



CODEZERO COMMUNICATION GUIDELINES – V1

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List of abbreviations and acronyms

Acronym	Meaning
AI	Artificial Intelligence
EN	European Norm
EU	European Union
KPI	Key Performance Indicator
LSP	Logistics Service Provider
NGO	Non-Governmental Organization
RIAB	Research and Innovation Advisory Board
SCC	Sustainable Consumption Communication
UN	United Nations
WP	Work Package

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Abstract

Deliverable 4.3 presents Version 1 of the Communication Guidelines, a practical, evidence-based tool for retailers, carriers, and logistics service providers to communicate with online consumers and encourage them to choose sustainable delivery and return options. Drawing on prior CodeZERO research from WPs 2, 3 and 4 (interviews with consumers, consumer survey, conceptual model of influences, and pilot co-design workshops), a systematic review of literature and existing guidelines, and extensive stakeholder input from a European consultation workshop, the 18 guidelines address the full online shopping journey — including how consumers learn about online offers, when they shop online, select a delivery option, the delivery itself and possible return phase. Guidelines are organised under four themes: communicating clearly and credibly; shaping the choice environment; using messages that matter; and aligning and supporting sustainability messaging.

The guidelines are designed for adaptability across markets, product types, and operational contexts and are presented both in short form, as a heuristic, and in a more self-explanatory longer form. They will be applied in CodeZERO four European pilots to assess their impact on consumer delivery choice. Lessons learned will inform a refined, user-friendly final version in Deliverable 6.1, supporting the wider adoption of sustainable e-commerce logistics.

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Executive Summary

Purpose of the Guidelines

E-commerce is expanding rapidly, but current consumer delivery and return choices often prioritise low prices and convenience over sustainability. Few retailers make sustainable options visible, and even fewer communicate their benefits effectively. CodeZERO Deliverable 4.3 addresses this gap by providing practical communication guidelines to help retailers and carriers present information on the sustainability of delivery options in ways that influence real consumer choices — not just consumer intentions. The guidelines offer a practical tool for influencing delivery and return decisions efficiently, covering the entire customer journey — from how consumers first learn about online offers, through the shopping and checkout process, to the final delivery phase involving the carrier. They are designed to be applicable across all product categories and types of online shops. This Deliverable focuses on developing the content of the guidelines. Their usability will be enhanced through pilot testing in real operational contexts, with lessons learned informing a refined version to be released in 2026.

Development Process

The guidelines presented in this Deliverable, were initially elaborated based on:

- CodeZERO research outputs (interviews with consumers, consumer survey, conceptual model of influences, and pilot co-design workshops).
- Systematic review of literature on sustainable consumption communication, on existing guidelines and on how to design and structure the presentation of consumer choices (“choice architecture”).

The first draft of 20 guidelines (organised in four thematic clusters) was then presented during a stakeholder consultation workshop with 21 participants gathering representatives of retailers, carriers and consumers, as well as subject matter experts. During the workshop, two group activities were organised to collect feedback from stakeholders on the guidelines’ completeness and understandability, as well as their applicability. The comments made on the guidelines’ completeness and understandability were integrated in a new refined version of 18 guidelines (V1) presented below in its short form. The feedback on the guidelines’ applicability was then integrated in a discussion section about lessons learned (see below). Some further feedback from the workshop has not yet been incorporated in the V1 of the Guidelines as they concern the user-friendliness of the guidelines (e.g. giving retailers dos and don’ts, giving examples, visuals of checkouts, best practices from retailers). They are described in this Deliverable and will be considered in the preparation of the final version of the guidelines, along with findings from pilot evaluation. This process will ensure that the guidelines are both evidence-based and grounded in operational realities.

Structure of the Guidelines

The 18 guidelines are grouped into four thematic areas:

Communicate Clearly and Credibly

1. Be open, clear and specific in your messaging
2. Explain new cues simply and clearly
3. Make verifiable claims
4. Layer sustainability information
5. Standardize sustainability information

Shape choice environments

6. Make sustainable options stand out
7. Encourage reflection on delivery choice
8. Provide comparability between options
9. Influence both habitual and conscious choices
10. Reward sustainable delivery choices

Use messages that matter

11. Show the real-world impact of choices
12. Cover all dimensions of sustainability
13. Leverage social norms to influence choices
14. Appeal to emotion, not just rationality
15. Target life transitions for greater impact

Align and Support Sustainability Messaging

16. Align communication across channels and consumer journey / supply chain
17. Give consumers actionable plans for out-of-home collection or return
18. Give consumers positive sustainable choice experience

In the Deliverable, the Guidelines are presented in short form, as a heuristic, and as a more self-explanatory longer form.

Applying the Guidelines – Key lessons

The workshop also collected feedback on what retailers and carriers need to consider when applying the guidelines:

- **Guidelines interact and support each other:** retailers and carriers should consider combining different measures (e.g., default sustainable choices with persuasive messaging accompanied by trust-building elements such as impact comparisons) to increase effectiveness.
- **Avoid information overload:** checkout messages should be kept concise to maintain the flow of the consumers' check-out experience and sustainability messages after purchase should be considered reinforcing.
- **Address challenges to compare the sustainability of the delivery options:** the most sustainable option can vary, depending on consumers factors or carriers' constraints. So, retailers should use transparent, adaptable communication and explore interactive tools to personalise and update impact data.
- **Adapt to specific contexts:** communication to consumers should be tailored to product type (e.g. fashion, groceries) and supply chain specificities, using relevant incentives and messages.
- **Collaborate for consistent communication:** retailers should coordinate across internal teams and with carriers to align sustainability messaging throughout the customer journey.
- **Extend communication to returns:** to communicate about sustainable returns, retailers should first gather and analyse reasons for returns, use this insight to improve product information, and then guide consumers toward the most sustainable available return methods.

Next steps

The guidelines will be tested in four European pilot cities (Milan, Utrecht, Antwerp, Oslo) from January to June 2026 (indicatively). Participating retailers and carriers will select the most relevant guidelines for their context and develop targeted interventions. The evaluation process (March–August 2026) will measure changes in consumer behaviour and attitudes, in particular:

- Sustainable delivery option uptake.
- Consumer sustainability awareness.
- Customer satisfaction.

A second consultation workshop in September 2026 will refine the guidelines, leading to the final Deliverable 6.1 in November 2026.

This deliverable is to be approved by the European Commission

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1 Introduction

1.1 About CodeZERO

CodeZERO is a three-year Horizon Europe research project aiming to co-create **sustainable and zero-emission last-mile delivery and return solutions for ecommerce** that align with **consumers'** preferences while being sustainable for **retailers, logistics operators** and **local authorities**. Additionally, the project is focused on providing clear, consumer-friendly communication and developing tools for local authorities to promote eco-friendly behaviour.

CodeZERO is articulated in four phases:

- An **ANALYSIS** phase which provides (1) an analysis of existing delivery and return options and an understanding of how they are shaped by the needs and constraints of all involved stakeholders; (2) an in-depth intersectional analysis of various groups of on-line consumers to understand what are the features of delivery and return options making them attractive, with the aim to identify mechanisms to incentivize behaviour changes; and (3) develops an assessment framework to measure the impacts in the environmental, economic and social domains of new solutions.
- A **DESIGN** phase, in which CodeZERO engages in a co-design process involving retailers, transport operators, consumers and local authorities in developing (1) guidelines for retailers to raise awareness among consumers; (2) a set of zero-emission and sustainable delivery and return options for retailers and transport operators; and (3) a toolset for local authorities to accelerate the transition towards sustainable solutions in last mile consignments in e-commerce.
- A **TEST** phase running four pilots in four different European cities in Italy, Netherlands, Belgium, and Norway to test a set of sustainable solutions identified in the previous phase with the aim to prove their feasibility, to fine-tune their design and to assess their impacts from the perspective of all stakeholders.
- A **CONSOLIDATION** phase where (1) CodeZERO outcomes are fine-tuned based on the lessons learned from real life applications, (2) requirements for up-scaling of solutions at European level are discussed (3) recommendations are formulated and (4) directions for future research are outlined.

Engagement with consumers and retailers' associations, industry stakeholders, cities and researchers contributes to shaping project results.

Running from June 2024 to May 2027, CodeZERO is organized along eight WPs:

- WP1 Analysis of current delivery models
- WP2 Analysis of consumers' behaviour
- WP3 CodeZERO assessment framework
- WP4 Design of CodeZERO solutions
- WP5 Testing solutions: CodeZERO living labs
- WP6 Conclusions and recommendations
- WP7 Dissemination, communication and exploitation
- WP8 Project management.

One of the aims of CodeZERO is to develop communication guidelines that retailers, logistics service providers and carriers can use to promote sustainable delivery choices by online consumers.

1.2 Context for current Deliverable

Online shopping has become a central part of consumer purchasing patterns, with convenience and price often driving decisions (Nguyen et al. 2019; Buldeo Rai et al. 2018). However, as e-commerce continues to expand, the environmental and societal impact of delivery and return choices is becoming

increasingly significant (Ignat & Chankov 2020). Achieving a shift toward more sustainable consumption requires both the availability of greener delivery solutions and consumers actually choosing these options.

Interviews with consumers conducted in Tasks 2.2 and 2.3 and retailers' websites used in the exercise in Task 2.3 show that few sustainable delivery options are available and little information is provided to guide consumers toward them. This highlights the need for clearer and more prominent communication. This also points to a broader challenge: many retailers and carriers may lack knowledge, evidence-based insights, or strategies needed to present sustainability information effectively and to influence consumers toward more sustainable choices.

Closing this gap requires practical, evidence-based communication guidelines that can support the wider adoption of sustainable delivery practices. These guidelines should provide retailers and logistics partners with concrete tools and recommendations for communicating effectively throughout the customer journey—from product selection and checkout to delivery and returns.

To develop such communication guidelines, this Deliverable builds on findings from WP2 (Deliverables 2.1, 2.2, 2.3, and 2.5) and the conceptual model of influences developed in Deliverable 3.2. The guidelines will be tested in CodeZERO pilots and assessed in Deliverable 5.2, before being refined into a final version presented in Deliverable 6.1.

1.3 Aim, scope and structure

This Deliverable describes the guidelines on retailer communication with consumers on sustainable delivery developed under CodeZERO Task 4.3. Specifically, the Deliverable describes the development and refinement of practical communication guidelines that retailers, carriers and logistics service providers can use to encourage sustainable delivery and return choices among online consumers. It describes attempts to ensure that the guidelines are evidence-based and stakeholder-informed, and how the guidelines will be used and evaluated in CodeZERO pilots. Communication to consumers has been considered for the whole consumer journey, from how they learn about online offers, through online shopping and checkout to the actual delivery phase involving the carrier. No product types or types of online shops have been excluded. The focus, however, is on the most popular or known websites or on products most often shopped for online, such as sports items, electronics, food or books. In this Deliverable, the content of the guidelines was developed, while their usability will be enhanced through pilot testing by incorporating lessons learned from their application in real operational contexts.

The Deliverable is structured as follows:

- Chapter 2 describes the sources of information used in guidelines' development and the stakeholder Consultation Workshop held to verify and refine the guidelines.
- Chapter 3 sets out the evidence taken from each source and how it contributes to the development of consumer communication guidelines.
- Chapter 4 describes which considerations were taken in the development of the preliminary draft of the guidelines, how this draft was refined based on the Consultation Workshop and sets out Communication Guidelines Version 1.
- Chapter 5 provides important considerations for applying the guidelines.
- Chapter 6 explains how the guidelines will be improved in the future version, both through piloting and evaluation as well as by applying feedback collected during the Consultation Workshop.

2 Methodology

Two main sources were reviewed as basis for the development of communication guidelines: i) CodeZERO findings on consumer preferences and behaviour; and ii) existing literature and guidelines.

2.1 CodeZERO findings

Earlier CodeZERO project outcomes were reviewed and relevant ones selected to inform the development of the preliminary draft of the communication guidelines. These are:

- D2.1 Definition of consumer groups (Cauwelier et al. 2025)
- D2.2 Consumers' awareness and behavioural change (Pernot et al. 2025)
- D2.3 Consumers' real-time decision-making on delivery options (Phillips & Pernot 2025)
- D2.5 Quantitative analysis of consumer preferences (Cauwelier, et al. 2025)
- D3.2 Assessment framework for consumer's behaviour change (Pernot & Phillips 2025)
- Notes made by the pilot leaders (TNO for Utrecht, TOI for Oslo, TRT for Milan and VUB for Antwerp) from workshops on co-design of delivery solutions conducted in the four pilot cities.

D2.1 and D2.5 informed on how to communicate choice of sustainable delivery options in ways that account for consumer attitudes, motivations, preferences and priorities. The model of influences on consumer choice of delivery option elaborated in D3.2 was used to structure the guidelines around three paths of influence on consumer choice. Notes from co-design workshops were reviewed to incorporate input from project partners, particularly retailers and carriers, on potential communication strategies to address the challenges they currently face. These workshops served as an initial brainstorming opportunity, allowing stakeholders to suggest practical interventions based on their operational realities. Gathered ideas helped ensure that communication strategies proposed in the guidelines account for stakeholder challenges and needs.

2.2 Literature and existing guidelines on consumer communication strategy

A review of the literature on behavioural change, decision-making and “nudging” theories was conducted in CodeZERO D3.2 for developing the model of factors influencing consumer delivery choice. Frameworks for evaluating the *effect* of communication on sustainable behaviour were also reviewed. Behavioural insights from these reviews were already incorporated into the structure of the model of factors influencing consumer delivery choice. Therefore, literature specifically focusing on effective communication strategies was reviewed for drafting the communication guidelines presented in this deliverable. This ensured that the guidelines instruct retailers not only on how to convey information to influence consumer choice but also on how to convey that information effectively. This review was conducted between April and June 2025 through three different searches to identify:

- Literature on how to communicate on sustainable consumption,
- Existing guidelines and communication policies,
- Literature on choice architecture.

2.2.1 Literature on how to communicate on sustainable consumption

Literature on how sustainable consumption should be communicated was identified by entering in Google Scholar the following search string for the years between 2020 and 2025: [sustainable OR sustainability] AND consumption AND communication AND ["meta analysis" OR "systematic review" OR guidelines]. This resulted in 43,300 hits. The first 500 hits were reviewed for relevance, in most cases by clicking on hypertext to obtain abstract and main text of the article. Out of these, 16 were selected for further scrutiny based on their relevance and importance: 2 meta-analyses, 12 articles' review, 1 bibliometric analysis, and 1 hybrid review (bibliometric + content analysis).

2.2.2 Existing guidelines and communication policies

Existing guidelines on *how* to communicate on sustainable consumption were retrieved in a separate Google search by using the string: "sustainable consumption" AND communication AND guidelines. Reviewing the first 500 hits as above and setting as a selection criterion the need to contain relevant guidelines on how to communicate to consumers about sustainable consumption, the search gave four hits. Two documents were published by the United Nations, one by the European Union, and one was a guide on sustainable communication in the fashion industry.

2.2.3 Literature on choice architecture

"Choice architecture" refers to the different ways consumer choices can be structured in supermarkets, online and in other consumer environments. It is important because the way choices are presented affects choices that are made. Choice architecture is often discussed along with nudging, as both describe attempts to influence consumer choice without affecting consumer freedom to choose between options. Setting sustainable options at the top of a list is a way of influencing consumers by changing the choice architecture or nudging.

To capture literature on choice architecture and nudging, Google Scholar was queried with the following phrases:

- "choice architecture" AND consumer AND "sustainable consumption" AND "delivery options"
- ["choice architecture" OR interface OR nudging] AND [review OR "meta-analysis"] AND consumer AND sustainable
- ["choice architecture" OR interface OR nudging] AND [review OR "meta-analysis"] AND consumer AND sustainable AND "delivery options"

For all three searches, only papers published between 2020 and 2025 were considered. The first search yielded 30 results, out of which only two were deemed relevant. The second search returned 2,870 references: the first 500 were screened, and two relevant papers were identified. The final search produced 21,200 results: again, the first 500 were reviewed, and seven publications were considered relevant.

2.3 Consultation Workshop

2.3.1 Why a stakeholder workshop

To ensure the relevance and practicality of the proposed communication guidelines for retailers and carriers, a stakeholder workshop was organised. Participants included retailers and carriers already engaged in the project, as well as representatives from European-level associations of retailers, carriers, and consumers, recruited through the project's advisory board as well as other retailer representatives at European level from the consortium network.

The aim of the workshop was to gather structured feedback on the preliminary draft of communication guidelines from practitioners and stakeholders with real-world experience. The workshop was set up to assess whether the guidelines were understandable, applicable across different operational contexts, and aligned with consumer expectations. It also aimed to identify potential challenges in implementing the recommendations - whether technical, organisational, or related to communication practices. Based on the data collected during the workshop, the guidelines' draft was then refined into Communication Guidelines Version 1 presented in Chapter 5.

2.3.2 Workshop set-up

The workshop was organised on Teams on 18 June 2025, from 09:00 to 12:00 CET. The event gathered 21 participants from the organisations listed in Table 1.

Table 1: Workshop participants mapping

Organization	Stakeholder type / Interest represented	Participation	Number of representatives
Torfs	Retailer	CodeZERO partner	1
Jumbo	Retailer	CodeZERO partner	1
Ikea	Retailer	CodeZERO partner	2
BPost	Carrier	CodeZERO partner	1
Netcomm	Retailer	RIAB	1
ASTER	Multi-interest	Invited guest	1
Svensk Handel	Retailer	Invited guest	1
EIT Urban Mobility	Multi-interest	RIAB	2
ALICE	Carrier	RIAB	1
UNIMIB	Consumer	RIAB	1
Testachats	Consumer	RIAB	1
TRT	Subject matter expert	CodeZERO partner	2
VUB	Subject matter expert	CodeZERO partner	1
TNO	Subject matter expert	CodeZERO partner	1
TOI	Subject matter expert	CodeZERO partner	2
Eurocities	European cities	CodeZERO partner	2
		TOTAL	21

At the beginning of the workshop, CodeZERO findings on delivery choice by online consumers were presented as a main basis for development of the communication guidelines (see Chapter 0 and slides in Annex A). This helped setting the scene for presenting the draft guidelines organized into four thematic clusters (see Annex B). Participants were then divided into four groups, each supported by a facilitator. To ensure that feedback from representatives of retailers, carriers and consumers was collected, one group brought together researchers and WP leaders, while the remaining groups combined retailers, carriers, RIAB members, and representatives of retailers, carriers, and consumers. The draft guidelines were discussed during breakout sessions organized into two different activities.

2.3.2.1 First activity: feedback on usability and completeness

Each group was tasked with discussing the draft guidelines in two parts:

- A. Each group was asked to consider the whole set of guidelines, and discuss along the following questions:
 - Is the set of guidelines complete? Are there any elements you feel are missing?
 - Do you have any other expectations that have not been met?
 - Do you have ideas for improving the guidelines?

- B. Each of group was asked to focus on one of the four clusters of guidelines, and discuss along the following questions:
- How easy or difficult are the guidelines to understand?
 - A detailed review of the text and examples of each guideline.
 - What could help improve clarity or understanding?

2.3.2.2 *Second activity: applying guidelines to a scenario*

In the second main activity, each group was given a scenario (see Annex C) and asked to brainstorm on how the five communication guidelines from the same cluster discussed in the previous activity, could be *applied* to influence consumer behaviour.

The groups explored:

- What communication interventions or messages could be suggested?
- Where and how should these messages be delivered (e.g. checkout page, email, packaging)?
- How different stakeholders (retailers, carriers, marketers) could contribute?

In addition, groups were asked to provide feedback on:

- How easy or difficult it was to apply the guidelines.
- Possible solutions to challenges encountered.
- Any missing guidelines they felt should be added.

2.4 Use of AI

The authors carried out all conceptual development, chose and applied the used methods, analysed and developed the findings from literature review and workshop. ChatGPT 4.0 was used to generate initial ideas for clustering the findings from the document review, written by authors in the main body of the report, which were then extensively developed by the authors. ChatGPT also helped summarize the report for the Abstract and Executive Summary. All outputs have been verified by the authors.

3 Evidence for guideline development

This section reviews the evidence used to build the draft guidelines for retailers and carriers on how to communicate with online consumers to get them to choose more sustainable delivery options.

3.1 Influences on consumer delivery choice

The following summarizes information taken from three key CodeZERO Deliverables looking at influences on choice of delivery solution by online consumers.

3.1.1 The need to consider consumer diversity

CodeZERO Deliverable 2.1 (Cauwelier, Lebeau, et al. 2025) identifies four personas:

- Pro-sustainable consumers who:
 - o are highly aware of sustainability issues
 - o can choose sustainable delivery options
 - o often align their choices with environmental values.
- Ignorant consumers who:
 - o lack awareness of sustainability issues
 - o are limited in the extent to which they can choose sustainable delivery options.
- Uncommitted consumers who:
 - o can choose sustainable delivery options, but
 - o lack motivation.
- Careless consumers who:
 - o are disengaged
 - o lack motivation
 - o are limited in the extent to which they can choose sustainable delivery options.

While the use of personas can support the design of tailored communication strategies based on consumer types, it has some limitations. Personas are simplified models that often fail to capture the full complexity and situational variability of online consumer behaviour. They are valuable because they illustrate how diverse consumer preferences are, but they are not meant as a basis for prescribing one type of communication per consumer group. This suggests that retailers should use a plurality of communication approaches when communicating to consumers about sustainable delivery options.

3.1.2 Consumer awareness and behaviour change

CodeZERO Deliverable 2.2 (Pernot et al. 2025) highlights several insights that are relevant to the design of effective communication strategies. One of the key findings is that consumers vary significantly in their knowledge about the sustainability impacts of e-commerce deliveries. This underscores the need to build general awareness among consumers, especially as increased awareness can positively influence the choices of consumers who already hold pro-sustainability values. However, the study also reveals that retailers and public authorities currently play only a limited role in informing consumers, and that many consumers are sceptical of sustainability claims made by retailers. This lack of trust points to the need for communication strategies that are transparent, credible, and when possible, supported by independent verification.

The report also stresses that consumers are motivated by different values related to sustainability: some consumers are driven primarily by environmental concerns, while others are more responsive to social concerns. Communication guidelines should therefore include varied framing strategies that speak to these diverse motivations and tackle all sustainability dimensions.

Importantly, D2.2 identifies major life events - such as moving to a new neighbourhood, starting a new job, or changes in family structure - as critical moments where consumers are more open to changing their delivery habits. These events often bring new logistical opportunities (for example, access to parcel lockers in the new neighbourhood) and can trigger a broader reconsideration of consumption patterns. In particular, becoming a parent is often associated with a shift toward more sustainable consumption behaviours. Communication strategies should therefore align with key transition points in consumers' lives by targeting moments when they are more likely to adopt new habits and consider sustainable delivery options.

In short Deliverable 2.2 informs that:

- Retailers should openly tell consumers about how different e-commerce deliveries impact sustainability.
- Reach more consumers by making clear different sustainability impacts of different delivery options (environmental, social etc.).
- Retailer messages should be credible (e.g. verified by third party).
- Retailers should consider how to target consumers during key life transitions.

3.1.3 Consumer delivery choice in real-world situations

This deliverable presents findings from interviews where participants used real online platforms in a speak-aloud exercise (Phillips & Pernot 2025). The main relevant findings were:

- Sustainability information was rarely visible on the platforms, leaving participants unaware of the societal impact of delivery choices.
- Many participants said they would accept higher costs, or inconvenience for sustainability reasons, if such options were clearly presented. Guilt that emerged during interviews as participants became aware of the effects of their everyday delivery choices supported the idea that consumers could be open to changing choice of delivery option.
- Consumers typically relied on familiar platform layouts, using cues like delivery cost, delivery method, time slots, return options, and icons. However, these cues mostly emphasized cost and convenience, not sustainability. This left consumers unsure how to identify sustainable choices.
- Instead of systematically comparing options, participants often evaluated one option at a time, choosing what seemed familiar, convenient, or workable within their personal schedules. Participants evaluated out-of-home delivery options by envisaging the collection process. Cost and control over timing and location were key factors.
- Negative delivery experiences were often blamed on third-party carriers, not retailers. Retailers' efforts to promote sustainable options could therefore be hindered if those options are experienced negatively by consumers in practice. Past delivery experiences shaped delivery choices by participants, stressing the importance of this point.
- Participants experienced product pages as more user-friendly and intuitive than delivery option pages.

Based on the above, the following conclusions guided the development of the communication guidelines:

- Consumers may overlook sustainable options if they are included in a list of options to be evaluated. If a sustainable option cannot be made default, it should appear first and/or be made appealing to consumers (use of labels, colours etc.) so that it is evaluated.
- Consumers will search for and expect to find familiar cues that they can use to evaluate a sustainable delivery option; when new cues are introduced (e.g. eco-label) they should be clearly and simply explained. Retailers could introduce cues that show the relative sustainability of different options using familiar labels/icons or simple facts, for instance about:
 - relative emissions used (e.g. "less emissions with this option")

- type of vehicles or energy sources used in delivery, or
- start location of the product or distance to transport it from current location etc.
- Retailers should make consumers *deliberate* about delivery sustainability by exploring use of e.g.:
 - simple messages e.g. “we drive fewer km” next to time slot or “we can deliver more parcels together and save on emissions if you wait x days for delivery”.
 - eco-labels next to delivery option or time slots.
 - rank delivery options or timeslots by sustainability score or relative distance travelled by truck for each option.
 - promote pick-up from workplace.
 - listing nearby shops with product in stock.
- Since consumers will evaluate out-of-home delivery options by envisaging the collection process, the sustainable delivery solution should convey collection know-how. Retailers should assist this process with (layered) information, e.g. clear, simple explanation of how parcel lockers work, interactive maps showing the location of collection points in relation to home, with options for travel.
- If they choose a sustainable option, consumers should experience them as positive. Retailers should therefore work with carriers to:
 - meet consumer expectations for delivery time, communication during delivery, delivery location, returns, carrier behaviour, package and customer control during delivery
 - ensure consumer kept “in-the-loop” during physical delivery process.

Similarly, retailers should address consumer barriers to choosing sustainable delivery options, e.g.

- new delivery options with explanation and transparency
- address the fact that consumers:
 - can feel forced to choose express delivery even when they are willing to wait (which would be more sustainable)
 - can feel forced to choose inconvenient pick-up points
 - can perceive that carriers delivering most sustainable option are low quality
 - can be distracted from choosing sustainable delivery by marketing information on the website.
- Retailers could explore whether coherent messages could be communicated across the delivery ecosystem or consumer journey, e.g.: in-store advertising of eco-labelled delivery options; messages from carrier apps thanking the consumer for choosing an eco-labelled delivery option; messages on carrier vans or cargo bikes that are consistent with those on platform; sustainability message included in package.
- Consumers value an intuitive, elegant interface design so retailers should work to develop the delivery choice menu and interface to address its useability and usefulness.
- Delivery information should be complete, accurate and up to date (e.g. opening times of pick-up points).

These conclusions require retailers to work on better informing consumers on relative sustainability of different options such as using innovative interactive communication on sustainable delivery solutions, e.g. get information from consumers about transport means used to reach collection points to give them feedback on emissions saved by choosing sustainable delivery.

In short, many online consumers often focus on one or two preferred options when choosing delivery. They assess if it works for them by reviewing the terms and collection process and, if it works for them, they choose it often without having considered other options. Retailers should therefore ensure that consumers do not overlook the sustainable delivery option by means given above. To change choice of delivery option, consumers need to:

- be made aware that they are about to select between options that have different sustainability impacts
- know what those impacts are
- know how to identify the most sustainable option
- be able to assess the ensuring delivery and collection process
- experience delivery as positive.

3.1.4 Key drivers of delivery preferences from consumer survey

Based on a large-scale online survey (10,092 respondents), CodeZERO Deliverable 2.5 (Cauwelier et al. 2025) confirms that delivery price is the most decisive factor shaping consumer preferences. However, the second most important driver is the 'delivery partner & ethics'. This attribute combines the type of delivery partner (e.g. national postal service, app-based delivery partners) as well as information on the environmentally friendliness and the working conditions of the personnel involved (see Figure 1). The prominence of this factor highlights a clear opportunity for influencing consumer choices through improved communication about the sustainability and ethical dimensions of delivery options.

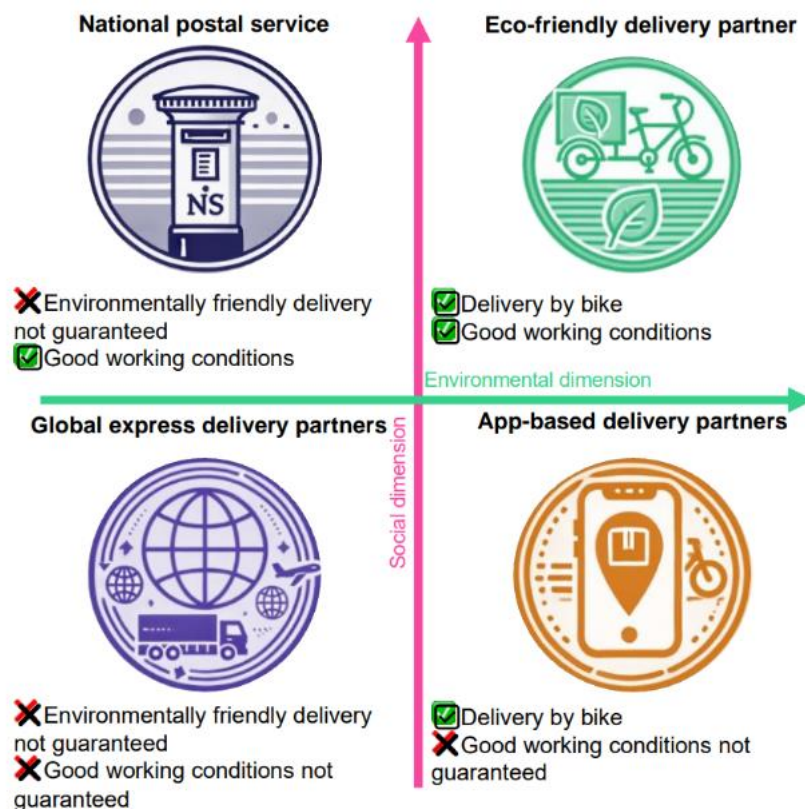


Figure 1: Four delivery partners and ethics as used in the large-scale consumer survey (from D2.5)

D2.5 also shows that the structure of consumer decision-making is consistent across different product types, including non-food items, food, and circular products. In each case, consumers prioritize delivery price, followed by delivery partner & ethics and then delivery location. Moreover, these decision-making patterns are broadly consistent across different European countries, suggesting that communication strategies developed based on these insights can be applied at a transnational level without major adaptation.

These findings emphasise the importance of engaging messaging that not only addresses cost, but also makes visible the ethical and environmental value of delivery options. By highlighting these aspects,

communication efforts can appeal to a broader range of consumer motivations and encourage more sustainable delivery choices.

3.2 Conceptual model of influences

D3.2 (Pernot & Phillips 2025) reviews literature on behavioural change, decision-making and “nudging” theories, as well as relevant CodeZERO findings, to develop a framework to structure the evaluation of retailer communications on sustainable delivery options (Figure 2).

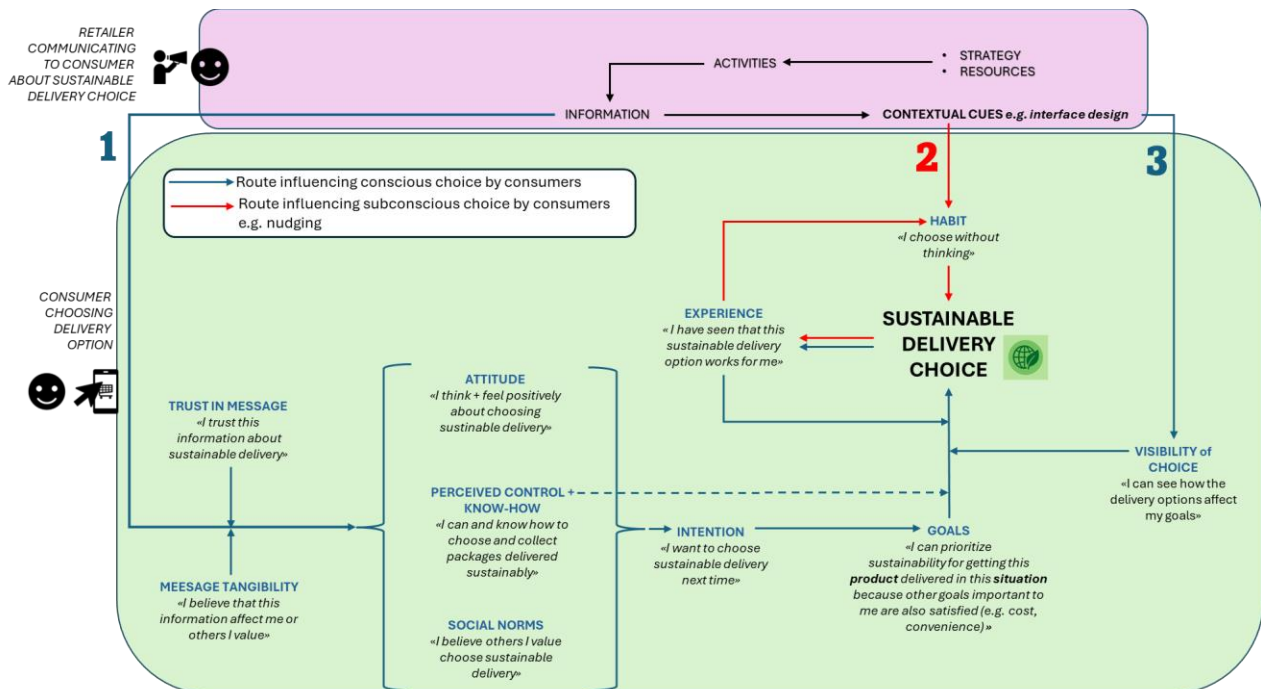


Figure 2: Model of how communications influence choice of delivery option by consumer.

This framework is effectively a model of different ways in which retailer communications can influence consumer choice of delivery option and is a potentially useful tool for those designing and developing communications to consumers about sustainable delivery. It says that there are three main routes of influence for communications:

- 1. Increase consumer intention to choose sustainable delivery** by using trusted, tangible messages to change consumers attitudes, inform consumers about how many others value or choose sustainable delivery (“social norms”), or increase consumers’ perceived ability to choose and collect using sustainable delivery.
- 2. Increase instinctive choice of sustainable delivery** by changing choice architecture, e.g. make sustainable delivery option default.
- 3. Increase visibility differences between delivery options** since, on deliberate consideration of options, consumers need to see clear differences between them so that these can be assessed in relation to valued goals (e.g. cost, convenience, sustainability).

Preferably, all three routes should be addressed by retailer communications. In this way retailers or others wishing to increase sustainable delivery choices will:

- reach those consumers who choose habitually *and* those who choose deliberately
- not only increase intentions to choose sustainable delivery, but translate those intentions into actual choices, by making clear how sustainable options address all goals that the consumer may value
- consider the effect that past experience has on choice of delivery option.

3.3 Insight from the co-design workshops

Co-design workshops conducted in CodeZERO four pilot cities (as part of WP4) offered valuable opportunities to gather practical insights from retailers and carriers on how to communicate with consumers, and challenges involved in doing so. While the emphasis on communication varied across pilots, several relevant themes emerged that also inspired the development of the communication guidelines. While these themes do not directly add evidence on how retailers should communicate with consumers on sustainable delivery, they give insight into how the evidence-based communication can be done in practice, and retailer constraints that should be attended to in the development and application of guidelines.

Relevant insights extracted by city can be summarised as follows¹:

Oslo

- Avoid overloading consumers with choice: too many options at checkout can discourage decision-making or cause consumers to default to unsustainable options.
- Costs should be transparent and preferably combat the assumption that eco-friendly means expensive.
- Remember that retailers need to compete. Consumers may shift to retailers with more convenient or cheaper delivery so avoid presenting sustainable options as second-best.

Milan

- Contrast the harm of unsustainable choices with benefits of good ones.
- Use multi-channel communication strategy, e.g. websites, postcards, and leaflets to reach and engage different consumer types.
- Visual aids: Icons, labels, and colours enhance understanding and guide choices.
- Highlight emission savings: provide concrete, positive environmental impact data.
- Increase the visibility of delivery by making the delivery method, time, and impact visible during the purchase process.
- Reward delivery choice (= positive experience), e.g. post-purchase thank-you notes can reinforce behaviour.

Antwerp

- Ecological impact score: show an environmental score for each delivery method.
- Ways to reward delivery/return choice (= give positive delivery choice experience):
 - give loyalty points or prizes for eco-friendly choices and fewer returns.
 - citizen involvement in parcel locker placement and use
 - reward parcel locker choice using:
 - factory tours, gifts
 - clearly signed, well designed and easy-to-use experience
- Price incentives: lower costs for sustainable options.
- Reward sustainable choices through storytelling, engagement, and soft influence rather than penalizing unsustainable choices.
- Promote active pick-up: encourage walking or biking to lockers or pick-up points.

¹ Utrecht – No Relevant Input

3.3.1 Key implications for the guidelines

Assuming these insights represent ideas and concerns of experienced practitioners, they suggest the communication guidelines should address the following key areas:

- Use multiple channels (digital and physical) to reach diverse audiences
- Integrate eco-data visually and consistently across platforms
- Make sustainable choices simple, avoiding complexity at checkout
- Reward consumers for sustainable choices, following up with a positive delivery experience
- Present sustainable options as the default or equally attractive choice
- Encourage behavioural shifts through gentle nudging, gamification, and community involvement, not guilt or friction.
- Use pricing, visual cues, and concrete data (e.g. CO₂ data) to inform and empower consumer choice.

The insights gathered from the co-design workshops also shed light on how stakeholders, particularly retailers and carriers, envision effective communication strategies. They provide a window into the types of approaches these actors are already familiar with, trust, or are inclined to prioritise. Just as importantly, the absence of certain suggestions reveals potential blind spots or areas where additional support or innovation may be needed. These discussions help understand where stakeholders would naturally place emphasis when it comes to consumer communication. Notably, there was a strong interest in nudging techniques such as setting default options, offering price incentives, and using gamification elements like rewards, thank-you messages, loyalty points, and playful experiences.

3.4 Document review

So far, findings from earlier CodeZERO tasks exploring influences on *delivery choice* by consumers and how to evaluate communication efforts aimed at changing those choices were considered. However, established knowledge on effective communication strategies for increasing *general sustainable choices* by consumers also exists. In this section we account for this knowledge in relation to previous CodeZERO findings as a basis for describing how the communication guidelines were developed.

The combined findings can be structured as four themes that retailer communications should address:

- Communicate clearly and credibly
- Shape consumer delivery choice environment
- Use messages that matter
- Align and support sustainability messaging.

3.4.1 Communicate clearly and credibly

Table 2 summarizes how existing guidelines and systematic literature reviews emphasised the need for retailers to communicate openly, clearly and credibly with consumers.

Table 2: Guideline input derived from literature to communicate clearly and credibly to consumers

Source type	Guideline input	Specific source
Systematic review of evidence of effective sustainable consumption communication	Trust in sender of message increased by authenticity and transparency (e.g. supply chain transparency)	(Golob et al. 2023)
	Trust in claims and perceived quality of product are important to consumers	(Sharma 2021)
	Clear and easy-to-understand eco-labels more likely to result in sustainable choices	(Majer et al. 2022)
	Eco-labels help increase retailer attractiveness and, if linked to the product, product attractiveness; certification and trusted eco-labels could enhance consumer trust and product credibility	(Majer et al. 2022; García-Salirrosas & Rondon-Eusebio 2022)
	Simplified and standardized labels enhance consumer understanding and trust.	(Cook et al. 2023)
Existing SCC Guidelines	Claims should be reliable (accurate, verifiable) or certified by recognized body; clear (e.g. avoid vague terms, “eco-friendly”), transparent (sources underlying claims made clear).	(United Nations Environment Programme 2023)
	Standardize sustainability information across platforms	(United Nations Environment Programme & Adelphi 2021)
	Layer information – basic details up front with options to access more in-depth information	(United Nations Environment Programme & Adelphi 2021)
	Regulatory considerations – Comply with EU regulations against misleading or vague claims and on use of eco-labels (must be based on certified scheme)	(European Union 2024)
	Be transparent by sharing progress and challenges; avoid greenwashing	(Arthur 2023)

Some of the findings on the need to avoid consumer mistrust and perceptions of greenwashing (e.g. Arthur 2023) and on using clear and easy-to-understand eco-labels (e.g. Majer et al. 2022) are underpinned by CodeZERO findings (e.g. Pernot et al. 2025; Phillips & Pernot 2025; Pernot & Phillips 2025). Building on this combined evidence base, the following elements were included in the communication guidelines:

- Clarity and specificity: communication should avoid vague claims like “eco-friendly,” focusing instead on precise, verifiable messages that strengthen credibility and trust from UNEP (2023) and Sharma (2021).
- Simple explanations of new cues: Majer et al. (2022), García-Salirrosas & Rondon-Eusebio (2022) and Cook et al. (2023) showed that simplified, standardized eco-labels increase consumer understanding and sustainable choices, which implies the need to explain new symbols in clear, non-technical language.
- Reliability of claims: Golob et al. (2023), Arthur (2023) and UNEP (2023) highlighted the importance of authenticity, transparency, and verifiable evidence.
- Layering of information: based on UNEP & Adelphi (2021), essential sustainability details need to be displayed upfront, with deeper layers available for consumers who want to explore methodology and evidence further.

- Cook et al. (2023), UNEP & Adelphi (2021), and EU regulation (2024) advocate for the use of standardized, EU-approved eco-labels and formats instead of creating proprietary icons, to ensure comparability, compliance, and trust.

3.4.2 Shape choice environment

Table 3 summarizes how existing guidelines and systematic reviews in literature emphasised the value of shaping the online choice environment that consumers face when choosing delivery (cf. discussions of choice architecture above).

Table 3: Guideline input derived from literature to shape consumer online choice environment

Source type	Guideline input	Specific source
Systematic review of evidence of effective sustainable consumption communication (SCC)	Visual cues and symbols more effective than text at conveying sustainability messages. Education can improve label comprehension.	(Cook et al. 2023)
	Nudges, such as default options and prompts, effectively guide consumer choices.	(Abrahamse 2020)
	Clear and easy-to-understand eco-labels more likely to result in sustainable choices.	(Majer et al. 2022)
	Eco-labels help increase retailer attractiveness and, if linked to the product, product attractiveness; certification and trusted eco-labels could enhance consumer trust and product credibility.	(Majer et al. 2022; García-Salirrosas & Rondon-Eusebio 2022)
	There is a shift towards interactive communication through use of social media engagement – can foster community and brand loyalty and generate data for future communications (e.g. learn how consumers travel to collection point to estimate reduced emissions).	(Golob et al. 2023; García-Salirrosas & Rondon-Eusebio 2022)
	Simplified and standardized labels enhance consumer understanding and trust.	(Cook et al. 2023)
Existing SCC Guidelines	Claims should be accessible (sustainability information should be available to consumers at the point of decision-making).	(United Nations Environment Programme 2023)
	Present information in a way that allows consumers to compare options.	(United Nations Environment Programme 2023)
	Innovate on creative ways to communicate with consumers (e.g. gamification, storytelling).	(United Nations Environment Programme 2023)
	Incorporate features like infographics, icons, and interactive elements to enhance understanding.	(United Nations Environment Programme & Adelphi 2021)
	Capture attention – place sustainability information prominently on consumer pages.	(United Nations Environment Programme & Adelphi 2021)

Source type	Guideline input	Specific source
Literature on choice architecture	Default settings and interface-based nudges that guide user behaviour without restricting freedom of choice are efficient.	(Mertens et al. 2022)
	Efficient nudges should operate during an action (e.g. default settings) or after an action (e.g. feedback combined with social norms).	(Zimmermann et al. 2021)
	Effective types of nudges are: feedback, social reference, default and framing.	(Beermann et al. 2022)
	AI-powered personalization of interface is a tool that can help shape consumer behaviour.	(Raji et al. 2024)

From this evidence base, the following elements were extracted and included in the guidelines:

- Visual salience of sustainable options: Cook et al. (2023), UNEP & Adelphi (2021), and Majer et al. (2022) show that visual cues such as labels, icons, badges, and highlights are more effective than text in conveying sustainability, and that clear positioning helps capture consumer attention.
- Research on nudging (Abrahamse 2020; Mertens et al. 2022; Beermann et al. 2022) highlights the role of prompts and feedback in encouraging consumers to reconsider habitual choices, while Zimmermann et al. (2021) emphasize that nudges can be effective both during and after an action.
- Comparability between options: UNEP (2023) stresses the need to make sustainability information accessible and comparable at the point of decision-making. CodeZERO results further confirm that visibility and comparability are key for delivery solutions (Phillips & Pernot 2025; Pernot & Phillips 2025).

UNEP (2023) and UNEP & Adelphi (2021) underline the value of consumer-focused and innovative communication, including interactive elements. Golob et al. (2023) and García-Salirrosas & Rondon-Eusebio (2022) further show that positive, interactive experiences can strengthen consumer loyalty and reinforce sustainable behaviour.

3.4.3 Use messages that matter

Table 4 summarizes how existing guidelines and systematic reviews in the research literature emphasised the need to use messages that were tangible to consumers, conveying importance by relevant to their real-life contexts—in other words, messages that matter.

Table 4: Guideline input derived from literature to use messages that matter to consumers

Source type	Guideline input	Specific source
Systematic review of evidence of effective sustainable consumption communication (SCC)	Where feasible, target specific audiences with tailored messages to enhance effectiveness.	(Fischer et al. 2021)
	Effective communication strategies often leverage social norms.	(Sesini et al. 2020; Zhang & Dong 2020; Abrahamse 2020)
	Consumers can be persuaded to change their attitudes by combining emotional appeals that avoid use of fear or shock with educational facts.	(Golob et al. 2023; Zhang & Dong 2020; Yadav et al. 2024)

Source type	Guideline input	Specific source
	Sustainable delivery options included in storytelling highlighting retailer's sustainability values, could resonate with consumers.	(Ray & Nayak 2023)
	Pointing out how choice empowers consumers to improve sustainability in tangible ways could be effective	(Haider et al. 2022; Zhang & Dong 2020)
	Interventions that address consumer's specific life contexts, values and concerns are more likely to result in long-term changes of behavior.	(Bergquist et al. 2023; García-Salirrosas & Rondon-Eusebio 2022; Sharma 2021)
Existing SCC Guidelines	Claims should be relevant (= tangible, pertaining to significant environmental, social or economic aspects of the "product").	(United Nations Environment Programme 2023)
	Sustainability information should address the three dimensions of sustainability (environmental, social and economic impacts).	(United Nations Environment Programme 2023)
	Account for the diversity of audiences receiving message.	(Arthur 2023)
Literature on choice architecture	Combining two types of message framing (among positive-negative, self-other, abstract-concrete) is effective in promoting SCB.	(Florence et al. 2022)

From this evidence base, the following elements were extracted to draft the guidelines:

- Haider et al. (2022) and Zhang & Dong (2020) show that consumers are more receptive when choices are linked to tangible, relatable outcomes that demonstrate empowerment. UNEP (2023) stresses that claims should be relevant, focusing on significant impacts.
- UNEP (2023) emphasizes that communication should address environmental, social, and economic impacts, while CodeZERO confirms the importance of including these multiple dimensions. This is also aligned with Arthur (2023), who highlights the need to account for diverse audiences.
- Research demonstrates the effectiveness of using what others do and value to influence behaviour (Sesini et al. 2020; Zhang & Dong 2020; Abrahamse 2020). CodeZERO findings (Pernot & Phillips 2025) further confirm that social reference points can guide sustainable delivery choices.
- Appealing to emotion as well as rationality: Studies show that emotional appeals, especially when combined with facts, are persuasive without resorting to fear or shock (Golob et al. 2023; Zhang & Dong 2020; Yadav et al. 2024). Storytelling that highlights retailer values and real courier experiences can resonate strongly with consumers (Ray & Nayak 2023).
- Evidence indicates that messages are more effective when they speak to consumers' specific contexts, values, or life changes (Bergquist et al. 2023; García-Salirrosas & Rondon-Eusebio 2022; Sharma 2021). CodeZERO findings (Pernot et al. 2025) also suggest that life transitions such as moving house or starting university are particularly promising moments to encourage sustainable delivery habits.

3.4.4 Align and support sustainability messaging

Table 1Table 5 summarizes how existing guidelines and systematic reviews in literature emphasised the need to use messages that were tangible to consumers, conveying importance by relevant to their real-life contexts.

Table 5: Guideline input derived from literature to align and support sustainability messaging

Source type	Guideline input	Specific source
Systematic review of evidence of effective sustainable consumption communication (SCC)	Collaborations with influencers and community engagement initiatives amplify message reach.	(Ray & Nayak 2023)
	Feedback on sustainability of past actions can influence future sustainable actions.	(Bergquist et al. 2023)
	Consistency in messaging / simplified and standardized labels across platforms strengthens brand credibility and trust.	(Yadav et al. 2024; Cook et al. 2023)
	Effective communication should include enhancing perceived benefits and reducing perceived barriers.	(Zhuang et al. 2021)
	There is a shift towards interactive communication through use of social media engagement – can foster community and brand loyalty and generate data for future communications (e.g. learn how consumers travel to collection point to estimate reduced emissions).	(Golob et al. 2023; García-Salirrosas & Rondon-Eusebio 2022)
Existing SCC Guidelines	Communication should encourage consumers to adopt more sustainable behaviour over time, not just make one green choice.	(United Nations Environment Programme 2023)
	Use multiple communication channels (e.g. packaging, websites, mobile apps, carrier apps, social media).	(United Nations Environment Programme 2023)
	Collaborate with other actors (suppliers, NGOs, certification bodies) to ensure consistent and harmonized sustainability information.	(United Nations Environment Programme 2023)

From this evidence base, the following elements were extracted to be integrated in the guidelines:

- Alignment across channels and consumer journey: UNEP (2023) emphasizes using multiple channels — from packaging to apps and social media — to ensure consistent messaging throughout the consumer journey. Yadav et al. (2024) and Cook et al. (2023) show that standardized, consistent communication strengthens brand credibility and trust.
- Evidence suggests that communication should reduce perceived barriers to sustainable actions (Zhuang et al. 2021) by providing clear, user-friendly instructions and tools. This is confirmed by CodeZERO (Phillips & Pernot 2025).
- Communication should support ongoing sustainable practices, not just one-off choices (UNEP, 2023). Bergquist et al. (2023) show that feedback on past sustainable actions motivates future behaviour, helping to build long-term habits.
- UNEP (2023) underscores the need for collaboration with other actors such as carriers, NGOs, and certification bodies to ensure harmonized and credible messaging. Ray & Nayak (2023) add that working with influencers and community initiatives can amplify reach, while Golob et al. (2023) emphasize the potential of interactive tools and social engagement.

3.4.5 Literature findings in context

In reviewing available literature, efforts were made to quantify the relative impacts of different communication strategies on consumer choices. However, this proved unfeasible due to the wide diversity of interventions studied, the heterogeneity of research settings, and the varying consumer behaviours examined across existing systematic reviews. For instance, Bergquist et al. (2023) identified social comparison and financial incentives as having the strongest effects on promoting sustainable consumption, though these effects differed substantially depending on the specific behaviour targeted. A further complication is the early stage of research specifically addressing e-commerce delivery choices. Delivery systems are evolving rapidly, and empirical evidence on how communication influences consumer decisions in this particular context remains limited (e.g., Thelen et al. 2024).

Given these limitations, the current review shifted focus toward a qualitative assessment of communication measures that should be considered in future guidelines. Despite the lack of robust quantitative evidence, there was a notable alignment between findings in the broader literature on sustainable consumption and insights from the CodeZERO research, which specifically addresses online consumer delivery choices. This convergence suggests that qualitative evidence from both sources provides a valuable foundation for developing effective communication guidelines aimed at shaping more sustainable delivery choices in e-commerce.

4 Developing the guidelines

This section describes the guidelines developed for communicating to consumers on sustainable delivery using the evidence reviewed in Chapter 3. It describes how the preliminary draft was generated, verified and refined using the consultation workshop.

4.1 Developing the preliminary guidelines

4.1.1 Structure and scope of the guidelines

The following considerations were made to scope and structure development of the guidelines.

The guidelines:

- Are intended for retailers and carriers who wish to raise awareness and encourage consumers to choose sustainable delivery and return options in the context of e-commerce. Specifically, they are for European retailers across different sectors and product flows in improving how they communicate with customers about sustainability in logistics.
- Should consider the need for retailers and carriers to integrate sustainability messaging along the entire customer journey. This includes communication across touchpoints such as the website, checkout interface, confirmation emails, carrier apps, delivery vehicles, courier interactions, and packaging. By embedding consistent and well-framed messages at these stages, businesses can effectively guide consumers toward sustainable choices.
- Should serve as a tool to facilitate internal collaboration among marketing teams, web designers, logistics managers, and sustainability officers.
- Should provide a shared framework for aligning communication strategies with the three routes by which communications can influence delivery choice by online consumer (see section 3.2): Influence consumer's attitude and intention; influence more habitual choices using nudging; and make clear how delivery options differ.
- Should be practical by being simple, adaptable and illustrative. They should include concrete examples to spark inspiration and clarify how the principles can be applied in practice. These examples should not be prescriptive, and users should be encouraged to adapt and expand upon them to suit their own operational context and customer base.

4.1.2 Preliminary draft

The preliminary draft of communication guidelines was developed in a series of meetings between the authors of this Deliverable and in a meeting with core project partners. This involved several iterations in which the evidence base presented in Chapter 3 was reviewed and guidelines identified. Specific links made between the evidence base and communication guidelines are as explained in Chapter 3. During the development of the guidelines, it also became clear that they could be usefully arranged into the four themes used to arrange the findings from the review of existing guidelines and associated literature in Chapter 3. The resulting preliminary draft of the guidelines is provided in Annex B.

4.2 Developing Version 1 of the guidelines

4.2.1 Feedback from the consultation workshop

The preliminary draft of the guidelines (Annex B) was presented during the workshop in which representatives of retailers, carriers and consumers reviewed the guidelines along with subject matter experts, for verification and improvement of the guidelines (see paragraph 2.3).

4.2.2 From preliminary draft to Communication Guidelines Version 1

Discussions in the workshop around each of the 20 guidelines of the preliminary draft provided valuable input for their development. Full notes taken from group discussions in the consultation workshop are given in Annex D. Table 6 in Annex E summarises the feedback received for each guideline and outlines the corresponding changes. Development of the preliminary draft of the guidelines focused on accounting for this specific feedback to produce the list of 18 guidelines in “Communication Guidelines Version 1” presented in Chapter 5.

4.3 Communication Guidelines – Version 1

4.3.1 Short form (heuristic)

Communicate clearly and credibly 1. Be open, clear and specific in your messaging 2. Explain new cues simply and clearly 3. Make verifiable claims 4. Layer sustainability information 5. Standardize sustainability information	Use messages that matter 11. Show the real-world impact of choices 12. Cover all dimensions of sustainability 13. Leverage social norms to influence choices 14. Appeal to emotion, not just rationality 15. Target life transitions for greater impact
Shape choice environments 6. Make sustainable options stand out 7. Encourage reflection on delivery choice 8. Provide comparability between options 9. Influence both habitual and conscious choices 10. Reward sustainable delivery choices	Align and support sustainability messaging 16. Align communication across channels and consumer journey / supply chain 17. Give consumers actionable plans for out-of-home collection or return 18. Give consumers positive sustainable choice experience

Figure 3: Short form for the communication guidelines

4.3.2 Extended form (with explanatory notes)

Communicate clearly and credibly

1. Be open, clear and specific in your messaging

Communicate clearly, openly and using specific claims that are easy to understand, relate to tangible outcomes and directly linked to consumer choices. Avoid vague, undefined terms like “green” or “eco-friendly.”

Example: Instead of saying “eco delivery,” say:

“Delivered by electric van from our Oslo warehouse.”

“This option emits less CO₂ than a standard van delivery.”

“Consolidated delivery — fewer vehicles, fewer emissions.”

2. Explain new cues simply and clearly

When introducing eco-labels or symbols, explain them in clear, non-technical language. Use hover-text, pop-ups, or clickable links.

Example: Symbol with hover text:  “This symbol means your parcel is grouped with others in your area to reduce delivery trips.”

3. Make verifiable claims

Support every sustainability claim with clear specific evidence, independent certification, recognized methodologies, or third-party audits. Use standards to calculate emissions such as CountEmissionEU.

Example: “Emission calculation based on EN16258 standard. Verified by TÜV Nord.”

4. Layer sustainability information

Display essential sustainability details up front with options to dive deeper (e.g. carbon footprint methodology, data sources). This can increase consumer trust and avoid consumer fears of greenwashing.

Example:

- Front layer: “This option emits less CO₂ compared to standard van delivery.”
 [learn more](#)
- Second layer: “We calculate emissions based on average distance, vehicle type, and load factor. Compared to a standard diesel van over the same route, your delivery saves approx. 1.4 kg of CO₂.”
 [See full methodology](#)

5. Standardize sustainability information

Where possible, adopt standardized EU-approved labels or icons to ensure consistency, transparency, and consumer trust. Use standardized formats, icons or messages across all product and checkout pages for consistency and comparability. Comply with the national regulations on sustainable communication.

Example: Avoid creating your own labels or icons but prefer standardized labels such as Nordic Swan Ecolabel

Shape choice environments

6. Make sustainable options stand out

Make the sustainable delivery option default or place it first in the list of options. Use labels, colour coding, icons, badges or highlighting to draw attention to the sustainable delivery options. Avoid letting it get lost among faster or cheaper options.

Example:

- Highlight the sustainable option by using fonts
- Preselect the sustainable delivery option
- Add a «recommended» tag

7. Encourage reflection on delivery choice

Prompt reflection on sustainable options: catch the consumers' attention and challenge them to think, rank options by distance, emissions, or vehicle type, suggest nearby pick-up points or in-store stock availability.

Example:

- Add questions for the consumer e.g.: "Fewer trucks = cleaner air. Choose this 2-day delivery?"
- Add personalized comments based on what they have in their basket, e.g. if they have several sizes of the same clothing item.

8. Provide comparability between options

Present standardized metrics or scoring systems in a user-friendly way to help consumers understand sustainability differences and decide between options. Simple statements could also be used. Options can be compared on emissions, type of delivery vehicle used, delivery distance and so on.

Example:

- "Standard delivery: low emissions" vs. "express delivery: high emissions"
- Graphic visualisation of emission saved by waiting 2 days

9. Influence both habitual and conscious choices

Use a diversified strategy:

- *Influence consumer's attitude and intention to choose sustainable delivery with facts and comparisons*
- *Influence more habitual choices using nudging e.g. through defaults or visual design or choice architecture to support subconscious habits*
- *Make clear how sustainable delivery options also satisfy personal goals (e.g. convenience, reliability)*

Example: Make out-of-home delivery default option & give info that most people tend to choose this

10. Reward sustainable delivery choices

This can be done in two ways:

1. *Through the online platform (e.g. loyalty scheme, benefits, thank you message, gamification)*
2. *Through the delivery: partner with carriers to ensure that sustainable delivery gives a positive user experience through clear and seamless communication, on-time delivery, friendly drivers and service people, facilitating easy returns, providing real-time tracking and feedback, keeping the consumer "in the loop" when delivery arrangements need to be altered. Rewarding through delivery experience is more likely to lead to long-term behaviour change.*

Example:

- 1 sustainable delivery = 100 eco-points and 500 eco-points = discount on next purchase
- Show a progress bar: "You've chosen sustainable delivery 3 times - keep going!"
- Display "Thank you for choosing low-emission delivery" in the order confirmation & the parcel.

Use messages that matter

11. Show the real-world impact of choices

Make it clear that consumer decisions drive measurable change, by linking sustainable delivery option to tangible, relatable outcomes such as less congestion, improved air quality, better labour conditions for couriers, last-mile deliveries often impact consumers neighbourhoods.

Example:

- “By choosing grouped delivery, you’re reducing emissions equivalent to 5 km of car driving just from this one order.”
- “Bike deliveries reduce van traffic and help improve air quality in your neighbourhood.”

12. Cover all dimensions of sustainability

Include environmental, social, and economic aspects of delivery sustainability. For example, highlight both emissions savings and fair working conditions. Consider also adding safety-related impacts where relevant.

Example:

- “Your parcel is delivered by a carrier awarded for fair labour standards”
- “Bike couriers are trained in urban safety standards — safer for couriers and for your community.”

13. Leverage social norms to influence choices

Use social norms to encourage sustainable delivery choices by communicating both:

- *what others do*
- *what others value or expect.*

Example:

- “75% of customers in your area choose this option”
- “Our community values responsible delivery — thank you for making a difference.”

14. Appeal to emotion, not just rationality

Use emotive storytelling to show how delivery choices make a difference. Show testimonials, behind-the-scenes courier stories, or before/after environmental visuals. Provide personalized feedback or celebrate milestones.

Example:

- Storytelling: include a story in checkout “Your courier, Sara, delivers on an electric cargo bike, reducing city noise and pollution.”
- Personalized feedback: “You saved 1.2 kg of CO₂!”
- Celebrate milestones: “You have chosen sustainable delivery 5 times!”

15. Target life transitions for greater impact

Identify and engage consumers during key life changes (e.g. moving house, starting university) when new habits are forming. Tailor sustainable delivery communication to these moments for higher impact.

Example: A furniture retailer targets new university students with an offer: “Furnish sustainably with low-emission delivery.”

Align and support sustainability messaging

16. Align communication across channels and consumer journey / supply chain

Collaborate with other supply chain actors to achieve coherent and engaging branding and messages across touchpoints of the consumer journey:

- In-store signage
- Before shopping (ads, search engines)
- Retailer websites, apps, social media
- At the point of decision (online checkout)
- During delivery (carrier apps and tracking page, email confirmation or updates)
- Post-purchase (surveys, newsletters)
- On/in the parcel itself (packaging, inserts)
- Carrier vehicles or delivery uniforms.

Example: Use the same labels and icons on website, delivery app, parcel label, the vehicle, follow-up emails. (e.g. message “delivered by a low-emission vehicle”).

17. Give consumers actionable plans for out-of-home collection or return

Help consumers feel confident about out-of-home parcel collection or return:

- *Show how lockers work*
- *Display interactive maps of nearby pick-up or return points*
- *Explain sustainable travel options (bike, walk, transit).*

Example: Provide a short video showing how to use a parcel locker.

18. Give consumers positive sustainable choice experience

Design intuitive, elegant menus that:

- *Introduce and explain new sustainable delivery options*
- *Avoid “forced” express delivery*
- *Keep consumers in the loop and give them choice when delivery plans change*
- *Remove marketing clutter that distracts from sustainability choice*
- *Ensure accurate, updated, and user-centered content.*

Example:

- Avoid sending to default pickup points when parcel locker is full
- Avoid unnecessary reminders

5 Further improvement and application

In addition to getting specific feedback on individual draft guidelines, the consultation workshop was used to collect general ways to improve them. Participants had also given feedback after attempting to apply the guidelines in one of four scenarios involving a retailer needing to develop communication with consumers on sustainable delivery choice. Feedback on improving and applying the set of guidelines as a set is presented here.

5.1 General recommendations on improving the guidelines

The workshop provided several recommendations to be addressed before the finalization of the guidelines. These will be considered along with findings from pilots to generate the Final Version of the guidelines.

Recommendations were as follows:

- Legal aspects on advertising regulation in EU and in European countries should be considered.
- Communication should be adapted to consumers, e.g. by segmenting consumers in groups and tying communication to what matters to each group. Surveys can help identify key segments.
- Consider improving the useability of the guidelines by:
 - Prioritizing the critical/essential vs. optional “nice-to-have” guidelines
 - Sorting them according to implementation timeline, ease of implementation
 - Giving retailers Dos and Don’ts
 - Giving examples, visuals of checkouts, best practices from retailers
 - Including as part of the guidelines advice on implementation strategy and how to blend guidelines with corporate rules.
- Consider how to account for the fact that retailers find it difficult to make claims because:
 - They lack data
 - They need to be able to guarantee what is claimed but they also need flexibility to adapt operations (e.g. type of vehicle).
- Consider the lack of certified labels at the European or country level that can be used to communicate about sustainable delivery
- Be clear on how to address the different dimensions of sustainability, e.g. how to include social concerns
- Account for carrier apps and interfaces as it is possible to change the delivery option choice there
- Account for returns; returns should be addressed specifically
- Ensure that the guidelines do not encourage retailers to remove “green claims” due to regulatory concerns.
- Account for the potential influence of AI-driven tools on shaping consumer perceptions. There is growing interest in understanding how AI reflects or influences sustainability messaging and whether it could be integrated into communication strategies.
- Consider actors across the supply chain to ensure that guidelines are not only feasible but effective
- Address diversity by making the information accessible to people that are visually impaired
- Consider whether all guidelines apply for all product types.

The complete notes from the group discussions are presented in Annex D.

5.2 Lessons from applying the guidelines

Several useful lessons emerged as workshop participants attempted to apply the guidelines to specific scenarios.

5.2.1 The guidelines interact and support each other

During group exercises on applying scenarios at the consultation workshop, it became clear how guidelines interact with and support each other. This was considered a positive aspect of the guidelines that would be usefully explained as part of the guidelines to retailers or their designers. The following are examples of this:

- Complementary measures: e.g. a retailer could default to sustainable options (e.g., cargo bike delivery or click & collect) and using concise, persuasive messaging like "support local, fair, and sustainable delivery," accompanied by trust-building elements such as logos, impact comparisons, or links to partner information.
- Guidelines 2 and 5: the need for retailers to communicate using clear and simple symbols or messages would be assisted by use of readily available, well-designed standard symbols or messages.
- Guidelines 7 and 8: encouraging consumers to deliberate on the sustainability differences between delivery options would be assisted by clear and comprehensible information about how they differ.
- Guidelines 8 and 11: information on how delivery options differ would be most usefully expressed in terms of real-world impact that consumers perceive as tangible.

5.2.2 The challenge of too much information

An important concern that emerged on applying the guidelines in scenarios was that retailers, needing to remain competitive, did not want delivery communications to lead them to lose customers during online checkout. Adding information could interfere with the flow of the consumers' check-out experience or reduce the retailer's ability to use marketing messages. Retailers felt that many consumers already ignored much of the information available during checkout since by the time they get that far, they just want to be able to purchase their delivery—the faster the better. One participant pointed out that a better way might be to give the sustainable message *after* online checkout (e.g. through emails or sms) where there is more space – this would give retailers more space for educating consumers about the importance of choosing sustainable delivery. Another pointed out that if sustainable delivery is to be made the cheapest option, consumers will choose it based on cost and get used to it—and that there may therefore be no need to mention sustainability. Despite these concerns, ways may be found to communicate at checkout without overloading consumers. Here, interface design matters—e.g. for a retailer promoting pick-up options, placing sustainable options at the top, showing pickup proximity, or integrating loyalty incentives can reinforce choices without overloading users.

5.2.3 The challenge of determining the sustainability of delivery options

Retailers highlighted that carriers they partner with often need to vary the vehicles used to deliver, such that it is not possible to calculate emissions in advance or guarantee that a specific delivery option will be the most sustainable. The most sustainable option depends on consumer factors, such as the location of pick-up points relative to the consumer or whether the consumer collects from a parcel locker with a bicycle while others may drive a diesel car. This makes it challenging for retailers to guarantee the sustainability of different options, but it points to the need for innovative, interactive solutions, e.g. embed into the checkout page an emissions calculator, developed in partnership with logistics and

environmental NGOs; or co-develop consumer-interactive tools that give personalized feedback or develop maps that give emissions comparisons.

5.2.4 Importance of contingencies and specific contexts

In applying the guidelines, retailers need to interpret them according to their specific contexts. For example, guideline 12 on the need to address different dimensions of sustainability will depend on the nature of the retailer's supply chain and the varying effects on emissions (e.g. transport mode used, and distance covered), warehouse conditions for workers and so on. In contexts like grocery retail, highlighting wider delivery windows that align with route consolidation can be made attractive through invisible nudges (e.g., suppressing less sustainable timeslots) and post-purchase rewards, like points or product samples. In fashion, minimizing returns should begin with improved product information and fit tools, but also involves raising awareness—not guilt—about the cost and impact of high return rates, particularly for consumers engaging in over-ordering.

5.2.5 Collaborate for consistent communication across the customer journey

Tailoring sustainability communication across the entire customer journey, from checkout to delivery and returns, could add to the consumer experience of seamless shopping. Accomplishing this requires that retailers collaborate internally across supply chain, marketing, and IT departments, and externally with carriers and checkout solution providers, to ensure that guidelines are applied. Long-term success lies in subtle nudges, credible claims, and reinforcing sustainable behaviour through ongoing communication touchpoints like delivery notifications, packaging inserts, or app messages.

5.2.6 Applying the guidelines to communicate on sustainable returns

Delivery and return choices are presented to consumers in different ways, as shown by the interviews in Tasks 2.2 and 2.3 and the online shopping exercise in Task 2.3. Consumers are often offered several delivery options to choose from, whereas there is typically only one return method available.

During the consultation workshops, retailers emphasised that offering returns is an integral part of the online shopping experience. While they expressed interest in reducing the number of returns, they were reluctant to make consumers feel guilty about returning products.

One measure identified as important for managing returns is understanding why consumers return products. This insight can help retailers improve the product information provided, thereby reducing unnecessary returns. Based on this, an additional guideline could recommend that retailers systematically gather and analyse consumers' reasons for returning deliveries to identify actionable improvements.

Although CodeZERO guidelines primarily focus on delivery, many of them can also be applied to communication around returns. For example, Guideline 17 — “Give consumers actionable plans for out-of-home collection or return”— could be implemented by displaying interactive maps of nearby return points.

5.3 Lessons learned from GreenTurn project

CodeZERO's sister project GreenTurn has also investigated how sustainable deliveries are communicated to consumers in e-commerce (Wolf & Buijs 2025). GreenTurn conducted an extensive review of the current landscape, examining 70 major European e-commerce websites to assess how and to what extent sustainability is communicated during the checkout process. The analysis revealed that sustainability communication is employed only to a limited extent, a finding that closely aligns with and confirms CodeZERO results (Pernot et al. 2025; Phillips & Pernot 2025). In addition, GreenTurn carried out qualitative interviews with key stakeholders, including representatives from e-commerce

companies, regulators, and logistics experts. These interviews explored industry perspectives on the feasibility and effectiveness of nudging strategies, while also providing insight into internal decision-making processes and perceived consumer responses to sustainability messaging.

Drawing on the website analysis, stakeholder interviews, and relevant behavioural theories, GreenTurn identified five best practices for influencing consumers choices in e-commerce. These are:

- Making sustainability tangible
- Positive framing
- Rewarding sustainable choices
- Social norms
- Visual cues as supporting elements.

These are supported by concrete best practices examples from across Europe, illustrating how different platforms and initiatives have successfully implemented communication strategies to promote sustainable consumer behaviour.

All five of these recommendations are incorporated into the CodeZERO communication guidelines presented in this Deliverable, confirming both their relevance and their alignment with current best practice in the field.

6 Next steps

6.1 Pilot testing

The Communication Guidelines – Version 1 developed in this Deliverable will be applied and tested in the CodeZERO pilots. During the implementation phase, retailers and carriers participating in the pilots will review the guidelines and select those most relevant to their specific challenges and context. Drawing on the content of this Deliverable and insights from the co-creation workshops (Deliverable 4.2), they will design the communication interventions to be tested in the pilots.

At the time of writing, the specific communication interventions for the pilots have not yet been decided. Once defined, these interventions will be implemented and evaluated using the framework developed in Deliverable 3.2. During the implementation phase, the evaluation process will be discussed and planned, including arrangements for data collection.

The success of the communication guidelines will be assessed against several indicators, such as:

- Increased selection of sustainable delivery options by consumers.
- Greater consumer awareness of sustainability-related issues.
- Higher customer satisfaction.

The pilot testing phase will run from January to June 2026, with evaluation taking place from March to August 2026.

6.2 Plans for finalising the guidelines

While the current Deliverable focuses on the content of the guidelines, further work is needed to enhance their usability and user-friendliness. This will require retailers and carriers to apply the guidelines during the pilots and share their learnings. Some preliminary ideas for improving usability were already suggested during the first consultation workshop (see Section 5.1) and will be considered for inclusion in the final version. These include, for example, developing clear “dos and don’ts” and providing visual examples of checkout pages. In addition, following the pilots, a second consultation workshop will be held in September 2026 to gather lessons learned from the pilots to refine and finalise the guidelines. The final Deliverable 6.1 is expected in November 2026.

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Annex A: Slides from the consultation workshop



2

The CodeZERO project

- The project aims to co-design sustainable and zero-emission last-mile delivery and return solutions for e-commerce that are also attractive to consumers
- June 1st 2024 - May 30th 2027
- 4 countries 
- 15 partners



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nr. 101145909.



Project achievements



Communication guidelines



Delivery and return options



Toolset for local authorities



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101146909



Aim of the workshop

- Present CodeZERO findings on
 - Does sustainability matter when choosing delivery?
 - How to get consumers to choose sustainable delivery?
- Present a draft for the project communication guidelines
- Get feedback

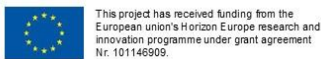


This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.



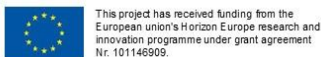
Agenda

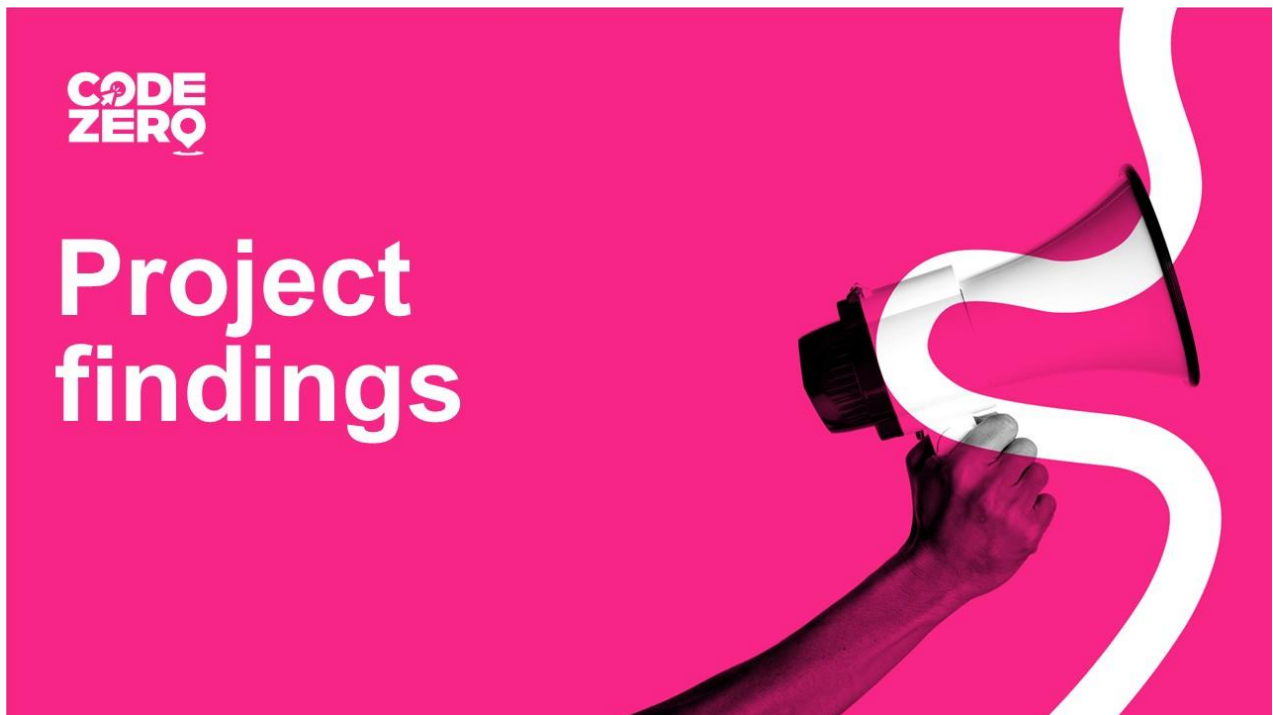
- Introduction (15 min)
- CodeZERO insights and guidelines draft (40 min)
 - Survey insights (VUB)
 - Model – how communications influence choice of delivery option by consumer (TOI)
 - Guidelines draft (TOI)
 - Questions
- First exercise – Are the guidelines usable and complete? (70 min)
 - Introduction
 - Group activity
 - Break (10 min)
 - Report back
- Second exercise – Applying Guidelines to Scenarios (50 min)
 - Introduction
 - Group activity
 - Report back
- Conclusion and next steps (5 min)



Participant introductions

- Go round the table introducing yourselves
 - name, organisation and role





8

Survey results

Kathleen Cauwelier (VUB)



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.

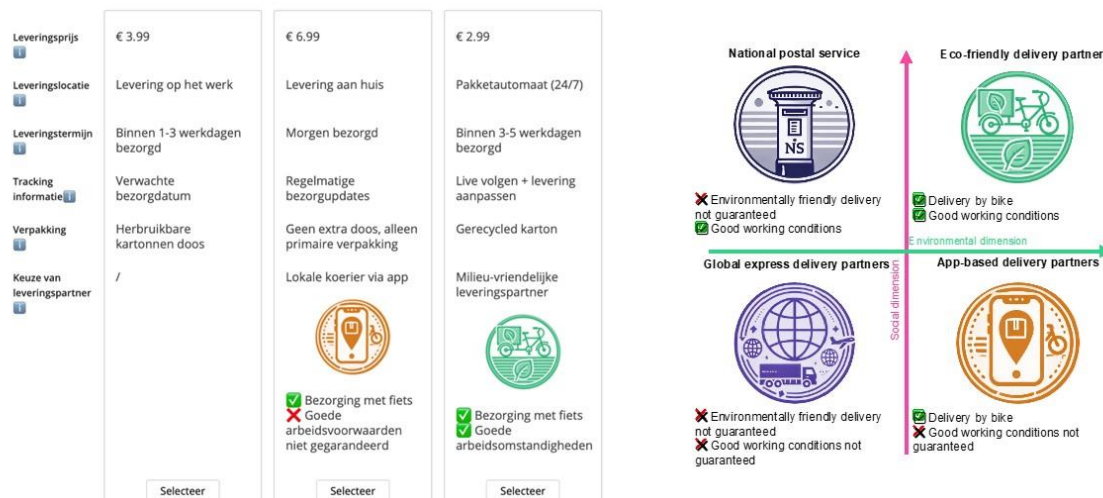


What was done?



This project has received funding from the European union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.

What was done?

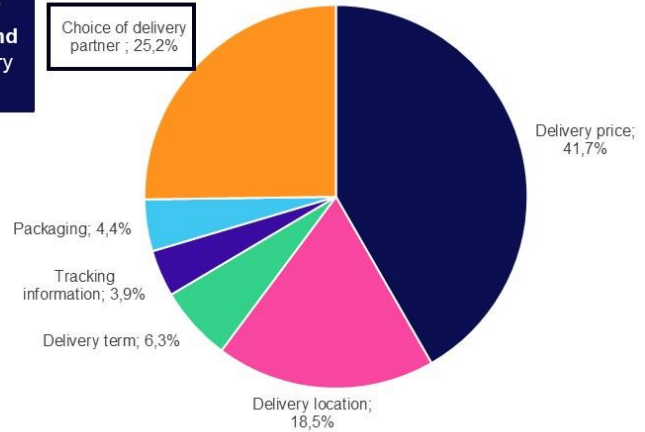
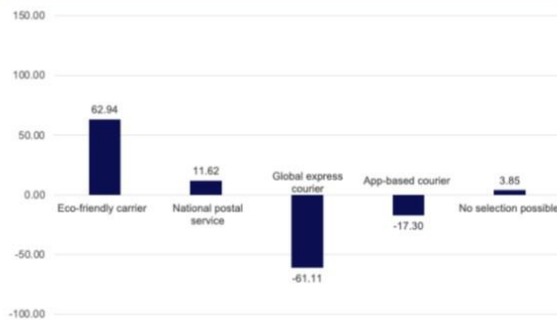


This project has received funding from the European union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.

Sustainability matters

11

One takeaway is that **sustainability**, through the choice of delivery partner, **matters**. After deliver price, it was the **second most important factor** in how people chose between delivery option, more influential than speed location or packaging



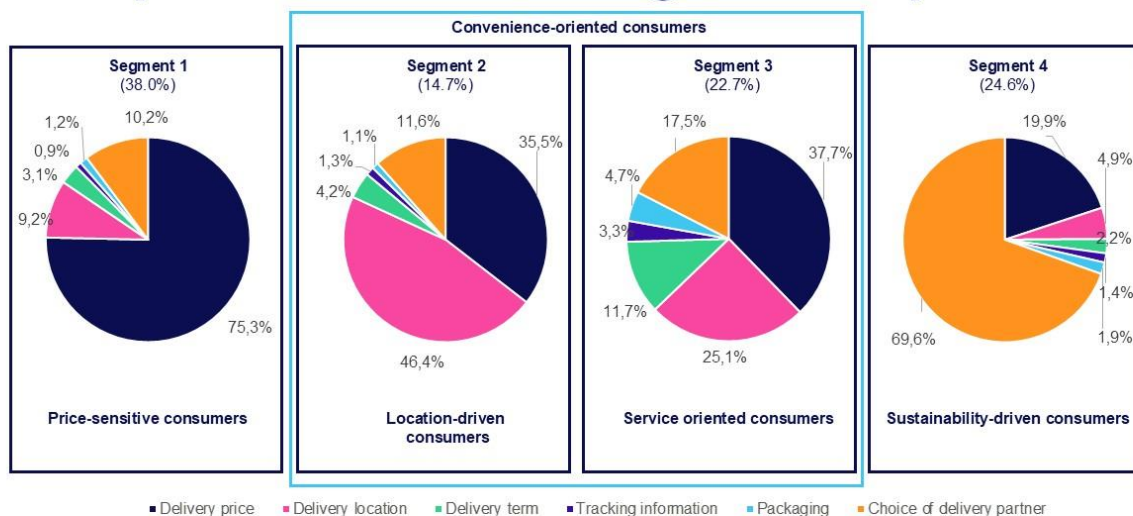
- Same trends across different product types and in 10 surveyed countries

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.



But preferences are segment-dependent

12



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.



In the right context, consumer will make trade-offs

Consumer segment	What they accept for sustainability	Condition
Price-sensitive consumers	Delivery in pickup points Slower delivery	Only if free or low cost (€ 2.99)
Location-driven consumers	Slower delivery Higher cost	Only if home delivery is preserved
Service-oriented consumers	Out-of-home delivery options	Must have speed, tracking and flexibility
Sustainability-driven consumers	Any inconvenience (location, cost, speed)	Only if it is clearly communicated as sustainable

Conclusion

14

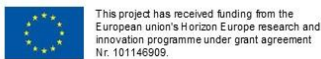




15

Model - how communications influence choice of delivery option by consumer

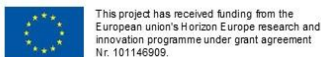
Ross Phillips & Delphine Pernot (TØI)



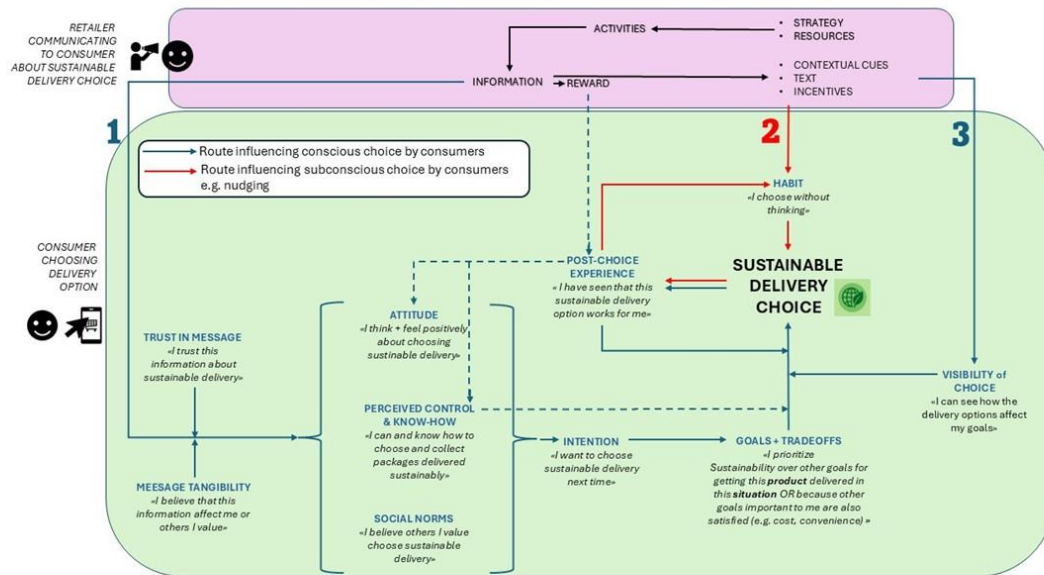
How communications influence choice of delivery option by consumer

16

- Model based on:
 - Theory on behavioural change and decision-making
 - Frameworks for influencing and evaluating change in sustainable consumer behaviour
 - Interviews with consumers about their online delivery choices



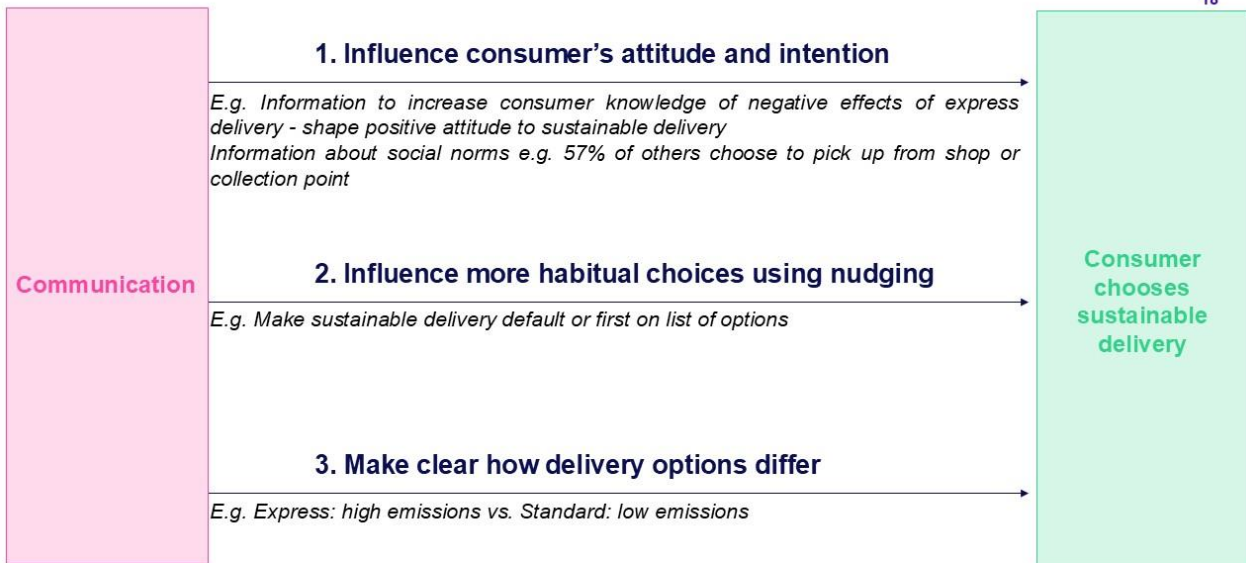
17



This project has received funding from the European union's Horizon Europe research and innovation programme under grant agreement Nr. 101146909.



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Communicate clearly and credibly

1. Be clear and specific in your messaging
2. Explain new cues simply and clearly
3. Make reliable claims
4. Layer sustainability information
5. Standardize sustainability information

Shape choice environments

6. Make sustainable options visually salient
7. Make consumers pause and reflect
8. Provide comparability between options
9. Influence both habitual and conscious choices
10. Reward sustainable delivery choices with positive delivery experience

Use messages that matter

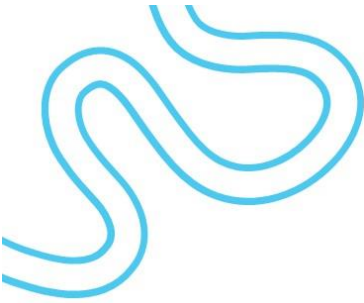
11. Show the real-world impact of choices
12. Cover all dimensions of sustainability
13. Leverage social norms to influence choices
14. Appeal to emotion, not just rationality
15. Target life transitions for greater impact

Align and support sustainability messaging

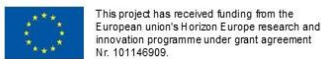
16. Align communication across channels and consumer journey / supply chain
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18. Encourage long-term sustainable behaviour
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Communicate clearly and credibly

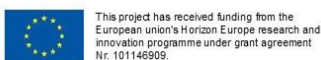


22

1. Be clear and specific in your messaging

Avoid vague, undefined terms like “green” or “eco-friendly.” Instead, communicate clearly using specific claims that are easy to understand, relate to tangible outcomes and directly linked to consumer choices.

➤ Instead of saying “eco delivery,” say:
 “Delivered by electric van from our Oslo warehouse.”
 “This option emits 30% less CO₂ compared to standard van delivery.”
 “Consolidated delivery — fewer vehicles, fewer emissions.”

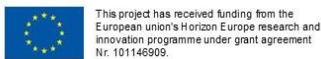


2. Explain new cues simply and clearly

When introducing eco-labels or symbols, explain them in clear, non-technical language. Use hover-text, pop-ups, or clickable links. Use recognized sustainability labels.

➤ Symbol with hover text:

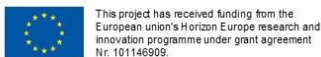
 “This symbol means your parcel is grouped with others in your area to reduce delivery trips.”



3. Make reliable claims

Support every sustainability claim with clear specific evidence, independent certification, recognized methodologies, or third-party audits.

➤ “Emission calculation based on EN16258 standard. Verified by TÜV Nord.”



4. Layer sustainability information

Display essential sustainability details up front with options to dive deeper (e.g. carbon footprint methodology, data sources).

➤ Front layer:

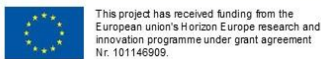
“This option emits 30% less CO₂ compared to standard van delivery.”

 [learn more](#)

➤ Second layer:

“We calculate emissions based on average distance, vehicle type, and load factor. Compared to a standard diesel van over the same route, your delivery saves approx. 1.4 kg of CO₂.”

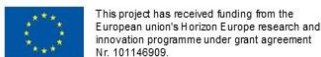
 [See full methodology](#)

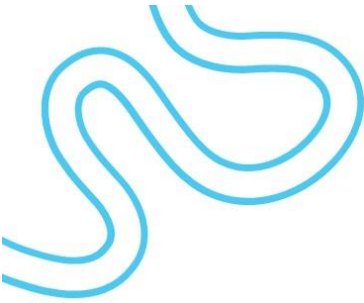


5. Standardize sustainability information

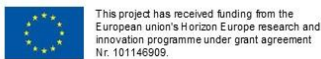
Where possible, adopt standardized EU-approved labels or icons to ensure consistency, transparency, and consumer trust. Use standardized formats, icons or messages across all product and checkout pages for consistency and comparability.

- Avoid creating your own labels or icons but prefer standardized labels such as Nordic Swan Ecolabel





Shape choice environments

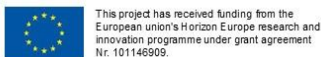


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6. Make sustainable options visually salient

If sustainable delivery isn't the default, place it first in the list of options. Use labels, color coding, icons, badges or highlighting to draw attention. Avoid letting it get lost among faster or cheaper options.

- Highlight the sustainable option
- Place it at the top
- Add a «recommended» tag

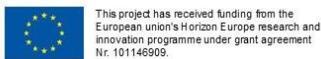


7. Make consumers pause and reflect

Prompt reflection on sustainable options:

- *Catch the consumers' attention and challenge them to think*
- *Rank options by distance, emissions, or vehicle type*
- *Suggest nearby pick-up points or in-store stock availability*

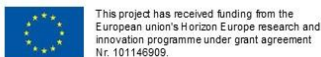
- Add questions for the consumer (e.g. "Fewer trucks = cleaner air. Choose this 2-day delivery?")
- Add personalised comments based on what they have in their basket, e.g. if they have several sizes of the same clothing item



8. Provide comparability between options

Use clear standardized metrics, qualified statements or scoring systems to help consumers understand sustainability differences and decide between options, based on emissions, type of delivery vehicle used, delivery km or distance from warehouse.

- "Standard delivery: low emissions" vs. "express delivery: high emissions"
- "Save 1.4 kg CO₂ if you wait 2 days"



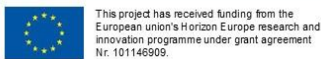
9. Influence both habitual and conscious choices

31

Use a diversified strategy:

- *Influence consumer's attitude and intention to choose sustainable delivery with facts and comparisons*
- *Influence more habitual choices using nudging e.g. through defaults or visual design or choice architecture to support subconscious habits*
- *Make clear how sustainable delivery options also satisfy personal goals (e.g. convenience, reliability)*

➤ Make out-of-home delivery default option AND give information that most people tend to choose this



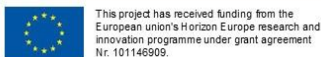
10. Reward sustainable delivery choices with positive delivery experience

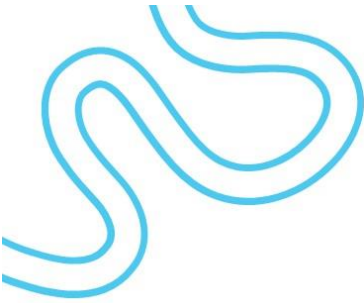
32

Partner with carriers to ensure that sustainable delivery gives a positive user experience through:

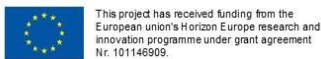
- *Clear, seamless communication*
- *On-time delivery*
- *Friendly drivers and service people*
- *Facilitating easy returns*
- *Providing real-time tracking and feedback*
- *Keeping the consumer "in the loop" when delivery arrangements need to be altered*

➤ Display "Thank you for choosing low-emission delivery" in the order confirmation and in the parcel





Use messages that matter

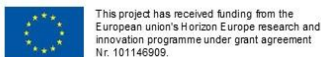


34

11. Show the real-world impact of choices

Make it clear that consumer decisions drive measurable change, by linking sustainable delivery option to tangible, relatable outcomes such as less congestion, improved air quality, better labor conditions for couriers.

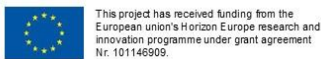
- “By choosing grouped delivery, you’re reducing emissions equivalent to 5 km of car driving — just from this one order.”
- “Bike deliveries reduce van traffic and help improve air quality in your neighborhood.”



12. Cover all dimensions of sustainability

Include environmental, social, and economic aspects of delivery sustainability. For example, highlight both emissions savings and fair working conditions. Consider also adding safety-related impacts where relevant.

- “Your parcel is delivered by a courier employed under fair labor standards “
- “Bike couriers are trained in urban safety standards — safer for couriers and for your community.”

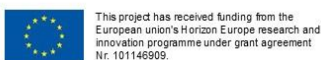


13. Leverage social norms to influence choices

Use social norms to encourage sustainable delivery choices by communicating both:

- *what others do*
- *what others value or expect*

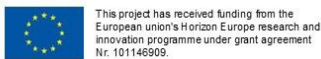
- “75% of customers in your area choose this option”
- “Our community values responsible delivery — thank you for making a difference.”



14. Appeal to emotion, not just rationality

Use emotive storytelling to show how delivery choices make a difference. Show testimonials, behind-the-scenes courier stories, or before/after environmental visuals. Provide personalized feedback or celebrate milestones.

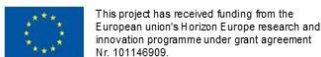
- Storytelling: include a story in checkout “Your courier, Sara, delivers on an electric cargo bike, reducing city noise and pollution.”
- Personalized feedback: «You saved 1.2 kg of CO₂!»
- Celebrate milestones: “You’ve chosen sustainable delivery 5 times!”

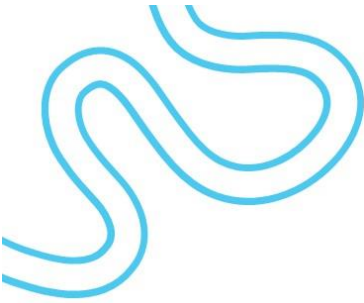


15. Target life transitions for greater impact

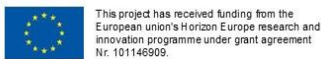
Identify and engage consumers during key life changes (e.g. moving house, starting university) when new habits are forming. Tailor sustainable delivery communication to these moments for higher impact.

- A furniture retailer targets new university students with an offer: “Furnish sustainably with low-emission delivery.”





Align and support sustainability messaging



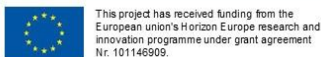
40

16. Align communication across channels and consumer journey / supply chain

Collaborate with other supply chain actors to achieve coherent and engaging messages at every touchpoint of the consumer journey:

- *In-store signage*
- *Before shopping (ads, search engines)*
- *Retailer websites, apps, social media*
- *At the point of decision (online checkout)*
- *During delivery (carrier apps and tracking page, email confirmation or updates)*
- *Post-purchase (surveys, newsletters)*
- *On/in the parcel itself (packaging, inserts)*
- *Carrier vehicles or delivery uniforms*

➤ Use the same labels and icons on website, delivery app, parcel label, and follow-up emails.

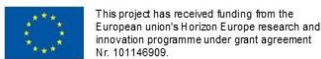


17. Give consumers actionable plans for out-of-home collection or return

Help consumers feel confident about out-of-home parcel collection or return:

- *Show how lockers work*
- *Display interactive maps of nearby pick-up or return points*
- *Explain sustainable travel options (bike, walk, transit)*

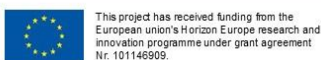
➤ Provide a short video showing how to use a parcel locker



18. Encourage long-term sustainable behaviour

Don't stop at a single "green" choice. Encourage habits like bundled orders, slower shipping, and opt-out of returns. Promote reuse or recycling options and explain how small actions add up over time.

➤ Show a progress bar: "You've chosen sustainable delivery 3 times - keep going!"



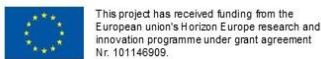
19. Give consumers positive sustainable choice experience

43

Design intuitive, elegant menus that:

- Introduce and explain new sustainable delivery options
- Avoid “forced” express delivery or misleading default selections
- Remove marketing clutter that distracts from sustainability choice
- Ensure accurate, updated, and user-centered content

- Avoid default choices, without consumers inputs
- Avoid overuse of urgency messaging
- Avoid banners and promos

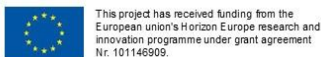


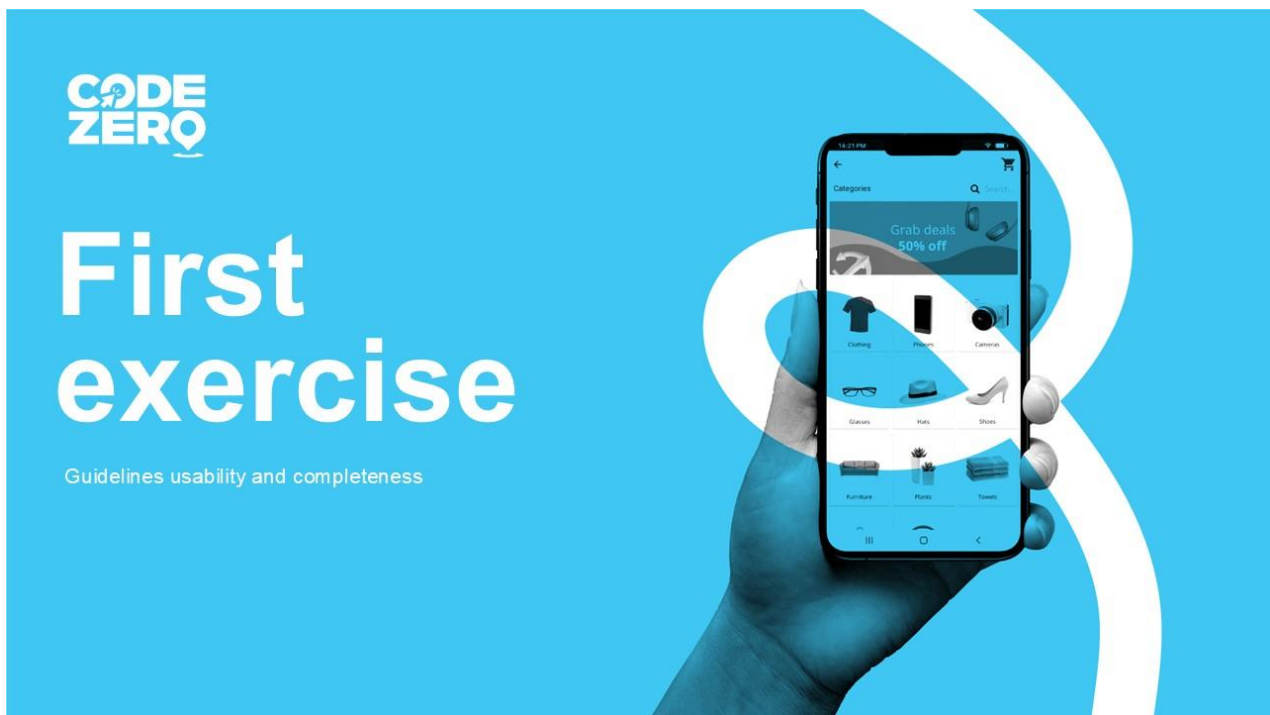
20. Collaborate on developing innovative and consistent communication tools

44

Partner with carriers, certification bodies, NGOs, public agencies, and technology developers to ensure that sustainability messaging is credible and consistent across retailers.

- Develop an emissions calculator in partnership with logistics and environmental NGOs, embedded on the checkout page.
- Co-develop interactive tools like personalized feedback or maps with emissions comparisons.



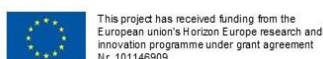


Group activity

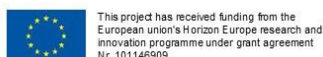
- 4 groups, each with a facilitator
- Facilitators should
 - note down the discussions as they go (not only a summary of the discussions)
 - share the document reporting on the different perspectives, it will be a record of the workshop for us
 - prepare a summary to report back

Guidelines usability and completeness

- Each participant has received the whole set of guidelines
- Each facilitator received instructions with 5 selected guidelines
- In groups, discuss:
 - Part A – on the whole set of guidelines – 10 minutes
 - Is the set of guidelines complete? Do you see anything missing?
 - Do you have any other expectations that we have not met?
 - Ideas for improvement?
 - Part B – on a selection of 5 guidelines – 20 minutes
 - How easy/difficult to understand are they?
 - Discuss the text and examples of each guideline in detail.
 - What would help you to understand them?



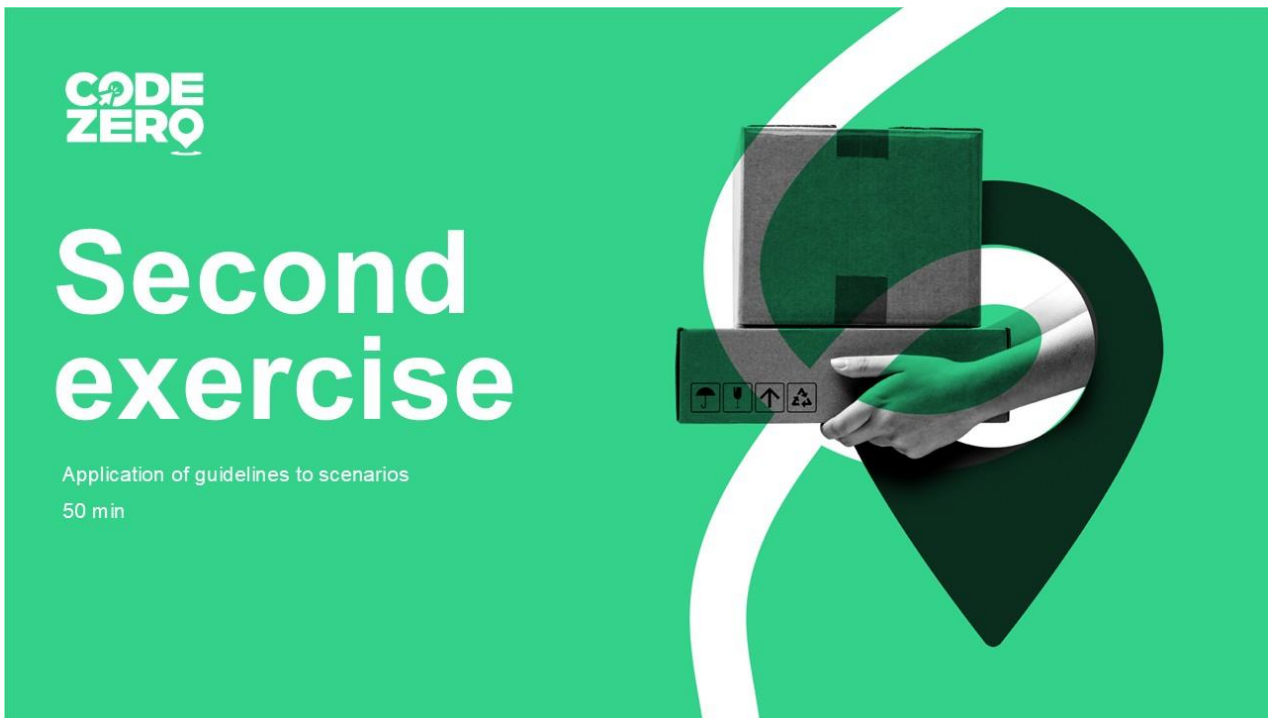
	Group A	Group B	Group C	Group D
Facilitator	Ross Phillips (TØI)	Delphine Pernot (TØI)	Kathleen Cauwelier (VUB)	Anne-Charlotte TRAPP (Eurocities)
Participants	██████████ ██████████ ██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████	██████████ ██████████ ██████████ ██████████
Guidelines	Align and support sustainability messaging 	Use messages that matter 	Shape choice environments 	Communicate clearly and credibly 



Report back

- Each facilitator reports back on the discussions from his group
- 5 min for each group

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CODE ZERO

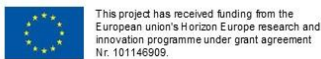
Second exercise

Application of guidelines to scenarios
50 min

The slide features a green background with a large, stylized white and green graphic of a hand holding a cardboard box. The box has a green circular logo on its side. The text 'CODE ZERO' is in the top left, and 'Second exercise' is in large white letters. Below it, 'Application of guidelines to scenarios' and '50 min' are written in smaller white text. The bottom of the slide has decorative wavy lines in light blue and pink.

Group activity

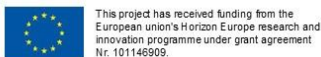
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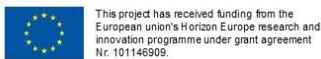
53

Applying Guidelines to Scenarios

- Each facilitator has received a scenario and will share it with their group.
- **As a group, brainstorm how the 5 previous communication guidelines can be applied to this scenario to influence consumer behavior. Identify and discuss:**
 - What communication interventions or messages can you suggest?
 - Where and how should these messages be delivered (e.g., checkout page, email, packaging)?
 - How different stakeholders (retailers, carriers, marketers) could contribute?
- **Provide feedback on:**
 - Are guidelines easy/difficult to use?
 - Do you see solutions to solve these challenges?
 - Any missing guidelines?



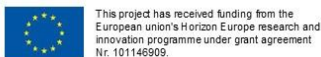
	Group A	Group B	Group C	Group D	54
Facilitator	Ross Phillips (TØI)	Delphine Pernot (TØI)	Kathleen Cauwelier (VUB)	Anne-Charlotte TRAPP (Eurocities)	
Participants	[Redacted]	[Redacted]	[Redacted]	[Redacted]	
Guidelines	Align and support sustainability Messaging 	Use messages that matter 	Shape choice environments 	Communicate clearly and credibly 	
Scenario	Scenario 1 – book retailer	Scenario 2 – fashion retailer	Scenario 3 – grocery retailer	Scenario 4 - marketplace	



Scenario 1

Book retailer promoting click & collect deliveries and communicating about consumers' travel behaviour

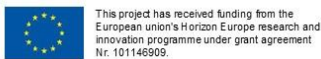
A book retailer would like to encourage consumers to choose deliveries in pickup points (located in shops or parcel lockers). The retailer also wants to discourage consumers from using their cars for pickups, unless it is during an existing trip (e.g. commuting). The goal is to encourage collection by foot, bike, public transport or on the way during another trip.



Scenario 2

Fashion retailer reducing returns through better fit guidance

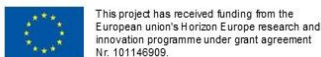
A mid-size fashion e-commerce company selling clothes and shoes would like to combat high return rates due to size and fit uncertainty. To achieve that, they want to establish communication discouraging consumers from returns and they also want to provide consumers reliable guidance to avoid multiple-size orders and multi-design orders.



Scenario 3

Grocery retailer encouraging non-express deliveries

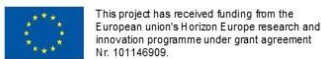
An online grocery retailer notices that too many orders are placed by consumers for the same day or the next day, making it challenging to forecast demand, leading to food waste, inefficient route planning and unconsolidated deliveries. The company wants to encourage consumers to schedule their deliveries 3–5 days in advance, by offering them advantages like better time slots, discounts, and communicating on the advantages in terms of sustainability.



Scenario 4

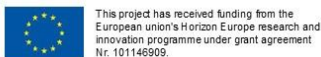
Marketplace platform promoting urban bike delivery over electric vans

A marketplace platform offering products from independent local shops — including fashion, home goods, tech accessories — delivering in dense urban areas, would like to develop and promote a “bike courier” delivery option at checkout for orders up to 15 kg, powered by a local cargo-bike logistics partner. Communication will emphasize the benefits of these cargo-bikes compared to the electric vans that are normally used by the company.



Report back

- Each facilitator reports back on the discussions from his group
- 5 min for each group





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Summary and next steps

- Please send feedback/comments on communication guidelines to dep@toi.no
- D4.3 – V1 of the guidelines – end August
- Pilots: test of the guidelines, new inputs
- 2nd workshop in 2026: refine the guidelines
- D6.1 – final version of the guidelines – November 2026



Annex B: Draft guidelines

Communicate clearly and credibly

1. Be clear and specific in your messaging

Avoid vague, undefined terms like “green” or “eco-friendly.” Instead, communicate clearly using specific claims that are easy to understand, relate to tangible outcomes and directly linked to consumer choices.

Example: Instead of saying “eco delivery,” say:

“Delivered by electric van from our Oslo warehouse.”

“This option emits 30% less CO₂ compared to standard van delivery.”

“Consolidated delivery — fewer vehicles, fewer emissions.”

2. Explain new cues simply and clearly

When introducing eco-labels or symbols, explain them in clear, non-technical language. Use hover-text, pop-ups, or clickable links. Use recognized sustainability labels.

Example: Symbol with hover text: ♻️ “This symbol means your parcel is grouped with others in your area to reduce delivery trips.”

3. Make reliable claims

Support every sustainability claim with clear specific evidence, independent certification, recognized methodologies, or third-party audits.

Example: “Emission calculation based on EN16258 standard. Verified by TÜV Nord.”

4. Layer sustainability information

Display essential sustainability details up front with options to dive deeper (e.g. carbon footprint methodology, data sources).

Example:

- Front layer: “This option emits 30% less CO₂ compared to standard van delivery.”
🔗 [learn more](#)
- Second layer: “We calculate emissions based on average distance, vehicle type, and load factor. Compared to a standard diesel van over the same route, your delivery saves approx. 1.4 kg of CO₂.”
🔗 [See full methodology](#)

5. Standardize sustainability information

Where possible, adopt standardized EU-approved labels or icons to ensure consistency, transparency, and consumer trust. Use standardized formats, icons or messages across all product and checkout pages for consistency and comparability.

Example: Avoid creating your own labels or icons but prefer standardized labels such as Nordic Swan Ecolabel

Shape choice environments

6. Make sustainable options visually salient

If sustainable delivery isn't the default, place it first in the list of options. Use labels, color coding, icons, badges or highlighting to draw attention. Avoid letting it get lost among faster or cheaper options.

Example:

- Highlight the sustainable option
- Place it at the top
- Add a «recommended» tag

7. Make consumers pause and reflect

Prompt reflection on sustainable options:

- Catch the consumers' attention and challenge them to think
- Rank options by distance, emissions, or vehicle type
- Suggest nearby pick-up points or in-store stock availability

Example:

- Add questions for the consumer (e.g. "Fewer trucks = cleaner air. Choose this 2-day delivery?")
- Add personalized comments based on what they have in their basket, e.g. if they have several sizes of the same clothing item

8. Provide comparability between options

Use clear standardized metrics, qualified statements or scoring systems to help consumers understand sustainability differences and decide between options, based on emissions, type of delivery vehicle used, delivery km or distance from warehouse.

Example:

- "Standard delivery: low emissions" vs. "express delivery: high emissions"
- "Save 1.4 kg CO₂ if you wait 2 days"

9. Influence both habitual and conscious choices

Use a diversified strategy:

- Influence consumer's attitude and intention to choose sustainable delivery with facts and comparisons
- Influence more habitual choices using nudging e.g. through defaults or visual design or choice architecture to support subconscious habits
- Make clear how sustainable delivery options also satisfy personal goals (e.g. convenience, reliability)

Example: Make out-of-home delivery default option AND give information that most people tend to choose this

10. Reward sustainable delivery choices with positive delivery experience

Partner with carriers to ensure that sustainable delivery gives a positive user experience through:

- Clear, seamless communication
- On-time delivery

- *Friendly drivers and service people*
- *Facilitating easy returns*
- *Providing real-time tracking and feedback*
- *Keeping the consumer “in the loop” when delivery arrangements need to be altered*

Example: Display “Thank you for choosing low-emission delivery” in the order confirmation and in the parcel

Use messages that matter

11. Show the real-world impact of choices

Make it clear that consumer decisions drive measurable change, by linking sustainable delivery option to tangible, relatable outcomes such as less congestion, improved air quality, better labor conditions for couriers.

Example:

- “By choosing grouped delivery, you’re reducing emissions equivalent to 5 km of car driving — just from this one order.”
- “Bike deliveries reduce van traffic and help improve air quality in your neighborhood.”

12. Cover all dimensions of sustainability

Include environmental, social, and economic aspects of delivery sustainability. For example, highlight both emissions savings and fair working conditions. Consider also adding safety-related impacts where relevant.

Example:

- “Your parcel is delivered by a courier employed under fair labor standards “
- “Bike couriers are trained in urban safety standards — safer for couriers and for your community.”

13. Leverage social norms to influence choices

Use social norms to encourage sustainable delivery choices by communicating both:

- *what others do*
- *what others value or expect*

Example:

- “75% of customers in your area choose this option”
- “Our community values responsible delivery — thank you for making a difference.”

14. Appeal to emotion, not just rationality

Use emotive storytelling to show how delivery choices make a difference. Show testimonials, behind-the-scenes courier stories, or before/after environmental visuals. Provide personalized feedback or celebrate milestones.

Example:

- Storytelling: include a story in checkout “Your courier, Sara, delivers on an electric cargo bike, reducing city noise and pollution.”
- Personalized feedback: «You saved 1.2 kg of CO₂!»
- Celebrate milestones: “You’ve chosen sustainable delivery 5 times!”

15. Target life transitions for greater impact

Identify and engage consumers during key life changes (e.g. moving house, starting university) when new habits are forming. Tailor sustainable delivery communication to these moments for higher impact.

Example: A furniture retailer targets new university students with an offer: “Furnish sustainably with low-emission delivery.”

Align and support sustainability messaging

16. Align communication across channels and consumer journey / supply chain

Collaborate with other supply chain actors to achieve coherent and engaging messages at every touchpoint of the consumer journey:

- *In-store signage*
- *Before shopping (ads, search engines)*
- *Retailer websites, apps, social media*
- *At the point of decision (online checkout)*
- *During delivery (carrier apps and tracking page, email confirmation or updates)*
- *Post-purchase (surveys, newsletters)*
- *On/in the parcel itself (packaging, inserts)*
- *Carrier vehicles or delivery uniforms*

Example: Use the same labels and icons on website, delivery app, parcel label, follow-up emails.

17. Give consumers actionable plans for out-of-home collection or return

Help consumers feel confident about out-of-home parcel collection or return:

- *Show how lockers work*
- *Display interactive maps of nearby pick-up or return points*
- *Explain sustainable travel options (bike, walk, transit)*

Example: Provide a short video showing how to use a parcel locker

18. Encourage long-term sustainable behaviour

Don't stop at a single “green” choice. Encourage habits like bundled orders, slower shipping, and opt-out of returns. Promote reuse or recycling options and explain how small actions add up over time.

Example: Show a progress bar: “You've chosen sustainable delivery 3 times - keep going!”

19. Give consumers positive sustainable choice experience

Design intuitive, elegant menus that:

- *Introduce and explain new sustainable delivery options*
- *Avoid “forced” express delivery or misleading default selections*
- *Remove marketing clutter that distracts from sustainability choice*
- *Ensure accurate, updated, and user-centered content*

Example:

- *Avoid default choices, without consumers inputs*

- Avoid overuse of urgency messaging
- Avoid banners and promos

20. Collaborate on developing innovative and consistent communication tools

Partner with carriers, certification bodies, NGOs, public agencies, and technology developers to ensure that sustainability messaging is credible and consistent across retailers.

Example:

- Develop an emissions calculator in partnership with logistics and environmental NGOs, embedded on the checkout page.
- Co-develop interactive tools like personalized feedback or maps with emissions comparisons.

Annex C: Scenarios for the workshop 2nd group activity

Scenario 1: Book retailer promoting click & collect deliveries and communicating about consumers' travel behaviour

A book retailer would like to encourage consumers to choose deliveries in pickup points (located in shops or parcel lockers). The retailer also wants to discourage consumers from using their cars for pickups, unless it is during an existing trip (e.g. commuting). The goal is to encourage collection by foot, bike, public transport or on the way during another trip.

- To discuss the guidelines “Align and support sustainability messaging”

Scenario 2: Fashion retailer reducing returns through better fit guidance

A mid-size fashion e-commerce company selling clothes and shoes would like to combat high return rates due to size and fit uncertainty. To achieve that, they want to establish communication discouraging consumers from returns and they also want to provide consumers reliable guidance to avoid multiple-size orders and multi-design orders.

- To discuss the guidelines “Use messages that matter”

Scenario 3: Grocery retailer encouraging non-express deliveries

An online grocery retailer notices that too many orders are placed by consumers for the same day or the next day, making it challenging to forecast demand, leading to food waste, inefficient route planning and unconsolidated deliveries. The company wants to encourage consumers to schedule their deliveries 3–5 days in advance, by offering them advantages like better time slots, discounts, and communicating on the advantages in terms of sustainability.

- To discuss the guidelines “Shape choice environment”

Scenario 4: Marketplace platform promoting urban bike delivery over electric vans

A marketplace platform offering products from independent local shops — including fashion, home goods, tech accessories — delivering in dense urban areas, would like to develop and promote a “bike courier” delivery option at checkout for orders up to 15 kg, powered by a local cargo-bike logistics partner. Communication will emphasize the benefits of these cargo-bikes compared to the electric vans that are normally used by the company.

- To discuss the guidelines “Communicate clearly and credibly”

Annex D: Notes from the group discussions during the consultation workshop

GROUP A

FIRST ACTIVITY - PART A – ON THE WHOLE SET OF GUIDELINES – 10 MINUTES

- **Legal** International Council for advertising self-regulation (ACAS?) – reference asking to check expressions being recommended – if using a number, how to make sure credible and easy to understand – make simple for a consumer who has no idea what sustainability is. So stay clear of numbers?
- **Comprehensive**, could be useful to go through website to check. Checkout is where it happens – so how to make pause, reflect with popups when you are trying to create flow for customer (online marketing managers won't like). But ingredients seem to be there.
- **Data to support claims** Many companies may not have data – how do they get it and what do they do? Are there sources such as ASTER's guidelines ([Vägvisare Tillgängliga och effektiva omnikanaler.pdf](#)) that can show retailers how to present the sustainability of home delivery versus delivery versus in-store purchases.
- Be clear on how to address **different aspects of sustainability** – and doesn't it conflict with no.1
- **Segmentation of consumers**- how to tie that and what people care about – how to tie in
- **A lot of guidelines and info** – important to remember that customer cannot remember so much info – it must be clear. We have a checkout and in the checkout it will be difficult to decide **which info we want in checkout** and which info we have when we deliver to customer. So how we decide the most important. What is critical to put where?
- **working with agreement** – have to be clear with examples – clear **dos and donts with examples** - don't do this at delivery checkout do do this - what we do clearly communicate? Makes **easy for retailers to share with checkout provider**. Summary with good and bad examples.

FIRST ACTIVITY - PART B – ON A SELECTION OF 5 GUIDELINES – 20 MINUTES

Guideline 16
How easy/difficult to understand is it?
Ok
What would help you to understand them?
Be clear e.g. "fossil-free delivery" sticker on locker – the SE regulator says no you can't use as consumer won't understand it – what does it mean – is it the van or parcel locker – important to be specific
Guideline 17
How easy/difficult to understand is it?
Ok
What would help you to understand them?
How will retailers do this with limited space on website – but could be done – will consumer read it
Guideline 18
How easy/difficult to understand is it?
Not clear if it means long-term sustainable delivery choice or general green behaviour. Is it points, reduction on price, loyalty program – what could the options be. / Be clear is it things other than delivery. Returns – [retailer] ok to say avoid return, company-dependent depends on sector and share of returns e.g. important to zalando – but giving info so people choose right product.

<i>What would help you to understand them?</i>
<i>Guideline 19</i>
<i>How easy/difficult to understand is it?</i>
<i>What would help you to understand them?</i>
<i>Guideline 20</i>
<i>How easy/difficult to understand is it?</i>
<i>What would help you to understand them?</i>

SECOND ACTIVITY – 30 MINUTES – SCENARIO EXERCISE:

Scenario 1 - Book retailer promoting click & collect deliveries and communicating about consumers' travel behaviour

On scenario: restricted opp for communication so unlikely to use it communicating to consumers how to pick up – but focus on what they can do i.e. deliver to a pick up a point.

Place pick up point at top – as 70% consumers don't deviate from standard option. Want as little info as poss so consumer doesn't deviate from purchase.

Carrier app – gives info about picking up and order on way etc. but could also have simple msg “choose to walk to pickup”. But how to influence carriers? Carriers and retailers have good open relationship so q poss.

How to tell consumers how to collect – pressure on space for online checkout – use carrier app to inform how to collect. [retailer] or others have own app so can control.

Insert postcode on checkout, get map with pinned locations of pickups – could enlarge to encourage pickup by walk/bike – could point out <500 m f ex.

Long-term sustainable delivery – use loyalty program? Show points per delivery option e.g. family points.

ecomID doing in SE – work with retailers esp fashion, gathers info from retailers to connect the dots, so if a consumer “misuse” options then less favourable options for returns.

Price – if cheaper to have sustainable delivery, then will choose and get used to it.

Lyko SE - One has “economy delivery” – 3-5 d – free – carrier not named – gives people in system more time.

[retailer] ccny – price important so cheaper for consumer. So do you need to mention sustainability??? You could give the sustainable message AFTERWARDS where there is more space – reinforces / gives positive experience / education over longer period.

Driver experience for guideline 19 – makes a big difference – they could verbally reinforce messages. Also, a negative experience can detract.

Collaboration – retailers can be influenced by e.g. [retailer], to increase tempo of change. When retailers know what should be done to change checkout – green claims - it still takes a long time, to e.g. collect data to support, develop phrases, symbols. So explain the changes are around corner, so we could have something about what to do now, start using credible expressions that could be built on the future. Must not make it such that retailers remove green claims due to reg concerns. A balance.

Other actors? [retailer] – utilize space in vehicle by collaborating with e.g. flower retailer to fill up van (consolidation). A lot depends on who the carrier is – could be cheaper for them so attractive too. Stordriftsfordeler.

Checkout solution companies – have power with retailers – knowledge gap there? They could develop green buttons, expression, explain them the consequences of choice architecture.

AI – how does chatgpt shape consumer behaviour – what are they saying about sustainability.

GROUP B

FIRST ACTIVITY - PART A – ON THE WHOLE SET OF GUIDELINES – 10 MINUTES

20 guidelines are a lot: prioritize the more important ones.

First time [REDACTED] sees such guidelines. It is useful.

Shorten them, prioritize them.

It is important to have examples.

How can we follow the guidelines without it being overwhelming.

Standardise the labels: it is very important. A good certified label would avoid a lot text.

Labels would also help choosing sustainability when making quick choices.

Focus on parcel lockers for [REDACTED] [carrier]. Possibility to change the delivery option after check out on retailers website.

Some guidelines are not applicable directly and needs time, lobby. So prioritize the guidelines should also account for that.

Layered information is a good guideline. To increase trust from consumers that fear greenwashing.

Social concerns are generally more convincing for more consumers than ecological concerns. → should we always prioritize this kind of message?

Have surveys to better know consumers values and adapt communication.

FIRST ACTIVITY - PART B – ON A SELECTION OF 5 GUIDELINES – 20 MINUTES

Guideline 11
How easy/difficult to understand is it?
Interesting guideline – good to be specific on the impact of choices. Be close to consumers as persons Last-mile deliveries always impact neighbourhoods so it is a good angle to communicate.
For carriers, it is a challenge to give information on the vehicle type because depending neighbourhoods. Deliveries are operated with different vehicles for the same retailer
Actual examples, with visuals of how the check-out would look like
The most sustainable option varies a lot and is not always pick-up point. Sometimes home delivery is actually the most sustainable. Smart & drop project
What would help you to understand them?
Guideline 12
How easy/difficult to understand is it?
Sustainability is global and all dimensions are important. Give the global perspective. It can also depend on the retailer and what is sold.
How can you make a statement as a retailer that one option has fair labor conditions without saying that the others are unfair.
What would help you to understand them?
Guideline 13
How easy/difficult to understand is it?
What would help you to understand them?
Guideline 14
How easy/difficult to understand is it?
What would help you to understand them?
Guideline 15
How easy/difficult to understand is it?
What would help you to understand them?

SECOND ACTIVITY – 30 MINUTES – SCENARIO EXERCISE:

Scenario 2 - Fashion retailer reducing returns through better fit guidance

Return are part of e-commerce. Rather look at while consumers are returning, what's wrong with the retailer's side. Do a full analysis of returns on why consumers are returning.

██████ [retailer] does as much as they can to limit returns.

Returns are part of the consumer journey.

Once retailers have done their work to limit returns, consumers can have choice between returning at the shop /from home with different prices.

Consumers should have right to free returns for consumers organisations.

But a segment of consumers is ordering multiple sizes and items --> not guilting them but raise awareness on the impact of returns and cost for society

Repeated type of product returned? Reviews, why are they not happy → give more information to consumers

Recommend consumers a specific type of return

██████ [retailer]: Consumers who repeat returns and are problematic receive a notification → they react positively

Communicate to consumers who are ordering two sizes get information on the specificities of the sizes for a brand, without restricting consumers.

How do you discourage them to return?

If they return, how do you encourage them to return in a more sustainable way?

You don't want to decrease too much returns because it would also decrease sales.

Boost blocked consumers with high returns rates.

Do we want to go with Klarna? It might increase returns.

Different consumers groups with returns behaviour

Shaming and blaming is not the way to go but raising awareness is needed

Dos and don'ts: examples of what can be done and how it works, how to apply them.

Best practices

Carriers: returns are a parcel as any other, they also need to have short delivery times.

Returns are less often done from home so might have less impact on city centres.

GROUP C

FIRST ACTIVITY - PART A – ON THE WHOLE SET OF GUIDELINES – 10 MINUTES

Is the set of guidelines complete? Do you see anything missing?

The overall feeling in the group was that they had the feeling that the communication guidelines already felt quite complete but here and there some small details were missing or could be adapted.

The discussion started with getting again an overview of the 20 guidelines where ██████ [retailer] gave a first comment and an overview on what they were doing at ██████. The already tested a lot of different communication strategies on how to be clear with the consumers and learned quite a lot out of it. They started with a green leaf, but that was not as clear for the consumer because of the difficulties of comparing it across different companies. Then, they moved on to a logo and also here they saw that it didn't work as well as expected and that consumers didn't really understand the logos. So, they moved on to indicated with a tag for a specific time slot that they are already in the neighborhood. And with this they see the highest impact they achieved with all the test they did. They have the feeling this is the most tangible for consumer and easy to understand but also for the retailer a way to really guarantee this. And with communication guideline 1 where it is all about clear and specific in the messaging it is also important to make sure that the claims that are being used can also be guaranteed by the retailer or LSP. So, by saying 30% less CO2 that is something you can always guarantee and that was a concern they had.

For communication guideline 2 where it is about explaining new cues, all participants in the group agreed the fact that if using a symbol, it should be a well-known symbol since consumers already so emerged by all kind of different symbols that it could also lose its added value. So then there should be from an EU or country-level a specific kind of label.

██████ also gave noted that he had the feeling (that in any of the guidelines, gamification came forward (he also mentioned that he might have missed some points during the presentation of the 20 guidelines). And he had the feeling in e-commerce and in green roadmaps, gamification works. And so maybe inside the guidelines, there could be something about that. By using gamification, it can also be a way to engage your consumers about the delivery options and so also the sustainable delivery options. Related to that are the loyalty programs. He explained that in Italy in some case it already exists that if a consumer chose for the greener option, they get more points in the loyalty program. For a consumer it is a rewarding strategy. Those were the two points he felt were missing but he also agreed that it was already very complete and so it was difficult to add ideas or points to the list.

██████ also added that while being already very complete, what was a bit missing for here was to insert some examples or extra guideline that really touches with the consumer support and feels personal to the consumers. So, for example: By choosing the most sustainable delivery option, you have some benefits in terms of customer support or like Mario said extra points with your consumer loyalty-based program. Instead of only focusing on giving information about the advantages for the consumer itself. Jan also mentioned on this that currently they are testing at ██████ [retailer] a way to collect money for the neighborhood consumers are living it as loyalty program and with that money the neighborhood can organize some event like a social event

Ideas for improvement?

For ██████ [retailer] some communication guidelines are overcomplete and with this he means that for example *communication guideline 3: making reliable claims*, he feels that referring to certain standards might not really add extra value. He explained that it is not something they will ever use with consumers since those standards are just too difficult to understand. And ██████ added that it is about not being able to understand and read the signs and understanding the message. Jan again referred to the already in your neighborhood tag and explains that this is much more tangible than the emission calculation is based on EN16258 standards.

██████ added that it is all about the wording and the simpler the better. We must think as a consumer: "I am a consumer, I'm not an expert in sustainable last mile delivery, so I cannot understand what an average vehicle distance is."

FIRST ACTIVITY - PART B – ON A SELECTION OF 5 GUIDELINES – 20 MINUTES

Guideline 6: Make sustainable option visually salient

How easy/difficult to understand is it?

So here overall the guideline seemed understandable, however the comment was made by ██████ to make the sustainable the default option, this could be a way to make it the most visually salient.

Another idea was to really highlight and basically only make the sustainable delivery option visible and consumer have to do something more to be able to choose for the other delivery options. With other words, making it more difficult to be able to choose for the unsustainable option.

Another example was given by [REDACTED] which proposed the creation of a badge/tag to make the sustainable option more visually salient. So, this is in line with what was already written in the guideline.
<i>What would help you to understand them?</i> It was already quite clear for them.
Guideline 7: Make consumers pause and reflect
<i>How easy/difficult to understand is it?</i> [REDACTED] [retailer] started discussing that suggesting nearby pick-up point or in-store availability might be difficult for some sectors, especially in the grocery sector. For the grocery sector, only 5% of the [REDACTED] orders are delivered in pickup points (stores) and they see a decline. Indicating that consumers don't want that. So, it would be more about focusing on other elements of the delivery which in some way they already do since the first show the timeslots when they are already in the neighborhood of the consumers and so they rank the options by distance. And this is order of size and stock availability is not always feasible in each of the e-commerce sector. So overall the guideline is clear, but it doesn't account for product type differences.
<i>What would help you to understand them?</i> [REDACTED] indicated that if the goal is to make consumers pause and reflect another way to do this would be by including a graphic visualization of the trade-off but this is some way relates to guideline 8.
Guideline 8: Provide comparability between options
<i>How easy/difficult to understand is it?</i> [REDACTED] again highlighted the fact that the proposed examples can use more simpler words: the first one ("Standard delivery: low emissions" vs. "express delivery: high emissions") is understandable for consumers while the second one ("Save 1.4 kg CO ₂ if you wait 2 days") is too technical for consumers. And if we still want to use words it has to be very concrete examples that are tangible for consumers. A way to do that is by translating it into a consumer benefit in terms of the environment. For examples: less delivery vans in your neighborhood or something like that.
<i>What would help you to understand them?</i> See comment above.
Guideline 9: Influence both habitual and conscious choices
<i>How easy/difficult to understand is it?</i> Overall, it seemed straightforward and clear for them.
<i>What would help you to understand them?</i> One comment was given to perhaps also add something as well about adapting the messaging based on the local regions or cultures. So, habits about delivery options vary across different cultures but also the wording used, it might be more appealing to Southern European than to the Nordics.
Guideline 10: Reward sustainable delivery choices with positive delivery experience
<i>How easy/difficult to understand is it?</i> This again was clear for the participants, they circled back to the idea of the loyalty and rewarding programs and what is the benefit for the consumer.
<i>What would help you to understand them?</i>

(Facilitator Standpoint): Overall feeling: I felt that overall, they did understand the guidelines but that sometimes because of the examples given the focus was not necessarily on understanding the guideline itself but already thinking about the solution and how this could be implemented and where the challenges and problems might emerge and so the focus wasn't necessarily on the communication guideline itself. I tried multiple time to redirect towards the guideline itself, but I don't think this always worked.

SECOND ACTIVITY – 30 MINUTES – SCENARIO EXERCISE:

Scenario 3 -Grocery retailer encouraging non-express deliveries

The discussion started with a bit a reaction on the scenario, so from [retailer] experience usually people do not schedule deliveries 3-5 days in advance and usually people also change just before cutoff moment (the last moment possible to change something at the delivery before really validating the purchase) the order or the delivery options. Also, [retailer] made the comment that for a big grocery retailer that has the volume this might be less relevant.

So, for the sake of the exercise, we switched from how we can encourage consumer to schedule their deliveries 3-5 days in advance to **how can we encourage consumer to choose for wider delivery timeslots (6 to 8 hours) instead of 2 hours timeslot.**

So, the communication interventions that were suggested to use guideline 6 and 10: So, highlighting the sustainable delivery option by really highlighting the timeslots when they are already in the neighbourhood and making the other timeslots less visible. One challenge with this is that you don't necessarily communicate a lot about it since too much information would interfere with the flow in the check-out but also since most consumers don't read all of it, they just want to be able to purchase their delivery and the faster the better.

Communication guideline 10 was also an intervention the group thought was a good one. Here they linked it too adding an extra test sample to the deliveries where consumers chose for a wider delivery timeslot. So here the message would be delivered before the purchase but also after the purchase in the parcel itself as a reminder for the consumers.

Given a discounts seems a bit more difficult in the grocery sector since groceries sector is a loss-making business and so being profitable can be challenging. Where working with test samples is really a more common and part of the business model.

[retailer] was interesting in this idea and mentioned he would step up a meeting with the marketing department and the purchasing department to see if there was any possibility to test this out. And so, mentioning that there is a dialogue between supply chain, purchasing and marketing department to make this work.

GROUP D

FIRST ACTIVITY - PART A – ON THE WHOLE SET OF GUIDELINES – 10 MINUTES

Is the set of guidelines complete? Do you see anything missing?

Yes, the Guidelines are complete

Guideline 8 seems difficult to implement (requires study, audit and certification)

How to blend in the Guidelines with the corporate rules could be an additional suggestion

Overall, there was the feeling that it would be helpful if the Guidelines would provide indications on how to build a strategy or make a selection of the recommendations that fit best a specific use case.

Do you have any other expectations that we have not met?

Add instruction on how easily the implementation of the guidelines are (time, efforts, costs, risks etc)

How to deal with post-delivery communication – when disruption in delivery system that affect the way a good was delivered in the end.

FIRST ACTIVITY - PART B – ON A SELECTION OF 5 GUIDELINES – 20 MINUTES

Guideline 1

How easy/difficult to understand is it?

Question raised: do we need a standard way to define explain what “green” means? Form the point of view of group D this might be difficult to harmonise across all countries etc

In the Netherlands there was the attempt to objectify what green is but the term was hard to “protect” as it is too generic and anyone can use it. It is consequently difficult to ensure the standard is implemented properly.
<i>What would help you to understand them?</i> A difficulty might be in perceived miscommunication if the vehicle indicated when ordering turns out to be another one at the delivery. Thus requires to think of post-delivery communication should the process be disrupted and a van turn out to deliver instead of the promised cargo-bike.
<i>Guideline 2</i>
<i>How easy/difficult to understand is it?</i> Very clear
<i>What would help you to understand them?</i> Be cautious to make the information accessible to people that are visually impaired
<i>Guideline 3</i>
<i>How easy/difficult to understand is it?</i> Clear: suggestion would be to add a reference to CountEmissionEU standards in the examples.
<i>What would help you to understand them?</i>
<i>Guideline 4</i>
<i>How easy/difficult to understand is it?</i> All clear.
<i>What would help you to understand them?</i> It might be good to add examples of ways to present and do the layering.
<i>Guideline 5</i>
<i>How easy/difficult to understand is it?</i> All clear
<i>What would help you to understand them?</i>

SECOND ACTIVITY – 30 MINUTES – SCENARIO EXERCISE:

Scenario 4 - Marketplace platform promoting urban bike delivery over electric vans

On the checkout page:

Put cargo bike delivery option as default or on top

- Indicate next to a cargo bike logo “With this choice you support a **local** cargo bike partner delivering **fairly** and **sustainably**”
- Words in bold shall be linked to further information about the partner(s). For sustainability emission impact comparison with e-can and vans could be indicated with reliable resources. Und fairly one could imagine having results of workers satisfaction surveys (would require cooperation with LSP)

In the checkout email: could have messaging saying “we are riding to you” potentially with the picture of a rider.

Packaging: could include postcard with a QR to a survey or way to win a free bike repair session or cargo bike ride

Annex E: Changes made to the communication guidelines based on feedback for each draft guideline

Table 6: List of changes made to the communication guidelines draft

Guideline	Comments summarized ²	Actions
1	Discussion on the meaning of “green”: should it be defined? Information on CO₂ quantity saved are too technical for consumers	Put less focus on the term green by moving the first sentence at the end. “30% CO₂” replaced by “less CO₂” “Open” was also added in the title to cover the need for transparency.
2	If using a symbol, it should be a well-known symbol. It should be from an EU or country-level specific kind of label.	Covered by guideline 5. Focus of guideline 2 is more about explaining cues and symbols. So “Use recognized sustainability labels.” was removed to avoid confusion.
3	A reference to CountEmissionEU standards could be added.	“Use standards to calculate emissions such as CountEmissionEU.” was added. “Reliable” was changed to “verifiable” for more precision.
4	Layered information is a good guideline to increase trust from consumers that fear greenwashing. Information on CO₂ quantity saved are too technical for consumers	“This can increase consumer trust and avoid consumer fears of greenwashing.” was added. “30% CO₂” replaced by “less CO₂”
5	Legal aspects on advertising regulation in EU and in European countries should be considered.	“Comply with the national regulations on sustainable communication.” was added.
6	Make the sustainable option default could be a way to make it the most visually salient. Create a badge/tag to make the sustainable option more visually salient. So, this is in line with what was already written in the guideline.	Wording was clarified so that using default option was more obviously suggested: “Make the sustainable delivery option default”. In the examples, “Place it at the top” was replaced by “Preselect the sustainable delivery option”. “Visually salient” was replaced by “stand out” for more clarity.

² Complete comments are included in Annex D.

Guideline	Comments summarized ²	Actions
		Precisions were also added to the phrasing with: - “draw attention to the sustainable delivery options”. - “Highlight the sustainable option by using fonts”.
7	Retailers want checkout to be quick and want to avoid interruptions and pauses in the shopping flow.	The phrasing was improved by replacing “Make consumers pause and reflect” by “Encourage reflection on delivery choice”.
8	The examples should be simplified and more tangible to consumers, in terms of benefits for the environment.	The phrasing was changing to integrate the “user-friendly” dimension. An example about graphic visualisation was added and the example with CO₂ emissions reduction was deleted.
9	/	/
10	Rewarding through the loyalty program or with other kinds of benefits should also be included in the guidelines.	The guideline is updated with two ways to reward sustainable delivery choices: through the delivery (as in the draft) and through the online platform, including possibilities of rewards through the loyalty scheme or gamification. The sentence “Rewarding through delivery experience is more likely to lead to long-term behaviour change.” is added to highlight the difference between the two different rewarding paths.
11	Last-mile deliveries always impact neighbourhoods, so this angle should be used to make the impact of deliveries tangible to consumers.	In the list of tangible outcomes, “last-mile deliveries often impact consumers neighbourhoods” was added.
12	As a retailer, it is difficult to make a statement that one option has fair labour conditions without implying that the others have unfair working conditions.	The first example is modified with a phrasing possibility that does not imply that other delivery options provide unfair working conditions: “Your parcel is delivered by a carrier awarded for fair labour standards”.
13	/	/
14	/	/
15	/	/
16	Important to be specific in the message if it is displayed at several places, e.g. “fossil-free delivery” sticker on locker is not permitted by Swedish regulation as consumer won't know if it applies to the van or parcel locker.	A specific messaging example was added: e.g. message “delivered by a low-emission vehicle” on the website, the vehicle, the parcel, the app. Rewording was done for more clarity: “engaging branding and messages across touchpoints”.

Guideline	Comments summarized ²	Actions
17	Difficult to integrate such communications given the limited space at check-out.	The guideline is not modified but in the general recommendations (see section 5.1), a discussion is added on how to associate guidelines (this one can be associated to guideline 4 - Layer sustainability information).
18	Unclear whether it refers to long-term sustainable delivery choice or general green behaviour outside deliveries.	Was deleted as it does not apply specifically to delivery choice. This is now included in the general recommendations (see section 5.1).
19	/	As one guideline recommend default option, the mention of “misleading default selections” was replaced by “Keep consumers in the loop and give them choice when delivery plans change” to be more accurate and avoid confusion. The examples were also rephrased for more clarity.
20	/	Was deleted and integrated in the general considerations (see Chapter 5) as it is not a proper communication guideline.

One conflicting suggestion was identified for guideline 6. The comment proposed that only sustainable delivery options should be made visible to consumers, while other options should be more difficult to access or select on the website. However, as this approach would significantly compromise the user experience, the recommendation was not incorporated into the final guidelines.

In addition to the guideline-specific feedback, participants shared more general observations, which are reflected in Chapter 5 (see section 5.1). Furthermore, the second group activity (the scenario-based exercise) helped identify practical challenges related to the use of the guidelines. These are also addressed in Chapter 5.