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European Commission

Technical assistance on the setting up of labels under the ESPR and on preparation of an implementing act on their layout

Draft Final Report on Tasks 1-4

Version 1.1

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EUROPEAN COMMISSION

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Abstract

This report presents the findings of a study commissioned by the European Commission's Directorate-General for Environment to support the establishment of common layout requirements for labels under Regulation (EU) 2024/1781 on Ecodesign for Sustainable Products (ESPR) and the preparation of the implementing act provided for in Article 16(5). The study developed and assessed possible designs for ESPR labels as a tool for communicating product ecodesign performance consistently across product groups and physical and digital purchasing environments. Based on this comprehensive study, the report contains a proposal for a recommended ESPR label layout (see **Figure 0-1**).

The analysis combined a structured literature review, two rounds of stakeholder consultation, an assessment of implementation cost evidence, two rounds of consumer focus groups in Germany, Romania and Spain, and an online survey-based behavioural experiment involving 6,104 consumers in France, Germany, Romania, Spain and Sweden. The study process comprised an iterative development of several label prototypes and gathered evidence for its single elements (e.g. rating scales, colour codes). Results of the stakeholder consultations and consumer focus groups informed the design and selection of three label design prototypes incorporating A-to-G rating scales, accessible colour coding, and a label header with the title "Ecodesign". Prototype I combined an overall rating of product performance with selected parameter-level ratings. Prototype II was designed in a highly similar way to the well-known EU Energy Label while Prototype III focused on an overall rating. In addition, a nested label variant suitable for online environments was created for all prototypes (see **Figure 0-2**).

The three label prototypes were subsequently assessed in the consumer survey and systematically tested within online behavioural experiments. They were tested across five product categories: coffee machines, furniture, apparel, detergents and earbuds. The assessment examined label attention, understanding, perceived usefulness, product comparability and effects on purchasing choices. All three tested prototypes significantly increased the probability of selecting products with better ecodesign performance compared with a no-label condition. Prototype I provided the strongest overall balance between behavioural effectiveness, perceived information value and consumer preference. Prototype III was perceived as easiest to understand, whereas Prototype II was less clear. Some misunderstandings remained across all designs, particularly regarding the precise scope of the label and the precise relationship between the overall rating and individual parameters if part of the design.

Based on the project's iterative label development and experimental evidence, the study therefore recommends an ESPR label framework based on the Prototype I design. The label features the EU flag in the header as its primary recognition element and uses the term 'Ecodesign' as its title. It adopts a layered information architecture, comprising a compact overall rating (i.e. aggregated score), a limited number of product-specific indicators, and access to additional information through a QR code and integration with the Digital Product Passport (DPP). The label is based on space-efficient horizontal A-to-G rating scales for communicating parameter performance and follows an accessible, colour-blind-friendly visual design.

The findings provide an evidence base for common ESPR label layout requirements and for further consultation within the Ecodesign Forum. Furthermore, it is recommended to accompany the introduction of the ESPR label with an information campaign.

Executive Summary

The Ecodesign for Sustainable Products Regulation (EU) 2024/1781 (ESPR) foresees the introduction of product labels to communicate sustainability and ecodesign performance accordingly. Article 16 sets out the framework for these labels, while Article 16(5) mandates the establishment of common layout requirements through implementing acts. The present study was undertaken to support the European Commission in developing these requirements by providing robust empirical evidence for possible designs of these labels.

The study examined how ecodesign information can be presented in a way that is recognisable, understandable and useful across different product groups and purchasing environments. It focused on a potential layout of the label. The central design question was how to provide a clear overall evaluation of the label content while retaining sufficient information on the individual product characteristics underlying that evaluation and make this accessible to consumers across Europe in an attractive and understandable way.

The evidence base comprised four project tasks that contained:

- a **review of scientific literature** and international labelling layouts;
- **stakeholder consultations** and an assessment of implementation considerations;
- **consumer focus groups** in Germany, Romania and Spain;
- an online **survey including a behavioural experiment** with 6,104 consumers in France, Germany, Romania, Spain and Sweden
- and accompanying **iterative conceptual and graphical development** of alternative label prototypes.

The combined evidence throughout the tasks and work packages leads to a final design recommendation (see **Figure 0-1**).

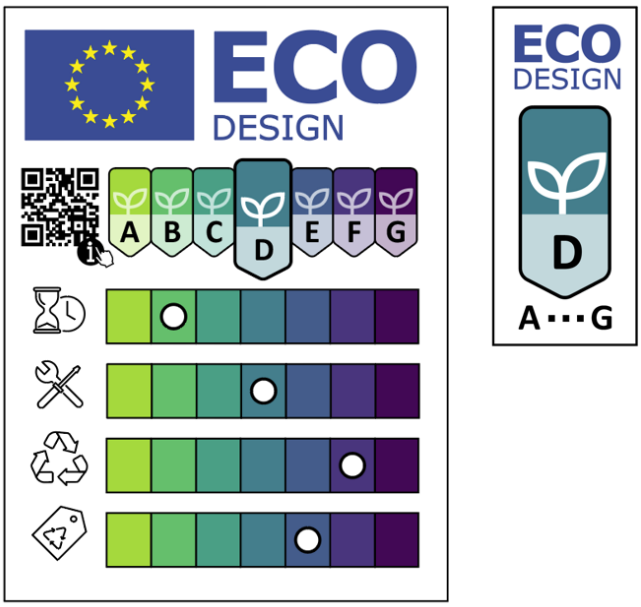

Figure 0-1: Revised and recommended ESPR label draft (full and nested label).

It strongly draws on the prototype that received the strongest overall balance between behavioural effectiveness, information value and consumer preference in the survey compared to two other designs (see **Figure 0-2** for an overview of prototypes used in the behavioural experiment). It combines a prominent overall ecodesign performance rating with selected parameter-level ratings. It thereby supports rapid product comparison while also providing information on (some of) the main characteristics underlying the overall result. The final design incorporates also selected advantages of another tested prototype which was particularly compelling due to its perceived ease of understanding among consumers. The recommended outcome is therefore a combination of the tested prototypes from the survey.

The final label design recommendation also includes a nested version for online environments which supports strong visual recognition in line with the full label, while simplifying its presentation and increasing the prominence of the overall product performance rating.

This final label approach preserves the explanatory value of parameter-level information while addressing the risk that additional detail may reduce clarity. The resulting label framework offers several information layers and comprises a compact overall design with horizontal performance scales and a customisable, limited number of criteria along the product criteria including three layers. It contains:

- a prominent overall performance rating for immediate recognition and comparison;
- a small number of carefully selected parameter ratings;
- a clearly identifiable data carrier, such as a QR code, providing access to more detailed information and encourages consumers to explore it further. A clear connection to the Digital Product Passport (DPP) should be established, while also enabling the integration of additional online information.

Additionally, throughout the research process important design criteria were identified which guided the final design process:

- a meaningful label name (i.e. ecodesign) that effectively communicates the label's underlying concept and intended message
- an accessible colour design that supports inclusiveness and remains understandable for users with colour vision deficiencies;
- the use of icons to communicate individual performance parameters in a language-independent and easily recognisable way;
- the use of an EU flag in the header to provide a clear indication of the label's identity and to communicate label authority.

Overall, the final label design framework is developed as an informative but visually disciplined label, rather than a detailed technical profile or an isolated overall score.

In the following a summary of evidence based on the respective tasks will be given.

Evidence and basis for ESPR label framework decisions and proposed criteria for the final label design

Insights from the literature and international examples

The literature review established the conceptual basis for the prototype development. It identified 47 studies either through systematic search or expert input that guided our in-depth analysis. The review led to the following insights: Labels can effectively support consumer decision-making by reducing the effort required to identify and compare relevant product characteristics. Prominence, consistency, simplicity and a clear evaluative direction are important conditions for effectiveness. Aggregated ratings e.g. as a single score are particularly useful where the underlying information is multidimensional or technically complex. Such aggregations provide a direct signal and facilitate comparison for the consumers. Additional parameter-level information can address the potential limitation of such a single score by providing additional information. It allows users to identify specific strengths and weaknesses and may be particularly relevant if consumer priorities regarding attributes differ. At the same time, each additional element increases the cognitive effort required to process the label. A label that attempts to communicate all available information may thus become less effective than one based on a carefully structured hierarchy.

The literature review supports the final and layered information approach in which a prominent summary signal is complemented by more detailed information about a set of parameters. This principle informed the final design recommendation.

The literature review also provided guidance on the design of rating scales. Prior research suggests that scales are most effective when they provide a clear evaluative direction. Graded scales with a limited number of performance categories help consumers distinguish between products without creating unnecessary complexity, while visual cues such as colour coding and ordered categories can further improve comprehension and comparability. At the same time, overly detailed scales may reduce usability because consumers often struggle to differentiate between too many rating levels. These findings support the use of a clearly structured overall performance scale in the final label design, complemented by parameter-specific ratings that follow the same visual logic. Such consistency across scales facilitates interpretation, reduces cognitive effort and strengthens the communicative value of the label.

The review also showed that consumers differ in knowledge, motivation and information needs. Not all users will engage with the label to the same extent. The proposed design accommodates these differences through the layered design.

International labelling examples that were identified point to the importance of a stable identity, consistent display rules and clear governance. Existing schemes use different combinations of summary scores, graded scales, colour coding schemes and individual indicators. No model can be transferred directly to the ESPR context, given the range of potentially covered products and ecodesign requirements. Nevertheless, the comparative evidence suggests a consistent core design with controlled product-specific variation.

Stakeholder and implementation considerations

The study was informed by two rounds of stakeholder consultation, resulting in 420 survey responses from business and industry representatives, Member State authorities, NGOs, consumer and environmental organisations, academia, research institutes and other relevant stakeholder groups across Europe. In addition, six expert interviews were conducted to further explore key implementation and design challenges. The stakeholder consultations highlighted that the label must function across diverse product groups, product and packaging sizes, physical and online sales channels, and different economic operators. The final design must

therefore combine consistency with sufficient flexibility to accommodate product-specific information.

The recommended approach is to establish a common label architecture while allowing the parameter-level content to vary across product groups. Findings from the stakeholder consultations suggest that common elements should include:

- a recognisable ESPR label identity;
- a consistent overall rating and rating scale;
- a clear visual hierarchy supporting rapid interpretation;
- a clearly defined position and presentation of the data carrier;
- minimum requirements for legibility across different product sizes and packaging formats; and
- common rules for the presentation of the label in physical and digital environments.

Product-specific rules should determine which parameters, if any, are displayed beneath or alongside the overall rating. Their inclusion should be justified by relevance, data robustness, comparability and consumer usefulness.

Implementation costs should also be considered. Parameter-level information may require additional data management, layout adaptation and quality assurance compared with an overall rating alone. These costs should be limited through common templates, clear technical specifications and alignment between physical labels, online displays and the DPP.

A modular design could facilitate application across different formats. However, this should not result in inconsistent versions that weaken recognition or omit essential information. The overall rating should remain the stable core of the ESPR label, while any format adaptations should follow clearly defined rules.

Stakeholders generally acknowledged the trade-off between familiarity and differentiation. While some participants considered similarities to the EU Energy Label beneficial because of its high level of consumer recognition, others expressed concerns that such similarities could lead to confusion regarding the purpose and scope of the ESPR label.

Stakeholders strongly supported the provision of digitally accessible information and the integration of the DPP as part of the overall label architecture. The DPP was widely viewed as an appropriate mechanism for providing additional explanations and product-specific information that cannot reasonably be displayed on the label itself. Stakeholders also supported the use of nested labels in digital environments to ensure consistency between physical and online presentation while maintaining a layered information approach.

Findings from the consumer focus groups

Six consumer focus groups in Germany, Romania and Spain informed the iterative development of the ESPR label prototypes before the final testing in the large-scale behavioural survey experiment. The discussions explored how consumers interpreted different label concepts, which visual elements attracted attention, how sustainability information should be communicated and which information consumers expected from an ESPR label. The focus groups were conducted in two iterative rounds, allowing findings from the first round to inform subsequent refinements of the prototypes presented in the second round.

Across both rounds, participants consistently emphasised the importance of an immediate and easily interpretable overall signal. Familiar rating systems based on A-G classes were strongly

preferred because they are already known from the EU Energy Label and allow rapid product comparisons. Participants also found A-G scales easier to understand and more impactful than alternative visualisations such as footprints, stars or abstract symbols. Consumers also showed a clear preference for colour-coded scales and largely correctly interpreted A as the best and G as the worst performance class without additional explanation.

However, participants simultaneously expressed a strong desire to understand the reasons behind an overall rating. A single aggregated score was appreciated for its simplicity, but many consumers wanted access to selected underlying information in order to understand strengths and weaknesses of a product and to judge aspects that were personally relevant to them. The focus groups therefore confirmed support for a layered design that combines an overall rating with a limited number of highly relevant sub-parameters. Participating consumers were generally receptive to labels displaying up to three key parameters or parameter groups, whereas designs containing numerous indicators were often perceived as overwhelming.

An important finding concerned the interpretation of parameter information. Participants appreciated grouped and structured information and strongly supported the idea of aggregating the 16 ESPR criteria into broader themes. Groupings related to environmental impacts, product lifespan and operating costs were generally well received because they reduced complexity while maintaining transparency. At the same time, consumers frequently interpreted a prominent score positioned at the top of the label as an overall assessment summarising the ratings shown beneath it, even in designs where this was not the intended meaning. This highlights the importance of creating a clear visual hierarchy and unambiguous relationships between summary scores and parameter ratings.

The focus groups also revealed limitations of icon-only communication. While certain concepts such as repairability, durability, lifespan, water use and environmental footprint were generally understood, many other icons were interpreted inconsistently across countries. Consumers repeatedly requested textual explanations and demonstrated substantially higher levels of understanding when parameter names accompanied the icons. This effect was particularly pronounced when parameter labels were presented in participants' national languages rather than in English alone. The findings suggest that textual explanations can improve consumer understanding. Given the need for a language-neutral label design; however, explanations are better provided through digital information layers and the DPP. A potential communication launch campaign could further familiarise consumers with the icons. The discussions further highlighted the importance of trust and label identity. The combination of the EU flag, familiar visual structures and a clear label title consistently generated trust and signalled that the label was linked to an official European scheme. Participants generally recognised the connection to sustainability, particularly when environmental symbols and explicit titles such as "EcoDesign" were used. They also preferred green header elements because these immediately communicated an environmental purpose.

Results of the behavioural experiment and survey

The behavioural experiment and survey implemented online involved 6,104 consumers in France, Germany, Romania, Spain and Sweden. The selected three prototypes informed by the prior steps plus additional nested label versions for each prototype were assessed across five product categories: coffee machines, furniture, apparel, detergents and earbuds. These product groups were selected to reflect a diverse range of ESPR-relevant applications, covering both energy-related and non-energy-related products, different purchasing contexts, existing labelling environments, and varying requirements regarding label size and placement. Prototype I combined an overall rating of product performance with selected parameter-level ratings. Prototype II was designed in a highly similar way to the widely recognised EU Energy Label while Prototype III focused on an overall rating. The research examined consumer

support, attention, understanding, evaluation of the designs and effects on product choice in simulated brick-and-mortar store environments and in online store environments. The online store environment presented the nested versions.

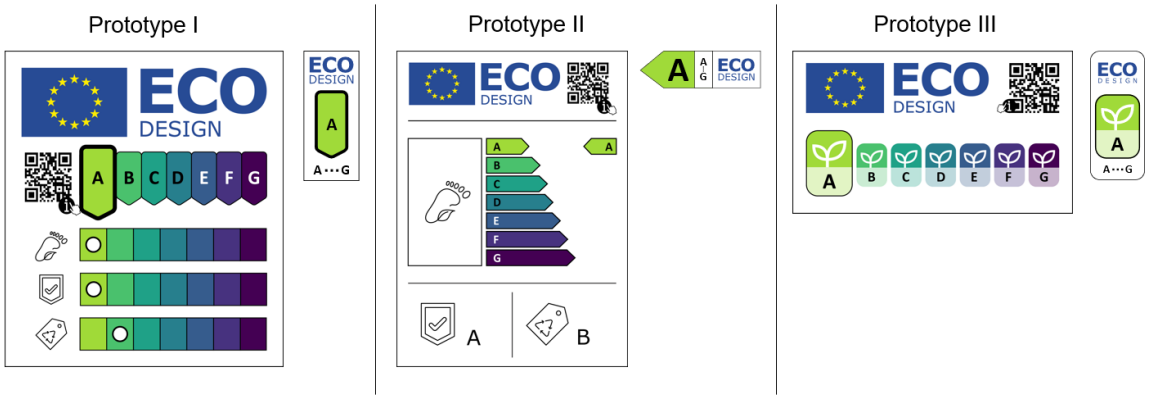

Figure 0-2: Exemplary prototype labels tested in the behavioural experiment.

A central finding was that all three tested prototypes significantly increased the probability of selecting products with better ecodesign performance compared with a no-label condition. This effect was observed even though the products with relatively high Ecodesign scores were not the lowest-priced items in the small assortments. The results therefore provide evidence that a visible and standardised presentation of ecodesign performance can influence purchasing decisions. In relation to label design, Prototypes I and III were slightly more effective than Prototype II. The relative effectiveness of the three designs was robust across countries, product categories and product prices.

Prototype label III was consistently perceived as the easiest to understand, probably due to its simple design; however, consumers gave a clear vote to prototype I over the other designs. Actual understandability of the information conveyed was good overall. However, the results suggest that consumers may have difficulty distinguishing between different types of environment-related information, such as environmental footprint and ecodesign performance.

These findings from the survey suggest that Prototype label I provides the strongest overall balance between behavioural effectiveness, usefulness, and consumer preference, and is therefore recommended as the basis for the final ESPR label framework. Prototype label III represents a relevant alternative, particularly if simplicity and ease of understanding are prioritised. Prototype label II appears less promising overall, given its somewhat lower behavioural effectiveness and the fact that it was perceived as more confusing due to its resemblance to the EU Energy Label.

Thus, as a final outcome of this study project, label designs strongly drawing on Prototype I with elements of Prototype III are put forward.

Limitations and next steps

Despite the consistency of findings across the different research activities, several limitations should be acknowledged. First, consumers were generally able to use the label as a decision aid without necessarily fully understanding all underlying concepts, parameters or methodological relationships. While this confirms the effectiveness of the label as a heuristic decision-making tool, the findings also indicate a need for additional explanations regarding the scope of the label and the interpretation of its ratings. A layered information architecture generally supports this by combining a simple label part (i.e. the overall performance score) for orientation and comparability with more detailed information provided through the DPP and other digital information layers. Second, the study focused on label communication and design rather than on the development of product-specific assessment methodologies. The final set of parameters, weighting approaches and calculation methods will only be defined in future product-related studies and respective delegated acts. Consequently, some design aspects may require further adaptation once product-specific requirements become available. This may be particularly relevant for product groups with highly diverse sustainability characteristics, complex technical information or limited display space. Third, while digital information layers emerged as a key component of the overall label concept, consumer interactions with nested labels, DPP interfaces and additional digital information were not investigated in fully realistic digital environments. Future research could therefore examine how consumers access, process and use digital sustainability information in online purchasing contexts. Laboratory-based studies using methods such as eye tracking may provide additional insights into attention patterns, information search behaviour and the effectiveness of different digital presentation formats.

Despite these limitations, the findings across literature review, stakeholder consultation, consumer focus groups and large-scale behavioural testing consistently point in the same direction. The proposed final label design therefore represents a robust and evidence-based framework for the development of common ESPR “Ecodesign” label layout requirements and future product-specific implementation.

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Abbreviations and definitions

CAWI	Computer Assisted Web Interview
CLASP	Collaborative Labeling and Appliance Standards Program
D	Deliverable
DG ENV	Directorate-General for Environment
DPP	Digital Product Passport
EC	European Commission
ELR	Energy Labelling Regulation
ENCE	National Label for Energy Conservation
EPREL	European Product Registry for Energy Labelling
ErP	Energy-related Products
ESPR	Ecodesign for Sustainable Products Regulation
EU	European Union
EuP	Energy-using Products
NGO	Non-Governmental Organisation
NUTS	Nomenclature of Territorial Units for Statistics
QR	Quick Response (code)
SPSS	Statistical Package for the Social Sciences

1. Introduction and purpose of the report

The Ecodesign for Sustainable Products Regulation (ESPR), Regulation (EU) 2024/1781, establishes a framework for improving the environmental sustainability and circularity of products placed on the European Union market. Building on previous ecodesign legislation, the Regulation extends the scope of sustainability-related requirements to a broad range of product groups and introduces new provisions concerning the communication of sustainability information to consumers and other actors along the value chain.

A central element of the ESPR is the establishment of information requirements that may accompany products regulated under future delegated acts. Such information can cover a variety of sustainability-related aspects, including environmental performance, circularity, durability, repairability, recycled content and resource efficiency. In addition to the Digital Product Passport (DPP), the Regulation foresees the possibility of using an ESPR label as a communication tool for selected information requirements. Where labels are introduced, they should facilitate access to relevant information, support informed decision-making and, where appropriate, enable comparisons between products.

To support the implementation of Article 16 ESPR, the European Commission is required to establish common requirements for the layout of ESPR labels through an implementing act. While the specific content of labels will be determined within future delegated acts for individual product groups, common layout requirements are intended to ensure a coherent and recognisable approach across different product categories and applications. Such requirements must accommodate a broad range of potential parameters, product characteristics and communication contexts, including both physical and digital environments.

Against this background, the Directorate-General for Environment of the European Commission commissioned the study *Technical assistance on the setting up of labels under the ESPR and on the preparation of an implementing act on their layout*. The overall objective of the study is to provide technical support and an evidence base for the development of common requirements for ESPR label layouts. The study addresses questions related to consumer understanding, label recognisability, communication of sustainability information, interaction with digital tools and implementation considerations for economic operators.

The study was organised around four main tasks (see **Figure 1-1**):

- **Task 1:** Evidence and insights for ESPR label
- **Task 2:** Conceptual and graphical design of ESPR label
- **Task 3:** Experimental testing and surveys on ESPR label
- **Task 4:** Presentation of final layout(s) for an ESPR label, development of recommendations and formulation of common requirements for ESPR labels

This report constitutes the Draft Final Report of the study. It documents the work carried out throughout the project, presents the methodological approaches applied across the different tasks, and provides the analytical basis supporting the development of recommendations for future ESPR label layouts and common layout requirements. The report is intended to support the European Commission in the preparation of implementing measures under Article 16(5) ESPR.

The remainder of the report is structured as follows: Sections 2 and 3 present the activities undertaken under Tasks 1 and 2. Section 4 summarises the implications of these activities for the label design used in Task 3. Section 5 reports the implementation and results of the

prototype experimental testing and consumer surveys. Section 6 presents the final assessment and recommendations for the final label design. Supporting material, methodological documentation and supplementary information are provided in the annexes.

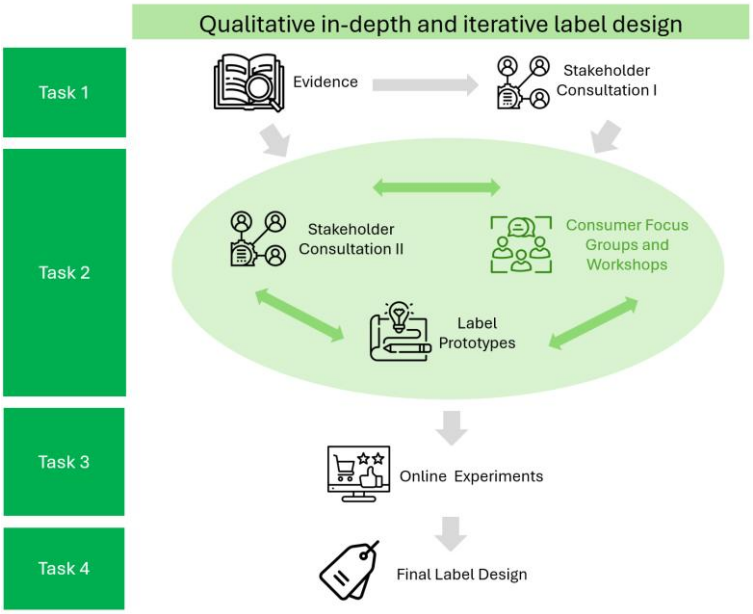


Figure 1-1: Overview of the project tasks.[1]

This document constitutes the *Draft Final Report* of the study. Following discussions with the client, the meeting with the Ecodesign Forum has been rescheduled to November 2026. This adjustment allows the study team to present the complete body of work undertaken within the project, including the consolidated label prototypes, supporting evidence, and draft recommendations, to members of the Ecodesign Forum for final discussion and feedback.

After the Ecodesign Forum meeting, the study team will review and incorporate comments received from both the European Commission and stakeholders participating in the Forum. The finalisation of the study deliverables, including the Final Report, is foreseen by the end of November 2026, following the completion of the review process and the integration of the final feedback received.

[1] Icons made by Magnific, Eucalyp, Vectors Tank, Freepik, Ida Desi Mariana, Gajah Mada from www.flaticon.com

2. Task 1: Evidence and insights for the ESPR label

2.1. Sub-task 1.2: Literature review

The literature review aims to build a knowledge base that will inform subsequent tasks and the label design itself. It draws primarily from literature on the EU Energy Label while also including studies on other energy and ecolabels. Specifically, the review addresses the following research questions, as outlined in the inception report:

(i) General understanding: What makes labels easily recognisable and understandable? What attributes arouse attention and interest in the information shared? How much information is still helpful to consumers?

(ii) Consumer impact: What enhances the impact of labels on consumer decision making?

(iii) Consumer engagement: How far do consumers engage with additional information e.g. provided by accessing additional databases? What are suitable means to access this information? What increases the probability of engagement?

(iv) Interaction effects between labels: How do different labels on the same product interact with each other, specifically the European energy label?

(v) Variations in consumer behaviour and label perception: Is there any knowledge about variations in behaviour between subgroups (e.g. younger and older customers, people with high vs. low income, people living in rural vs. urban areas)? Is there evidence of systematic differences in understanding or attention to labels across EU countries?

(vi) Facilitators of adoption by economic operators: What simplifies adoption by economic operators (businesses, producers)?

(vii) Global examples: What examples are there for environmental or energy labels (apart from the EU Energy Label) from Member States and other parts of the world?[2]

2.1.1. Method

For the literature review addressing questions (i) through (vi), two approaches were combined to gather the relevant research articles: (1) a systematic search and (2) expert input. This approach ensured that a wide range of research articles was included in addressing the specific questions outlined above. In addition to the literature review, to address question (vii)

[2] The earlier version of this overarching research question included additional analyses of the 'evidence for consumer understanding and impact on behavioural decisions' for these international labels. Given the wide range of existing energy labels and the structured method of literature search, this question was no longer addressed separately.

on global label examples, a database for ecolabels was searched to identify examples for comparative labels (see **Annex III: Database used for literature review**).

For the systematic search, various search strings were developed and applied to the following databases: Web of Science, Scopus, Google Scholar and Zenodo[3]. Recognising the potential contribution of literature reviews as a source of knowledge, an additional search to identify review papers was included. In total, 20 searches were conducted[4]. **Figure 2-1** illustrates the screening process that led to the identification of relevant papers. Only articles published between 2020 and 2025 were included (last articles extracted: August 29, 2025). If searches within each database yielded more than 20 articles, only the 20 most relevant articles were extracted[5]. In total, 354 studies were identified through the various database searches. Several consecutive steps were taken to refine the body of literature such as the removal of duplicates (n = 136) and of studies deemed insufficiently relevant based on abstract or full-text screening. Articles were deemed insufficiently relevant when they did not address one of our research questions. Ultimately, 35 articles were identified as key papers and were read and analysed.

For the expert input, further relevant studies were collected, including literature already mentioned in the service request, the project proposal and studies recommended by consortium members based on their expertise. Following this approach, 12 studies published between 2014 and 2025 were additionally included.

For the analysis, an Excel spreadsheet was used. Information extracted from each paper was systematically recorded in designated columns. These columns encompassed various elements, including all research questions, information on the label subject to the paper (such as name of the label, product category addressed) and information on the regional scope of the country as well as the data used[6].

[3] Given the limitations of Google Scholar and Zenodo for combining search strings, a simplified search string was used for these databases. In contrast, Scopus and Web of Science offer sophisticated options for systematic search, therefore multiple search strings were developed addressing the different questions.

[4] The search strings used are provided in annex (see Annex II). The search strings can be used to replicate our search results. Generally, search strings included the following words: label, energy OR eco* OR environment*, eu* OR europe* as well as words referring to the respective research question. If possible, we limited the results to relevant disciplines. For instance, the search string to address question (i) General understanding for Scopus reads: TITLE-ABS-KEY (label* w/15 (energy OR eco* OR environment*) AND (eu* OR europe*) AND (effective* OR attitud* OR behav* OR intention* OR attent* OR interest* OR recogn* OR understand* OR perce*)) AND PUBYEAR > 2019 AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (SUBJAREA , "ENER") OR LIMIT-TO (SUBJAREA , "ENVI") OR LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "MULT") OR LIMIT-TO (SUBJAREA , "NEUR") OR LIMIT-TO (SUB-JAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "EART") OR LIMIT-TO (SUBJAREA , "PSYC") OR LIMIT-TO (SUBJAREA , "DECI"))

[5] Scopus, Web of Science, and Google Scholar provide the option to sort search results by relevance. The relevance of an article is determined by the database through various metrics such as the frequency of search terms in the document or where the keyword is found in the document. For Scopus and Web of Science, more information can be found on the databases' websites through the following links: Scopus, Web of Science. We chose to rely on the relevance sorting provided by these databases to effectively address the diverse research questions within the project timeline. As we searched different databases, our approach still ensured that a wide range of articles is covered.

[6] A clean version of the excel file containing the papers analysed for this review is provided in Annex (Annex III: Database used for literature review)

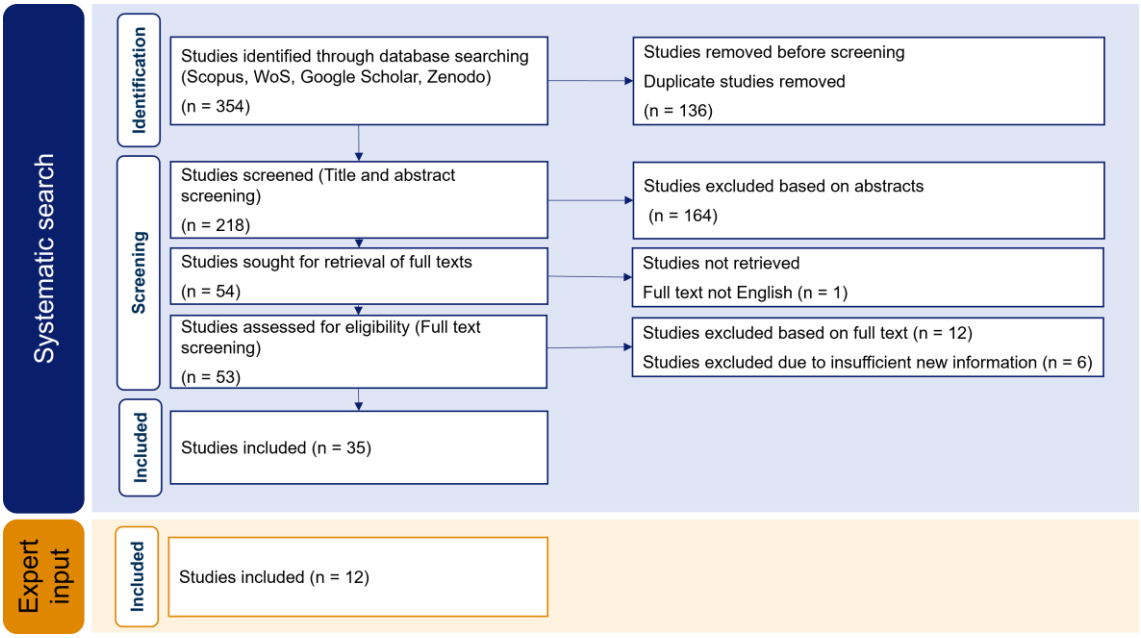


Figure 2-1: Adjusted PRISMA Flow Chart.

In addition to the literature review and to address question (vii) asking for global examples, the ecolabel index database (Big Room Inc., 2025) was screened. In line with the study goal all relevant comparable labels were compiled in one document (see **Annex IV: List of comparative worldwide Eco and Energy Labels**) informing the further label design process.

In the following sections, the results are presented. For the literature review, the key findings are summarised in narrative form, addressing each question (i) to (vi) separately. The results of our search for global examples, using the ecolabel database to address question (vii), are organised by different design elements.

2.1.2. Design factors influencing general understanding

In general, understandability can be enhanced if a label has a distinctive and simple design (Hay et al., 2024). Regarding scales, studies indicate that alphabetical scales, as seen in the EU Energy label, are understandable. For instance, London Economics and Ipsos (2014) compared the willingness to pay for energy efficient products for an alphabetical closed scale (A - G) with a numerical closed scale (0 - 100), finding that a higher proportion of respondents is willing to pay a premium in the experimental condition with an alphabetic closed scale label design. Studying the old and revised EU Energy label, Faure et al. (2021) found that the revised label (A - G) is easier to comprehend than the old label (A+++ to D). In addition, alphabetical labels are correctly understood in the context of ecolabels for mobile phones: individuals showed higher preferences and willingness to pay for higher classes (Bergener et al., 2025). These alphabetical scales are examples of categorical scales. In general, categorical-scale labels are intuitive and enable decision-making with low cognitive burden (He et al., 2022). Categorical information, such as energy classes, may dominate perceptions, potentially leading to other details on the label, such as energy consumption information, receiving less attention (Andor et al., 2019). This focus on the class information is discussed as "class valuation effect" (He et al., 2022). The finding that consumers focus on the class information is backed by Kesselring (2025) in the context of the EU Energy Label and by Operate (2022) in an eye-tracking study. Continuous-scale labels can be useful in correcting for this ‘class valuation effect’’ (He et al., 2022); however, they might be less understandable. For decreasing vs. increasing scales, London Economics and Ipsos (2014) did not find consistent effects when comparing a numeric closed scale (30 to 100) to a reverse numeric

closed scale (7 to 1). Finally, explaining the scale, e.g. by indicating the start and end point can enhance understandability of the scale as shown by Elsen and Leenheer (2022). Before the introduction of the current online version of the EU Energy Label, Elsen and Leenheer conducted an experiment comparing different potential options, finding that the label design including the class and the scale performed well compared to versions without scales.

Colour-coded labels are discussed to be useful. For instance, studying consumer waste sorting labels, Liva et al. (2025) found that citizens generally prefer colour-coded labels. Traffic-light coloured labels, such as the eco-score or the energy label have been shown to be understandable and influence consumer preferences (Jürkenbeck, 2023; Kolber & Meixner, 2023). Findings by Bauw et al. (2024) in the context of traffic-light coloured ecolabels for fish suggest that consumers' choices are influenced by colour associations. Further, Bengart and Vogt (2023) compare different label options for electricity products, finding that traffic-light labels increased the share of choices for low-emission electricity compared to only text-based labels, but not compared to greyscale labels - indicating that, potentially, other colour-coded schemes can be similarly useful. Importantly, colour selection should be logical, for instance using green to indicate an environmentally friendly product (Hay et al., 2024). Additionally, colours can draw consumers' attention to labels, which is important in purchasing situations (Operate, 2022).

Additional information included in the label can be useful if the information is easy to read and understand (Meis-Harris et al., 2021) and not excessive (Nakaishi & Chapman, 2024). In their study on the EU green leaf logo, Hartmann et al. (2025) found that adding text to labels that otherwise only consist of a picture can only lead to improved consumer evaluations, potentially as they increase understandability[7]. Similarly, Liva et al. (2025) discuss that participants express a strong preference for labels with text in their report on waste sorting labels. Out of the respondents preferring text on labels, around 50% favour the bilingual option (i.e., national language and English) due to usability and accessibility considerations, while around 35% favour text only in their national language (Liva et al., 2025). Operate (2022) conducted a study on a durability and repairability label utilising expert interviews, finding that the label name is of special importance. It should be clear and communicate the aim of the label (Operate, 2022). Regarding numbers in labels, studies find mixed results; especially unknown units can be confusing (Dütschke & Schneider, 2017; Hay et al., 2024). In focus groups on ecolabelling some participants preferred visual representation of data instead of numbers to facilitate easy decision-making and comprehension (Hay et al., 2024). In their report on an eye-tracking study, Operate (2022) discuss how participants struggled to find durability and reparability information on the EU Energy Label, suggesting that the icons were not intuitive. The study also revealed learning effects, meaning that consumers found the information easier to locate the more familiar they became with the label.

- (Existing) categorical, alphabetical scales are generally well understood.
- Including an overall class on the label may capture attention and focus it on the class.
- Colour-coded labels are useful if colour choice is logical (e.g. traffic-light colours)
- Information included in the label, such as label names, can be useful if the information is easy to read and understand and is not excessive.

[7] Hartmann et al. (2025) added either the word "eco" or a reference to "certification" to the EU green leaf logo and compared it to the original logo without text.

2.1.3. (Design) factors influencing consumer decision making

Knowledge and awareness as well as trust in the label have been identified as relevant drivers for comprehension and effectiveness of labels (Codagnone et al., 2013; Meis-Harris et al., 2021; Nakaishi & Chapman, 2024). Label trust can be enhanced by a high degree of transparency and rigour in the label certification process (Nakaishi & Chapman, 2024) and can be influenced by trust in the institution being associated with the label (Gorton et al., 2021). In addition, positive perception of the label has been found to be related to the intention or willingness to use the label in purchasing decisions (Berden & Hung, 2025; Dihr et al., 2021). Furthermore, the certifying body can impact whether a certain label is regarded in purchasing decisions. For instance, in Germany and Serbia, knowledge of third-party certification has been shown to positively influence label use (Gorton et al., 2021). In their literature review Majer et al. (2022) found evidence that governmental labels are more effective than non-governmental labels e.g. from NGOs. Further, studies point towards the role of individual factors of the consumers in label effectiveness. For instance, environmental attitudes as well as environmental concern have been found to be related to behaviour in buying products with the EU ecolabel (Recio-Román et al., 2024). Studying the EU Energy Label, Guetlein et al. (2025) identified energy literacy to be related to label effectiveness: for individuals who have the ability to make informed and deliberate choices in the domain of household energy consumption, the energy label was more effective.

- Knowledge, awareness, trust in the label and positive perceptions of the label can enhance comprehension and effectiveness of labels.
- The certifying process and body can impact whether a certain label is regarded in purchasing decisions - third-party certifications and government labels seem to be more effective.
- Individual consumer factors, such as environmental attitudes or knowledge about the label domain, may influence label effectiveness.

2.1.4. Consumer engagement with additional information

Studies indicate a generally positive perception of QR codes as a means to access additional product information. In a focus group study on ecolabels conducted by Hay et al. (2024) participants expressed a favourable view of QR codes or websites that provide detailed information. However, they raised concerns about the practicality of using QR codes for impulse purchases or products in supermarkets, suggesting that QR codes are more beneficial for items with higher costs and smaller size (Hay et al., 2024). These findings are supported by Liva et al. (2025) who report that study participants preferred labels with QR codes over those without QR codes. Research by Cordero-Gutiérrez et al. (2025) explored the utility of QR codes linked to blockchain-based traceability information for beef products. Their findings indicate that consumers recognise the advantages of traceability and see value in QR codes for verification, which enhances their purchasing intentions. Hunka et al. (2025) investigate chemical content labelling for clothing, finding that individuals prefer instant access to chemical information through a QR code over information printed on the product label.

While QR codes on labels are generally supported by consumers, studies investigating actual engagement with the QR codes reveal that QR codes are hardly used. Denny (2022) tested the effectiveness of QR codes as a supplement to product labels, but only found minimal engagement from participants. These findings are backed by Liva et al. (2025) who asked individuals about their use patterns of QR codes, revealing that almost one-third had not scanned QR codes in the past month.

- Additional information that can be accessed through a QR code is generally viewed positively by consumers.
- However, actual engagement with QR code seems to be low.

2.1.5. Interaction effects between the labels

The presence of multiple labels on a single product does not always lead to confusion or negative outcomes. For instance, a study conducted by Zhu et al. (2023) in China found that the inclusion of the EU organic logo alongside the Chinese organic label, is associated with a higher willingness to pay. Similarly, in their study on different ecolabels on olive oil, Torres-Peña et al. (2025) showed that the presence of several labels did not result in consumer confusion.

However, evidence also indicates that multiple labels can reduce the noticeability of key information and lead to confusion, particularly when the ratings presented do not align. Liva et al. (2025) reported that the inclusion of additional labels can reduce the noticeability of waste sorting labels in salience tasks, suggesting that additional labels can distract from the key information provided by the labels. In the food sector, Berden and Hung (2025) found that the simultaneous presence of the Eco-score[8] and Nutri-score on the packaging is positively linked to the number of correct evaluations of a product's environmental impact. However, when the scores are significantly different (e.g., an Eco-score of E and a Nutri-score of A), the accuracy of evaluations declines, indicating that multiple labels can lead to confusion when the ratings are conflicting (Berden & Hung, 2025). For the study, only food products were used that were available with that specific combination of the Eco-score and Nutri-score.[9] Dorisse et al. (2025) studied food labels with different valence (positive vs. negative) and found that the presentation of conflicting labels was associated with consumer confusion, in some cases even decreasing purchasing intention. They suggest to integrate multiple dimensions into a single, comprehensive assessment to streamline consumer decision-making as seen in the planet-score or to avoid using identical grading scales for different attributes (Dorisse et al., 2025).

- Multiple labels on a product do not necessarily negatively impact label understandability but might decrease consumer attention.
- In cases of conflicting labels (e.g., labels showing opposing scores) this can lead to confusion.

2.1.6. Variations in consumer behaviour and label perception for different groups and across different European countries

In general, evidence on variations in consumer behaviour or label perception are inconclusive and context dependent. Regarding variations in socio-demographic subgroups, this overall impression is backed by a literature review conducted by Majer et al. (2022) who discuss that findings regarding sociodemographic characteristics are inconclusive. In their study on a hypothetical multi-level ecolabel for mobile phones, Jacobs et al. (2025) conducted a cluster analysis to identify distinct consumer segments in Germany. They argue that, for instance, the

[8] Since end of 2024 known as the Green-Score.

[9] For instance, Boni Bio Liege waffles were presented in the experiment which have an Eco-score of A and a Nutri-score of E.

segment “brand and eco shoppers” exhibits a strong preference for higher eco-score levels; notably, this segment was identified as significantly younger and more educated than the overall survey population in their study (Jacobs et al., 2025). Berden and Hung (2025) investigated the relationship between socio-demographic variables and variables related to the Eco-Score, such as perceptions of the Eco-Score and intentions to use it, in a Belgian sample. They found that subjective knowledge indirectly influences intention via perception of the Eco-Score and that income and employment are positively associated with subjective knowledge whereas gender and age are associated with objective knowledge. Additionally, younger age was associated with higher intention to use an eco-score. Recio-Román et al. (2024) found that ecolabel purchasing behaviour is positively associated with older age, female gender, higher education levels, and urban residency. Studying ecolabels in the food context, Taillie et al. (2024) discovered that ecolabels have a more pronounced impact on sustainability perceptions among older adults compared to younger individuals, as well as among men compared to women. Ecolabels might be less effective in altering perceptions among younger adults and women due to their already high baseline levels of awareness (Taillie et al., 2024).

It is important to note that the studies discussed above present single findings that cannot be generalised to all labels or countries; in addition, the studies do not address specific label designs but rather give some insights into whether and in how far labels work for different subgroups.

Concerning variations across European countries, some studies indicate differences; however, no clear pattern emerges. Therefore, no inferences about other labels or contexts can be drawn. In their literature review Majer et al. (2022) discussed two studies utilising data from several European countries which are comparing nationalities: Banovic et al. (2019) and Grunert et al. (2014). These studies reported some country differences, for instance that participants in the UK include labels in their decision making most; in contrast, Polish participants indicated to use labels the least (Grunert et al., 2014). Research by Nakaishi and Chapman (2024) compared label awareness across EU countries. They found, for instance, that France has a relatively high awareness of the EU Energy Label and the green leaf logo, while the awareness for the EU Ecolabel and EU Energy Label is relatively low in Romania (Nakaishi & Chapman, 2024). In their study on modifications of the EU green leaf label, Hartmann et al. (2025) showed that the effects of label modifications are observable across various European countries, not only for single countries.

Evidence regarding variations in consumer behaviour and label perception among subgroups or across European countries is inconclusive and highly context dependent.

2.1.7. Facilitators of adoption by economic operators

In general, only a few studies were identified that address factors simplifying adoption of mandatory labels for economic operators. In their literature review, Meis-Harris et al. (2021) summarize the factors that may influence businesses to adopt ecolabels. The influencing factors they identified are more relevant in the context of voluntary labels rather than mandatory labelling schemes. In addition, none of the factors mentioned are related to the label design. Gröfke et al. (2021) explore a hypothetical meta-sustainability label designed as a traffic-light index. They conduct interviews with various stakeholders, including companies, to gain insights into their perspectives. One barrier identified regarding label design is the limited space on packaging, suggesting that more detailed information should be made available online or through campaigns (Gröfke et al., 2021). In a focus group study involving citizens on ecolabels conducted by Hay et al. (2024), participants discussed potential space limitations for producers when implementing labels. To address these challenges, they

proposed a label design that scales with the size and complexity of the product (Hay et al., 2024). In addition, participants suggested linking physical labels to more comprehensive data available online through QR codes or web addresses (Hay et al., 2024).

Costs associated with the certification process are relevant to economic operators. While the introduction of eco-labels can improve a brand's reputation and value, for voluntary labels companies evaluate whether a product has a sufficient market penetration making it worthwhile to invest in the certification process (Meis-Harris et al., 2021). In addition, costs arise when revising the design of the packaging to include a new label (Gröfke et al., 2021). However, the costs might be offset by potential benefits.

Limited space on packaging is one potential hurdle for label design and adoption.

2.1.8. Global examples

In the following, examples are depicted that present different design elements of labels. This compilation of labels informed the label design within this project.

Comparative ecolabels use various scales (see **Figure 2-2**). For instance, the EU Energy Label or the Energy Performance Diagnostic (DPE) label for buildings from France use letters. In contrast, the Chinese Energy Label uses numbers to indicate classes, while the US Energy Guide Label uses stars and the Chinese Water Efficiency Label uses other symbols - in this case drops - to indicate evaluations.



Figure 2-2: Examples of label designs and scales.

In addition, the form of the scales differs among the compared labels (see **Figure 2-3**). The EU Energy Label or the National Label for Energy Conservation (ENCE label) in Brazil use scales in a pyramid form. The Korean Energy Efficiency Label uses a scale in the form of a half-circle resembling a speedometer. The Canadian EnerGuide rating system utilises a continuous scale.

Explanation of sclale in pyramid form, e.g. EU Energy Label or the ENCE label for electricity in Brazil:



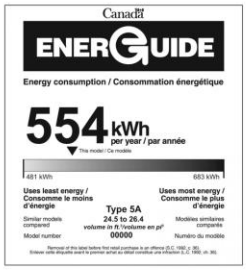
ENCE label for electricity

Scale in the form of a half circle, e.g. in Korean energy efficiency labelling scheme:



Korean energy efficiency labelling scheme

Continous scale, e.g. in Canadian EnerGuide Rating System:



EnerGuide Rating System

Figure 2-3: Examples of varying scale shapes from existing labels.

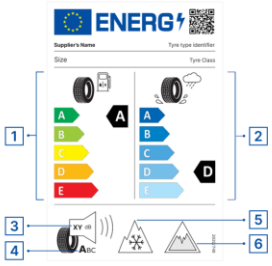
Labels employ different colour schemes (see **Figure 2-4**). The ENCE label is an example for a traffic-light coloured label, while the EU tyre label additionally uses a blue scale. The EnerGuide Label only uses shades of grey.

Traffic-light colours, e.g. in ENCE label for buildings in Brazil



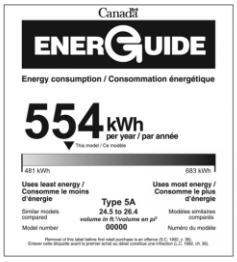
ENCE label for buildings

Other colour palettes: shades of blue in EU tyre label



EU tyre label

Shades of grey, e.g. in the EnerGuide Rating System in Canada

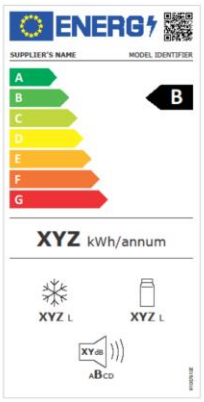


EnerGuide Rating System

Figure 2-4: Examples of different colour schemes from existing labels.

Lastly, the compared labels differ in their way of using icons or text (see **Figure 2-5**). The EU Energy Label relies on many icons to display information, while the ENCE label uses text to explain information on the label.

Labels using several symbols, e.g. EU Energy Label:



EU energy label

Labels using written text, e.g. ENCE label for buildings in Brazil:



ENCE label for Buildings

Figure 2-5: Examples for using symbols or text from existing labels.

2.1.9. Conclusions from the literature review

The literature review provides an overview of the findings from existing studies that are relevant to the ESPR label design. **Table 2-1** illustrates how the findings from the literature review can inform the current label design process and label design approaches in general. Furthermore, the results emphasise the necessity of engaging consumers and stakeholders in discussions and testing of specific label designs, as outlined in other sections of the research project.

Table 2-1: Conclusions from the literature review for ESPR label design.

Category	Application of findings to the label design
Design factors influencing general understanding	The findings emphasise that various design elements, such as scales, colour schemes, and text or symbols, can influence label understandability. This underscores the necessity to make deliberate choices regarding these elements during the label design process. For instance, the review highlights the significance of text on labels for enhancing understandability. As the ESPR label design is intended for use across the EU, the language used must be understandable throughout the EU or labels may need to be adapted for different countries. Hence, using text on labels is related to practical barriers. The reviewed study results do not permit a comprehensive assessment of the interactions among different design elements. Therefore, the literature review highlights the importance of discussing and empirically validating diverse design elements and their combinations in the label design process.
(Design) factors influencing consumer decision making	Consumer decision making is related to factors such as knowledge, awareness and trust in the label as well as the labelling procedure and certifying body. Hence, to enhance the effectiveness of labels, the provision of comprehensive information on the labelling process, including the role of the European Union (EU) can be useful. These could be presented via the QR code or on official websites.

Consumer engagement with additional information	The provision of additional information via QR codes is supported. However, engagement with them is limited. Hence, the findings suggest including a QR code in the label design; however, essential information should be prominently featured on the label itself.
Interaction effects between the labels	Multiple labels on one product can lead to reduced attention or understandability, especially when labels are conflicting. Potentially, multiple dimensions can be integrated into a single, comprehensive assessment. Different scales included in the label should be aligned.
Variations in consumer behaviour and label perception for different groups and across different European countries	The findings concerning variations among subgroups or across EU countries are inconclusive. Nevertheless, label design should prioritise ease of understanding for individuals with different language backgrounds and possibly visual impairment/ colour blindness.
Facilitators of adoption by economic operators	Since space on packaging may be limited, only essential information should be displayed on the label. Additional information can be accessed via the QR code. Few studies were identified that provide information on which label designs are advantageous for economic operators. This literature gap highlights the importance of stakeholder involvement in label design processes, as planned in this research project.
Global examples	Global examples employ a variety of scales, colours, and differ in their use of text and symbols. Therefore, as anticipated within the project framework, testing specific label designs in different European countries is crucial.

2.2. Sub-task 1.3: Stakeholder consultation I

2.2.1. Aim and research questions

This section presents the findings of the stakeholder consultation process to support the design and development of the ESPR label. This consultation consisted of a survey that collected the expert insights and informed opinions from a diverse range of stakeholders across the EU, including business associations, Member State authorities, NGOs, academia, and professional associations. This survey has been followed up by a set of meetings and interviews with a selection of stakeholders to provide more accurate detail on the potential issues that affect an ESPR label. As a result, this section presents the overall preferences, priorities, and perceived challenges associated with various label design elements from these stakeholder groups.

The research addresses key questions such as stakeholder perspectives on different design elements of the label as well as their feedback on examples. Stakeholders were contacted through the Ecodesign Forum and academic experts identified through the literature review were included as well. Participants were invited to complete a structured online questionnaire, drafted based on the main existing gaps and questions within the literature review, and with expert input to ensure the relevance of the questions. After this survey, a set of key stakeholders was selected to be interviewed.

2.2.2. Methodology and design of the questionnaire

The stakeholders for the survey were contacted through the Ecodesign Forum[10]. This initial list of stakeholders was complemented by including the authors of the most relevant papers identified in the literature review. Participants were contacted directly and invited to complete an online questionnaire. In addition to this consultation, a set of interviews was conducted during November and December 2025 to support the refinement of the findings.

The survey was structured in two distinct sections. The first section primarily featured multiple-choice questions, supplemented by a number of open-ended responses. It covered a range of topics pertinent to the design of the ESPR label, including the potential incorporation of elements already featured on the EU Energy Label, the significance of various colour schemes, the language employed within the label, and the number of parameters displayed. The second section focused on evaluating the effectiveness of different label prototype elements.

In total, the survey gathered 227 responses from a diverse range of stakeholders from various types of organisations (see **Table 2-2**). The main respondent group in the survey are business associations, primarily producers. Other participants include Member State authorities, NGOs, academia, and professional associations. In terms of geographical reach, most organisations operate at either the EU or global level, with particularly strong representation from Portugal, Belgium and Germany, alongside other EU and non-EU countries overall representing 19 different countries. To facilitate the analysis of the data, these stakeholder types have been grouped into three groups, business-related stakeholders (business), NGO, academia and others, and Member State authorities. Among these groups, the business-related stakeholders represent the most predominant group (145 respondents, which correspond to 63.88% of the responses), the second group are the NGO, academia and others (56 responses, which correspond to 24.67% of responses) and the least numerous group is the Member State authorities (26 responses, which correspond to an 11.45% of responses).

Table 2-2: Number of respondents in the survey per type of stakeholder group.

Type of stakeholder	Stakeholder group	Number of respondents
Total	Total	227
Business / business association (producers)	Business	98
Member State authority	Member State authority	26
Business / business association (other)	Business	25
Business / business association (traders)	Business	17
NGO (including consumer and environmental organisations)	NGO, academia and others	15
Academia, research institute or think tank	NGO, academia and others	13
Professional association	Business	5

[10] Group of experts on Ecodesign for Sustainable Products and Energy Labelling ('the Ecodesign Forum') https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3969&fromCallsApplication=true

Other[11]	NGO, academia and others	28

Following the stakeholder consultation, a set of six interviews were conducted to confirm the answers from the survey and to expand topics that were asked in the survey (see **Table 2-3**). These interviews were semi-structured and tailored to each interviewee based on their specific feedback and experience on product labelling.

Table 2-3: Interviewees after the first stakeholder survey.

Type of interviewee	Number of interviews
Total	6
Business associations	4
NGOs	1
Member State authorities	1

2.2.3. Results

ESPR Label consumer use and expectations

The survey included a question on the main expectations that stakeholders had about the future ESPR label. The response options included:

(i) the enablement of more sustainable consumption practices (i.e. to nudge towards more sustainable choices),
(ii) the ability to create more transparency in the market (i.e. to prioritise the provision of information),
(iii) to support consumers in making choices by making high-quality information about products available to them (i.e. repairability, durability), and
(iv) to enhance the thorough comparability of products, and their comparability in a simple manner.

Respondents supported all four expectations, with strongest support for encouraging more sustainable consumption practices and increasing market transparency. Enabling product comparability received the least support.

General label design

Label design preferences highlight a strong emphasis on simplicity, clarity, and adaptability, with a focus on ensuring broad accessibility and functionality. Neutral, symbol-based designs take priority to avoid translation challenges and associated costs, as an over-reliance on English text could lead to misunderstandings in non-English-speaking markets. There is a clear preference for smaller, space-efficient labels, ideally in a rectangular format similar to the EU Energy Label, which is widely recognised and trusted (see **Figure 2-6**).

In terms of visual presentation, stakeholders expressed their preference for colours for impact and readability, though flexibility remains key—the design should also function effectively in black and white where needed. Rather than adopting a one-size-fits-all approach,

[11] The category others include a diverse arrange of profiles. Examples of these are non-profits, research labs that are not strictly academia, consultants, certification bodies, multi-stakeholder organisations, or individuals that work in relevant companies.

stakeholders recommend tailoring colour schemes to specific product categories, with some even suggesting monochrome or minimal colour palettes to streamline implementation and prevent confusion.

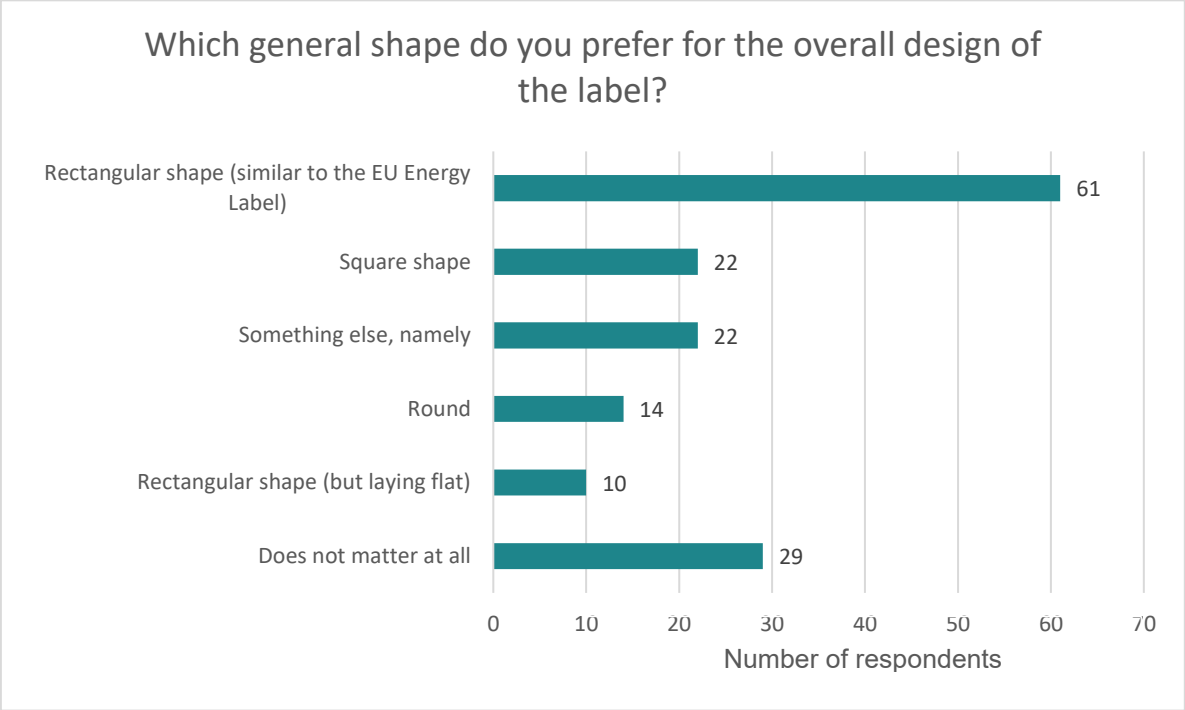


Figure 2-6: Answers to shape preference for the ESPR label.

Number of parameters

Respondents show a clear preference for using separated scales for each parameter, along with including all 16 parameters for comprehensive product assessment. As a second choice, opinions vary, with some favouring between 6 to 10 key parameters instead. However, concerns remain about the lack of clarity in how these parameters will be integrated, which could potentially distort the results and reduce the label's effectiveness.

The use of different languages

Language neutrality is the preferred approach across most groups, though NGOs, academia, and EU-level organisations show a clearer preference for translated content (see **Figure 2-7**). Finally, the survey respondents note that a language-neutral label would reduce labelling costs. This saving could reasonably be attributed to lower translation expenses and the streamlined logistics of ensuring each label reaches its intended market.

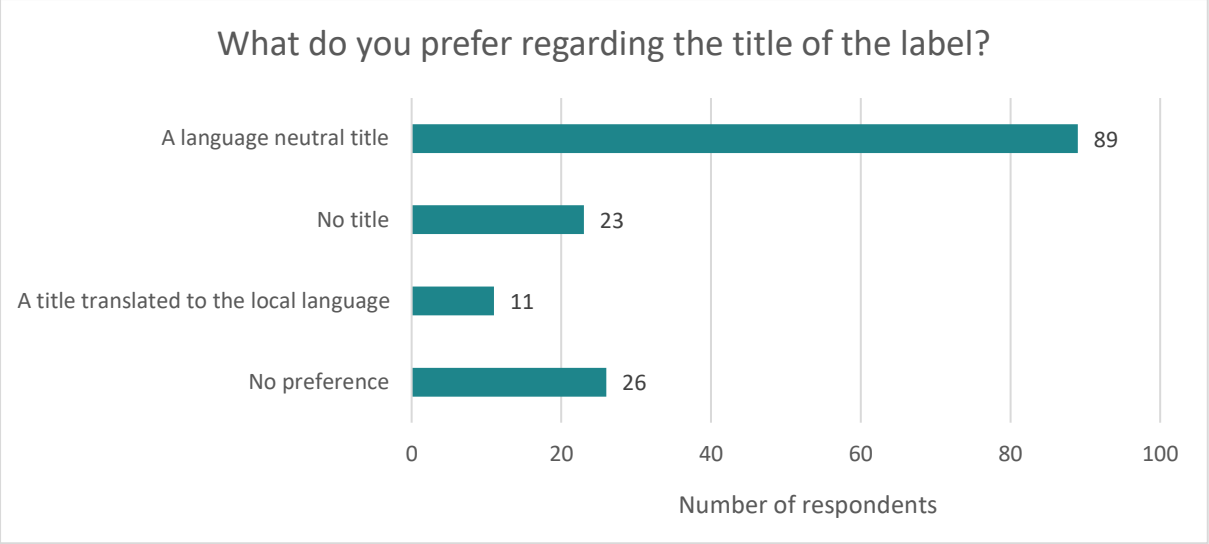


Figure 2-7: Answers to language preference in the label title.

The integration of a QR code

Stakeholders broadly support the inclusion of a QR code on the label, recognising its potential to provide quick access to detailed information. Most respondents show a strong preference to include QR codes as it was included in the EU Energy Label. However, they also acknowledge drawbacks, including its impact on the label's visual appeal, potential accessibility challenges for some users, and the additional time required to scan and interpret the linked data.

Label recognisability

Stakeholders expressed that every element of the label plays a role in enhancing its recognisability and clarity, though not every element contributes equally. Where multiple colours, column-based information structuring, and typographic emphasis—such as bold or italic text—are considered less impactful, the most valued aspects are simplicity, public awareness, and the clarity of symbols. A well-designed label also benefits from consistent value alignment, where, for example, a higher number reliably indicates a positive attribute. Importantly, the label's features must be tailored to suit the specific product type, ensuring relevance and effectiveness across different categories. This approach ensures the label remains intuitive, user-friendly, and universally applicable.

The reutilisation of elements from the EU Energy Label

Most respondents show a strong preference for a similar outline to the EU Energy Label and its elements. The QR code ranks first, while the A-to-G energy scale ranks second as most favoured elements, leveraging existing recognition particularly from the familiarity of the EU Energy Label. Meanwhile, the blue title is the least popular design choice. However, 39 respondents selected "none", indicating that support for reusing elements from EU Energy Label was not universal (see **Figure 2-8**). Member State authorities also view similarity to the EU Energy Label or other existing labels as a potential source of overlap and conflicting information if they are combined next to each other. To offer a comparative analysis of the values in **Figure 2-8**, the business-related stakeholders represent 63.88% of respondents, NGO, academia and others are 24.67%, while Member State authorities are 11.45%, as mentioned in **Section 2.2.2**.

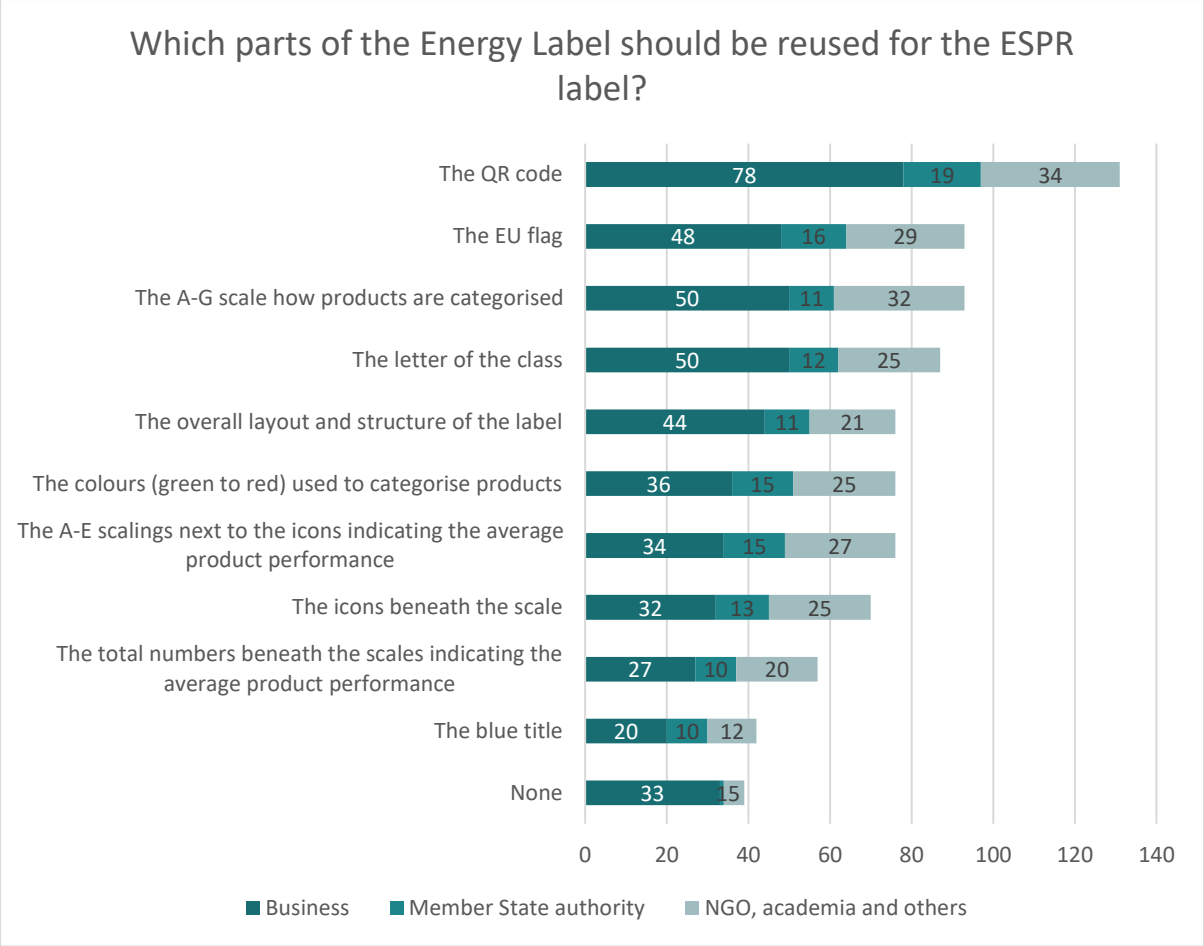


Figure 2-8: Stakeholder opinions on the reutilisation of elements from the Energy Label.

Stakeholder concerns regarding an ESPR label

Some of the surveyed stakeholders raised additional concerns about the proposed ESPR label. Some question how it would align with existing labels, such as the DPP and the EU Energy Label, fearing potential overlap or confusion. Stakeholders have also pointed out the uncertainty about the label's scope, key metrics, and measurement methods. Clarifying these details early is essential, as they directly influence the label's design and stakeholder acceptance. These issues are relevant, as an increased amount of labelling requirements can increase the administrative burden of retailers and producers, as well as represent a significant cost in the packaging.

Another issue is whether a single ESPR label layout can effectively cover diverse products like appliances, furniture, and textiles, which vary greatly in function, size, and information needs. As several stakeholders pointed out during both the interviews and in the survey open-ended questions, defining the included products first could help determine if a one-size-fits-all approach is feasible or not and the number of shared details that can be shared across all the included products.

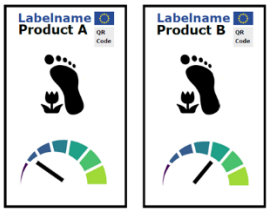
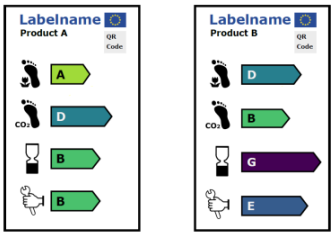
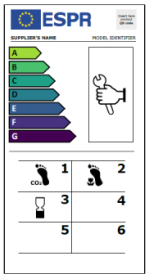
Finally, some stakeholders emphasised the need for a digital-only label – a view already emphasised for textile products in stakeholder consultations in the context of preparing the revision of the Textile Labelling Regulation (EU) 1007/2011, in which, while over 70% of respondents in the Open Public Consultation supported the inclusion of sustainability and circularity information on a label for textile products, 62% of respondents in the targeted

consultation favoured a digital-only solution[12]. According to those stakeholders, introducing a physical version could increase costs, confuse consumers, and undermine efforts to reduce packaging—especially for smaller products.

Preference for elements of a potential prototype

In the final phase of the survey, stakeholders evaluated six potential prototypes for the future ESPR label, assessing them across several key dimensions (see **Table 2-4**). Such label prototypes were drafted by the design team within this consortium, drawing inspiration from existing labels and insights from the literature review.

Table 2-4: Elements and first designs for ESPR label prototypes tested in stakeholder consultation I.

Type 1	Type 2	Type 3
		
Increasing size of the icon means a larger footprint	The colour scale and size indicate the product's footprint	A single icon and rating scale in the shape of a snail.
Type 4	**Type 5**	**Type 6**
		
A label with several key icons for indicators and ratings.	A label combining different elements emulating the format of the EU Energy Label	Modular system of elements and indicators

The surveyed stakeholders rated each design on its practical feasibility (including ease of implementation both in-store and online, such as printing requirements and product integration) as well as its ability to clearly communicate product attributes. Stakeholders also

[12] However, it is important to note that, in the context of the Textile Labelling Regulation (TLR) revision, the alternative of a physical label has the specific meaning of a "support for written labelling information permanently attached to the textile product". The TLR physical label therefore implies particular costs for businesses and particular consumer readability concerns, alien to the wider concept of an ESPR physical label. For that reason, the preparatory work for the TLR revision, currently planning for the introduction of a digital label carrying (also) ecodesign information (in a layout and format drawing from the conclusions of this study), is without prejudice to the possibility of a physical ESPR label, different and separate from the TLR physical label, being introduced for textile products under the planned ESPR DA for the introduction of ecodesign requirements for textile apparel.

considered how easy the designs were for consumers to understand, their accessibility in ensuring clarity for all consumer groups, and their recognisability—meaning how well they stood out and remained memorable. Additional criteria included the label's effectiveness in influencing consumer behaviour, its transparency in conveying information, and its simplicity in avoiding information overload. Finally, respondents examined whether the proposed designs risked conflicting with existing labels, including those at a national level.

The survey revealed clear preferences among label designs, with the Type 4 label, with key icons for indicators and ratings, ranking as the most effective in terms of communication, implementation, and consumer understanding. The Type 5 label, which mirrors the EU Energy Label's structure, emerged as the second-most favoured option.

In contrast, the Type 1 label, with its oversized icons and larger footprint, was deemed the least effective across these criteria. Among NGOs and other organisations, preferences were as follows:

- **Type 4** again led as the top choice for accessibility, recognisability, influence on consumer behaviour, transparency, and ease of understanding.
- **Type 5** remained the second preference across these criteria.
- **Type 1** and **Type 6** were the least preferred, particularly for accessibility, recognisability, and transparency.
- **Type 6** ranked lowest for transparency and understanding, followed closely by Type 1.

2.2.4. Summary and conclusions from the first round of stakeholder consultation

The survey reveals broad support for the ESPR label's objectives, with transparency and sustainable consumption most highly valued. The survey also indicates a preference for a language-neutral label and for an layout similar to the existing EU Energy Label. Preferences for label design emphasise clarity, simplicity, and adaptability, while concerns remain about costs, complexity, and potential confusion with existing labels. The table beneath summarises the main findings from the stakeholder survey.

Table 2-5: Overview of the main findings of the ESPR label design in comparison to the outcomes of the literature review.

Category	Key Findings from the stakeholder consultation	Findings from the literature review
Consumer expectations	Strong support for promoting transparency and sustainable consumption; least enthusiasm for enabling product comparison (particularly among businesses).	-

General design	Preference for simplicity, clarity, and adaptability; symbol-based designs to avoid translation costs; smaller, rectangular format (like the EU Energy Label). Colour favoured but should adapt to black and white. Product-specific colour schemes recommended.	Consumers also prefer simplicity and clarity in label design (see e.g., Hay et al., 2024). However, the literature suggests that symbols without text can be misunderstood (Hartmann et al., 2025). Labels must attract consumers' attention to impact their decisions. Hence, labels should not be too small. Colour-coded labels are preferred by consumers (see e.g., Liva et al., 2025).
Parameters	Separate scales for each parameter preferred, with support for all relevant parameters (or 6–10 key parameters as a secondary option). Concerns about lack of clarity in integration potentially distorting results.	Too much information on labels can distract consumers. Hence, displaying too many parameters could reduce label clarity and understandability. Labels with one overall class are generally well understood.
Language use	Language-neutral designs preferred to reduce costs; NGOs, academia, and EU groups favour translations. Translation identified as the costliest implementation activity.	Consumers tend to not prefer language-neutral designs. Instead, including text on labels that otherwise only consists of symbols is useful for understandability (Hartmann et al., 2025). Bilingual options (i.e., national language and English) are viewed positively by consumers in one study (Liva et al., 2025).
QR Code inclusion	Broad support for QR codes (aligned with EU Energy Label precedent) for quick access to details, but concerns about aesthetics, accessibility, and time to scan/interpret data.	Generally, consumers also support QR codes. However, concerns regarding practicality for impulse purchases or products in supermarkets are discussed (Hay et al., 2024). Studies reveal that QR codes are hardly used (Denny, 2022).
Label recognisability	Simplicity, symbol clarity, and public awareness most valued; colours, columns, and typography (bold/italics) seen as less impactful. Consistent value alignment (e.g. higher numbers = better) improves usability.	Literature suggests that simplicity and clarity of the label design are important for understandability. In addition, consumer awareness of the label is essential for label use. The literature also backs the importance of consistent value alignment.
EU Energy Label elements	Strong preference for reusing EU Energy Label components (QR code ranked highest, A–G scale second). Member States caution against conflicts with existing labels if designs overlap.	Literature indicates that the alphabetical scale A-G of the EU Energy label is generally understood by consumers (see e.g., Faure et al., 2021).

2.3. Sub-task 1.4: Cost estimation

In order to determine labelling costs, efforts were undertaken to speak with commercial actors who are required to provide labels on their products. The focus was on reaching out to commercial actors who are obliged to provide labels on their products (as opposed to voluntarily choose to as is the case with eco labels). Two main label groupings were identified: the EU Energy Label that is applied to household appliances, and the GINETEX label that is sewn into clothing items.

At the time of writing data has only been obtained with regard to energy labelling costs - where several market actors agreed to supply cost information providing their identities were protected. In the case of the GINETEX label no information has currently been supplied despite requests made to relevant market actors and industry associations. Such cost insights will be added in a later iteration of this report if data is eventually supplied.

2.3.1. Energy labelling costs

With regard to energy labelling the appliance producers contacted indicated as follows.

Costs associated with supplying a physical label

The average cost to supply a physical label for a household appliance is €0.24 (with a range of €0.20 to €0.29 per label).

The costs are comprised of the following elements:

- Procuring a colour label template sticker from a supplier.
- Printing (in black ink) the product-specific information onto the label.
- The costs of the handler who places it with the product manual in a bag and puts it in the appliance in the factory.

The largest cost component is the label template sticker which is typically more expensive than it would need to be for pure regulatory compliance because suppliers opt to use a high-quality sticky label that can be removed without leaving any residue.

In periods where labels are changed due to regulatory changes and the four-month transition period stipulated in the Energy Labelling Regulation (ELR) during which time producers are obliged to supply both the old and new label formats, the average costs rise to €0.39 for the two labels per product shipped.

Costs associated with entering energy label information into the EPREL database

For the energy label, there are also costs associated with the requirement to enter product information into the EPREL database.

These costs comprise a fixed cost associated with software procurement, maintenance and adjustment and a variable cost associated with staff time required to enter the information into the database. Normalising these costs over the number of models needing to be entered produces an average cost of €50 per model entered into the database; however, these will be higher for suppliers with fewer models in their range than those with more.

Note, the above costs do not include the initial set-up costs to get a supplier's product information system to link to the EPREL format and system.

Costs associated with entering label information into a vendors' website

Most product suppliers not only sell products to consumers through a retail chain but also offer the option to direct purchase via their own website. However, in this case the suppliers already host the product information data (from the product information sheets) on their sites, so the extra costs exclusively associated with the label are minimal. In the case of household appliances there is a common Product Information standard that APPLiA and EuroCommerce have developed which allows the product information to be supplied from the producer's system to e-retailers via a common template, which the latter then use to supply the information on their websites.

Costs associated with supplying product sustainability information to e-retailers to include in their websites

Euronics/APPLiA are working with EuroCommerce members to provide product sustainability information in a way that e-retailers can use (as they wish) as additional product features in their online retail (to allow users to search by sustainability parameter of interest). This builds on work done in a LIFE project (the European Union's funding instrument for environmental and climate-action projects). Suppliers are currently testing the market with this to see how much interest there is among consumers for this type of information.

In addition, the collaborative labelling and appliance standards program (CLASP) with agreement from the Commission supplied a free software tool, an ''applet", that links to the product information sheet to allow the label class to be shown in a compliant way on e-commerce sites (either in suppliers' own e-commerce sites or on e-retailer sites).

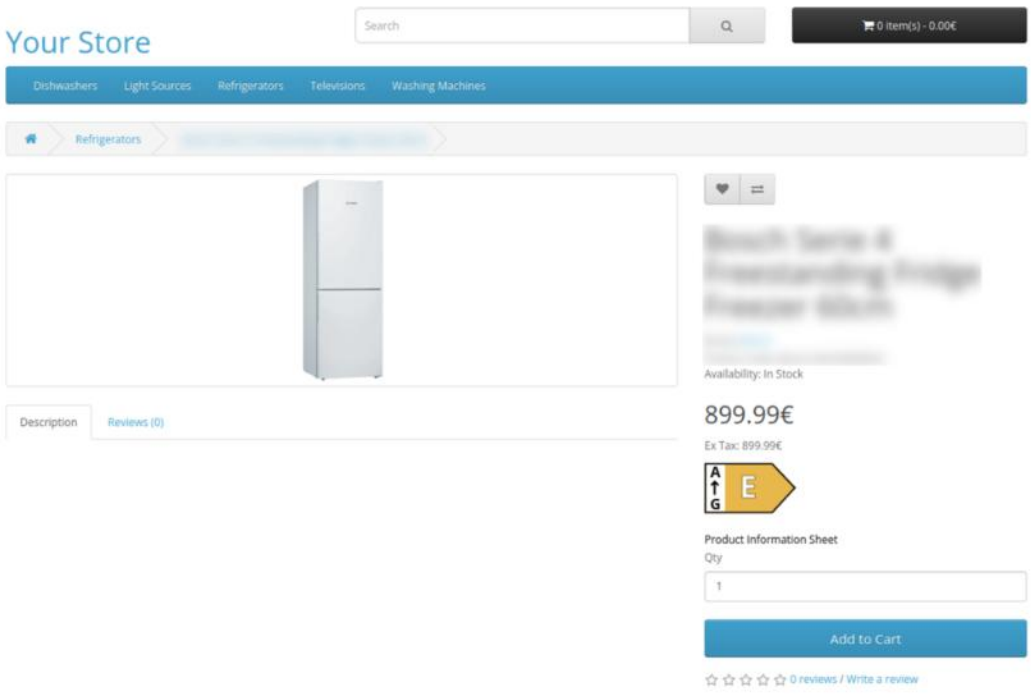


Figure 2-9: The CLASP Energy Label applet.

The Applet displays the label class arrow, assembles the EPREL info and displays it when requested by the site users (see **Figure 2-9**).

2.3.2. Clothing labelling costs

Vendors of clothing items are required to provide a label, known as the GINETEX[13] label which reports information on how to wash and iron clothing in line with an ISO standard. This label is typically sewn into items of clothing on a soft and flexible material and uses the Care symbols under the standard ISO 3758:2023 (see **Figure 2-10**).

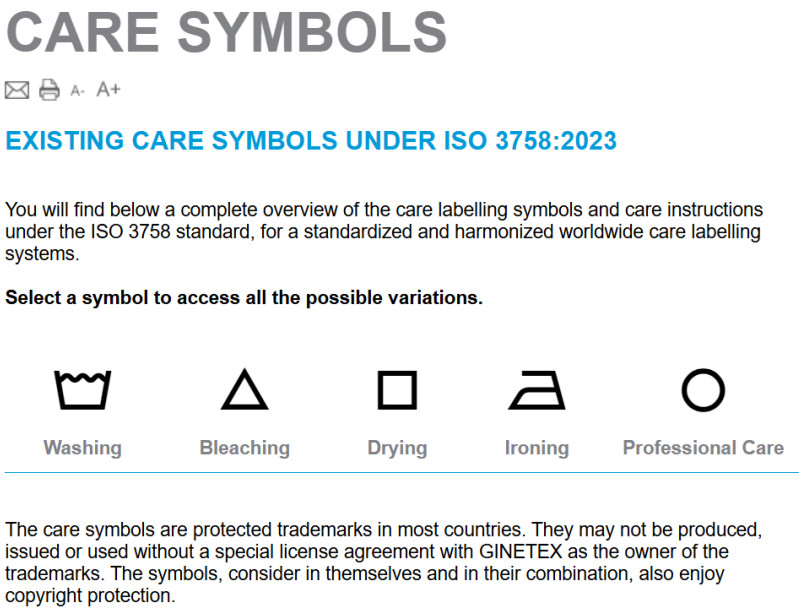


Figure 2-10: The GINETEX clothing care labels.

Thus far, no clothing supplier has agreed to supply information on the associated costs.

2.3.3. Costs associated with the French Repairability and Durability indices

It is also interesting to note the costs associated with providing the information required by the French repairability[14] and durability indices.

The repairability index applies to many product types and the durability index currently only to a single product group, as compliance is understood to be too hard to test. These indices also link to product information sheets.

Information on the costs, both for initial set-up and for ongoing implementation, have been provided by one major appliance supplier and indicate that in their situation the amortised costs over a multi-year period would amount to something between €0.25 and €0.30 per appliance sold. These costs encompass:

[13] See: https://www.ginetex.net/gb/labelling/care-symbols.asp
[14] See: https://monindicedereparabilite.fr/index

- the initial development and implementation effort required to establish the information assessment and calculation framework
- recurring costs associated with maintaining the scheme, including the assessment and documentation of new models, monitoring regulatory changes, and operating and maintaining the IT infrastructure and calculation tools.

It is not possible to generalise from this case as other suppliers may have quite different sales volumes.

How these costs might relate to any EU-led ESPR system would also depend on the approach used for data reporting and requirements therein, but reporting such information in a transparent way in a single EU scheme would be cheaper than reporting in separate national schemes.

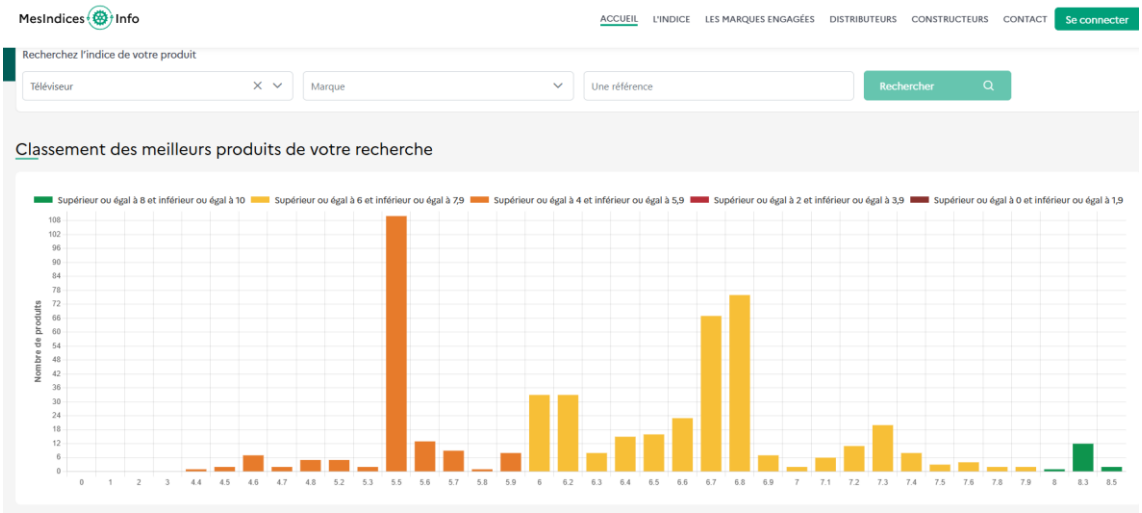


Figure 2-11: Distribution of products by Repairability Index under the French Repairability Index scheme.

Figure 2-11 illustrates a screenshot (taken in March 2026) of the frequency distribution of products by their repairability indices within the French repairability scheme (where the higher the number on the x-axis, the greater the repairability of the product). It is illustrative of the kind of information that consumers can access publicly via the scheme's official website.

3. Task 2: Conceptual and graphical design of the ESPR label

3.1. Sub-task 2.1: Design of 3 label prototypes and nested label designs

Prototypes were designed based on previous findings from the project and experience with other labels..[15] In general, the label prototypes aim at providing sufficient information while still being comprehensible for consumers and taking limited space for the label into account. As discussed by Senatore et al. (2025) in the label design process, decisions have to be made regarding what information is crucial and thus should be included in the label (primary information), and what information can be provided through other sources to limit information overload (secondary information). Language chosen for the label should be understood easily by customers in the Member States (Senatore et al., 2025).

Before starting the design process, some general considerations regarding a label taxonomy were made in order to structure the discussion on design elements within the study project team, with the Commission, and with further stakeholders. **Figure 3-1** illustrates the breakdown of elements included in the eco-label design. It features a branding section for displaying the label's name or logo that forms the label's identity. Additionally, the label comprises a narrower label area that can include colour-coded visual scales and space for further indicators, such as icons depicting performance based on specific attributes. A QR code is also integrated as a digital data carrier, intended to provide access to detailed product information. The importance of a data carrier linked to further information is backed by Senatore et al. (2025). Notably, the figure serves to outline potential label components and is not intended to present a finalised or draft design or configuration.

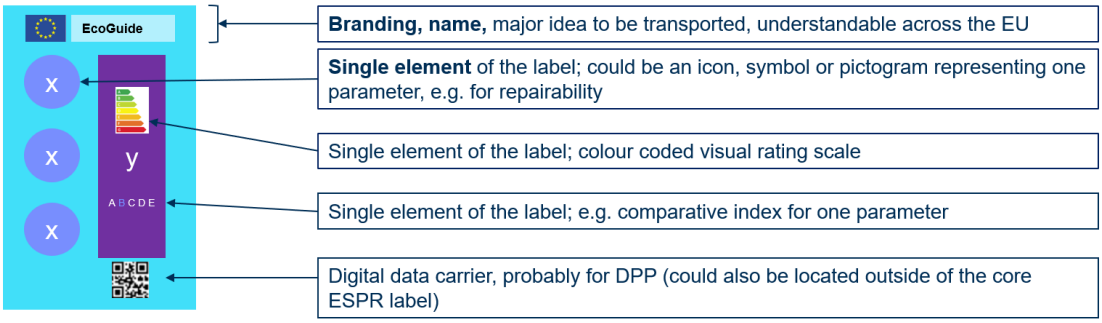


Figure 3-1: Label taxonomy.

Three well-differentiated label prototypes of the general layout of the ESPR label were developed, with one additional prototype that is still in an early draft version. The following label prototypes represent the first consolidated drafts, developed after stakeholder consultation I through multiple iterations within the study team, following the integration of findings from the literature reviews and based mainly on the creativity of the involved design

[15] The icons and graphical elements used throughout this report for the preparatory label prototype development prior to testing in Task 3 include original artwork created by the authors, openly available icons used in accordance with their respective licence terms for research purposes (www.flaticon.com), and a selection of licensed Shutterstock materials. Shutterstock image IDs include 2533711017, 2425600633, 2562510187, 2577660463, 2613030729, and 2620551335.

team. Various label elements and earlier versions of the subsequent label designs were incorporated into and tested with Consumer Focus Group 1 (see **Section 3.4**).

The Viridis colour palette was used in most prototype designs. This colour palette is well suited for visualisations as it makes differences in values easy to distinguish. It is colour-blind-friendly, which improves accessibility, and maintains clarity when printed in greyscale. Additionally, its smooth gradient and balanced hues make it visually appealing and suitable for presenting quantitative or categorical data consistently.

Before presenting the set of initial prototypes the next section expands on the relevance of, and suggestions for the label identity.

ESPR label identity and identity forming elements

A label needs a clear identity, as its impact relies on recognition, trust, and understanding by the consumers and stakeholders alike and supports differentiation from other labels on the market (e.g. Nakaishi & Chapman, 2024). Consistent visual elements help consumers to quickly identify the label, signal reliability, and make complex information more accessible (Hay et al., 2024). A concise name or title, for example, forms an important part (Operate, 2022). All label designs included for discussion use the label ‘ESPR’. This, together with the QR code and the EU flag, forms the identity of the label. However, as ‘ESPR’ is not known in society, it is advisable to provide the label with a more specific title to ensure it reflects the content it should communicate. For example, combining an icon with a title can help establish a clear sense of identity (see **Figure 3-2** and **Figure 3-3**). In this phase of the study, several alternative proposals for the label’s title, such as EcoGuide or EcoIndex, were under discussion with the Commission. Various concepts for visual anchoring of the label's general idea using different icons have been tested in the first round of focus groups. The results of these discussions and tests will be incorporated into the next stage of label refinement.



Figure 3-2: 'Eco Design' as label name.

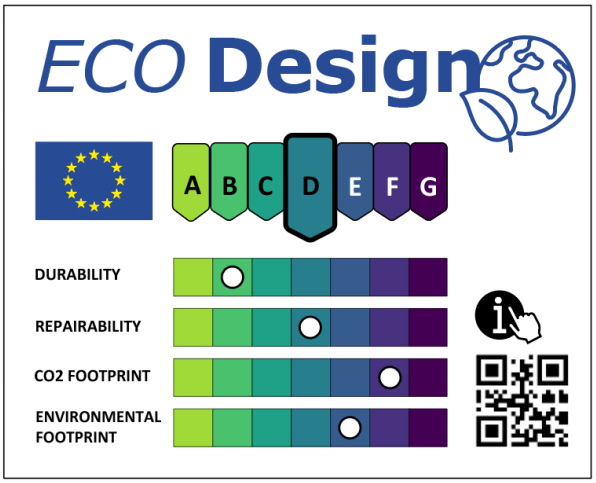


Figure 3-3: 'Eco Design' as part of the label identity.

Prototype I: single indicator or overall index solution

The first prototype presents two single indicator solutions which consist of one main product score (i.e. a weighted overall indicator). This puts emphasis on the need that consumers will make quick purchasing decisions at least for some product categories and the capacity to process large amounts of information is challenging in such situations. Therefore, presenting information in a digestible format is essential. The main design principles were a choice of typography with high legibility across different sizes and media, and a layout that ensures a logical hierarchy of information. The two solutions apply two different colour schemes and designs. While the first design (see **Figure 3-4**) adopts a neutral yet clear visual language, the second design (see **Figure 3-5**), with its leaf motif, already establishes a reference to nature and, by extension, environmental protection. On the one hand, this can reinforce the label's message; on the other hand, it can also be distracting if the label has limited recognition. Aggregation of data into one single indicator or overall index can have limitations - for instance it can oversimplify environmental issues and reduce transparency (Senatore et al., 2025).

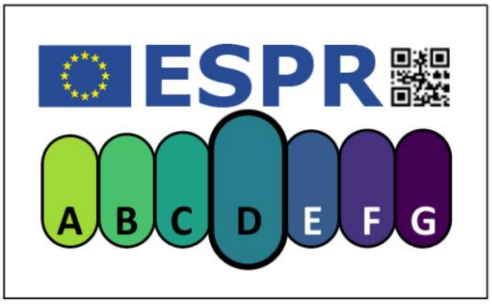


Figure 3-4: Prototype I, single indicator or overall index solution (Viridis colour palette).



Figure 3-5: Prototype I, single indicator or overall index solution (leaf icon, green-red scale).

Prototype II: superordinate/overall index formed by selected parameters

Label prototype II employs a higher complexity approach, generating a single overall score derived from four (or more) selected indicator scores. This allows key parameters and product performance aspects—such as durability, repairability, carbon footprint, and environmental footprint—to be presented in a concise, understandable format. However, there is a risk that the weighting or prioritisation of parameters may vary between product categories, potentially affecting the comparability and balance of the overall score (see **Figure 3-6** and **Figure 3-7**).

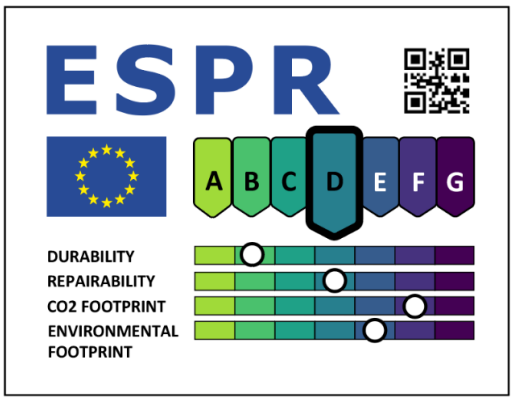


Figure 3-6: Prototype II, superordinate/overall index and selected parameters (product parameter presented in text form).



Figure 3-7: Prototype II, superordinate/overall index and selected single parameters (product parameter presented with icons).

Prototype III: non-hierarchical, multi-parameter solution

This label prototype follows a higher complexity approach and is inspired by the design and concept of the EU Energy Label (see Figure **3-8** and **Figure 3-9**). It allows multiple parameters to be presented in parallel, with one key parameter highlighted at the top and a lower section displaying an adaptable number of additional parameters. Unlike the simpler prototypes, no weighted overall score or major index on a particular selection from the list of parameters is included. A similar design was proposed by Senatore et al. (2025), who argue that the design should showcase classes of performance for environmental impact as priority information,

enabling a clear understanding of the environmental footprint of a product. Similarly to our design Senatore et al. (2025) offer additional information below the main classes of performance. Distinct classes are chosen for this information as they are easy for comparison between several products (Senatore et al., 2025). However, this approach entails certain risks, such as potential confusion with the EU Energy Label, and it may be challenging for consumers to identify the relevant information, thereby reducing its effectiveness in guiding their decision-making. This caution is supported by insights from the literature review.

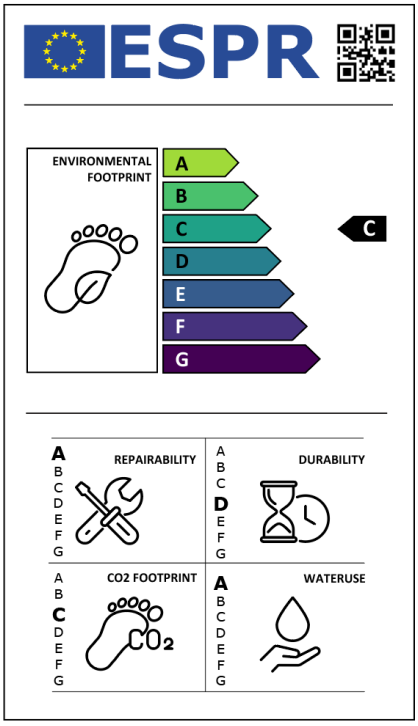


Figure 3-8: Prototype III, non-hierarchical, multi-parameter solution (5 parameters displayed).

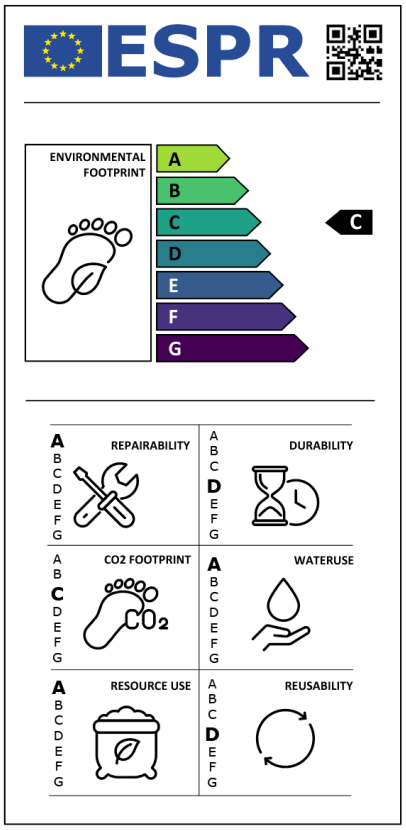


Figure 3-9: Prototype III, non-hierarchical, multi-parameter solution (7 parameters displayed).

Prototype IV: Game board approach

Figure 3-10 illustrates a conceptual design for an eco-label inspired by a game board layout. Each line of boxes within the label represents a specific environmental impact parameter, with more boxes filled indicating higher level for this parameter. In contrast to the former designs, the polarity is reversed here: the more icons representing one parameter there are on the board in the respective line, the better the product is and the more it fulfils the target criterion of being a resource-saving, sustainable product. Based on the findings by London Economics and Ipsos (2014), who do not find consistent differences regarding understandability comparing increasing and decreasing scales, we expect reversed scales to be generally understandable.

The design is characterised by its flexibility, allowing for colour-coding variations given the overall rating of the product (i.e. green for a product that has an A-Rating). The label also incorporates visual symbols to represent various parameters, such as footprints and hourglasses. While this draft design highlights adaptability, it also poses potential challenges, as it comes with high complexity challenging consumer understanding.

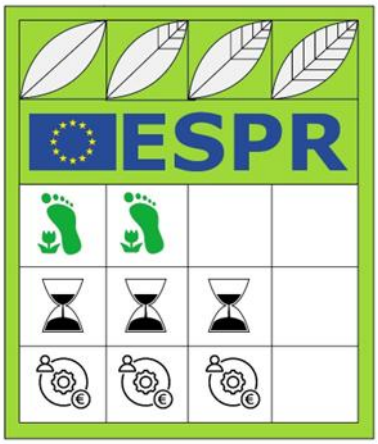


Figure 3-10: Prototype IV, 'Halma' board game solution.

Nested label designs used in online environments

Online shopping has become an increasingly important part of consumer behaviour. Furthermore, many consumers research products online before making a purchase, making it crucial to consider how ESPR related information can be effectively conveyed at the point of first contact. In this context, a nested label design can communicate complex environmental information in a structured and accessible manner. A nested display serves as a compact representation of the category defined by the primary label.

Furthermore, a certain tension between recognisability and informational depth highlights the relevance of the nested label approach: The primary label serves as an entry point, while secondary, embedded layers provide access to more detailed information—such as additional environmental impact categories, compliance thresholds, or thematic sub-criteria. For example, the EU Energy label has established such a nested label identity, preserving the visual identity of the EU Energy Label, while its underlying meaning is transparent already in the first stage of contact.

The need for such an approach is particularly pronounced in digital and online environments. On e-commerce platforms, comparison tools, and mobile interfaces, conventional static labels often appear detached from context, reduced in size, or stripped of explanatory power. Users are likely to engage in rapid scanning and side-by-side comparison, expecting sustainability information to be both immediately legible and selectively explorable. Nested label designs address this challenge by enabling progressive disclosure: a clear and concise sustainability signal at first glance, followed by deeper layers of information that can be accessed on demand without overwhelming the user.

Based on the nested label design from the EU Energy label, we developed potential nested label design for the ESPR label (see **Figure 3-11**). Both suggestions focus on: (a) sending the message that this information relates to ESPR labelling by displaying the text "ECO Design"; (b) supporting this message with a suitable icon (e.g. the overall index or one selected ESPR parameter and its performance rating); (c) providing the rating in reference to the attribute represented by the icon.

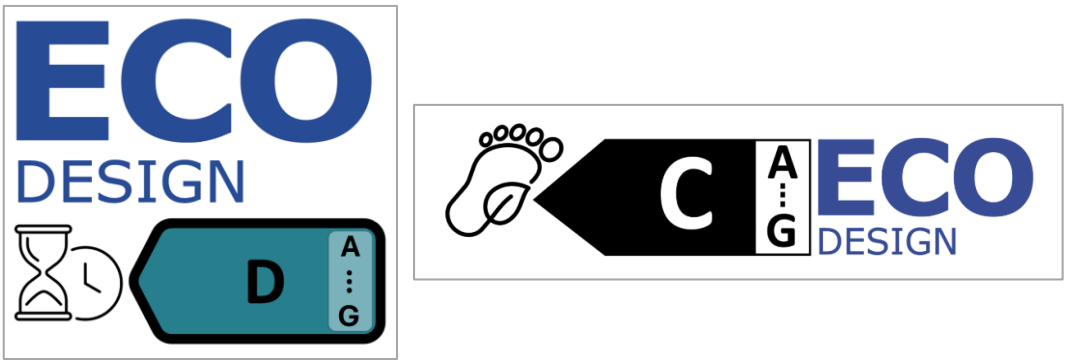


Figure 3-11: Examples of potential nested ESPR label designs.

Justification for the use of the Viridis Colour Palette in ESPR label design

One of the goals in the development of the new label is a careful consideration of accessibility, interpretability, and regulatory robustness. Since the ESPR label communicates environmentally relevant information that may influence purchasing decisions, its visual encoding must be both perceptually reliable and inclusive. For this reason, the selected colour combinations were tested using the WebAIM Contrast Checker[16] and were confirmed to meet Web Content Accessibility Guidelines (WCAG) 2.1 Level AA contrast requirements.[17]

The WCAG, developed by the World Wide Web Consortium (W3C), define internationally recognised standards for accessible (digital) communication. Ensuring compliance with these guidelines is particularly important in the context of labels, which are increasingly displayed in digital environments such as online shops, comparison platforms, and mobile applications. Adequate contrast is essential not only for users with visual impairments but also for ensuring legibility across varying screen qualities and lighting conditions.

Against this background, the Viridis colour palette was selected (see **Figure 3-12**, for ESPR label drafts, yellow was excluded and light green was used as the starting point).[18] Originally developed for scientific data visualisation, Viridis is characterised by perceptual uniformity and a consistent progression in luminance. This is a critical feature for sustainability labels that communicate graded performance levels (e.g. environmental impact categories or efficiency classes). Unlike non-uniform colour scales, which may exaggerate or obscure differences, Viridis ensures that each step in the scale corresponds to an approximately equal perceptual difference. Research on the misuse of colour in science communication (e.g. Crameri et al., 2020) has demonstrated how inappropriate colour mappings can distort interpretation; adopting a perceptually uniform scale mitigates this risk and supports transparent communication.

[16] See: https://webaim.org/resources/contrastchecker/
[17] See: https://www.w3.org/WAI/standards-guidelines/wcag/
[18] See also: https://waldyrious.net/viridis-palette-generator/



Figure 3-12: Example of Viridis colour palette with 8 categories

Importantly, Viridis also performs reliably in greyscale reproduction, as its luminance increases monotonically across the scale (see also **section 5.2**). In the context of ecodesign and labelling, this characteristic is highly relevant: labels may appear in black-and-white print, low-cost packaging, regulatory documents, or monochrome digital displays. Because the hierarchy of values remains visible without reliance on hue alone, the semantic ordering of performance is preserved even when colour information is removed.

Product groups for prototype label refinement

The design of the products on which the labels are shown must be reasonably realistic and sufficiently varied, incorporating at least five different product groups and ways of providing the information and include website, product, product advertising materials, and packaging. For further development of product-specific prototypes, the selection of product categories to be tested is essential. Together with the client and in accordance with Article 18 ESPR, the following product groups were prioritised for further prototype refinement (see **Table 3-1**).

Table 3-1: Product groups for prototype label development.

Product category	Energy use / energy related product	Ecodesign and Energy Labelling Working Plan 2025-2030	EU Eco Label Logo	Repairability Score	Type of purchase decision	Suggested placement and size of the label[19]
Furniture	No	Yes	Yes	Unclear	Planned	On the packaging or as a tag if on display (medium to large size possible)
Detergent	No	No	Yes	No	Quick	On the product but small and reduced version (extended version possible to place online)
Textile / garment	No	Yes	Yes	No	Quick	Small and reduced version on a separate hang tag (extended version possible to place online)
Coffee machine	EuP	Possibly yes through horizontal repairability measure	No	Yes	Planned	On the packaging or as a tag if on display (medium to large sizes possible)
Ear buds	ErP	No	No	Unclear	Planned	On the shelf, small and reduced version on the packaging, extended version on the shelf or/and online

The product selection includes both energy-related products (ErP), energy-use products (EuP), and non-energy-related items, which is important for examining potential conflicts in communication given that people are aware of the EU Energy Label but not the future ESPR label. In the next phase of the redesign, it is essential to refine the label prototypes taking into account existing parallel labels for certain product categories, such as the EU Ecolabel (e.g. for detergents) and the EU Energy Label (e.g. for energy-using products such as coffee machines).

[19] Considerations relate to shopping situations in a physical store.

In the next phase of label prototype refinement, further elaboration is needed on how size, format, and information content interact with the timing and context of consumption decisions given these selected product groups. These factors determine not only the effectiveness of communication but also the consumer's engagement with the product at the point of choice. It will be important to explore various placement options—whether the label appears on the packaging, in close proximity to the product itself (e.g. as a sticker), or attached to the garment's inner seam—to identify the most suitable solution for each product category. This exploration will help ensure that label design supports both usability and brand consistency across product lines.

3.2. Sub-task 2.2: Design and visualisation of the data carrier

The data carrier is likely to be a very significant part of the ESPR label as a means of providing additional information on some specific parameters needing to be reported and explained for a given product group. Hence, a data carrier offers the possibility to direct a consumer to:

- a general explanation of the ESPR label and its contents
- an explanation of the relevant ESPR impact parameters

In addition, it may direct the consumer to information on the product they are considering purchasing. The EPREL database is a good example of this, where accessing the QR code on the EU Energy Label redirects the user to all relevant technical data of the product that carries that label and code.

Note, while EPREL is a good example of how such data can be compiled and presented, it is also reported that very few consumers inspect the QR code on products with energy labels. Hence the value of the information under the data carrier is underutilised when consumers are considering their purchase decisions. There are thought to be two primary explanations for this:

- The QR code is passively placed on the label with no indication that consumers should seek to access it - many consumers are likely unaware that it will direct them to more information on the product and to the EPREL database. They may consider it to be something of relevance to the retail sector and not a portal to public information.
- The EU Energy Label is already well understood and most of the information a consumer likely needs, is already shown on the label itself.

Accordingly, as it is expected that there is intrinsically a higher need for consumers to be able to access additional information on the ESPR label and similarly on the details of any specific product (as it will be very challenging to convey all this on a simple label) the data carrier and its design becomes more important for the success of the ESPR label as a whole. This increases the importance of determining how to prompt users to access the data carrier through graphic design options on the label itself. Accordingly, this issue is explicitly explored in the first set of focus groups via a set of QR code designs with prompts.

3.3. Sub-task 2.3: Stakeholder consultation II

3.3.1. Aim and research questions

The second round of stakeholder consultation consisted of an in-depth analysis of stakeholder opinions, focusing on key topics that emerged from the previous tasks that require further elaboration from a stakeholder perspective. This consultation was developed through an additional quantitative survey, which was distributed to the same target groups that were approached during the first round of the consultation phase.

3.3.2. Methodology

As in the first round, stakeholders were contacted through the Ecodesign Forum[20]. This initial list was complemented by including the authors of the most relevant papers identified in the literature review. The participants were contacted by E-mail and invited to complete an online questionnaire.

The survey was structured into two distinct sections. The first section primarily featured multiple-choice questions, supplemented by a number of open-ended responses. It covered a range of topics relevant for the design of the ESPR label, including the potential incorporation of elements already featured on the EU Energy Label, the significance of various colour schemes, the language employed within the label, and the number of parameters displayed. The second section focused on evaluating the effectiveness of different label prototype elements.

In total, the survey gathered 193 responses from a diverse range of stakeholders from various types of organisations. The main respondent group of the survey are business associations, primarily producers. Other participants included Member State authorities, NGOs, academia, and professional associations. In terms of geographical reach, most organisations operate at either the EU or global level, with particularly strong representation from Portugal, Belgium and Germany, alongside other EU and non-EU countries overall representing 17[21] different countries. The consultation was open for a four-week period, allowing sufficient time for relevant stakeholders to provide their feedback.

[20] Group of experts on Ecodesign for Sustainable Products and Energy Labelling ('the Ecodesign Forum') https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3969&fromCallsApplication=true

[21] Germany, Portugal, Belgium, Italy, Netherlands, Czechia, Latvia, Greece, France, Estonia, Sweden, Poland, Luxembourg, Lithuania, Hungary, Denmark and Austria.

Table 3-2: Number of respondents in the survey per type of stakeholder group.

Type of stakeholder	Stakeholder group	Number of respondents
Number of respondents (total)	Total	193
Member State authority	Member States	28
Producing business / association	Business	62
Business / business association (other)	Business	12
Business / business association (traders)	Business	39
NGO (including consumer and environmental organisations)	NGO and others	14
Academia, research institute or think tank	NGO and others	10
Professional association	Business	5
Other[22]	NGO and others	23

3.3.3. Results

Main message of the ESPR label

The first question in the survey asked about the preferred main messages that the ESPR label should communicate to consumers among a set of predefined options (see **Figure 3-13**). Among the predefined options, "Product sustainability" is the most popular choice, particularly among businesses (41), followed by NGOs and others (19) and Member States (14). "Environmental impact of the product" is the second most selected choice, with businesses (30), NGOs and others (20), and Member States (14) showing interest. "Ecodesign of a product" is the third option, with businesses (29), NGOs and others (21), and Member States (13). Finally, the least prioritised options are "Circular use of resources" and "Resource efficiency". It must be noted that the most chosen option among all stakeholder groups was "Other".

[22] The category others include a diverse arrange of profiles. Examples of these are non-profits, research labs that are not strictly academia, consultants, certification bodies, multi-stakeholder organisations, or individuals that work in relevant companies.

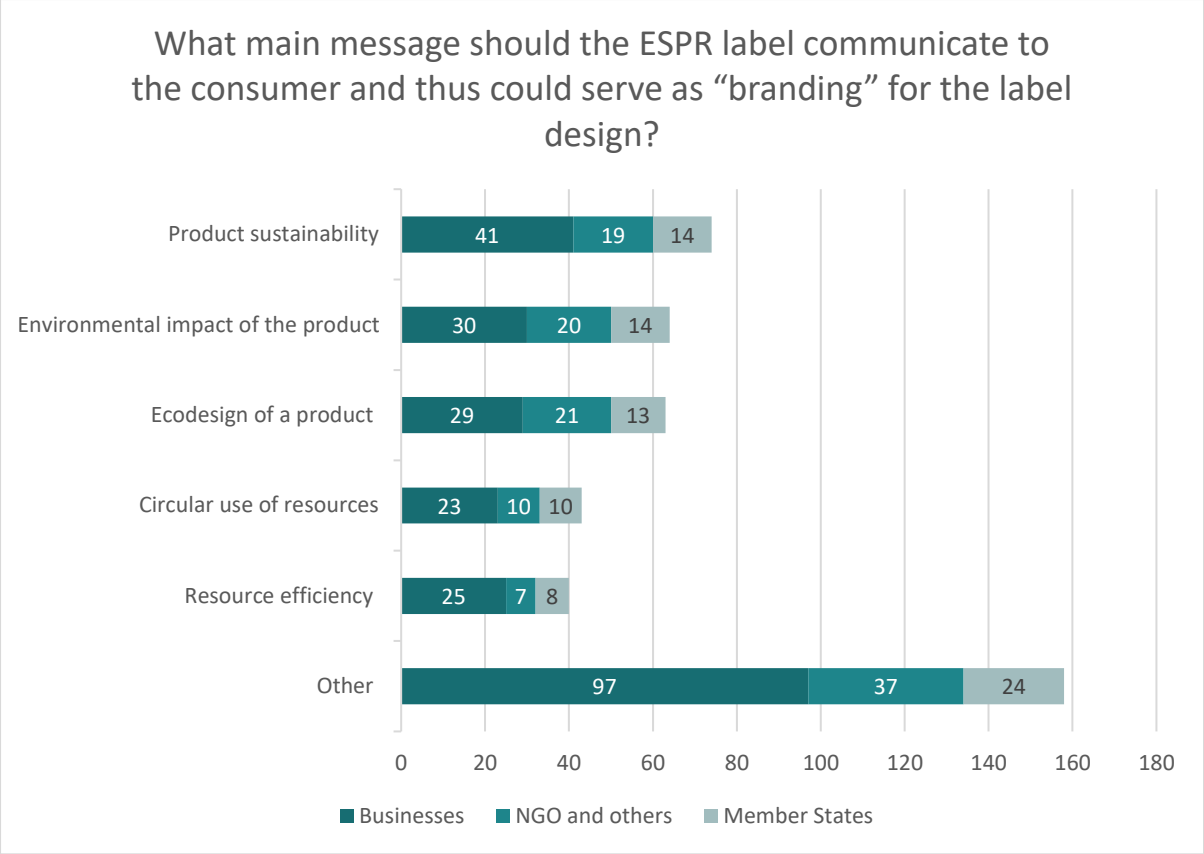


Figure 3-13: Responses on the label main message.

When asked on their opinion on the ESPR label message, the consulted stakeholders expressed concerns regarding the development of a unified ESPR label. Critics argue that the content, layout, and main message should be tailored to separate products in the delegated acts, as sustainability parameters and consumer information needs differ significantly across products. The consulted stakeholders raised doubts about whether a single, unified label can adequately reflect such diversity. Additionally, some of the stakeholders expressed their concerns that a standardised ESPR label might prove impractical or misleading for consumers, particularly in terms of its main message. Finally, several stakeholders also expressed their concern on the potential duplications arising if the Digital Product Passport (DPP) is not finalised before implementing the ESPR label.

Label title

The stakeholders were also asked about the title that should be given to the ESPR label, and they were given six hypothetical titles to choose from (see **Figure 3-14**). From these, EcoDesign emerges as the most favoured title proposal among respondents, particularly among businesses (22), with NGOs and others (13) and Member State authorities (10) also showing notable support. This suggests a strong inclination towards emphasising the design aspect of sustainability in the label's title. In second place, the title ESPR itself is preferred by businesses (18), Member State authorities (8), and NGOs and others (7), indicating a moderate level of support for retaining the regulation's acronym as the label title. Then, EcoIndex and EcoImpact are relatively balanced in their appeal, with EcoIndex receiving 13 votes from businesses, 7 from NGOs and others, and 7 from Member State authorities, while EcoImpact is supported by businesses (12), NGOs and others (9), and Member States (3). Finally, SustainScore and Eco are less popular options. SustainScore is backed by businesses (11), NGOs and others (4), and Member State authorities (7), whereas Eco receives 8 votes from Businesses, 2 from NGOs and others, and 4 from Member State authorities.

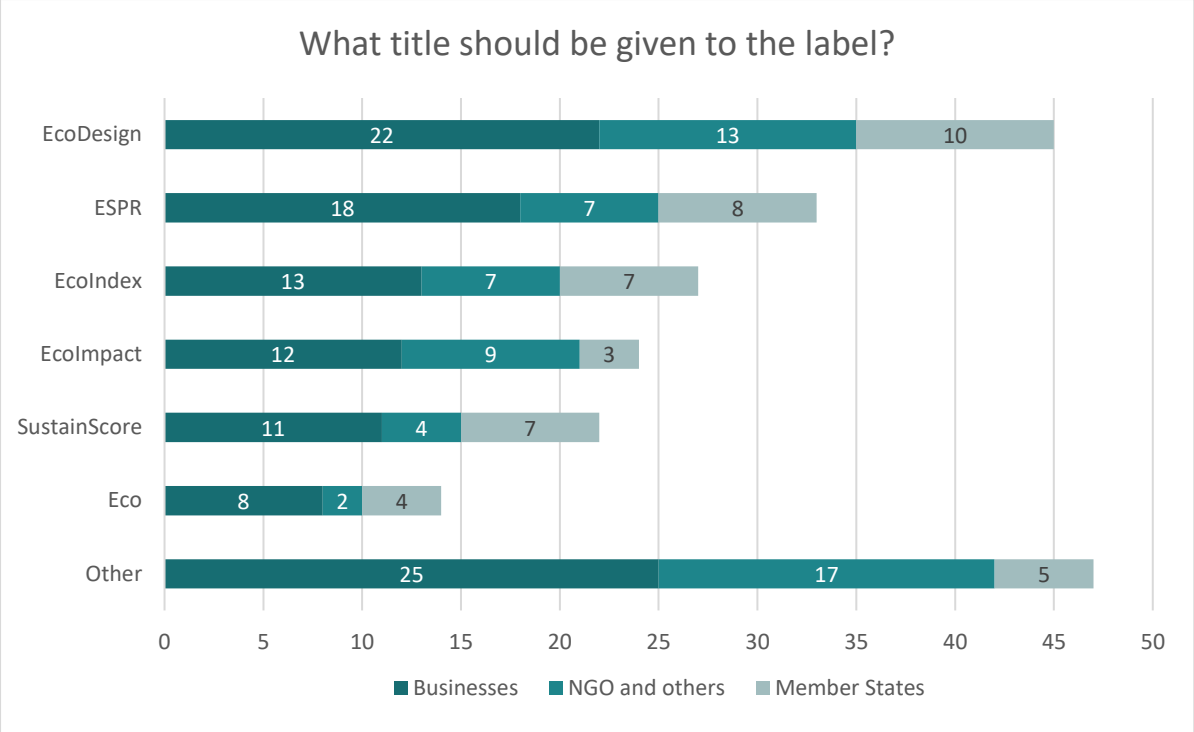


Figure 3-14: Responses to the label name.

The category "Other" is significantly the prominent choice, especially among businesses (25), Member State authorities (17), and NGOs and others (5), indicating a substantial interest in alternative or additional title options beyond those listed. When asked their opinion in an open-ended question, stakeholders expressed notable concerns regarding the use of terms like "sustainable" or "eco" for the ESPR label. Critics argue that these terms imply best-in-class performance, which may not align with the minimum requirements set by the ESPR, and some stakeholders point out that using those names may even contradict the spirit of the prohibition of vague or generic environmental claims in Directive 2024/825, notably the use of wording like “sustain” or “eco” and the leaf emblem. Additionally, such words can be ambiguous and fail to address broader issues, including social aspects. There is also apprehension that establishing a title before clearly defining the product groups and required label information could be premature, potentially leading to a misalignment between the title and the label’s actual content. Regarding the proposed names, stakeholders highlight that the ESPR acronym might be confusing for consumers. There are also mentions from some stakeholders to avoid overly generic terms in the title to prevent conflicts with the Empowering Consumers for the Green Transition Directive, and some proposals to alternative names, such as "EcoScore" or "Sustainability Score".

Presentation of parameters

Firstly, when asked how to present the ESPR parameters in the label, stakeholders showed preference for a label to display product performance across multiple parameters, which should be specified in the delegated act for each product (see **Figure 3-15**). This option is strongly supported by businesses (38), NGOs and others (31), and Member State authorities (20). The second most selected option is to display the product performance though one overall index. This option is backed by businesses (28), NGOs and others (17), and Member State authorities (11). Finally, a more reduced portion of respondents selected the option "I don’t know".

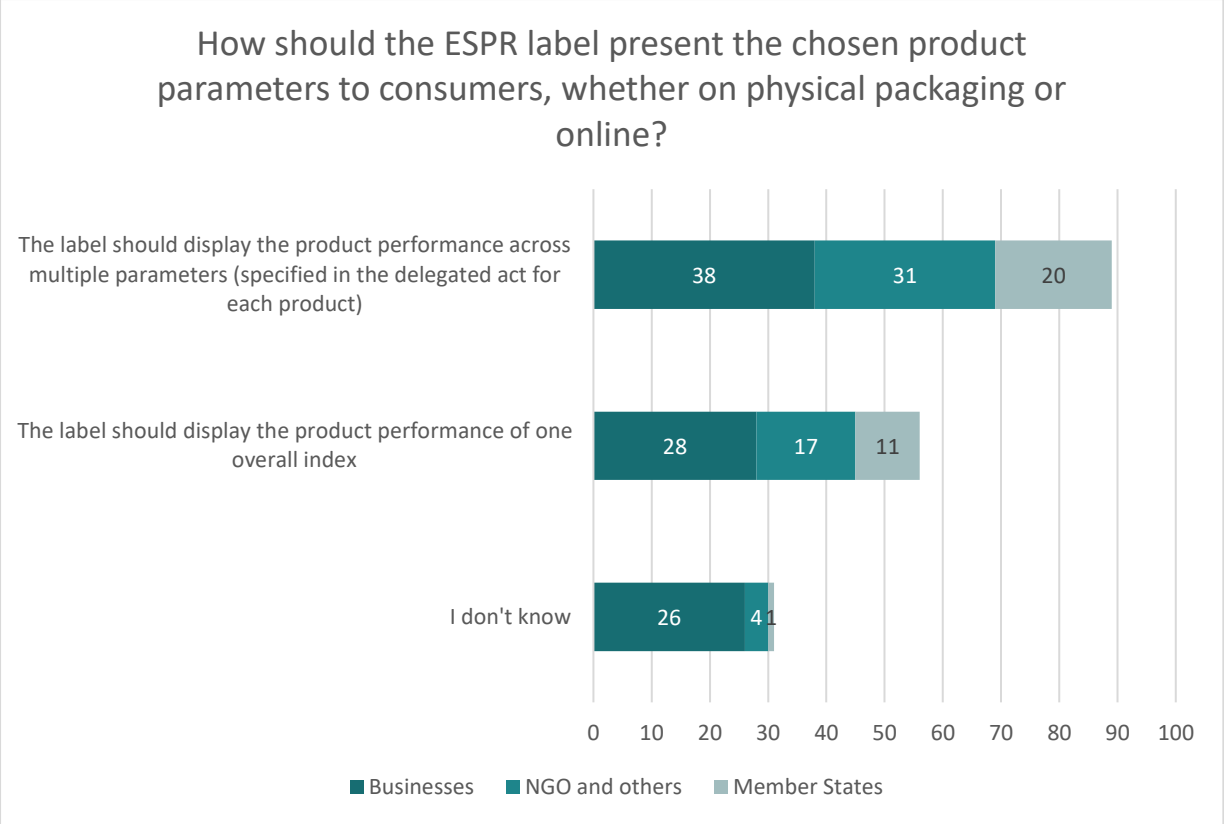


Figure 3-15: Responses to the display of product parameters in the label.

Digital label design and properties

The stakeholders we asked about the digital design and the properties of the ESPR label. These questions cover several aspects, such as the benefits of separate designs for the physical and digital versions of the ESPR label, the relationship between the physical and digital versions of an ESPR label, and the benefits for a simplified version of the ESPR label displayed in search results, product listings, or adverts on e-commerce websites.

Regarding the possibility of separate designs for the physical and digital versions of the ESPR label, the most selected option among respondents is "No" to having different designs for physical and digital labels with 95 respondents, whereas, 42 respondents answered "Yes", suggesting that they believe separate designs would be beneficial. Finally, 21 respondents selected "I don't know" (see **Figure 3-16**).

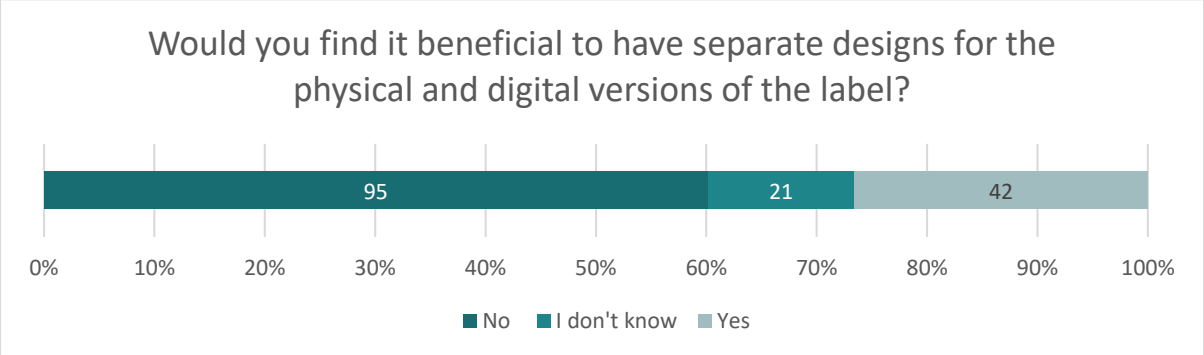


Figure 3-16: Responses to the creation of separated designs of the label for physical and digital versions.

Regarding the relationship between the physical and digital versions of an ESPR label, the majority of respondents believe that a digital label should provide additional explanations about the meaning of the different elements of the physical label (see **Figure 3-17**). This view is particularly strong among businesses (52), with notable support from NGOs and others (19) and Member State authorities (15). In contrast, some respondents think that a digital label should contain the same exact information and design as a physical label. This opinion is held by businesses (24), NGOs and others (21), and Member State authorities (10). Finally, the option "I don't know" was the least chosen option, including 11 businesses and 4 NGOs and others.

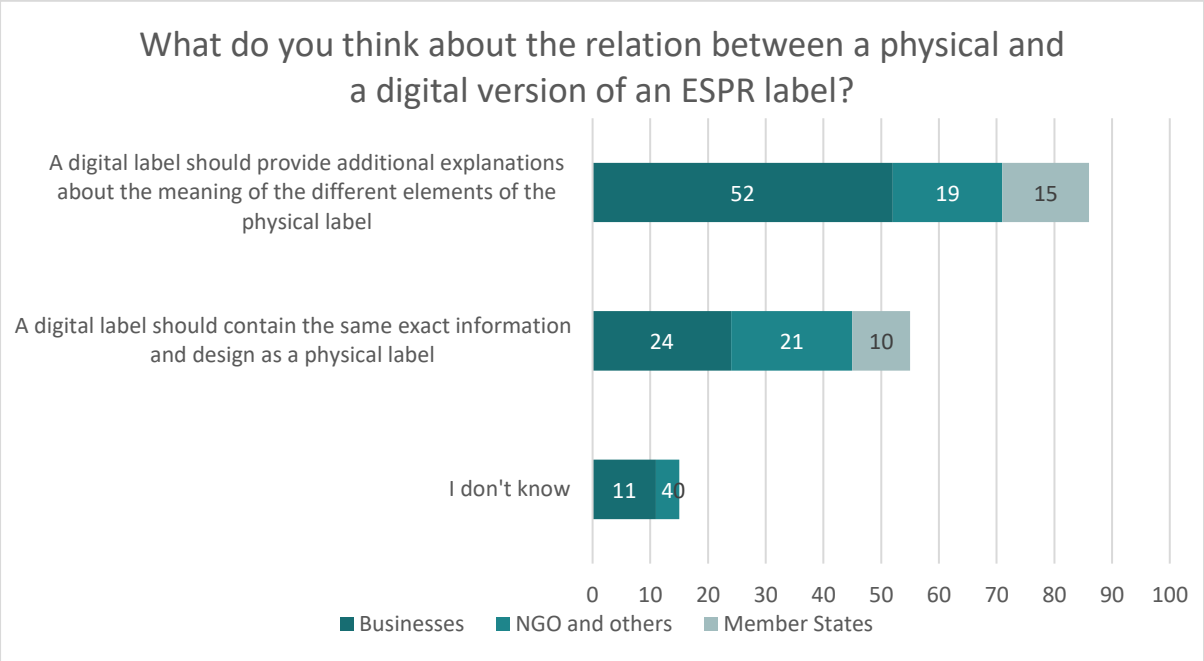


Figure 3-17: Responses to the relation between the physical and the digital versions of the label.

When asked in the open-ended questions of the questionnaire, stakeholders have expressed a range of concerns regarding the digital version of the ESPR label. Some advocate for eliminating physical labels entirely, citing environmental and practical benefits for companies and consumers. However, others insist on retaining physical labels, arguing that they provide unmatched clarity, accessibility, and immediate visibility that digital solutions cannot fully replicate. Also, many respondents stressed that having two different labels for online and for physical formats may duplicate the administrative burden of producers and retailers and it may create an unfair inequality among them.

There are several responses arguing that a digital ESPR label should complement rather than duplicate the physical label, offering additional transparency and information such as detailed parameters, explanations, links to the Digital Product Passport (DPP), and updated product information. Consistency between digital and physical labels is also emphasised to ensure equal benefits for consumers, particularly in online purchasing, and to prevent increasing the administrative burden on producers.

Additionally, some stakeholders presented their concerns about label overlaps, particularly regarding potential duplication between the DDP, EU Energy Label, and ESPR label, which could further burden producers. Some stakeholders argue that requiring both physical and online labels for each product might be redundant. Many stakeholders also stress the

importance of keeping the label simple. Finally, there are concerns that discussions about the label format may be premature before the content of the label is clearly defined.

Finally, stakeholders were asked regarding the creation of a simplified version of the ESPR label displayed in search results, product listings, or adverts on e-commerce websites. In this question, the majority of respondents, 100 in total, answered "Yes", illustrating a strong support for the idea of a simplified version of the ESPR label in digital contexts (see **Figure 3-18**). These comprised 49 business respondents, 34 respondents from NGOs, academia and other organisations, and 17 Member State authorities**.**The second option is "I don't know", selected by 31 respondents, and finally, 24 respondents answered "No", suggesting that they do not see a benefit in having a simplified version of the ESPR label for e-commerce purposes.

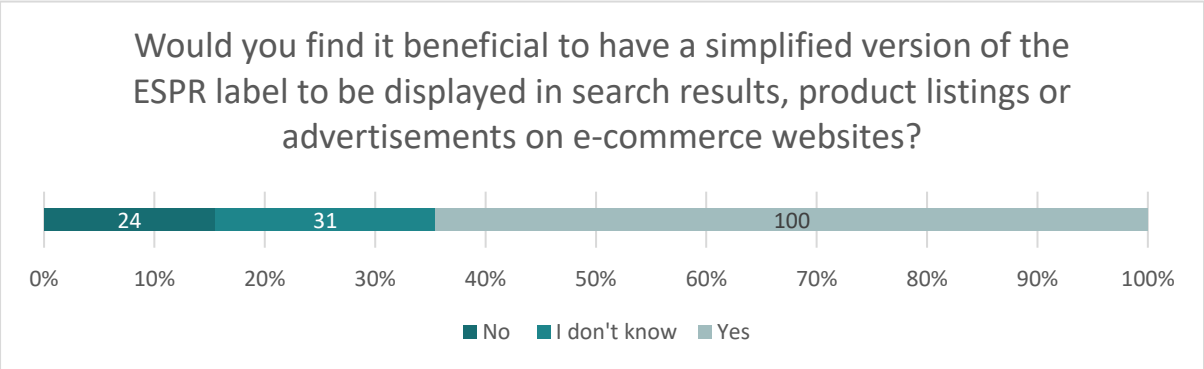


Figure 3-18: Responses to the creation of a simplified label for search results, product listings or advertisements.

QR code

Regarding the use of a QR code, stakeholders were asked about the likelihood of consumers to scan a QR code at the point of sale and about the benefits to use a prompt for the QR.

Regarding the likelihood of consumers to scan a QR code at the point of sale, most respondents (83 respondents) agreed that a QR code would be scanned by consumers, indicating strong confidence in consumer engagement with QR codes during the purchasing process. Secondly, 44 respondents selected "I don't know", and 29 respondents responded "No, a QR code will not be scanned by consumers", suggesting that the more sceptical view of consumer interaction with QR codes at the point of sale is the least common view (see **Figure 3-19**).

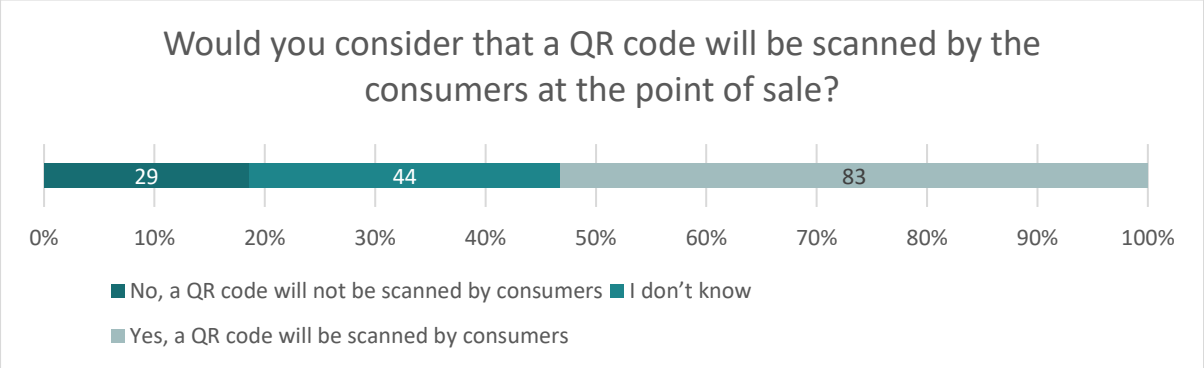


Figure 3-19: Responses on the consumers' engagement to a QR code.

Finally, regarding the use of prompts, the most common choice among stakeholders (70 respondents) is "Yes", indicating a strong belief that well-designed prompts can effectively encourage consumers to scan QR codes (see **Figure 3-20**). The second most common option (38 respondents) selected "I don't know", and the least selected option (48 respondents) answered "No", suggesting scepticism about the ability of prompts to significantly increase QR code engagement.

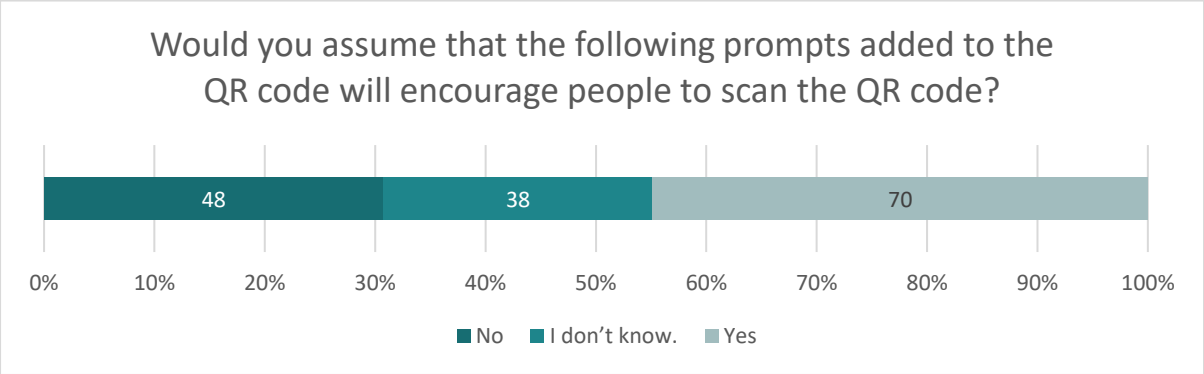


Figure 3-20: Responses to the inclusion of prompts in the QR.

In the open-ended questions, stakeholders have raised several concerns regarding the display, engagement, and prompts associated with QR codes on products. Many emphasise that QR codes should complement rather than replace physical labels, as physical labels provide essential, easily accessible information—particularly for consumers without smartphones or digital access. Some stakeholders suggest that QR codes should link exclusively to the Digital Product Passport (DPP). Additionally, there is a call for a single QR code per product, consolidating all relevant information—such as DPP and ESPR details—to avoid clutter and confusion. Ensuring that QR codes are of sufficient size and contrast is also highlighted as important for usability.

In terms of consumer engagement, some stakeholders pointed out that existing evidence indicates that most consumers do not scan QR codes at the point of sale, with older individuals engaging even less. QR codes tend to be more frequently used for high-value or complex products, such as appliances, rather than for low-cost or impulse purchases.

Regarding QR prompts, stakeholders stress the need for clear messaging that explains the concrete benefits of scanning, such as accessing information on durability, repairability, and total cost of use. However, some express concerns that QR prompts may occupy valuable space on product packaging. There is also a suggestion that promotional campaigns should be conducted to raise awareness of the content accessible via QR codes. Alternative prompt suggestions include simple phrases like "Scan me" or "More info" to encourage engagement.

Language use

Regarding the role of the language in the label, stakeholders were asked about the possibility to place parameter descriptions in the official languages of EU Member States alongside icons, about placing such descriptions in English, and about incorporating brief explanations for each parameter.

Regarding the possibility of placing parameter descriptions in the official languages of EU Member States alongside icons is important for improving the understandability of the ESPR label, most respondents (82) believe that providing descriptions in official languages is important for both the digital and physical versions of the ESPR label (see **Figure 3-21**). These comprised 37 business respondents, 32 respondents from NGOs, academia and other

organisations, and 13 Member State authorities. Secondly, 31 respondents replied that multilingual descriptions are important only for the digital version of the ESPR label, suggesting that digital formats may be seen as more adaptable for accommodating multiple languages. Then, 31 respondents, answered "No", indicating that they do not consider multilingual descriptions necessary for improving understandability. Finally, 14 respondents selected "I don't know".

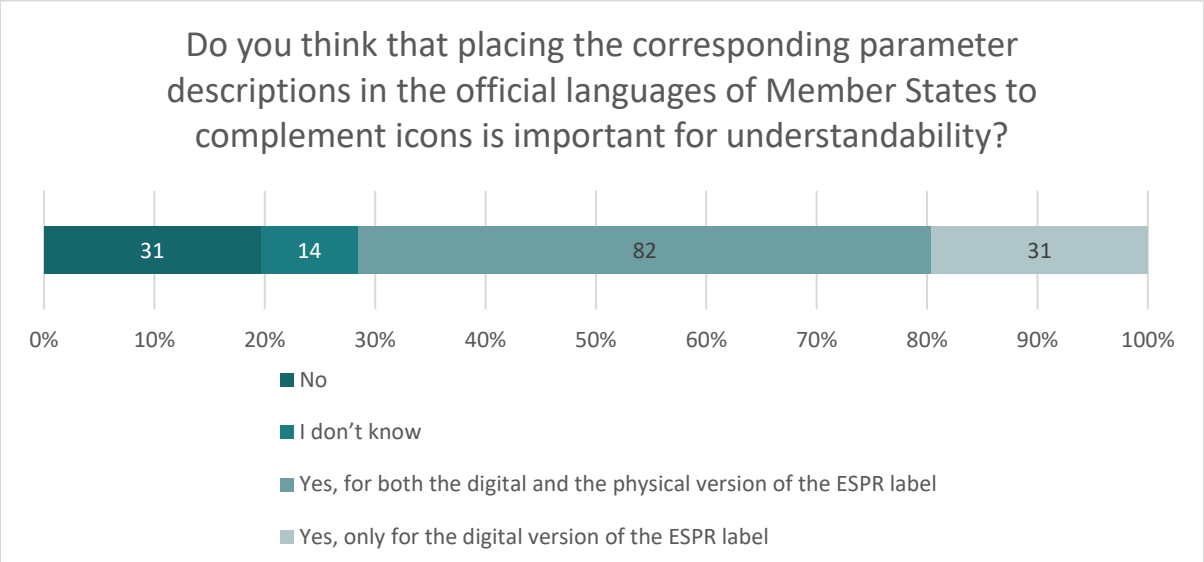


Figure 3-21: Responses to the inclusion of label descriptions in the official languages of Member States.

Regarding the sufficiency of using English for parameter descriptions alongside icons to ensure understandability across EU Member States, most stakeholders replied "No" (69 respondents), comprising 31 business respondents, 23 respondents from NGOs, academia and other organisations, and 15 Member State authorities**.** 43 respondents agreed that English is sufficient for both the digital and physical versions of the ESPR label, 25 respondents selected "I don't know", and 19 respondents replied that English is sufficient only for the digital version of the ESPR label, implying that digital formats might be more accommodating for a single language (see **Figure 3-22**).

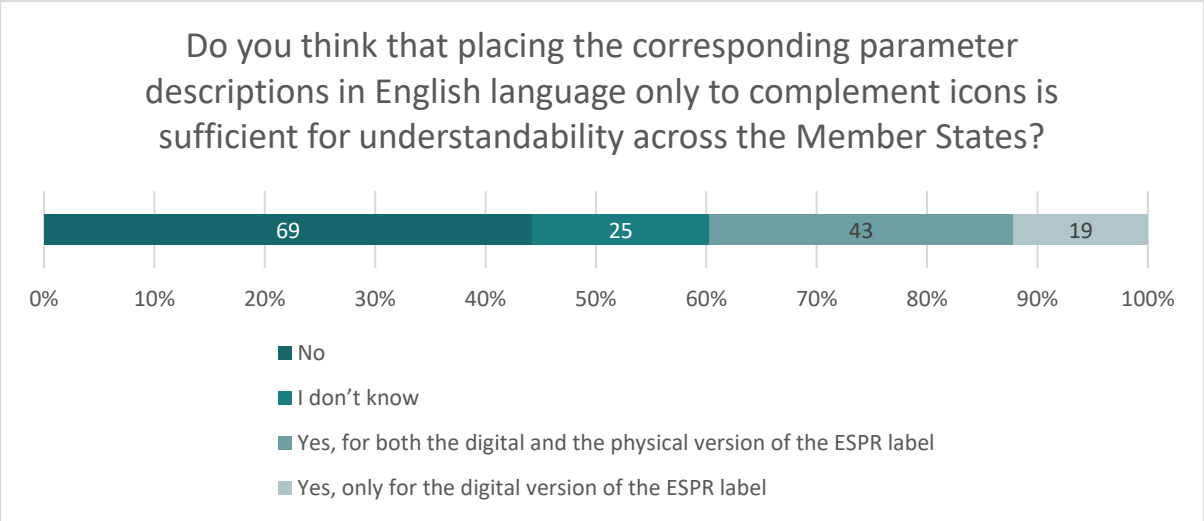


Figure 3-22: Responses on including label descriptions in English.

Regarding the possibility to include brief explanations of the parameters to improve the understandability of the ESPR label, most respondents (68) replied that brief explanations should be included for both the digital and physical versions of the ESPR label. 24 respondents think that brief explanations are important only for the digital version of the ESPR label, suggesting that digital formats may be better suited for providing additional details. Finally, 19 respondents selected "I don't know", and 43 respondents, answered "No", indicating that they do not consider necessary to include brief explanations in the ESPR label (see **Figure 3-23**).

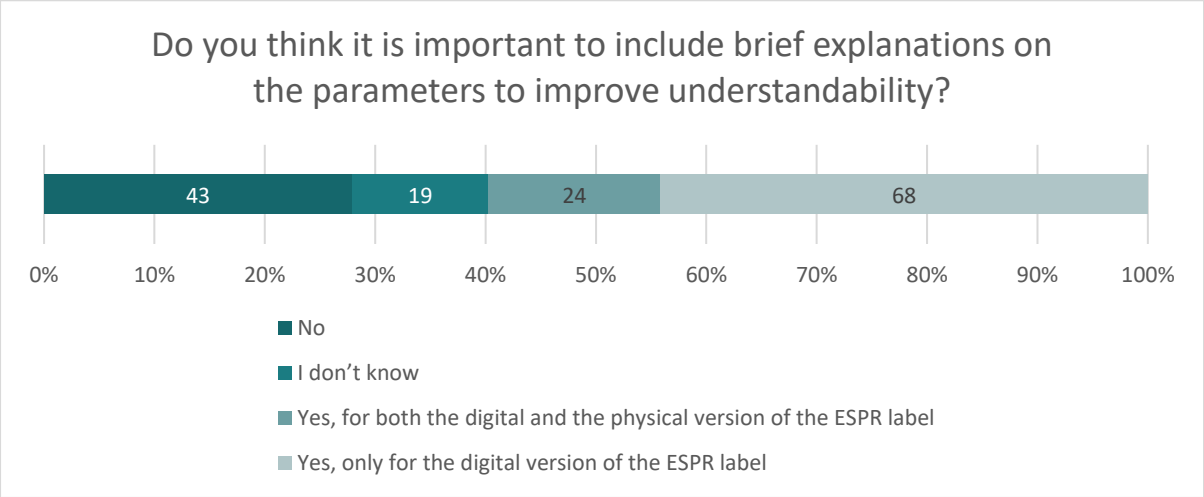


Figure 3-23: Responses on the inclusion of explanations in the label.

In the open-ended questions, stakeholders have expressed a range of concerns regarding the use of language on product labels within the EU. Some argue that a widely accepted language such as German or English should suffice, while others warn that relying solely on English could be perceived as elitist and impractical for non-English-speaking consumers. Some respondents expressed a certain concern that mandatory national languages on physical labels could shatter the internal market (different labels for each language may create a barriers to commercialise products across Member States with different languages) or clutter the label design (if all languages must be in the same label). The use of a digital label is suggested as a practical solution if multiple languages are required. Many stakeholders advocate for labels to be as language-neutral as possible to avoid complexity, proposing that icons should be self-explanatory, with textual descriptions addressed in product-specific delegated acts once parameters are defined. However, there is a recognition that icons alone may not be specific enough to convey the intended information effectively, and that additional explanations could be provided outside the label, such as in a manual or on a supporting website.

Label structure and other elements

Regarding the structure of the ESPR label and other elements, the stakeholders were asked about the colour of the scale of the label, the potential to use a design similar to the EU Energy Label, and the reasons in favour or against reusing that design.

Regarding the colour scale, the most preferred option among respondents is the green-to-red colour scale (60 respondents). The green-to-blue colour scale, which is considered more accessible for people with visual impairments, is the second most popular option, (46 respondents). Thirdly, 33 respondents selected "I don't know". Finally, 14 respondents indicated that they prefer neither of these colour codes (see **Figure 3-24**).

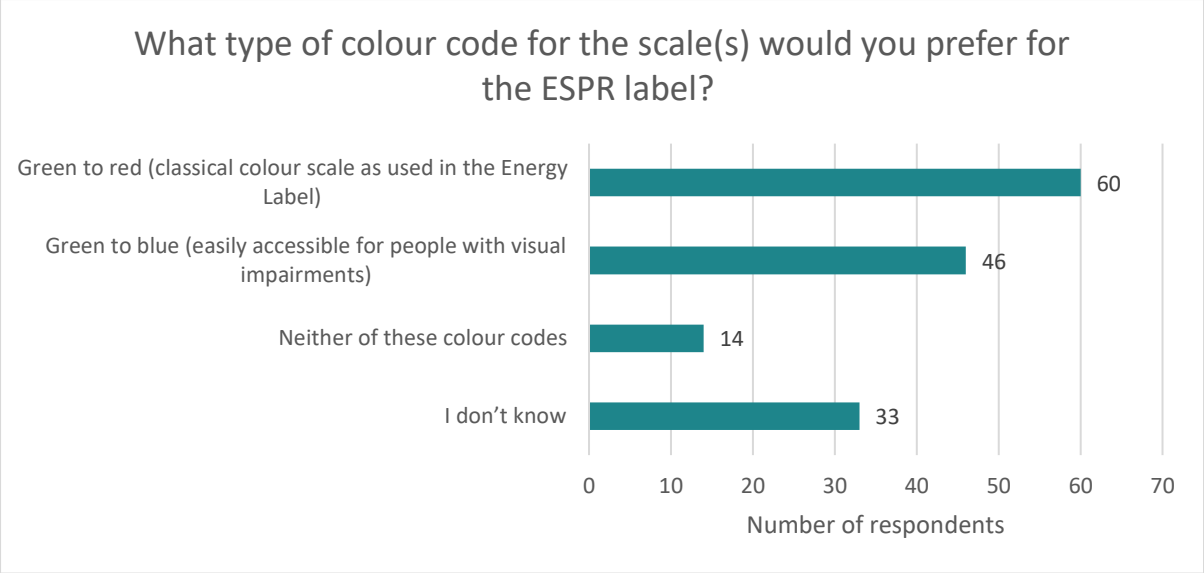


Figure 3-24: Responses on the label colour scale.

Regarding the use of a similar structure as the EU Energy Label, most respondents agreed with the reuse of the same design or structure (77 respondents), comprising 40 business respondents, 20 respondents from NGOs, academia and other organisations, and 17 Member State authorities, indicating strong support for aligning the ESPR label's design with that of the EU Energy Label. Then, 18 respondents selected "I don't know" to the question and 23 respondents disagreed with the idea that the ESPR label should mimic the EU Energy Label's design. A further 35 respondents selected "Other opinion" (see **Figure 3-25**).

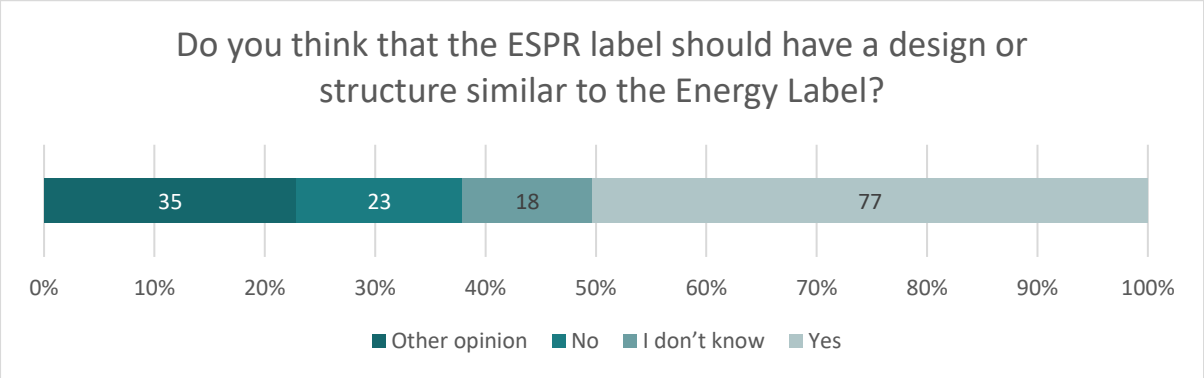


Figure 3-25: Responses on reusing the ESPR structure.

Finally, a smaller group of 35 respondents, chose "Other opinion", suggesting that there may be alternative design preferences or considerations beyond simply replicating the EU Energy Label. These stakeholders shared in the follow-up open-ended question that replicating the EU Energy Label's design could potentially be confusing for consumers and could undermine the clarity of both labels. While it is suggested that the ESPR label could incorporate familiar design elements—such as layout, font, and corporate colours—from the EU Energy Label to leverage consumer recognition, the structure must be adapted to reflect the ESPR label's unique scope. Regarding the structure, some respondents have highlighted the need to have a flexible design or structure that can adapt to the shape of different products. Additionally, some stakeholders expressed their preference for intuitive colour schemes, such as red to green, while ambiguous schemes like green-to-blue are discouraged. Negative indicators, such as the colour red, are considered more influential in guiding consumer purchase decisions. Additionally, horizontal layouts are discouraged, as they may not be as effective.

Finally, some stakeholders pointed out that the design should remain flexible to accommodate the diverse requirements of different product groups and information needs, which will be defined in delegated acts.

When asked why they agree with the use of the EU Energy Label design, the most voted options among respondents were its understandability for consumers (68), familiarity (65), simplicity (48), and understandability by stakeholders and the industry (43), while the demonstrated effectiveness (35) and included colour scales (21) are the least selected arguments, followed by the choices I don't know (11) and other (8) (see **Figure 3-26**). The stakeholders that selected "Other" have highlighted concerns about the structure of the ESPR label, emphasising that the purpose of the ESPR and EU Energy Labels is very similar. They argue that it would be beneficial to build on the existing consumer recognition of the EU Energy Label rather than creating a completely new design. Additionally, it is not anticipated that both an ESPR and an EU Energy Label will appear on the same product, which minimises the risk of consumer confusion.

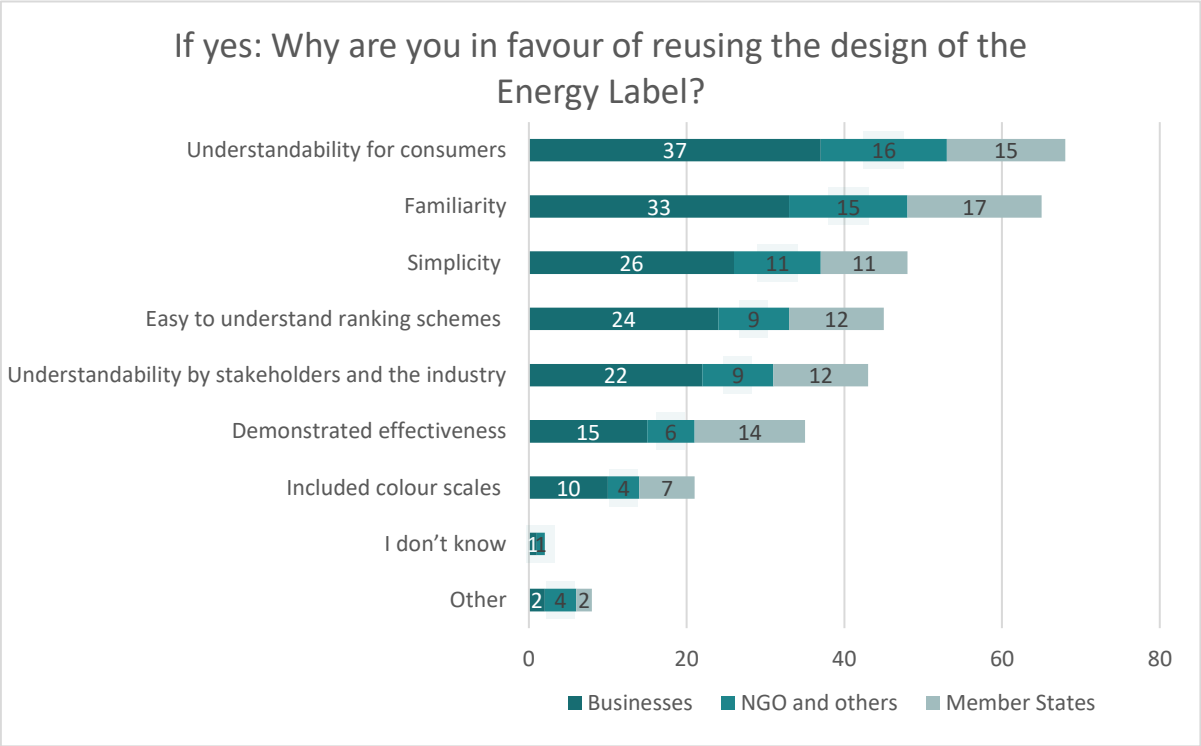


Figure 3-26: Responses to why to reuse the ESPR structure.

When asked why they do not agree with the use of the EU Energy Label design, the most voted option among respondents was to prevent confusion between the EU Energy Label and the ESPR Label (19 respondents) (see **Figure 3-27**). The second most voted option was that reusing the general layout is not an issue, however, if the ESPR label also includes a main parameter displayed with a similar ladder scale, letters, and green-red colours, consumers may think it is also about energy (5 respondents). The other options that received less attention by stakeholders were that the EU Energy Label is too complicated in general terms (2 respondents), the EU Energy Label is not easy to understand for stakeholders and industry (2 respondents), the EU Energy Label is not easy to understand for consumers (1 respondent), and only the general layout should not be reused (2 respondents). The respondents of "Other" were 4 and they expressed concerns about the structure of the ESPR label, emphasising that the ESPR label needs its own distinct identity. Some respondents also stated that, where the EU Energy Label features a dominant parameter, some product groups - such as textiles - do

not have a dominant parameter. As a result, these products may not benefit from a design that is modelled too closely on the EU Energy Label.

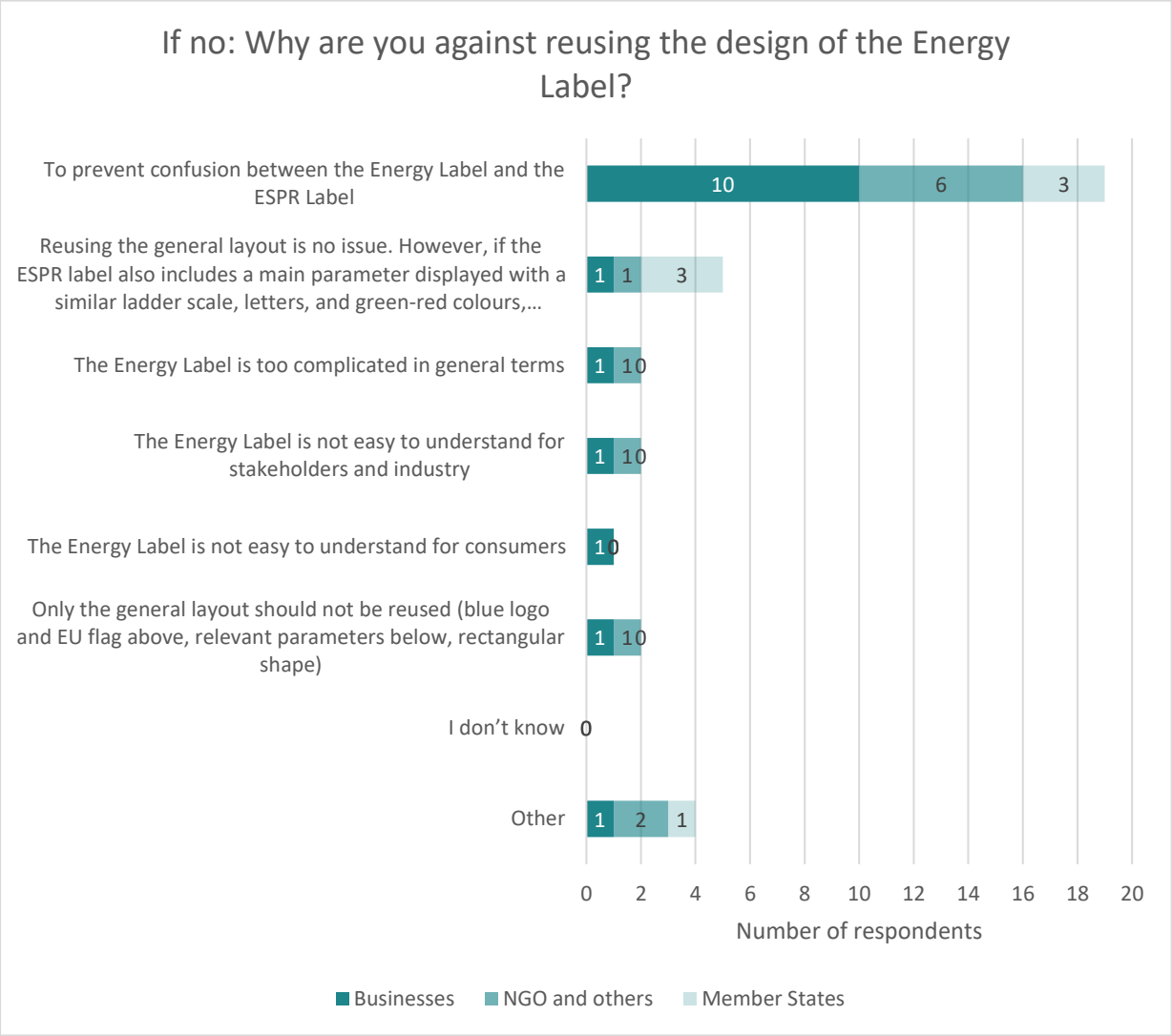
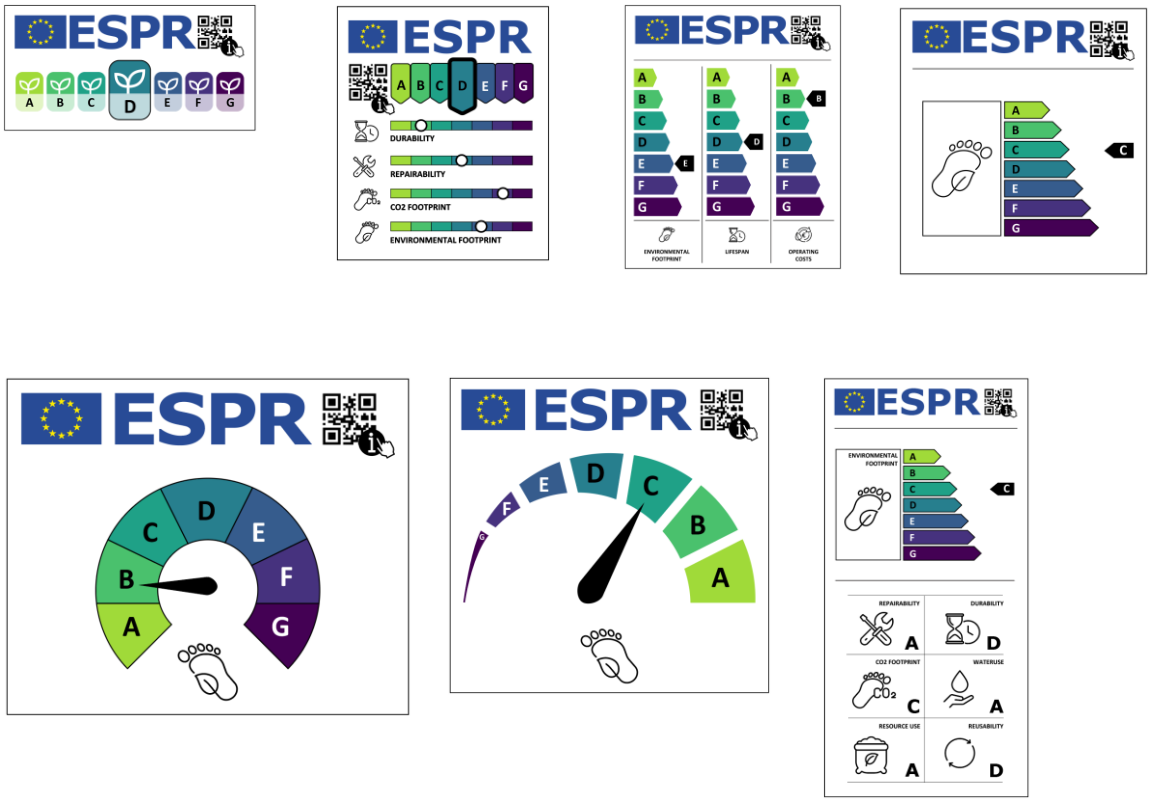


Figure 3-27: Responses to why not to reuse the ESPR structure.

Potential conflicts

The table below presents the ESPR label prototypes assessed in the second stakeholder consultation.

Table 3-3: ESPR label prototypes included in the second stakeholder questionnaire.



When asked whether the prototypes shown in **Table 3-3** could conflict with other existing labels, most respondents (42 respondents), particularly among Member States, believe that none of the prototypes will conflict with existing labels. In contrast, prototype 7 (35 respondents), prototype 4 (35 respondents), and prototype 3 (33 respondents) are seen as the most likely to cause conflicts, especially by businesses, whereas prototype 2 is the option that is perceived as the least likely to generate conflicts (12 respondents) (see **Figure 3-28**).

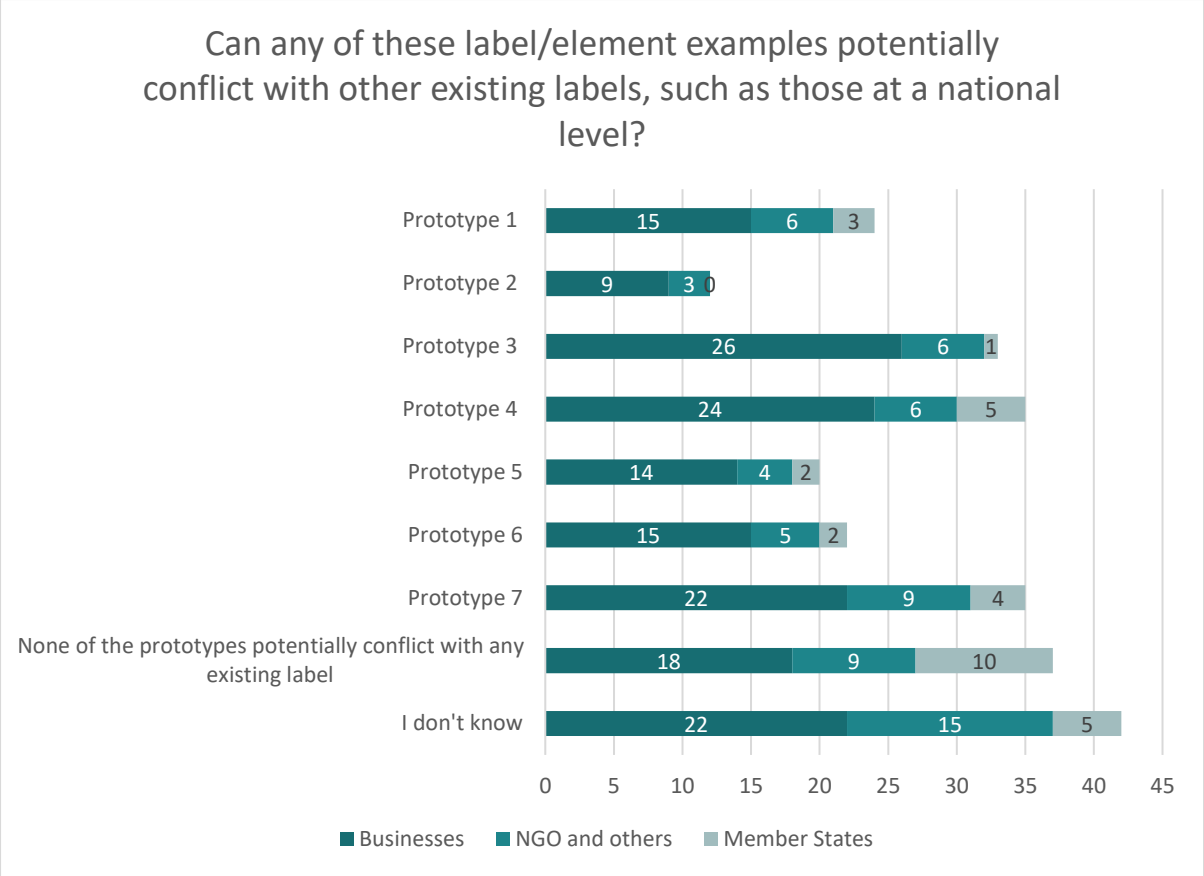


Figure 3-28: Results of the label prototypes that can potentially conflict with other labels.

In the open-ended questions, some respondents highlighted that the proposed prototypes for the new ESPR label raise concerns about their resemblance to existing labels, particularly the EU Energy Label. Prototypes 3, 4, and 7 closely mimic the Energy Label's A–G scale, colour scheme, and ladder design, which could mislead consumers into associating them with energy efficiency rather than sustainability or durability. Some stakeholders pointed out that this similarity violates Article 6 of the Energy Labelling Regulation (EU) 2017/1369, which explicitly prohibits imitating the EU Energy Label to prevent consumer confusion. Other prototypes, such as 5 and 6, evoke sustainability dashboards or speed indicators, while Prototype 1 is frequently likened to the Nutri-Score, especially in Germany and Belgium. Additionally, the ESPR label risks conflicting with established national labels like the French Ecoscore and repairability labels in France and Belgium, as well as private initiatives such as Clear Fashion and Glimpact. There is also a concern that many prototypes do not align with Directive 2024/825, which bans vague or generic environmental claims, given their use of terms like "sustain" or "eco" and the inclusion of a leaf emblem.

Opinions on proposed prototypes

The survey showcased the seven prototypes of the possible design of the ESPR label (see **Table 3-3**) and asked stakeholders on their understandability, physical and online implementability, effectiveness and recognisability.

All the prototypes show a similar score in their physical and online implementability, showing that there are no significant differences between the proposed label designs and their implementability and an overall neutral vision by respondents. The different prototypes show a significant correlation between understandability, effectiveness and recognisability. More specifically, prototypes 2 and 7 show a higher score in these three parameters, whereas prototypes 1, 3, 4, 5, and 6 show a relative even scoring with also a neutral vision by respondents.

In the open-ended questions, the respondents highlight several key concerns regarding the design and practical application of the proposed label prototypes. Many designs are criticised for being overly complex, featuring an abundance of text, icons, and colours that hinder quick and clear consumer understanding. Simplicity and clarity are stressed as essential for effective communication.

Accessibility is another significant issue, particularly the reliance on colour gradients, such as green-to-blue, which may not be accessible to individuals with visual impairments. Stakeholders recommend incorporating additional visual aids, like arrows or symbols, to improve inclusivity. Maintaining language neutrality is also emphasised, with a preference for minimising text to avoid translation challenges and ensure consistency throughout the Single Market.

Regarding the establishment of a common layout, several stakeholders have stated that a one-size-fits-all label is deemed impractical due to the diverse nature of products. For textiles, the complexity of supply chains and the variety of relevant parameters make it difficult to apply a uniform label or determine a primary focus. Additionally, labels must be adaptable to small packaging, where space constraints are a concern, with digital solutions proposed as a necessary alternative for such products.

General opinions on the label

The proposed ESPR label has sparked significant debate among stakeholders, with many arguing that its introduction is premature, as the specific information requirements for each product group remain undefined. Concerns have been raised that the label may contradict the EU's goals of simplification and digitalisation, potentially increasing producers' obligations and risking market fragmentation due to language barriers. There is also a notable risk of information overload, as overly complex or multilayered designs could confuse consumers, particularly if the label resembles existing EU schemes, and how the ESPR label will coexist with existing and other future elements, such as the DPP and the EU Energy Label. In that sense, some stakeholders have requested to delay the ESPR label development until the DDP is materialised and evaluated.

Some concerns have emerged as well about the idea to create a common layout and design for the ESPR label. Firstly, some respondents highlighted that discussing on a common layout may be challenging before defining the product parameters withing each product group and their calculation, as these may strongly affect the priorities and design needs around the future ESPR label. Secondly, some stakeholders indicated that common label layout could mislead consumers by proposing unfair comparisons between inherently different products (e.g., tyres vs furniture) and between different product parameters (e.g., energy efficiency vs repairability). Hence, they expressed preference for only product-specific labels.

From a practical standpoint, physical constraints such as limited space, printing challenges, and durability issues—especially for products like textiles—pose significant hurdles. The cost and logistics of implementing new labels could be substantial, potentially increasing expenses for businesses and undermining EU packaging reduction targets. However, the label also presents opportunities, such as raising consumer awareness about sustainability, promoting transparency, and enabling informed purchasing decisions. A well-designed label could harmonise fragmented national schemes, support digitalisation through tools like QR codes and the DPP and ensure regulatory consistency. Finally, there are some elements that transcend the debate on the label design and that will influence the follow-up debates in the product-specific delegated acts, such as the definition of the right parameters for complex products such as textiles.

Design-wise, the label should prioritise simplicity, clarity, and accessibility, avoiding unnecessary complexity and language barriers. Cost and feasibility are key considerations, with a preference for black-and-white or monochromatic labels to reduce expenses and environmental impact. A digital-first approach is favoured, as it aligns with EU digitalisation goals, reduces physical waste, and offers flexibility for diverse product categories. Finally, the label must complement—not duplicate—existing schemes and adapt to the unique needs of different sectors to avoid inconsistency and ensure practicality.

3.3.4. Summary and conclusions from the second round of stakeholder consultation

The stakeholder survey on the ESPR label reveals a clear demand for a nuanced approach that balances standardisation with adaptability to address the diverse needs of products, consumers, and markets across the EU (see **Table 3-4**). While "product sustainability" and "environmental impact" emerged as the most favoured messages, the prevalence of the "Other" option underscores a lack of consensus, highlighting the necessity for tailored communication that reflects the unique sustainability parameters of each product category. The proposed title "EcoDesign" garnered significant support, but concerns were raised about the use of ambiguous terms like "sustainable" or "eco," which could mislead consumers or fail to align with the regulation’s minimum requirements. Stakeholders also stressed the importance of defining the label’s content and scope before finalising its title or design to avoid misalignment.

In terms of design, there is a strong preference for presenting multiple performance parameters rather than a single index, with the digital label seen as a complementary tool to provide additional explanations and updates. However, the digital version should not replace physical labels entirely, as the latter offer immediate visibility and accessibility. The use of QR codes was widely supported, particularly when accompanied by clear prompts, though their effectiveness was noted to vary depending on the product type and consumer demographics. Accessibility and language neutrality were also key themes, with multilingual descriptions and clear, simple visuals deemed essential for ensuring the label’s inclusivity and effectiveness across the EU.

The survey further highlighted the potential risks of replicating the EU Energy Label’s design, as this could lead to consumer confusion, particularly if the ESPR label adopts similar colour schemes or grading systems. Prototypes that closely mimicked existing labels, such as the EU Energy Label or Nutri-Score, were flagged as particularly problematic. Instead, stakeholders advocated for a distinct yet intuitive design that maintains flexibility to accommodate the varied requirements of different product groups. Ultimately, the success of the ESPR label will depend on its ability to deliver clear, actionable information to consumers

while avoiding duplication with other initiatives like the DPP and ensuring that its implementation remains practical and adaptable to the evolving needs of the market.

Table 3-4: Main takeaways from the stakeholder consultation.

Label element	Main takeaway
Main message	"Product sustainability" and "environmental impact" are the top preferred messages for the ESPR label, but "Other" was the most selected option, reflecting a lack of consensus.
Title	EcoDesign emerged as the favoured title, but stakeholders warned against using terms like "sustainable" or "eco," which may imply best-in-class performance and risk ambiguity or misalignment with minimum ESPR requirements.
Parameters	Multiple parameters (rather than a single index) are preferred for displaying product performance, with specifics to be defined in delegated acts per product.
Digital label designs	No separate designs for physical and digital labels are favoured, but the digital version should complement the physical one with additional explanations, links, and updates.
QR code	Most stakeholders believe consumers will scan QR codes, especially with well-designed prompts, but engagement may vary by product type (e.g., high-value vs. impulse purchases). QR codes should complement, not replace, physical labels, and should link to comprehensive information (e.g., DPP).
Language	Multilingual descriptions are deemed important, especially for physical labels, but there are concerns about clutter and market fragmentation. English alone is insufficient for EU-wide understandability; icons and brief explanations are preferred, with detailed information provided digitally or in supporting materials.
Label structure	Reusing the EU Energy Label's design is popular for its familiarity and simplicity, but risks consumer confusion if the ESPR label mimics energy-related elements (e.g., A–G scales, colour schemes).
Potential conflicts	A design similar to the EU Energy Label may be in conflict with the Regulation (EU) 2017/1369
General comments	One-size-fits-all is impractical: The diversity of products and consumer needs requires flexible, product-specific delegated acts. Avoid duplication: Coordination with the Digital Product Passport (DPP) and other labels (e.g., EU Energy Label, national initiatives) is critical to prevent redundancy and confusion. Simplicity and clarity are paramount: Overly complex designs, vague terms, or ambiguous visuals risk undermining the label's effectiveness.

3.4. Sub-task 2.4: Consumer focus groups

Consumer focus groups were employed to thoroughly examine whether consumers can easily understand the prototypes and their design elements. The goal was to better understand the essential components for easy recognition, comprehension, and information processing. These focus group discussions provided a space for participants to articulate the issues in their own terms, potentially uncovering unforeseen perspectives. This process aimed to

deliver a more comprehensive and nuanced understanding of consumer perceptions and decision-making than what would be achieved through experimental or survey methods alone.

3.4.1. Discussion guides

The focus groups were structured around a discussion guide designed by the study team (WSEE and Fraunhofer ISI) and to be used by the moderators (Ipsos) to guide the focus group discussions. The guide ensured that:

- Stimuli, such as label design concepts, were presented to participants in a structured manner by making use of an accompanying PowerPoint slide deck.
- All pertinent research issues were probed in such a way that meaningful answers can be gathered and used to inform the label evaluation and design optimisation process.
- Topics and questions were raised in a structured way so that respondents' answers can be grouped and analysed in a consistent manner from one focus group to another and meaningful comparisons across the focus groups can be derived.
- There were no leading questions or discussion, such that participants could not second guess what "correct" or "desired" answers may be and thereby avoid bias being inadvertently introduced into the research.

The guide for the first iteration of the focus groups facilitated structured discussions on several key areas (see also **Annex VIII: Raw data stakeholder consultation II**):

1. Initial warm-up
2. Overview of focus group format and expectations.
3. Label meaning and product sustainability questions
    - Participants' interpretations of label header designs.
    - Discussion on the meaning of 'sustainability' and its application to products.
4. ESPR Label for products
    - Feedback on types of sustainability aspects the label should address.
    - Evaluation of icon designs and their clarity and priority, incl. footprint designs.
    - Discussion on communicating sustainability parameters on product labels.
5. QR Code
    - Exploration of the use of QR codes on labels for additional information.
    - Assessment of participants' likelihood to engage with QR codes.

A PowerPoint slide deck was used to demonstrate the icons and label designs. The guide combined a mixture of methods by including not only purely qualitative questions but also adding questions to which the answers can be analysed in a more quantifiable manner. The Microsoft Teams polling functionality was used for these more quantitative questions. Additionally, sub questions clearly indicated which topics should be probed by the moderator, so that the response given can be captured in the most detailed way.

The logic behind this structure and questions for focus group I

The opening questions begin by showing the participants a set of label designs where the text ESPR is mixed with the EU flag, the QR code and in some variants icons that might indicate

a message linked to sustainability. The aim is to probe whether the label conveys an official EU labelling scheme and whether the link with sustainability is made. Although the term *ESPR* is unlikely to convey meaning on its own, its use may nevertheless reinforce the impression of an EU-backed label, as the font mirrors that of the EU Energy Label and the colour matches the EU flag.

Once the above unprimed designs have been tested, the next questions probe what participants understand by sustainability and what sustainability parameters they think could apply to products. After this the concept of the ESPR is formally introduced and participants are asked what they think each of the 16 default sustainability parameter icons could be referring to (this is to test their intrinsic ability to convey their intended meaning). Then participants are shown the meaning of the icons in their own language and asked to a) indicate how successful they think each of the icons are at conveying their intended meaning, and b) which of the 16 sustainability impact parameters they think are the most and least important. The intent behind these questions is to probe: consumer understanding of sustainability as a concept; the effectiveness of the default icons at communicating their intended topic; the importance that consumers place on each of the ESPR impact parameters. Collectively the insights gathered could help inform decisions about which icons to use on a label and which impact parameters might have the greatest impact at informing and influencing consumer purchase decisions.

Following this, participants are asked how it would be best to convey the product sustainability information on a label, based on the ESPR impact parameters. Their views are probed about how the information could be grouped or presented separately and about how much information to attempt to communicate. Views are also sought on options to group the impact parameters. These questions help to better understand how much information can be effectively displayed on a label; whether aggregating impact parameters and their scores might be more effective than displaying each individually or the converse.

After this, various primary label concepts are tested. Most of these have the same top text and arrangement - this is intentional so variation in this aspect of the label is not a factor in how participants respond to the way the sustainability is shown in the main body of the label. The designs vary as a function of:

- The nature of the scales used
- The number of scales used
- The colour schemes used in the scales
- The orientation of the scales
- Whether the scale(s) refer to a single impact parameter or aggregated ones
- In the designs where specific ESPR impact parameters are shown - the choice of impact parameters shown
- Whether a full scale is used or single classes to represent the impact parameter scores

The purpose of the above is to probe which are the most effective means of communicating the ESPR impact information in terms of understanding, appeal, salience (meaning the importance that consumers place on the information), and the most productive organisation of the information within a label. Note, for all of the above tests the product in question is not disclosed so this conveys label effectiveness information in a generic sense, without some of the constraints that might apply to actual product labels. The intent is for these to be probed in the second set of focus groups.

The last set of questions probe participants understanding and expectations with regard to QR codes - whether they know what they are, if they know how to use them, what they think they

might see if they did. It then probes how likely they are to use them and then presents some enhanced QR codes designs that (without explaining this is their intent) are intended to encourage consumers to access them and the information they contain. The effectiveness of the various designs at prompting users to access the QR code is probed. The rationale for these questions is that the ESPR is inherently complex and therefore there is likely to be an inherent need to provide additional information than that which can be conveyed within the physical constraints of a label. A priori this information could be provided through a link accessed by the QR code. The questions probe participants expectations with regard to having further information via a QR code. Further, it is known that the QR code on the EU Energy Label is very rarely used so there is a need to prompt users to access it - hence the test of the effectiveness of designs that attempt to do this.

The logic behind this structure and questions for focus group II

For the second set of focus groups (see complete questionnaire for focus groups II in the **Annex XII: Questionnaire focus groups II**) a reverse logic was used where, rather than explaining what the purpose of the label research concerned, the groups were exposed to and questioned about successive design concepts with absolutely no background or explanation. This kind of “blind” testing aims at replicating how users would interpret and access information shown on labels in a real-world environment. The designs used in the second round of Focus Groups were informed by the findings from the first and hence were already improved designs compared to those used in the first round of focus groups. The structure of the focus groups explored:

- Understanding of the label purpose with ESPR text and various icons intended to convey sustainability
- Understanding of the label purpose with various English language titles
- Understanding when titles were combined with icons
- Understanding of the author of the label and trust of its contents with the EU flag
- Effectiveness of different design concepts with regard to ESPR impact scales
- Effectiveness of different designs as a function of their level of information content
- Effectiveness of different designs as a function of the font colours
- Effectiveness of different designs as a function of the colours used in the impact scales
- Effectiveness of different designs intended for use on clothing
- Effectiveness of different designs intended for use on detergents
- Level of understanding of the meaning of icons intended to convey distinct ESPR impacts
- Effectiveness of designs intended to guide the user to access the QR code to gather more information.

Fieldwork for both focus group iterations

Both focus groups were conducted in Romania, Spain and Germany. This selection did not only ensure a good geographical spread across Western, Southern and Eastern Europe, it also ensured linguistic diversity by including two Romance languages (Spanish and Romanian) and one Germanic language (German). This linguistic range can be particularly valuable when discussing potential label terminology, especially terms related to 'Eco'. Two focus groups were conducted in each of these three countries.

As mentioned earlier, an iterative approach was used in which the focus groups were conducted in two rounds, with one group per country in each round. This allowed us to fine-tune the prototypes between rounds, having an extra design phase. The focus groups for the first iteration were implemented between the 7th of October and the 14th of October 2025. The focus groups for the second iteration were implemented between the 3rd of December

and the 5th of December 2025. Each focus group has a duration of approximately 90 minutes. Below is an overview of the fieldwork dates.

- Romania first focus group: Tuesday 7th of October 2025
- Germany first focus group: Friday 10th of October 2025
- Spain first focus group: Tuesday 14th of October 2025
- Romania second focus group: Wednesday 3rd of December 2025
- Germany second focus group: Friday 5th of December 2025
- Spain second focus group: Wednesday 3rd of December 2025

The focus groups were conducted in the main official language of the countries, and moderated by senior, highly skilled moderators. All of the moderators were mother tongue speakers and had significant experience of conducting this type of research. Nonetheless, to ensure that the study objectives, topics, and discussion structure were well understood by all moderators – and that the moderation was consistent across the different countries – an online moderator briefing was organised prior to any fieldwork commencing.

3.4.2. Composition of the focus groups

The focus groups included eight participants per group. We aimed for a balanced recruitment in terms of age, gender and education (see **Table 3-5**). This ensured that participants from vulnerable populations, such as older adults and individuals with lower education levels were included. Additionally, we aimed to include participants with visual impairments as the needs of this group can significantly inform the accessibility and thereby effectiveness of labelling systems[23]. The final sampling composition per country for both iterations is presented in **Table 3-6**.

Table 3-5: Quota criteria and composition for each focus group iteration.

Gender	Age	Education [24]	Visual impairments
Men: min. 3 Women: min. 3	18-34: min. 2 35-54: min. 2 Over 55: min. 2	Low: min. 1 or 2 Medium: min. 2 High: min. 2	Min. 1

[23] People with visual impairments: Not only sampling participants with eye conditions related to age (e.g., presbyopia) but also people with having diagnosed visual impairments, i.e. myopia (nearsightedness), hyperopia (farsightedness), astigmatism, presbyopia, amblyopia (lazy eye), cataracts, glaucoma, diabetic retinopathy, age-related macular degeneration (AMD), retinitis pigmentosa, colour vision deficiency/colour blindness.

[24] Education levels are defined as follows: 1) Lower education: Individuals who have not completed secondary education. 2) Medium education: Individuals who have completed secondary education but have not pursued or completed any form of post-secondary education, such as vocational training, associate degrees, or bachelor's degrees. 3) Higher education: Individuals that have completed a post-secondary level of education, such as vocational training, associate degrees, or bachelor's degrees.

Table 3-6: Overview of the sampling composition per country for focus group iterations.

	Iteration I	Iteration II
Germany		
Gender	Men: 4 Women: 4	Men: 4 Women: 4
Age	18-34: 4 35-54: 2 Over 55: 2	18-34: 2 35-54: 3 Over 55: 3
Education	Low: 1 Medium: 4 High: 3	Low: 1 Medium: 4 High: 3
Visual impairments	3	2
Romania		
Gender	Men: 4 Women: 4	Men: 4 Women: 4
Age	18-34: 2 35-54: 4 Over 55: 2	18-34: 3 35-54: 3 Over 55: 2
Education	Low: 2 Medium: 4 High: 2	Low: 1 Medium: 4 High: 2
Visual impairments	2	2
Spain		
Gender	Men: 5 Women: 3	Men: 4 Women: 4
Age	18-34: 1 35-54: 5 Over 55: 2	18-34: 2 35-54: 5 Over 55: 1
Education	Low: 1 Medium: 4 High: 3	Low: 1 Medium: 3 High: 4
Visual impairments	4	3

3.4.3. Approach to the analysis

The purpose of qualitative research and of qualitative data analysis, is not to measure the number of particular views or experiences, but to reveal the depth and diversity of views and experiences of the topic in question. It should reveal patterns, similarities and differences, while also retaining the unique character and context of individual experiences. Our analysis of the focus group data involved two main stages: (a) a moderator analysis by the Ipsos team and (b) an aggregate (cross-country) analysis by the WSEE research team.

Moderator analysis – On completion of the main fieldwork the moderators listened back to the recording from the focus groups they moderated to produce a detailed analytical summary of it using a structured framework (analysis excel sheet) developed by the core Ipsos research team. This template was designed to systematically analyse findings per question, analyse differences in views according to age, gender, education and visual impairments and capture relevant recommendations to further improve the designs.

WSEE research team analysis – Upon receiving all analytical input from the countries, the WSEE research team compared and contrasted the reported findings for all countries together, and for the different age, gender, education and visual impairment groups, to identify and flesh out the key topics (and sub-topics) and patterns (differences/similarities). These findings are reported in the following section.

A couple of limitations for the interpretation of the findings from this study need to be pointed out. Firstly, due to the qualitative research methodology adopted for this study, findings cannot be extrapolated beyond the specific research participants and beyond the specific setting and dynamics of the respective focus group discussion. Secondly, the interpretative nature of qualitative research and data analysis is inextricably linked with a level of subjectivity. Instead of quantifying results by counting topics and using an intercoder reliability rate as a standardised measure of reliability, qualitative data analysis commonly adopts quality criteria that focus on thorough data collection and analysis, clearly described research processes, and detailed description of findings to demonstrate its reliability (Bryman, 2016).

The reliability of findings for this study is ensured by (a) the use of a uniform framework Excel analysis sheet for analysis (as discussed above), (b) the combination of perspectives from different researchers (both researchers from the local country teams, as well as researchers from the core research team) to counter, to the extent possible, subjectivity in interpretation, and (c) a detailed description of findings.

3.4.4. Results

Results of focus groups I[25]

The EU flag, ESPR text and font type/colour made respondents think it was an EU issued label and could be trusted. When shown labels with ESPR as text but icons intended to convey a sense of the environment or sustainability, many participants thought the label was likely to be about sustainability, but this was far from a universal response, and it was unclear which icon was most effective at communicating this.

The concept of sustainability is complex and while much of what consumers think of as being pertinent aspects of sustainability correspond to the parameters addressed in the ESPR, some do not (e.g. participants in all three focus groups mentioned proximity of the products' production to its point of sale).

While participants can appreciate the rationale behind many of the default icons developed for the ESPR to indicate specific sustainability impact parameters some are more effective and intuitive than others. In general, it is unlikely they would be well understood without more explanation. The same is true of the underlying concepts in some cases.

Participants appreciate the notion of grouping the impact parameters rather than trying to present them all individually. They do not think a label that shows just one of the ESPR impact parameters would be meaningful or effective. They are receptive to label designs that show up to three impact scales and these could be either aggregates of the wider set of ESPR impact parameters (a notion of grouping them in an aggregate manner terms of: environmental impacts, product lifetime related impacts and operating cost related impacts was well received), or simply presenting the three most important. Another design than showed a single A-G scale (for the environmental footprint) at the top of the label and six ESPR impact icons beneath it with single letter grades was well received, but also somewhat misunderstood as

[25] More detailed results are presented in **Annex XI: Detailed results focus groups I.**

participants assumed the scale at the top was the aggregate of the icon scores below rather than reporting a distinct (higher priority) impact.

Participants prefer A-G scales compared to other options and find them easier to understand and more impactful. They prefer the Green to Red colour coding (as per the EU Energy Label) to other colour options. They prefer vertical A-G scales to horizontal ones but are open to the A-G scale designs that use a dial or growing segments (although it is not evident that latter design would be effective if more than one scale were used on the label whereas using three vertical A-G scales is effective and well received). They do not want to see more than three scales shown on a label as it becomes overwhelming and difficult to process. They are fully aware of the EU Energy Label but do not generally perceive there is much risk of confusing an ESPR label with an EU Energy Label as other design aspects differ even if the A-G scale and top of label are similar.

Overall, it is apparent that the complexity of the ESPR impacts and the notion of sustainability in general will result in low understanding (and hence impact) without supporting information to better inform users of what the label means and is intended to convey. Accordingly, being able to access such information via a QR code is likely to be essential to the label's success. Participants knew what a QR code was and imagined it could offer more information but were not very sure about the latter. Passive QR codes (as shown on the EU Energy Label) are known to have very low access levels but designs which prompted the label reader to access the QR code were well received with a clear winner among 5 options. It seems likely such a design would be relatively effective at directing consumers to seek additional information on the label and/or the product.

Results focus groups II

The results of the second set of focus groups are reasonably consistent with those from the first with one exception: in the second set of focus groups respondents mostly expressed a preference for the Green to Blue colour coding for the primary label scale whereas in the first set the preference was mostly for the Red to Green scale (despite both sets of focus groups having equal numbers of visually impaired participants). While in the first set of focus groups there was universal preference for vertical A to G scales both horizontal and vertical scale designs seemed to be appreciated in the second set of focus groups.

With regards to the label’s purpose it was found that when participants were presented with top of label designs using the ESPR text and various icons to indicate what the overall purpose of the label is about, some icon designs were relatively successful at conveying environmental/sustainability aspects of the label. Further, there was universal recognition that the label is an EU label (due to the EU flag and fonts) and an expression of high confidence in the information it will convey as a result. Various label title texts were tested with mixed results regarding the label’s meaning such that no clear candidate emerged as a front runner but comprehension of the general intent was not especially low. Title text such as ‘EcoDesign’ appears to work better when combined with an icon (symbol) to indicate it concerns the environment. Labels with green text in the heading were preferred to those with blue (as it communicates a link to the environment).

It was found that Horizontal or vertical A-G scales seem to work better and be more appreciated than dial configurations although a dial concept was slightly preferred by the Spanish FG. The German and Spanish FGs tended to prefer designs with more information while the Romanian group opted more for simplified designs (that would imply aggregating impact rankings or simply reporting one impact ranking). When asked to rank the various designs, some clear preferences emerged that could form the basis for verification testing in the online experiment. These were for designs that used a principal horizontal Green to Blue scale at the top of the label with four horizontal sub scales for other specific ESPR impact

parameters. It was not clear, though, whether participants interpreted the top scale to be an aggregate of the scales reported beneath or a separate parameter.

With regards to comprehension of ESPR impact icons there was high comprehension of the icons intended to express: product longevity (lifespan) and repairability. Intermediate understanding of the icons intended to represent: the environmental footprint, CO2 footprint, durability, water use and efficiency; generation of waste material. By contrast, the icon for Reusability was confused with recycling and there was poor understanding of the icon for Resource use and efficiency. The recycled content icon was understood to have something to do with recycling but not the content per se (see **Annex XIII: Detailed results focus groups II**).

When shown specific designs intended for clothing there was a slight preference for a design with a vertical scale and four impact parameters beneath but some thought too much information was being presented for clothing. When shown specific designs intended for detergents there was a diversity in preferences but attention paid to the specific icons displayed with some questioning whether they all made sense for detergents (in part due to misunderstanding of the meaning of the resources use & efficiency icon).

Overall, it was shown that comprehension of the label's intent and the various icons increased significantly when English text was used, but respondents immediately remarked that their national language should be used. When shown designs with national text they were much happier and seemed to fully comprehend the intent and meaning of the various icons/scales shown. The use of the QR code design with an i for information and hand pointing to it was shown to be highly effective at communicating that more information could be gathered by accessing the QR code.

3.4.5. Summary and conclusions from focus groups

In summary, it is found that:

- Designs that use A to G scales are better understood and appreciated by users than those that don't.
- Both vertical or horizontal A to G scales could be viable.
- The intent (primary purpose) of the label is better understood when some type of English text (such as Eco Design, Eco Guide, Eco Index) is used than when ESPR is used (which in any case is confusing in Spain as ES is the national acronym).
- The understanding of the intent is improved again when an icon to convey sustainability is added to the main title.
- Using the EU flag ensures that people understand it is a European scheme and raises confidence and trust.
- Using green text in the label title seems to successfully reinforce that the label concerns environmental aspects and is appreciated.
- Label scales that use Green to Red or Green to Blue would appear to be viable and appreciated.
- Designs that have a main scale in A to G and icons with a single letter ranking against them also seem to be effective and appreciated.
- Users can see similarities with the EU Energy Label but are not confused with it as other factors differentiate the designs from the EU Energy Label.
- Some ESPR impact icons are more easily understood than others but only a few have a high level of understanding – this implies that reliance on such icons alone will be insufficient to convey the meaning of the label information.

- Designs that use multiple scales can be successful and are appreciated (up to three scales if they are vertical) and one primary scale with up to four sub-scales if they are horizontal.
- Icons that group ESPR impacts with regard to lifespan (highly successful), environmental footprint (reasonably successful) and operating costs (middling success) appear to work as a means of grouping multiple ESPR impact parameters.
- It is not fully clear if users interpret leading scales as being aggregated scales (aggregations of numerous ESPR impacts) or separate scales reporting a unique impact – this needs to be probed further.
- Comprehension of the label intent, scales and impact parameters improves substantially when English text beneath the icons.
- Yet, users have a very strong preference for local language text for such icons (but appear to be accepting of English text in the label title) and their comprehension is evidently much significantly higher again when that is offered.
- At least one design has been shown to be highly successful at informing users that they should access the QR code to receive more information.
- If text is not used to explain icons it will be necessary to have strong supporting information accessible via the QR code for the label to be widely understood.
- When designs are tested for specific product types there is a need to ensure that the icons used are understandable for the product type and are deemed pertinent for the product group – there is also a need to ensure the level of information provided is deemed appropriate for that product group and is informative while avoiding overloading users.

4. Conclusions from Task 1 and Task 2 and implications for Task 3

Based on the preceding tasks, the following section consolidates the main findings and insights for the label design.

Branding, header elements, and overall score

For the branding of the label, a header wat tested that included several name suggestions, additional icons, and the EU flag as a design element. The results indicate that the arrangement of content in the header contributed to building trust among both stakeholders and focus group participants.

Several names were tested throughout the tasks. In the second round of stakeholder consultation and in the focus groups, ‘Eco Design’ emerged as the preferred name. ‘Eco Index’ and ‘Eco Guide’ were also rated positively and are suggested as potential alternatives.

It was also explored whether an additional icon next to the label could help create a distinct identity and convey that the label relates to sustainability and circularity. Opinions among stakeholders were mixed, with concerns that additional icons could clutter the label. Although such an icon could help communicate the main content, it was decided not to include an additional icon in the header, and a simpler, more streamlined design was preferred.

Regarding the presentation of an overarching index score, results remain inconclusive. Stakeholders generally preferred displaying separate parameter scores, while focus group participants indicated that a combined score could be useful and improve understanding of the label. Further testing can help to determine how a summary score is most effective to support informed decisions.

Overall arrangement of elements, scalings, parameter scores, and additional features

Based on the tested prototypes, three main design approaches can be identified from the previous findings. One of these designs follows the general arrangement of the EU Energy Label, while the others feature an overall index displayed at the top of the label. Although the version with a single indicator only was not less preferred by either stakeholders or focus group participants, it is nevertheless being tested in the surveys in order to examine consumers’ views on such a label in greater detail.

Overall, the results from the stakeholder consultation were more heterogenous compared to the focus groups. No clear favourite emerged among the tested prototypes in the stakeholder feedback, whereas the focus groups showed a tendency to prefer a label design similar to the EU Energy Label. However, presenting a larger number of parameters (>5) in this format proved to be difficult to understand.

A potential drawback of the EU Energy Label–style design is its high visual similarity to the existing label. The subsequent survey task will provide further insight into whether this similarity is perceived as an advantage or a disadvantage in terms of influencing consumer behaviour.

Language neutrality and integration of additional context (QR Code)

Regarding the scales tested, both the barrier-free colour scale (horizontal or vertical) and the A–G scale were found to function well. Feedback from stakeholders and focus groups confirmed the effectiveness and understandability of this arrangement of information, which is already well supported in the literature.

Clear results were also obtained regarding the use of a QR code to provide additional information. All consulted participants considered it useful, and the addition of an “info” icon with a hand pointing to the QR code was seen as helpful in encouraging consumers to actually scan it. Overall, the findings indicate that providing access to further label information, for example, via a website linked through the QR code, is valuable. The precise content and presentation of this information behind the QR code, however, is not within the scope of the current project.

For a label to be applicable EU-wide, it is important that it remains language-neutral. At the same time, the results show that some complexity exists in the icons themselves, and supplementary text can support comprehension. Including information in local languages also appears beneficial based on the initial results. However, this adds complexity in finding translations which ensure the same meaning across languages. In the next task, the arrangement and interpretability of icons used in the product-specific prototypes will be further examined to ensure the final label is clearly understandable.

5. Task 3: Experimental testing and surveys on label prototypes

Task 3 covers the design, operational set-up, fieldwork, analysis and reporting of the behavioural experiment undertaken as part of the study. The following sections present the methodology and findings of this task.

5.1. Aim of the experiment and research questions

An online behavioural experiment was conducted to assess how different ESPR label design alternatives influence consumer choices, whether and how these effects vary with product price, and how the label designs perform in terms of consumer understanding and evaluation. The experiment was designed to generate comparative evidence on the performance of the tested label prototypes, including their ability to support consumer understanding, facilitate product comparison, and steer choices towards products with better ecodesign performance across the selected product groups and purchasing contexts. In doing so, the experiment supports the identification of the most effective prototype label and provides an empirical basis for its further refinement.

The experiment addresses the following research questions:

1. How do different label design alternatives affect participants' likelihood of choosing products that perform well on ecodesign aspects?
2. To what extent does product price moderate the effect of different label design alternatives on those choices?
3. How do different label design alternatives affect consumers' understanding and evaluation of the label?

5.2. Overview of label prototypes for experimental testing

Building on the selected product groups (see **section 3.1**, **Table 3-1**) and the findings from the preceding tasks, refined and product-related prototype labels were developed.

For the behavioural experiment, three major prototype frameworks were selected in consultation with the Commission. These prototype frameworks were adapted to the selected product groups in order to test them under realistic shopping conditions (see **Figure 5-1**, **Figure 5-2** and **Figure 5-3**). In two of the three prototypes an overall index is presented (see **Figure 5-1** and **Figure 5-3**). The second prototype contains a variation of placements and selection for visually highlighted but single ESPR parameters (see **Figure 5-2**). Prototype label I (**Figure 5-1**) and II (**Figure 5-2**) can be expanded by adding additional parameters and performance ratings in the lower part of the label. Prototype label III is designed to allow for the display of significantly more information about the label behind the QR code and to show a single, comprehensive rating (see **Figure 5-3**).

For each prototype label, a smaller version of the label was designed for use in online shopping environments (see **Figure 5-1, Figure 5-2, Figure 5-3**). In such environments, a nested display mechanism can be used, whereby the smaller label is initially displayed and the full label appears if the smaller label is clicked or hovered over with a mouse.

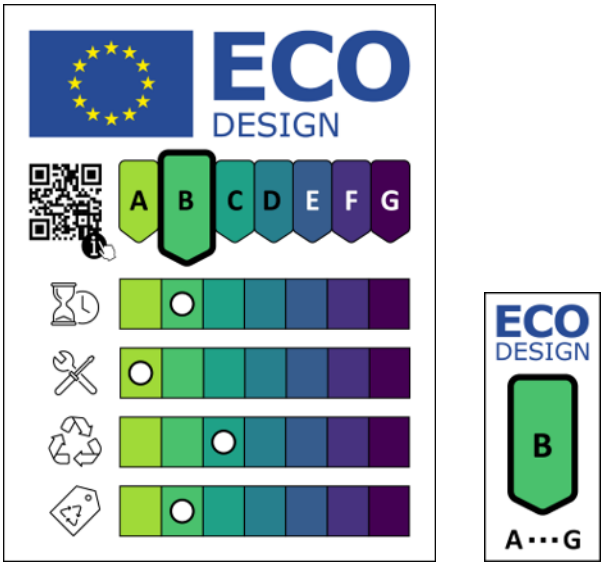


Figure 5-1: Prototype label I

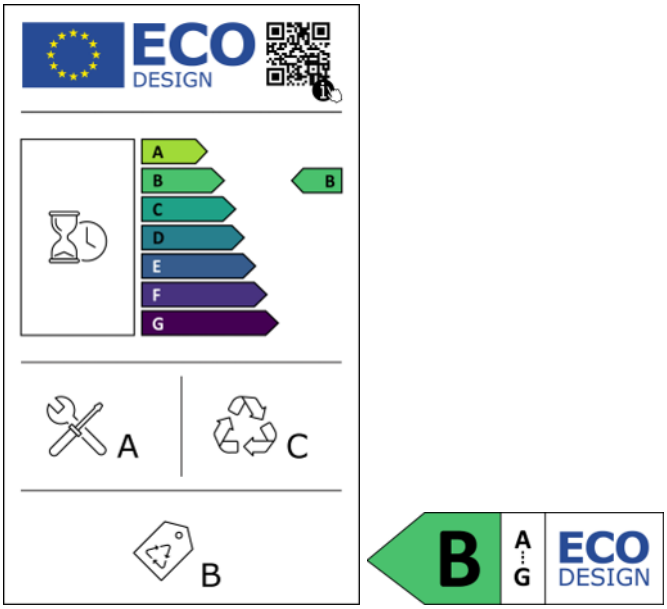


Figure 5-2: Prototype label II

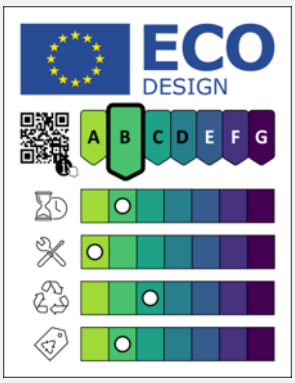


Figure 5-3: Prototype label III

It is important to note that the prototype labels and their smaller versions differ along multiple dimensions, including content, design, and size. Consequently, the behavioural experiment can assess which design alternative performs best (e.g., in terms of choice, attention, understanding, and evaluation), but cannot provide insight into which specific features drive any observed differences in performance between the design alternatives. For example, if Prototype label I proves more effective than Prototype label III, this effect could stem from its larger size, its design (e.g., solid versus leaves, darker colours), or the inclusion of additional parameter scores. However, the experimental design does not allow these factors to be disentangled.

Prototype labels were developed for five product categories included in the behavioural experiment to enhance the generalisability of the findings: coffee machines, furniture, apparel, detergents, and earbuds. **Table 5-1** provides an overview of the ecodesign parameters included for each category, along with an example label (Prototype label I).

Table 5-1: Overview of ecodesign parameters and an example label, per product category.

Product category	Parameters **highlighted parameter in Prototype label II*	Example label (Prototype I displayed)
Coffee machines	Repairability*	
Furniture	Durability* Repairability Recyclability Recycled content	
Apparel	Environmental footprint* Robustness Recycled content	

Detergents	Environmental footprint*	
Earbuds	Repairability* Recyclability Battery endurance	

5.3. Design of the experiment

The behavioural experiment examined the effects of label design alternatives on choice behaviour as well as cognitive and affective responses, including attention, understanding and evaluation. The experiment consisted of two types of tasks: (a) product choice tasks, (b) survey questions assessing how much attention respondents paid to the label during the choice tasks, as well as their understanding and evaluation of the label.

5.3.1. Product choice tasks

In the first part of the experiment, participants made hypothetical product purchase decisions. The experiment employed a **mixed design**, with label design alternative and purchase environment as between-subjects factors and product category as within-subjects factor (see **Figure 5-4** for a visual representation). Each participant was randomly assigned to one of two store environments (online vs. brick-and-mortar store) and one of four label conditions (no label vs. prototype label I vs. prototype label II vs. prototype label III). Participants completed the purchase tasks in a fictitious store that either simulated an online shopping environment, in which labels were displayed through a nested display mechanism (described in further detail below) or a brick-and-mortar store environment, in which labels were immediately displayed in full. All participants were presented with the same product alternatives, while the presence and type of label were systematically varied between participants. Specifically, products were presented either with prototype label I, prototype label II, prototype label III, or no label.[26]

Product category was included as a within-subjects factor, meaning that each participant made a product choices in each of five product categories: coffee machines, furniture, apparel, detergents and earbuds. Specifically, participants were asked to hypothetically purchase a

[26] Randomisation checks confirmed that the experimental groups were comparable in terms of gender, education and income composition, as well as self-reported financial situation and degree of urbanisation. However, small but statistically significant differences in age composition were observed across the experimental groups. These differences were accounted for by including age as a covariate in all statistical models, thereby ruling out age composition as an explanation for the observed label effects.

coffee machine, a side table, a white T-shirt, a laundry detergent, and earbuds. The order in which the product categories were presented was randomised to control for order effects.

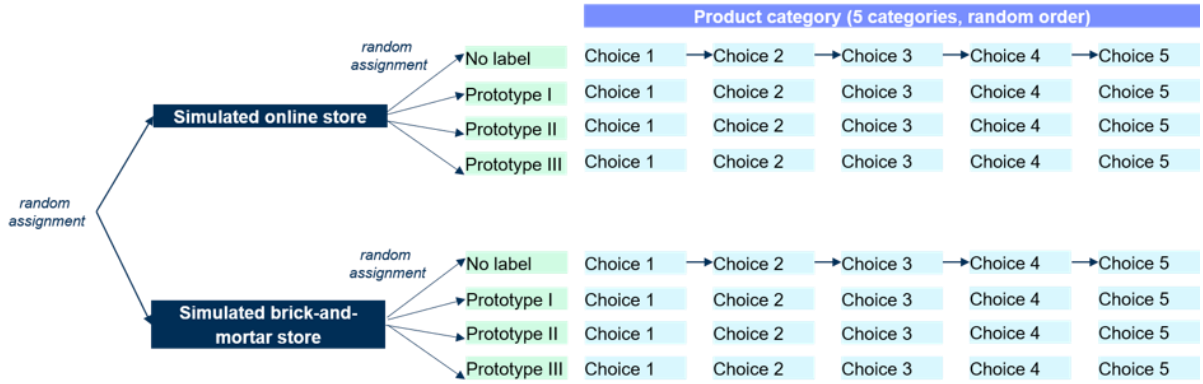


Figure 5-4: High-level experimental design.

For each product category, a product set comprising three product options was constructed. The options varied in terms of functional features (e.g., the capacity of the coffee machine, the size of the side table's size, a detergent's scent, the earbuds' sound quality), ecodesign performance, price, and other relevant attributes, such as brand and visual design. The product options varied systematically in functional performance, ecodesign performance and price as follows:[27]

1. **Product option 1** (budget option): relatively *low* functional performance, relatively *low* ecodesign performance (label E, F or G, randomly selected) and a relatively *low* price (base price);

2. **Product option 2:** relatively *high* functional performance, relatively *low* ecodesign performance (label E, F or G, randomly selected) and a relatively *high* price (base price +40%);

3. **Product option 3:** relatively *high* functional performance, relatively *high* ecodesign performance (label A, B or C, randomly selected) and a relatively *high* price (base price +10%, +40% or +70%, randomly selected).

The position of the three product options within each choice set was randomised to ensure that the target product did not consistently appear in the same position.

The primary outcome of interest was the share of choices allocated to the product with relatively high ecodesign performance (alternative 3), hereafter referred to as the **target product**. To be able to gain insight into how label effectiveness depends on price (research question 2), the price of the target product was set at either 10%, 40%, or 70% above the base price, with the price level randomly assigned. **Figure 5-5** provides a schematic representation of the choice set design. An example of a choice set is shown in **Figure 5-6.**

Note that the share of choices allocated to the target product in the no-label group reflects its baseline attractiveness in the absence of an Ecodesign label, based on attributes such as its functional features, price, visual design, and brand. The effectiveness of the Ecodesign label is assessed by comparing the share of choices allocated to the target product in each label condition with that in the no-label group. Any differences in choice shares between these

[27] Prices were multiplied by a country-specific factor derived from comparative price analysis to account for price differences between countries and expressed in each country's local currency.

groups **can be attributed only to the presence and type of label**, as price was varied independently of the label condition and all other attributes were held constant.

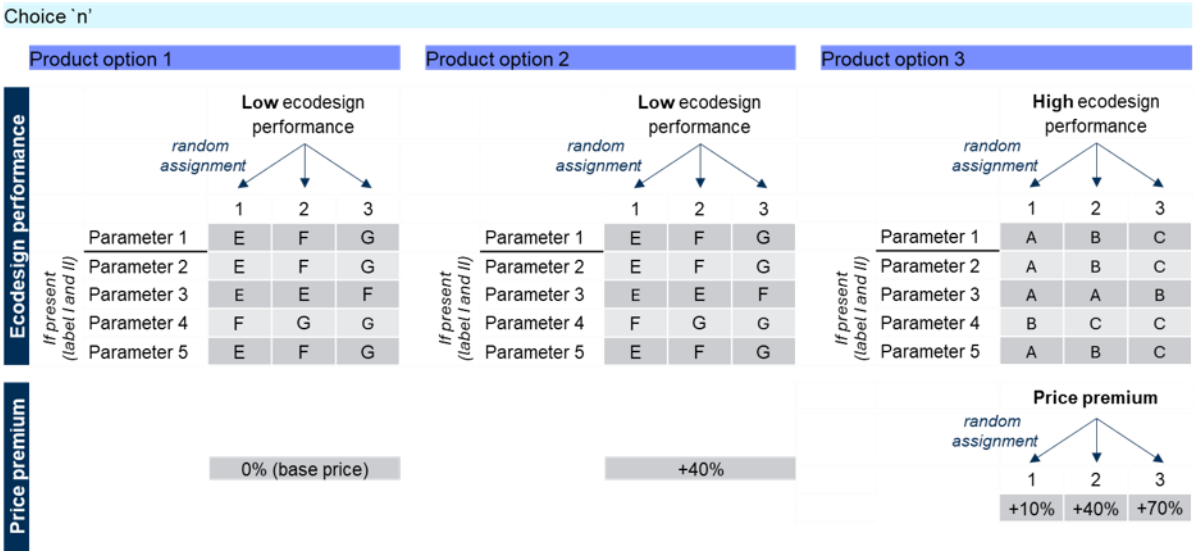


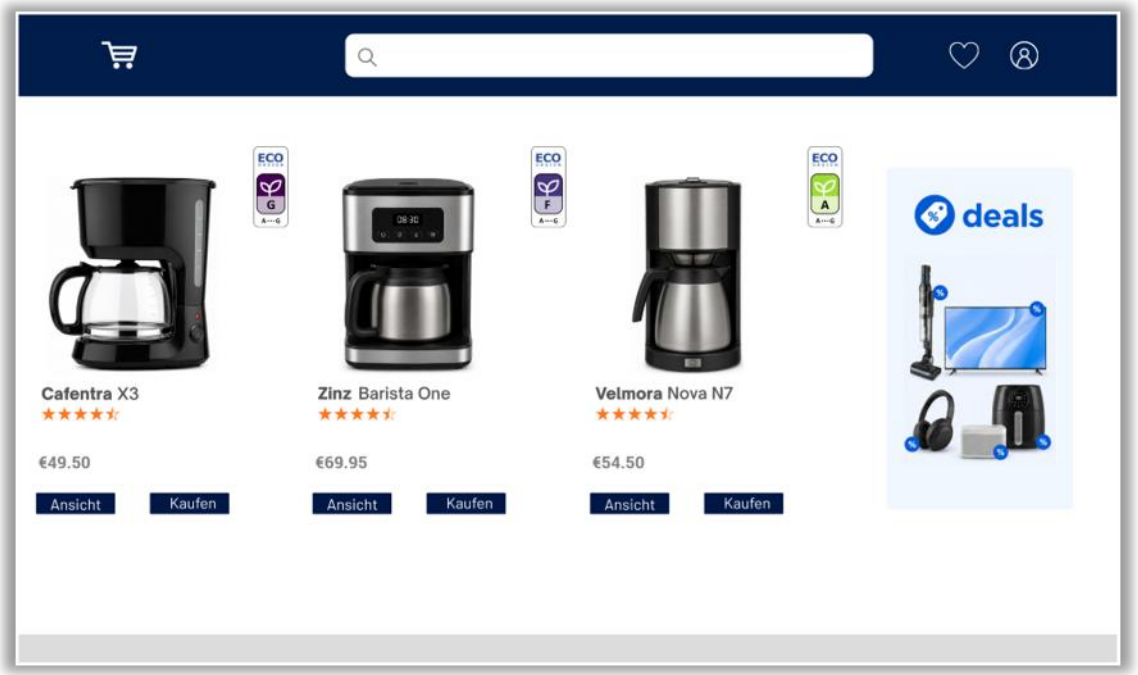
Figure 5-5: Choice set design.

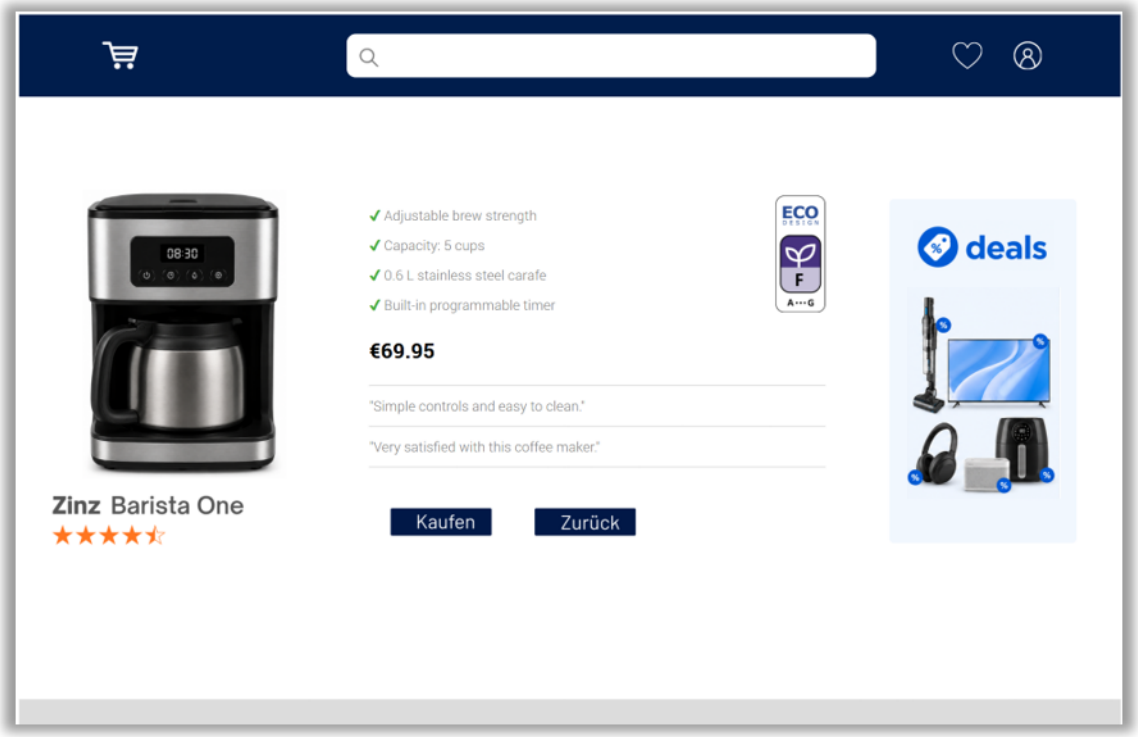
Finally, it is important to note that the detergent and T-shirt choice sets differed slightly from those of the other product categories. In the detergent choice set, alternative 3 also carried the **EU Ecolabel** (including in the no-label condition), as products with high ecodesign performance would be more likely to carry this label as well. Similarly, in the T-shirt choice set, alternative 3 was always accompanied by information indicating that the T-shirt was made from **organic cotton**. In these two product categories, the observed effect of the Ecodesign label therefore represents its additional effect beyond that of the EU Ecolabel or the organic cotton indication, respectively. Consequently, somewhat smaller effects of the Ecodesign label were expected for these product categories.

Participants completed the purchase tasks in a fictitious store that mimicked the relevant features of either an online shopping environment or a brick-and-mortar store environment. In the simulated online store, the Ecodesign labels were presented using a **nested display mechanism**, whereby the full label appeared after participants clicked on the smaller label. Consistent with a typical online shopping experience, participants could click a “View” button to access an individual product page containing more detailed product information (see **Figure 5-6** for an example). In the simulated brick-and-mortar store, the Ecodesign labels were **immediately displayed in full**. Here, the labels were displayed on product information tags that also included a product description and price. Participants could click a “View” button to inspect individual products and their accompanying information tags, mimicking the experience of moving closer to a shelf to examine a product in greater detail (see **Figure 5-6** for an example).

In the two shopping environments, the same products and product information were presented, with the exception of customer reviews, which were displayed only in the online shopping environment to enhance ecological validity. To ensure comparability across the two environments, (a) all product alternatives were assigned the same average customer rating, and (b) written reviews were randomly selected from a pool of ten category-specific reviews. This approach minimised the potential influence of differences in customer ratings and review content on participants’ purchase decisions.

The following images provide a visual representation of the product overview and the product close-up.





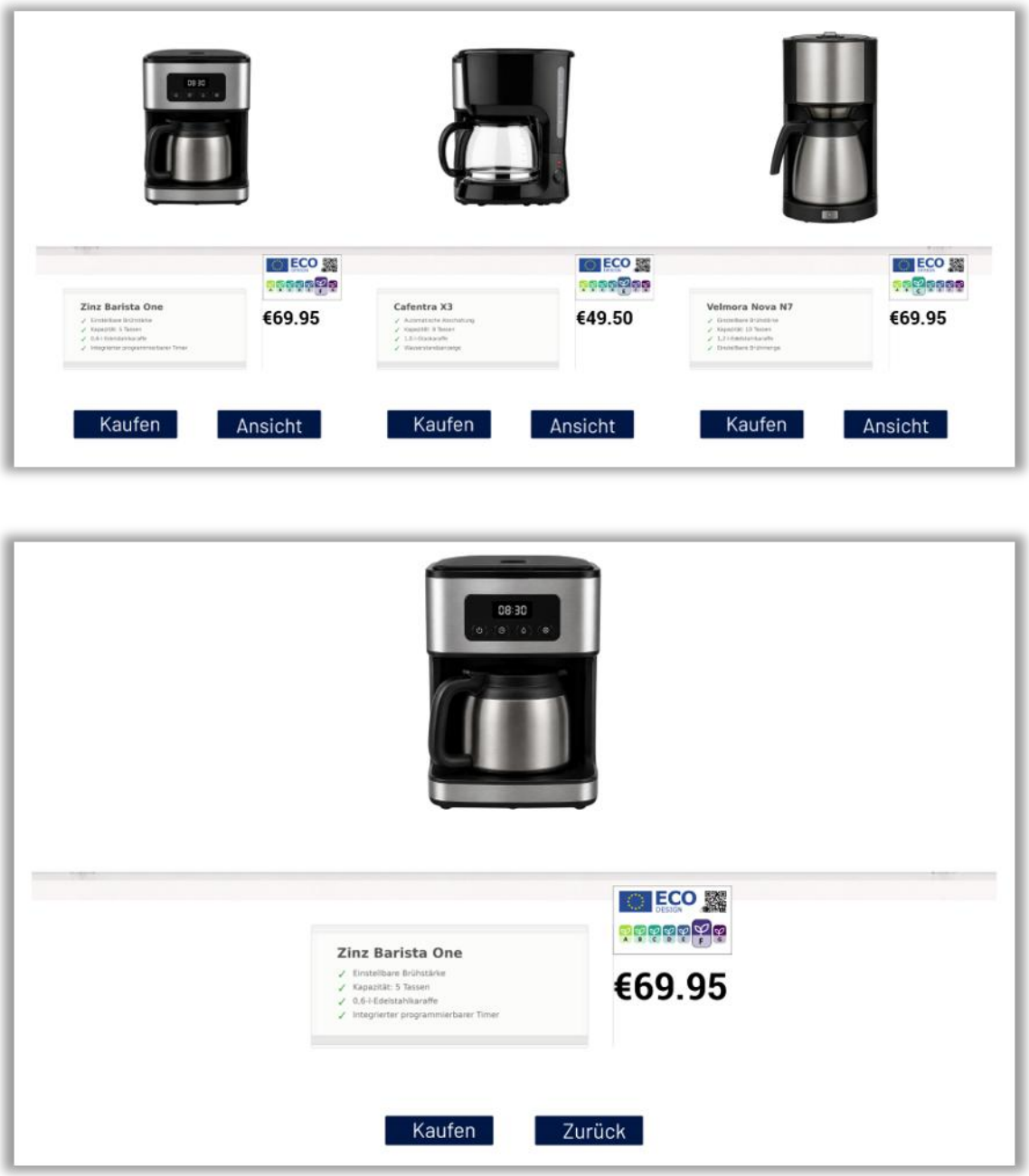


Figure 5-6: Example of a product overview and product close-up (brick-and-mortar store, prototype label III, coffee machines).

5.3.2. Survey questions assessing label attention, understanding and evaluation

After completing the purchase tasks, participants answered a series of survey questions about the Ecodesign label. First, their **attention** to the label during the purchase tasks was assessed, followed by questions measuring whether they **understood** that the label provides information about the environmental friendliness of a product's design (i.e., how well a product performs on aspects such as repairability, recyclability, and environmental impact), rather than, for example, the product's carbon footprint or energy efficiency.

To assess **general support for an Ecodesign label**, participants were subsequently informed about the European Commission's efforts to develop such a label and its intended purpose. They then rated the extent to which they considered an Ecodesign label important, useful, helpful, and redundant, as well as the likelihood that such a label would influence their purchasing decisions.

Next, participants' attention was directed to the specific label they had seen in the final purchase task. They were asked a series of questions assessing their **understanding of specific elements of the label**. Participants who had been exposed to Prototype label I or II first completed a multiple-choice question assessing their understanding of the relationship between the overall index (Prototype label I) or highlighted rating (Prototype label II) displayed at the top of the label and the individual ratings presented at the bottom. To assess participants' ability to use the individual parameters to compare products, they subsequently completed a product identification task. In this task, participants were presented with the labels of two different product alternatives and asked to identify the product with a specific characteristic (e.g., "Which of these two products is easiest to repair?" and "Which of these two products contains the highest proportion of recycled materials?"). Participants in all label conditions then **evaluated** the label using statements such as "This label is easy to understand", "This label is confusing", and "This label makes it easy to compare products".

In the final task, participants received an explanation of the meaning of the prototype label they had previously encountered in the survey and were then shown the two alternative prototype labels. The key differences between the three potential label designs were explained, after which participants indicated their **preferred design** and the **reason for their preference**.

5.3.3. Survey instrument

The behavioural experiment was embedded in an online survey, which started with screening questions assessing participants' socio-demographic characteristics. These characteristics were used to monitor the composition of the sample against predefined quotas and to ensure that key demographic groups were adequately represented.

Following the experiment, participants completed a short supplementary questionnaire assessing relevant consumer characteristics, including environmental concern (e.g., "I am concerned about the environment", "I am concerned that people do not care enough about the environment" and "To help protect the environment, I often buy products labelled as sustainable"), measured on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree.* Price consciousness was assessed using two items: "I pay attention to product prices when shopping" and "The lowest-priced product is usually the one I choose". The full survey instrument is provided in **Annex XIV: Behavioural experiment - survey instrument**.

5.3.4. Sample description

The experiment was conducted via computer-assisted web interviews (CAWI) in five Member States: France, Germany, Sweden, Romania, and Spain. Respondent samples were drawn from Ipsos' access panel network in each of the selected countries. In total, 6,104 respondents completed the survey, with approximately 1,200 respondents per country. **Table 5-2** provides an overview of the characteristics of the respondent sample, both overall and by country.

Table 5-2: Overview of sample characteristics, in total and per country.

	FR	DE	RO	ES	SE	Total
Sample size	1,236	1,218	1,243	1,203	1,204	6,104
Gender						
Male	47%	51%	52%	51%	53%	51%
Female	52%	48%	48%	49%	47%	49%
Age group						
18-24	11%	10%	9%	10%	11%	10%
25-34	16%	17%	14%	15%	19%	16%
35-44	16%	16%	18%	17%	15%	16%
45-54	17%	17%	22%	22%	18%	19%
55-64	17%	20%	16%	18%	17%	18%
65-80	23%	21%	20%	19%	21%	21%
Educational level (ISCED category)						
Low/Mid	40%	57%	34%	44%	49%	45%
High	57%	39%	66%	55%	48%	53%
Unknown	3%	5%	1%	1%	3%	2%
Income group						
Low	28%	37%	5%	22%	29%	24%
Mid	26%	30%	14%	31%	29%	26%
High	39%	26%	76%	38%	30%	42%
Unknown	8%	8%	5%	9%	12%	8%
Self-reported financial situation On a scale from 1 = *very difficult* to 5 = *very easy* to make ends meet	2.89	3.09	2.78	3.05	3.27	3.02
Degree of urbanisation						
Rural area or village	32%	26%	12%	13%	20%	21%
Small or medium size town	42%	40%	33%	22%	37%	35%
Large town or city	26%	34%	56%	65%	43%	45%
Perceived importance of protecting the environment On a scale from 1 = *not important at all* to 5 = *extremely important*	3.56	3.44	3.71	3.59	3.49	3.56
Perceived seriousness of climate change On a scale from 1 = *not at all a serious problem* to 10 = *an extremely serious problem*	8.13	7.60	8.20	7.79	7.24	7.80

5.3.5. Statistical analysis approach

The product choice data were analysed using multilevel logistic regression models to account for both the binary nature of the outcome measure (target product selected vs. not selected) and the nested structure of the data, as each participant made choices across five product categories. Outcomes related to attention, understanding and evaluation were analysed using (ordered or multinomial) logistic and linear regression models that appropriately account for the nature of the respective outcome variable (e.g., binary, (ordered) categorical, or continuous). In all models, the presented label (four conditions) was included as the main explanatory variable. Contrast tests were conducted to disentangle effects of **label presence** (comparing the three prototype label conditions with the no-label condition) and **label type** (comparing the three prototype label conditions with each other). Follow-up statistical tests were performed to examine potential interaction effects between the presence/type of label and potential moderators, including shopping environment, price level, product category, and country.

The figures in the results section present the outcomes (e.g., product choice, attention, understanding) by label condition, with error bars indicating one standard error above and below the estimated mean. **Unless otherwise indicated, the differences and effects described in the results section are statistically significant**.

5.4. Results of the behavioural experiment

This section presents the results of the behavioural experiment. It provides insight into which label design alternative is most effective at steering choices towards products with better ecodesign performance (all else being equal), and whether and how its effectiveness varies across shopping environments, price levels, product categories, countries, and consumer groups. It also examines how the different label design alternatives perform in terms of underlying cognitive and affective process measures, including attention, understanding, and evaluation. The complete dataset and detailed variable definitions are available in the accompanying raw data and codebook **Annex XV: Raw data and codebook experimental surveys.**

Before turning to these results, however, the following section first examines consumers' general support for an Ecodesign label, irrespective of any specific label design.

5.4.1. Consumer support for an Ecodesign label

In the survey, participants received the following information about the Ecodesign label and its purpose:

> ***EU Ecodesign legislation requires companies to design products in a way that meets strict standards in the following areas***
>
> - *Circularity**: for example, making products easier to repair, reuse, and recycle***
> - ***Raw materials: for example, avoiding harmful substances and using more recycled materials***
> - *Product durability**: for example, making products last longer and preventing them from breaking or becoming outdated too quickly***
> - *Environmental impact**: for example, reducing pollution and CO_2 emissions***

Building on this legislation, the European Commission is developing a new Ecodesign label. This label will show how well a product performs on environmental aspects, such as repairability, recyclability, durability and environmental impact. This label is intended to make it easier for consumers to compare products based on these aspects.

The majority of participants (71%) indicated that they understood the objective of the label. A relatively small proportion (7%) indicated that they did *not* understand its objective, while the remaining participants gave a neutral response. Similarly, 69% of participants indicated that they understood the type of information the new label is intended to convey, whereas 8% indicated that they did *not* understand this (the remaining 23% gave a neutral response).

Figure 5-7 shows participants' general attitude towards an Ecodesign label, irrespective of the specific label design they had been exposed to. The majority of participants expressed positive attitudes towards the introduction of an Ecodesign label. Approximately two-thirds considered such a label important (68%), useful (65%), and helpful (64%). Furthermore, and importantly, half of the participants (50%) indicated that an Ecodesign label would be likely to influence their purchasing decisions. Opinions on the potential redundancy of an Ecodesign label were more divided. While one-third of participants (33%) considered such a label redundant, a similar proportion (35%) did not consider it redundant.

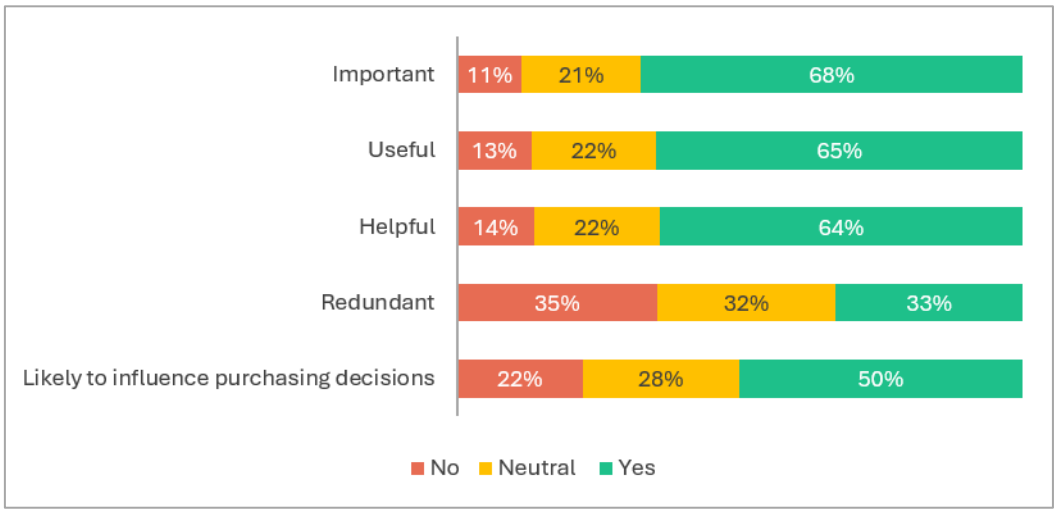


Figure 5-7: Attitude towards the Ecodesign label.

Overall, these findings indicate clear consumer support for an Ecodesign label. Whether such a label also influences purchasing behaviour, and which label design is most effective in doing so, is examined in the following section.

5.4.2. Label effects on consumer choice behaviour

This section presents the results from the purchase tasks, which were designed to examine the influence of alternative Ecodesign label designs on participants' product choices. The primary outcome of interest is the percentage of choices in which the target product – that is, the product with relatively high ecodesign performance – was selected.

Figure 5-8 shows the effect of the different label design alternatives on choice behaviour across the five product categories, the two shopping environments and the three price levels

(differences in the results across product categories, shopping environments and price levels are discussed later in this section). **Overall, the Ecodesign label significantly increased the likelihood of choosing products with relatively high ecodesign performance**. In the no-label condition, the target product was selected in 28% of the choices. If participants received information about the ecodesign performance of the products through the Ecodesign label, this percentage significantly increased. Prototype label I (with the target product being selected in 40% of the cases) and prototype label III (39%) were slightly more effective than prototype label II (37%), although the differences were small in absolute terms.

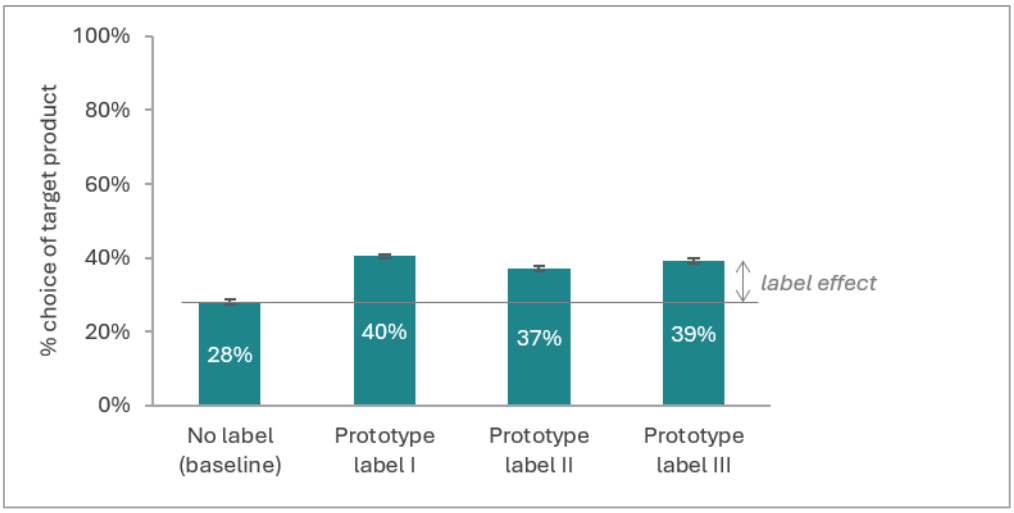


Figure 5-8: Label effects on choice behaviour.

Figure 5-9 shows the results by type of shopping environment. In both environments, all three prototype labels effectively steered choices towards alternatives with better ecodesign performance. However, the relative performance of the prototypes differed somewhat between the two environments. Most notably, prototype label III performed better in the simulated online store (with the target product being selected in 41% of the choices), where labels were presented through a nested display mechanism, than in the simulated brick-and-mortar store (37%), where labels were displayed immediately in full. Note, however, that the absolute differences in effectiveness between the label designs were small.

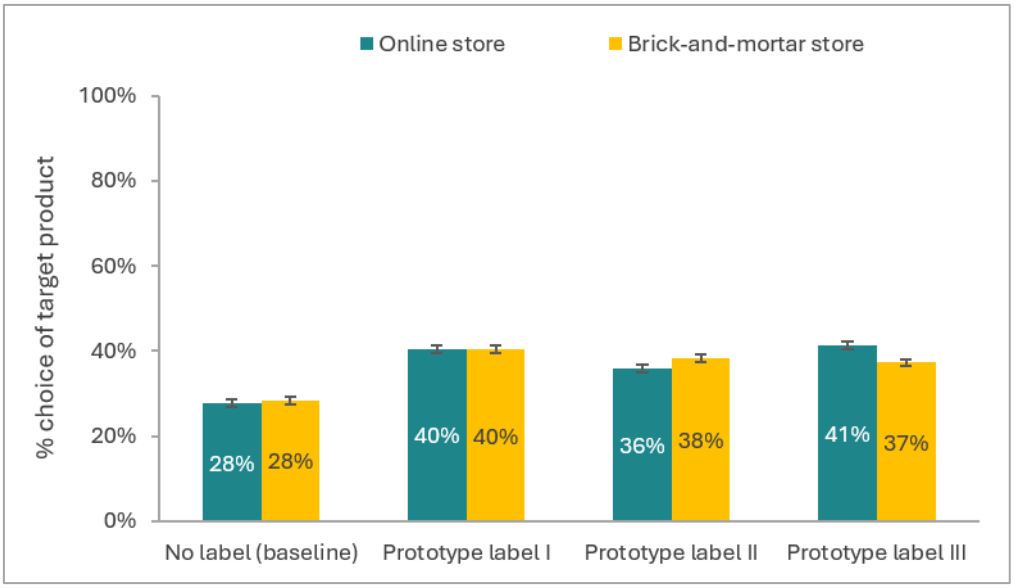


Figure 5-9: Label effects on choice behaviour, by type of environment.

In the experiment, the price of the target product was varied independently of the label condition to examine whether and how label effects are moderated by product price. As expected, the results, shown in **Figure 5-10**, reveal a negative price effect: as the price of the target product increased, the likelihood of selecting it decreased. When the target product was priced only 10 percent higher than the budget option, it was selected in almost half of the choices in the prototype label conditions (Prototype label I: 49%; Prototype label II: 45%; Prototype label III: 47%), compared with 34% in the no-label condition (see **Figure 5-10**) – an increase of approximately 13 percentage points. As expected, the effect of the Ecodesign label became weaker as the price of the target product increased. Nevertheless, the label continued to influence product choices even when the target product was priced 70 percent higher than the budget option. At this price difference, the target product was selected in around 30 percent of the choices when a label was present (Prototype label I: 32%; Prototype label II: 28%; Prototype label III: 31%), compared with around a quarter of the choices (24%) in the no-label condition – an increase of approximately 6 percentage points. The relative effectiveness of the three design alternatives did not significantly vary as a function of product price.

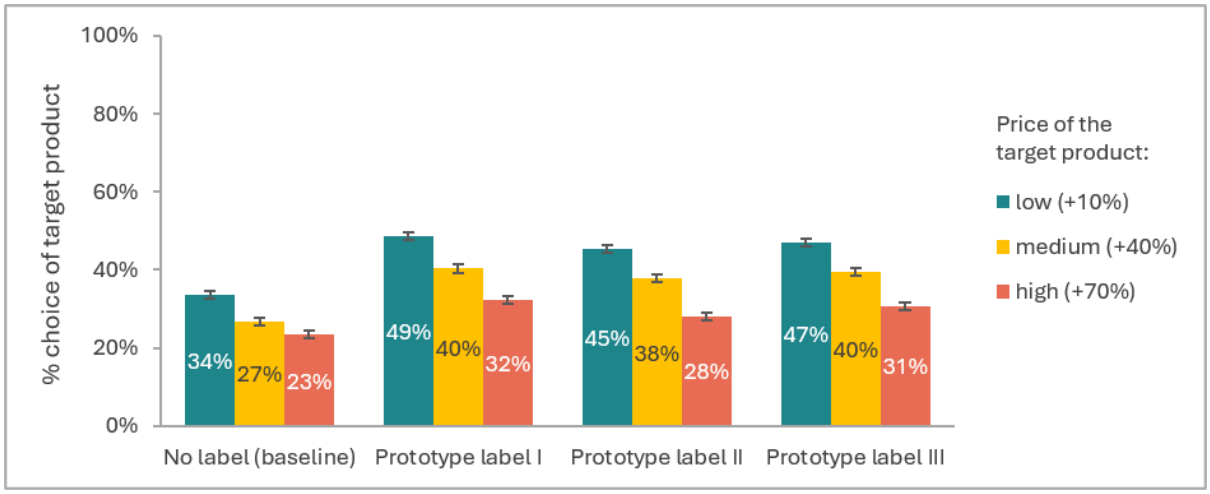


Figure 5-10: Label effects on choice behaviour, by product price.

A follow-up analysis examined whether consumers with relatively high environmental concern responded differently to the Ecodesign labels than those with relatively low environmental concern. The results, shown in **Figure 5-11**, indicate that the effectiveness of the prototype labels varied depending on participants' self-reported level of environmental concern.[28] Specifically, as expected, the Ecodesign labels had a stronger effect on the choices of participants with relatively high environmental concern than on those with relatively low environmental concern.

Among participants with relatively high environmental concern, Prototype labels I and III produced the largest increases in the selection of the target product. In these conditions, the target product was selected in approximately half of all choices (Prototype label I: 50%; Prototype label III: 49%), compared with 33% in the no-label condition – an increase of approximately 17 percentage points. Prototype label II also significantly increased the

[28] Environmental concern was measured using five items (e.g., "I am concerned about the environment", "I am concerned that people do not care enough about protecting the environment" and "To help protect the environment, I often buy products labelled as sustainable") on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree*). The scale showed high internal consistency (Cronbach's alpha = 0.90). The results in **Figure 5-11** show the label effects at one standard deviation below the mean (low environmental concern) and one standard deviation above the mean (high environmental concern) of the environmental concern scale.

selection of the target product (45%; an increase of approximately 12 percentage points), but was slightly less effective than the other two designs.

Among participants with relatively low environmental concern, the labels still had a positive effect on the selection of the target product, but the effect was much less pronounced. In the label conditions, the target product was selected in around 30% of choices (Prototype label I: 31%; Prototype label II: 29%; Prototype label III: 30%), compared with 23% in the no-label condition – an increase of approximately 7 percentage points. Within this group, there were no significant differences in effectiveness between the three label designs.

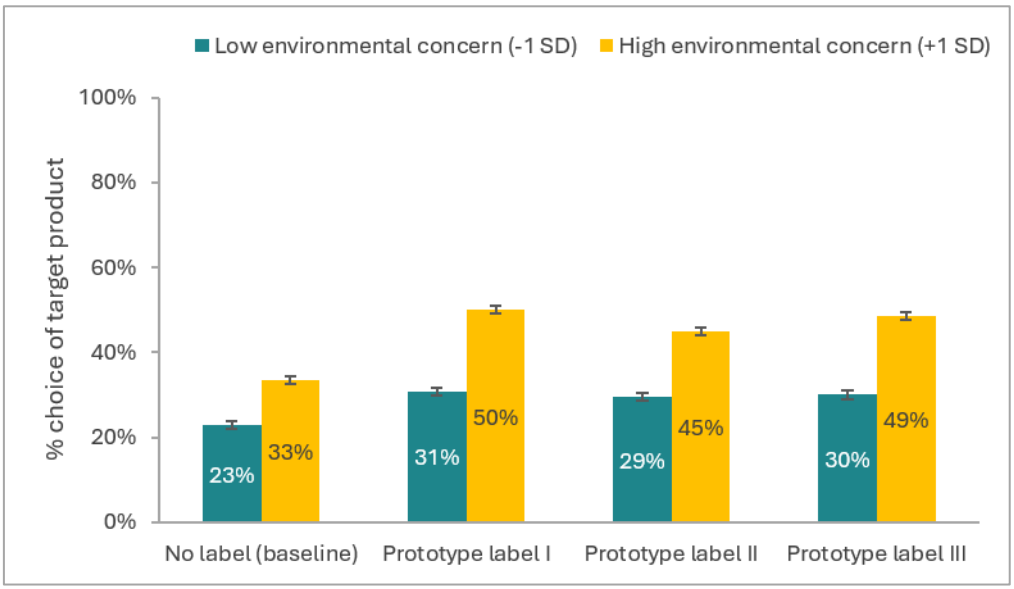


Figure 5-11: Label effects on choice behaviour, by self-reported environmental concern.

Robustness of the label effects across product categories and countries

Finally, further analyses were performed to examine the robustness of the Ecodesign label effects on product choice across product categories and countries. With regard to product categories, the analysis showed that the presence of an Ecodesign label had a stronger influence on product choice for some product types than others. More specifically, the presence of a label produced the largest increase in the selection of the target product for detergents (16 percentage points), despite this product already carrying the EU Ecolabel. This was followed by earbuds (13 percentage points) and coffee machines (11 percentage points). The increase was smaller for T-shirts (9 percentage points) and side tables (5 percentage points). The particularly strong label effect for detergents is somewhat surprising. As noted earlier, the target product in this category already carried the EU Ecolabel, meaning that the reported effect reflects the additional influence of the Ecodesign label beyond that of the EU Ecolabel. Although many factors may contribute to these differences, the pattern may reflect variation in the relative importance of functional versus more affective or identity-related considerations across product categories. The Ecodesign label may be more influential for primarily functional products, whereas taste, aesthetics, and self-expression may play a larger role for products such as T-shirts and side tables. As noted earlier, Prototype labels I and III performed slightly better than Prototype label II overall. The relative effectiveness of the three label designs did not vary significantly across product categories, with the same general pattern emerging across all categories (more detailed results can be found in **Annex XVI: Behavioural experiment – detailed results**).

The analysis further revealed that the strength of the Ecodesign label effect varied across countries. More specifically, the labels had a significantly stronger influence on the product choices of French participants, resulting in an average increase of 17 percentage points in the selection of the target product, than on those of Romanian (8 percentage points), Spanish (10 percentage points), and Swedish participants (8 percentage points). The results for German participants fell in between (12 percentage points) and were not significantly different from either group. Several factors may contribute to these cross-country differences, such as differences in consumers' familiarity with environmental labels and trust in such labels, or broader socioeconomic and cultural differences that shape environmental attitudes and purchasing behaviour. The relative effectiveness of the three label design alternatives did not vary significantly across countries, however. The same general pattern emerged in all countries, with the target product being selected more frequently when Prototype label I or III was present than when Prototype label II was present. However, the absolute differences in target-product selection between the label designs were small in all cases, with the largest difference being 5 percentage points in France, and were not always statistically significant (more detailed results can be found in **Annex XVI: Behavioural experiment – detailed results**).

5.4.3. Attention to the label during the purchase tasks

After completing the purchase tasks, participants answered survey questions assessing to what extent they had paid attention to the label during the purchase tasks.

Participants who visited the simulated online store were first shown with the small version of the label and asked whether they had looked at this label for at least some of the products while browsing the store. **Figure 5-12** presents the results. Participants who were exposed to Prototype label I or Prototype label III during the purchase tasks were more likely to report that they had looked carefully at the small label (39% and 38%, respectively) than those exposed to Prototype label II (30%). Conversely, they were less likely to report that they had not looked at the label at all (14% and 15%, respectively, compared with 21%; see **Figure 5-12**). Although the designs of the small labels differed in several respects (see **Figure 5-1, Figure 5-2, Figure**

5-3), the vertical versus horizontal format may provide a potential explanation for this pattern. Prototype labels I and III both used a vertical format, whereas Prototype label II used a horizontal format.

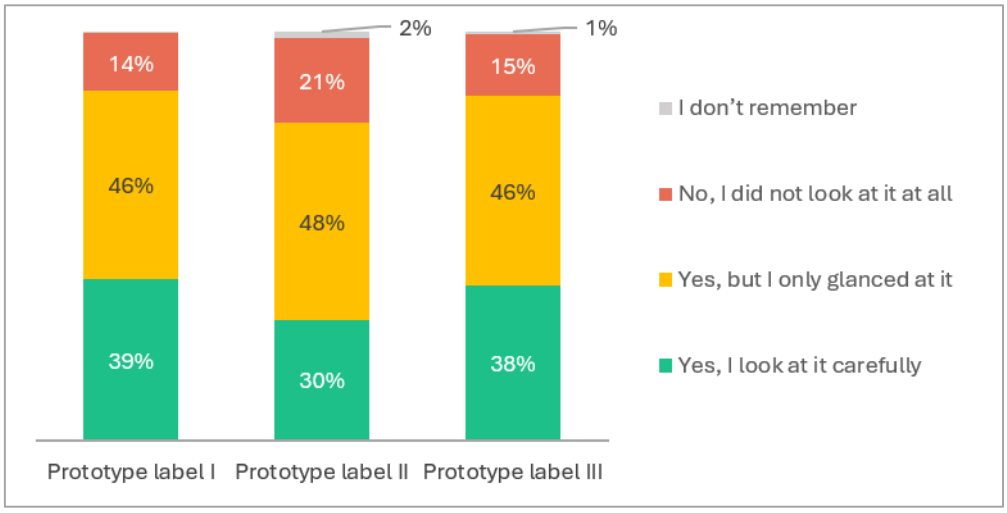


Figure 5-12: Self-reported attention to small label, online store.

Participants who indicated that they had looked at the small label, either briefly or carefully, were then shown examples of the full label ("In case you clicked on the small label, a larger version of the label appeared") and asked whether they had looked at the full label for at least some of the products. The results, visualised in **Figure 5-13**, reveal a pattern similar to that observed for the smaller label, although the differences are somewhat less pronounced. Participants who were exposed to Prototype label I or Prototype label III were more likely to report that they had looked carefully at the full label (26% and 28%, respectively) than those exposed to Prototype label II (20%). Participants who were exposed to Prototype label II were more likely to report that they had not looked at the label at all (34%) than participants who were exposed to Prototype label III (27%).

Participants who visited the simulated brick-and-mortar store were immediately shown examples of the full label and asked whether they had looked at the label for at least some of the products. In general, and perhaps not surprisingly, they reported higher attention to the full label than participants who visited the simulated online store did: more than one third reported having looked at it carefully (see **Figure 5-14**). Interestingly, in the simulated brick-and-mortar store, where the full label was displayed immediately rather than through a nested display mechanism, there were no significant differences in self-reported attention to the full label across the three label design alternatives. This suggests that the lower attention to the full version of Prototype label II observed in the online environment may be related to the nested display mechanism rather than to the design of the full label itself.[29]

[29] A follow-up analysis confirmed that the Ecodesign label had a substantially stronger influence on the choices of respondents who indicated that they had carefully looked at the label, resulting in an average increase of 25 percentage points in the selection of the target product, than on the choices of respondents who indicated that they had only glanced at the label (6 percentage points increase) or did not look at the label at all (4 percentage points decrease).

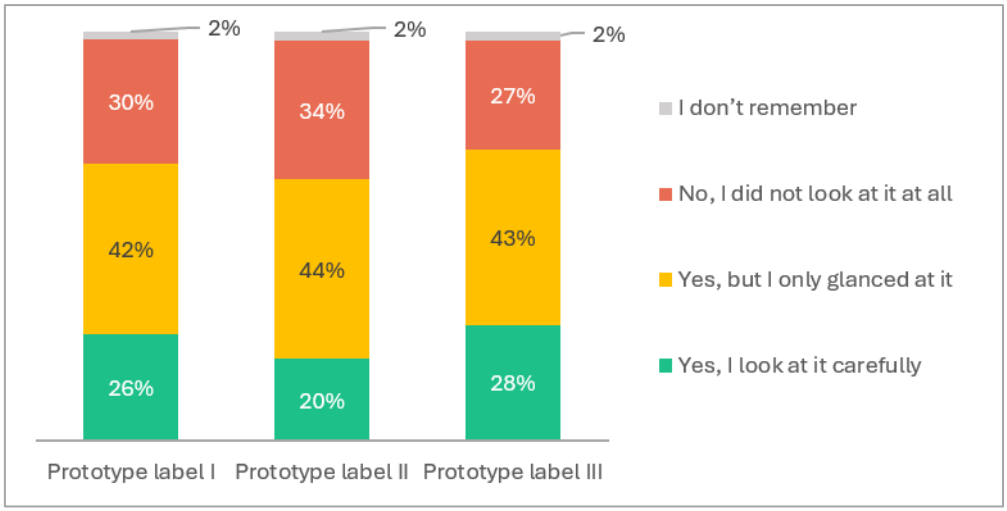


Figure 5-13: Self-reported attention to full label, online store.

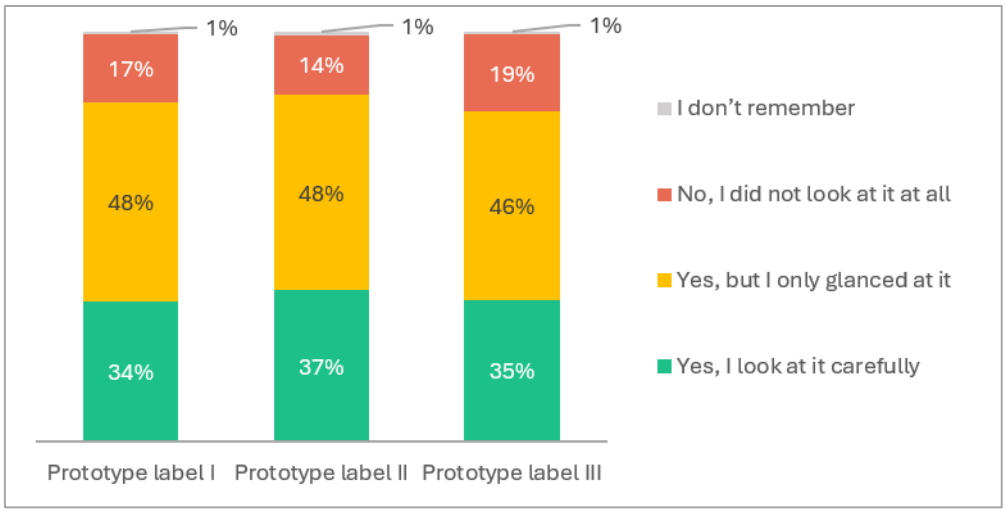


Figure 5-14: Self-reported attention to full label, brick-and-mortar store.

5.4.4. Label understanding and evaluation

Next, before the meaning of the label was explained, participants rated the prototype label to which they had been exposed during the purchase tasks on a 5-point scale ranging from (1) *difficult to understand* to (5) *easy to understand*. As shown in **Figure 5-15**, Prototype label III, which provides only an overall index, was considered easier to understand (mean = 3.7) than Prototype label I (mean = 3.3) and Prototype label II (mean = 3.2), which (additionally) provide information on individual ESPR parameters.

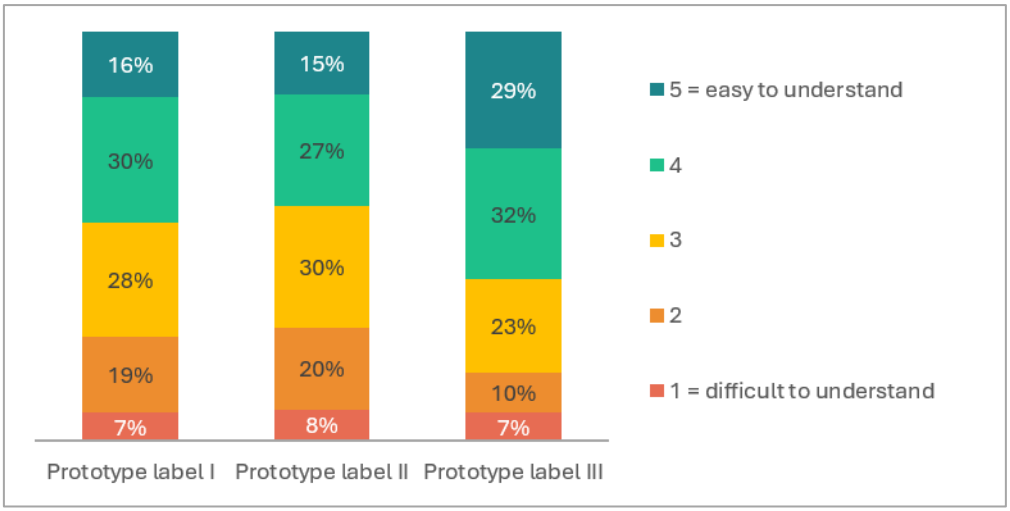


Figure 5-15: Self-declared understanding of the general meaning of the label, before explanation.

Consumers self-declared understanding may not always correspond to their actual understanding of the information. Therefore, participants also answered a multiple-choice question assessing what they believed the information on the label conveyed ("Please select the option that *best describes* what information the label provides"), which served as a measure of objective understanding. In addition to the correct interpretation of the label – "the environmental friendliness of the product's design, i.e., how well the product performs on aspects such as repairability, recyclability, and environmental impact" – the response options included other environmental and non-environmental aspects that consumers might confuse with the information conveyed by the label. These included the product's energy class, potentially due to the label's resemblance to the EU Energy Label, particularly for Prototype label II; the product's environmental footprint (i.e., its total impact on the environment throughout its life cycle, from production to disposal); the product's carbon footprint; and specific ecodesign aspects, such as the product's repairability or recyclability.

The results in **Table 5-3** reveal that participants had difficulty identifying what information the label conveys. Overall, only about a quarter of participants selected the correct answer (24%; see **Table 5-3**). An equally large proportion believed that the label provided information about the product's environmental footprint (i.e., its total environmental impact from production to disposal). The label was also relatively frequently confused with the EU Energy Label: one in five participants believed that it indicated the product's energy class. As predicted, this confusion was most common among participants exposed to Prototype label II (26%), but it was also relatively common among those exposed to Prototype label I (20%) and, to a lesser extent, Prototype label III (12%). Overall, participants exposed to Prototype label III were most likely to correctly indicate that the label provides information about the environmental friendliness of the product's design, although this still represented a minority of participants (30%). The fact that this label contains only an overall index may have encouraged participants to pay greater attention to the label header ("ECO design") and reduced the potential for confusion caused by additional information presented on the label.

Table 5-3: Objective understanding of the general meaning of the label (multiple-choice question).

Please select the option that best describes what information the label provides.	**Prototype label I**	**Prototype label II**	**Prototype label III**	**Total**
The label provides information about…				
the environmental friendliness of the product's design (i.e., how well the product performs on aspects such as repairability, recyclability and environmental impact)	**23%**	**20%**	**30%**	**24%**
the environmental footprint of the product (i.e., the total impact the product has on the environment throughout its entire life cycle, from production to disposal)	19%	20%	33%	24%
the energy class of the product (i.e., how energy efficient the product is)	22%	26%	12%	20%
the repairability of the product (i.e., how easy the product is to repair)	10%	9%	1%	7%
the recyclability of the product (i.e., the extent to which the product can be recycled)	8%	6%	2%	5%
the carbon footprint of the product (i.e., the level of greenhouse gas emissions caused by the product throughout its entire life cycle, from production to disposal)	3%	6%	6%	5%
the quality of the product (e.g., whether the product is of high or low quality)	4%	5%	3%	4%
the extent to which the product complies with social and ethical standards (e.g., fair trade practices and labour conditions)	2%	1%	1%	1%
Don't know	8%	8%	13%	10%

In a subsequent task, participants' attention was directed to the specific label they had seen in the final purchase task, after which they answered a series of questions assessing their understanding of specific elements of the label. Participants who had been exposed to Prototype label I completed a multiple-choice question assessing their understanding of the relationship between the overall index displayed at the top of the label and the individual parameter ratings presented at the bottom. **Table 5-4** (left column) presents the percentage of participants selecting each response option, aggregated across the five product categories (and thus including labels displaying only one sub-parameter).

Just over a quarter of participants (27%) interpreted the rating at the top as the average, or summary score, of the ratings shown below, which corresponds to the intended interpretation. However, a nearly equally large group (22%) believed that "the rating at the top indicates the overall environmental friendliness of the product's design, while the ratings below highlight some (but not all) environmental aspects that contribute to this rating". Thus, these participants appeared to interpret the overall index as reflecting a broader assessment of the product design's environmental friendliness, extending beyond the specific sub-parameters displayed

on the label. Nearly one in five participants (18%) perceived no direct relationship between the rating at the top and the ratings at the bottom of the label.

Participants were more likely to identify the intended meaning of the overall index when presented with a label containing more than one sub-parameter (as was the case for side tables, T-shirts or earbuds). For these labels, 35% of participants interpreted the overall index as the average, or a summary score, of the ratings shown below (see **Table 5-4**, middle column).

Participants who had been exposed to Prototype label II in the final purchase task completed a similar multiple-choice question assessing their understanding of the relationship between the highlighted rating displayed at the top of the label and the ratings presented at the bottom. The question was asked only for labels with more than one parameter, as labels with only one parameter did not have a bottom section. About one in five participants (21%) interpreted the highlighted score at the top as reflecting a key environmental aspect that has a strong influence on the overall environmental friendliness of the product's design and is therefore given prominence on the label, as intended. However, the majority of participants (59%) incorrectly interpreted the rating displayed at the top as some form of overall index, either as a broader assessment of the environmental friendliness of the product's design or as a summary rating based on the ratings displayed at the bottom of the label (see **Table 5-4**, right column).

Table 5-4: Interpretation of the information at the top of the label (multiple-choice question).

	Prototype label I: all product categories	**Prototype label I:** categories with more than one parameter	**Prototype label II:** categories with more than one parameter
According to you, which of the following statements is **correct**?			
The rating at the top is the average (a summary score) of the ratings shown below.	**27%**	**35%**	14%
The rating at the top indicates the overall environmental friendliness of the product's design, while the ratings below highlight some (but not all) environmental aspects that contribute to this rating.	22%	22%	24%
The rating at the top indicates the overall environmental friendliness of the product's design, while the ratings below refer to separate environmental aspects of the product, which are not directly reflected in the rating at the top.	18%	18%	21%
The rating at the top reflects a key environmental aspect that has a strong influence on the overall environmental friendliness of the product's design. This aspect is therefore given prominence in the label.	17%	13%	**21%**
Don't know	15%	12%	20%
Total	100%	100%	100%

Note: Green = intended interpretation.

Consumers' ability to use individual parameters to compare products was assessed using a product identification task. In this task, labels for two different product alternatives within a given category were displayed, using the same product category as in the preceding task, which varied across participants. Participants were then repeatedly asked to identify which product had a specific ecodesign characteristic (e.g., "Which of these two products is easiest to repair?" or "Which of these two products contains the highest proportion of recycled materials?"), with response options "Product 1", "Product 2" and "Don't know". The questions covered all parameters displayed on the respective label and were presented in random order. In all sets, one product performed better on some parameters, whereas the other product performed better on others. **Figure 5-16** shows an example of this task.

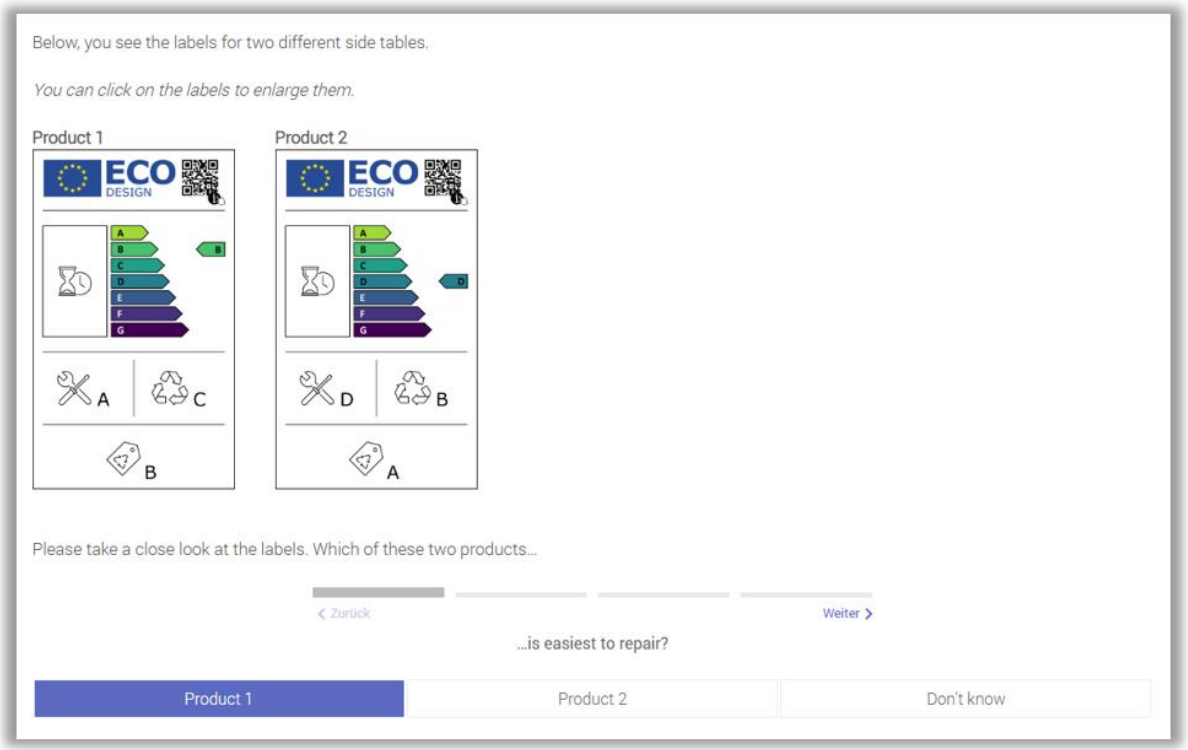


Figure 5-16: Consumers' ability to use individual parameters in product comparisons: task example (Prototype label II, side tables, repairability).

Table 5-5 presents the results, aggregated across the relevant product categories. Across the three labels displaying a repairability indication (i.e., for coffee machines, side tables, and earbuds), the product alternative with the higher repairability rating (e.g., Product 1 in the example shown in **Figure 5-16**) was correctly identified in 83% of cases when Prototype label I was presented. The side-table label was the only label displaying a durability indication; in this case, the product alternative with the higher durability rating was correctly identified in 76% of cases. As shown in **Table 5-5**, the product alternative with the higher rating was correctly identified in the majority of cases for each individual parameter. In general, most participants were thus able to use the individual parameter ratings to identify products with specific characteristics (e.g., easy to repair, durable), suggesting that they accurately understood the icons displayed on the label. Overall, understanding appears highest for the icons representing product repairability (81%), environmental footprint (79%), recyclability (75%) and battery endurance (71%). It appears somewhat lower, but still above chance level, for durability (66%), recycled content (62%) and robustness (61%). It should be noted, however, that these differences in understanding are not necessarily linked solely to the visual design of the icons. They can also be influenced by the presence and similarity of other icons displayed on the same label, for instance. The fact that the highest proportions of correct

product identifications were observed for icons that are also presented on labels with only one parameter (i.e., for coffee machines and earbuds) provides some support for this latter explanation.

The extent to which participants were able to correctly identify products with specific ecodesign characteristics varied somewhat depending on the label design. Specifically, products with higher repairability and durability ratings were more likely to be correctly identified when Prototype label I was presented (83% and 76%, respectively) than when Prototype label II was presented (79% and 61%, respectively). Conversely, the product with the higher proportion of recycled material was slightly more likely to be correctly identified when Prototype label II was presented (65%) than when Prototype label I was presented (59%), although this difference was only marginally significant. Other differences between the two label designs were not statistically significant.

Table 5-5: Ability to use individual parameters in product comparisons (product identification task).

	Prototype label I	Prototype label II	Total	Parameter appears on the label for…
Which of these two products…				
…is easiest to repair?	83%	79%	81%	*Coffee machines, side tables, earbuds*
…has the smallest environmental impact across its life cycle (from production to disposal)?	77%	80%	79%	*T-shirts, detergents*
…contains the highest proportion of recyclable material?	75%	74%	75%	*Side tables, earbuds*
…can be used to longest on a single battery charge?	71%	70%	71%	*Earbuds*
…is most durable (i.e., is expected to last the longest)?	76%	61%	66%	*Side tables*
…contains the highest proportion of recycled material?	59%	65%	62%	*Side tables, T-shirts*
…is most robust (i.e., best resists wear and tear)?	58%	64%	61%	*T-shirts*

Participants in all label conditions then evaluated the label using the statements “This label is easy to understand”, “This label is confusing”, and “This label makes it easy to compare products”, rated on a scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Consistent with the results for self-declared understanding before the label’s meaning was explained (see **Figure 5-17**), Prototype label III, which displayed only an overall index, continued to be rated as easiest to understand after participants had received information about the general meaning and purpose of the label (64% agreed; mean = 3.7; see **Figure 5-17**, left panel). Prototype label I (57% agreed; mean = 3.5) was also considered somewhat easier to understand than Prototype label II (51% agreed; mean = 3.4).

Prototype label II was considered somewhat more confusing (31% agreed; mean = 2.8) than Prototype label I (25% agreed; mean = 2.7) and Prototype label III (23% agreed; mean = 2.5; see **Figure 5-17**, middle panel). This may be related to the fact that participants exposed to this prototype were more likely to misinterpret the label as providing information about the product’s energy class, potentially because of its relatively strong resemblance to the well-known EU Energy Label. The preceding results also suggest that consumers may expect the

visually prominent element at the top of the label to represent some form of overall index, which may also have contributed to the higher level of confusion associated with this label.

Most participants agreed that the label made it easy to compare products (see **Figure 5-17**, right panel). Although the differences were small in absolute terms, Prototype label I (64% agreed; mean = 3.7) and Prototype label III (66% agreed; mean = 3.7) were more frequently rated as facilitating product comparisons than Prototype label II (60% agreed; mean = 3.6).

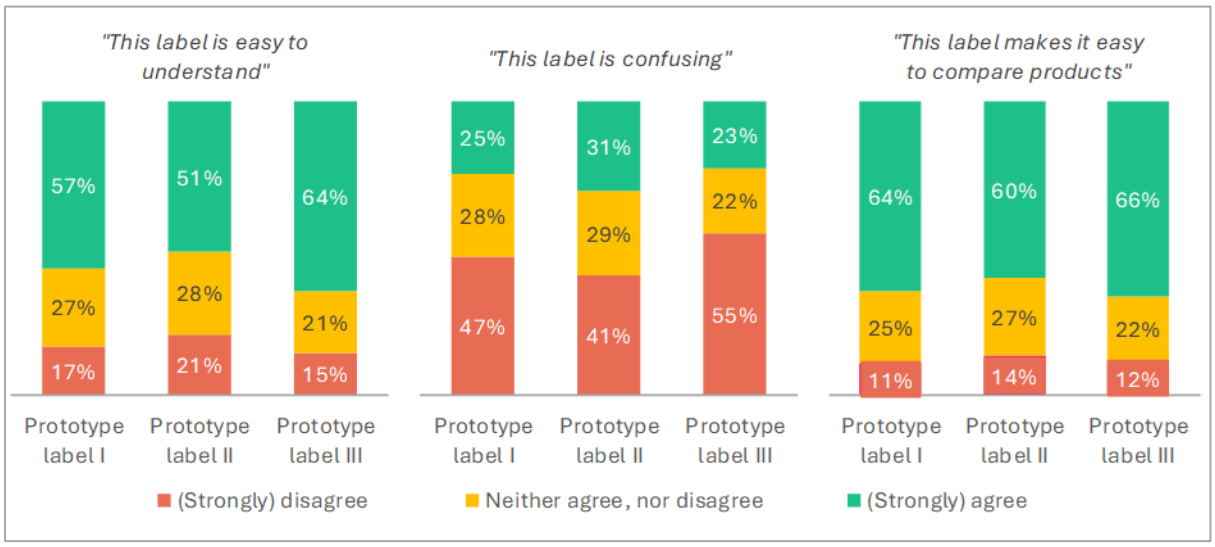


Figure 5-17: Label evaluation.

In the final task, participants received an explanation of the meaning of the prototype label they had encountered throughout the survey and were then shown the two alternative label designs. The key differences between the three potential label designs were explained, after which participants indicated their preferred design and the reason for their preference. The vast majority of the respondents – nine in ten – indicated that they understood the differences between the three label design alternatives, at least to some extent (45% very clearly, 45% to some extent, 8% not really, and 2% not at all).

When participants viewed the three labels side by side, a clear preference emerged for Prototype label I. Overall, 45% of participants preferred this label design (see **Figure 5-18**). The other label designs were preferred by considerably fewer participants: 28% preferred Prototype label III and 23% preferred Prototype label II (the remaining 4% had no clear preference).

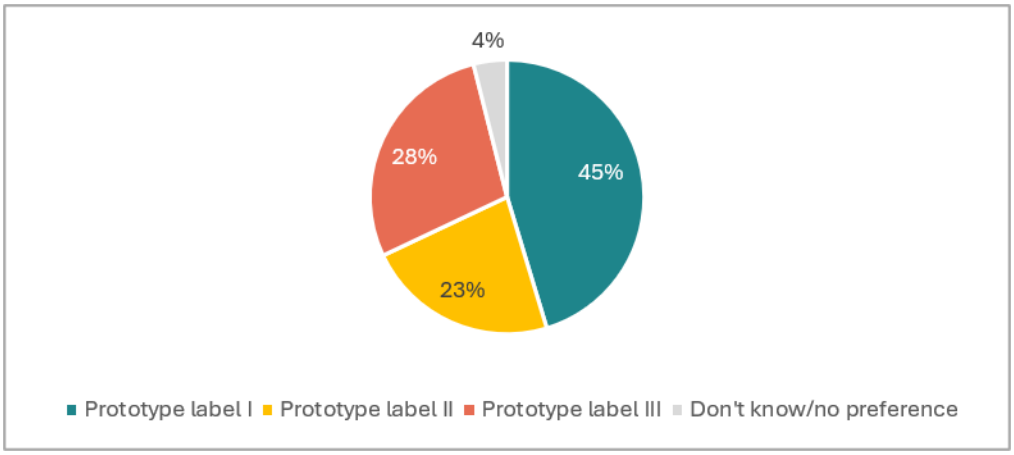


Figure 5-18: Preferred design in direct comparison.

Figure 5-19 provides insights into the reasons underlying participants' design preferences. Note that the percentages in this figure do not add up to 100%, because participants could provide multiple reasons for their preference. The most frequently cited reason for preferring any of the three designs was that it provides the **right amount** of information, with this reason mentioned most often (64%) by participants who preferred the simpler Prototype label III. The findings further suggest that the inclusion of an overall index contributes to the **perceived usefulness** of the information. Participants who preferred Prototype label I or III frequently indicated that they preferred the respective design because they considered the information most useful (54% and 51%, respectively). By contrast, the usefulness of the information was cited less frequently as a reason for preferring Prototype label II (35%). Instead, this design was more frequently preferred for its **visual appeal** (52%) than the other designs, potentially because its resemblance to the EU Energy Label made it more recognisable to consumers.

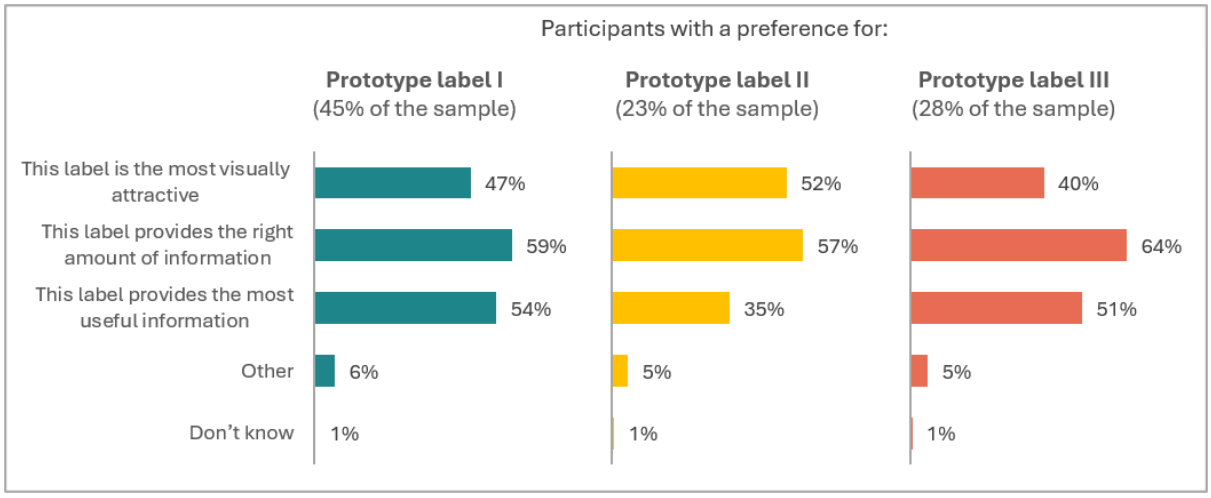


Figure 5-19: Reason for preference.

5.4.5. Summary of results from task 3

Overall, the findings indicate that consumers are generally supportive of an Ecodesign label. In this section, we summarise the results, structured around the three research questions.

How do different label design alternatives affect participants' likelihood of choosing products that perform well on Ecodesign aspects?

In the behavioural experiment, all three prototype labels influenced product choice in the desired direction. When comparing the three label designs, Prototype labels I and III generally performed somewhat better (increasing the choice of the target product by 12 and 11 percentage points) than Prototype label II (by 9 percentage points). However, the absolute differences in behavioural effectiveness between the three designs were small.

The relative effectiveness of the three label designs varied somewhat across environments. Prototype label I outperformed Prototype label II in both the online and brick-and-mortar store environments, whereas Prototype label III outperformed Prototype label II only in the online environment. A similar pattern was observed for attention: Prototype labels I and III tended to attract more attention than Prototype label II, but only in the online environment.

These findings suggest that the relatively strong performance of Prototype label III in the online environment may be related to the nested display mechanism. In particular, the vertical small-label format used for Prototypes I and III may have attracted more attention and, in turn, contributed to their greater behavioural effectiveness in the online environment. This interpretation is consistent with the fact that the advantage of Prototype label III over Prototype label II was observed only online, where participants initially encountered the smaller label before accessing the full label. However, this mechanism cannot account for the effectiveness of Prototype label I, which also performed well in the simulated brick-and-mortar store environment, where the full label was displayed immediately. It is important to note, however, that although statistically significant, the observed differences in choice behaviour between the label designs were always small in absolute terms.

Finally, although the overall effect of the Ecodesign label on product choice differed significantly across countries and product categories, the relative effectiveness of the three prototype designs did not vary significantly across either. That is, the relative effectiveness of the three designs was robust across countries and product categories.

To what extent does product price moderate the effect of different label design alternatives on those choices?

In the experiment, the effect of the Ecodesign label significantly depended on the price of the target product. More specifically, the label effect was strongest when the target product was only 10% more expensive than the budget option and decreased as the price difference increased, but remained evident even at a 70% price premium. However, the relative effectiveness of the three label design alternatives (e.g., which label design worked best) did not significantly vary across price levels.

How do different label design alternatives affect consumers' understanding and evaluation of the label?

The results on understanding and evaluation provide further differentiation between the designs. Prototype label III was consistently perceived as the easiest to understand, both before and after participants received an explanation of the label's meaning and purpose. Its simple design, displaying only an overall index, may have made it easier to process. However, Prototype label I stands out when considering overall consumer preference and usefulness.

When the three designs were presented side by side after their meaning had been explained, 45% of participants preferred Prototype label I, compared with 23% for Prototype label II and 28% for Prototype label III. Participants preferring Prototype label I most frequently cited the right amount of information and the usefulness of the information as reasons for their preference.

Overall, the individual parameter ratings appeared to be relatively well understood. However, the results pattern suggests that identifying the product with a specific characteristic (e.g., the easiest to repair) became more difficult as the number of parameters displayed on the label increased, potentially leaving more room for confusion.

Potential confusion with other labels and environment-related information

Finally, although consumer confusion between the Ecodesign label and other labels was not assessed directly, several findings provide indications of the extent to which such confusion may occur. More specifically, participants frequently believed that the labels conveyed information they did not in fact convey, such as the product's energy class or carbon footprint, or interpreted them as having a much narrower scope than intended (e.g., as providing information only about product repairability or recyclability).

Notably, one in five participants believed that the Ecodesign label provided information about the product's energy efficiency. This proportion was highest among participants presented with Prototype label II (26%), which arguably bears the greatest visual resemblance to the EU Energy Label, but was also relatively high for Prototype label I (22%).

More broadly, the results suggest that consumers may have difficulty distinguishing between different types of environment-related information, such as environmental footprint and ecodesign performance. Together, these findings indicate that consumers may not always clearly distinguish what the Ecodesign label communicates from what other environmental labels or indicators communicate.

Conclusion and recommendation

Taken together, these findings suggest that Prototype label I provides the strongest overall balance between behavioural effectiveness, usefulness, and consumer preference, and is therefore recommended as the strongest starting point for further development. Prototype label III represents a relevant alternative, particularly if simplicity and ease of understanding are prioritised. Prototype label II appears less promising overall, given its somewhat lower behavioural effectiveness and the fact that it was perceived as more confusing.

There are, however, important points of attention for further development. Most notably, the results indicate that the meaning and structure of the labels were not always sufficiently clear to consumers. Further development of Prototype label I should therefore focus on making the relationship between the overall index and the individual parameters more immediately understandable. This could be supported by clear and accessible consumer communication explaining the meaning and purpose of the label and how the different elements should be interpreted.

6. Task 4: Label design recommendations

Building on the findings of the behavioural experiment, this chapter presents the recommended ESPR label concept and the key design principles underpinning it.

The experiment provides strong evidence that an Ecodesign label can steer consumers towards products with better ecodesign performance. Across shopping environments, product categories, price levels and countries, the presence of a label significantly increased the selection of higher-performing products. While all three prototypes proved effective, important differences emerged regarding usability, comprehensibility and consumer acceptance.

Overall, the findings identify Prototype I as the most suitable basis for the proposed ESPR label concept. Although behavioural differences between the prototypes were relatively small, Prototype I consistently achieved the highest or joint-highest performance in guiding consumers towards products with better ecodesign performance and was clearly preferred by consumers. Participants particularly valued its combination of a prominent overall rating and product-specific information.

The results indicate that consumers benefit from an overall assessment that enables quick comparisons while also providing insight into individual ecodesign dimensions. At the same time, the experiment revealed important communication challenges. Many participants associated the label with environmental footprint, energy efficiency or carbon footprint rather than ecodesign performance as intended. Whilst this does, to some extent, reflect the complexity and, in some cases, the conceptual vagueness of the underlying sustainability concepts, confusion was particularly evident for Prototype II due to its similarity to the EU Energy Label. These findings highlight the need for a distinct visual identity, terminology and presentation that clearly differentiate the ESPR label from existing EU labelling schemes. The final label design does meet this requirement.

The results also show that the relationship between the overall rating and the underlying parameters is not always self-explanatory. The proposed label concept therefore avoids suggesting that the overall rating is simply an average of the displayed parameters and requires transparent explanations where additional criteria or weighting rules are applied.

Finally, the experiment underlines the importance of a coherent information architecture that links the physical label with digital information tools. The proposed concept combines a compact label design with access to additional information through the DPP, thereby balancing simplicity, transparency and information depth.

The resulting label concept translates the overall evidence collected into a transparent, credible and effective ESPR labelling framework and provides a basis for discussion within the Ecodesign Forum.

6.1. Recommended ESPR label framework and design elements

The findings suggest that a future ESPR label should combine the strengths of Prototype I and Prototype III. The first information layer should provide a simple and highly visible overall ecodesign rating in a compact format, supporting rapid recognition and comparison in both online and physical shopping environments. This could also easily be used for the nested label presented in online environments. A second information layer should provide access to a (limited) set of product-specific ecodesign parameters, allowing consumers to better understand the drivers of the overall rating and compare products on characteristics such as

repairability, durability or recycled content. Additional information, i.e. approachable after scanning the QR code or via an embedded link could give access to online material and could be provided alongside the DPP. Such a layered information architecture would combine the simplicity and accessibility of Prototype III with the transparency and informational value of Prototype I.

While stakeholders frequently emphasised the importance of transparency and parameter-level information, consumer testing consistently demonstrated the value of a prominent overall rating as a heuristic decision-making tool. Rather than representing competing approaches, the findings suggest that the most effective solution is to combine both elements: a highly visible overall assessment that supports rapid comparison, complemented by selected parameter-level information and additional explanations accessible through digital information layers. The final label concept is therefore primarily based on Prototype I, which demonstrated the strongest overall performance across the behavioural testing and achieved the best balance between behavioural effectiveness, consumer preference and information value. At the same time, the plant-based visual element, featured in both the nested label concepts and the simplified overall-rating prototype, was retained in the final design due to its positive reception by consumers. It reinforces the environmental purpose of the label and contributes to a distinctive and recognisable visual identity.

Based on this, the label layout is suggested and illustrated (see **Figure 6-1):**

(I) QR-code;
(II) Product-specific ESPR parameters, represented by an icon for each performance indicator and with the corresponding performance ratings on a Scale from A to G;
(III) Placeholder for EU Ecolabel (if it is additionally certified¸ it could also be included in the rectangular box at the bottom);
(IV) Scale of Ecodesign overall performance class from A to G;
(V) Aggregated overall ecodesign performance rating;[30]
(VI) Space for additional technical data, i.e. supplier's name, model identifier and the number of according Regulation that is '20XX/XXXX'[31] and space for information about parameters that are not expressed in the same classes of performance and/or not possible to include in an aggregated overall score.

[30] In specific cases where an aggregated parameter is not feasible, the label framework provides sufficient flexibility to either highlight a prominent product-specific parameter or present a set of relevant parameters without an aggregated score.
[31] Needs to be specified further.

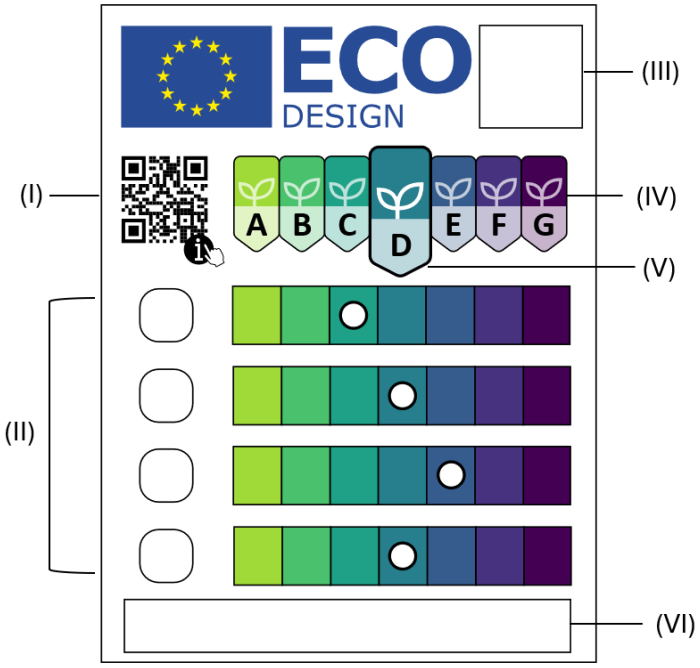


Figure 6-1: Content and structure of the ESPR label.

Additionally, **Figure 6-2** shows the final label draft for full and nested label including a selection of specific parameters visualised with exemplary icons per parameter. **Figure 6-3** shows the label with a reduced number of parameters and an incorporated EU Ecolabel in its header, showing the adaptability of the proposed label framework. Further possible adjustments that can be made using this labelling framework are set out in a **separate Annex XVII: A flexible and adaptable ESPR label framework**. This ESPR Ecodesign label architecture provides a useful evidence-based ground for further discussion and refinement of the Ecodesign label.

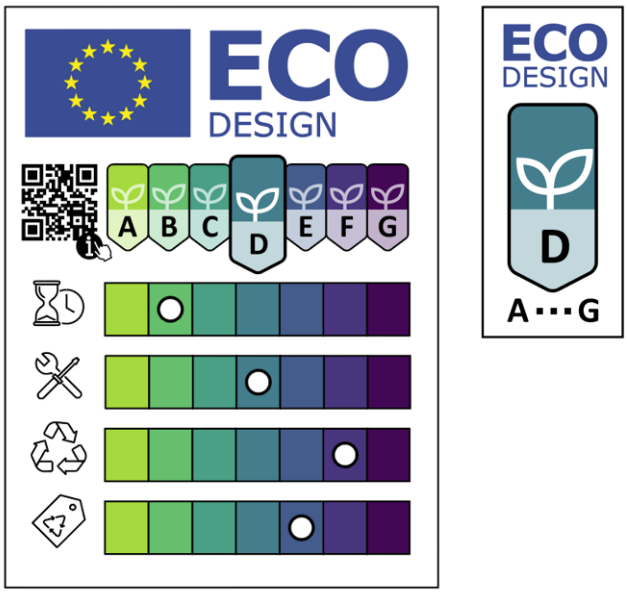


Figure 6-2: Recommended and revised ESPR label draft (full and nested label)

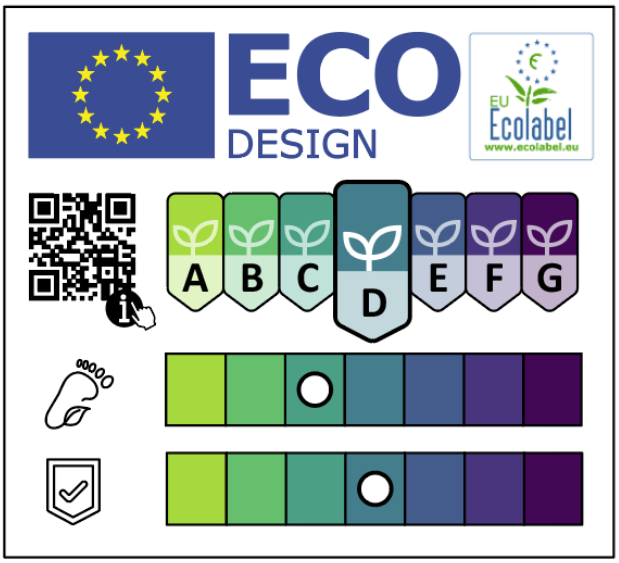


Figure 6-3. Label with two parameters and incorporated EU Ecolabel in the header.

6.2. Limitations and future development

The study provides a robust evidence base for the implementation of an ESPR label by combining findings from literature, stakeholder consultations, consumer focus groups and behavioural testing. Nevertheless, several limitations should be considered when interpreting the results and deriving recommendations for future policy development.

Uncertainty regarding product-specific requirements and applicability across product groups

As the study was conducted at an early stage of the ESPR implementation process, when product-specific delegated acts were not yet available for most of the products examined in Task 3, important elements of the future labelling framework were still being developed. This provided an opportunity to explore and evaluate different label architectures and design principles ahead of the final specification of product requirements. As the regulatory framework evolves, the findings can inform further refinements of the label design.

Important elements such as the relevant parameters, aggregation methodologies, performance classes and scope of application remain under development. At the same time, the findings of the present work can contribute to shaping these elements as they are further developed. Consequently, the project assessed alternative label architectures and design principles rather than a fully specified labelling system. Future design refinements might be necessary once product-specific requirements become clearer. While the findings suggest that several design principles are broadly applicable, it remains uncertain whether a single label format can equally support informed decision-making across the full diversity of products covered by the ESPR. Stakeholder consultations, focus groups and behavioural experiments indicated that information needs, interpretation processes and label effects may vary considerably between product groups. Consequently, further testing will be required to assess the extent to which a harmonised label can accommodate product-specific contexts without compromising usability, relevance and comparability.

Limited assessment of the future information ecosystem

The future ESPR label will not operate in isolation but as part of an increasingly digital product information ecosystem centred around the DPP and other existing information instruments. As the development of these systems is still ongoing, the project was only able to assess the label itself rather than the full user experience across connected information channels. This creates both uncertainty and opportunity: digital tools may enable a clear separation between concise information displayed on the label and more detailed information made available through the DPP. Future work should therefore investigate how labels and digital information systems can be designed to complement each other and support informed consumer decision-making.

Consumer familiarity and understanding

The project demonstrated broad consumer support for an ESPR label, but also showed that understanding of both the concept of ecodesign and the meaning of the tested label designs remains limited. As the ESPR label does not yet exist in the marketplace, the findings reflect first-time exposure rather than responses to an established policy instrument. Consumer understanding, trust and use may therefore evolve considerably following implementation and accompanying communication activities.

Further work should therefore focus on three key areas: First, refining the communication of the overall score and its relationship to individual parameters would be highly relevant. While the preferred label concept performed well in terms of behavioural effectiveness, usefulness and consumer preference, the research also showed that consumers do not always understand how the overall rating relates to the underlying parameters. Improving this relationship should therefore be the primary focus of the next design iteration.

Second, ensuring a clear and distinct label identity would support consumer understanding and raise effectiveness of the label. The future label should build on the strengths of existing EU labelling schemes, particularly their recognisability and credibility, while remaining clearly distinguishable from the EU Energy Label, the EU Ecolabel and other sustainability-related schemes. This is essential to avoid confusion and support long-term consumer recognition. And third, embedding the label within a layered information architecture would help to increase acceptability and usability among the several target groups – both the consumers and the producers alike. The findings consistently support an approach in which the physical label communicates the most relevant information at a glance, while additional explanations and product-specific details are made available through digital tools such as QR codes and the DPP. A coherent interaction between these different information layers should be guaranteed throughout the final ESPR label.

Addressing these priorities through targeted refinement and discussion within the Ecodesign Forum will support the development of a final ESPR label that combines consumer comprehensibility, transparency and consistency across product groups while remaining compatible with the broader EU sustainable product policy framework.

7. References

Andor, M. A., Frondel, M., Gerster, A., & Sommer, S. (2019). Cognitive reflection and the valuation of energy efficiency. *ENERGY ECONOMICS*, *84.* https://doi.org/10.1016/j.eneco.2019.104527

Banovic, M., Reinders, M. J., Claret, A., Guerrero, L., & Krystallis, A. (2019). A cross-cultural perspective on impact of health and nutrition claims, country-of-origin and eco-label on consumer choice of new aquaculture products. *Food Research International (Ottawa, Ont.)*, *123*, 36–47. https://doi.org/10.1016/j.foodres.2019.04.031

Bauw, M. de, Peracaula Moner, A., Santa Cruz, E., & Vranken, L. (2024). Please don't throw me in the briar patch! Empirical evidence on the role of instructional cues on eco-label usage in fish consumption decisions. *Appetite*, *197.* https://doi.org/10.1016/j.appet.2024.107291

Bengart, P., & Vogt, B. (2023). Effects and interactions of labels' color scheme and the individual difference variable lay rationalism on pro-environmental choices. *Journal of Environmental Psychology*, *87*, 101998. https://doi.org/10.1016/j.jenvp.2023.101998

Berden, J., & Hung, Y. (2025). Effectiveness of the Eco-score food label: An information experiment combined with Nutri-score label in Belgium. *Appetite*, *204*, 107759. https://doi.org/10.1016/j.appet.2024.107759

Bergener, J., Jacobs, K., Veneny, M., & Gossen, M. (2025). Consumers' Willingness to Pay for Sustainable Mobile Phones: An Adaptive Choice-Based Conjoint and Market Simulation Approach Testing a Multi-Level Eco-Score. *Business Strategy and the Environment*, Article bse.70241. Advance online publication. https://doi.org/10.1002/bse.70241

Big Room Inc. (2025, October 15). *Ecolabel Index*. https://www.ecolabelindex.com

Bryman, A. (2016). *Social research methods*. Oxford university press.

Codagnone, C., Bogliacino, F., & Veltri, G. (2013). Testing CO2/Car labelling options and consumer information.

Cordero-Gutiérrez, R., Lahuerta-Otero, E., & Zapatero-González, A. (2025). Leveraging blockchain for ecosystem service transparency: Enhancing consumer value and sustainability in the beef industry. *Agricultural and Food Economics*, *13*(1), 1–22. https://doi.org/10.1186/s40100-025-00392-4

Crameri, F., Shephard, G. E., & Heron, P. J. (2020). The misuse of colour in science communication. *Nature Communications*, *11*(1), 5444. https://doi.org/10.1038/s41467-020-19160-7

Denny, E. (2022). Long-term Energy Cost Labelling for Appliances: Evidence from a Randomised Controlled Trial in Ireland. *Journal of Consumer Policy*, *45*(3), 369–409. https://doi.org/10.1007/s10603-022-09516-5

Dihr, M., Berthold, A., Siegrist, M., & Sütterlin, B. (2021). Consumers' knowledge gain through a cross-category environmental label. *Journal of Cleaner Production*, *319*, 128688. https://doi.org/10.1016/j.jclepro.2021.128688

Dorisse, A., Charry, K., & Parguel, B. (2025). When multi-labelling backfires: The influence of sustainability FOP labels valence and orientation. *Appetite*, *213*, 108055. https://doi.org/10.1016/j.appet.2025.108055

Dütschke, E., & Schneider, U. (2017). *D6.2: Scientific report on the consumer perspective of digital labels and solutions*. 10.24406/publica-fhg-298218

Elsen, M., & Leenheer, J. (2022). Energy efficiency of consideration sets and choices: the impact of label format. *European Journal of Marketing*, *56*(8), 2484–2505. https://doi.org/10.1108/EJM-02-2022-0081

Faure, C., Guetlein, M. C., & Schleich, J. (2021). Effects of rescaling the EU energy label on household preferences for top-rated appliances. *ENERGY POLICY*, *156.* https://doi.org/10.1016/j.enpol.2021.112439

Gorton, M., Tocco, B., Yeh, C.-H., & Hartmann, M. (2021). What determines consumers' use of eco-labels? Taking a close look at label trust. *Ecological Economics*, *189*, 107173. https://doi.org/10.1016/j.ecolecon.2021.107173

Gröfke, N., Duplat, V., Wickert, C., & Tjemkes, B. (2021). A Multi-Stakeholder Perspective on Food Labelling for Environmental Sustainability: Attitudes, Perceived Barriers, and Solution Approaches towards the “Traffic Light Index”. *SUSTAINABILITY*, *13*(2), 933. https://doi.org/10.3390/su13020933

Grunert, K. G., Hieke, S., & Wills, J. (2014). Sustainability labels on food products: Consumer motivation, understanding and use. *Food Policy*, *44*, 177–189. https://doi.org/10.1016/j.foodpol.2013.12.001

Guetlein, M. C., Schleich, J., Faure, C., & Tu, G. Y. (2025). Energy literacy, income, and choice of energy-efficient appliances: a discrete choice experiment and welfare analysis in eight European countries. *APPLIED ECONOMICS.* Advance online publication. https://doi.org/10.1080/00036846.2025.2477317

Hartmann, M., Yeh, C.-H., Gorton, M., Tocco, B., & Török, Á. (2025). Enhancing Sustainability Label Effectiveness Through Logo Design Modification: An Analysis of the EU Green Leaf Logo. *Agribusiness*, Article agr.70013. Advance online publication. https://doi.org/10.1002/agr.70013

Hay, C., Meyer, K., Rutherford-Carr, G., Hill, J. P., & Hort, J. (2024). Taking a Consumer-Led Approach to Identify Key Characteristics of an Effective Ecolabelling Scheme. *SUSTAINABILITY*, *16*(14), 6260. https://doi.org/10.3390/su16146260

He, S., Blasch, J., van Beukering, P., & Wang, J. (2022). Energy labels and heuristic decision-making: The role of cognition and energy literacy. *ENERGY ECONOMICS*, *114*, 106279. https://doi.org/10.1016/j.eneco.2022.106279

Hunka, A. D., Daniel, A. M., Bour, A., & Boyer, R. H. (2025). Is transparency a good business strategy? Consumer preferences and willingness to pay for information about the chemical content of reused and recycled clothing. *Sustainable Production and Consumption*, *56*, 128–141. https://doi.org/10.1016/j.spc.2025.03.020

Jacobs, K., Bergener, J., & Gossen, M. (2025). The influence of a hypothetical eco-score on purchase decisions: Empirical evidence on consumer preferences and consumer segments for mobile phones. *Cleaner and Responsible Consumption*, *18*, 100289. https://doi.org/10.1016/j.clrc.2025.100289

Jürkenbeck, K. (2023). The effect of information among established and new sustainability labelling on consumers’ preference and willingness to pay. *Cleaner and Responsible Consumption*, *10*, 100131. https://doi.org/10.1016/j.clrc.2023.100131

Kesselring, A. (2025). Energy labels in the European Union: Consumer inattention and producer responses. *ENERGY ECONOMICS*, *144.* https://doi.org/10.1016/j.eneco.2025.108275

Kolber, A., & Meixner, O. (2023). Effects of Multi-Level Eco-Labels on the Product Evaluation of Meat and Meat Alternatives-A Discrete Choice Experiment. *FOODS*, *12*(15). https://doi.org/10.3390/foods12152941

Liva, G., Mariani, I., Negrini, M., Rodes, C., Schmittinger, F., Tolino, U., & Wiese, J. (2025). *Design and behavioural research study to create evidence-based, EU harmonised consumer waste sorting labels: Interim report 1.* European Commission. https://doi.org/10.2760/3720322

London Economics, & Ipsos (2014). Study on the impact of the energy label – and potential changes to it – on consumer understanding and on purchase decisions.

Majer, J. M., Henscher, H. A., Reuber, P., Fischer-Kreer, D., & Fischer, D. (2022). The effects of visual sustainability labels on consumer perception and behavior: A systematic review of the empirical literature. *Sustainable Production and Consumption*, *33*, 1–14. https://doi.org/10.1016/j.spc.2022.06.012

Meis-Harris, J., Klemm, C., Kaufman, S., Curtis, J., Borg, K., & Bragge, P. (2021). What is the role of eco-labels for a circular economy? A rapid review of the literature. *Journal of Cleaner Production*, *306*, 127134. https://doi.org/10.1016/j.jclepro.2021.127134

Nakaishi, T., & Chapman, A. (2024). Eco-labels as a communication and policy tool: A comprehensive review of academic literature and global label initiatives. *Renewable and Sustainable Energy Reviews*, *202*, 114708. https://doi.org/10.1016/j.rser.2024.114708

Operate (2022). Evaluation of durability and repairability label: Eye-tracking lab-test and expert review.

Recio-Román, A., Recio-Menéndez, M., & Román-González, M. V. (2024). Examining the Attitude–Behavior Gap in EU Ecolabel Adoption: A Mediation Path Analysis. *Sustainability (Switzerland)*, *16*(16). https://doi.org/10.3390/su16167214

Senatore, V., Gonzalez Torres, M., Rodriguez Manotas, J., Magrini, C., Kouloumpis, V., Syrus, A., Ardente, F., & Gama Caldas, M. (2025). Methods for the definition of classes of performance and labels. *1831-9424.* Advance online publication. https://doi.org/10.2760/2237742

Taillie, L. S., Wolfson, J. A., Prestemon, C. E., Bercholz, M., Ewoldt, L., Ruggles, P. R., & Hall, M. G. (2024). The impact of an eco-score label on US consumers' perceptions of environmental sustainability and intentions to purchase food: A randomized experiment. *PLOS ONE*, *19*(6), e0306123. https://doi.org/10.1371/journal.pone.0306123

Zhu, Z., Zhang, T., & Hu, W. (2023). The accumulation and substitution effects of multi-nation certified organic and protected eco-origin food labels in China. *Ecological Economics*, *203*, 107625. https://doi.org/10.1016/j.ecolecon.2022.107625

8. Annexes

Annex I: List of articles analysed in literature review

Approach	Authors	Title	Year	Source title
Systematic approach	Andor, MA; Gerster, A; Sommer, S	Consumer Inattention, Heuristic Thinking and the Role of Energy Labels	2020	ENERGY JOURNAL
Systematic approach	Bengart, P; Vogt, B	Effects and interactions of labels? color scheme and the individual difference variable lay rationalism on pro-environmental choices	2023	JOURNAL OF ENVIRONMENTAL PSYCHOLOGY
Systematic approach	Berden, Jeroen; Hung, Yung;	Effectiveness of the Eco-score food label: An information experiment combined with Nutri-score label in Belgium	2025	Appetite
Systematic approach	Boyano, A; Espinosa, N; Villanueva, A	Rescaling the energy label for washing machines: an opportunity to bring technology development and consumer behaviour closer together	2020	ENERGY EFFICIENCY
Systematic approach	Brunzell, L; Renstrom, R	Recommendations for revising the energy label system for dishwashers: supporting sustainable development and usage through the interaction of energy labels, technical improvements and consumer behaviour	2020	ENERGY EFFICIENCY
Systematic approach	Carroll, J; Aravena, C; Boeri, M; Denny, E	Show Me the Energy Costs: Short and Long-term Energy Cost Disclosure Effects on Willingness-to-pay for Residential Energy Efficiency	2022	ENERGY JOURNAL
Systematic approach	Colasante, A; D'Adamo, I; Desideri, S; Iannilli, M; Mangani, V	Environmental Concerns in the Fashion Industry: A Twin Transition With the Digital Product Passport	2025	BUSINESS STRATEGY AND THE ENVIRONMENT
Systematic approach	Cordero-Gutiérrez, R; Lahuerta-Otero, E; Zapatero-González, A	Leveraging blockchain for ecosystem service transparency: enhancing consumer value and sustainability in the beef industry	2025	AGRICULTURAL AND FOOD ECONOMICS
Systematic approach	de Ayala, A; Foudi, S; Solà, MD; López-Bernabé, E; Galarraga, I	Consumers' preferences regarding energy efficiency: a qualitative analysis based on the household and services sectors in Spain	2021	ENERGY EFFICIENCY

Systematic approach	de Bauw, Michiel; Peracaula-Moner, Aniol; Santa Cruz, Elena; Vranken, Liesbet	Please don't throw me in the briar patch! Empirical evidence on the role of instructional cues on eco-label usage in fish consumption decisions	2024	Appetite
Systematic approach	Dihr, Marius; Berthold, Anne; Siegrist, Michael; Sütterlin, Bernadette;	Consumers' knowledge gain through a cross-category environmental label	2021	Journal of Cleaner Production
Systematic approach	Dorisse, Axelle; Charry, Karine M. ; Parguel, Béatrice	When multi-labelling backfires: The influence of sustainability FOP labels valence and orientation	2025	Appetite
Systematic approach	Elsen, Millie ; Leenheer, Jorna	Energy efficiency of consideration sets and choices: the impact of label format	2022	European Journal of Marketing
Systematic approach	Faure, C; Guetlein, MC; Schleich, J	Effects of rescaling the EU energy label on household preferences for top-rated appliances	2021	ENERGY POLICY
Systematic approach	Gorton, Matthew; Tocco, Barbara; Yeh, Ching-Hua; Hartmann, Monika;	What determines consumers' use of eco-labels? Taking a close look at label trust	2021	Ecological Economics
Systematic approach	Gröfke, N; Duplat, V; Wickert, C; Tjemkes, B	A Multi-Stakeholder Perspective on Food Labelling for Environmental Sustainability: Attitudes, Perceived Barriers, and Solution Approaches towards the Traffic Light Index	2021	SUSTAINABILITY
Systematic approach	Guetlein, Marie Charlotte; Schleich, Joachim; Faure, Corinne; Tu, Gengyang	Energy literacy, income, and choice of energy-efficient appliances: a discrete choice experiment and welfare analysis in eight European countries	2025	Applied Economics
Systematic approach	Hartmann, M; Yeh, CH; Gorton, M; Tocco, B; Török, A	Enhancing Sustainability Label Effectiveness Through Logo Design Modification: An Analysis of the EU Green Leaf Logo	2025	AGRIBUSINESS
Systematic approach	Hay, C; Meyer, K; Rutherford-Carr, G; Hill, JP; Hort, J	Taking a Consumer-Led Approach to Identify Key Characteristics of an Effective Ecolabelling Scheme	2024	SUSTAINABILITY
Systematic approach	Hunka, AD; Daniel, AM; Bour, A; Boyer, RHW	Is transparency a good business strategy? Consumer preferences and willingness to pay for information about the chemical content of reused and recycled clothing	2025	SUSTAINABLE PRODUCTION AND CONSUMPTION

Systematic approach	Jurkenbeck, Kristin	The effect of information among established and new sustainability labelling on consumers' preference and willingness to pay	2023	Cleaner and Responsible Consumption
Systematic approach	KAMALUDIN, MAHIRAH; AZIZ, AZLINA ABDUL; SAMDIN, ZAITON; HARON, NAZATUL FAIZAH;	A NARRATIVE REVIEW OF ENERGY LABEL TOWARDS SUSTAINABILITY	2025	Journal of Sustainability Science and Management
Systematic approach	Kolber, Anna ; Meixner, Oliver	Effects of Multi-Level Eco-Labels on the Product Evaluation of Meat and Meat Alternatives—A Discrete Choice Experiment	2023	Foods
Systematic approach	Majer, JM; Henscher, HA; Reuber, P; Fischer-Kreer, D; Fischer, D	The effects of visual sustainability labels on consumer perception and behavior: A systematic review of the empirical literature	2022	SUSTAINABLE PRODUCTION AND CONSUMPTION
Systematic approach	Meis-Harris, Julia; Klemm, Céline; Kaufman, Stefan; Curtis, Jim M.; Borg, Kim ; Bragge, Peter	What is the role of eco-labels for a circular economy? A rapid review of the literature	2021	Journal of Cleaner Production
Systematic approach	Nakaishi, Tomoaki; Chapman, Andrew;	Eco-labels as a communication and policy tool: A comprehensive review of academic literature and global label initiatives	2024	Renewable and Sustainable Energy Reviews
Systematic approach	PEIRO-SIGNES, A	Consumer Demand for Environmental, Social, and Ethical Information in Fishery and Aquaculture Product Labels	2024	
Systematic approach	Recio-Román, A; Recio-Menéndez, M; Román-González, MV	Examining the Attitude-Behavior Gap in EU Ecolabel Adoption: A Mediation Path Analysis	2024	SUSTAINABILITY
Systematic approach	Si-Dai, Guo; Cheng-Peng, Lu; Hang, Li; Ning, Zhu;	Influence mechanism of energy efficiency label on consumers' purchasing behavior of energy-saving household appliances	2021	Frontiers in Psychology
Systematic approach	Skourtos, M; Damigos, D; Tourkolias, C; Kontogianni, A	Efficient energy labelling: the impact of information content and style on product choice	2021	ENERGY EFFICIENCY
Systematic approach	Stasiuk, Katarzyna; Maison, Dominika Agnieszka (6701328649)	The Influence of New and Old Energy Labels on Consumer Judgements and Decisions about Household Appliances	2022	Energies

Systematic approach	Taillie, Lindsey Smith; Wolfson, Julia A; Prestemon, Carmen E; Bercholz, Maxime; Ewoldt, Laina; Ruggles, Phoebe R; Hall, Marissa G;	The impact of an eco-score label on US consumers' perceptions of environmental sustainability and intentions to purchase food: A randomized experiment	2024	PloS one
Systematic approach	Teufer, Birgit; Waiguny, Martin K.J.; Grabner-Kräuter, Sonja	Consumer perceptions of sustainability labels for alternative food networks	2023	Baltic Journal of Management
Systematic approach	Torres-Peña, FJ; Vega-Zamora, M; Murgado-Armenteros, EM; Torres-Ruiz, FJ	Unveiling the heuristic influence: how certifications shape consumer perceptions and inferences in the agri-food market	2025	BRITISH FOOD JOURNAL
Systematic approach	Zhu, ZG; Zhang, T; Hu, WY	The accumulation and substitution effects of multi-nation certified organic and protected eco-origin food labels in China	2023	ECOLOGICAL ECONOMICS
Expert input	Bergener, Jacobs, Veneny, Gossen	Consumers' Willingness to Pay for Sustainable Mobile Phones: An Adaptive Choice-Based Conjoint and Market Simulation Approach Testing a Multi-Level Eco-Score	2025	Business Strategy and the Environment
Expert input	Codagnone, Cristiano; Bogliacino, Francesco; Veltri, Giuseppe	Testing CO2/Car labelling options and consumer information	2013	European Commission
Expert input	Denny, E.	Long-term Energy Cost Labelling for Appliances: Evidence from a Randomised Controlled Trial in Ireland	2022	Journal of Consumer Policy
Expert input	Dessart, F.J., Marandola, G., Hille, S.L. and Thøgersen, J.	Comparing the impact of positive, negative, and graded sustainability labels on purchase decisions	2021	European Commission
Expert input	Dütschke, Elisabeth; Schneider, Uta	D6.2: Scientific report on the consumer perspective of digital labels and solutions	2017	
Expert input	He, S., Blasch, J., van Beukering, P., & Wang, J.	Energy labels and heuristic decision-making: The role of cognition and energy literacy	2022	Energy Economics
Expert input	Jacobs, Bergener, Gossen	The influence of a hypothetical eco-score on purchase decisions: Empirical evidence on consumer preferences and consumer segments for mobile phones	2025	Cleaner and Responsible Consumption

Expert input	Kesselring, A.	Energy labels in the European Union: Consumer inattention and producer responses	2025	ENERGY ECONOMICS
Expert input	LE Europe, VVA, Ipsos, ConPolicy and Trinomics	Behavioural Study on Consumers' Engagement in the Circular Economy	2018	European Commission
Expert input	Liva, G., Mariani, I., Negrini, M., Rodes, C., Schmittinger, F., Tolino, U. and Wiese, J.	Design and behavioural research study to create evidence-based, EU harmonised consumer waste sorting labels	2025	European Commission
Expert input	London Economics	Study on the impact of the energy label – and potential changes to it – on consumer understanding and on purchase decisions	2014	European Commission
Expert input	Operate	Evaluation of durability and repairability label	2022	

Annex II: Search string used for literature review

The detailed search strings supporting the analysis for the literature are provided in **Annex II - Search strings literature review,** submitted as a separate Excel file.

Annex III: Database used for literature review

The detailed database supporting the analysis for the literature is provided in **Annex III – Database literature review**, submitted as a separate Excel file.

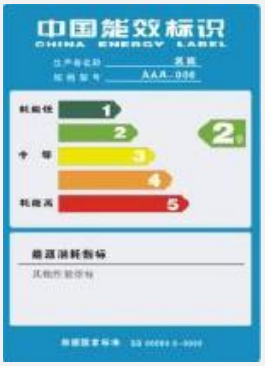
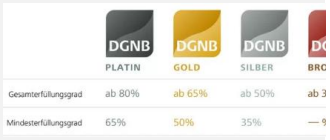
Annex IV: List of comparative worldwide Eco and Energy Labels

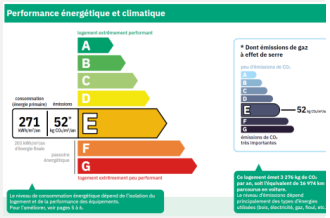
For this investigation, the baseline dataset was drawn from the Ecolabel Index (https://www.ecolabelindex.com/ecolabels). The database was examined in September 2025.

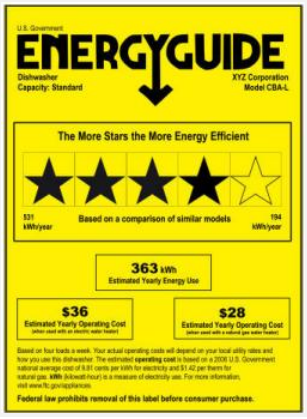
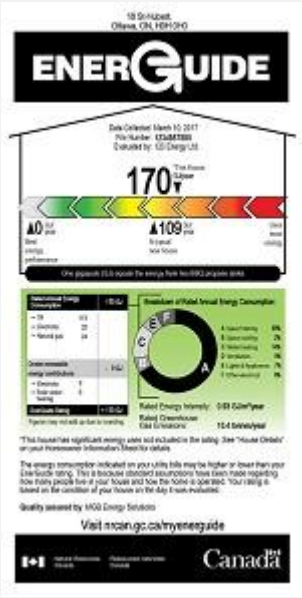
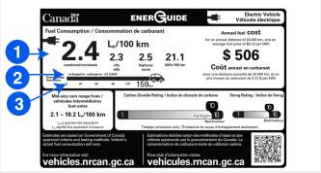
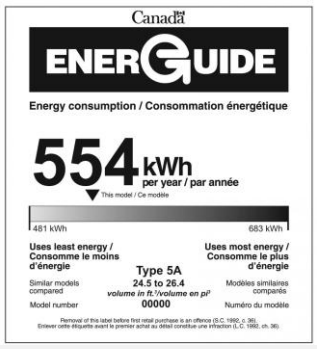
To ensure relevance for the purpose of the study, inclusion criteria were defined to focus on labels that provide comparative information for products. Labels were excluded if general information about the label could not be found or there were no comparative indices given. This approach ensures that the resulting analysis is grounded in accessible, verifiable data and focuses on labels that directly inform consumer choices/decisions through comparative metrics.

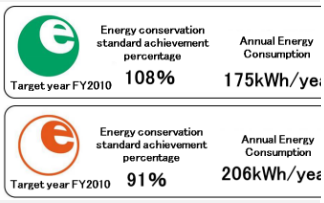
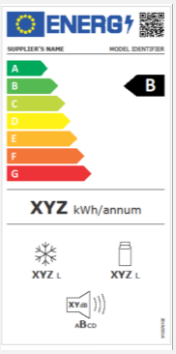
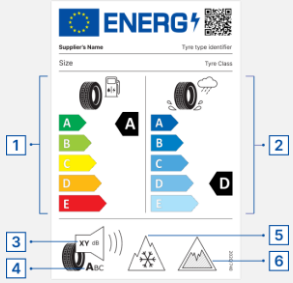
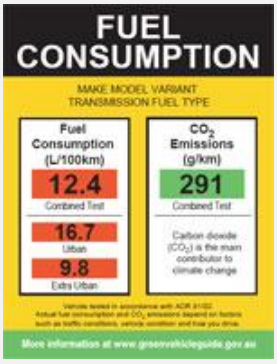
Literature

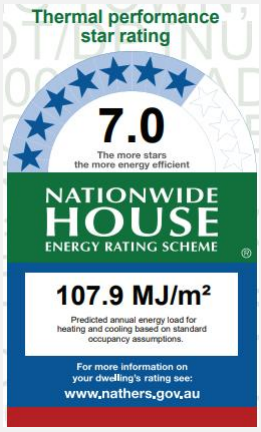
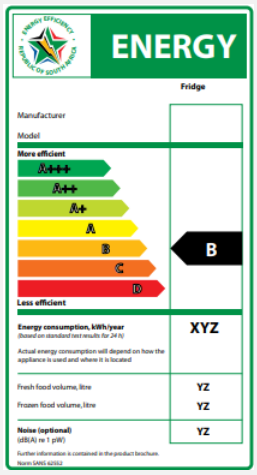
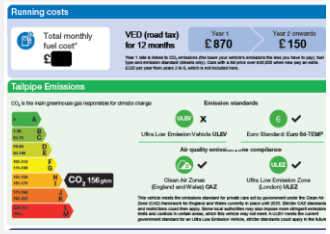
Label Name	Manda-tory	Category of interest	Region of implemen-tation	Link/source	Example
ArgeTQ	No	Buildings	Austria, Germany, Switzer-land	https://www.oegnb.net/	
Automobile efficiency label	Yes	Mobility (i.e. cars with combustion engines and battery electric vehicles)	Republic of Corea	https://www.energy.or.kr/en/conts/10400200000000.do	
BOMA BESt	No	Buildings	Canada	https://bomabest.org/	
Carbon Footprint Report	No	Houseware, food, clothing, office equipment, energy using products, etc.	Japan	https://www.cfp-japan.jp/english/	

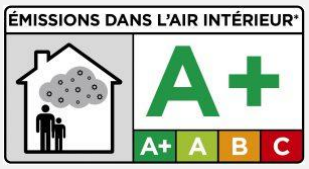
Carbon Reduction Label	No	Electronics, cosmetics, building products, machinery, services, food, etc.	Australia, Canada, France, UK, Germany, Republic of Corea, USA, etc.	https://www.carbontrust.com/what-we-do/carbon-footprint-labelling	
Certified Green Restaurant	No	Restaurants	Canada, USA	https://www.dinegreen.com/	
China Energy Label	Yes	Electronics	China	https://www.energylabel.com.cn/indexEnergy	
China Water Efficiency Label	Yes	Bathroom products (i.e. showers, taps and toilets), dishwashers	China	https://cisema.com/en/china-water-efficiency-label-updates-on-nozzles	
Climate Registered	No	Companies	USA	https://theclimateregistry.org/	
DGNB Certificate	No	Buildings	Germany	https://www.dgnb.de/de/zertifizierung/das-wichtigste-zur-dgnb-zertifizierung	

DPE (Diagnostic de performance énergétique)	Yes (when selling)	Buildings	France	https://www.ecologie.gouv.fr/politiques-publiques/diagnostic-performance-energetique-dpe	
Eco-Leaf	No	Electronics, building products, textiles, food, machinery, etc.	Japan	https://www.ecoleaf-jemai.jp/eng/	
ENCE label Electricity	Yes	Electronic devices, heaters, air conditioners, household appliances, etc.	Brazil	https://thebrazilbusiness.com/article/energy-efficiency-labeling-in-brazil	
ENCE label Buildings	Yes (for public building)	Buildings	Brazil	https://thebrazilbusiness.com/article/energy-efficiency-labeling-in-brazil	

Energy Guide Label	Yes	Household appliances, water heaters, room air conditioners, central air conditioners, furnaces, boilers, heat pumps, pool heaters, and televisions	USA	https://www.ftc.gov/legal-library/browse/rules/energy-water-use-labeling-consumer-products-under-energy-policy-conservation-act-energy-labeling	
EnerGuide label for homes	No	Buildings	Canada	https://natural-resources.canada.ca/energy-efficiency/product-energy-ratings/energuide/welcome-energuide	
EnerGuide label for vehicles	Yes	Mobility (i.e. cars with combustion engines and battery electric vehicles)	Canada	https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/personal-vehicles/energuide-vehicles	
EnerGuide Rating System	Yes	Household appliances and buildings	Canada	https://natural-resources.canada.ca/energy-efficiency/product-energy-ratings/energuide/reading-label-energuide	

Energy efficiency labeling	Yes	Household appliances, buildings	Republic of Corea	https://www.energy.or.kr/en/conts/104002000000000.do	
Energy Rating	Yes	Electronic devices	Australia	https://www.energyrating.gov.au/	
Energy Saving Labeling Program	Yes	Household appliances and electronics	Japan	https://www.asiaeec-col.eccj.or.jp	
EU Energy Label	Yes	Electrical devices	EU	https://energy-efficient-products.ec.europa.eu	
EU Tyre Label	Yes	Tyres for cars and trucks	EU	https://energy-efficient-products.ec.europa.eu/product-list/tyres_en	
Fuel Consumption Label	Yes (for new cars)	Mobility (i.e. cars with combustion engines and battery electric vehicles)	Australia	https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/vehicle-safety-environment/fuel-consumption-label	

Greenline Print	No	Print industry products (i.e. paper)	Europe	https://www.greenlineprint.com/	
Nationwide House Energy Rating Scheme	Yes (for new and renovated houses)	Buildings	Australia	https://www.nathers.gov.au/owners-and-builders/nathers-certificate	
RightShip's GHG	No	Ships	International	https://rightship.com/technical-information?nid=97	
South African Energy Efficiency Label	Yes	Household appliances and air conditioners	South Africa	https://www.savingenergy.org.za/asl/south-african-energy-efficiency-label/index.html	
Tire efficiency label	Yes	Tires	Republic of Corea	https://www.energy.or.kr/en/conts/10400200000000.do	
UK Fuel Economy Label	Yes (for new cars)	Mobility (i.e. cars with combustion engines and battery electric vehicles)	UK	https://www.vehicle-certification-agency.gov.uk/fuel-consumption-co2/fuel-	

				consumption-labelling/	
Uniform Energy Saving Label	Yes	air conditioners, electric refrigerators and freezers, TVs, LED lights and water heaters	Japan	https://www.iea.org/policies/363-unified-energy-saving-labeling-program?country=Japan	
VOC-Label	Yes	Construction products and furnishing materials	France	https://www.eco-institut.de/de/portfolio/emissions-dans-lair-interieur/	
Water Efficiency Labelling	Yes	Household appliances, showers, taps and toilets	Australia	https://www.waterrating.gov.au/	

Annex V: Questionnaire stakeholder consultation I

Introduction

Introductory page

Dear Sir or Madam,

You have been contacted as a valued expert whose insights will help inform the development of the label of the Ecodesign for Sustainable Products Regulation (Regulation (EU) 2024/1781 - the 'ESPR'). The ESPR establishes a framework to set Ecodesign requirements that products have to comply with in order to improve their environmental sustainability. The ESPR includes provisions to create a new label to facilitate informed consumer choices.

This survey as part of a stakeholder consultation process is led by Ramboll in cooperation with the project consortium (i.e. Fraunhofer ISI, IPSOS, Waide Strategic Efficiency Europe, Oeko-Institut Consult GmbH, and VITO) on behalf of DG ENV. It will take approximately 15 minutes to complete the questionnaire. Your responses will remain strictly confidential and will be stored and processed in full compliance with GDPR. All results will be reported in aggregate form only, ensuring that no individual or organisation can be identified.

This questionnaire starts with asking about your stakeholder profile, so the questions can be tailored to your expertise accordingly. Afterwards, several questions concerning general questions related to the ESPR label and its design elements are followed.

Your responses will remain strictly confidential and will be stored and processed in full compliance with GDPR. All results will be reported in aggregate form only, ensuring that no individual or organisation can be identified. The data you provide will directly inform the development of the ESPR label.

Thank you for contributing your time and expertise to this important study. Your feedback will help shape policy recommendations that support the design of the ESPR label.

The survey will close on the 15th of September (midnight).

In case of any questions, please send an email to [email].

Starting questions

Questions	Answers
What is the name of the organisation that you represent?	Open-ended
What is the geographical area where your organisation operates?	Multiple-choice (only one option can be chosen): List EU Member States European Union (general) Other non-EU country Global
Which of these options best defines your type of organisation?	Multiple-choice (only one option can be chosen): Business association (traders) Business association (producers) Business association (other) NGO (including consumer and environmental organisations) Member State authority Academia, research institute or think tank Professional association Other [please insert: _____]

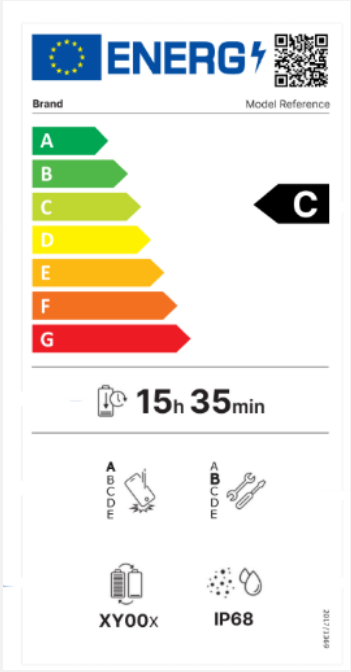
Questions on the main expectation for the ESPR label:

Questions	Answers
On a scale of -5 to 5, where -5 = I strongly disagree and 5 = I strongly agree, how much you agree/disagree with the following objectives of the ESPR?	
The ESPR label should enable more **sustainable consumption** practices (i.e. to nudge towards more sustainable choices)	Rating scale: From -5 to 5
The ESPR label should create more **transparency** in the market (i.e. to prioritise the provision of information)	Rating scale: From -5 to 5
The ESPR label should allow consumers to **compare** products in a **simple manner**	Rating scale: From -5 to 5
The ESPR label should allow consumers to **thoroughly compare** products	Rating scale: From -5 to 5
The ESPR label should support consumers in making choices by making **high-quality information about products available to them** (i.e. repairability, durability)	Rating scale: From -5 to 5

Questions for business associations and professional associations

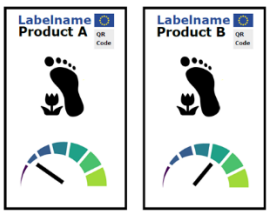
Questions	Answers
On a scale of -5 to 5, where -5 = negative effect and 5 = positive effect, do the following elements affect the **costs of the adoption** of a label by economic operators (costs including human resources and monetary costs)? • Requirement to **translate the label to the languages** of each EU Member State • Ability of the label to **influence consumer purchase decisions** • **Simplicity of the administrative process** to apply and verify the information from the label	Rating scale: From -5 to 5
Given that the ESPR addresses up to 16 distinct impact parameters and the need to provide additional explanation on the nature and contents of the label, how important do you think it is that users should be able to access such an explanation and information via a **nested link on the label (e.g. via a QR code)**? Please rank from -5 to 5 (where -5 means a negative effect and 5 means a positive effect)	Rating scale: From -5 to 5
Given that the ESPR addresses up to 16 distinct impact parameters and the need to provide additional explanation on the nature and contents of the label, how important do you think it is that consumers should be able to access such an explanation and information via a **nested link on the label (e.g. via a QR code)**? Please rank from -5 to 5 (where -5 means a low importance and 5 means a high importance). - On a scale of -5 to 5, where -5 = I strongly disagree and 5 = I fully agree, how much you agree/disagree that the presence of **external links or QR codes affects the ESPR label on products offline** in the following dimensions? - The QR code would affect the **aesthetic display** of the label. - The QR code would affect the **time** that consumers need to inform themselves about the product. - The QR code would exclude certain consumer groups due to inability or lack of **willingness to scan** the QR code.	Rating scale: From -5 to 5 for each dimension
At what size does the label become too large to feature on a product?	Multiple choice ranging from A3 to A9 and other.

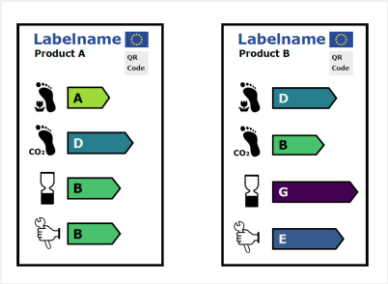
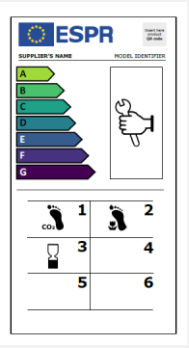
Which general shape do you prefer for the overall design of the label? 	Multiple choice (multiple choices are possible): - Round - Square shape - Rectangular shape (similar to the EU Energy Label) - Rectangular shape (but laying flat) - Does not matter at all - Something else, namely_____
What choice of colours is preferable for a label offline?	Multiple choice (multiple choices are possible): - Multiple-colour label - A label that includes up to a max of 3 colours - A label that uses colour, but the elements are adaptable to black and white - A black and white label only - A label that uses colours but that are accessible for people with visual impairments and is inclusive (i.e. red-green colour blindness) - No preference
What choice of colours are preferable for a label online?	Multiple choice (multiple choices are possible): - Black and white label - Multiple-colour label - A label that includes up to a max of 3 colours - A label that uses colour, but the elements are adaptable to black and white - A black and white label only - A label that uses colours that are accessible for people with visual impairments and is inclusive (i.e. red-green colour blindness) by default - No preference
What do you prefer regarding the language of the label in offline environments?	Multiple choice (multiple choices are possible): - A fully language neutral label - A multiple language label that is for example in English but has translations in it - A local language label that is adapted to the language of each country - No preference
What do you prefer regarding the language of the label online?	Multiple choice (multiple choices are possible):

	- A fully language neutral label - A multiple language label that is for example in English but has translations in it - A local language label that is adapted to the language of each country - No preference
What do you prefer regarding the title of the label?	Multiple choice (multiple choices are possible): - A language neutral title - A title translated to the local language - No title - No preference
Which parts of the energy label should be reused for the ESPR label from your perspective? 	Multiple-choice (multiple choices are possible): • None • The overall layout and structure of the label • The blue title • The EU flag • The QR code • The A-G scale how products are categorised • The colours (green to red) used to categorise products • The letter of the class (in the example “C”). • The icons beneath the scale. • The A-E scale next to the icons indicating the average product performance. • The total numbers beneath the scales indicating the average product performance.
The ESPR lists 16 product parameters that can be improved through ecodesign requirements (see Article 5 ESPR and the image below). 	

In your view would it be best to:	Multiple choice (only one option can be chosen): a. Display, to the extent possible, a single rating scale that reports the aggregated performance across all the relevant impact criteria b. Display multiple rating scales with a separate scale for each relevant parameter c. I do not know
if the answer above is b): What is the maximum number of parameters which should be reported on the label?	Multiple choice ranging from 1 to 16
Should all indicators on the label be designed uniformly so that a higher value always reflects better performance (i.e. 'good = high, poor = low')? For example, some ESPR indicators included in the label may have performance ratings that somehow contradict intuition and may mislead interpretation. A well performing product may have a high repairability score (here 'high' is good) and a low footprint (here 'low' is good).	Multiple choice answer (only one option can be chosen): • Yes, indicators should be aligned so that higher values always reflect better performance. • Neutral, I have no clear preference. • No, indicators do not need to be aligned this way.
Are there other label requirements that should be taken into consideration in designing the ESPR label layout?	Open-ended question

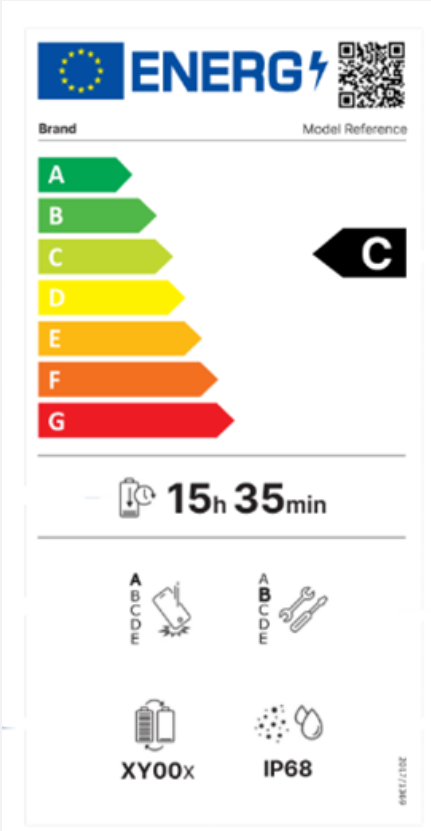
Questions	Answers
These are examples to illustrate how the elements and the arrangement of elements of a future ESPR label could inform consumers about several parameters of different products. Please answer the questions beneath about these prototypes.	

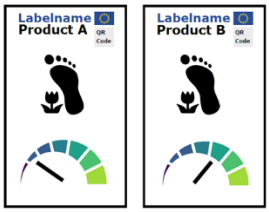
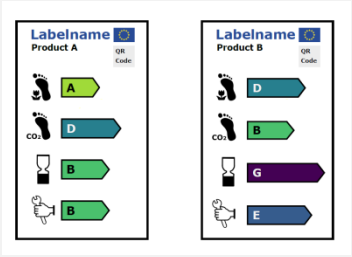
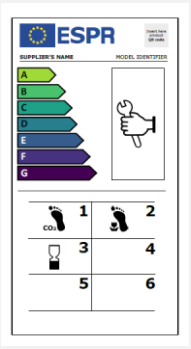
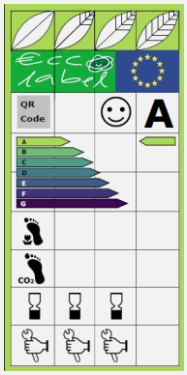
Type 1	Type 2	Type 3
		
Increasing size of the icon means a larger footprint	The colour scale and size indicate the product's footprint	A single icon and rating scale in the shape of a snail
Type 4	**Type 5**	**Type 6**

		
A label with several key icons for indicators and ratings	A label combining different elements emulating the format of the Energy Label	Modular system of elements and indicators
On a scale of -5 to 5, where -5 = very difficult and 5 = very easy, how feasible would it be to **implement** the different ESPR label design elements for products **in-store and online** (e.g., printing options, integration into products)? • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6		Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = very ineffective and 5 = very effective, how effectively do the different ESPR label designs **communicate product characteristics?** • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6		Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = very difficult and 5 = very easy, how easy are the different ESPR label designs for customers **to understand?** • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6		Rating scale: From -5 to 5

Questions for NGOs, academia, research institutes, think tanks and others

Questions	Answers
On a scale of -5 to 5, where -5 = negative effect and 5 = positive effect, how much do the following features contribute to making a label **recognisable?** • Clear title in the label • Public awareness of the label • Simplicity of the label • Presence of several colours in the label • Presence of external links or QR codes • Visual attractivity of the label	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = irrelevant effect and 5 = relevant effect, how much the following features contribute to making a label **understandable?** • Size of the label • Clarity of used symbols • Structuring of information in columns • Use of bolds or italics to highlight key words • Presence of external links or QR codes • Complete barrier-free and inclusive design (e.g. for people with visual impairments)	Rating scale: From -5 to 5
Are there other label requirements that should be taken into consideration?	Open-ended question
What choice do you prefer regarding the **title** of the label?	Multiple choice: - A language neutral title - A title translated to the local language - No title - No preference
The ESPR lists 16 product parameters that can be improved through ecodesign requirements (see Article 5 ESPR and the image below). 	
In your view would it be best to:	Multiple choice: a. Display a single rating scale that reports the aggregated

	performance across all the relevant impact criteria b. Display multiple rating scales with a separate scale for each relevant impact criterion c. I do not know
if the answer above is b): What is the maximum number of impact criteria which should be reported on the label?	Multiple choice ranging from 1 to 16
Which parts of the energy label could be **reused** for the ESPR label from your perspective? 	Multiple-choice: • None • The overall layout and structure of the label • The blue title • The EU flag • The QR code • The A-G scale how products are categorised • The colours (green to red) used to categorise products • The letter of the class (in the example “C”) • The icons beneath the scale. The A-E scale next to the icons indicating the average product performance • The total numbers beneath the scales indicating the average product performance
Should all indicators on the label be designed uniformly so that a higher value always reflects better performance (i.e. ‘good = high, poor = low’)? For example, some ESPR indicators included in the label may have performance ratings that somehow contradict intuition and may mislead interpretation. A well performing product may have a high repairability score (here ‘high’ is good) and a low footprint (here ‘low’ is good).	Multiple choice answer (only one option can be chosen): • Yes, indicators should be aligned so that higher values always reflect better performance. • Neutral, I have no clear preference. • No, indicators do not need to be aligned this way.

Questions	Answers
These are examples to illustrate how the elements of a future ESPR label could inform consumers about the footprint of different products. Please answer the questions beneath about these prototypes.	
Type 1	**Type 2**
	
Increasing size of the icon means a larger footprint	The colour scale and size indicate the product's footprint
Type 3	
	
A single icon and rating scale in the shape of a snail	
Type 4	**Type 5**
	
A label with several key icons for indicators and ratings	A label combining different elements emulating the format of the Energy Label
Type 6	
	
Modular system of elements and indicators	
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, how do the different ESPR label designs affect the label in terms of their **accessibility** (understandability to all groups of consumers)? • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, how the different ESPR label designs affect the label in terms of their **recognisability** (which label design would be most likely to catch consumers attention and to be remembered by consumers)? • Type 1 • Type 2 • Type 3 • Type 4	Rating scale: From -5 to 5

• Type 5 • Type 6	
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, how the different ESPR label designs affect the label in terms of their **effectiveness** (ability to shape consumer behaviour)? • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, how the different ESPR label designs affect the label in terms of their **transparency** (clarity with the information that is being conveyed)? • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, the different ESPR label designs in terms of their **simplicity** (ability to not to overload consumers with excessive information)? • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, how do the different ESPR label designs affect the label in terms of being **easy to understand by consumers?** • Type 1 • Type 2 • Type 3 • Type 4 • Type 5 • Type 6	Rating scale: From -5 to 5

Questions for Member State authorities

Questions	Answers
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, to what extent do the following elements **facilitate the adoption** of a label by economic operators? • **Simplicity** of the administrative process to verify the information from the label • **Similarity** of the label to other existing similar labels, such as the European energy label. • **Costliness** of the administrative process • Branding of the label that communicates efforts in the field of the **circular economy** • Branding of the label that communicates efforts in the field of **ecological sustainability**	Rating scale: From -5 to 5
On a scale of -5 to 5, where -5 = low effect and 5 = high effect, to what extent the following features contribute to make a label **recognisable and understandable?** • Sufficient size of the label to be readable • Public awareness of the label • Presence of several colours in the label • Presence of external links or QR codes • Complete barrier-free and inclusive design (e.g. for people with visual impairments)	Rating scale: From -5 to 5
What choice do you prefer regarding the **title** of the label?	Multiple choice (only one option can be chosen): - A language neutral title - A title translated to the local language - No title - No preference
Which parts of the energy label should be reused for the ESPR label from your perspective?	Multiple-choice (multiple options can be chosen): • None • The overall layout and structure of the label • The blue title • The EU flag • The QR code • The A-G scale how products are categorised • The colours (green to red) used to categorise products • The letter of the class (in the example “C”) • The icons beneath the scale



- The A-E scale next to the icons indicating the average product performance
- The total numbers beneath the scales indicating the average product performance

Are there any other label requirements that should be taken into consideration?	Open-ended question
Should all indicators on the label be designed uniformly so that a higher value always reflects better performance (i.e. 'good = high, poor = low')? For example, some ESPR indicators included in the label may have performance ratings that somehow contradict intuition and may mislead interpretation. A well performing product may have a high repairability score (here 'high' is good) and a low footprint (here 'low' is good).	Multiple choice answer (only one option can be chosen): • Yes, indicators should be aligned so that higher values always reflect better performance • Neutral, I have no clear preference • No, indicators do not need to be aligned this way

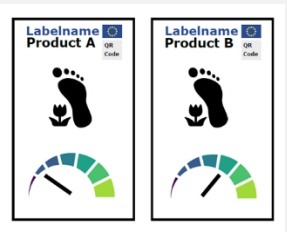
The ESPR lists 16 product parameters that can be improved through ecodesign requirements (see Article 5 ESPR and the image below).

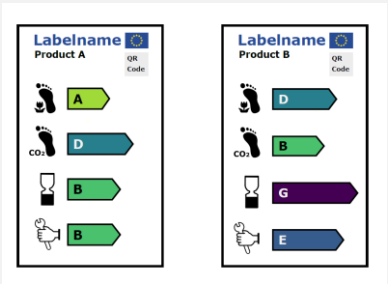
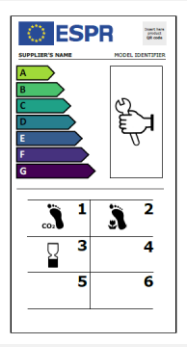


In your view would it be best to:	Multiple choice:

	a. Display a single rating scale that reports the aggregated performance across all the relevant impact criteria b. Display multiple rating scales with a separate scale for each relevant impact criterion c. I do not know
if the answer above is b): What is the maximum number of impact criteria which should be reported on the label?	Multiple choice ranging from 1 to 16

Questions	Answers
These are examples to illustrate how the elements and the arrangement of elements of a future ESPR label could inform consumers about the several parameters of different products.	

Type 1	Type 2	Type 3
		
Increasing size of the icon means a larger footprint	The colour scale and size indicate the product's footprint	A single icon and rating scale in the shape of a snail

Type 4	Type 5	Type 6
		
A label with several key icons for indicators and ratings	A label combining different elements emulating the format of the EU Energy Label	Modular system of elements and indicators

Do these label/element examples **potentially conflict with other existing labels**, such as those at a national level? • Type 1 • Type 2 • Type 3 • Type 4	Yes/No

• Type 5 • Type 6	
Please explain why these labels/label elements may potentially conflict with existing labels?	Open-ended question

Concluding questions

Questions	Answers
Is there any other element that you would like to comment?	Open-ended question
Would you agree to participate **in follow-up interviews** to further inform the research of the possible label designs?	Yes/No
Would you agree to participate in a **second survey** to further inform the research of the possible label designs?	Yes/No
If yes, what would be your preferred E-mail address to be contacted?	Open-ended question
Would you like to recommend someone else to be involved in this survey? (If yes, please indicate their contact and name)	Open-ended question for name and for E-mail

Thank you very much for your participation and for sharing your insights.

Annex VI: Raw data stakeholder consultation I

The material for **Annex VI – Raw data stakeholder consultation I** is submitted as a separate Excel file.

Annex VII: Questionnaire stakeholder consultation II

Introduction

Introductory page

Dear Sir or Madam,

You are invited to contribute as an expert to an EU study (DG ENV) supporting the development of the label under the Ecodesign for Sustainable Products Regulation (Regulation (EU) 2024/1781 – the 'ESPR'). The ESPR establishes a framework to set ecodesign requirements for products to comply with to improve their environmental sustainability. The ESPR includes provisions to create a new label to facilitate informed consumer choices.

At this stage, the study aims to collect general insights on the conceptualization, layout and graphic design that will potentially form future ESPR labels. We kindly invite you to share your personal opinions and insights. Please note that there are no right or wrong answers, that the survey results will be anonymized, and that we do not expect the answers to be official statements from your organization. Your thoughts based on your expertise are greatly appreciated.

Importantly, the purpose of the study is not to determine which products should be covered by the ESPR label or what the exact content of this label should be. It will be for delegated acts setting out ecodesign requirements for specific product groups to decide to which products the ESPR label will apply and what will be its content or the manner in which it should be displayed. Also, in the case of textiles, the visual presentation of sustainability information on a digital label planned as part of the revision of the Textile Labelling Regulation (TLR) or on a physical label which can additionally be introduced in the delegated act setting out ecodesign requirements for textiles will be aligned with the design resulting from this study.

This survey does not deal with the calculation of performance requirements for specific product groups; instead, the focus is to understand the stakeholder views on possible shared layout guidelines for the future ESPR labels.

This consultation represents the second round of stakeholder engagement conducted by the study team (i.e. Fraunhofer ISI, Ramboll, IPSOS, Waide Strategic Efficiency Europe, Oeko-Institut Consult GmbH, and VITO) on behalf of DG ENV.

The questionnaire will take approximately 20 minutes to complete. Your responses will remain strictly confidential and will be stored and processed in full compliance with GDPR. All results will be reported in aggregate form only, ensuring that no individual or organisation can be identified. Thank you for contributing your time and expertise to this important study. Your feedback will help shape policy recommendations that support the design of the ESPR label.

The survey will close on the 22nd of December of 2025.

In case of any questions, please contact [E-mail].

Organisational profile questions

Questions	Answers
What is the name of the organisation that you represent?	Open-ended (free-text)
What is the geographical scale your organisation operates in?	Multiple-choice (only one option can be chosen): Specific EU Member States, namely: (al the EU Ms are listed in the survey) Several EU Member States All of the European Union (general) Other non-EU country Global
Which of these options best defines your type of organisation?	Multiple-choice (only one option can be chosen): Trading business / association Producing business / association Other business / association [namely: _____] (free-text) NGO (including consumer and environmental organisations) Member State Authority Academia, research institute or think tank Professional association Other [namely: _____] (free-text)

General label questions

Questions	Answers
Subtheme I: General information about the content of the label and how to display single parameters and product performance Intro: The ESPR lists 16 product parameters that can be improved through ecodesign requirements (see Article 5 of the ESPR, and the image below). Some of these parameters will be used in the future ESPR labels, depending on each type of product. Please, note that these 16 parameters specified in the ESPR are not the relevant parameters for all products. The relevant parameters for each product group will be specified and regulated at a later stage in the delegated act.	

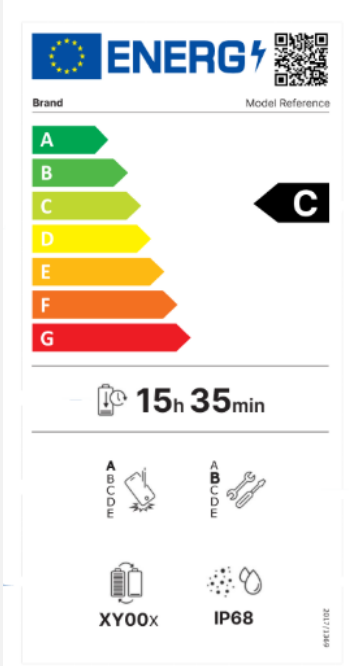


Typically, labels have a unique branding, so that the aim of the label is understood easily and the label is recognized, even if displayed in slightly different formats to fit different product categories. The branding can also inform the "title" of the label that is displayed on the label. In the following we want to understand which kind of main message or information should be conveyed with the label.

What main message should the ESPR label communicate to the consumer and thus could serve as “branding” for the label design?	Environmental impact of the product Circular use of resources Resource efficiency Product sustainability Ecodesign of a product Other: ____
Typically, the title is displayed in the label. What title should be given to the label? You can choose more than one option.	Multiple choice: Eco EcoDesign EcoIndex EcoLabel ESPR SustainScore EcoImpact EcoGuide Other _____
How should the ESPR label present the chosen product parameters to consumers, whether on physical packaging or online?	Multiple choice, multiple answers possible: The label should display the product performance across multiple parameters (specified in the delegated act for each product) The label should display the product performance of one overall index I don't know

Subtheme II: Digital label The ESPR label can have a physical and a digital version. The physical label is placed on the product itself or is connected to the physical product. The digital version will be used for e-commerce and for online shopping. The following questions are about how these digital and physical versions of the ESPR label could possibly interact and provide added value to enhance the objectives of the ESPR.	
Would you find it beneficial to have separate designs for the physical and digital versions of the label?	Multiple choice, one answer possible: Yes No I don't know
What do you think about the relation between a physical and a digital version of an ESPR label? –Please select the answer that best fits your opinion.	Multiple choice, one answer possible: A digital label should contain the same exact information and design as a physical label A digital label should provide additional explanations about the meaning of the different elements of the physical label
Would you find it beneficial to have a simplified version of the ESPR label to be displayed in search results, product listings or advertisements on e-commerce websites? This could be similar to the single horizontal energy efficiency class arrow with the letter inside used for energy labelling when the full energy label cannot fit.	Multiple choice, one answer possible: Yes No I don't know
In case you have any additional comments concerning the role or presentation of the digital version of the ESPR label, you can add them here:	Open-ended question (free-text)
Subtheme III: Specific design elements or features These questions aim to understand your opinion on the inclusion of additional elements or features in the ESPR label.	
From your expertise and knowledge: Would you consider that a QR code will be scanned by the consumers at the point of sale?	Multiple choice, one answer possible: Yes, a QR code will be scanned by consumers No, a QR code will not be scanned by consumers I don’t know
Would you assume that the following prompts added to the QR code will encourage people to scan the QR code? [INSERT picture here]	Yes No I don’t know.

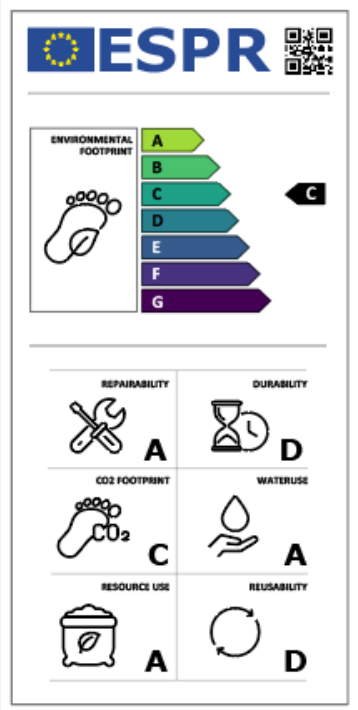
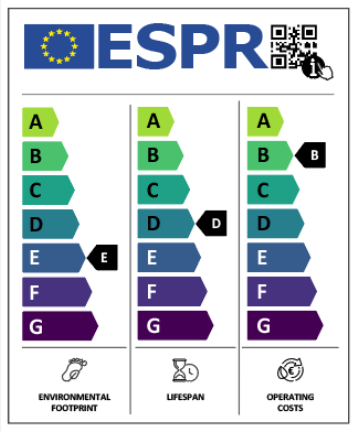
	
In case you have any additional comments concerning QR codes on the ESPR label you can add them here. If you have thoughts on how to encourage consumers to engage with QR codes, you can also add them here:	Open-ended question (free-text)
Do you think that placing the corresponding parameter descriptions in the official languages of Member States to complement icons is important for understandability (e.g., adding 'repairability' besides its relevant icon)? 	Multiple choice, one answer possible per sub question each: Yes, for both the digital and the physical version of the ESPR label Yes, only for the digital version of the ESPR label No I don't know
Do you think that placing the corresponding parameter descriptions in English language only to complement icons is sufficient for understandability across the Member States? (e.g., adding 'repairability' besides its relevant icon)? (see example above).	Multiple choice, one answer possible per sub question each: Yes, for both the digital and the physical version of the ESPR label Yes, only for the digital version of the ESPR label No I don't know

Please note: the aim of this question is to gain insight on the understandability of a label in English language independently of the legal considerations of this option in each Member State."	
In case you have any other insights on the idea to place the corresponding parameter descriptions in national languages to complement icons you can add them here:	Open-ended answer
Do you think it is important to include brief explanations on the parameters to improve understandability? For example, including a definition of upgradability next to the upgradability parameter.	Multiple choice, one answer possible per sub question each: Yes, for both the digital and the physical version of the ESPR label Yes, only for the digital version of the ESPR label No I don't know
In case you have any other insights or comments on the idea to include brief explanations on the parameters please add them here:	Open-ended answer
Subtheme IV: Relation with the Energy Label These questions aim to understand your opinion on the potential synergies or conflicts between the Energy Label and the ESPR label. This is the current Energy Label: 	
What type of colour code for the scale(s) would you prefer for the ESPR label?	Multiple choice, one answer possible: Green to blue (easily accessible for people with visual impairments) Green to red (classical colour scale as used in the Energy Label) Neither of these colour codes

	I don’t know
Do you think that the ESPR label should have a design or structure similar to the Energy Label?	Multiple choice, one answer possible: Yes No Other opinion, namely_____ _ I don’t know
If yes: Why are you in favour of reusing the design of the Energy Label? You can choose more than one option.	Multiple choice, several answers possible: Familiarity Understandability for consumers Understandability by stakeholders and the industry Simplicity Demonstrated effectiveness Included colour scales Easy to understand ranking schemes Other, namely: ___ (free-text) I don’t know
If no: Why are you against reusing the design of the Energy Label? You can choose more than one option.	Multiple choice, several answers possible: Only the general layout should not be reused (blue logo and EU flag above, relevant parameters below, rectangular shape) To prevent confusion between the Energy Label and the ESPR Label Reusing the general layout is no issue. However, if the ESPR label also includes a main parameter displayed with a similar ladder scale, letters, and green-red colours, consumers may think it is also about energy efficiency The Energy Label is not easy to understand for consumers The Energy Label is not easy to understand for stakeholders and industry The Energy Label is too complicated in general terms Other, namely: ___ (free-text) I don’t know

C. Questions on the label prototypes

Questions	Answers
Intro: These are examples to illustrate how the elements and the arrangement of elements of a future ESPR label could inform consumers about several parameters of different products. Please answer the following questions about these prototypes (on the next page).	
A	
B	

C	ESPR ENVIRONMENTAL FOOTPRINT A B C D E F G C REPAIRABILITY A DURABILITY D CO2 FOOTPRINT C WATERUSE A RESOURCE USE A REUSABILITY D
D	ESPR A B C D E F G E A B C D D E F G A B B C D E F G ENVIRONMENTAL FOOTPRINT LIFESPAN OPERATING COSTS
E	ESPR F E D C B A

F	
F	
On a scale of -5 to 5, where -5 = very difficult and 5 = very easy, how easy are the different ESPR label designs for customers to understand? Type 1 …. Type	Answer Rating scale: From -5 (very difficult) to 5 (very easy)
On a scale of -5 to 5, where -5 = very difficult and 5 = very easy, how feasible would it be to implement the different ESPR label designs for physical products (e.g., printing options, integration into products)? Type 1 … Type …	Answer Rating scale: From -5 (very difficult) to 5 (very easy)
On a scale of -5 to 5, where -5 = very difficult and 5 = very easy, how feasible would it be to implement the different ESPR label designs for products online (e.g., displaying options, integration into retailers' websites)? Type 1 .... Type x	Answer Rating scale: From -5 (very difficult) to 5 (very easy)
On a scale of -5 to 5, where -5 = very ineffective and 5 = very effective, how effective are the different ESPR label designs at communicating product ratings? Type 1 … Type 4	Rating scale: From -5 (very ineffective way to communicate the product characteristics) to 5 (very effective…)
On a scale of -5 to 5, where -5 = very difficult to recognise and 5 = very easy to recognise, how easy is it for customers to recognise the different ESPR label designs?	Rating scale: From –5 (very difficult to recognise) to 5 (very easy to recognise)

In this context, recognisability refers to how users can effortlessly spot and identify the label at a glance. Type 1 …. Type 4	
Please, indicate if any of these label/element examples can potentially conflict with other existing labels, such as those at a national level. You can choose more than one option. Examples of these conflicts could be that some information is displayed with a similar ladder scale, letters, or colours to other labels, inducing confusion among consumers.	Multiple choice, several answers possible: Prototype 1 Prototype 2 Prototype 3 Prototype 4 Prototype 5 Prototype 6 Prototype 7 None of the prototypes potentially conflict with any existing label I don't know
If you identified a potential conflict, can you explain why these label prototypes may potentially conflict with existing labels?	Open-ended question
Do you have other comments or insights about the proposed label prototypes?	Open-ended question

E. Closing questions

Questions	Answers
Do you foresee any significant challenge or concern regarding the general conceptualisation, layout, and graphic design of the ESPR label?	Open-ended question (free-text)
Do you foresee any significant opportunity regarding the general conceptualisation, layout, and graphic design of the ESPR label?	Open-ended question (free-text)
Is there any other element that you would like to comment on?	Open-ended question (free-text)
Thank you very much for your participation and for sharing your insights. Please click at finish to submit your answers. Click on the printer icon if you want to obtain an overview of your answers.	

Annex VIII: Raw data stakeholder consultation II

The material of **Annex VIII – Raw data stakeholder consultation II** is submitted as a separate Excel file.

Annex IX: Interview Summaries

Anonymisation note. Names, organisation names, and other direct identifiers have been removed for all interviews. The summary reflects the substance of the interview and has been edited for clarity and consistency.

Interview 1: Textiles and circularity specialist

Interview context

The interview explored the design of product sustainability information for textiles, with particular attention to durability, repairability, environmental assessment, consumer behaviour and the future relationship between physical labels and the Digital Product Passport.

Measuring sustainability

- Current product-level assessment methods may produce counter-intuitive results and may not capture all relevant environmental trade-offs.
- An indicator such as durability should not be interpreted in isolation. A more durable product may still involve trade-offs relating to substances of concern, microplastic generation or other impacts.
- Standardising diverse products within a single framework risks oversimplifying their environmental performance.

Durability, repairability and use

- Repairability in textiles differs from repairability in electronics. Garments may be replaced for reasons unrelated to physical failure, including fashion, fit or occasion.
- Technical durability does not necessarily extend a garment's actual period of use. Increasing durability may raise production costs without reducing impacts if the garment is still discarded early.
- The duration and intensity of use are central to environmental performance, but technical measures do not fully capture emotional attachment, perceived value or other factors that influence continued use.
- In apparel, products are more commonly repurposed for less formal use than technically upgraded.

Information for consumers

- The production date could provide useful information and may support longer use or improved traceability.

- Chemical safety information is relevant to consumer protection and traceability, particularly where substances of concern are present.
- Symbols may reduce language requirements but can be ambiguous. Written explanations are clearer but difficult to accommodate across multiple markets.
- A QR code or digital product information source could provide explanations in several languages, although digital access should not be assumed to resolve all comprehension issues.

Policy and behavioural considerations

- Labels alone are unlikely to change consumption patterns. Marketing, social expectations and other behavioural factors may have a greater influence on clothing replacement than technical failure.
- Broader measures may be needed to address fast-fashion consumption and encourage longer product use.
- Fairness considerations, such as living wages in supply chains, may be relevant to consumers but fall outside the current label parameters discussed in the interview.

Overall implication

The interview indicates that product labels should not present technical durability as a simple proxy for sustainability. Label design should reflect real-world use, disclose relevant trade-offs and sit within a broader policy approach that addresses consumption patterns and product impacts.

Interview 2: European digital commerce representative

Interview context

The interview considered how future product labelling requirements could operate consistently across online and offline sales channels. It focused on information placement, digital access, symbols, label naming and interaction with parallel regulatory initiatives.

Consistency across sales channels

- Labelling requirements should be consistent across online and physical retail. Differences should be limited to those required by the characteristics of each channel.
- A coherent approach is particularly important for businesses operating across several channels and for consumers moving between them.

Format and placement of information

- Online product pages can become overloaded if all mandatory information must be displayed directly. Clear rules are therefore needed on the visibility, sequence and placement of information.
- Hyperlinks and QR codes can provide access to detailed information, but the destination and responsibility for maintaining that information must be clear.
- Links to official public sources were viewed as more reliable than links controlled by third parties or individual sellers.

Symbols and digital explanations

- Symbols can support language-neutral and concise communication, although consumer understanding will vary.
- Digital information can supplement physical labels by explaining symbols and providing additional detail.
- Safety-related information should remain clear and directly accessible rather than being hidden behind optional digital steps.

Label title, scope and regulatory coordination

- The label title should reflect a scope extending beyond energy efficiency to include attributes such as repairability and recyclability.
- The framework should avoid confusion with existing labels and clarify how it relates to the Digital Product Passport and energy labelling requirements.
- Clear and timely communication from public authorities will be important to limit duplication, uncertainty and unnecessary administrative burdens.
- Making label information visible early in the online purchasing journey was identified as a useful practice.

Overall implication

The interview supports a consistent, channel-neutral labelling framework with limited, clearly justified adaptations for online and physical retail. Digital tools can provide detail, but core mandatory and safety information should remain easy to find at the point of purchase.

Interview 3: National public authority with labelling expertise

Interview context

The interview examined the architecture of a future ESPR label, drawing on public-sector research into consumer-facing sustainability information. It addressed label families, parameter integration, design flexibility, language neutrality, small products and terminology.

A family of label formats

- Different label formats may be needed for distinct aspects such as carbon footprint, repairability and recycled content.
- The overall design should be sufficiently flexible to accommodate future product-specific requirements and compact versions for small products.
- Labels should remain visually distinct from one another and from the existing energy label to avoid implying equivalence between unrelated performance dimensions.

Transparency and information density

- Calculation methods and assumptions behind scores should be transparent.
- Combining several parameters into one score may conceal trade-offs and weaken trust.
- Conversely, displaying too many parameters may create information overload. The design therefore needs to balance completeness with immediate comprehension.

Flexible access to detail

- The framework should support both simple labels and more detailed formats where several parameters are relevant.
- QR codes and the Digital Product Passport can provide additional information for users seeking greater detail.
- The same architecture should remain legible when adapted to smaller products or constrained packaging.

Symbols, language and recognition

- Language-neutral design can reduce translation requirements, but symbols should be limited to essential information and tested for comprehension.
- New symbols should be introduced consistently and supported by public information campaigns.
- Textiles and small products create particular space and usability constraints. Long multilingual labels may be intrusive and are often removed by users.
- The term “ESPR” may not be meaningful to consumers. A clearer term linked to ecodesign, or a consistently applied visual identifier, may improve recognition.
- Consumer familiarity will require consistent use and sufficient time for the label to become established.

Overall implication

The interview supports a flexible but recognisable label architecture that can accommodate different product groups and parameters. Transparency, limited information density and consistent communication will be essential to build understanding and trust.

Interview 4: European environmental civil-society organisation

Interview context

The interview addressed the risks of simplifying environmental performance into a consumer label. It considered parameter trade-offs, implementation, accessibility, end-of-life information, repairability and the distinction between regulatory product information and environmental certification.

Complexity and the risk of oversimplification

- A single environmental score may conceal material trade-offs between impact categories and could mislead consumers.
- Displaying several parameters may provide a more balanced picture, but the label should also identify important impacts that are not represented.
- There is no universally appropriate number of parameters. Consumer testing and input from consumer organisations will be important.

Digital information and second-hand use

- A QR code can provide additional detail without overloading the physical label, but use may be concentrated among already engaged consumers.
- Digital product information may remain available when a product is resold, which could support second-hand markets.
- Core information should not depend solely on consumers choosing to scan a code.

Measurement and implementation

- Indicators such as repairability and durability must reflect practical conditions, including the availability and affordability of repair services and spare parts.
- Vague or theoretical scores could create an unjustified impression that a product is sustainable.
- Manufacturers should not be able to optimise a headline score while concealing weaker performance on other relevant attributes.

Purpose, terminology and accessibility

- The ESPR primarily establishes minimum product requirements for the EU market. The label should communicate relative performance rather than function as an environmental certification.
- Existing ecolabels can continue to distinguish products that meet higher voluntary standards.
- Terms such as “eco” may imply that a product is inherently sustainable. Neutral titles such as “product information” or “product information sheet” may be less misleading.
- Colour scales should be accessible to people with colour-vision deficiencies and should not rely on colour alone. Green may also imply an unqualified positive judgement when the intended meaning is only comparatively better performance.

Circularity, repair and consumption

- End-of-life information should address recyclability, substances of concern and the potential recovery of materials.
- Grouping information by themes such as product use, design and end of life could improve comprehension.
- Repairability requirements should enable realistic repair, including access to spare parts and local or home repair where appropriate.
- Communication should not encourage guilt-free consumption. Even better-performing products have impacts, and the label should inform choices without obscuring the wider issue of overconsumption.

Overall implication

The interview cautions against presenting the label as an environmental endorsement. It should communicate comparative product information transparently, acknowledge omitted impacts and support, rather than substitute for, strong product requirements under the ESPR.

Annex X: Questionnaire focus groups I

Prepared for the use of Ipsos by Waide Strategic Efficiency Europe Ltd.

In support of the European Commission project on the development of the ESPR Label.

Introduction

This document comprises a guide for the moderator to use when conducting the focus groups on the EU ESPR (Ecodesign for Sustainable Products Regulation) labelling initiative. The ESPR label is a label that communicates sustainability information of products) (see more contextual information below).

The proposal for a new European Ecolabel is rooted in the European Union's ambitious agenda to achieve a circular economy and accelerate the transition toward sustainable consumption and production patterns. A cornerstone of this agenda is the Circular Economy Action Plan (CEAP), which was adopted in March 2020 as part of the European Green Deal. The CEAP outlines legislative and non-legislative initiatives aimed at transforming the entire product lifecycle—from how products are designed and manufactured to how they are used, repaired, and ultimately recycled. By targeting these stages, the CEAP promotes circularity, encourages sustainable consumption, and seeks to minimize waste.

Building on this framework, the Ecodesign for Sustainable Products Regulation (ESPR, EU 2024/1781), adopted on June 13, 2024, and effective from July 18, 2024, provides a comprehensive policy instrument to address sustainability across nearly all categories of physical goods placed on the EU market. The ESPR marks a significant evolution from the Ecodesign Directive (2009/125/EC), which was limited to energy-related products, by expanding its scope to include a much broader range of goods. For cases where the energy label, governed by Regulation (EU) 2017/1369, does not adequately cover a product's performance in relation to sustainability, the ESPR plans to introduce an ESPR-specific label. This label will supplement existing energy labelling schemes and aim to provide a clear and accessible tool to communicate sustainability information directly to consumers, thus ensuring that consumers are well-informed and equipped to make sustainable purchasing decisions.

More detailed information can be found via this link: https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/ecodesign-sustainable-products-regulation_en.

Visual materials are compiled into a PowerPoint presentation and displayed to participants via screen sharing. It is foreseen that each focus group will last for 90 minutes and therefore the intention is that the focus groups conducted using these materials should fit into that time span.

Discussion guide

Initial warm-up (5 min)

Welcome the group and thank them for their participation. Explain that during the course of the Focus Group they will be shown various material and asked questions about it – they will be invited to comment on the material and discuss it. Most of the focus group will be questions that invite an open discussion and all participants will be asked to share their views and perspectives. In a few cases questions will invite participants to type an answer (these are all questions about preferences where people are invited to enter their order of preference). The

purpose of the research is to understand how they think and feel about the topics and stimuli they will be shown. Explain that this is not a test of their knowledge, and there are no right or wrong answers.

People shouldn't worry about the effort involved as the answers they will be asked to enter will be very short. Also they shouldn't worry if they find some things difficult to answer as we are testing the material we will be showing them for its ease of understanding and usefulness and if they find they are unsure about something it indicates there is a problem with the material, not with them.

Focus group participants will answer quantitative questions through MS Teams' built-in polling functionality. See separate document with instructions on how to set up these polls.

Label meaning and product sustainability questions (10 min)

Q1. Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?

[Share slide to show the images below]



A



B



C



D



E



F

Facilitate a discussion where participants are encouraged to come forward with suggestions and comments.

[Summarise results of discussion in analysis template]

Now you've seen and discussed these top of label design concepts we can explain that the purpose of this research is to understand how people might think and feel about the environmental & sustainability impacts of products. Ultimately the objective is to learn how people can be best informed about the environmental & sustainability impacts of products.

Q2. These days there's a lot of talk about "sustainability" but what does that term mean to you?

Encourage each member of the focus group to cite a range of characteristics.

[The moderator should aim to write down each suggestion on a blank slide.]

Once they have done this ask them to collectively rank the relative importance of each sustainability characteristic (in order of most important first).

[The moderator should add this ranking to the prior slide that lists all the suggestions.]

[Summarise results of suggestions and their ranking in analysis template]

The idea of the ESPR label for products (50 min)

Q4. Were products to be given an indicator (i.e. a ranking) of how sustainable they are what types of sustainability aspects do you think the ranking should address?

Facilitate a discussion where participants are encouraged to come forward with suggestions and are then probed about why they proposed what they did.

[The moderator should aim to write down each suggestion on a blank slide.]

[Summarise results of suggestions in analysis template]

Q5. Which of these aspects would be the highest priority for you?

[The moderator should highlight the suggestions with the highest priority in the prior slide that lists all the suggestions.]

[Summarise priority suggestions in analysis template]

Q7.

[Share slide to show the image below]

[Be mindful of the time with this question]



Q7.1 Please look at these icons. What do you think about them?

[Summarise results of discussion in analysis template]

Q7.2 Then ask them to collectively rank the three most important and the three least important sustainability parameters for products in general

[Summarise results of suggestions in analysis template]

Now we've discussed the range of the parameters that need to be considered when assessing a products sustainability we're going to ask questions about how this could best be communicated on product labels

Q8.

Q8.1 Given the complexity of the 16 sustainability impact parameters do you think it could make sense to try and group them before presenting the groupings on a product label? Ask the participants to answer Yes or No.

[Record Yes/No answers via poll]

[Insert results of poll in analysis template]

Q8.2 Then facilitate a discussion about why they answered as they did.

[Summarise results of discussion in analysis template]

Q9.

Q9.1 Now you know that the ESPR label is hoping to communicate information on the 16 previously mentioned product sustainability parameters what do you think would be the best way to do this on a product label?

- Option A – A single ranking scale that shows the product's sustainability performance for a single sustainability parameter and ignores the rest?
- Option B – A single ranking scale that shows the product's aggregated sustainability performance across all 16 parameters?
- Option C – A few ranking scales (up to 3) that show the products' performance for the most important sustainability impact parameters?
- Option D – A few ranking scales (up to 3) that shows the product's aggregated sustainability performance for up to 3 groupings of the 16 impact parameters?
- Option E – something else?

[Record answers via poll]

[Insert results of poll in analysis template]

Q9.2 Then trigger discussion and probe why participants responded as they did.

[Summarise results of discussion in analysis template]

Q10. What do you think of the idea of using a single scale to represent an aggregated sustainability performance across the 16 sustainability impact aspects on a product label?

Ask the participants to discuss this and probe why they think what they do.

[Summarise results of discussion in analysis template]

Q11. Suppose a product label were to use a single scale to communicate this what do you think about each of these designs?

[Share slide to show the images below]



A



B



C



D



E



F

Show the set of single scale designs and ask them to comment on each and judge which they think is best from the point of view of:

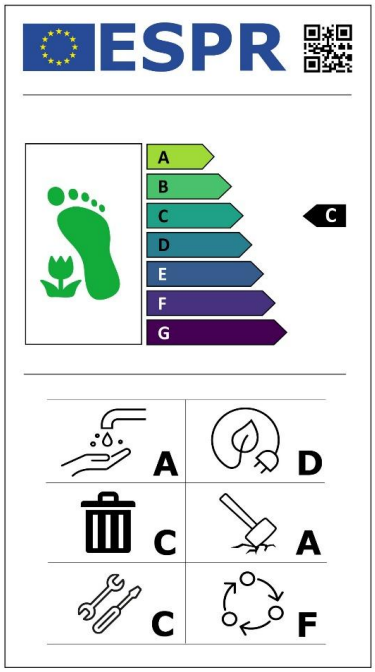
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

[Summarise results of discussion in analysis template]

Q12.

[Share slide to show the image below]



Q12.1 Ask participants to discuss the approach shown in this label and probe why they think what they do.

Q12.2 Ask them what they think the icon to the left of the A-G scale means?

Q12.3 Ask them what they think each of the other icons mean.

Q12.4 What do they think the letters next to these icons mean?

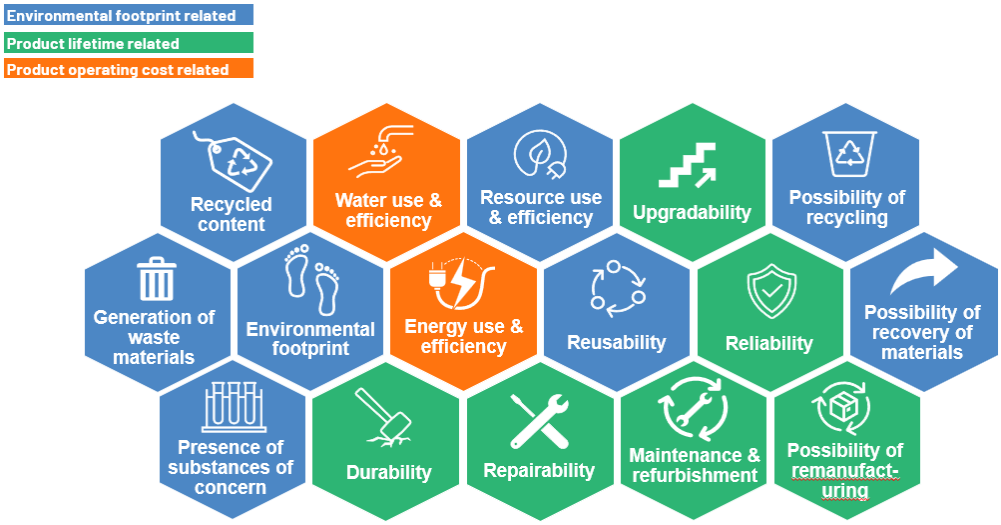
Q12.5 If they say a ranking of how well the product performs against the parameter shown in the icon – ask them what do they think the best possible class (rank) might be and also what they think the worst possible class might be.

Q12.6 Ask them whether they think this approach or the single aggregated scale approach in Q11 would be best and to explain why.

[Summarise results of discussion in alalysis template]

Q14. Again considering the 16 product sustainability impacts.

[Share slide to show the image below]



Q14.1 What do you think of the idea of grouping them as follows and then communicating product characteristics on a label for each of the three grouped themes? Ask them to answer whether they think this is a Good or Bad idea.

[Record good/bad idea answers via poll]

[Insert results of poll in analysis template]

Q14.2 Then facilitate a discussion about why they answered as they did.

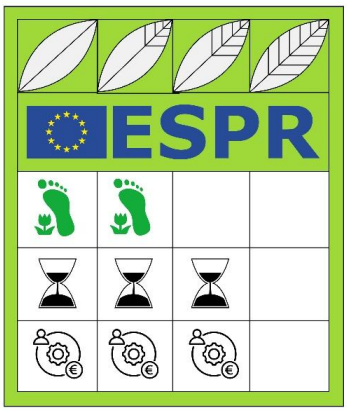
[Summarise results of discussion in analysis template]

Q15a. Imagining that there were a label using three icons with performance scales to communicate the above groupings what do you think about each of these designs?

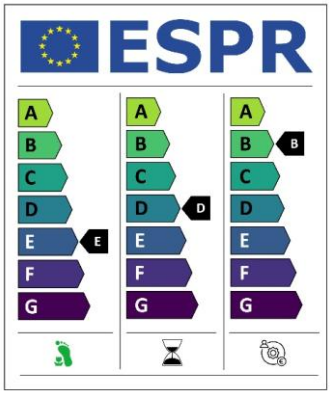
[Share slide to show the images below]



A



B



C

Show the set of triple scale designs (for Environmental footprint related, Product lifetime related and Product usage cost related) and ask them to comment on how well each performs compared to the single scale approach considered in Q11.

[Go back to slide 7 showing single scale approach in Q11 if needed]

Ask them to judge which they think is best from the point of view of:

- ease of understanding the label's meaning
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

[Summarise results of discussion in analysis template]

Q15a.1 For Label A) ask them what they think the best score could be for a given impact parameter and what they think the worst could be.

[Summarise results of discussion in analysis template]

Q15a.2 For Label B) ask them:

- whether they think having more Environmental Footprint icons means a product that is better for the environment or worse
- whether they think having more Hour glass icons means a product that lasts longer or less
- whether they think having more Operating Cost icons means a product that is more expensive to operate or less

What do they think the best score could be for a given impact parameter and what they think the worst could be.

[Summarise results of discussion in analysis template]

Q15a.3 For Label C) ask them how many A-G scales do they think would be the maximum that should be used on a product label and probe why.

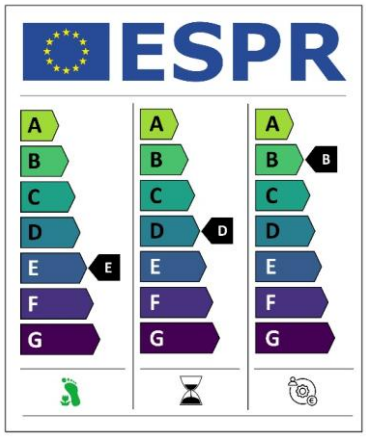
[Summarise results of discussion in analysis template]

Q15a.4 For Label C) ask them if this reminds them of any other labels they know – if yes, ask them do they think having this label but on different product types might confuse people about what both labels are about.

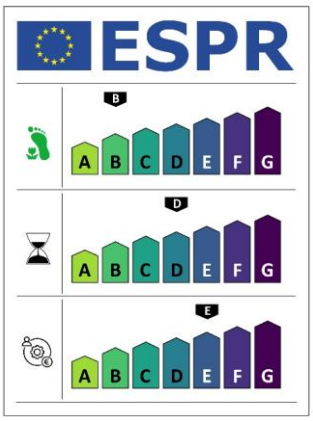
[Summarise results of discussion in analysis template]

Q15b.

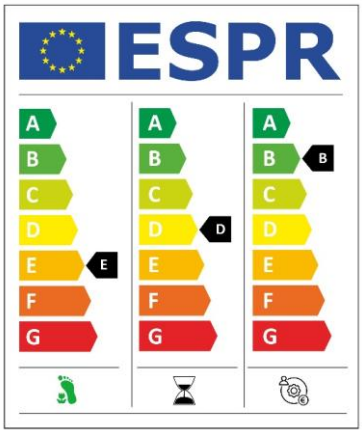
[Share slide to show the images below]



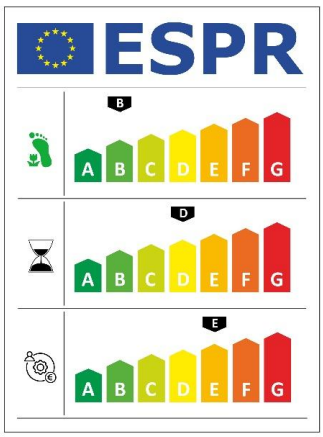
A



B



C



D

Q15b.1 Which of these designs do you prefer? Ask them to explain their preferences – i.e. why they prefer it compared to the other options. Ask them whether they prefer any of these designs to their preferred option in Q15a and if so why?

[Summarise results of discussion in analysis template]

Q15b.2 Ask them if they are familiar with the energy label? If they are, ask them if they think there is any risk or confusing the two labelling schemes if any of the options above were used (noting that the ESPR label will not be on the same product types as the energy label).

[Summarise results of discussion in analysis template]

Footprint designs (10 min)

Q16. Please look at the following image.

[Share slide to show the images below]

[Low priority question: In case you run out of time, this question can be skipped. Especially when the foot icon was already discussed throughout previous questions.]



Q16.1: What do you think it is intended to convey?

[Summarise results of discussion in analysis template]

Q17. Please look at the following image.

[Share slide to show the images below]

[Low priority question: In case you run out of time, this question can be skipped. Especially when the foot icon was already discussed throughout previous questions.



Q17.1: What do you think it is intended to convey?

[Summarise results of discussion in analysis template]

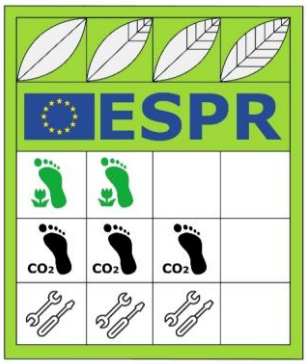
Q18. Imagining that there were a label using the following three icons.

[Share slide to show the images below]

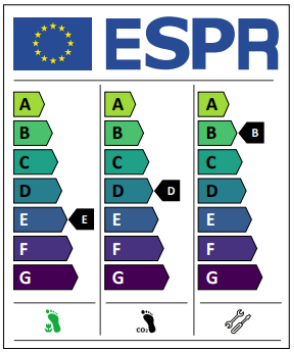
[Low priority question: In case you run out of time, this question can be skipped.]



A



B



C

Q18.1 What do you think about each of these designs?

[Summarise results of discussion in analysis template]

Q18.2 How well do these triple scale designs perform compared to the previous approach (used in Q15a).

[Go back to slide 13 showing approach in Q15a if needed]

[Summarise results of discussion in analysis template]

Q18.3 Ask the participants whether it should matter that these designs only report a product's performance for 3 of the 16 product sustainability parameters?

[Summarise results of discussion in analysis template]

Q18.4 Explore whether they think the sustainability parameters shown in this label are the most important parameters or not.

[Summarise results of discussion in analysis template]

QR code (10 min)

Q19.

[Share slide to show the images below]



Q19.1 Show the image above and point to the QR code. Ask them what they think it is.

[Summarise results of discussion in analysis template]

Q19.2 If any of them suggest that it is a QR code that people can access with a QR reader on their smart phone ask participants why they think an image like that might be on a label?

[Summarise results of discussion in analysis template]

Q19.3 If any of them suggest that it could be to provide more information about the label and the product ask them how likely do they think it is that they would try to access the QR code using the QR reader on their smart phone?

[Summarise results of discussion in analysis template]

Q20. Imagine a product label had one of these designs on it.

[Share slide to show the images below]



Ask the participants to speculate on what the designs mean and to explain why they think what they do.

[Summarise results of discussion in analysis template]

Q21. If an ESPR product label had one of these images on it, how likely do you think it is that you might try to access the QR code with your smart phone QR reader?

[Summarise results of discussion in analysis template]

After hearing the responses, ask the participants:

Q21.1 Why might you do this?

[Summarise results of discussion in analysis template]

Q21.2 Do you think these designs would make it more likely that you'd try and access the QR code than if a simple QR code were shown?

[Summarise results of discussion in analysis template]

Q21.3 Which of these designs do you think would be most effective at encouraging you to access the QR code on your smartphone?

[Summarise results of discussion in analysis template]

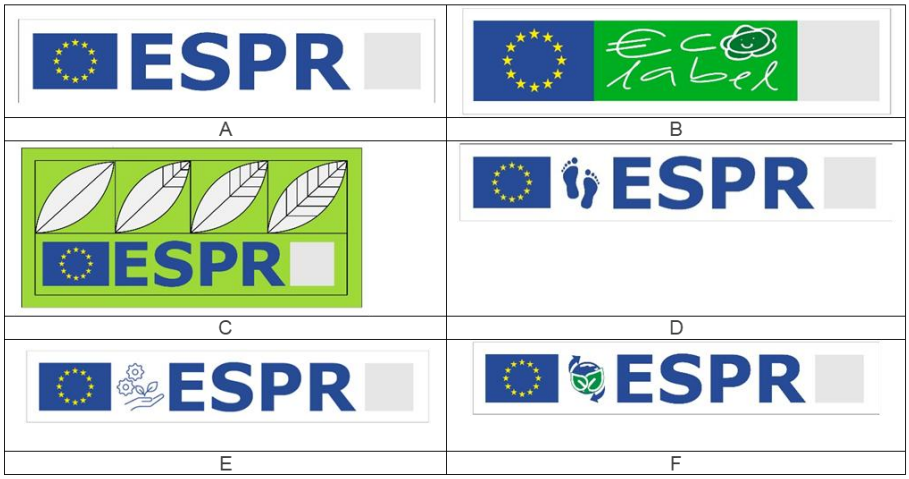
Outro (5 min)

Thank everyone for their participation and close the Focus Group.

Annex XI: Detailed results focus groups I

The findings from the first round of focus groups are presented in the rest of this section. They are order by question asked and a summary of the responses received are delivered in order of Germany (DE), Spain (ES) and Romania (RO) before a summary and conclusions drawn in relation to the question is provided. Note, that sometimes questions may be missing - this is because they were in the first draft of the moderator's guide but cut from the final one due to time constraints. Nonetheless, the questions and responses received to them are sequential and in the order they were posed during the focus groups.

Q1. Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?



Germany:

Mentions:

- 4x Sustainability / Sustainability Label
- 3x Carbon Footprint
- 3x EU / European Connection
- 3x Nature Connection
- 1x Each suggests something slightly different
- 1x Recycling
- 1x Circular Economy

Key Themes and Arguments

1. Sustainability and Environmental Awareness:

- Designs could indicate sustainability, carbon footprint, and environmentally friendly production
- Symbols such as feet, plants, or hands are interpreted as signs of ecological responsibility
- One participant added that individual labels could address different aspects of sustainability, e.g., recycling or a connection to nature

2. European Origin and Cooperation

- Clear reference to Europe, as the EU flag is recognized
- Representation as an expression of cross-border cooperation in the spirit of common sustainability goals

3. Quality and Credibility

- Such a label indicates a high-quality and certified product
- Labels are generally considered a seal of quality that builds trust and informs consumers about Ecological standards informed
- The group participants unanimously suspect that the designs shown represent sustainability or environmental labels. Several clues in the symbols – such as footprints, plants, globes, or hands – are interpreted as symbols of closeness to nature, environmental protection, the circular economy, and ecological awareness.
- Overall, the group concludes that the designs shown are likely European environmental or sustainability labels. These are intended to identify ecological, nature-oriented, and resource-saving aspects of products and could also represent Europe-wide cooperation and high quality standards.

Spain:

- 1. Institutional association (EU). The group interprets the acronym as a European label, linked to regulation or official certification. This connection generates trust and a sense of legitimacy.
- 2. Environmental and ecological association. Symbols such as leaves and natural colours evoke the idea of the environment, though without specifying further. An intuitive “eco-friendly” category.
- 3. Ambiguity and unforeseen associations. There is consensus around the ecological and European reading, but also some confusion (“they look like number plates”), which at first glance suggests that the design creates ambiguity.

Romania:

- Opinions regarding the labels themselves are diverse - the general consensus once most participants mentioned their opinion being that they have something to do with some sort of standards - probably tied in some form to the European Union.

Overall, the responses from ES are likely to be median but perhaps surprisingly half the respondents in the DE focus group mentioned sustainability and in all groups there was a perception that the labels were for a European label. In ES and DE most thought they were likely to be concerned with the environment or sustainability.

Q2. Overall: What does sustainability mean to you?

Germany:

- 1. Environmentally friendly materials and degradability - Biodegradable, recyclable materials, less plastic
- 2. Resource conservation & durability - Durable products, economical use, reuse

- 3. Behavioural sustainability in everyday life - Bicycle instead of car, reusable bottles, consumer behaviour
- 4. Circular economy & use of residual materials - Energy from waste, closed value chains
- 5. Social sustainability & justice - Reducing social inequalities, global responsibility
- 6. Local and regional production - Preference for local products, short delivery routes
- 7. Transparency & credibility - Traceable manufacturing processes, anti-greenwashing
- 8. Animal and environmental protection / ethics - Freedom from animal cruelty, conscious consumption. In ES participants associate sustainability mainly with pollution, recycling, and proximity. They understand it as reducing environmental harm and using natural and recyclable materials.

In Spain participants associate sustainability mainly with pollution, recycling, and proximity. They understand it as reducing environmental harm and using natural and recyclable materials.

In Romania participants associate sustainability mainly with pollution, recycling, and proximity. They understand it as reducing environmental harm and using natural and recyclable materials. When the group ranks importance, there is consensus around three main points:

- That the product should not pollute.
- That the product should be recyclable.
- That it should be locally produced to reduce transport.

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- That the product should not pollute.
- That the product should be recyclable.
- That it should be locally produced to reduce transport.

Conclusions: The concept of sustainability is a bit nebulous as it can cover many aspects. There is some overlap in the concepts expressed in the focus groups, especially those held in ES/DE, with those addressed in the ESPR but also several differences. It is interesting that in all three focus groups emphasis was placed upon products being locally produced to reduce transportation impacts but this is not addressed in the ESPR.

Q4. Overall: Were products to be given an indicator (i.e. a ranking) of how sustainable they are what types of sustainability aspects do you think the ranking should address?

Germany:

Five key sustainability dimensions can be derived from the contributions, which the group would consider in a ranking order:

- 1. Material and packaging avoidance - Plastic-free, recyclable packaging, reducing unnecessary wrapping
- 2. Transparency and comprehensibility - Disclosure of origin, clearly understandable labels, no "hidden codes"
- 3. Regionality and short supply chains - Regional products, traceable origins
- 4. Ethical and animal-friendly production - Vegan, vegetarian, cruelty-free

- 5. Credibility and verification of claims - Distrust of "microplastic-free" claims; demand for verifiability

Spain:

- 1. Direct environmental impact: how much the product pollutes, how much energy and water it uses, with an emphasis on efficiency and consumption.
- 2. Product origin and proximity: proximity is valued for its environmental impact (less transport) but also for its moral symbolism (local as “good practice”).
- 3. Recycling and product life cycle: a key and undisputed criterion. It is perceived as a direct way of measuring sustainability.
- 4. Use of chemicals and toxic materials: a mention that connects sustainability with health and well-being, extending the criteria beyond the environment.
- 5. Clarity of information: some participants mention that labels should be clear and easy to understand, anticipating a need for transparency in communication.

Romania:

Sustainability in this context proved to be difficult to manage, as participants fumbled with characteristics which tended to focus on the perspective of the manufacturer and characteristics which focused on their perspective as end-users. Also, some participants were focusing on specific types of products while others were focusing on others, and implicitly products were ranked in terms of sustainability based on different factors.

Conclusions: priorities vary but interestingly product proximity seems to matter and that isn’t among the ESPR impact criteria.

Q5. Which of these aspects would be the highest priority for you?

Germany:

Joint Evaluation/Prioritisation (Implicit Ranking). Based on agreement, repetition, and emphasis in the discussion, the following priority order emerges:

- 1. Packaging and material avoidance - Most frequently mentioned; cited by several participants as a key environmental issue.
- 2. Transparency and comprehensibility - Emphasizes traceability and clarity.
- 3. Regionality - For many, a sign of genuine sustainability.
- 4. Ethical/animal-friendly production - Vegan/cruelty-free, important, but less widely supported.
- 5. Credibility/monitoring of sustainability claims - Scepticism toward marketing labels; relevant, but secondary.

Spain:

When prioritising, environmental impact is placed first as the main criterion, followed by recycling and proximity.

Romania:

After deciding to rank products based on characteristics important to them as consumers, reliability, energy consumption and the quality of the products ranked first.

Overall across the focus groups the following aspects were mentioned: reliability, energy consumption, product quality; environmental impact, recycling and proximity, packaging, material efficiency. Also transparency, ethical animal friendly production, credibility of sustainability claims, regionality. Implicitly it can be noted that a number of the 16 ESPR impact parameters are embedded in these responses but there are mismatches.

Q7.1 Please look at these icons. What do you think about them?



The text in the icons above was presented in the local language in each Focus Group.

Germany:

1. Overall Impression of the Group

- The group reacted predominantly positively to the presented symbols. Participants found the presentation understandable, clear, and informative. It was repeatedly emphasized that the symbols cover many relevant sustainability aspects that have not always been considered in previous discussions (e.g., durability, repairability, upgradability).
- At the same time, some participants expressed a desire for even clearer evaluation and transparency, particularly regarding the weighting and reliability of the information.

2. Perception and Evaluation of the Symbols

a) Comprehensibility and Design

- The completeness, structure, and comprehensibility of the presentation were praised.
- Good visual implementation with icons, as these can be quickly recognized and classified.
- The system is intuitive and easily accessible; understandable even for less interested consumers.

b) Content Aspects and Completeness

- Emphasize that important, often overlooked criteria are taken into account, e.g., durability, repairability, upgradability.
- Expansion of the existing sustainability assessment.
- The group perceives the presentation as comprehensive in content – a positive, holistic approach.

c) Criticisms: Evaluation, traceability, warnings

- Questions about the reliability and differentiation of the presentation
- Positive and negative aspects (e.g., "substances of concern" or "waste materials") are presented equally, which leaves the assessment unclear.
- A concrete scale or percentage would be beneficial – e.g., a star system or percentage bars under the icons.
- Symbols are also seen as seals of approval: They indicate that testing has been carried out, not necessarily how well the product performs.
- The presentation is clear, but lacks a recognizable weighting or rating.
- The group would like more transparency regarding the extent to which individual criteria are met.

3. Perceived function of the symbols

- System as a kind of quality or test mark that signals that a product has been evaluated according to certain criteria.
- Consumers should be able to immediately recognize the quality and level of compliance – without research or background knowledge.
- The symbol system is accepted as a guide, but should provide additional depth of information.

4. Conclusion

The group rates the symbol system positively overall because it:

- depicts many sustainability aspects,
- is understandable and visually appealing,
- and enables quick orientation.

At the same time, younger participants in particular would like:

- a clearer differentiation between positive and negative criteria,
- a recognizable rating scale or percentage,
- and more transparency regarding the significance of the symbols.

Spain:

- Participants perceive the icons as clear, meaningful, and useful for quickly identifying a product’s sustainable features.
- There is a sense of familiarity, as most are recognisable, although some (such as “substances of concern”) generate surprise. They convey quality and reliability, and their potential is valued.

Romania:

- All participants consider the "Recycled content", "resource use and efficiency" "upgradability" and "possibility of recycling" are agreed to be appropriate icons. All participants also agree in regards to the icon for "presence of substances of concern" being correlated with the chemicals in test tubes. In regards to "Durability",

"Repairability", "Maintenance & refurbishment" as well as "Possibility of remanufacturing" participants also agree the image and text are correlated.
- The "water use & efficiency" and "energy use & efficiency" icons are not considered clear regarding the efficiency aspect, but one participant thinks differently.
- The opinions on the environmental footprint icon are split in terms of the environmental aspect.
- The "Reusability" and "reliability" icons are interpretable, but all participants agree that "possibility of recovery of materials" icon is not suitable at all for what it refers to, the correlation between the two not being an evident one.
- In order to improve the "Presence of substances of concern" icon, one participant proposes using a skull while another mentions using danger signs like the ones used generally in hospitals or vehicles that transport dangerous substances, a different example being a funnel turned upside down.
- The "repairability" icon could be improved in the opinion of one participant with more than two tools.

Conclusions: Most of the icons seem to be deemed to be appropriate given their intended meaning and are viewed positively. However, icons by themselves are insufficient - they need more contextualisation. The most problematic icons are those for: Reusability, Reliability, Possibility of recovery of materials, Substances of concern. The Environmental footprint was also somewhat challenging.

Q7.2 Then ask them to collectively rank the three most important and the three least important sustainability parameters for products in general

Germany:

Most important sustainability parameters

- Durability / Longevity - Products should last a long time; resource conservation; long-term use and reuse are key
- Resource conservation (water, energy) - Efficient use of limited resources; conserving resources, water as a critical raw material; energy is becoming increasingly important
- Recycling / Reusability - Recycling enables reuse; creative new products; reusability as a complement to durability

Unimportant sustainability parameters

- Recycling and recovery are related in terms of content; duplication.
- Ecological footprint is too unspecific and is already covered by other parameters.
- Reliability can be omitted because it is a consequence of other parameters.

Overlaps are pointed out several times: ecological footprint, reliability, recycling, and recovery are partially redundant in terms of content.

Spain:

- The three most important: durability (if a product lasts longer, excessive production and consumption are avoided), repairability and/or upgradability (both merge into the idea of extending a product’s lifespan), and recyclability (giving products a second life).

- The three least important: reliability, potential for material recovery, and potential for remanufacturing (since the word “potential” conveys uncertainty and offers no guarantee). These are perceived as more abstract and harder to verify.

Romania:

- After a significant discussion regarding resources use as being the most important sustainability aspect, participants agreed on placing in the top three spots: possibility of recycling, reusability and maintenance and refurbishment, resource use & efficiency coming close though.
- In the absence of anything obvious to choose from for the least important parameters, participants mention the possibility of remanufacturing, the possibility of recovery of materials and upgradability parameters on the last spots.

Conclusions: there wasn't consensus across the groups on this but some topics seem to be more generally deemed important than others. The lowest ranked were those using "possibility of.." as this seemed unconvincing. Also respondents noted overlaps and redundancy among some of the concepts - e.g. the env footprint should address most of what was in the other icons.

Q8.1 Given the complexity of the 16 sustainability impact parameters do you think it could make sense to try and group them before presenting the groupings on a product label? Ask the participants to answer Yes or No.

Germany:

- Yes: 7
- No: 0
- Yes and No: 1

Spain:

- Yes: 8
- No: 0

Romania:

- Yes: 7
- No: 1

Conclusions: There is overwhelming support for grouping the 16 ESPR impact parameters rather than trying to report them separately.

Q8.2 Then facilitate a discussion about why they answered as they did (in Q8.1).

Germany:

Reasons for Approval: The majority favour a thematic summary of the 16 sustainability parameters.

The most important arguments:

a) Clarity & Understandability

- All participants consider grouping necessary to avoid information overload on the label.
- A label with 12–16 symbols would be "overloaded," so a condensed presentation is useful, ideally with additional digital information (QR code).
- Overlaps between parameters (e.g., shelf life ↔ resource conservation)
- Grouping is seen as a necessary step towards simplification.

b) Meaningful Connections and Reductions

- Several participants recognize duplication of content and suggest umbrella categories.
- Many see a similarity in content between the parameters, making clustering seem logical and understandable.

c) Priorities of individual aspects

- Water consumption, energy consumption, recycling → most important factors, as they are directly linked to global resources and conflicts.
- Resource use & efficiency as an overarching value → encompasses energy, water, and material use.
- Durability = central prerequisite for sustainability; without it, every product would lead to increased consumption.
- Durability and recycling as core aspects of sustainable product design.
- The group tends to place greater emphasis on technical-material sustainability factors (longevity, resource use, recycling) than on abstract concepts such as "ecological footprint."

d) Criticism and relativization (yes/no vote)

- Grouping makes the label clearer, but can obscure important details.
- Grouped presentation + QR code for depth of detail (e.g., concrete values for repairability or material content).

Spain:

The main reasons mentioned are order, clarity, and cognitive accessibility, aiming for a system that simplifies without reducing trust.

- Clarity and simplification: grouping facilitates visual understanding and quick reading at the point of purchase.
- Usability and space: too many labels would create visual overload.
- Intuitive grouping by type of impact: participants suggest organising them into broad categories, making the information intuitive, visual, and coherent.

Although in one case, participants preferred not to group the labels, as this offers greater certainty and direct understanding. It is argued that people can learn to recognise individual labels over time.

Romania:

Conclusion - the main reasons mentioned for supporting a grouping of the ESPR impact parameters before presenting them on a label are order, clarity, and cognitive accessibility, aiming for a system that simplifies without reducing trust.

Q9.1 Now you know that the ESPR label is hoping to communicate information on the 16 previously mentioned product sustainability parameters what do you think would be the best way to do this on a product label?

Option A – A single ranking scale that shows the product's sustainability performance for a single sustainability parameter and ignores the rest?

Option B – A single ranking scale that shows the product's aggregated sustainability performance across all 16 parameters?

Option C – A few ranking scales (up to 3) that show the products' performance for the most important sustainability impact parameters?

Option D – A few ranking scales (up to 3) that shows the product's aggregated sustainability performance for up to 3 groupings of the 16 impact parameters?

Option E – something else?

Germany:

Option A: 0

Option B: 4

Option C: 3

Option D: 1

Option E: 0

Spain:

Option A/B: 2

Option C: 2

Option D: 2

Option C/D: 2

Romania:

Option A: 0

Option B: 0

Option C: 8

Option D: 0

Option E: 0

Overall:

Option A: 1

Option B: 5

Option C: 14

Option D: 4

Option E: 0

Conclusions: Option C is clearly the most preferred but options B, C, or D seem to be viable. Option A is not and option E received no votes but a priori this does mean that an alternative option might not be viable (as it would have required a participant to think of it, propose it and all to consider it - which is probably unrealistic within the constraints of a focus group). Thus, a priori respondents would prefer designs that show up to three of the most important impact parameters and would not welcome a design that only shows one.

Q9.2 Then trigger discussion and probe why participants responded as they did (to Q9.1).

Germany:

Reasons for the answers

a) Pro "B" (generalized / aggregated)

- Clarity and quick orientation for consumers
- Satisfies various information needs
- Appeals to more potential users
- Practical, as consumers don't have to think too long (Steffen)
- Subgroup tendency: Older participants and users with medium to high education prefer clarity and ease of use.

b) Pro "C" (detailed / specific)

- Sufficient level of detail to highlight individual relevant points
- Provides more information on specific aspects
- Middle ground between overview and level of detail
- Prevents general metrics from distorting users' personal priorities
- Subgroup tendency: Younger participants (18-34) and users with higher education prefer level of detail, but want to avoid being overwhelmed.

c) Pro "D" (aggregated scales, specific groups)

- Grouping of parameters, summarizing on a few scales
- Practical for users who want to see overarching relationships
- More detailed than overly generalized options, without being too complex
- Subgroup bias: Younger participants with lower levels of education prefer simple but differentiated scales.

Spain:

The majority prefer multiple scales (Option C or D), as these better preserve detail and allow for the consideration of different parameters. In any case, participants emphasise the need to avoid overload, since too much information can lead to confusion.

A minority favour a single scale, valuing its simplicity, accessibility, and lower cognitive load.

Romania:

Although participants all selected option C, given their general answer to the previous question, participants brought forth the variety of products they presume these labels would be on. Also some parameters have been mentioned as being more important for some products all while less important for others.

Conclusions: there are arguments in favour of options C, B & D.

Q10: What do you think of the idea of using a single scale to represent an aggregated sustainability performance across the 16 sustainability impact aspects on a product label?

Germany:

General Perceptions

Presentation of the Scale

- Participants associate the idea with familiar rating bars or energy labels (refrigerator, etc.)
- The idea of a simple key figure is seen as practical for quick orientation.

Pro: Aggregated Presentation

- • A logo or symbol (e.g., globe, plant) on the front of the packaging immediately signals sustainability.
- • Detailed information could be explained on the back.
- • For many consumers, the first impression is crucial, not the exact breakdown of all 16 criteria.

Cons / Critical Points:

- • Greenwashing Risk: It is pointed out that "green" is often used exaggeratedly or inaccurately.
- • Reliability vs. Feeling: Younger participants see a psychological effect ("green label makes you feel good"), while older participants prefer hard facts.
- • Clarity: Too much information or symbols could be confusing and overwhelm consumers.

Spain:

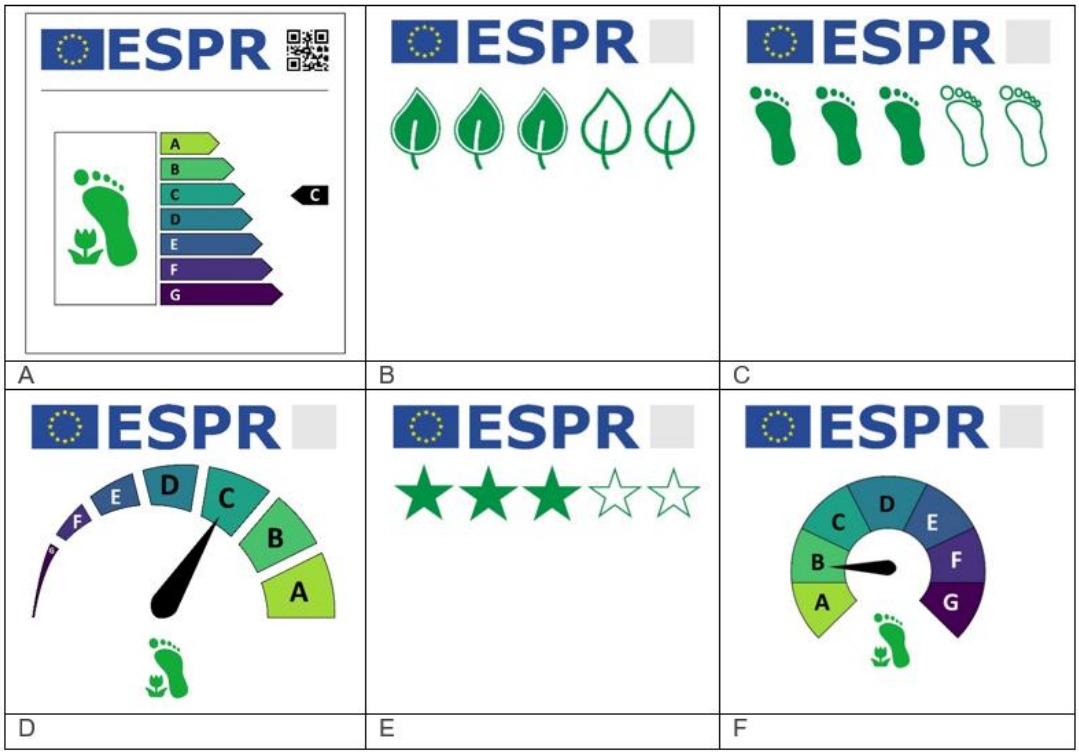
The group is receptive to the idea of a single aggregated scale, provided it is clear, visual, and familiar. They highlight the importance of using already recognised codes (such as energy efficiency labels). The concern lies less with the concept of a single scale and more with its presentation, which should enable quick reading and avoid confusion or ambiguity.

Romania:

- Participants mention the fact that a single scale could be limiting to the understanding of the sustainability of a product.
- One participant mentions the fact that more parameters show a bigger picture regarding the sustainability of a product.
- A single scale showing the sustainability level for a scale might not be enough for some users who'd require more information.
- The term <aggregated> was understood differently by participants in the absence of the examples provided afterwards.

Conclusion: there are those for an against this idea with no real consensus.

Q11. Suppose a product label were to use a single scale to communicate this what do you think about each of these designs ?



Germany:

Design A (classic letter/energy efficiency scale)

- Perceived as familiar, easy to understand, and accessible.
- Positive: Quickly grasped, familiar from everyday life and household appliances.
- Negative: Seems un-innovative; some participants note that it is not necessarily recognizable as a "new score."

Design B (Leaves)

- Less intuitive, requires additional explanation.
- Familiar from review portals (e.g., eBay), frequently used.

Design C (Footprints/Foodprint)

- Less intuitive, requires additional explanation.
- Participant opinions: Dagmar: With topics like foodprint, you have to research them first; they are harder to understand immediately.

Design D (Speedometer/Pointer Scale)

- Visually appealing, draws attention, conveys a "goal/achievement" feeling.
- More emotionally appealing, less immediately recognizable.

Design E (Star/Symbol Scale)

- Familiar from review portals (e.g., eBay), frequently used.
- Positive: Clear, easy to understand.
- Participant opinions: Steffen likes E because it seems familiar.

Design F (Arrow/Letter Scale)

- A mix of familiar and new, easily recognizable, easy to read.
- Positive: Transparent, clearly visible, with an arrow for easy identification.
- Negative: Personal preferences may vary depending on the orientation (“right side up” or mirrored).

Key Criticisms/General Information

- Transparency: Criteria must be understandable to ensure credibility.
- Legibility on small surfaces: Some designs (D, F) may be more difficult to recognize on small packaging.
- Familiarity vs. Innovation: Designs like A offer familiar orientation, while D is more visually striking but less familiar.

Conclusion of the Discussion

- Design F is rated as most suitable by most participants: clear, highly visible, familiar, yet sufficiently novel.
- Design A scores highly with older and less educated participants due to its familiarity, but is criticized by younger, middle-educated groups as lacking innovation.
- Design D is visually appealing, particularly appealing to younger and visually oriented users, but is difficult to read on small packaging.
- Design C requires explanation and is therefore of limited use.
- Design E is appreciated by participants who are familiar with rating scales (e.g., stars).

Spain:

There is a clear preference for a single A-G type scale with colour gradients: it is clear, conveys greater precision, and feels familiar, making it quick to interpret (models A, D, F). The public tends to trust previously known codes. Among the three models, model A generates the highest level of consensus.

Designs featuring leaves, footprints, or stars (B, C, E) raise doubts: there is no agreement on whether a greater number of symbols implies a better rating or, in the case of footprints, a greater environmental footprint.

Participants favour designs with a clear and consistent meaning, avoiding ambiguity.

Romania:

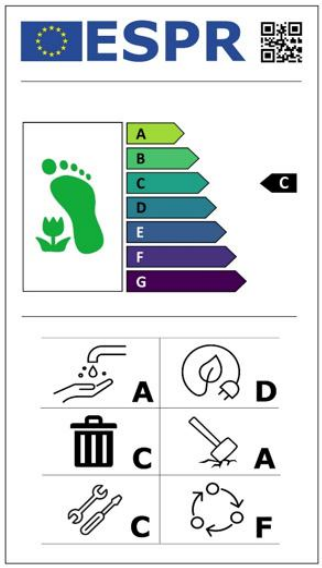
- Models A, D and ultimately F reminded participants of household appliances which show electricity usage efficiency categories.
- It's clear participants feel attracted to what is familiar to them, although participants consider the green footprint as not particularly efficient in representing sustainability.
- A combination of A and B would be more appropriate in the opinion of one participant, aspect which is reinforced by another participant who sees option E as interesting.

Overall:

For DE design F is the highest rated. In ES its design A. in RO A/D/F. All lean towards using an A-G colour scale.

Conclusions: There is a clear preference for a single A-G type scale with colour gradients: it is clear, conveys greater precision, and feels familiar, making it quick to interpret (models A, D, F). The public tends to trust previously known codes. Among the three models, model A generates the highest level of consensus.

Q12.1 Participants are asked to discuss the approach shown in this label. The moderator probes why they think what they do.



Germany:

General Assessments

Score Transparency

- It is helpful to have a breakdown of the score: You can see how sub-areas (e.g., water, stability, waste, repairability, resources, reusability) are assessed.
- The importance of further information, e.g., via a QR code: You can see how the symbols and ratings are generated.
- Uncertainty about how individual symbols (e.g., F) are to be interpreted and requires clarification.

Aim of the Approach

- The approach is intended to enable detailed conclusions about individual sustainability aspects.
- It provides orientation, especially for those who have not previously dealt with the topic.

Potential Weaknesses

- Without an explanatory key or QR code, some symbols remain unclear to some users.
- Requires active review or prior knowledge to fully understand the significance.

Detailed breakdown is generally appreciated.

Transparency and explainability are crucial to correctly interpret the scores.

Spain:

The label is interpreted as a familiar system, similar to energy efficiency labels, which in this case aggregate sustainability into an A-G scale. Participants appreciate that it reuses already known codes and makes reading easier through both colour and letter.

Romania:

Overall: The label is interpreted as a familiar system, similar to energy efficiency labels, which in this case aggregate sustainability into an A-G scale. Participants appreciate that it reuses already known codes and makes reading easier through both colour and letter. However, the DE respondents seemed to think the top scale was an aggregate of the ones below

Conclusion: water use, repairability, electricity consumption, durability icons are rather well understood. The other two less so.

Q12.2 Ask them what they think the icon to the left of the A-G scale means?

Germany:

- Participants interpret the symbol as an ecological footprint.
- The combination of flower and footprint indicates environmental or sustainability aspects.
- The symbol is understood as a reference to ecological/environmental criteria.

Spain:

- The icon is identified as representing the product's environmental footprint (or "carbon footprint"). From the beginning of the group discussions, this association has emerged spontaneously in participants' comments.

Romania:

- The green footprint determines most participants to think of eco-friendly products rather than specifically sustainable ones.

Overall: the icon is identified as representing the product's environmental footprint (or "carbon footprint" in a case).

Conclusions: the environmental footprint concept is conveyed but there is ambiguity about what specifically it is communicating

Q12.3 Ask them what they think each of the other icons mean.

Germany:

- Top left (faucet) = Water consumption, water consumption in product manufacturing
    - → Clearly recognizable as water consumption, relatively unproblematic.
- Middle left (trash can) = Recycling, contains pollutants, amount of waste produced
    - → Interpretations vary greatly depending on age and education group.
- Bottom left (tool) = Repairability, how easy it is to repair
    - → Understandable for younger participants, less explicit for others.
- Top right (leaf with plug) = Energy, electricity consumption, energy efficiency, sustainable/renewable energy
    - → Interpretations vary depending on the level of detail; younger and older participants see energy efficiency, while higher education also considers renewable energy.
- Middle right (hammer) = Durability, one participant associates destruction
    - → Consistent interpretation, easy to understand.
- Bottom right (cycle) = Compatible with other devices (smart home), environmental cycle (environmentally conscious), circular economy
    - → Older and more highly educated participants recognize the concept of sustainability, less technology-related.

Spain:

- They refer to “recycling and waste”, “durability”, “energy efficiency”, and “water consumption”. In general, participants easily associate the icons with the 16 items reviewed in previous sections.

Romania:

- Participants recognise the water use and efficiency, resource use and efficiency, durability, repairability and reusability icons.
- Recycling is also mentioned, confusion most likely made - based on the previous discussion with the honeycomb of icons - based on the last icon provided in the example.

Overall: Participants recognise the water use and efficiency, resource use and efficiency, durability, repairability and reusability icons. Participants recognise the water use and efficiency, resource use and efficiency, durability, repairability and reusability icons.

Recycling is also mentioned.

Conclusion: Water use, repairability, electricity consumption, durability icons are rather well understood. The other 2 less so.

Q12.4 What do they think the letters next to these icons mean?

Germany:

General assessments

- All participants interpret the letters as a ranking, with A representing the best class and G the worst class.
- Derivation is partly done visually using colours.
- Colours help to intuitively understand the ranking.
- Group agreement shows that colour choice is important as a supporting orientation.

Spain:

- They interpret each icon as corresponding to one of the previously discussed parameters, with the letter indicating the degree or performance class within that parameter.

Romania:

- The letter, most likely given participants' experience with their household appliances consider the letters to present a ranking in efficiency regarding each of the characteristics presented.

Conclusion: The letter ranking scale is well understood.

Q12.5 If they say a ranking of how well the product performs against the parameter shown in the icon – ask them what do they think the best possible class (rank) might be and also what they think the worst possible class might be.

Germany:

- See 12.4

Spain:

- Being familiar with energy efficiency labels, they associate the best class with the letter A and the worst with G.

Romania:

- A is considered to be, by most participants to be the best class of product. One participant considers G to be the most efficient.

Conclusion: The letter ranking scale is well understood - most assume A is best and G worst

Q12.6 Ask them whether they think this approach or the single aggregated scale approach in Q11 would be best and to explain why.

Germany:

Preference for the segmented approach (detailed symbols / Q12)

- • Segmented presentation is better because it allows for a more detailed understanding of individual aspects (e.g., durability, repairability, water consumption) and a differentiated evaluation of the product.
- • Structure and clarity; the segmentation makes the label easier to understand.

Justification for preference

- Detailed approach: Enables differentiated evaluation of individual parameters; supports informed decisions.
- Aggregated approach (Q11): Less detailed; may appear simpler at first glance, but provides less specific information.
- In general, the clarity and familiarity of the symbols are crucial, even within the detailed approach.

Differentiation and structure are crucial for comprehensibility and information value.

Symbol design plays a role: Familiar, self-explanatory symbols facilitate use; unfamiliar symbols can cause comprehension problems.

The aggregated scale appears simpler but provides less differentiated information and is therefore less preferred.

All subgroups generally prefer the detailed approach (Q12) to a single aggregated scale (Q11).

Spain:

- They prefer this approach using icons and a colour scale over a single aggregated scale, as it is clearer, more familiar, and offers double coding (letter and colour), as well as more levels of interpretation. However, there is a perceived need for guidance to ensure that all users understand each icon and letter in the same way.

Romania:

- This type of scale is perceived as presenting more information regarding particular qualifiers/aspects/characteristics, which can be interpreted, based on previous answers of participants to previous questions as offering a more complete perspective over the product's actual sustainability.

Conclusion: Participants prefer this approach using icons and a colour scale over a single aggregated scale, as it is clearer, more familiar, and offers double coding (letter and colour), as well as more levels of interpretation. However, there is a perceived need for guidance to ensure that all users understand each icon and letter in the same way.

Q14 Again considering the 16 product sustainability aspects (shown below with text in the local language:



Q14.1 What do you think of the idea of grouping them as follows and then communicating product characteristics on a label for each of the three grouped themes? Ask them to answer whether they think this is a Good or Bad idea.

Germany:

- Good idea: 8
- Bad idea: 0

Spain:

- Good idea: 8
- Bad idea: 0

Romania:

- Good idea: 8
- Bad idea: 0

Conclusion: there is universal agreement this is a good idea.

Q14.2 Then facilitate a discussion about why they answered as they did.

Germany:

Simplification and Clarity

- Grouping makes things easier to understand, reducing the time spent recognizing connections.
- Practical Simplification

Colour Coding for Orientation

- Different colours allow you to identify groups individually; previously, everything was uniform and difficult to understand.
- Colour navigation structures the label, making it practically summarized and very clear.

Summary of Benefits

- Colour grouping supports quick orientation.
- Division into topic groups reduces cognitive load when comprehending complex product information.
- Time savings in understanding product information are emphasized.

Spain:

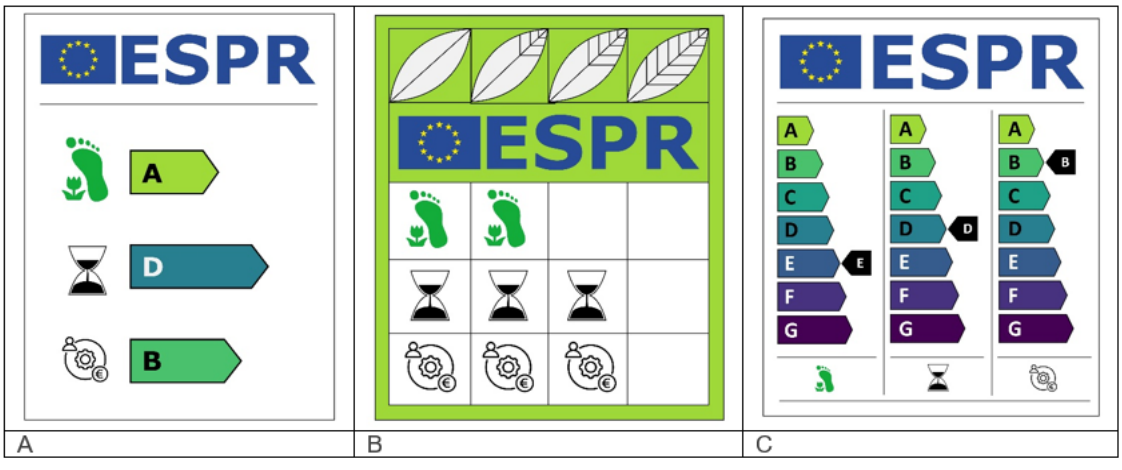
- Everyone agrees that using colours and grouping information is a good idea, as it makes the labels more visual, clear, and easy to understand. In fact, this was a spontaneous request that emerged earlier when all the labels were presented in the same colour.
- Some participants mentioned that they are already used to identifying certain things by colour (for example, in recycling), which makes them easier to remember.

Romania:

- The way the categories are presented in this question seems to satisfy everyone.
- Presenting all participants with the information offered before by one of the participants according to whom <resource use and efficiency> was in the same category as <water use and efficiency > and <energy use and efficiency>, none of them found the fact that these are presented separately when asked about this inconsistency.
- Participants also agree to the labels for the categories presented above the honeycomb of factors.

Conclusion: Participants liked the simplification and the colour code groupings. However, it is less clear why they thought the proposed groupings by impact area made sense or not - it is possible the intent of the question was slightly misunderstood

Q15a. Imagining that there were a label using three icons with performance scales to communicate the above groupings what do you think about each of these designs?



Germany:

General Assessments

1. Preference for the single scale

- The single scale is clearer, even though the three-part scale (e.g., slide 8) is visually appealing. Criticisms of B (looks like a time card) and C (difficult to read in small formats).
- The single scale is more understandable and appealing; hourglass and other symbols are confusing when shopping quickly.
- The three-part design is acceptable, but the single scale is easier to understand because you don't have to interpret all the symbols at once.

2. Evaluation of the three-part designs (A, B, C)

- A: Preferred by three participants because it is less cluttered and easier to understand.
- B: Criticized, looks like a "time card."
- C: Known from energy efficiency scales, familiar, but can be confusing in small formats.

3. Problems with symbol interpretation

- Hourglass: One participant associates it with preparation time, while another has to first consider what it means.
- Footprint, gear, leaves: Require additional consideration; some symbols are not intuitive.
- Greater detail (multiple symbols next to each other) makes quick understanding more difficult.

4. Participants' conclusion

- A single scale/simpler representation is generally preferred because it is quicker to grasp, clearer, and easier to understand.
- A three-part scale can work, but with multiple symbols it is too complex for quick shopping.
- Symbols must be self-explanatory or familiar to ensure quick orientation during shopping.

Spain:

Romania:

- Presented with the three examples, participants gather around variant C as it is perceived as more suggestive, complex in information.
- The hourglass is perceived to represent resource use or durability as well as usability for the product.
- Having three parameters shows a better picture of the product in the opinion of all participants

Overall, there is a preference for design C or A but not B. Participants consider three scales the maximum reasonable number, one per group of criteria. More than that would overly saturate the label.3. There are some difficulties in interpreting the meaning of the symbols (icons):

Q15a.1 For Label A) ask them what they think the best score could be for a given impact parameter and what they think the worst could be.

Germany:

- A is interpreted as the best rating and D as the worst rating.
- Agreement from the group indicates agreement on this ranking.
- No dissenting opinions were expressed.

Spain:

- When presented in this way, the group is not clear about which range is being used (whether A-G or, for example, A-Z) which creates confusion about the meaning of each letter. However, some participants believe that if more information were provided about the scale and colours were added, it could work well, as it appears visually cleaner.

Romania:

- Having all labels on the screen, Label A is perceived as being confusing, given the parameters it measures. While for the lifetime of the product, participants consider, the longer line to be better, for the product's environmental footprint, the shorter the line is, the better the product is perceived to be.

Overall: When presented in this way, the group is not clear about which range is being used (whether A-G or, for example, A-Z) which creates confusion about the meaning of each letter. In the DE FG all thought A is interpreted as the best rating and D as the worst rating. In RO Label A is perceived as being confusing, given the parameters it measures. While for the lifetime of the product, participants consider, the longer line to be better, for the product's environmental footprint, the shorter the line is, the better the product is perceived to be.

Q15a.2 For Label B) ask them:

- whether they think having more Environmental Footprint icons means a product that is better for the environment or worse
- whether they think having more Hour glass icons means a product that lasts longer or less
- whether they think having more Operating Cost icons means a product that is more expensive to operate or less
- What do they think the best score could be for a given impact parameter and what they think the worst could be.

Germany:

Spain:

In label B, participants understand that:

- More footprints mean worse for the environment.
- More clocks indicate greater durability or lifespan (though not everyone is certain).
- More cost icons mean higher operating costs.

However, most agree that the design is not intuitive and generates doubts about the meaning of each icon.

Romania:

- Opinions are contradictory regarding the number of footprints. Some participants consider the more there are, the better the product is for the environment, while some consider the opposite
- The more hourglasses there are, the longer the product's life is - an opinion which is shared amongst the group of participants
- The more icons for the cost of use, the higher the cost of use is perceived to be
- Participants perceive the leaves presented above ESPR as being part of the evaluation itself
- Label B is also considered to be ambiguous for the same reason as label A

Overall: Opinions are contradictory regarding the number of footprints. Some participants consider the more there are, the better the product is for the environment, while some consider the opposite.

- The more hourglasses there are, the longer the product's life is - an opinion which is shared amongst the group of participants
- The more icons for the cost of use, the higher the cost of use is perceived to be.
- Participants perceive the leaves presented above ESPR as being part of the evaluation itself.
- Label B is also considered to be ambiguous for the same reason as label A.

Q15a.3 For Label C) ask them how many A-G scales do they think would be the maximum that should be used on a product label and probe why.

Germany:

General Assessments

Maximum Number of Scales

- 3 scales as a maximum to maintain clarity.
- Up to 5–6 scales are possible if the categories are well-explained; longer scales are useful for more differentiated assessments.
- At least 5 scales, supported by experience with online rating systems (e.g., eBay).

Reasons

- Clarity: Fewer scales (e.g., 3) are easier to understand and reduce cognitive load.
- Differentiation: More scales (5–6) allow for a more detailed assessment of individual aspects, useful if visually well-structured.
- Experience with familiar systems: Colour coding and the number of scales are based on familiar rating systems (stars, colours) for intuitive comprehension.

Spain:

- Even though it may be risky, participants consider three scales the maximum reasonable number, one per group of criteria. More than that would overly saturate the label.

Romania:

- Participants consider 3 characteristics to be sufficient in regards to the number of indicators for a product. One participant considers one to be enough as well - most likely given the parameters evaluated in this example. Only one, though is perceived to be too little though by another participant.
- Label C is perceived to be much clearer compared to the other 2 with a smaller chance of creating confusion.

Overall, participants consider three scales the maximum reasonable number, one per group of criteria. More than that would overly saturate the label.

Q15a.4 For Label C) ask them if this reminds them of any other labels they know – if yes, ask them do they think having this label but on different product types might confuse people about what both labels are about.

Germany:

General Assessments

Familiar Labels

- Similar to light bulb labels, but not completely identical.
- Parallels to washing machine, refrigerator, and dishwasher labels.

Potential Confusion

- Implicitly, it becomes clear that familiar label associations can influence different product categories, which could lead consumers to assume that the evaluation criteria are identical.
- No explicit statement regarding confusion, but the mention of familiar labels suggests associations and potential interpretation transfer.

Spain:

- As mentioned earlier, this design clearly reminds them of the energy efficiency label, both in terms of colours and the A-G format. This association emerged spontaneously in the discussion.
- Some participants think it could cause confusion, although most believe there would be no issue if applied to other categories or with different colours.

Romania:

- Participants have already mentioned the scales presented on energy efficiency of household appliances.

Overall, all participants recognise the resemblance to the energy label. Most seem to think this wouldn't be confusing but some think it might be.

Q15b.1 Which of these designs do you prefer? Ask them to explain their preferences – i.e. why they prefer it compared to the other options. Ask them whether they prefer any of these designs to their preferred option in Q15a and if so why?

Germany:

General assessments

All participants prefer Design C.

Reasons:

- Clarity.
- Colour gradation: Green = good, red = bad, allows for immediate identification.
- Structure/sorting: Column arrangement makes the layout more organized.
- Familiarity/recognizability: Similar to energy efficiency labels for household appliances.
- Clarity of values: Straight lines and colour representation help easily identify poor values.

Comparison with Q15a (Single scale / Label A)

- It is implicitly clear that Design C complements or replaces the single scale because it is both clear and familiar.
- Advantage over other designs (A, B): Easier to understand, clear colour coding, familiar layout for quick orientation.

Spain:

- Unanimously, participants prefer label C, as it is the most visual, clear, and familiar. They like both the use of colour and the A-G scale.
- They suggest minor improvements: adjusting the colours to make them more intuitive, while maintaining a green-to-red progression.

Romania:

Overall: All participants prefer Design C. Reasons offered include:

- Clarity.
- Colour gradation: Green = good, red = bad, allows for immediate identification.
- Structure/sorting: Column arrangement makes the layout more organized.
- Familiarity/recognizability: Similar to energy efficiency labels for household appliances.
- Clarity of values: Straight lines and colour representation help easily identify poor values.
- Advantage over other designs (A, B): Easier to understand, clear colour coding, familiar layout for quick orientation.

Q15b.2 Ask them if they are familiar with the energy label? If they are, ask them if they think there is any risk or confusing the two labelling schemes if any of the options above were used (noting that the ESPR label will not be on the same product types as the energy label).

Germany:

- All age and education groups recognize parallels to familiar labels.
- Potential confusion can arise if consumers assume that the same symbols for different product categories represent identical ratings.

Spain:

- All participants are familiar with the energy efficiency label. Although, as mentioned, they acknowledge there may be some initial confusion, they believe that with proper guidance and differentiated use by product type, this could be avoided.

Romania:

- Participants present opposing views regarding the possibility of confusion between the energy efficiency label and the proposed sustainability ones presented. Options for presenting the sustainability label are offered, especially given the one participant with a different view on the scales, like for example, switching the colours between them to tie longer arrows to a greener colour in order to show the level of sustainability.
- Dropping colours altogether and thus going for the length of the arrow was also presented as a possibility as well as dropping the scale altogether and presenting the level in the form of a battery (for example) which is full to a certain degree in terms of the characteristic presented.

Overall: all participants are familiar with the energy efficiency label. Although, as mentioned, they acknowledge there may be some initial confusion, they believe that with proper guidance and differentiated use by product type, this could be avoided.

Q16.1: Pease look at the following image. What do you think it is intended to convey?



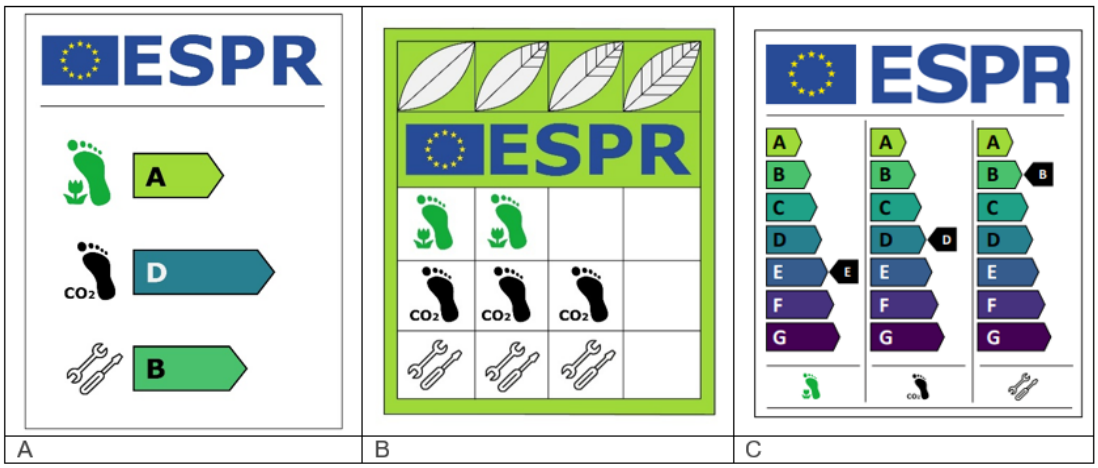
This was only addressed in the Romanian focus group due to lack of time in the other groups. The findings were: Most participants perceive an eco-friendly vibe regarding the label. Sustainability doesn't come forth based on their reactions and answers.

Q17.1: Pease look at the following image. What do you think it is intended to convey?



This was only addressed in the RO focus group due to lack of time in the other groups. The findings were: The label is perceived to represent something negative, as opposed to the previous one based on participants' reactions.

Q18 Imagining that there were a label using the following thee icons:



A B C

Q18.1 What do you think about each of these designs?

This was only addressed in the RO focus group due to lack of time in the other groups. The findings were: The fact that the icons changed doesn't come up in their reactions to these designs e.g. "I think I would go with option C again".

Q18.2 How well do these triple scale designs perform compared to the previous approach (used in Q15a).

This was only addressed in the Romanian focus group due to lack of time in the other groups. The findings were: participants express the same reaction to these designs compared to the previous approach.

Q19



Q19.1 Show the image above and point to the QR code. Ask them what they think it is.

Germany:

General Assessments

Purpose of the QR Code

- The QR code provides background information, explains the structure of the labels and details.
- Could lead to the company's website; unclear what ESPR means.
- Access to explanations of why the product was rated on the scale.
- Detailed breakdown of symbols, information about the rating institute, ideally independent.
- More manufacturer-related, leads to the company's website, and provides information about the product.

General Perception

- The QR code is seen as a source of information that either explains product ratings, clarifies the logic of the scale, or leads to the manufacturer.
- Uncertainty about the exact source or neutrality of the information is suggested (independent institute)."

Spain:

- The group correctly identifies the QR code.

Romania:

- Participants recognise the QR code as is.

Overall: all participants recognise that its is a QR code.

Q19.2 If any of them suggest that it is a QR code that people can access with a QR reader on their smart phone ask participants why they think an image like that might be on a label?

Germany:

- Was not explicitly mentioned

Spain:

- The group views the QR code as a useful and modern tool that serves to expand information and promote transparency.
- In this sense, some interpret it as a symbol of reliability and trust. Others also point out barriers to digital access, particularly among those who are not accustomed to using it regularly.

Romania:

- The QR code is presumed to be used to offer more information regarding the aspects discussed during the focus-group by all of those present.

Overall: Many imagine accessing it will show more details of the product. Some think it will provide explanations of the label more generally

Q19.3 If any of them suggest that it could be to provide more information about the label and the product ask them how likely do they think it is that they would try to access the QR code using the QR reader on their smart phone?

Germany: - not probed.

Spain:

- Although they recognise the usefulness of the QR code, most participants say they would not use it actively, either due to technical limitations with their phones, low technological familiarity, or a preference for traditional formats such as paper.
- Others indicate that their use would depend on their interest in the specific product.

Romania:

- Some participants manifest curiosity regarding the information that would be provided via the QR code, one does not.
- It is considered a useful for people who'd like more information regarding the sustainability of the products they buy, but, one participant considers it useful for non day to day purchases.

Overall: It is considered a useful for people who'd like more information regarding the sustainability of the products they buy, but, one participant considers it useful for non day to day purchases. Although they recognise the usefulness of the QR code, most participants say they would not use it actively, either due to technical limitations with their phones, low technological familiarity, or a preference for traditional formats such as paper.

Q20. Imagine a product label had one of these designs on it. Ask the participants to speculate on what the designs mean and to explain why they think what they do.



Germany:

General Assessments

Interpretation of the QR Code / Information Symbol

- The QR code indicates further information.
- The "I" symbol indicates information, while the "Plus" symbol indicates more details if needed.
- The "+" symbol is reminiscent of the positive pole symbol on batteries, interpreted as additional information.

Common Assumption

- All groups recognize the "I" / "Plus" / "Hand" symbol as a reference to further information.
- The QR code is viewed as a technical implementation for providing this information.

Spain:

Romania:

Most participants are lead to believe that the designs would offer more information. The ones containing <i>s are thought to be more obvious in the sense of offering information and participants agree that option E is one of the best, followed by D and B designs

Overall: Participants understand that the designs are prompts to offer more information. The ones containing <i>s are thought to be more obvious and the hand pointing reinforces this. Option E is one of the best, followed by the D and B designs

Q21. If an ESPR product label had one of these images on it (showing the images in Q20), how likely do you think it is that you might try to access the QR code with your smart phone QR reader?

Germany:

- Design E is rated by the majority as most likely to motivate QR code scanning; motivating through clear interaction

Spain:

- Although improving the visual design of the icons increases symbolic willingness to access the QR code, it does not appear to change the actual behaviour of those who were previously reluctant to use it.

Romania:

- Participants consider the use of the QR code useful, but just in case curiosity regarding more information about the product is present.

Q21.1 Why might you do this?

Germany:

- Clear indications of interactivity and additional information motivate use.
- Design E clearly conveys that there are more details about the product or review.

Spain:

Two main themes are repeated:

- 1. Pedagogical value: icons should be clear and instructive, avoiding ambiguity.

- 2. Technological gap: some acknowledge that, while practical, certain groups may be excluded due to a lack of digital habits or resources.

Romania:

- Main answers refer to either disinterest and curiosity.

Q21.2 Do you think these designs would make it more likely that you'd try and access the QR code than if a simple QR code were shown?

Germany:

- Participants who prefer Design E believe that it is more likely to encourage scanning than a simple, unobtrusive QR code.

Spain:

- As mentioned earlier, while most participants believe that these designs help draw attention and clarify function, the real impact still depends on users' technological profiles.

Romania:

- Compared to a generic QR code, the five ones presented during the FG seem to be more suggestive and part of the participants mention the fact that they would rather access one of these instead of a simple one.

Q21.3 Which of these designs do you think would be most effective at encouraging you to access the QR code on your smartphone?

Germany:

- E is clearly cited as the most effective because it visually signals that interaction is possible and information is available.

Spain:

- Unanimously, design E (with the "i" and the pointing finger) is the preferred option among all participants. It is perceived as the most intuitive and effective for prompting action. What is most valued is its symbolic clarity and visual appeal.

Romania:

- In a short stack, option E seems to win everyone over. On the second place, opinions differ, as both the other QR codes with an <i> are mentioned (B and D), as well as option A and C, for which the <+> sign is perceived to offer a plus of information

Q21 Overall: QR codes are considered to be useful for people who'd like more information regarding the sustainability of the products they buy, but, not always for day to day purchases. Although they recognise the usefulness of the QR code, most participants say they would not use it actively, either due to technical limitations with their phones, low technological familiarity, or a preference for traditional formats such as paper. It was agreed that all the designs shown

increased the likelihood they would seek more information through the QR code compared to a simple QR code and design E was universally preferred across the focus groups.

Annex XII: Questionnaire focus groups II

ESPR Label Research – Focus Groups Round 2: Moderators Guide 28.11.2025 Final

Prepared for the use of Ipsos by Waide Strategic Efficiency Europe Ltd. and Fraunhofer ISI Karlsruhe

In support of the European Commission project on the development of the ESPR Label.

Introduction for the moderator

This document comprises a guide for the moderator to use when conducting the focus groups on the EU ESPR (Ecodesign for Sustainable Products Regulation) labelling initiative. The ESPR label is a label that communicates sustainability information of products) (see more contextual information below).

The proposal for a new ESPR label is rooted in the European Union's ambitious agenda to achieve a circular economy and accelerate the transition toward sustainable consumption and production patterns. A cornerstone of this agenda is the Circular Economy Action Plan (CEAP), which was adopted in March 2020 as part of the European Green Deal. The CEAP outlines legislative and non-legislative initiatives aimed at transforming the entire product lifecycle—from how products are designed and manufactured to how they are used, repaired, and ultimately recycled. By targeting these stages, the CEAP promotes circularity, encourages sustainable consumption, and seeks to minimize waste.

Building on this framework, the Ecodesign for Sustainable Products Regulation (ESPR, EU 2024/1781), adopted on June 13, 2024, and effective from July 18, 2024, provides a comprehensive policy instrument to address sustainability across nearly all categories of physical goods placed on the EU market. The ESPR marks a significant evolution from the Ecodesign Directive (2009/125/EC), which was limited to energy-related products, by expanding its scope to include a much broader range of goods. For cases where the energy label, governed by Regulation (EU) 2017/1369, does not adequately cover a product's performance in relation to sustainability, the ESPR plans to introduce an ESPR-specific label. This label will aim to provide a clear and accessible tool to communicate sustainability information directly to consumers, thus ensuring that consumers are well-informed and equipped to make sustainable purchasing decisions.

More detailed information can be found via this link: https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/ecodesign-sustainable-products-regulation_en.

Visual materials are compiled into a PowerPoint presentation and displayed to participants via screen sharing. *It is foreseen that each focus group will last for 90 minutes and therefore the intention is that the focus groups conducted using these materials should fit into that time span*

1. Discussion guide

1.1. Initial warm-up (5 MIN)

- *Welcome the group and thank them for their participation.*
- *Explain that during the course of the Focus Group they will be shown various material and asked questions about it – they will be invited to comment on the material and discuss it.*
- *Most of the focus group will be questions that invite an open discussion and all participants will be asked to share their views and perspectives.*
- *In a few cases questions will invite participants to type an answer (these are all questions about preferences where people are invited to enter their order of preference).*
- *The purpose of the research is to understand how they think and feel about the topics and stimuli they will be shown. Explain that this is not a test of their knowledge, and there* ***are no right or wrong answers.***
- *Explain confidentiality (All personal data and responses will remain confidential and anonymous.)*

Short introduction round of the participants (e.g., first name, occupation).

Ask recording permission (AFTER the introduction round):

"With your permission, I would like to record the discussion. The recording will be used solely for analytical purposes. It will be shared with our research partner and the client; however, rest assured it will not be shared outside these organisations. The recordings will be deleted from our systems once the project is completed. Are you happy for me to turn the recorder on?"

Note for the moderator: People shouldn't worry about the effort involved as the answers they will be asked to enter will be very short. Also they shouldn't worry if they find some things difficult to answer as we are testing the material we will be showing them for its ease of understanding and usefulness and if they find they are unsure about something it indicates there is a problem with the material, not with them.

1.2. Label meaning and product sustainability questions (10 MIN)

Q1.1 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?

[Share slide to show the images below]



A



B



C



D



E

<u>Show each label in turn</u> (A to E) - probe what they think each of the icons signify and record the responses for each label separately.

[Summarise results of discussion in analysis template]

<u>Show all the labels simultaneously</u> and ask:

Q1.2 Who do you think would have issued theses labels?

Probe why they respond as they do and record the reasons offered.

[Summarise results of discussion in analysis template]

Q1.3 How likely would you be to trust any information given (lower down) on such a label?

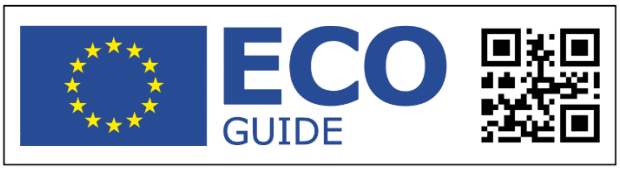
Probe why they respond as they do and record the reasons offered.

[Summarise results of discussion in analysis template]

Q2.1 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?

<u>Show each of the label designs with the various label titles and for each in turn ask the question above.</u>

[Share slide to show the images below]



A



B



C



D



E



F

[Summarise results of discussion in analysis template]

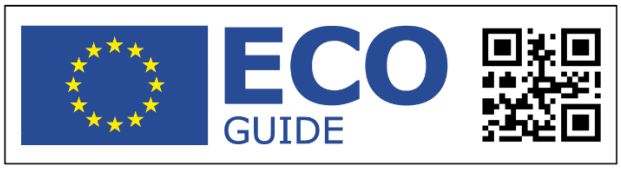
Show all the label designs above simultaneously (in the green text and blue text versions) and ask the question below.

Q2.2 Which do you prefer? The labels with Green text or those with the Blue text?

[Share slide to show the images below]



A1



A2



B1



B2



C1



C2



D1



D2



E1



E2



F1



F2

Probe why they respond as they do and record the reasons offered.

[Record the results and summarise the discussion in analysis template]

Q2.3 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?



A



B



C

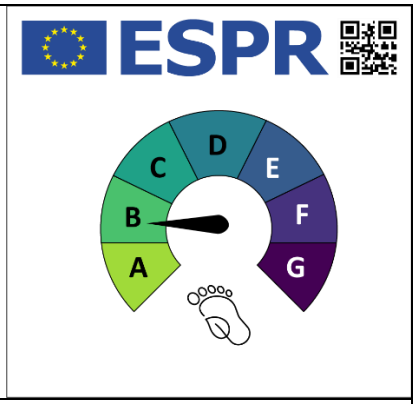
[Summarise results of discussion in analysis template]

1.3. Unprimed testing of potential ESPR labels for products (50 MIN)

In this section the participants will be shown various ESPR label design concepts and asked what they think they're about and which they think is most effective. ***They will <u>not</u> be told that the labels are about product sustainability beforehand.***

Q3. What do you think about each of these designs?

[Share slide to show the images below]

A	B	C
		

Show the set of single scale designs and ask them

a) what they think the label might be about,

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

[Record numerically the responses against each parameter and summarise the results of the discussion in the analysis template]

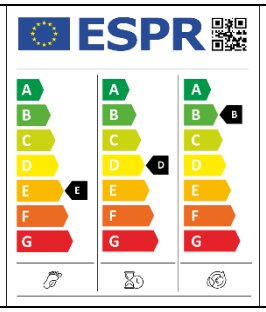
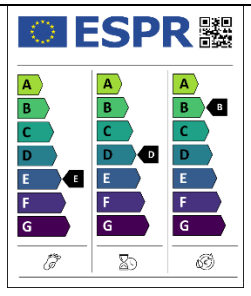
Ask them to select a preferred design (as a group) from A, B or C.

Add a copy of the preferred design into the slide template for Q8.

[Record numerically the result by design option]

Q4. What do you think about each of these designs?

[Show the images below side by side]

A	B
	

Q4.1 Show the set of triple scale designs above and ask participants:

a) what they think the label might be about?

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

[Record numerically the responses against each parameter and summarise the results of the discussion in the analysis template]

Q4.2 Ask them what they think each of the icons beneath the scales might be about?

[Summarise results of discussion in analysis template]

Ask them to select a preferred design (as a group) from A or B.

Add a copy of the preferred design into the slide template for Q8.

[Record the numerical results by design option including the winner]

Q5. What do you think about each of these designs?

[Share slide to show the images below]

A	B
	

Q5.1 Show the set of designs and ask them

a) what they think the label might be about,

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale(s)
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

[Record numerically the responses by design option and summarise the results of discussion in the analysis template]

Q5.2 Ask them what they think the icons to the left of the scales in label A mean? – Also probe what they think each top (main) scale is about on label designs A and B.

[Summarise results of discussion in analysis template]

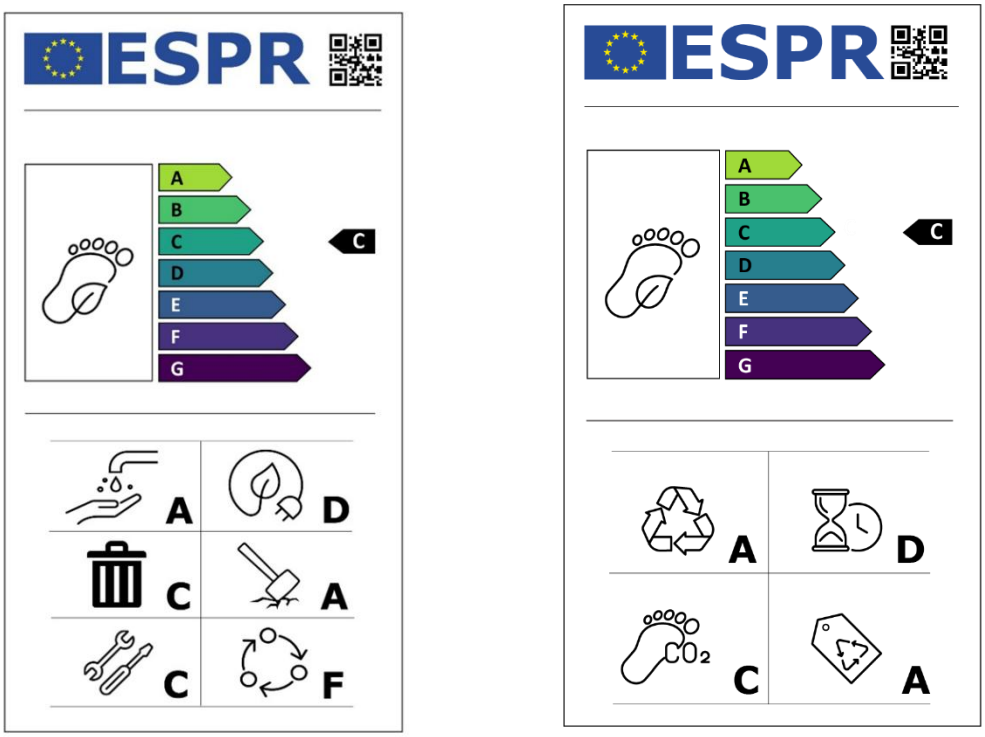
Ask them to select a preferred design (as a group) from A or B.

Add a copy of the preferred design into the slide template for Q8.

[Record the result including the numerical vote]

Q6. What do you think about each of these designs?

[Share slide to show the image below]



A B

Q6.1 Ask participants to discuss the approach shown in each label and probe why they think what they do.

Q6.2 Ask them what they think the icons to the left of the A-G scale means?

Q6.3 Ask them what they think each of the other icons mean.

Q6.4 What do they think the letters next to these icons mean?

Q6.5 If they say a ranking of how well the product performs against the parameter shown in the icon – ask them what do they think the best possible class (rank) might be and also what they think the worst possible class might be.

Q6.6 Ask them whether they think the approach in these labels or the single aggregated scale approach in Q3 case A would be best and to explain why.

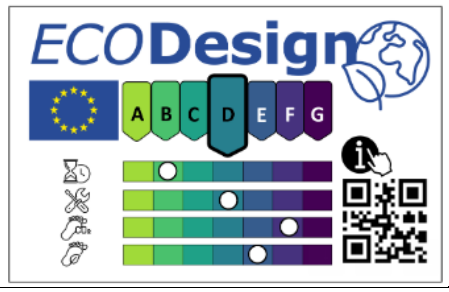
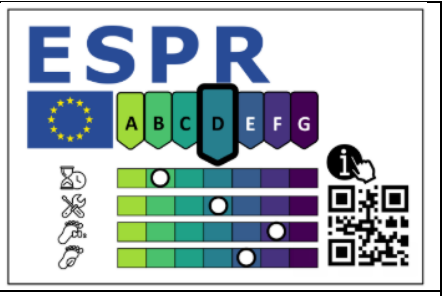
Q6.7 Ask them which of the two designs they think (as a group) is best and to explain why.

[Record the result for Q6.7 (including the numerical vote) and summarise the discussion for all of the above (previous points Q6.1 to Q6.6/6.7 in the analysis template]

Ensure that this design is included in the slide template for Q8.

Q7. What do you think about each of these designs?

[Share slide to show the images below]

	
A	B

Show each design and ask them

a) what they think the label might be about,

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design they selected is best for each of these aspects.

Ask them to select a preferred design (as a group) from A or B.

Add a copy of the preferred design into the slide template for Q8.

[Record numerically the responses against each parameter and summarise the results of the discussion in the analysis template]

Q8. Looking again at the designs you thought were best for each of Q3, Q4, Q5, Q6, Q7 Which do you think are best now and why?

[Share the slides with the preferred images from Q3, Q4, Q5, Q6, Q7]

Best from Q3	Best from Q4	Best from Q5
Best from Q6	Best from Q7	

Show each design and ask them to comment on each and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

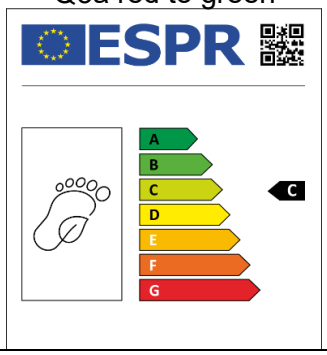
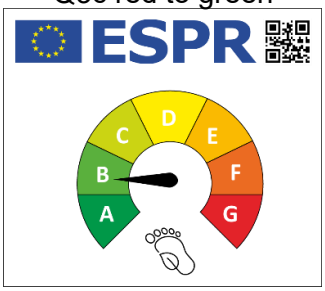
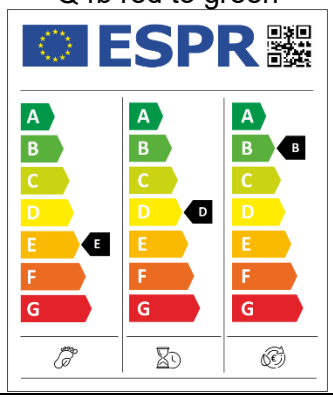
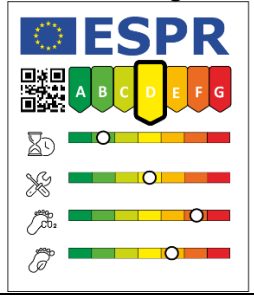
Ask them to explain why they think the design(s) they selected is/are best for each of these.

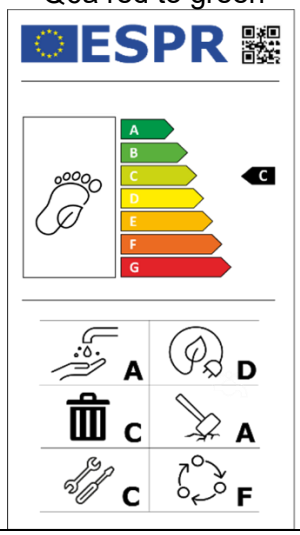
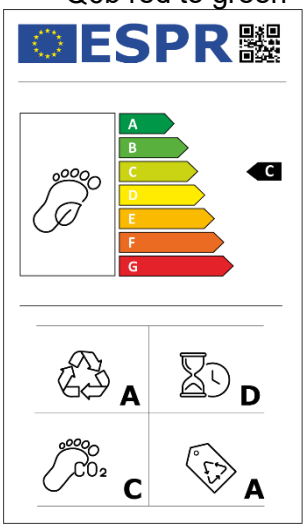
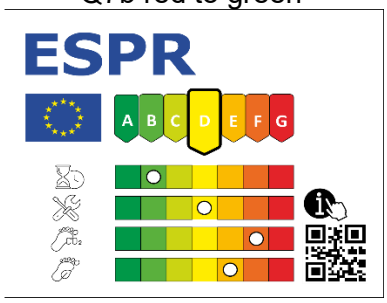
[Record numerically the responses against each parameter and summarise the results of the discussion in the analysis template]

Ask them to decide <u>as a group which is their preferred design from the above set</u> and explain why.

[Record the results and summarise the discussion in the analysis template]

<u>Taking the preferred design from the above list</u> – show a version of the same label with the Green to Red scale and a version with the Green to Purple scale and ask:

<table>
<tr><td>Q3a red to green
</td><td>Q3b red to green
</td><td>Q3c red to green
</td></tr>
<tr><td>Q4b red to green
</td><td></td><td></td></tr>
<tr><td>Q5a red to green
</td><td>Q5b red to green
</td><td></td></tr>
</table>

Q6a red to green 	Q6b red to green 	
Q7a red to green 	Q7b red to green 	

Q9 – Which of these designs do you prefer and why?

Record the answers in the analysis template and probe why they prefer the design they do.

[Record numerically the results and summarise results of discussion in the analysis template]

Then ask:

Q10 – Do the scales on these label designs remind you of another label?

[Record the results and summarise results of discussion in the analysis template]

Q11 – If you were to see a product with one of these labels on it do you think it might be confused with an energy label?

[Use the slide with the same designs shown in Q8]

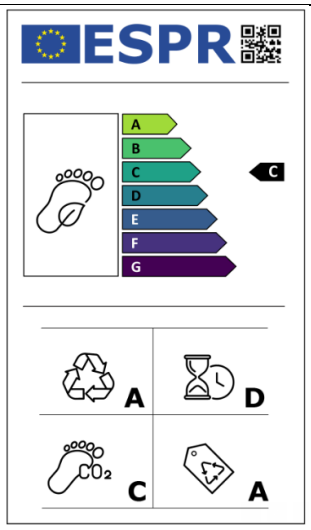
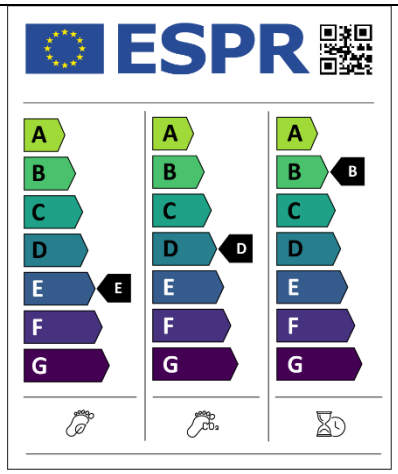
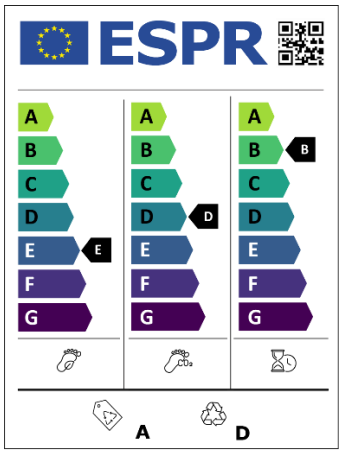
Show each design and ask them to what extent they think the design might be confused with the energy label and how that would vary if the label were shown on a non-energy related product and on an energy related product.

[Record numerically and summarise results of discussion in analysis template]

1.4. Checking efficacy of designs as applied/adapted to the target product groups, e.g. clothing & detergents (10 min)

Q12a Imagine you saw these labels <u>on items of clothing</u> what do you think of each of these designs?

[Share slide to show the images below]

	
A	B
	
C	D
	
E	

<u>Show each design</u> and ask them a) what they think the label is about, b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about

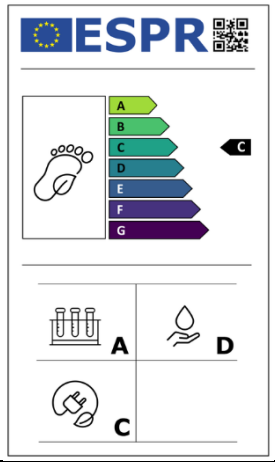
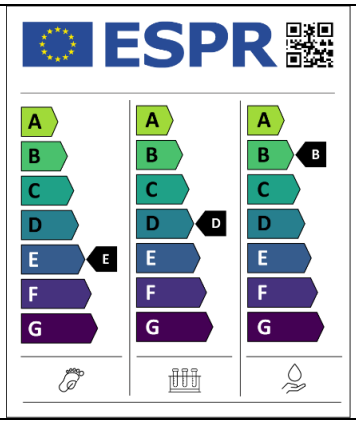
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

[Summarise results of discussion in analysis template]

Q12b Imagine you saw these labels <u>on a Detergent package</u> what do you think of each of these designs?

[Share slide to show the images below]

<table>
<tr><td>
</td><td>
</td></tr>
<tr><td>A</td><td>B</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td>C</td><td>D</td></tr>
</table>

<u>Show each design</u> and ask them a) what they think the label is about, b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

[Summarise results of discussion in analysis template]

1.5. Language, additional information and QR codes (15 MIN)

Q13 a) When you look at your preferred design from Q8…

Show the preferred design from Q8 (share the relevant slide)

i) What is it lacking?

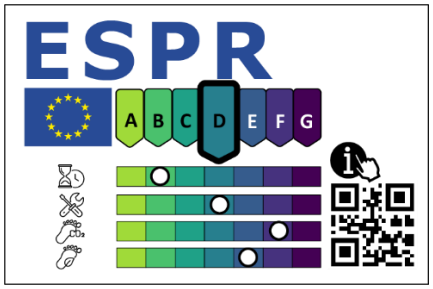
ii) How sure are you that you know what it is about?

iii) What more information would you want?

iv) How do you think you could get that information?

[Summarise results of discussion in analysis template]

Q13 b) Imagine you were shown this label



Note, this label has an enhanced QR code and without prompting the group we're curious to see if this design increases the number of respondents that say they would try to access the QR code

i) How do you think you could get that information?

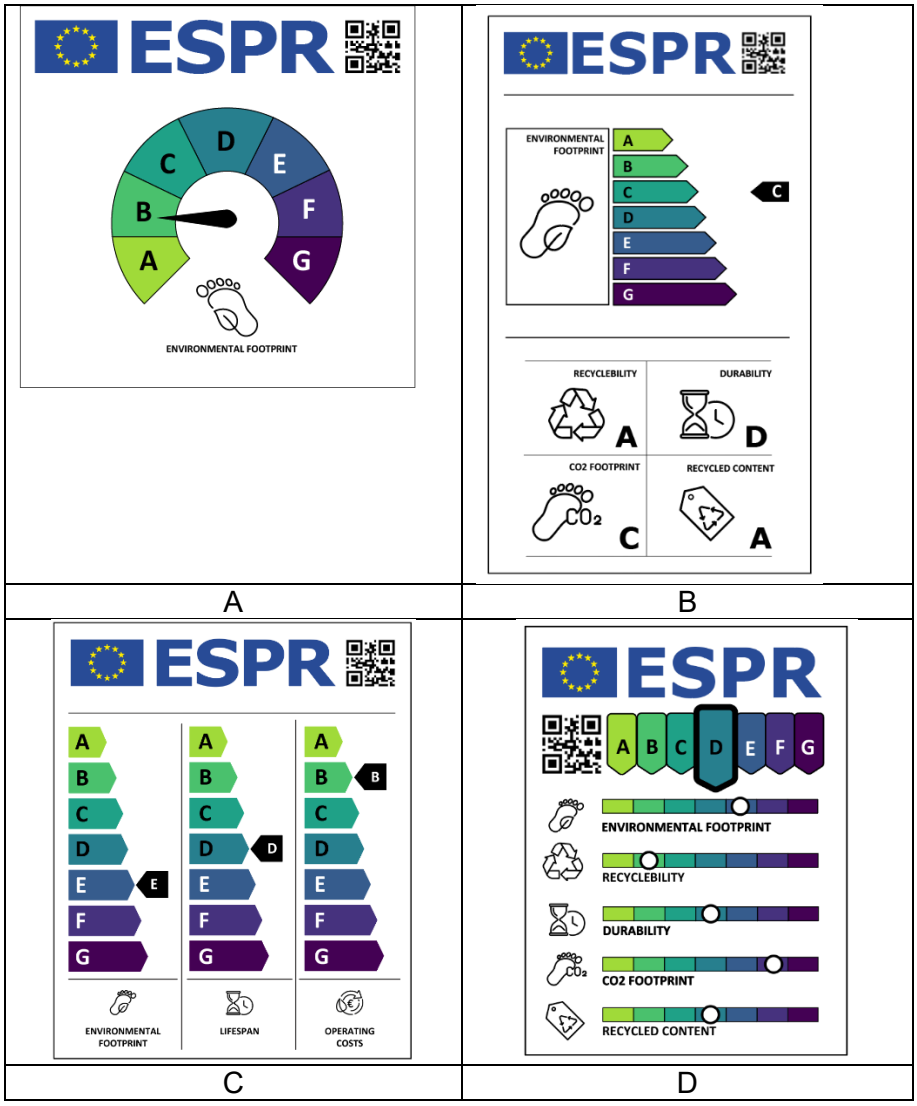
ii) How does this design compare to the previous one?

iii) What do you think is being signified differently?

[Summarise results of discussion in analysis template]

Q13 c) Please look at these designs

Show the label versions with English language text indicating the icon meanings next to each of the icons as below (share the slide):



A | B

C | D

i) Does having this text against the icons make the meaning of the labels clearer?

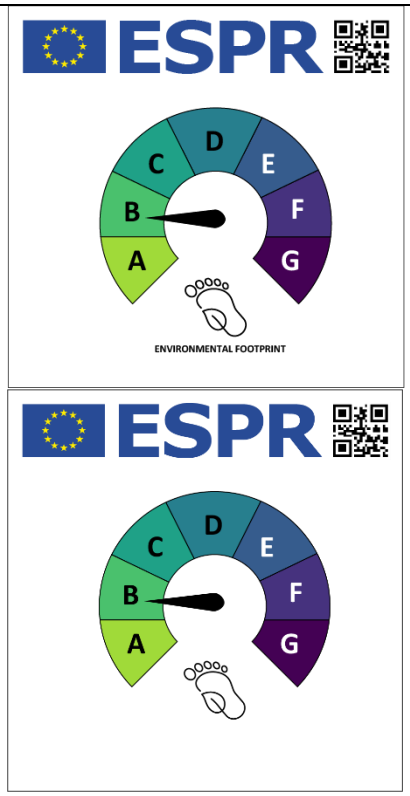
ii) What do you understand this text to mean?

iii) Would this text be sufficient for you to understand the intended meaning of the icons and the labels?

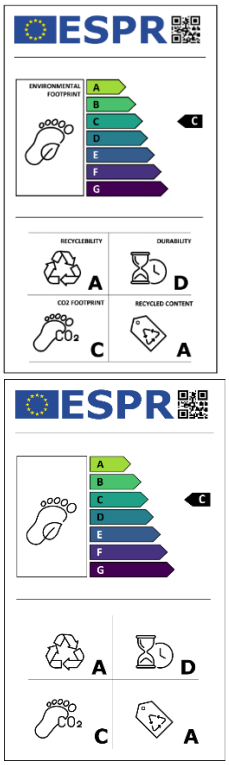
[Summarise results of discussion in analysis template]

Q13 d) If I were to tell you that the text shown in these labels means…

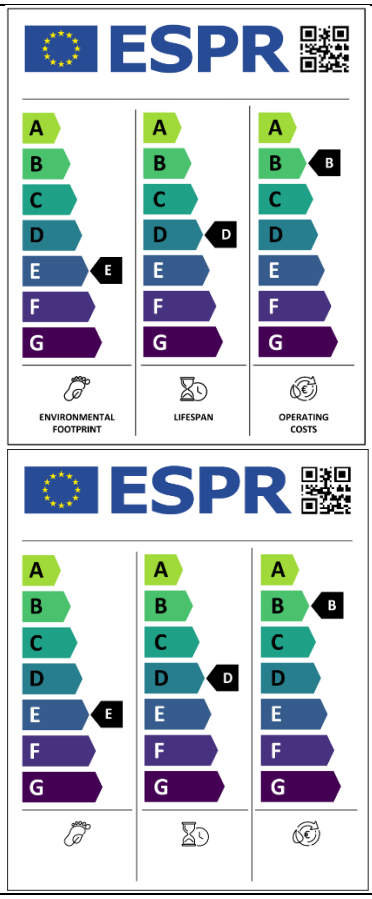
Show the label versions but with the English text translated into the local language (share the slide with the text translated – note that the participants don't need to translate this, although they can suggest improvements)

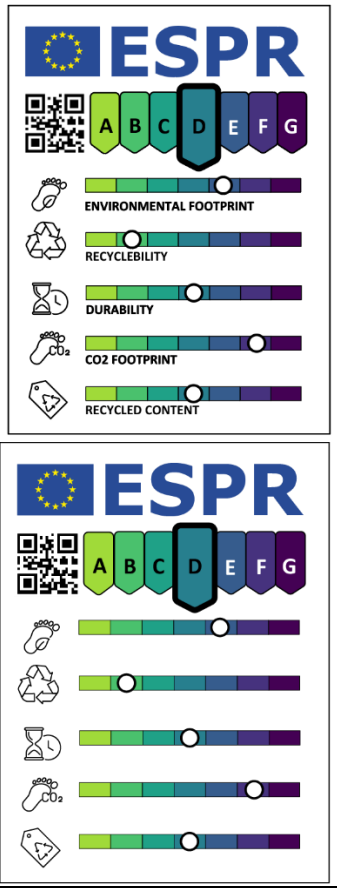


A
Environmental footprint



B
Environmental footprint
(for the top scale icon)
then: Recyclability, Durability, CO2 footprint, Recycled Content





C	D
Environmental footprint, Lifespan, Operating costs	Environmental footprint Recyclability Durability CO2 Footprint Recycled content

i) Does having this text against the icons make the label meaning clearer?

ii) Would this text be sufficient for you to understand the intended meaning of the icon and the labels?

[Summarise results of discussion in analysis template]

Q14 Which of the potential label titles in set shown below best conveys the sense of product sustainability to you?

[Share slide to show the text below]

Eco Guide	Eco Design
A	B
Eco Impact	Eco
C	D
Eco Index	Eco Label
E	F
Eco Sustain	Sustain Score
G	H
Sustain Index	Sustain Guide
I	J

Probe why they respond as they do and record the reasons offered.

[Record the results and summarise the discussion in analysis template]

Outro

Thank everyone for their participation and close the Focus Group

Annex XIII: Detailed results focus groups II

First, we present a list of icons used for testing and the corresponding feedback from the second round of focus groups.

ESPR Article 5	Para-meter name	Icons	Clothes	Deter-gents	Furniture	Coffee machine	Ear buds	Feedback focus groups II	Consumer understanding
(a)	Durability		x		(x)			Raw materials/material origin; Uncertainty about the meaning and how this is factored into the overall assessment; Interpreted as “impact on the environment - how much pollution it gives off, selective recycling; Represents ra w materials	
			x		(x)			Was interpreted as durab ility	
(b)	Reliability							Not yet tested/used	

(c)	Reusability		(x)					Recycling, circular economy, interpreted as ability to be recycled, represents the recycling loop	
			(x)						
(d)	Upgradability							Not yet tested/used	
(e)	Repairability				x	x	x	Represents the repairability or manufacturing aspects of a product; Generally understood, but not clear for all participants; Represents the level of difficulty in repairing the product but also as the impact on environment by means of manufacturing the product	
						x			
(f)	The possibility of maintenance and	 						Not yet tested/used	

	refurbish-ment								
(g)	The presence of substances of concern			x				n.a.	
				x				n.a.	
(h)	Energy use and energy efficiency				x	x		Not yet tested/used	
(i)	Water use and water efficiency			x	x	x		Water consumption during production, relatively clear, no major misunderstandings, Interpreted both as water consumption and level of pollution, or the product's compatibility with water, or having to do with a washing cycle.	
				x					

(j)	Resource use and resource efficiency				x	x		Electricity consumption, Logical, but not clear to everyone; Interpreted as durability in terms of energy consumption by one of the participants. But it's also interpreted by another participant that it can be fed with green energy; The leaf with the plug is electricity,	
(k)	Recycled content		x		(x)			n.a.	
(l)	The possibility of remanu -facturing				x	x		Not yet tested/used	
(m)	Recyclabil ity		x		x	x		Interpreted as having something to do with recyclability again	

								Aggregated overall rating / ecological score; Interpreted as recyclability of components by one of the participants	
(n)	The possibility of the recovery of materials							Not yet tested/used	
(o)	Environmental impacts, including carbon footprint and environmental footprint		x	x	x	x	x	Ecological footprint, showing the product's environmental impact; Represents CO2 emissions of the product in terms of use, but also interpreted as such in terms of manufacturing impact	
			(x)	x	x	x	x	Least clear; possible interpretations: overall score or environmental friendliness; Interpreted as the environmental impact of the product, in a general way.	

(p)	Expected generation of waste.			x				Disposal, separation of raw materials; Comments/Uncertainties: Unsure whether it refers to separated raw materials; confusion about the actual meaning; Interpreted as recyclability and leads one participant to think about H&M programs for recycling clothing; Represents how it can be disposed of	
For grouped index	Environmental footprint		x	x	x	x	x	See above	
	Lifespan		x	x	x	x	x	Primarily represents the lifespan or durability of a product.	

								Interpreted as the time required for the product to take effect but it's also interpreted as impact on environment in terms of time; Product lifespan / longevity; Linked to biodegradation or to how long the product takes to break down.	
	Operating costs		x	x	x	x	x	n.a.	

The detailed findings from the second round of focus groups are presented in order by question asked. A summary of the responses received are delivered in order of Germany (DE), Spain (ES) and Romania (RO) before a summary and conclusions drawn in relation to the question are provided. Note, that sometimes questions may be missing - this is because they were in the first draft of the moderator's guide but cut from the final one due to time constraints. Nonetheless, the questions and responses received to them are sequential and in the order they were posed during the focus groups.

1.1 Label meaning and product sustainability questions

Q1.1 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?



A



B



C



D



E

Germany:

Mentions:

5x EU

6x Environment

4x QR code/further reading

3x Regulations

2x Development aid

4x Sustainability

6x Recycling

5x Certification (due to the tick in Design E)

Key Themes and Arguments

1. Sustainability and Environmental Awareness:

• Designs could indicate sustainability, recycling, and an environmental connection, though what exactly that connection is is vague.

• Plant symbols indicate the environmental connection, and the cyclical symbols indicate more of a focus on recycling, sustainability.

• Participants hypothesised that the designs might indicate products that are either recyclable or made with recyclable/sustainable materials.

2. European Origin and Cooperation

• Clear reference to Europe, as the EU flag is recognized

• Participants were unsure of the meaning of "ESPR".

• One participant identified design B as specifically an ecodesign regulation; a strong connection was drawn to EU regulations.

3. Technicality and certification

• The tick in design E in particular indicated to participants that the label was a symbol of certification (of recyclability or that the product was made of recycled materials).

• Gears in design B gave the impression that the design was related to production, manufacturing or something else similarly technical - this "manufacturing" angle was revisited when discussing subsequent designs.

The group participants unanimously suspect that the designs shown represent sustainability or environmental labels, but were unclear on the precise meaning beyond the environmental connection. Participants responded most positively to design D, interpreting it as a connection specifically to recycling and sustainability, where designs A, B and C were more nebulous. Participants were clear that in each case they knew there was more to read after scanning the QR code. Design E's tick in particular elicited a strong association with confirmation or certification (of something environmental), but participants were unsure what exactly.

Spain:

Design A: EU association, indicates an organic product.

Design B: Participants thought this design might indicate something mechanical. Multiple participants thought this design might indicate that the product/procedure complies with regulations and environmental policies.

Design C: Recycling and more general ecology.

Design D: Recycling, environment, something "green".

Design E: Participants agreed that this design indicated a product that complies with environmental regulations.

All designs had an association with the environment, recycling, ecology, and EU approval.

Romania:

Design A: Inspires confidence, indicates a product made in the EU with connotations of nature, recyclability, and environmental protection.

Design B: Indicates something environmentally friendly or sustainable - again an EU product. One participant linked this design to agriculture, while another found the design positive but wasn't sure what it represented.

Design C: Participants agreed across the board that this design indicated a recyclable product.

Design D: Very strong connection to nature, biodegradability, renewability. Participants agreed this label indicates a product that comes from/is based on/is friendly to nature.

Design E: Participants agreed that this design represented biodegradability or a natural product of some sort, with the tick indicating a success or confirmation of the former.

Recyclability and an environmental association were strong across all designs. Design B drew a variety of interpretations but had close associations with manufacturing in particular. All designs communicated a connection with nature.

Q1.2 Who do you think would have issued theses labels?

Probe why they respond as they do and record the reasons offered.

Germany:

All participants agreed that the label was from the EU.

Spain:

Participants here identified the EU but more specifically Spain. The "ES" in ESPR was understood to refer to Spain - participants thought other EU nations might have similar labels with different acronyms, for example "FRPR" for France.

Romania:

All participants agreed that the label was from the EU, and further added that there was a youthful/newer feel due to the QR code and ecological focus. One participant specifically mentioned environmental protection and consumer protection bodies.

During this question, multiple participants called back to the gears in design B, indicating that that aspect was perhaps more memorable.

Q1.3 How likely would you be to trust any information given (lower down) on such a label?

Germany:

Participants had a mix of views, with one participant saying they wouldn't trust the label but wouldn't trust any other label of the same sort. The EU symbol was seen as generally more trustworthy than a corporate label, but concern was raised by one participant that such labels may often be used for greenwashing. It was generally agreed that the QR code was a good addition in this respect, as it would likely link to further, more in-depth information.

Spain:

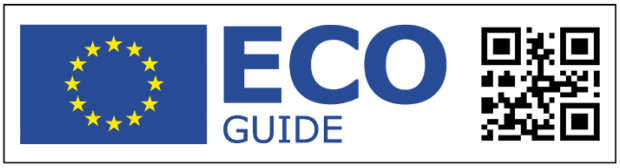
Participants found the design highly trustworthy, as it indicates a product is validated by the EU. Participants were particularly drawn to the QR code, and the group requested to be able to scan the code themselves to view further information (though this was not possible at the time).

Romania:

Participants found the labels highly trustworthy, indicating that they thought the EU flag guarantees quality, and that the association with environmental protection made the designs more trustworthy. One participant specifically singled out design D as the most trustworthy.

Q2.1 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?

Show each of the label designs with the various label titles and for each in turn ask the question above.



A



B



C



D



E



F

Germany:

A: Association with instruction, perhaps a set of instructions for how to be more nature-friendly when purchasing products. Participants felt "neutral", and thought this design could mean anything, depending on what was behind the QR code.

B: Participants could not discern a meaning from this label, and wouldn't pay attention to it.

C: Again, participants found this design uninformative, found it difficult to get a sense of the meaning behind it. An association was drawn by one participant to ideas of the economy, or perhaps a blueprint. Participants thought it didn't make much sense.

D: Participants found that this design had more "science behind it" compared to C, hence found it more trustworthy. They associated this design with data, facts, projects, presentations. Participants expected that scanning the code would reveal perhaps a grade/numbering classification. It was suggested that this label might refer to a list of sustainable companies.

E: "For insiders", this was deemed vague, like marketing speak, and uninformative.

F: One participant commented that this design "conveys somehow already quite succinctly and unambiguously like here the EU has according to certain criteria found this product to be good ecologically", hence relatively high trust. This one was compared to design D, and thought there might be some kind of certification involved.

ECO could mean economy or ecology, perhaps economical/energy-saving.

Participants missed the pictographical element present in the designs from Q1, finding these designs too plain by contrast, and lacking in meaning

Spain:

A: A guide of organic products. This product had to meet some sort of ecological standard to be in this guide.

B: A product that passed an EU ecological standard of some kind.

C: Similar to the previous one. Perhaps this was an eco product designed by the EU.

D: Essentially the same, a list or guide.

E: Has a positive ecological impact. To do with EU sustainable product regulations.

F: A certificate of validation that this product meets ecological standards.

Design E was preferred, but designs A and F were also liked by participants.

Romania:

A: Could be a guide to eco products/substances, or perhaps a guide on how to use the product in an eco-friendly manner, or information about the EU's eco products. Alternatively, this could be a label for something in the organic aisle (commonplace in supermarkets).

B: Participants identified similar organic, eco associations. This one felt more like a label saying that a product is an eco product, as opposed to A which would simply indicate the presence of a guide/instructions. This was identified as being a little simpler, a "raw product".

C: Design A was preferred over this one, which was liked less. Could be products for crafts or construction, such as paint, or possibly referring to the way it was made, for instance it might be biodegradable. A participant felt that the word "design" seemed less important.

D: Definitely some kind of list, multiple participants suggested one of eco products with their ingredients/composition included. Multiple participants weren't sure what this might indicate.

E: Impact on the environment was strongly associated here. A positive impact on people's health was also suggested. One participant was unsure.

F: It's simply a label. This could be a certification that the product is organic, or perhaps somehow related to the ingredients or composition.

These designs seem like a more "general" label, perhaps simply informing you about the product standards.

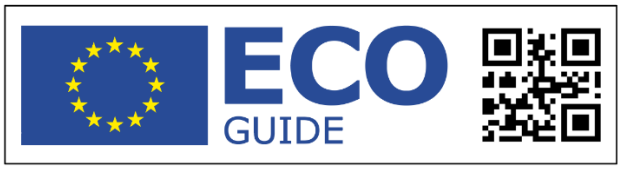
Show all the label designs above simultaneously (in the green text and blue text versions) and ask the question below.

Q2.2 Which do you prefer? The labels with Green text or those with the Blue text?

[Share slide to show the images below]



A1



A2



B1



B2



C1



C2



D1



D2



E1



E2



F1



F2

Germany:

Green was preferred. Participants felt that there was a stronger association with the ecological/environmental theme. They also felt it was happier.

Spain:

Participants unanimously preferred the green designs due to their ecological link. They found the designs more recognisable/stand-out too.

Romania:

Participants preferred blue to match the EU flag and keep the colouring simple, but also particularly liked design D1 (green, with larger text) and felt that there the green was more appropriate.

Q2.3 Imagine you were to see products for sale in the shops whose top part was like any of the designs shown below - what do you think it might be about?



A



B



C

Germany:

This product is environmentally friendly, as indicated by the globe and leaf. B was perceived as a "light" design. One participant felt that design A was too ambiguous.

Spain:

Recyclable, sustainable designs that comply with regulations, recyclable material in the product, perhaps using less plastic than other products.

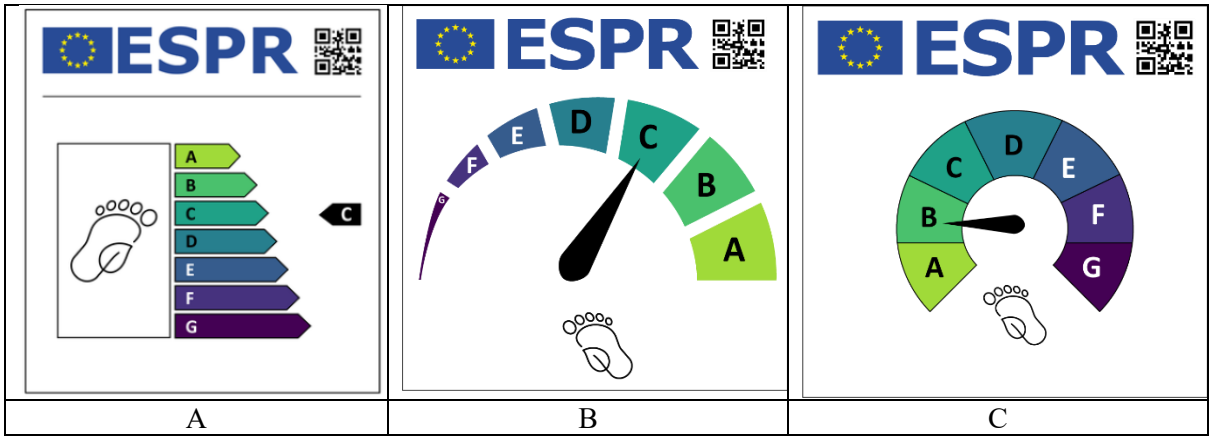
Romania:

Participants thought these might be used for electronic household appliances, to indicate sustainable production, or to represent any eco product. Participants liked design C the most, but also liked design B.

Unprimed testing of potential ESPR labels for products

In this section the participants were shown the various ESPR label design concepts and asked what they think they're about and which they think is most effective. ***They were not told that the labels are about product sustainability beforehand.***

Q3. What do you think about each of these designs?



A	B	C

Germany:

These look like energy efficiency scales on a fridge.

Participants quickly identified that the foot signified a carbon footprint, and therefore that an A grade would be a product with the lowest carbon footprint. One participant was momentarily unsure of the significance of the foot, however. Another questioned why products with grade E, F or G would even be produced.

One participant preferred design B, but all others preferred design A. They felt that design A was simple, structured and clear, that the G was hard to see on design B, and that it made more sense for the G label to take up the most space to signify the most negative impact. One participant expressed a dislike for the foot symbol, but another thought it was a necessary inclusion in order to convey that the design referred to carbon footprint.

Participants thought that the labels might indicate sustainability, environmental friendliness and whether a product harms the environment, as energy consumption labels already exist.

One participant wondered if the size of the bars on A actually conveyed information or whether that was purely aesthetic. The participant who preferred design B preferred it because they

found it friendlier and more energetic, and found that the larger "A" felt more like a target to strive for.

Spain:

Participants thought these designs represented a scale of pollution, perhaps to do with power consumption or to do with how clean the production of the item was. They understood that letter G was most polluting and letter A was least polluting. They also thought these could be for organic foods without preservatives. They weren't certain if there was significance to the size or orientation of the footprint.

Participants preferred design C, as they thought it was a familiar scale of a type they were used to seeing. Some participants did prefer design A, however.

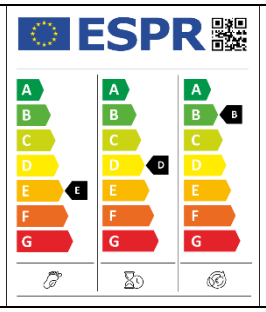
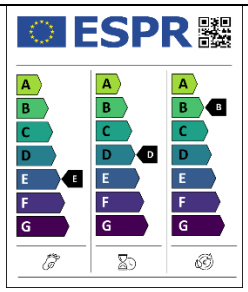
Romania:

Participants thought these labels indicated eco footprint, how much a product consumes, and might be related to household appliances. One participant noted the colour choices felt natural. The household appliance connection was felt most strongly in relation to design A, which was thought to represent how much something consumes or how much it pollutes. Design B was thought more confusing due to the size of the segments, and C more confusing because it might be good to go fast on a speedometer, seen as similar to this design.

Participants generally preferred design A, and all agreed that it seemed the clearest in terms of what it communicated even where they expressed aesthetic preferences for designs B or C.

Respondents were asked to select a preferred design (as a group) from A, B or C and these were added to the preferred design into the slide template for Q8.

Q4. What do you think about each of these designs?

	
A	B

Q4.1 Show the set of triple scale designs above and ask participants:

a) what they think the label might be about?

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale

- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

Q4.2 Ask them what they think each of the icons beneath the scales might be about?

Though questions 4.1 and 4.2 were laid out as they are here in the Moderators Guide, the groups commented on the designs in a manner that did not align so neatly with the questions. Consequently, their answers to both questions have been combined below.

Germany:

Participants identified these designs as being very similar to those you might find on a fridge or other electronic appliance. As a group, they were unsure as to the exact meanings of the 3 symbols present in each design. The footprint symbol was quickly identified by the group as referring to sustainability, the ecological/environmental footprint of a product. The clock/hourglass was identified more tentatively as perhaps to do with the longevity of a product or its battery lifespan, or maybe to do with the timescale of its impact on the environment, such as the time taken for the product to be recycled. The final symbol was identified as perhaps referring to return on investment, as some financial component - perhaps how economical a device might be, but perhaps also to do with the cost of use and reuse, the value of a product's raw materials. It was suggested that the Euro symbol present might link this symbol specifically to the EU.

Spain:

Symbol 1: Ecological footprint, production of the product, sustainability

Symbol 2: Production time, lifespan, time it takes to break down/biodegrade

Symbol 3: Cost to recycle, something to do with consumption, type of material

Participants had mixed opinions on the possible meaning of the three symbols. They decided that these were not food products, but perhaps something to do with ecodesign and the environment (though this may have been influenced more by the earlier questions). They thought this label might be used to indicate parts of an ecodesign process,

Romania:

Participants identified these designs as being very similar to those you might find on a fridge or other electronic appliance. They thought the first symbol might represent environmental footprint, the second might represent time for the product to decompose or expire, or the speed of some product function, and the third might represent the cost of recycling or the cost of production, or alternatively the extent to which the product can be recycled.

Ask them to select a preferred design (as a group) from A or B.

Germany:

5 of the 8 participants preferred design B (though some members of the group said they liked both), leading to a narrow preference for design B. Design A was seen as perhaps too similar to existing label designs, so the group thought design B would stand out more by contrast.

Spain:

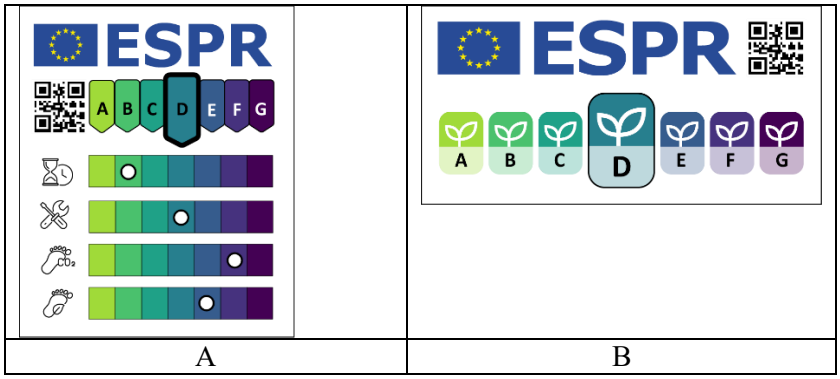
Participants lightly preferred design B, but were split. Participants who preferred design A cited the familiar colour scheme, with the red colour clearly meaning something bad. One participant was colour-blind and couldn't differentiate the colours in design A, so preferred design B significantly as the light/dark shading of the different bars made them easier to differentiate. The group thought this question depended a lot on what type of product the labels might be used on, as design A has more of a strong association specifically with household devices/electronic appliances.

Romania:

The group was tied on which design they preferred. Proponents for design A liked its familiarity, while proponents for design B liked that it was differentiated from the familiar design A. Participants agreed that design B was equally as legible in terms of its colour scheme, but some believed that the colour scheme of A was more "optimistic", so they preferred that.

Copies of the preferred designs were added into the slide template for Q8.

Q5. What do you think about each of these designs?



A | B

Q5.1 Show the set of designs and ask them

a) what they think the label might be about,

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale(s)
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

Q5.2 Ask them what they think the icons to the left of the scales in label A mean? – Also probe what they think each top (main) scale is about on label designs A and B.

Ask them to select a preferred design (as a group) from A or B.

Once again, the answers to Q5.1 and Q5.2 have been combined as follows:

Germany:

The group identified that in design A the overall score of a product would be D, as an amalgamate or average of the component scores listed beneath that.

Icon 1: Lifespan

Icon 2: Repairability, something to do with manufacturing

Icon 3: Carbon footprint

Icon 4: Unsure what this might mean given the presence of icon C; the group would have identified this as an environmental footprint except that CO2 was already clearly identified immediately above, so they weren't sure what it might signify if CO2 emissions aren't part of it.

The group identified the icon in design B as being an overall score, perhaps for sustainability, and compared it to "Nutri-score" on food products.

The group strongly preferred design A due to the additional information provided, and felt that they'd be less sure of the meaning of design B without the context of design A. One participant commented that they might like design B more if they knew the explicit meaning of the leaf icon and the scale. The group liked that with design A they were able to look at different metrics for the product, where one individual might care more about product lifespan but not care as much about other metrics, so they'd be able to interpret the scale with more detail on a more personal level.

Spain:

Participants thought these designs referred to product sustainability.

This group did not comment much on the design of the icons, identifying them just as subsections of product sustainability.

Participants felt that design A gave the consumer greater decision-making power, and liked the ability to see the breakdown of different ecological factors. They found the plant icon in design B more confusing and vague, but one participant preferred the simplicity of design B, thinking design A was too crowded. Another participant suggested the idea of a design C, with the additional detail of design A combined with the larger main scale of design B. Half the group preferred this hypothetical design C to design A, but those who still preferred design A thought this hypothetical would be too crowded. One participant thought that they might just not look at the info present on design A because of information overload.

Romania:

Icon 1: Speed of the product, time taken to manufacture

Icon 2: Repairability, environmental impact of manufacturing

Icon 3: CO2 emissions

Icon 4: Environmental impact

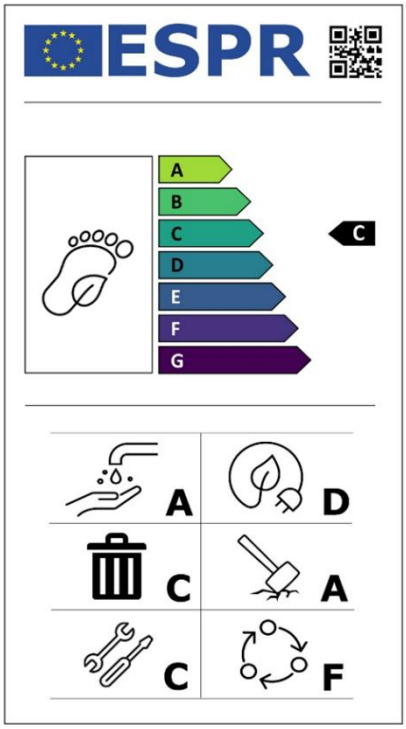
Participants felt that design B was simpler, and expressed a concern that design A might be too leading in some way - one participant felt that design B would allow for greater freedom of choice due to not including information on CO2, for instance, because it felt like steering consumption rather than informing consumers about the product. A different participant,

conversely, preferred to have the option of looking at the subcategories present in design A while still having the overall scale at the top. Some participants preferred design A, but the group overall preferred the simple design of B.

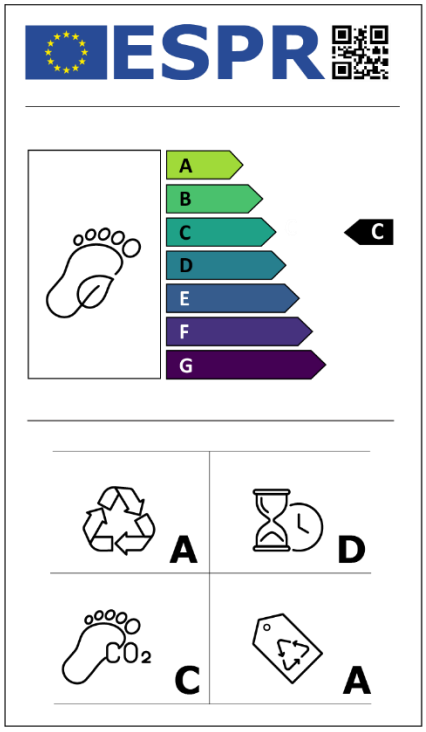
Participants found both designs equally trustworthy due to the presence of the EU flag. One participant commented that they wouldn't be worried about the extra details on emissions and pollution in design A as they believed the EU wouldn't allow the production of a "truly dangerous product" to begin with.

Copies of the preferred design were added into the slide template for Q8.

Q6. What do you think about each of these designs?



A



B

Q6.1 Ask participants to discuss the approach shown in each label and probe why they think what they do.

Q6.2 Ask them what they think the icons to the left of the A-G scale means?

Q6.3 Ask them what they think each of the other icons mean.

Q6.4 What do they think the letters next to these icons mean?

Q6.5 If they say a ranking of how well the product performs against the parameter shown in the icon – ask them what do they think the best possible class (rank) might be and also what they think the worst possible class might be.

Q6.6 Ask them whether they think the approach in these labels or the single aggregated scale approach in Q3 case A would be best and to explain why.

Q6.7 Ask them which of the two designs they think (as a group) is best and to explain why.

Results for Q6.1 to 6.7 are reported below

Germany:

Design A

The group suggested the following meanings for the icons, though weren't certain.

1: Amount of water used in production

2: Electricity used

3: How a product can be disposed

4: Materials it was manufactured with

5: Repairability

6: Recycling

The group found design A overwhelming with too much information, so preferred design B. One participant wasn't sure of the point of the overall rating if the subcategories are present, though the group did decisively identify the footprint logo as meaning an overall rating. The group preferred the designs in the previous question with the colour scale as opposed to just the lettering used here, and found the repeated letters (A and A, C and C) to be confusing. The group was unsure of the difference between the two icons with recycling symbols in design B.

The group preferred the additional detail over the design in question 3 without the additional detail.

The group preferred design A (5 to 3), because they found the symbols in design A more comprehensible. One participant liked that the information in design A was more detailed.

Spain:

Participants thought the small icons might refer to water consumpton, electrical consumption, whether a product is biodegradable. The group identified the lettering scale as being similar to the large scale, with A being the best and G the worst. They felt that there was too much information presented with the different letters.

The group heavily preferred design A, with only one disagreement. They preferred the additional information to be present. The one participant who preferred design B thought that design A had too much information. The group liked this design better than the design in Q3 due to the additional information present.

Romania:

Participants thought the hammer icon might refer to the environmental impact, while the leaf/cord combination might refer to energy consumption, or perhaps to the type of energy consumed (whether it uses renewables etc). There was confusion due to the fact that multiple icons could potentially refer to recycling. One participant thought these designs could perhaps be clothing labels, with instructions on how to wash, reuse the clothing, while design B might

refer to something recyclable. The group identified the letters by the small icons as being comparable to the overall scale above them.

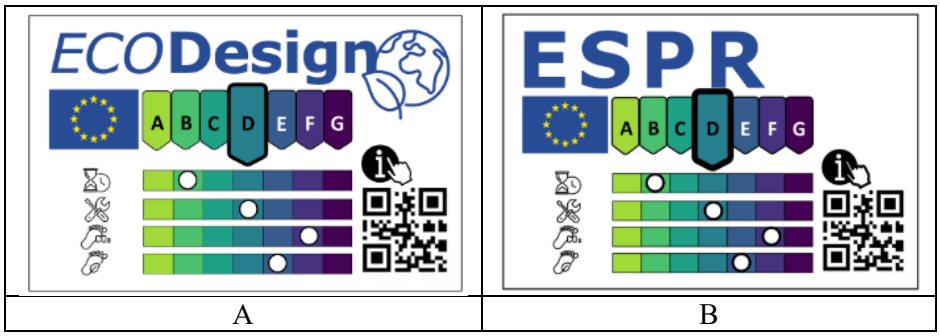
Participants preferred to have a single scale over having the additional detail. One participant believed that the further detail (recyclability, product qualities) would already have been assessed by the EU due to the presence of the flag. The group seemed to have high trust in the EU institutions.

The group thought the footprint logo might mean the environmental footprint, though one participant was still completely unsure as to its possible meaning.

The group preferred option B for its simplicity. One participant was older and preferred B due to it being harder to read A, and would therefore choose a design with "as little information as possible". Participants found it hard to discern the meanings of the smaller symbols.

Ensure that this design is included in the slide template for Q8.

Q7. What do you think about each of these designs?



A | B

Show each design and ask them

a) what they think the label might be about,

b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design they selected is best for each of these aspects.

Ask them to select a preferred design (as a group) from A or B.

Copies of the preferred design were added into the slide template for Q8.

Germany:

Multiple participants found design A too busy, but others liked the presence of the globe and leaf as that indicated that the label referred to sustainability of some sort. Participants were unsure of the meaning of ESPR, while they found "ECODesign" more comprehensible.

The group was evenly split on which design they preferred. Those who preferred B found that design much clearer. Those who preferred A found the inclusion of the globe appealing and thought there was a clearer connection to the environment and ecological impact. One participant commented that they preferred when designs from the EU are more "boring", as it feels more trustworthy.

Spain:

The group found design A to be more cluttered than design B, but also more attention-grabbing, and clearer that it referred to something ecological. The group voted 7-1 in favour of design A, and preferred its inclusion of the leaf/globe.

Romania:

Participants all preferred design A. Some commented that they found design A more legible, and design B harder to read with a smaller font. One participant found "ECODesign" more significant than ESPR, which was likened to the name of a company. Participants commented that they would prefer if the bold/italics in ECODesign were switched, to emphasise "ECO".

The group found A more trustworthy due to not knowing the meaning of ESPR.

Some in the RO group commented that the font in design B was smaller - it's possible that in this focus group, design B was displayed smaller than design A, despite them being the same size here. Similarly the ES group made reference to design A being "wider" and thus more legible. This may have skewed the results, and the same may be true for subsequent questions - in Q9, the DE group moderator mentions that the two designs were displayed at different sizes, though this wasn't intentional. Complaints about legibility due to font or label size likely stemmed from this in at least some cases.

Q8. Looking again at the designs you thought were best for each of Q3, Q4, Q5, Q6, Q7 Which do you think are best now and why?

[Share the slides with the preferred images from Q3, Q4, Q5, Q6, Q7]

Best from Q3	Best from Q4	Best from Q5
Best from Q6	Best from Q7	

Show each design and ask them to comment on each and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the design(s) they selected is/are best for each of these.

Ask them to decide <u>as a group which is their preferred design from the above set</u> and explain why.

Germany:

The group preferred the design from question 5. They liked that it had additional information but was still visually legible. One participant commented that they might like Q6 too if the subcategories were presented similar to those in Q5. One other participant liked the categories present in Q4.

The group thought the QR code would provide further information to clarify the meaning of the symbols present on the label in all cases.

The group found Q5 most trustworthy, but also mentioned Q4 due to its relative simplicity. The group found Q5 the clearest, but also mentioned Q7 due to the similar subscale present there. They found Q5 and Q7 to be the most memorable, due to the subcategories.

The group strongly preferred Q5, but 2 participants preferred Q7. They found Q5 in particular visually appealing, informative, clear, and felt that the meaning of the scale was most apparent.

Members of this group wanted to know the meaning of ESPR - one member of the group who knew what it meant told the group the meaning of the acronym and the purpose of the regulation, which may have affected the group understanding of subsequent questions.

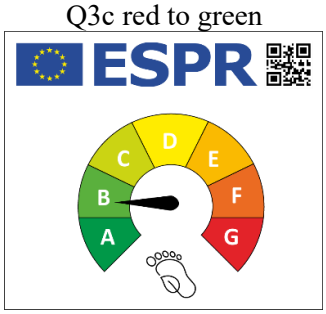
Spain:

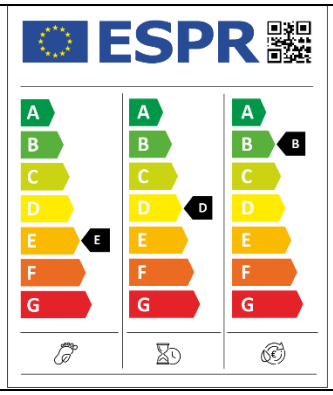
The group was split between Q6 and Q7 for their overall preference, but narrowly voted in favour of Q7. The group liked the inclusion of the "ECODesign" to clarify that the label had an ecological theme. One individual preferred Q5.

Romania:

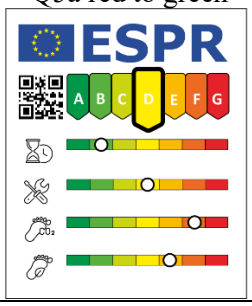
One participant preferred Q7 purely because they were unsure of the meaning of ESPR (though they did like other aspects of the design). The group as a whole seemed to prefer Q7 for all questions except visual appeal, for which Q5 was preferred. Overall, the group voted 5-3 in favour of Q7 over Q5 as their favourite.

Taking the preferred design from the above list – show a version of the same label with the Green to Red scale and a version with the Green to Purple scale and ask:

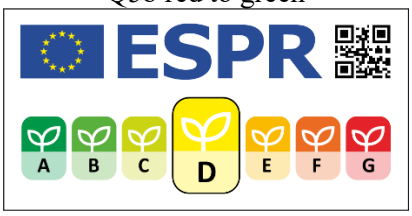
Q3a red to green	Q3b red to green	Q3c red to green
		
Q4b red to green		



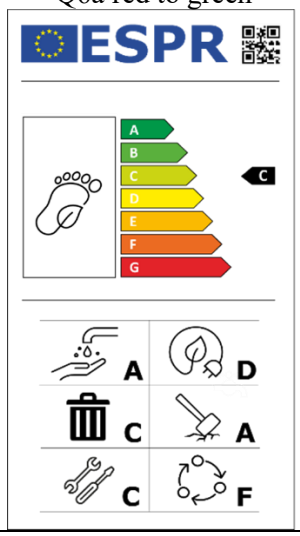
Q5a red to green



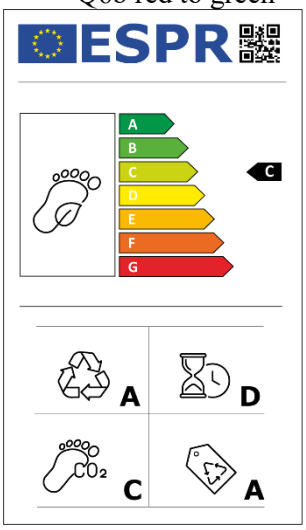
Q5b red to green



Q6a red to green



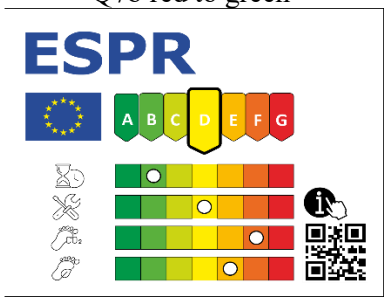
Q6b red to green



Q7a red to green



Q7b red to green



Q9 – Which of these designs do you prefer and why?

Record the answers in the analysis template and probe why they prefer the design they do.

Germany:

The group preferred the green-purple colour scale, finding that it was too similar to existing labels on electrical appliances. One participant didn't think this was an issue, so voted for the red-green scale on the basis that they understood the design language immediately. Everybody thought the green-purple scale was comprehensible nonetheless.

Spain:

The group strongly preferred the red-green scale, with one exception as in the RO group.

Romania:

One participant found it hard to see the letter D on a yellow background on the red-green scale. The group strongly preferred the green-purple scale, finding it important to differentiate it from the scale found on electronic appliances. One participant preferred the red-green scale because they liked the red colour.

Then ask:

Q10 – Do the scales on these label designs remind you of another label?

Germany:

Participants drew comparisons to Nutri-Score, the standard energy label, and a 1-5 animal welfare scale.

Spain:

The group found the design similar to appliance labels. One participant mentioned a colour scheme at a fuel station. Nutri-Score was also mentioned as a point of comparison.

Romania:

Participants felt the scale was very similar to energy efficiency labels.

Q11 – If you were to see a product with one of these labels on it do you think it might be confused with an energy label?

[Use the slide with the same designs shown in Q8]

Show each design and ask them to what extent they think the design might be confused with the energy label and how that would vary if the label were shown on a non-energy related product and on an energy related product.

Germany:

Perhaps, but the green-purple colour scheme would differentiate things.

Spain:

This group held a vote on whether they felt the label was too similar to energy labels, but the vote was only recorded in the meeting chat.

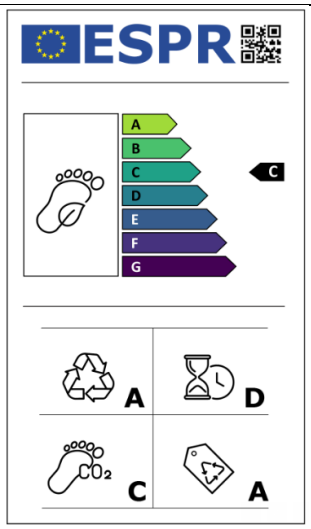
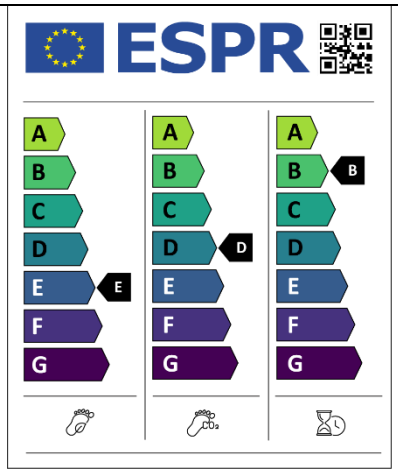
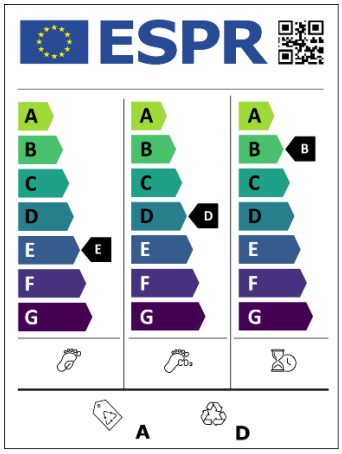
Romania:

The group found that the red-green colour scheme could lead to easy confusion with energy labelling, especially for older people. Some found that the small icons were enough to differentiate the design, or that it wasn't an issue for the designs to be similar given that they're both dealing with something ecology related. One participant felt that keeping the colour scheme the same would actually be a benefit, though others thought the colours should be clearly distinct from other labels.

This group did not discuss this question separately to Q9 and Q10.

1.4. Checking efficacy of designs as applied/adapted to the target product groups, e.g. clothing & detergents

Q12a Imagine you saw these labels <u>on items of clothing</u> what do you think of each of these designs?

<table>
<tr><td>
</td><td>
</td></tr>
<tr><td>A</td><td>B</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td>C</td><td>D</td></tr>
</table>

	
E	

Show each design and ask them a) what they think the label is about, b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

Germany:

The group disliked the idea of having these labels on clothing. They said they would usually cut off labels of this sort. They thought the labelling might refer to the component materials, or whether the clothing was made "fairly".

The group preferred design B, because they felt excessive detail was unnecessary, and the small icons would do a good enough job of conveying relevant information. One participant preferred design E (though also liked design B), because personally they found details about clothing even more important than similar details in other areas.

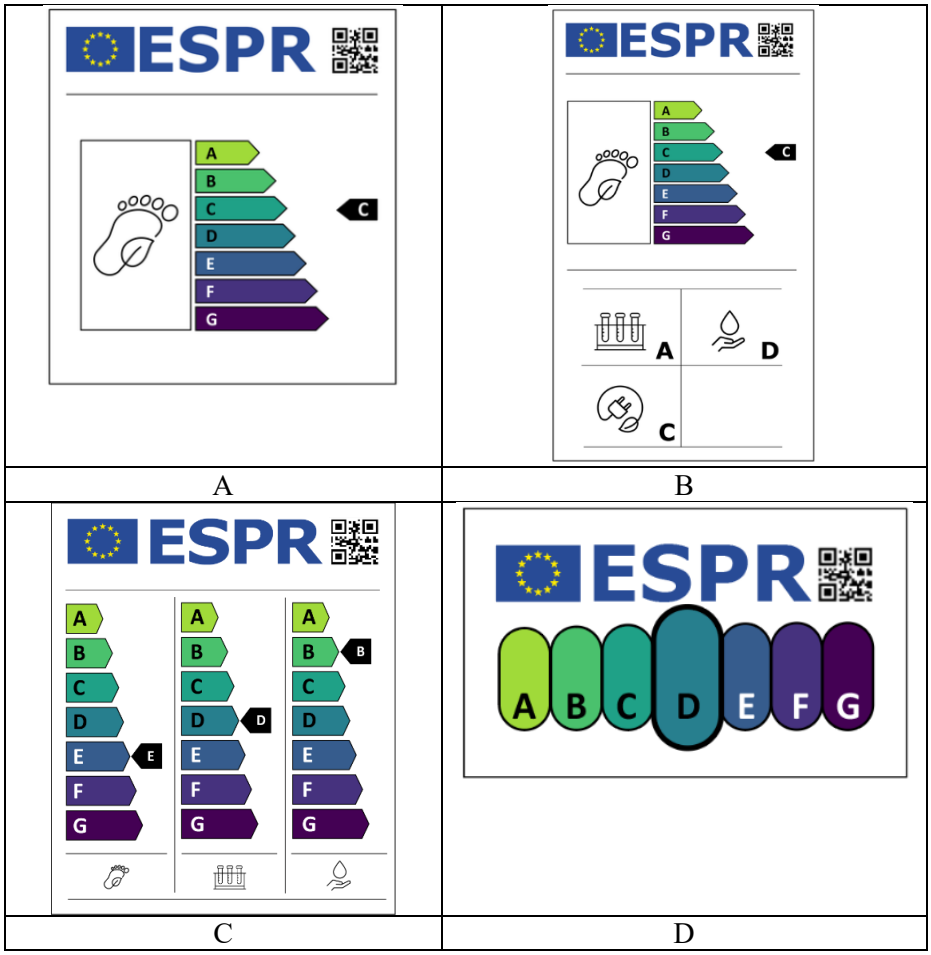
Spain:

The group thought the labels might refer to information on the manufacture of the clothing, its environmental footprint, whether it is recyclable. The group was split on which label they preferred, with some preferring B, some preferring C or E for additional information, and some saying they would prefer the simplest possible label. It was felt that the QR code is most important, with individuals saying they wouldn't look into clothing with this much detail.

Romania:

The group preferred design E, as the other designs were more associated with household appliances. Individuals also cited design D because they felt it was clearer or had additional information. The group found all designs equally trustworthy.

Q12b Imagine you saw these labels <u>on a Detergent package</u> what do you think of each of these designs?



A | B | C | D

<u>Show each design</u> and ask them a) what they think the label is about, b) to comment on each design and judge which they think is best from the point of view of:

- communicating what they think the label is about
- ease of understanding the meaning of the scale
- appeal
- credibility
- ability to remember from one product to another.

Ask them to explain why they think the designs they selected are best for each of these.

<u>Germany:</u>

The group thought the labels might refer to the ecological impact of the detergent, whether the bottle can be reused, or the impact of production or of waste products. They weren't entirely sure what the different designs might represent.

The group preferred designs B and D, with a slight preference for B, as it was like designs A and D but with more information. They found C too cluttered. One participant strongly preferred design D due to finding B too overwhelming.

<u>Spain:</u>

Some participants expressed a preference for D, while others preferred B. There was some confusion as to the meaning of the electrical plug symbol in design B.

Romania:

Participants felt that more information was more important here as the product would be in contact with skin, so preferred B. They found D to be less trustworthy due to the lack of information, and A similarly so, but the footprint icon made it more clear what the label was referring to, so it was still deemed more trustworthy than D.

1.5. Language, additional information and QR codes

Q13 a) When you look at your preferred design from Q8…

Show the preferred design from Q8 (share the relevant slide)

i) What is it lacking?

ii) How sure are you that you know what it is about?

iii) What more information would you want?

iv) How do you think you could get that information?

Germany:

i) The group felt that their preferred design (Q5) wasn't missing anything.

ii) They weren't entirely sure of its meaning - they would like an explanation of the symbols, perhaps a numerical value on the scale (kWh, CO2 values etc).

iii) The group would like an explanation of the symbols.

iv) The QR code clearly has the additional information.

Spain:

The group's preferred design was Q7.

The group found very little missing with the label, the only suggestion being to perhaps make the symbols larger. They were unsure of the meaning of the symbols still, especially the clock symbol - they suspected it might mean lifespan or the time taken for the product to biodegrade but weren't certain.

Romania:

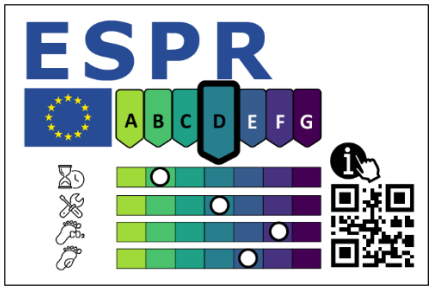
The group's preferred design was Q7.

i) A participant suggested a legend explaining the meaning of the symbols, but was concerned that that might take up space - consensus was that this design wasn't missing anything, and that information could be supplied via the QR code.

ii) Participants felt that the symbols present should vary based on the type of product. They were clear that the label had an ecological focus but weren't sure of its meaning beyond that.

iii), iv) The QR code should contain information about the meaning of the symbols.

Q13 b) Imagine you were shown this label



Note, this label has an enhanced QR code and without prompting the group we're curious to see if this design increases the number of respondents that say they would try to access the QR code

i) How do you think you could get that information?

ii) How does this design compare to the previous one?

iii) What do you think is being signified differently?

Germany:

i) Further information could be found via the QR code. The "i" with the hand shows this clearly, but the group found that this was clear beforehand too.

ii) They clearly identified the "i" as the main difference.

iii) This version of the label indicates that you should follow the QR code for more info.

Spain:

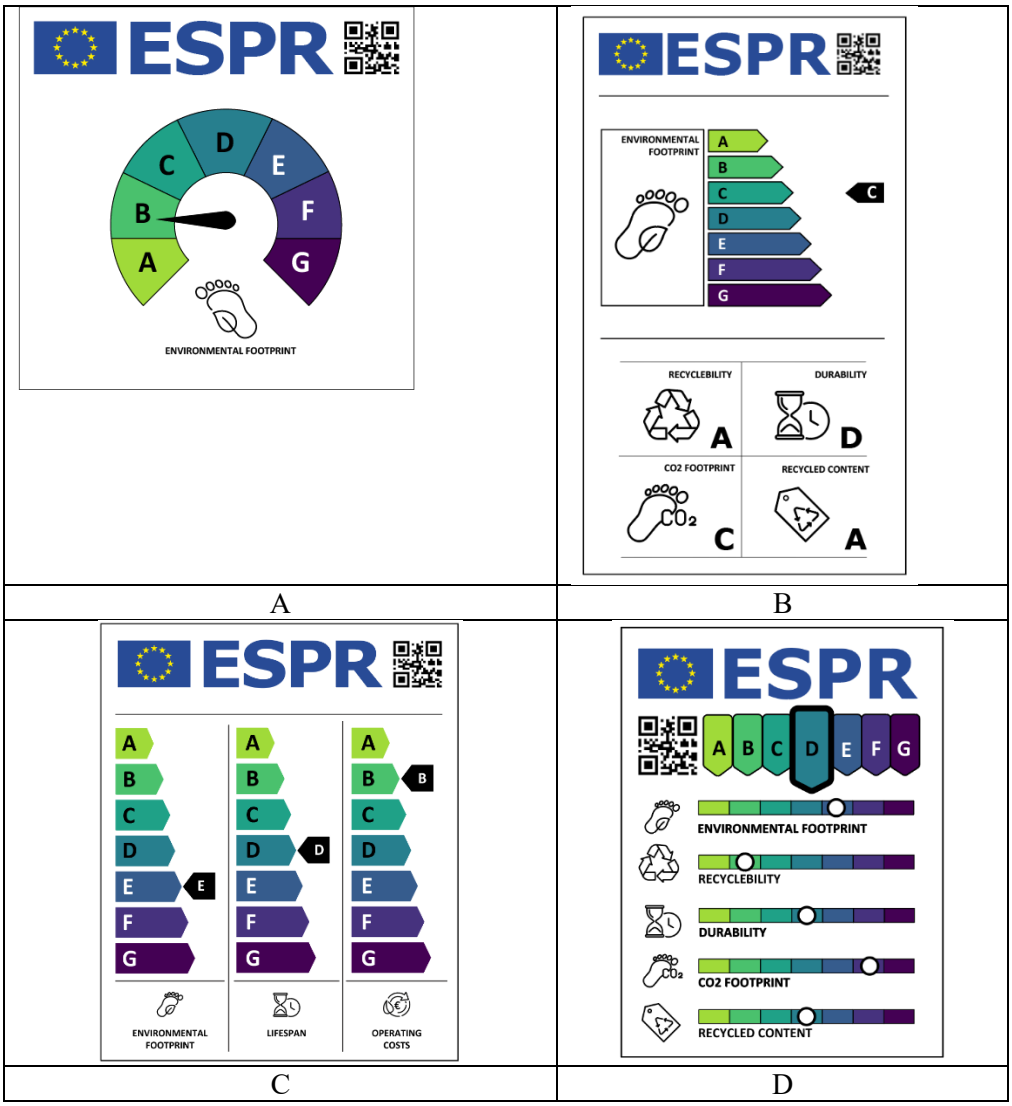
The group didn't initially spot the different QR code, focusing on the difference between "ECODesign" and "ESPR". When prompted about the QR code the consensus was that they would pay more or less attention to it/be more or less likely to scan it depending on the price of the product - a more expensive product they would research more fully, but with something cheap and disposable they wouldn't bother.

Romania:

The group was clear that the "i" indicates to scan the QR code. They preferred their chosen design over this one due to the "ECODesign" element. They felt the designs were almost identical.

Q13 c) Please look at these designs

Show the label versions with English language text indicating the icon meanings next to each of the icons as below (share the slide):



A | B

C | D

i) Does having this text against the icons make the meaning of the labels clearer?

ii) What do you understand this text to mean?

iii) Would this text be sufficient for you to understand the intended meaning of the icons and the labels?

Germany:

i), ii) The group would prefer the explanatory text in German, and thought that it would be unfair to people who don't speak as much technical English to have the labels in English. They found it much clearer with the text. One participant was unsure whether older people would be able to use QR codes, so found the extra text to be a big improvement. It was commented that the additional text did not make the label harder to read.

iii) The group found the text comprehensible when provided in German, and were confident that they could scan the QR code if they needed further clarification.

Spain:

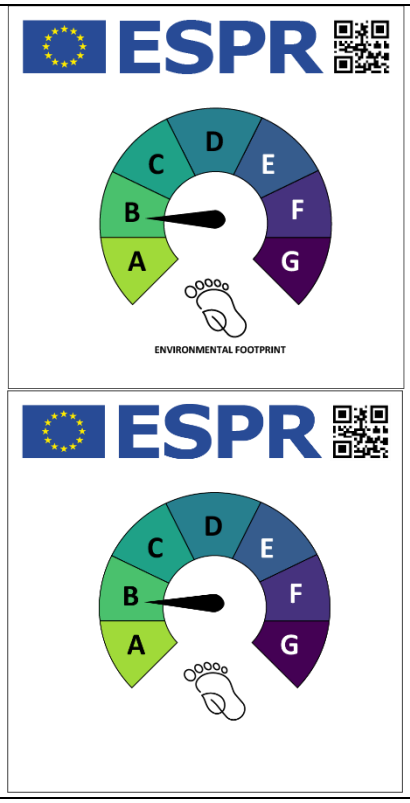
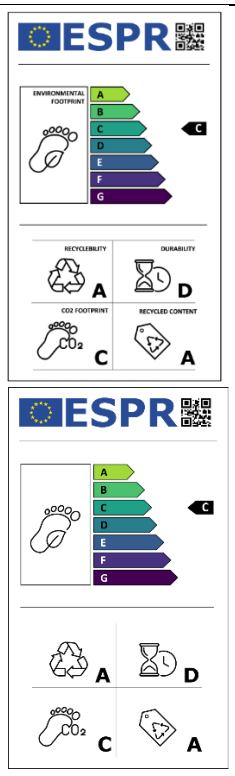
The group found this more comprehensible, but would prefer it in Spanish (Castilian specifically was mentioned).

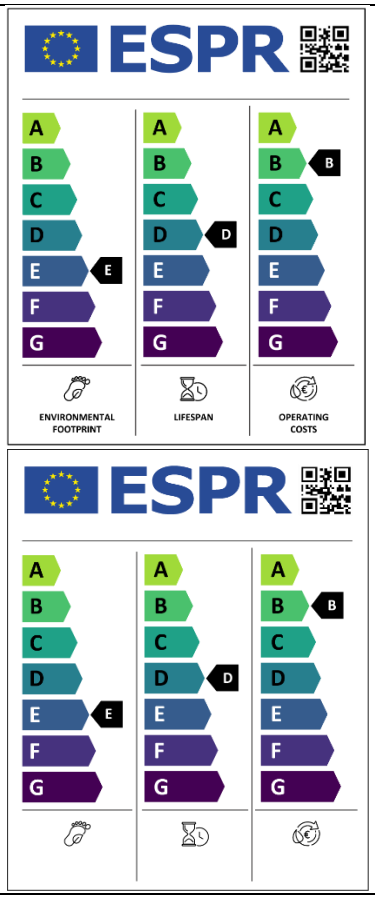
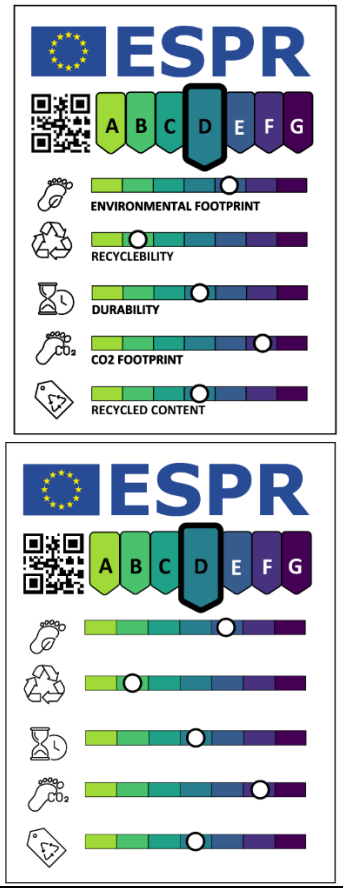
Romania:

The group found the extra label text to make the label much clearer. Most participants with the exception of one older participant could understand the English meanings. They would prefer the text be translated into Romanian. It was suggested that there could be different languages available via the QR code.

Q13 d) If I were to tell you that the text shown in these labels means…

Show the label versions but with the English text translated into the local language (share the slide with the text translated – note that the participants don't need to translate this, although they can suggest improvements)

	
A Environmental footprint	B Environmental footprint (for the top scale icon) then: Recyclability, Durability, CO2 footprint, Recycled Content

	
C Environmental footprint, Lifespan, Operating costs	D Environmental footprint Recyclability Durability CO2 Footprint Recycled content

i) Does having this text against the icons make the label meaning clearer?

ii) Would this text be sufficient for you to understand the intended meaning of the icon and the labels?

Germany:

i) The group preferred the German text. There was some confusion over the exact meaning of "environmental footprint".

ii) Some members of the group found that they now had a much better understanding of all the terms. Others were concerned that there might be confusion for people who don't speak German as well (or English), because the concepts laid out here may not be as comprehensible to those who aren't familiar with ecological technicalities. One participant found it particularly important that the label was able to be understood by everybody who read it.

Spain:

The group found this perfectly clear, and were now able to understand all the icons. It was felt by some that perhaps now the "ECODesign" was not necessary, as with the additional text it had already become clear that there was an ecological connection. That said, the group was still very unsure of the meaning of "ESPR".

Romania:

All participants found the translated text to be clear.

Q14 Which of the potential label titles in the set shown below best conveys the sense of product sustainability to you?

Eco Guide	Eco Design
A	B
Eco Impact	Eco
C	D
Eco Index	Eco Label
E	F
Eco Sustain	Sustain Score
G	H
Sustain Index	Sustain Guide
I	J

Germany:

The group strongly preferred F, "Eco Label", due to its simplicity and clarity. One participant preferred E, "Eco Index", because the word "Index" implies a technical scale behind it. One other participant mentioned D, "Eco", for its simplicity.

Spain:

The group was split, but the majority voted for C, "Eco Impact", as they felt that this most clearly indicated that the label referred to ecological impact. Individual members voted for D, "Eco", and H, "Sustain Score".

Romania:

The group strongly preferred D, "Eco". The word is used in Romanian, and considered short and succinct by the group, effectively conveying a sense of sustainability as opposed to anything economic. One participant also mentioned F, "Eco Label", and another mentioned G, "Eco Sustain".

Annex XIV: Behavioural experiment - survey instrument

Annex XIV – Behavioural experiment – survey instrument is provided as separate document.

Annex XV: Raw data and codebook experimental surveys

All data for **Annex XV – Raw data experimental survey and codebook** is provided as a separate Excel files.

Annex XVI: Behavioural experiment – detailed results

Robustness of the label effects across product categories

The analysis revealed that the presence of an Ecodesign label had a stronger influence on product choice for some product types than others. **Figure 8-1** presents the findings for each product category. The choice percentage of the target product in the no-label condition reflects its baseline attractiveness, that is, how attractive the product was based on its other characteristics, such as its visual appearance, colour, and functional features. For example, the target detergent was selected in 20% of the choices when no label was displayed, and the target earbuds in 29% of the choices. Differences in baseline attractiveness across product categories simply reflect variation in the perceived attractiveness of the products themselves.

In the graphs, the effect of the **presence** of label is reflected in the difference between (a) the average choice percentage of the target product (i.e., with the best label) across the three prototype label conditions and (b) the choice percentage of the target product in the no-label condition. The strength of this effect significantly differs across product categories. More specifically, the presence of a label produced the largest increase in the selection of the target product for detergents (16 percentage points), despite this product already carrying the EU Ecolabel. This was followed by earbuds (13 percentage points) and coffee machines (11 percentage points). The increase was smaller for T-shirts (9 percentage points) and side tables (5 percentage points).

The effect of the **type** of label did not differ significantly across product categories. In all five product categories, each of the three prototype labels significantly increased the likelihood of choosing the target product. When averaged across the five product categories, Prototype labels I and III performed slightly better overall than Prototype label II, although the differences were very small in absolute terms. As shown in **Figure 8-1**, the same pattern was observed in each product category, with Prototype label II performing slightly less well than the other two prototypes, although the differences at the individual country level were not always statistically significant.

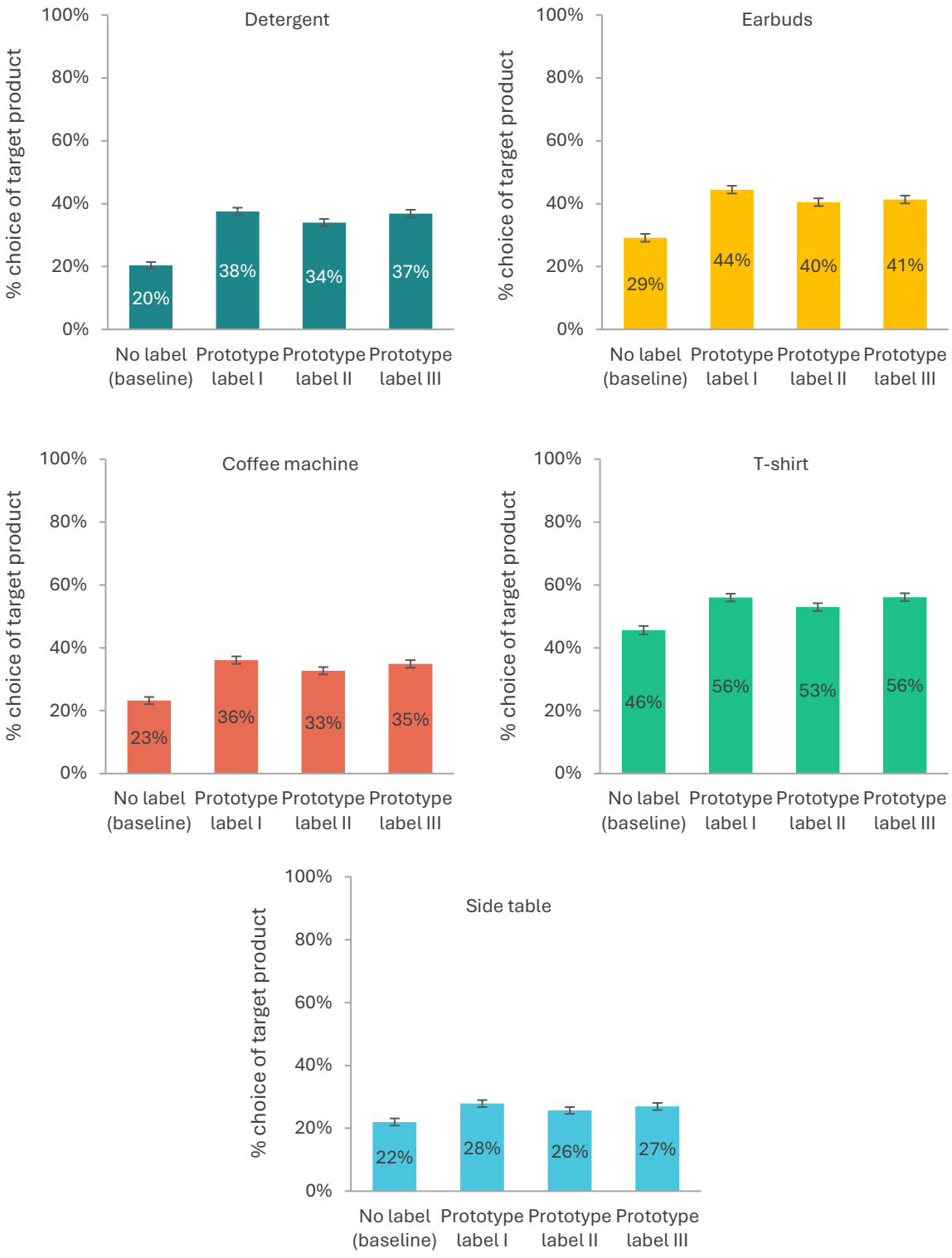


Figure 8-1: Label effects on choice behaviour, by product category.

Robustness of the label effects across countries

The analysis further revealed that the strength of the Ecodesign label effect varied across countries. **Figure 8-2** presents the findings for each country. In the no-label condition, the five target products (one from each of the five product categories) were selected in approximately three out of ten choices in each country, indicating that, in the absence of the Ecodesign label, the target products had a broadly similar level of baseline attractiveness across countries.

The effect of label **presence –** that is, comparing the average choice percentage across the three prototype label conditions with the choice percentage in the no-label condition **–** differed significantly across countries. The labels had a significantly stronger influence on product choice in France, where they increased the selection of the target product by an average of 17 percentage points, than in Romania (8 percentage points), Spain (10 percentage points), and Sweden (8 percentage points). The results for Germany (12 percentage points) fell between these two groups and did not differ significantly from either group.

The effect of **label type** – that is, the relative effectiveness of the three prototype labels – did not differ significantly across countries. In other words, there was no indication that one label design was substantially more effective in one country while another design performed substantially better in another country. Instead, the results for the individual countries showed the same general pattern: (a) all three prototype labels significantly increased the likelihood of selecting the target product; (b) the differences between the prototype labels were generally small in absolute terms and were not always statistically significant; and (c) if anything, Prototype labels I and III performed slightly better than Prototype label II. The differences in behavioural effectiveness between the prototype labels were largest in France, where Prototype labels I and III outperformed Prototype II by 5 percentage points (see **Figure 8-2**).

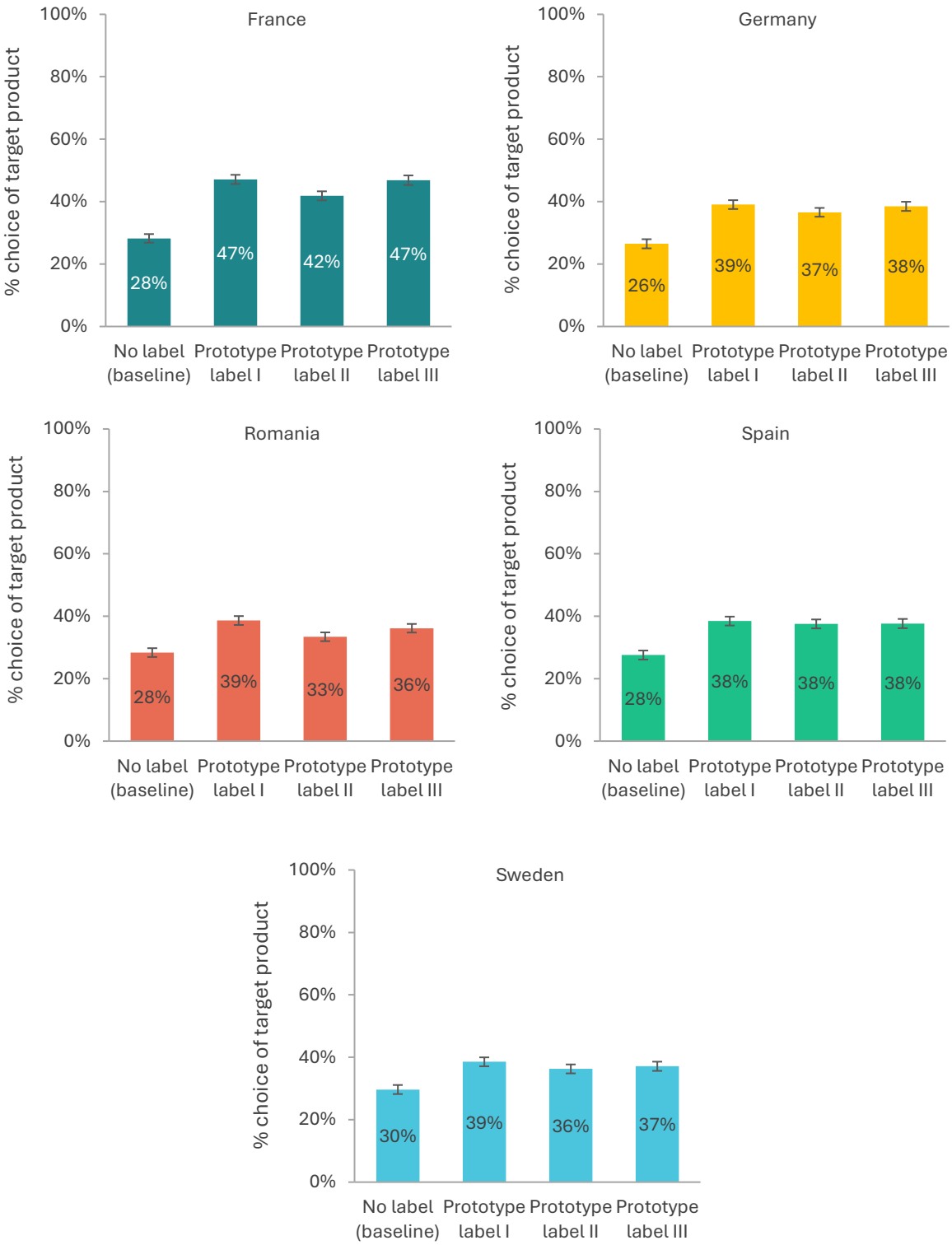


Figure 8-2: Label effects on choice behaviour, by country.

Annex XVII: A flexible and adaptable ESPR label framework

The separately provided **Annex XVII – A flexible and adaptable ESPR label framework** gives examples of label customisations for various products and configurations.

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