LIKE-A-PRO's Living Labs

Consumer Insights Dataset

Like a PRO

like-a-pro.eu

Funded by the European Union

cscp

Imprint

Title LIKE-A-PRO's Living Labs. Consumer Insights Dataset

Authors Arlind Xhelili (leading author)
Jennifer Wiegard
Jannik Schüürmann

All at the Collaborating Centre on Sustainable Consumption and Production (CSCP)

Contributors Stavroula Ziavras
Polymeros Chrysochou
Toula Perrea

All at the American College of Greece – Research Centre (ACG-RC)

Reviewers Sterre van der Waard (WZV)
Sasa Straus (ITC)
Morena Silvestrini (CNTA)

Acknowledgments The LIKE-A-PRO consortium extends its sincere appreciation to all Living Lab implementers whose dedicated efforts enabled the successful execution of consumer engagement activities across Europe.

Living Lab implementors

Centro Nacional De Tecnologia Y Seguridad Alimentaria (CNTA), Spain
Irene González, Elena Romero Melgosa

Innovation Technology Cluster (ITC), Slovenia
Dr. Saša Štraus, Tamara Kozic, MA, Marina Balaic, MA

The American College of Greece Research Centre (ACG-RC), Greece
Athanasios Krystallis

University of Bologna (UNIBO), Italy
Antonella Samoggia, Francesca Monticone, Chiara Benussi, Giulia Rossi, Erica Conversano, Rino Ghelfi, Aldo Bertazzoli, Andrea Fantini, Giuseppe Macaione

University of Social Sciences and Humanities (SWPS), Poland
Hanna Zaleskiewicz, Anna Kornafel, Natalia Paduszynska, Ewa Kulis, Zofia Szczuka, Anna Banik, Maria Siwa, Aleksandra Luszczynska

Demos Helsinki (DEMOS), Finland
Otso Sillanaukee, Satu Lähteenoja, Sinianna Kuosmanen, Vilja Halme, Anni Saviniemi, Sointu Toiskallio, Veera Saavalainen, Janne Sala, Johannes Jauhiainen

Møreforsking Ålesund AS (Møreforsking), Norway
Bjørn Tore Nystrand, Julia Bondeli, Lisa Kolden Midtbø, Inger Bye, Maria Berstad, Trond Roger Oskars, Eirin Svanøe-Hafstad

Food and Bio Cluster (FOODCLUSTER), Denmark
Britt Sandvad, Louise Albeck Larsen

Zeytince - Ekolojik Yaşamı Destekleme Derneği (ZEYTINCE), Turkey
Menevis Uzbay Pirili, Leyla Ogut, Akin Erdoğan, Özge Yilmaz, Onur Özden

Foundation Week Without Meat (WZV), The Netherlands
Floor Severens, Lieske van der Waals, Nina de Graaf, Jona de Levita, Audrey Vandenbauw, Irmen Boel, Ingeborg Prins, Margot van Hout

Collaborating Centre on Sustainable Consumption and Production (CSCP), Germany
Marcia Rottwitt, Lily Pepper, Mareike Matz

Project title LIKE-A-PRO. From niche to mainstream –
alternative proteins for everybody and everywhere

Citation Xhelili, A., Wiegard, J., & Schüürmann, J. (2025). LIKE-A-PRO's Living Labs. Consumer Insights Dataset. LIKE-A-PRO project. Wuppertal, 2025. DOI: 10.5281/zenodo.19695223

Design soweit / Studio für Übergänge
www.soweit.studio

Photo credits Photo page 1, 36 by Jonathan Borba on Pexels
Photo page 7,152 by makafood on Pexels
Photo page 20 by Ella Olsson on Pexels

Funded by the European Union

This project is funded by the European Union under Grant Agreement No. 101083961.

Table of Contents

List of diagrams, infographics & tables

List of abbreviations

AP: Alternative Protein
CCF: Consumer Choice Framework
LCA: Life Cycle Assessment
LL: Living Lab
GA: Grant Agreement
FBCD: Food and Bio Cluster Denmark
DEMOS: Demos Research Institute
CSCP: Collaborating Centre on Sustainable Consumption and Production
ACG-RC: American College Greece – Research Centre
UNIBO: Università di Bologna – Alma Mater Studiorum
WWM: Foundation Week Without Meat
Moreforsking: Møreforsking AS
SWPS: Uniwersytet SWPS
ITC: Innovation Technology Cluster
CNTA: Centro Nacional De Tecnologia Y Seguridad Alimentaria
Zeytince: Zeytince - Ekolojik Yaşamı Destekleme Derneği
DK: Denmark
FI: Finland
DE: Germany
GR: Greece
IT: Italy
NL: The Netherlands
NO: Norway
SI: Slovenia
ES: Spain
TR: Turkey

1. Introduction

1.1 Broader contexts and inspirations

European consumers are showing an increasing interest in alternative proteins (APs) as a substitution towards the conventional animal-based food products [1]. Consumers growing pull towards such products is an excellent opportunity to enhance efforts toward healthier and more sustainable diets, in line with the ambitious targets of the European Green Deal [2], as well as the Farm to Fork Strategy [3].

Despite such an increasing interest, animal-based products still capture the majority share in our diets, accounting for about 67% of our protein intake. For example, 94% of Europeans still consume animal-based products on a daily basis [4]. The reasons are manifold. As animal and AP-based diets are two interconnected food consumption behaviours, their relationship favouring the former can go back to the general desire of people to consume conventional animal-based products or to other factors that are correlated directly to the latter. Research so far supports that consumers at points lack information or knowledge about the benefits (environmental, nutritional, health) of consuming AP products as a direct substitute of animal-based ones [5]; have negative perception of the sensory properties of AP products, together with limited familiarity with such products [6]; perceive AP products as not so easily accessible (lack of choice, availability as well as convenience) [7] and as relatively more expensive than their counterparts [8]. When it comes to availability and choice, the risk of potential allergens in such products and/or the need for a balanced nutritional profile becomes a consumption barrier for some consumers [6]. The lack of a clean label, as well as guidance on safety requirements for novel, AP-based products can also act as a barrier, especially for those consumers for whom health and safety are the determining factors of their food consumption habits [9].

Interest in alternative proteins is rising, but daily diets still tell a different story: animal products account for 67% of protein intake in Europe, and 94% of Europeans still consume them every day. Closing this gap is a strategic opportunity.

Looking at food environments more closely, consumers perceive the promotion and marketing efforts as limiting and/or isolating which can then act as a barrier towards their increased consumption. For example, in most cases AP products are promoted using segregated language such as ‘vegan’ or ‘vegetarian’, as opposed to other (animal) products / dishes where the nutritional or other sensory properties are highlighted [10]. This is especially true for consumers who might be curious but still consider themselves as carnivores. Another example is the placement of AP products in isolated supermarket shelves or separate menu pages, a tactic that deprives these products from even the chance of being considered as possible options by consumers. Such isolation or segregation practices are followed at other points of sale (e.g., restaurants, food markets, canteens) as well [9]. Additionally, prevalent social and cultural norms make animal-based products to take precedence, while the consumption of APs being potentially discouraged or downplayed [10]. To cap off the exemplification of factors that disfavour the consumption of AP products are vendor related ones where the availability and accessibility to AP sources and products becomes more difficult due to supply volatility such as shortages, gluts or failures [11].

The above well-known barriers can at the same time act as leverage points towards the facilitation and scaling up of the consumption of APs. As an evolving field, more research is needed to understand consumer perceptions and how consumption of AP products can be promoted. Further research and development should also go in the direction of AP sources and the introduction of novel products and as a means to offset some of the above-identified barriers at the value / supply chain level.

1.2 LIKE-A-PRO - APs, consumer and food actor engagement

Inspired by and capitalising on these developments, the LIKE-A-PRO project aims to accelerate the shift towards and normalise healthier and more sustainable dietary patterns by diversifying and increasing the availability, accessibility and uptake of alternative sources of protein and specific products.

At least sixteen new AP products are being developed during the course of the project, based on ingredients from seven protein sources which are novel, sustainable, EU-based, healthy, affordable and industry viable. In addition to these products, LIKE-A-PRO is co-designing and promoting other types of solutions, such as governance mechanisms which hold the potential to promote AP supply and products in food environments, including their promotion and uptake at the consumer level. Examples of these include policies that look at reducing the portfolio of unsustainable products, marketing strategies, guidelines for human-centric campaigns and similar.

Accordingly, four inter-linked and iterative clusters of activities support reaching the project goals:

- **Food environments and consumers:** in this cluster, the focus is placed on better understanding consumer behaviour-related determinants, consumers' food choices and the necessary food environment (contextual) frameworks that enable a higher uptake of AP products.
- **AP product diversification and development:** in this cluster, the goal is to diversify the AP supply and develop new AP products, thereby increasing the availability and accessibility of such products in the European markets. Best product value propositions will be developed based on consumer, market and regulatory considerations.
- **Mobilising food system actors:** in this cluster, the project works with key food system actors to support them in utilising the project learnings and empower them to make AP products an easy and economically viable choice via their diversified & increased market supply and favourable food environment conditions.
- **Impact and regulatory assessment:** in this cluster, the aim is to ensure that the project brings about positive changes in terms of health and sustainability of the European food system. Socio-economic, health, and environmental impact assessments as well as alignment with regulatory and ethical considerations are central to this clusters.

The food environments and consumers (cluster 1) and, to a lesser degree, the development of AP products (cluster 2), are the clusters through which the project has interacted with the consumer engagement activities through living labs.

1.3 What's in this report?

This report summarises the insights gained from consumer engagement activities conducted through Living Labs (LLs) in 11 European countries, representing all major European social and cultural regions: East, West, North, and South.

Following the previous contextual section, we continue this report with an overview of the methodological approach to provide the reader with a smoother and more structured reading experience. This includes details about the LIKE-A-PRO LLs, the methods used for data collection and analysis, the participant sample, as well as the limitations and benefits of the adopted approach.

To enable practitioners to build on the experiences of others and avoid common pitfalls, the next section outlines key procedural learnings from across the 11 countries. This includes what worked well and what we wish had been known at the outset of the process, concluding with key considerations and recommended steps.

The core of the report focuses on two main areas:

1. **European perceptions and attitudes towards APs**, summarised using the COM-B model (Capabilities, Opportunities, and Motivation) for behaviour change.
2. **Public perceptions of different intervention strategies** to promote APs. These include limiting the availability of unsustainable and unhealthy options, expanding access to sustainable and healthier protein alternatives, experimenting with food environment design, and leveraging communication, language framing, and education. Or a combination of these. Together, these are summarised under the project's **Consumer Choice Framework (CCF).**

Both the COM-B model and the CCF are detailed in the methodology section. The findings are presented at both the individual country level and as a cross-country summary to provide a broader understanding of the results.

The report concludes with a discussion of the findings, reflections on future directions, and next steps for the project.

Due to the comprehensive nature of the findings and the broad regional coverage, the full report is extensive. For readers seeking a more concise overview, including food decision makers / stakeholders, a shorter version will be prepared. This shortened report will retain most sections of the full version but will provide a distilled summary of the key findings within the CCF and is limited to cross-country summaries.

2. The LIKE-A-PRO Living Labs in a nutshell

2.1 An overview of the methodological approach

The LIKE-A-PRO LLs acted as forums to exchange, discuss, and co-create with European citizens and consumers on a range of topics related to food choices and how these choices are made in various food environments. The specific focus, aligned with the project's mandate, was the consumption and integration of AP products into European diets.

Through the LLs, the project team:

1. Explored food environments from the perspective of European citizens and their consumption realities - how consumers make choices in such environments, how easy or difficult it is, and what challenges or opportunities they encounter.

2. Tested and gathered feedback on developed AP products-where feasible and always in compliance with all applicable regulatory and ethical standards.

3. Investigated the most influential consumer behavioural determinants that could drive a shift toward healthier and more sustainable dietary patterns.

4. Identified and exchanged on potential entry point in food environments, governance mechanisms or solutions, that could create favourable conditions to support the necessary dietary transitions.

The LLs were implemented in 11 European countries with local partners (i.e., lab implementers, please see Diagram 1) on the grounds representing diverse regions and a wide range of dietary cultures, norms, and practices. Efforts were made to engage consumers from various socio-demographic backgrounds and geographical contexts—urban, peri-urban, and rural. The project had the idea of guaranteeing a wide representativity of consumer segments, with particular attention to groups that are typically more difficult to engage, such as people living in rural areas-for whom a 15% quota has been applied. This target has been exceeded in most LL countries, with the exception of Greece and Turkey. For a full overview of LL participants, please see Diagram 1.

Each LL included four iterations, with at least two meetings per iteration, resulting in a minimum of eight meetings or interaction points with participants. The CCF [12] served as the foundation for engagement, offering a structured approach to better understand the interplay between food environments and consumer behaviour. The CCF clustered interventions into four overarching types:

Choice Editing — Removing unsustainable or unhealthy options from the available choices.

Choice Expansion — Increasing the availability of sustainable and healthier options while keeping other options accessible.

Choice Environment — Designing food environments to nudge consumers toward more sustainable choices.

Beyond Choice — Implementing systemic interventions (e.g., education and awareness campaigns) that influence behaviour outside the immediate point of purchase.

The implementation was further guided by the COM-B model [13], which framed behaviour as a result of three key determinants:

Capability — The physical and psychological skills required to perform a behaviour (e.g., knowledge, memory, cognitive abilities).

Opportunity — External conditions that enabled or constrained behaviour-either physical (e.g., infrastructure, accessibility, time, availability) or social (e.g., cultural norms, interpersonal influences).

Motivation — The conscious and unconscious processes that influence decisions-both reflective (e.g., planned and evaluative) and automatic (e.g., impulsive or habitual).

These determinants helped structure both the design and analysis of LL activities.

Two main formats were used to meet the project's goals:

- **Conventional Exchanges and Co-Creation**: LL participants engaged in structured workshops using various facilitation techniques to explore food behaviours and identify key behavioural determinants, especially regarding the adoption of APs.

- **Interaction at Point of Sale**: The project team conducted activities in real food environments (without changing them), such as supermarkets, restaurants, canteens, and food markets, using tools like interviews and surveys to capture behaviour in situ. This is not to be confused with behavioural intervention pilots where food environments are changed as a mean to observe how consumers would react to such changes, and if their behaviours will change.

To ensure effective implementation, a series of interlinked documents and training activities were developed and used:

- **LIKE-A-PRO LLs Governance Framework**: Outlined key procedural steps for planning, establishing, managing, and monitoring the LLs. It outlines the vision, purpose, thematical focuses, target group, places and timeline of implementation, operational procedures including roles and responsibilities [14].

- **LIKE-A-PRO LLs Manual**: Provided step-by-step guidance / protocols on organising LL meetings, specifying the focus of each session and offering facilitation strategies and support materials. It served as a practical protocol for lab implementation [15].

- **Participant Recruitment and Engagement Strategy (PRES)**: Addressed how to attract and retain participants, ensuring robust and diverse involvement across the LLs [16].

- **Three Train-the-Trainer Workshops**: Delivered to align all local implementers on methodology and equip them with the skills required to facilitate the LLs effectively [17].

These documents provide a complete and detailed overview of the methodological approach.

2.2 An overview of the participant sample

Within the LIKE-A-PRO LLs, the project aimed to engage approximately 3,000 participants, encouraging their continued involvement throughout the full duration of the LLs process, where possible.

To ensure diversity and inclusiveness, the project team sought to recruit participants representing a broad range of socio-demographic backgrounds, including gender, age, education level, self-perceived socio-economic status, and geographi-

cal location. In the majority of cases, the composition of participants changed from one meeting to the next or across different interaction points.

A summary of participant characteristics is presented in Diagram 1, which provides a detailed overview of these variables across each participating country.

In addition to demographic information, participants were also asked about their awareness of specific APs, their meat consumption behaviours, and their intentions to reduce meat intake. These findings are further discussed in Section 4.2.

Throughout the engagement process, the project team maintained high ethical standards, in accordance with the LIKE-A-PRO Data Management Plan and Ethical Requirements, both of which are aligned with the EU General Data Protection Regulation (GDPR) and other relevant data protection frameworks. In a nutshell, during each meeting and interaction point, participants signed a consent form for the processing of their data and, where applicable, for any photos taken during their engagement with the project. Prior to giving consent, they received an information sheet outlining the project's objectives, purpose, and duration, the potential risks of participation, the voluntary nature of their involvement, their right to withdraw participation and data at any time, and the procedures for data storage, handling, and retention. All participants' questions and concerns were thoroughly addressed by representatives of the LL implementers before consent was obtained.

2.3 Research limitations and disclaimers

While the findings presented in this report offer valuable insights into consumer perceptions and behaviours regarding APs across 11 European countries, several methodological limitations should be acknowledged to provide appropriate context for interpretation.

The data collected relies on participants' self-reported behaviours, thoughts, and opinions. As with any self-reporting method, there is a risk of bias, such as social desirability or inaccuracies in recall, which may affect the reliability of some responses. Moreover, the structure of the LL sessions involved pre-defined questions, which did not allow for follow-up or probing to clarify or validate participants' responses. This limited the opportunity to explore emerging themes in greater depth.

Part of the insights were gathered in workshop-style settings, where participants could hear and respond to others' contributions. While this format encourages engagement, it may also have influenced individual responses due to group dynamics or peer pressure, whether consciously or unconsciously.

Although participant selection aimed to ensure diversity in terms of gender, age, education, socio-economic background, and geography, the sample was not statistically representative of national populations. Therefore, the findings should not be interpreted as nationally generalisable.

While a shared protocol guided the overall implementation of the LLs, lab imple-

menters made contextual adaptations to reflect cultural, linguistic, and logistical realities. This included differences in language, facilitation style, and the specific AP products introduced. Accordingly, this report moves beyond traditional cross-country comparisons to summarise findings and highlight the main similarities and differences observed in practice. In view of this, some insights may not be directly transferable to other settings without further validation.

In addition, despite using standardised materials and facilitator training, there remains a possibility that facilitators unintentionally influenced discussions through how questions were posed or how sessions were guided. This may have subtly shaped participant responses or the emphasis placed on particular topics.

These limitations do not diminish the relevance or utility of the findings but are important to consider when interpreting the results.

2.4 Benefits of this research / knowledge generation process: how to use the learnings

The research conducted through the LIKE-A-PRO LLs offers valuable, real-world insights into how European consumers perceive and engage with APs within their everyday food environments. While the findings should be understood as exploratory and indicative, they provide a strong foundation for informing future actions across multiple stakeholder groups.

The study offers a qualitative snapshot of consumer attitudes, behaviours, and motivations across a diverse range of social and cultural contexts in Europe. These insights help identify emerging patterns, shared concerns, and localised barriers or enablers related to the uptake of APs and broader shifts toward healthier and more sustainable diets.

For those wishing to build on this work, the results point to key areas where more targeted, structured, and possibly quantitative research could be beneficial. The LLs serve as a valuable starting point to guide the design of follow-up studies, pilot interventions, or co-create solutions that are better aligned with consumer needs and expectations.

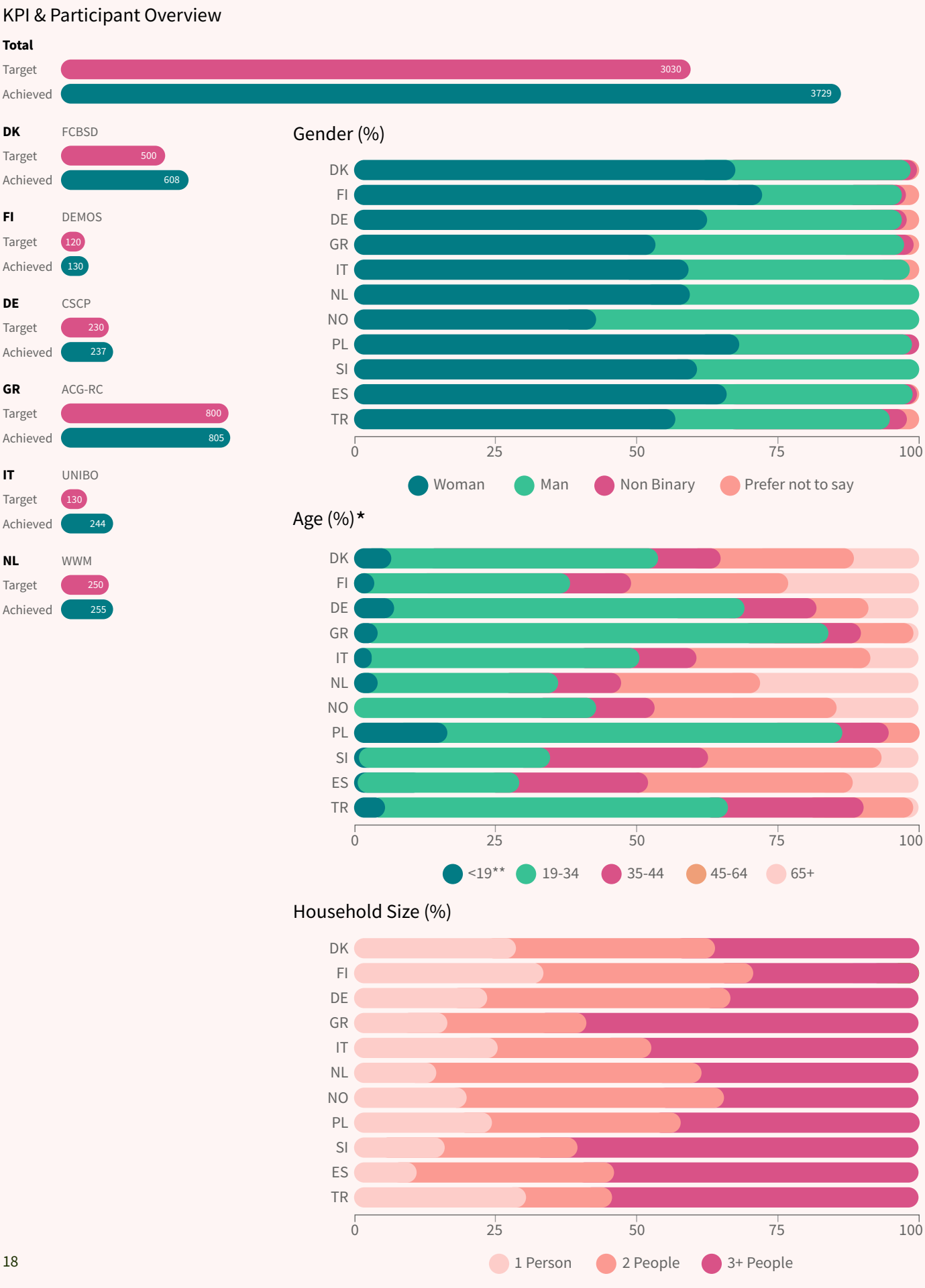
From a product development perspective, the findings can inspire food innovators and manufacturers to reflect on how current offerings are perceived, and where there may be opportunities for improvement in terms of taste, accessibility, pricing, communication, or cultural fit. Similarly, food system decision-makers, including policymakers, retailers, chefs, campaigners, civil society and researchers, can use these insights to shape strategies and interventions that bring consumers closer to APs, while supporting transitions toward more sustainable and nutritious diets.

The participatory nature of the LLs methodology also contributes to capacity-building at the local level. It enables community members and stakeholders to become more informed, engaged, and empowered in food system discussions. This, in turn, fosters trust, transparency, and legitimacy in the development and

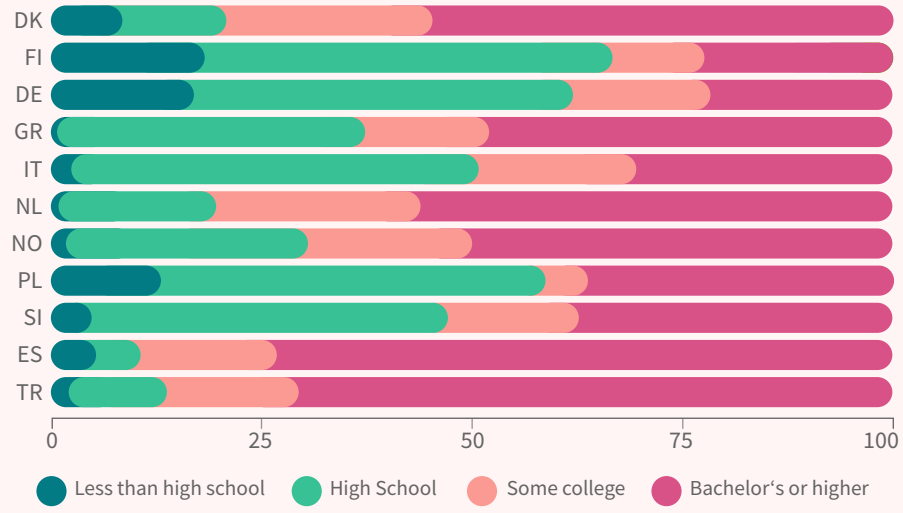
implementation of food-related interventions.

In a nutshell, the insights presented here serve as a meaningful starting point for understanding consumer engagement with APs and can inform future research, policy development, and practical interventions, while recognising the need for further validation and exploration.

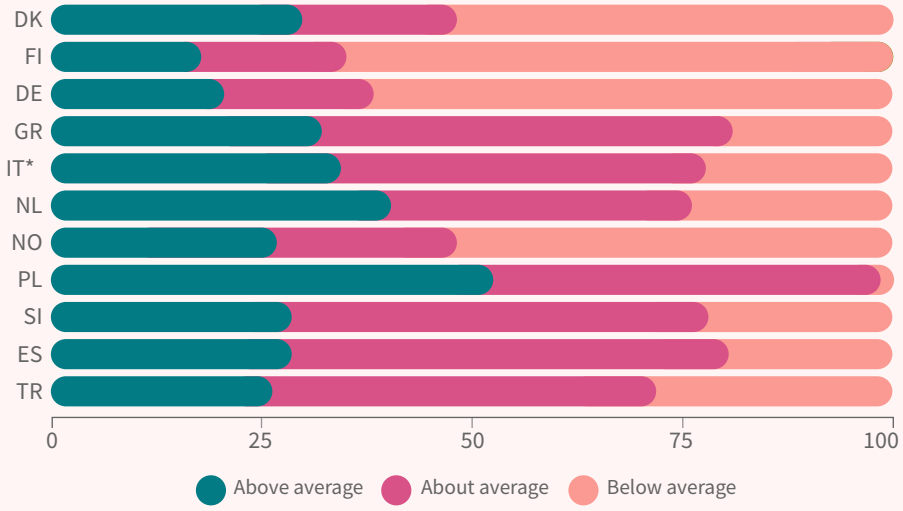
Diagram 1: Participants overview and demographic summary by country



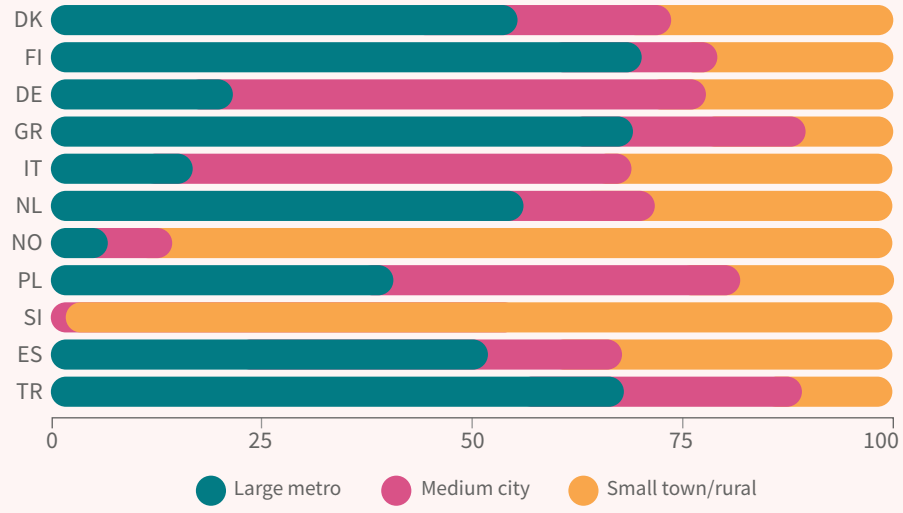
Household size (%)



Income (%)



Place of residence (%)



Note: * Age groups were normalised; ** In Italy the coding was different (1=not at all; 1= with difficulty; 3= no serious problem; 4= easily; 5= I am quite rich) and recoded into 1&2 = below average; 3= above average; 4&5 = above average). *** In cases where participants were under 16 and not emancipated, their consent forms were signed by a caregiver, as recommended in the consent form template.

3. Procedural learnings from the LIKE-A-PRO Living Labs

In each iteration of the LLs, lab implementers were invited to reflect on their experiences and provide structured feedback. They shared what worked well, what proved more challenging, and what kind of support or adjustments might strengthen future activities. This feedback covered all aspects of the process, from recruitment and workshop design to facilitation, logistics, and follow-up.

The following sections summarise these insights, first highlighting elements that were particularly successful in engaging participants, and then outlining areas where refinements could make the LLs even more effective. Together, these reflections provide a rich foundation for drawing overall learnings and recommendations for consumer engagement in multi-country settings.

3.1 What went well?

- **Active and inclusive participation.** Across the LLs, participants were highly motivated, engaged, and eager to share their thoughts. Workshops often benefited from talkative groups who debated questions openly and contributed valuable perspectives (***Denmark, Germany, The Netherlands, Turkey***). In several cases, the friendly and non-judgmental atmosphere helped even initially hesitant participants become active contributors (***Italy, Slovenia, Poland***). Novel and thought-provoking topics captured attention and sustained interest, sometimes sparking emotional responses that enriched discussions (***Spain, Greece***).

- **Food as catalyst for engagement.** Shared dinners, tastings, and realistic menu mock-ups helped participants connect with the themes on a practical level (***All countries***). Providing lunch or working with well-known chefs further enhanced the appeal of workshops and incentivized participation (***Finland***). Snacks and catering were similarly effective, motivating conversations and linking food to personal memories in informal settings like markets (***Germany***). Participants frequently expressed surprise and enjoyment at the quality of AP dishes, with tasting activities encouraging lively interaction and reflection (***Italy, Poland, Slovenia, Spain***). In ***Greece***, the appealing campus environment and high-quality AP-based meals boosted participation.

- **Effective workshop design and methods.** The iteration guidelines, method mix, and workshop or point-of-sale outlines supported well-structured facilitation (***Norway, Germany***). Templates and discussion guides were highly adaptable and effectively tailored to local contexts (***Spain, Greece***). Structured activity stations, clear facilitator roles, and interactive tools such as visual mock-ups made the sessions dynamic and easy to follow (***The Netherlands, Poland, Slovenia***). In ***Spain***, innovative approaches such as food and advertising memory discussions revealed generational differences and sparked emotional, family-connected conversations. The use of Canva further supported the preparation of engaging workshop materials (***Poland***). Interviews in ***Finland*** provided thoughtful responses even if the sample leaned toward pensioners; all countries successfully deployed multi-site fieldwork and used Likert-scale surveys to generate clear, interpretable results; and in ***Spain***, the

involvement of a professional photographer created valuable testimonials and social media content, while online survey adaptations resulted in visually engaging and comparable data.

- **Broad and diverse recruitment.** Multipliers expanded access to diverse groups, including rural citizens and underrepresented socio-economic profiles, while grocery stores and libraries served as practical venues (***Finland***). Collaborations with universities and schools secured diverse participants and reduced recruitment effort (***Germany***). Wide-ranging participant profiles were reached in ***Spain***, including students, older citizens, and intellectually disabled groups. In ***Norway***, passerby recruitment and conventional exchange brought varied perspectives. Smooth cooperation with restaurants and supportive facilitators helped ***Polish*** participants feel safe while completing surveys. ***Denmark's*** use of QR codes and online survey formats further improved accessibility.

- **Smooth organization and logistics.** Well-prepared agendas and teamwork among implementation partners were highlighted as particularly strong (***Greece, Italy***). Relying on university and vocational school venues simplified arrangements and eliminated rental costs, while collaboration with farmers' markets provided informal yet effective opportunities (***Germany***). Supermarkets and the spaces in front of them also served as valuable free venues, creating accessible and realistic settings for engaging with consumers directly (***Spain, Poland***). Café-restaurant settings were also welcomed, creating a more pleasant environment for participants (***Spain, Turkey***). Monthly consortium meetings facilitated the exchange of ideas and best practices, strengthening the project's overall delivery (***Finland***). Careful planning of room layouts and facilitator roles also contributed to smooth management (***The Netherlands***).

- **Knowledge sharing and awareness raising.** Nutritionist input, fact slides, and translated materials ensured participants gained insights and fully understood the content (***Finland***). Expert input sessions further fostered learning and reflection (***Germany, Spain***). For students and academics, particularly in gastronomy, the workshops were eye-opening in linking sustainability and the future of nutrition (***Turkey***).

Inclusive formats +

Food-centred activities +

Strong facilitation +

Engaged participants, valuable insights and impact beyond data collection

In sum, the LLs were highly successful in motivating participants, fostering inclusive and engaging atmospheres, and using food-centred activities as powerful enablers of participation. The adaptability of guidelines and templates ensured smooth facilitation, while recruitment strategies and partnerships brought diverse voices into the discussions. Strong organization, effective logistics, and well-designed methods created an environment where participants not only contributed valuable insights but also increased their knowledge and reflection on APs. In several countries, the work went beyond data collection to deliver measurable impacts, producing high-quality results and generating material for outreach and communication.

3.2 What could be improved?

- **Recruitment and participation.** While recruitment strategies were often effective, securing balanced groups remained resource-intensive and occasionally unpredictable (***Denmark, Germany, Norway, The Netherlands, Poland***). Timing, location, and participant availability influenced turnout, with busy periods or remote venues reducing attendance (***Greece, Norway, FCBSD***). Earlier invitations, reminders, and trust-building tools such as flyers or badges could improve reliability (***Germany, Spain, Poland***). Incentives like tastings or giveaways may further diversify participation (***Norway, Turkey***).

- **Workshop duration and pacing.** Several LLs highlighted the challenge of striking the right balance between depth and participant energy. Sessions over three hours sometimes felt tiring, while shorter formats risked limiting discussion (***Finland, Germany, Greece, Slovenia, Spain, Italy, The Netherlands***). Long consent or profiling forms also added to fatigue (***Finland, Spain***). Realistic time planning, streamlined paperwork, and pacing that allows for both reflection and exchange would strengthen future workshops.

- **Clarity and accessibility of materials.** Some materials and questions were experienced as too complex, abstract, or overlapping. Open-ended prompts such as "future visioning" proved demanding (***Finland, Norway, The Netherlands***), and tools like COM-B occasionally caused confusion (***Greece, Spain, Poland***). Mock-up evaluations, lengthy ads, or dense slides further challenged attention (***Finland, Germany, The Netherlands***). Simplifying texts, using more concrete phrasing, and coordinating adjustments across countries could improve comparability and ease of use (***Finland, Norway, Spain, Turkey***).

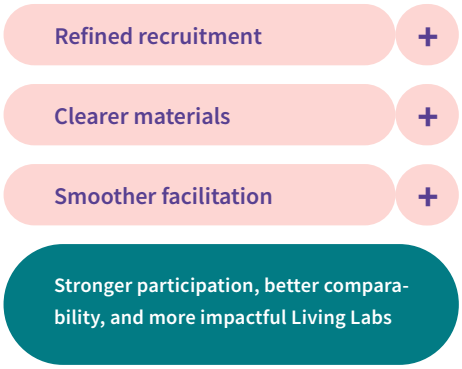
- **Venue, setting, and logistics.** Practical venues such as universities, schools, supermarkets, and restaurants generally worked well, though settings sometimes limited comfort or focus due to space, noise, or informality (***Germany, The Netherlands***). Technical issues, outdoor visibility, or remote locations occasionally reduced engagement (***Norway, The Netherlands***). Food presentation also mattered: unclear timing or serving cold samples dampened appeal (***Denmark, The Netherlands, Turkey***). Strengthening logistical planning and ensuring freshness of tastings would enhance participant experience.

- **Facilitation and group dynamics.** In some LLs, a few voices dominated discussions while others hesitated to speak, highlighting the need for stronger moderation (***Italy, Poland***). Overloaded sessions or too many topics occasionally reduced focus (***Slovenia, Spain***). Ice-breakers and clearer instructions during tastings or group tasks could help balance participation and keep discussions on track (***Italy, Slovenia, Turkey***). Clarifying the role of trainees and ensuring diverse group composition also supported more inclusive dynamics (***Poland, Turkey***).

- **Data collection and reporting.** Feedback and reporting processes were sometimes demanding. Informal discussions and non-verbal responses were harder to document (***Denmark***). Long forms discouraged some participants

(***Finland, Spain***). Occasional confusion between optional and mandatory questions, or lengthy surveys leading to drop-off, pointed to the need for streamlined templates and harmonised tools (***Germany, Norway***). Shorter, user-friendly profiling methods would improve both participation and comparability (***Denmark, Finland, Germany, Norway, Spain, Italy***).

Knowledge and readiness. Differences in prior knowledge influenced how easily participants engaged. Some older or less familiar groups focused on unrelated issues or required additional explanations (***Germany, The Netherlands***). A clearer introduction to APs, supported by visuals, prototypes, and recipes, was suggested to ground discussions in practice (***Greece, Poland, Turkey***). Providing market-available products for tasting and demonstrations further strengthened engagement and understanding (***All countries***).



In sum, the LLs also revealed areas where future iterations could be strengthened. Recruitment, while generally effective, remained resource-intensive and sometimes uneven across contexts. Finding the right balance in workshop pacing proved important, as both lengthy sessions and condensed formats carried trade-offs. Simplifying materials and questions would make participation more accessible, while refining reporting tools could improve comparability across countries. Greater attention to venue comfort, food presentation, and facilitation techniques would further enhance the participant experience. Finally, providing clearer introductions and practical demonstrations of APs would help participants engage more confidently with the topic. These refinements build on the strong foundation already established and would make future LLs even more impactful.

3.3 Overall learnings for consumer engagement

The LLs provided valuable insights into how to design, implement, and follow up on consumer engagement activities. While contexts varied across countries, several common lessons stand out. These recommendations highlight opportunities to strengthen recruitment, workshop design, facilitation, and follow-up. They can be adapted flexibly depending on local circumstances but offer a useful foundation for anyone running multi-country consumer engagement initiatives.

Plan recruitment early and strategically

Allow sufficient time for invitations, reminders, and outreach. Working with multipliers and trusted networks can open access to harder-to-reach groups. Using diverse venues, such as schools, universities, libraries, or supermarkets, helps reach participants with different profiles. Incentives like tastings, small giveaways, or refreshments can add appeal. Building recruitment strategies into project planning early makes participation more reliable and consistent.

Strive for diverse and balanced groups

Recruitment should go beyond “easy-to-reach” audiences to ensure that a range of perspectives is included. Efforts to involve different age groups, socio-economic segments, or levels of familiarity with the topic enrich discussions and make insights more meaningful. Collaborating with local organisations can help to broaden reach in a feasible way. In multi-country projects, maintaining this diversity helps ensure that findings are comparable while still reflecting local contexts.

Set realistic duration and integrate profiling smoothly

The balance between depth and participant energy is critical. Sessions of two to three hours generally work best, with time for breaks and interaction. Collecting background / segment information is important, but lengthy forms can discourage participation. These should be streamlined and, where possible, integrated into interactive activities rather than treated as stand-alone paperwork. In multi-country work, agreeing on a core set of simple, shared profiling questions ensures a minimum level of comparability without overwhelming participants.

Use food and familiar environments as engagement tools

Food consistently proved to be a powerful bridge for discussion, whether through tastings, shared meals, or mimicking everyday food environments (e.g., supermarket shelves, menus, or canteen settings). These formats help participants connect abstract topics to daily life. Careful attention to presentation enhances the experience and sustains engagement. When applied across countries, adapting food environments to local practices makes discussions both relatable and comparable.

Keep materials clear, simple, and relatable

Workshop guides, slides, and questions should use straightforward, accessible language. Abstract prompts can be replaced with concrete, everyday scenarios that participants easily relate to. Visuals, short texts, and clear examples are particularly effective across different groups. Simple and adaptable templates allow for local tailoring while still supporting shared learning across contexts.

Choose venues that support comfort and focus

The choice of venue matters. Spaces should be accessible, comfortable, and free from major distractions. Universities, schools, and community centres provide reliable infrastructure, while supermarkets or café-restaurants can bring in real-world relevance if well managed. Checking acoustics, visibility, and technical equipment in advance ensures smooth delivery.

Facilitate actively and inclusively

Facilitation is key to balancing participation. Ice-breakers, clear task instructions, and active moderation help quieter voices contribute while avoiding dominance by a few participants. Smaller groups often encourage more openness, while clear roles for facilitators or assistants keep activities running smoothly. Investing in facilitator training supports consistency while allowing flexibility to adapt to local dynamics.

Simplify data collection and reporting

Feedback and reporting processes should be as simple and user-friendly as possible. Short surveys, clear templates, and well-structured guides make it easier for participants to engage and for implementers to capture results.

Support knowledge and confidence building

Participants engage more deeply when they feel confident in the topic. Providing a short, clear introduction supported by visuals, practical demonstrations, or product examples helps make abstract themes tangible. Where possible, linking content to everyday experiences builds relevance. In multi-country work, these introductions should be tailored to local knowledge levels but keep a consistent framing to support comparability.

Share learnings and maintain continuity

Consumer engagement does not end when a workshop finishes. Sharing outcomes with participants helps close the feedback loop and builds trust. Testimonials, photos, or short summaries make contributions visible and valued. Extending engagement through social media or community follow-ups can sustain interest. Transparent communication of how participant input shaped outcomes demonstrates impact and strengthens future collaboration. For example, in the LIKE-A-PRO project, this will be achieved by sharing the report summarising the outcomes via the general project website and other communication channels, including the social media platforms used for participant recruitment. Where participants have provided email addresses, a link to the report will be shared directly. Additionally, QR code stickers will be developed and distributed within the food environments where some of the interaction points took place.

4. Consumer Insights Dataset

4.1 Joint reflection: a cross-country summary: similarities and differences

This section presents a cross-country summary of the enablers / facilitators and barriers that influence the adoption of APs. By grouping these factors into relevant clusters, we can better understand the shared drivers and region-specific challenges that either promote or inhibit AP adoption in different markets. This analysis allows us to identify key insights and variations across countries, offering a clearer picture of the dynamics shaping the market for APs.

Health and nutritional benefits

A key driver of AP adoption across many countries is the health benefits associated with these proteins. Consumers in countries like Germany, Spain, and Italy are drawn to the nutritional advantages of APs, including better digestion, lower cholesterol, and disease prevention. APs are also seen as easier to digest, offering additional nutrients like fibre and minerals, which are appealing to people with dietary restrictions or health concerns (e.g., Poland, Slovenia, Norway, Denmark, and Finland).

However, health-related concerns also play a role in hindering AP adoption. In some countries, such as Turkey, Poland, and Norway, there is a belief that meat is essential for optimal health. Consumers in these countries often perceive APs as nutritionally inadequate, particularly in terms of protein quality and amino acid profiles. Some even believe that eating only APs might lead to nutrient deficiencies or other health risks, such as digestive discomfort or side effects from unfamiliar ingredients (e.g., Spain and Germany). This scepticism towards the nutritional sufficiency of APs poses a significant challenge to their broader acceptance.

Availability and access

The availability of APs plays a crucial role in their adoption across countries. In regions like Germany, The Netherlands, and Poland APs are becoming more mainstream, with an increasing presence in supermarkets, restaurants, and public institutions like schools and canteens. This greater visibility in everyday settings is helping normalize the consumption of APs and makes them more accessible to consumers. Countries like Italy and Spain are also seeing APs integrated into mainstream food environments, with product placement in supermarkets and menu inclusion in restaurants playing a crucial role in normalizing consumption.

"I'm open to alternative proteins, but I need them to be easier to find, easier to trust, and easier to fit into my everyday meals."

However, inconsistencies in stock availability remain a challenge, particularly in countries such as Germany, Turkey and Spain where some (rural) regions face limited product variety. While Finland and Poland benefit from greater product availability, they still encounter distribution gaps that make some APs harder to access. Restaurants and canteens have made great strides in offering

APs in countries like Denmark and Norway, but widespread inclusion in mainstream menus is still in progress. Visibility, labelling, clarity, and staff familiarity remain essential to helping consumers find and confidently choose APs in daily food environments (notably emphasised in Greece and Italy).

Price sensitivity and economic barriers

Across many countries, the price of APs is a significant factor that influences their adoption. In countries like Spain, Turkey, and Poland, consumers find APs to be expensive compared to conventional meat. In these regions, lower-income consumers may not be able to afford APs, especially processed varieties that are often priced higher than their animal protein counterparts. Price competitiveness with meat remains a key barrier in these countries (as also seen in Greece, The Netherlands and Poland).

"The interest is there, but price, availability, and uncertainty still get in the way — with clearer information and better access, I'd be more likely to choose them."

On the other hand, countries like Germany, Italy and Finland have seen more affordable AP options such as lentils, tofu, and beans becoming available. Yet, the overall economic accessibility of APs remains an issue in many regions. The need for subsidies, discounts, or affordable pricing strategies is essential in making APs accessible to a wider consumer base. Additionally, consumers are more likely to turn to home-cooking as a cost-effective solution, as making APs at home (e.g., using tofu or lentils) can significantly reduce expenses (e.g., Italy and Spain).

Cultural resistance and integration

Cultural factors play a major role in both facilitating and hindering the adoption of APs. In countries like Germany, Norway, and Greece, meat is deeply rooted in traditional diets and social customs. In these regions, meat consumption is not just a dietary choice but also part of the cultural fabric, making it difficult for APs to gain traction. Consumers in these countries are often resistant to adopting new food products, especially those perceived as niche or vegan alternatives (similarly reflected in Poland and Turkey).

In contrast, countries like Italy, Spain and The Netherlands are more open to plant-based diets and show greater acceptance of APs. Flexitarian diets are more common in these countries, and there is less cultural resistance to adopting plant-based proteins. However, even in these more progressive regions, there remains resistance from social groups who are more traditional in their eating habits. The social pressure to consume meat, especially in social gatherings and family meals, can be a barrier to AP adoption (e.g., Denmark and Finland). Building trust through transparency, credible information, and consistent labelling is key to overcoming hesitation and addressing lingering doubts about authenticity and product quality.

Taste, sensory experience, and cooking integration

Taste and sensory appeal continue to be major hurdles to AP adoption across all countries. While Germany, Italy, and The Netherlands have made strides in accepting tofu, mushrooms, and plant-based burgers, many consumers in Spain, Poland,

and Turkey remain sceptical about the taste and texture of APs. Concerns about meat imitations being unconvincing or unpleasant to eat make it harder for consumers to switch from meat to APs.

"I'm willing to try alternative proteins, but I need more confidence in their taste, nutritional value, and how to use them in practice."

Moreover, the difficulty in cooking and integrating APs into traditional meals poses another challenge. In countries like Finland, Germany, and Italy, consumers feel they lack the necessary cooking skills to prepare APs properly. The lack of good recipes, cooking tools, and guidance on how to incorporate APs into traditional dishes hinders their adoption (e.g., Denmark, Norway, and Poland). This is especially true for raw APs (e.g., legumes, tofu) that require additional preparation time compared to ready-to-eat meat products. Pre-packaged, ready-to-cook AP options are more appealing to time-constrained consumers, but these options are not always widely available (e.g., Spain and Greece).

Sustainability perceptions and trust

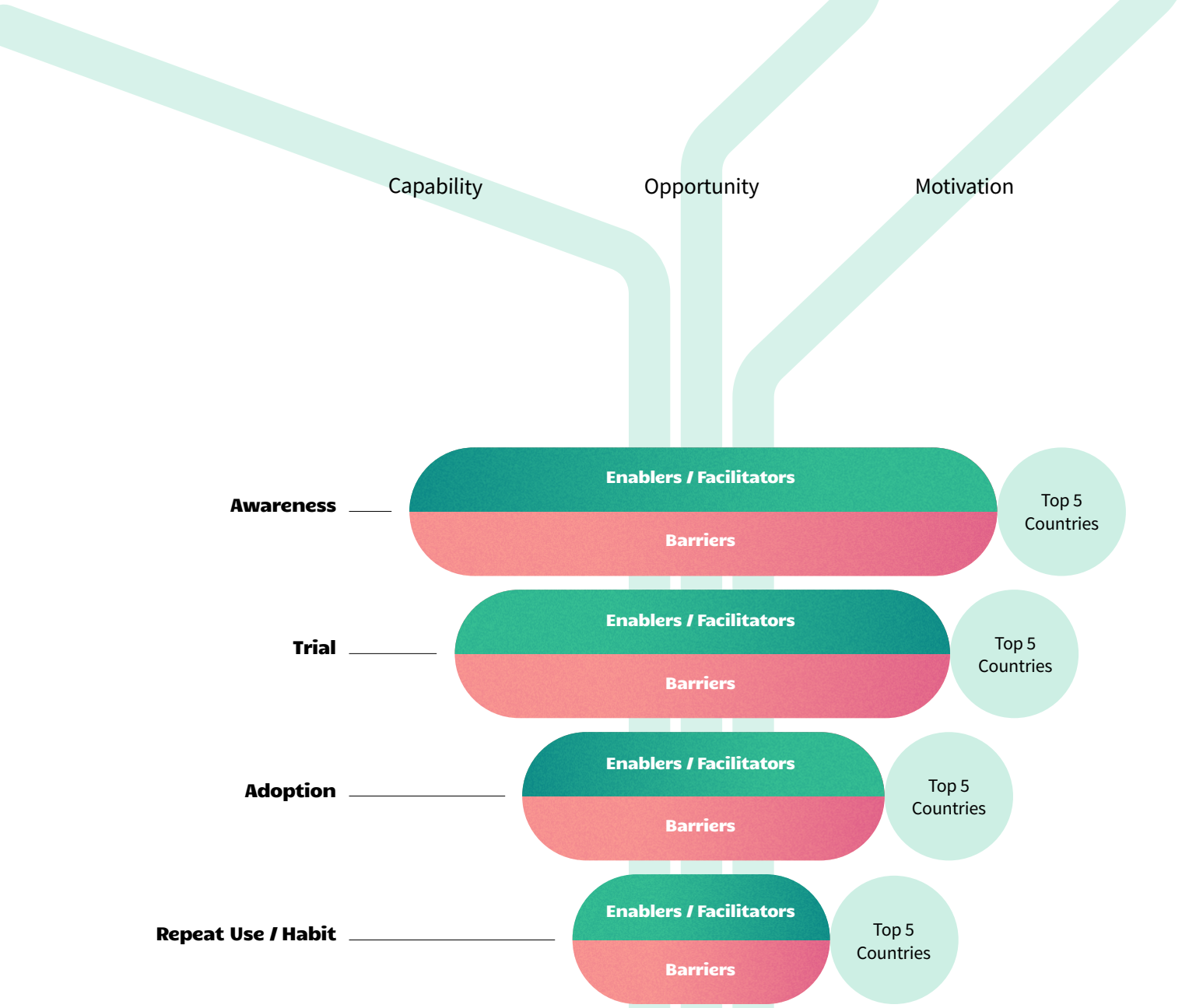
Across Europe, sustainability narratives both support and challenge AP acceptance. In many countries, including Denmark, Italy, Greece, The Netherlands, Spain, Slovenia, Poland, and Turkey, consumers recognise APs as a path toward reducing environmental impact, protecting biodiversity, and supporting more sustainable production systems. In these contexts, environmental motivation often complements health and ethical considerations, reinforcing the idea of responsible consumption and collective action.

At the same time, sustainability concerns persist. Consumers in several countries (such as Finland, Italy and The Netherlands) express doubts about how sustainable APs truly are, questioning the environmental costs of soy cultivation, imported ingredients, and energy-intensive processing. In others (like Norway and Spain), transportation distances and dependence on global supply chains raise further scepticism about emissions and affordability. Some also highlight broader ethical and economic implications such as potential job losses in traditional farming or unintended environmental trade-offs (notably in Germany and Greece).

Ensuring credible sustainability claims, supported by transparent labelling, independent verification, and lifecycle assessments, is essential to building trust. Consumers respond positively when they can see tangible evidence of local sourcing, reduced emissions, and ethical production practices. Addressing these perceptions consistently across regions will be vital to strengthening confidence in APs as genuinely sustainable and socially responsible alternatives.

This cross-country summary underscores the complexity of AP adoption across different regions. While key drivers like health benefits, availability, and social influence are shared, factors such as price sensitivity, cultural resistance, and taste preferences vary significantly by country. To maximize AP adoption, strategies must be tailored to address these region-specific barriers, while also considering broader macro-level approaches, such as sustainability assessments and regulatory solutions, that could benefit all regions. Additional reflections on the future outlook are provided in Section 5.4.

Europeans and APs: an overview of behavioural determinants guided by COM-B



Awareness (easiest to influence)

	Capability	Opportunity	Motivation	Most frequent countries
Enablers / Facilitators	• Familiar AP options increase willingness[1] • Education/campaigns build AP knowledge[2] • Media/documentaries shape perceptions[3]	• Advertising/promotion creates awareness[6] • "Where to find it" info supports uptake[7] • Clear, accessible info reduces anxiety[8]	• Curiosity/openness sparks interest[10] • Health & wellbeing motives[11] • Environmental motives[12]	DE ES PL NL GR
Barriers	• Low knowledge limits consideration[4] • Misinformation / poor marketing confuses[5]	• "Where to buy" uncertainty blocks	• Sustainability doubts can reduce interest	

Trial

	Capability	Opportunity	Motivation	Most frequent countries
Enablers / Facilitators	• Recipes/product trials enable first use[15] • Cooking skills help integrate APs[16] • APs feel easy/quick to cook[17]	• Sampling/tastings prompt trial[20] • Restaurant/canteen/ school inclusion normalises[21] • Strategic placement boosts picking[22] • Attractive packaging/presentation drives trial[23] • Staff training builds confidence in AP promotion[24]	• Taste is the key "go/no-go"[25]	ES DE PL NO NL
Barriers	• Don't know how to cook/use APs[18] • Food restrictions/allergies complicate trial[19]	• "Where to buy" uncertainty blocks	• Taste/texture disappointment blocks retry[26] • Neophobia/disgust (esp. insects) deters[27] • Vegan framing can create negativity[28]	

Adoption

Capability	Opportunity	Motivation	Most frequent countries
Enablers / Facilitators			
• Convenience: quick/easy cooking supports routines[29] • Versatility (fits many meals) supports repeat[30] • Home-cooking reduces costs (staples)[31]	• Wide availability in everyday settings drives adoption[34] • Ready-made/long shelf-life formats improve fit[35] • Price parity/cheaper than meat increases uptake[36]	• Fair price/value perception supports repeat purchase[39] • Trust in reputable brands/ verification helps[40]	ES TR PL DE NL
Barriers			
• Time-consuming prep deters busy people[32] • Lack of time to cook/learn prevents uptake[3]	• Price too high vs meat deters adoption[37] • Rural/stock gaps undermine reliable access[38]	• "Ultra-processed/additives" concerns reduce repeat[41] • Doubts about nutrition/ protein adequacy persist[42]	

Repeat use / habit (hardest to shift)

Capability	Opportunity	Motivation	Most frequent countries
Enablers / Facilitators			
• Lifestyle routines (veg/flexitarian/ variety) sustain habit[43]	• Social influence (family/peers/partners) reinforces behaviour[45] • Trends (Veganuary/Meat-Free Mondays) reinforce routines[46]	• Health routines + family health motives sustain[50] • Ethics/animal welfare identity sustains[51] • Environmental duty/ values sustain[52]	GR DE PL TR NO
Barriers			
• Habit change feels hard even with knowledge[44]	• Social pressure to eat meat blocks maintenance[47] • Meat-centred food cultures slow normalisation[48] • Stereotypes (e.g., masculinity/ working-class) add friction	• "Meat is healthier/essential" beliefs persist[53] • Meat is deeply embedded as identity & comfort[54]	

(**1**) PL, ES; (**2**) DE, DK, GR, IT; (**3**) GR, IT, ES; (**4**) DE, GR, NO, PL, SI, ES, NL, TR; (**5**) PL, ES; (**6**) DE, PL, ES, NL, FI; (**7**) DE, GR, PL, NL, ES; (**8**) DE, PL, NL; (**9**) IT, ES; (**10**) DK, DE, GR, IT, NO, PL, SI, ES, NL, TR; (**11**) DK, IT, ES, NL, TR, SI, DE, GR, PL, NO; (**12**) PL, SI, GR, TR, ES, NL, IT, DK; (**13**) DK, FI, GR, IT, ES, NL, DE, TR, PL; (**14**) FI, IT, NL, ES; (**15**) DK, FI, DE; (**16**) GR, PL, DK; (**17**) DE, DK, IT; (**18**) DK, FI, DE, NO, PL, SI, ES, NL; (**19**) FI, DE, NO, PL, SI, ES, NL; (**20**) DE, NO, PL, ES; (**21**) DE, DK, GR, NO, FI, IT; (**22**) ES, NL, DE, PL; (**23**) DE, PL, ES; (**24**) FI, ES; (**25**) DK, GR, NO, ES, NL, TR, IT, DE, FI, PL; (**26**) DK, IT, DE; (**27**) GR, PL, ES; (**28**) DK, NL; (**29**) DK, IT, NO, ES, DE; (**30**) DK, FI, NL, DE, IT; (**31**) IT, ES; (**32**) DK, DE, IT, NO, PL, SI, ES; (**33**) PL, NO; (**34**) IT, ES, DE, PL, TR, NO, NL, DK, GR, FI; (**35**) IT, TR, PL, ES; (**36**) GR, IT, NO, ES, NL, TR, PL; (**37**) FI, DE, GR, IT, NO, PL, SI, ES, NL, TR; (**38**) DE, ES, TR; (**39**) ES, FI, IT, GR; (**40**) PL, ES, TR; (**41**) DE, IT, PL, SI, NL; (**42**) DK, DE, FI, PL; (**43**) FI, DE, IT, PL, ES, NL, TR, GR; (**44**) GR, IT, NL; (**45**) DE, PL, NL, TR, GR, SI, ES, IT, FI; (**46**) DE, PL, SI, ES; (**47**) GR, PL, NL, NO; (**48**) DK, FI, DE, GR, NO, PL, TR; (**49**) DE, PL; (**50**) ES, TR; (**51**) DK, FI, GR, IT, ES, NL, DE, TR, PL; (**52**) TR; (**53**) TR, NO, PL, SI, NL; (**54**) GR, DE, IT, NO, PL, TR

4.2 Awareness and eating behaviours regarding APs

As highlighted above, across the 11 European countries included in this study, a short survey was conducted with all LL participants to assess their awareness and eating behaviours related to APs.

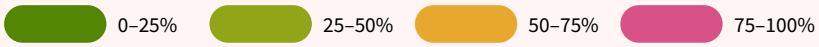
Across the total sample, awareness of AP sources is generally high, though it varies markedly by product type. Plant-based proteins and analogues show the strongest recognition, with an average awareness of around 83%, exceeding 90% in Denmark, Finland, Germany, and The Netherlands, and peaking at 99% in Poland. In contrast, cultured (lab-grown) meat and seafood are recognised by about 53% of respondents overall, with the highest familiarity in Germany (71.7%) and The Netherlands (72.9%), and the lowest in Poland (36.9%). Awareness of fermentation-derived proteins and algae-based products is more limited, averaging 37% and 50%, respectively. Greece consistently reports the lowest familiarity (≈25%), while Norway and Poland record relatively high awareness of algae-based products (above 70%). Edible insect products are somewhat more familiar, with about 59% overall recognition, particularly strong in Germany and Poland (≈79–83%) but substantially lower in Greece (31%).

In terms of eating behaviour, only around 26% of respondents report having reduced their overall meat consumption, led by Denmark (41%) and Finland (40%), while Poland reports almost no change (0.6%). A further 24% have reduced specific types of meat, whereas 41% have made no changes-most notably in Greece, Norway, and Poland (48–57%). Vegetarianism or complete abstention from meat remains limited (≈9% overall), though somewhat higher in Germany (17.5%) and Poland (20.6%). Despite these patterns, future intentions suggest growing openness to dietary change: approximately two-thirds (66.8%) of participants express willingness to reduce meat intake in favour of non-animal proteins, with Denmark showing the highest readiness (90%) and Greece the lowest (47.1%).

Please see Diagram 2 for a detailed overview.

Taken together, the findings suggest that while awareness of APs is high, behavioural change remains uneven. However, the strong future willingness to adapt diets across most countries points to a favourable environment for scaling sustainable eating habits-provided that accessibility, taste, and trust continue to improve.

Diagram 2: Awareness and eating behaviours regarding APs



Awareness (%)

Category	DK	FI	DE	GR	IT	NL	NO	PL	SI	ES	TR
Cultured meat	55.9	55.4	71.7	52.3	44.7	72.9	61.9	36.9	47.3	46.4	49.2
Plant proteins	96.1	90	94.1	78.4	67.2	95.3	93.5	99.4	72.7	82.5	54.9
Fermentation protein	42.8	46.2	45.1	24.8	27	44.3	47.1	35.6	39	34.4	47.4
Macroalgae	64.5	53.1	60.8	25.8	35.7	48.6	71.6	76.3	62	57.1	42.9
Edible insects	72	57.7	78.9	31.2	54.5	75.3	75.6	83.1	60	63	50.8

Eating behavior (%)

Category	DK	FI	DE	GR	IT	NL	NO	PL	SI	ES	TR
Cut down overall	41.3	39.7	35.4	20.4	35.1	32.5	20.1	0.6	20	17.6	22.3
Cut down particular types	21.2	28.9	20.1	27.2	22.1	12.9	26.6	31.9	29.3	27.8	20.8
Not cut down	28.1	22.3	27.1	50.4	31.7	39.2	48.7	46.9	41.4	51.3	46
Do not eat meat	9.4	9.1	17.5	2	11.1	15.3	4.5	2.6	9.3	3.4	10.9

Would you consider in the future to reduce your protein intake (and replace it with other types of non-animal products)? (%)

Category	DK	FI	DE	GR	IT	NL	NO	PL	SI	ES	TR
Would reduce protein intake	90	74.1	76.8	47.1	74.2	58.8	53.3	68.1	51.3	67.2	59.6

5. Promoting APs in the European market: Four intervention angles guided by the CCF

5.1 Choice editing

As highlighted in the methodological section, choice editing refers to the practice of limiting the range and availability of unsustainable or unhealthy food products for consumers. Naturally, this approach raises certain concerns and questions, particularly regarding consumer autonomy. During the discussions with the lab participants, we explored several key points.

We asked participants how they would respond to restrictions in product assortment, in other words, whether limiting or removing certain products could actually help people make healthier and more sustainable consumption choices. We also discussed whether such an approach could be justified as a legitimate means of advancing the sustainability and health agenda at the EU level. Another important aspect of the discussion focused on identifying the opportunities and barriers associated with this strategy, that is, the potential benefits and challenges of adopting choice editing approaches in practice.

Beyond these questions, participants also reflected on how such measures could be implemented, considering appropriate thresholds, guidelines, and limitations. They further discussed which actors should lead these initiatives, examining the roles of policymakers, businesses, and consumers in shaping this transition.

The following section summarises the perspectives shared by participants in each country, followed by a cross-country synthesis. This synthesis is not intended as a direct comparison, but rather as a way of situating the findings within a broader European context.

Key findings by country: Denmark

Attitudes toward choice editing

The reactions to limiting product assortment are mixed, reflecting both support and opposition. On the positive side, a notable group expressed openness to these limitations, provided they are implemented thoughtfully. These respondents em-

phasized the importance of clear communication, transparency, and the availability of good alternatives to maintain consumer satisfaction. Positive nudging, rather than rigid rules, was seen as a desirable strategy to guide behaviour toward sustainable and healthy choices. Many also highlighted the importance of addressing economic equity, such as balancing meat price increases with subsidies or lowered costs for APs.

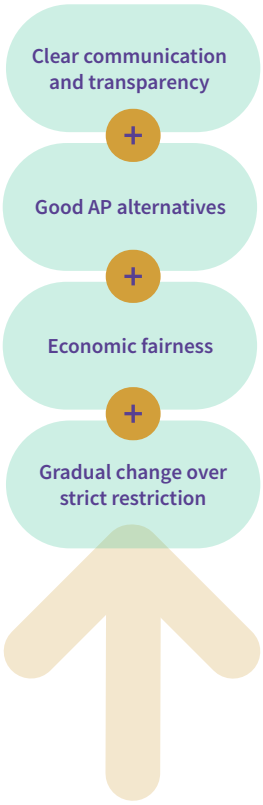
Conversely, resistance was rooted in concerns about autonomy and cultural values. A significant number of individuals opposed any perceived imposition on their dietary freedom, expressing strong dislike for authorities or other decision makers dictating food choices or removing options. Cultural attachment to meat and fears of negative backlash were prominent, alongside worries about practical difficulties in adjusting to new diets. This highlights a preference for education and voluntary change over restrictions, emphasizing the need for gradual, consumer-driven transformation.

Perceived outcomes of choice editing

Choice editing is seen as a potentially impactful strategy for advancing sustainability and health goals. From a climate perspective, many respondents acknowledged the environmental urgency of reducing meat consumption. They also noted the potential to secure animal welfare and promote public health through a shift toward APs. Expanding consumer choices by focusing on APs was seen as a key benefit, fostering innovation and creating financial incentives for sustainable options. Positive nudging through improved supermarket placement, public campaigns, and better AP integration in other food environments was viewed as a practical way to influence behaviour while preserving autonomy.

This approach also presents an opportunity to reshape food culture by normalizing APs and investing in local production, ultimately advancing both sustainability and economic objectives across the EU.

However, barriers to implementation must be addressed. Leading among these is the fear that steep increases in meat prices could lead to inequities, making meat accessible only to wealthier consumers. Additionally, cultural resistance to



What makes choice editing workable in practice?

reducing meat consumption and concerns about autonomy could limit public acceptance. Policymakers need to tread carefully to avoid alienating populations or fostering resentment toward perceived coercion.

Acceptability of choice editing measures

Respondents were more open to approaches that respected autonomy while encouraging sustainable choices. Lowering AP prices, adjusting meat prices to reflect environmental impact, and improving access to APs in supermarkets were widely supported. Training chefs and kitchen staff to use APs, educating schoolchildren about these alternatives, and offering free school meals featuring APs were also seen as acceptable and impactful measures.

Promotional campaigns and taste-testing opportunities were highlighted as positive ways to raise awareness without imposing restrictions. These measures, combined with improved product variety and positioning, would gently encourage behavioural change while preserving the sense of choice.

More controversial measures, such as removing meat from supermarkets entirely, discouraging its purchase with graphic warnings, or increased taxes on conventional products were seen as a possibility by some participants. However, respondents emphasized the importance of complementing such measures with robust alternatives to ensure the transition felt empowering, not restrictive.

There was a clear consensus that certain approaches would cross a line. For many, removing meat entirely from the market or making it significantly less accessible would be unacceptable, as would drastically increases in meat prices without corresponding reductions in AP costs. Shaming individuals for eating meat or imposing strict quantity restrictions were viewed as extreme measures likely to alienate consumers and provoke backlash. Additionally, top-down mandates from authorities or politicians on what people can and cannot eat were seen as intrusive and counterproductive.

These responses underscore the importance of balancing ambitious sustainability goals with respect for cultural, economic, and personal autonomy, ensuring any interventions are inclusive, transparent, and gradual.

Key findings by country: Finland

Attitudes toward choice editing

Responses to potential product limitations reveal a nuanced mix of support and criticism. On the positive side, many respondents saw the value of nudging strategies, which make sustainable and healthier options more accessible. They suggested that partial restrictions on meat, such as reducing its supply or re-framing it as a special treat, could help shift consumption patterns without entirely eliminating choice. Some advocated for making vegetarian or APs the default option, highlighting its potential to decrease meat consumption organically.

Others framed choice editing as a practical opportunity, particularly if paired with pricing strategies that make APs more appealing and affordable. However, several respondents expressed a preference for focusing on promoting APs through visibility

and education, rather than restricting meat outright. Importantly, they noted that such strategies must account for practical considerations, including food waste and animal welfare.

On the negative side, opposition stemmed from scepticism about the effectiveness and fairness of choice editing. Some respondents felt it was an exclusive practice, emphasizing that there should be dietary options for everyone. Others argued that many consumers are not ready to adopt vegetarian diets, and that restricting meat would not necessarily lead to meaningful environmental benefits.

Perceived outcomes of choice editing

From a sustainability perspective, choice editing was recognized as a tool to promote better health outcomes, improved animal welfare, and reduced environmental impact. Respondents highlighted its potential to encourage consumers to explore vegetarian options and APs, ultimately reducing pressure on planetary boundaries. They emphasized that restricting meat supply could drive innovation in food production while simultaneously encouraging healthier diets.

However, success would depend on ensuring sufficient availability of AP alternatives, as well as addressing individual dietary needs such as allergies and food restrictions. Transparent communication and equitable implementation would also be crucial to gaining consumer trust and support.

Critics warned that choice editing could negatively affect the livelihoods of farmers and meat producers, suggesting that their income losses should be compensated to mitigate economic disruptions. Additionally, there were concerns that limiting meat options might reduce access to domestic and locally sourced products, particularly in rural areas. These barriers highlight the importance of designing policies that balance sustainability goals with economic and social equity.

Acceptability of choice editing measures

Respondents generally supported measures that preserved autonomy while encouraging sustainable behaviour. Examples include making APs more visible and accessible in stores, pricing strategies such as lowering AP costs and increasing meat prices, and a gradual transition (e.g., offering meat only on certain days or introducing familiar substitutes).

"I could accept eating less meat if the change is fair, gradual, and supported by affordable alternatives but not if it ignores allergies, dietary needs, or people's freedom to choose."

(Participant from Finland)

Other acceptable strategies included increased advertising, redirecting subsidies, and introducing penalties for food waste. Informative campaigns and clear explanations for choice editing were also suggested to foster consumer understanding and buy-in. Incentives and rewards for AP consumption could further reinforce positive behaviours.

Controversial measures, such as graphic warnings on meat products, were divisive, with some supporting them as a wake-up call and others rejecting them as confrontational. However, these measures were generally deemed acceptable if complemented by sufficient alternatives and clear justification.

Respondents were clear about the boundaries of acceptable intervention. Com-

pletely prohibiting meat or removing it entirely from stores was considered unacceptable, as was penalizing restaurants and producers for selling it. There was also resistance to confrontational tactics, such as direct comparisons between meat and APs, which were seen as polarizing and unproductive.

Additionally, respondents stressed that policies should not make APs more expensive than meat, as this would defeat the purpose of encouraging sustainable consumption. Any measures perceived as overly coercive or punitive were viewed as counterproductive to fostering widespread adoption of APs.

Key findings by country: Germany

Attitudes toward choice editing

Reactions to limiting product assortment were mixed, with both support and resistance emerging from respondents. On the positive side, many participants expressed openness to the idea, but only under specific conditions. A recurring sentiment was that limiting meat consumption could lead to a more conscious approach toward its value, with consumers being more mindful of both the price and the overall consumption of meat. Some respondents even suggested that meat should be treated as a luxury product, reducing its everyday presence in diets. However, for this shift to be acceptable, respondents emphasized the importance of offering creative alternatives, such as providing better methods of preparing APs, and increasing public education on how to use them effectively. Many also stated that the success of this strategy depends on the availability and affordability of APs. A significant number of respondents stressed that APs would need to be much cheaper and more easily accessible for them to consider making the switch.

"I'm open to alternative proteins when they are visible, affordable, and easy to prepare, but I would resist changes that feel imposed or disconnected from local food culture."

(Participant from Germany)

Respondents also called for increased visibility of APs, with suggestions to promote these alternatives through media like cooking shows and cookbooks dedicated to AP recipes. Additionally, the need for APs to be easy to prepare and quick to use was highlighted as crucial for encouraging widespread adoption. Many participants also suggested that supermarkets should expand their range of APs and provide more information on their health benefits to help consumers make more informed choices.

On the other hand, resistance to the idea of limiting product assortments was also evident. A significant portion of respondents expressed that they would not accept removing meat from supermarkets entirely. Instead, some indicated that they would turn to local butchers or farmers for their meat if supermarket offerings were limited. There was a widespread concern about limiting consumer freedom, with many feeling that such restrictions could lead to meat becoming a luxury only available to wealthier individuals, creating a social divide. Cultural factors also played a significant role, as many respondents pointed out the deep cultural and generational attachments to meat, particularly among older populations. Some felt that such a drastic change in food choices would not be feasible, as society is not yet ready for this kind of shift.

Perceived outcomes of choice editing

The potential for limiting product assortments to promote sustainability and health at the EU level was met with a mixture of support and concern. Many respondents identified several advantages to this approach. Reducing meat consumption, they argued, could help address issues such as zoonoses and antibiotic resistance, making APs a healthier alternative. The promotion of APs was seen as a way to encourage a new focus on fitness and health. Additionally, APs were perceived to be less time-consuming compared to meat, with many participants appreciating their longer shelf life, which could contribute to reducing food waste.

Despite these advantages, respondents also highlighted significant challenges and disadvantages associated with this strategy. A common concern was the public's lack of knowledge about APs, which some feared could lead to confusion or health issues if these products are not properly regulated or widely understood. Economic consequences were also a major point of concern, with respondents fearing job losses in the meat industry as a result of such policies. The lack of public acceptance was another obstacle, as many felt that the transition to APs would not be well received, particularly given the current lack of diversity in available alternatives. Furthermore, the strong influence of the meat lobby was cited as a major barrier to implementing such changes on a large scale. Some respondents also expressed concerns about new allergens or diseases emerging from APs, raising further questions about their safety.

There was also scepticism about the health benefits of APs, with some participants pointing out that they often contain more additives than meat. This concern highlights the importance of thorough regulation and transparent communication regarding the health impacts of APs.

Acceptability of choice editing measures

Several measures were suggested as acceptable ways to encourage sustainable consumption without infringing on personal autonomy. Many respondents supported the idea of gradually limiting cheaper, industrially-produced meat, but they emphasized that this should be balanced by increasing the availability of regionally

sourced APs. Some respondents were particularly supportive of financial subsidies for organic farmers and the development of APs, which could make APs more affordable and accessible. Public education initiatives were also widely endorsed, with many suggesting the introduction of nutrition curricula in schools and large-scale awareness campaigns about the benefits of APs.

A common sentiment was that any changes should be gradual to allow the public time to adjust, and some suggested a national referendum to determine the best way to introduce APs into the public's diet. Other suggestions included compulsory vegan and vegetarian options in restaurants and supermarkets, with the idea that consumers should still have the freedom to choose but be given healthier alternatives. There was support for using taxes on intensive livestock farming to fund the development and promotion of APs. This approach was seen as a way to ensure that the shift toward more sustainable food options would not be financially burdensome for consumers.

While there was significant support for promoting APs and limiting certain food choices, respondents clearly identified several boundaries where such measures would be unacceptable. The most significant concern was the affordability of food. Respondents expressed that if the shift toward more sustainable options made groceries too expensive, it would not be acceptable. Many feared that this shift could disproportionately affect lower-income individuals, making food less accessible to a broader population.

The complete prohibition of meat was widely seen as unacceptable. Respondents emphasized that while they supported reducing meat consumption, removing it from the market entirely would go too far. Similarly, there was resistance to placing the responsibility solely on consumers. Many felt that the state and industry should play a central role in making this transition easier for the public.

There were also concerns about cultural habits, particularly among older populations, who may not be willing or able to adjust their diets as quickly as younger generations. Some respondents also expressed concerns about the chemicals and additives found in APs, noting that an overreliance on these products could lead to health issues.

Key findings by country: Greece

Attitudes toward choice editing

Reactions to limitations in product assortment varied, with both positive and negative views. On the positive side, some participants expressed that they did not perceive limitations during their choice-editing experiences, and even welcomed the idea of limitations as long as they felt satisfied with the existing product choices. Those who viewed such changes positively felt that there was a valid reason behind these limitations, and they were open to them as long as the rationale was clear and aligned with their values. Some respondents felt that limitations could offer an opportunity for detoxification and a healthier approach to eating, as well as trigger positive reflection for various actors on current challenges in the food domain, such as sustainability. A few individuals expressed that they would support such

initiatives if there was sufficient evidence to back them, including expert opinion, particularly when it came to promoting healthier eating and environmental sustainability. In addition, some respondents emphasized that they would be open to gradual changes and supported the idea of education being integrated into the transition process.

However, there were considerable negative reactions as well. Many participants expressed that any form of limitation felt like an infringement on their freedom. For them, a ban or restriction of products appeared to be an attempt to control their choices, and they felt uncomfortable with the idea of someone else deciding what they should consume. This sense of control was likened to being subjected to an experiment, with respondents saying they would feel like "lab rats" or being coerced into doing something they didn't want to do. For some, such restrictions would prompt them to seek alternatives elsewhere, whether by shopping in other markets or even migrating to another country where such limitations didn't exist. There was also a concern about the lack of transparency, with many respondents stating that they would want to be informed about any choice editing, as they wouldn't accept uncontrollable interventions.

Perceived outcomes of choice editing

When considering whether choice editing could help advance sustainability and health goals at the EU level, many participants recognized potential benefits. Several respondents believed that such an approach could lead to positive health effects, such as reducing cholesterol and blood glucose levels, and could be particularly impactful if implemented in school cafeterias, potentially preventing diseases like obesity. The idea that scientific interventions could help ensure APs are healthy and satiating was also seen as beneficial for tackling health issues. Some participants acknowledged that although they had been opposed to limitations in the past, they saw the value in such an approach if sustainability and health were prioritized, often advocating its inclusion in a holistic strategy.

"I would be more open to these measures if they helped people reflect on their habits, but not if they crossed the line into controlling everyday food choices."

(Participant from Greece)

The potential benefits extended beyond health improvements. Some respondents believed that the increased production and consumption of APs could lead to lower prices through economies of scale, making these alternatives more affordable. This could also create new job opportunities and spur economic growth, particularly in countries that specialize in producing APs. Additionally, there were expectations that competition between APs and conventional proteins would drive innovation, leading to better and more attractive products. The environmental benefits were also highlighted, with respondents noting that AP production could help reduce CO_2 emissions, conserve energy, and contribute to achieving climate goals. Some linked choice-editing to ethical consumption, with a small minority supporting reduced availability or higher prices for meat-based products.

However, despite these advantages, there were also notable concerns about the implementation of such an approach. Regarding health and sustainability, uncertainty around such claims led some to reject the need for choice editing or even anticipate a reverse effect on related consumption. A key issue was the potential disruption to the economy, especially in primary production industries. Respond-

ents stressed that primary production, including traditional meat farming, is essential to the economy and should not be entirely replaced by APs. They believed that APs could complement existing industries but not fully replace them. Additionally, there was resistance to change, with some participants pointing out the difficulty of shifting long-standing habits and traditions, as well as expected opposition from producers. Psychological consequences, such as the challenge of recalling and adjusting to new eating patterns, were also mentioned. Some respondents feared that such transitions could lead to job losses in industries tied to traditional food production, further contributing to the difficulty of implementing widespread changes.

Acceptability of choice editing measures

Several points were suggested as acceptable ways to promote sustainability and health via APs without limiting personal autonomy. Many respondents expressed support for a gradual shift, rather than an immediate restriction of food options. They emphasized that a gradual change would allow for education and health promotion programs to be implemented, helping consumers understand the reasons behind the changes and giving them time to adapt. A few individuals mentioned that, as long as there were still some levels of choice, albeit limited, they would accept such changes, similar to the availability of vegan food options today. Autonomy in their level of involvement should also be extended to food environments like retailers.

It was also widely agreed that education and awareness campaigns are essential for building consumer trust. Respondents called for the government and public authorities to provide clear, transparent information about the benefits and drawbacks of such changes. Additionally, the idea of offering alternatives and making the transition process more appealing through funding research and positive reinforcement was favoured. While choice editing was seen as acceptable in certain circumstances, respondents insisted that it should not be imposed but rather offered as a conscious choice. This would require adequate time for stakeholders, policymakers, and consumers to adjust and understand the implications.

There were several concerns about where the line should be drawn when it comes to choice editing and restrictions on food products. The most commonly stated boundary was the preservation of personal freedom and choice. Many respondents expressed that they would draw the line at total restrictions, as they felt such measures would make them feel trapped or controlled. A few participants said that they would accept gradual or partial restrictions but were strongly against any form of total ban.

There was also concern about the economic impact, especially on professions tied to traditional food production, such as farmers. Some respondents noted that they would mark the limit at changes that negatively impacted the economy, job market, and family income of those employed in the affected industries. Additionally, there was fear that government intervention in agricultural policy and the free market could disrupt competition and lead to negative consequences for the economy. Some respondents established boundaries at the imposition of sanctions on busi-

nesses or individuals who did not comply with “choice editing” policies.

Key findings by country: Italy

Attitudes toward choice editing

Responses to limitations in product assortment, particularly those targeting reductions in animal-based products, show a mixed sentiment. On one hand, many respondents expressed openness to a gradual transition towards plant-based alternatives, especially if the shift happens over time and is accompanied by education on the benefits of such alternatives. Those in favour highlighted the importance of quality and sustainability, suggesting that reduced meat consumption can lead to improved animal welfare, environmental sustainability, and public health.

However, resistance exists, particularly against drastic changes or impositions. Some respondents viewed such measures as an infringement on personal freedom and believed they may be culturally disruptive. Concerns were raised that limiting product assortments too drastically could lead to market distortions or an unintended rise in prices, making food less affordable. Scepticism was also voiced regarding the motivations behind such changes, with some suspecting market-driven rather than public health or environmental concerns.

The removal of certain products, while potentially contributing to sustainability and health goals, would need to be balanced with consumer education and gradual implementation to avoid alienating or disadvantaging people, especially those with limited purchasing power.

Perceived outcomes of choice editing

Many respondents justified this approach, particularly from an ethical standpoint. Animal welfare was highlighted as a critical concern, with respondents noting that current meat production often neglects animal well-being. Health reasons were also a major driver of support, as reducing meat consumption can help prevent chronic diseases and improve public health. Environmental sustainability was another key argument, with supporters noting the significant impact of animal agriculture.

“I could support eating less meat if plant-based options were treated as real main dishes and their benefits were better explained, but I would resist anything that feels imposed or dismisses food culture and personal choice.”

(Participant from Italy)

However, concerns about the economic and social consequences were significant. Respondents worried that farmers might struggle to adapt to new regulations, and that imposing limits without offering support could harm livelihoods and food quality. Without a comprehensive awareness campaign, such policies might lead to unintended outcomes, such as black markets or a decline in quality as businesses attempt to maintain profits. There was also discomfort with reduced consumer choice, particularly if economic inequalities were not addressed.

The key to justifying such measures lies in aligning them with public health and sustainability goals while ensuring that the economic and social impacts are mitigated through public support systems.

Acceptability of choice editing measures

The majority of respondents agreed that gradual change, alongside clear and accessible information, would be the most acceptable form of intervention. A key element of support was the assurance that any reduction in animal-based products would be accompanied by an increase in quality, particularly with a focus on animal welfare and health standards. Public authorities were seen as crucial in shaping and overseeing this transition, but respondents emphasized that interventions should be participatory, with input from civil society, retailers, producers, and consumers.

Many also supported the idea of public authorities setting ethical standards for food production, particularly regarding animal welfare. The focus on a collaborative approach, where all stakeholders are involved in decision-making, was widely endorsed. There was a strong preference for policies that ensure sustainability, quality, and consumer awareness without resorting to top-down impositions or drastic restrictions.

"This shift makes sense to me when it helps people rediscover healthier, more sustainable ways of eating, but it has to come with awareness, good alternatives, and respect for tradition." (Participant from Italy)

A balance between public guidance and individual freedom was seen as key. Ensuring that consumers have the freedom to make informed choices, supported by clear information and alternatives, was considered crucial for long-term acceptance.

The most significant limitations respondents drew concerned price increases. There was a clear sentiment that raising food prices, especially without redistribution policies, would make healthy and sustainable food inaccessible to many. Respondents were particularly opposed to policies that could make meat a luxury item, emphasizing that food affordability is a key concern. The protection of national food traditions and preservation of consumer choice were also highlighted as essential. Any approach that severely restricts traditional diets or national food products was seen as unacceptable.

While many supported reducing the quantity of animal-based products, they did not want these changes imposed through prohibitive measures or price hikes. Instead, they favoured a strategy of conscious choice, where consumers are informed and empowered to make decisions based on awareness campaigns rather than government-imposed restrictions.

The limit is drawn where policies interfere too much with personal autonomy, especially if they disproportionately affect affordability and restrict cultural food traditions.

Key findings by country: Norway

Attitudes toward choice editing

The reactions to limitations in product assortments, especially with regard to removing traditional animal-based protein products, are mixed. On the positive side, some individuals acknowledge that such limitations could encourage more sustainable and healthy consumption patterns. For example, they might increase their intake of fruits and vegetables, embrace APs, or shift to more sustainable die-

tary habits if suitable alternatives are provided. Media campaigns, social pressure, and the gradual removal of less healthy or sustainable food options could help shift consumer behaviour, especially when substitutes offer comparable taste, sensory qualities, and nutritional benefits.

However, there are significant concerns about how these measures could negatively impact consumer autonomy. Many respondents expressed frustration at the idea of having fewer choices, particularly if alternatives do not meet their preferences for taste, quality, or nutritional value. There is also a belief that such changes might cause immediate negative reactions, including protests or consumer backlash, particularly if consumers feel coerced into making these shifts. Additionally, some worry that if alternatives are not accessible, consumers will either turn to unhealthy food options or go cross-border shopping to find what they prefer. Traditional food is also viewed as potentially sustainable, challenging the assumption that only APs can achieve sustainability.

Perceived outcomes of choice editing

Justifying the removal of certain products to further sustainability and health goals is more easily accepted when framed in terms of environmental, health, and animal welfare benefits. Supporters argue that removing less sustainable products could push consumers toward more sustainable, local, and healthy options. Furthermore, it could reduce carbon emissions and promote positive environmental practices like carbon capture or the use of by-products for AP production. Public communication strategies, especially using social media and influencers, could help gain traction, particularly among younger consumers. Moreover, promoting APs as more affordable or attractive options could further encourage adoption.

"Reducing meat becomes easier to imagine when the alternatives are practical, familiar, and supported at a broader system level." (Participant from Norway)

On the flip side, there are substantial barriers. The removal of traditional protein sources could exacerbate socio-economic disparities, making food less accessible for some populations, especially the poor. The shift might also face significant consumer resistance, as many people prefer familiar food choices, and the removal of certain products could be perceived as an infringement on autonomy. Additionally, the economic impact on farmers and the potential for job loss in traditional agricultural sectors present a significant challenge. If APs are not properly integrated or if they are of lower nutritional value or highly processed, consumers might reject them. The transition must consider these factors to avoid unintended negative consequences, such as a reliance on unhealthy or ultra-processed products.

Acceptability of choice editing measures

Several approaches were proposed to introduce limitations gradually without infringing on consumer autonomy. These include the stepwise introduction of AP options, gradual price adjustments, and targeted subsidies for AP producers. The key is to avoid abrupt changes or the total removal of traditional protein sources. Subsidies could help make APs more accessible, while social media campaigns and influencers could raise awareness and normalize their use.

Respondents are also open to some price increases on animal-based products, pro-

vided that APs become more accessible or affordable. It's important, however, that these alternatives maintain comparable nutritional value and are not ultra-processed, which many consumers are sceptical of. Additionally, the focus should be on educating consumers and increasing familiarity with APs, rather than imposing mandatory changes. Soft measures, such as improved labelling, promotional campaigns, and encouraging mixed products (e.g., blends of animal and plant-based proteins), would likely be more acceptable to consumers than more forceful measures.

Respondents express clear boundaries regarding the extent of intervention. The removal of products should not happen abruptly or without viable, high-quality alternatives. If APs do not offer similar nutritional qualities, or if they are overly processed, they are unlikely to be accepted. Significant price increases on conventional proteins are particularly problematic, as many consumers already consider meat and traditional proteins expensive, and raising prices could make healthy food unaffordable for many.

"People may understand the logic behind the transition, yet still react negatively if everyday food choices start to feel managed for them."

(Participant from Norway)

Moreover, prohibitive measures that completely remove animal proteins or restrict choice too drastically would be viewed as unacceptable. The introduction of ultra-processed APs or coercive tactics, like forced dietary shifts, are also considered ineffective and counterproductive. People prefer gradual shifts and education over being dictated to, particularly when their food choices are concerned. The introduction of any such measure should be accompanied by strong arguments for its necessity, and any policy must ensure that the transition is fair and does not disproportionately impact vulnerable populations.

Key findings by country: Poland

Attitudes toward choice editing

Many respondents expressed a preference for gradual changes rather than abrupt limitations in product assortment. The idea of transitioning to APs is generally seen as more acceptable when introduced in stages, allowing consumers time to adjust. Positive reactions stem from the potential benefits of reducing meat waste, as well as the longer shelf life of plant-based products, which could reduce food waste. For those who are not strongly attached to eating meat, the idea of replacing traditional animal products with plant-based alternatives is not particularly disruptive, and some even welcome the change, seeing it as an opportunity to eat healthier.

There is also a strong sense of curiosity and willingness to try new APs, especially among those who are already less reliant on animal products. The environmental and ethical advantages of APs, such as reducing greenhouse gas emissions and promoting animal welfare, are recognized as compelling reasons to adopt these alternatives. For some, the shift would not only be about health but also about making more responsible, eco-friendly food choices.

However, negative reactions to the limitations in product assortment are common. A significant number of respondents expressed discomfort at the prospect of having fewer choices, particularly when it comes to meat. For many, meat consumption is tied to cultural practices, traditions, and personal freedom, which makes

the idea of limiting or removing meat from the market feel like an infringement on their rights. Concerns about the unknown qualities of APs, particularly regarding taste, nutritional value, and potential quality degradation, also fuelled anxiety and resistance. The fear that such changes could result in lower-quality products or loss of familiar food experiences created a sense of dissatisfaction, especially for those who are attached to their current eating habits.

Perceived outcomes of choice editing

The idea of limiting or removing less sustainable food products is viewed by some as a beneficial strategy for advancing sustainability and health goals at the EU level. Advocates argue that such measures could help reduce meat production's environmental impact, particularly through lower greenhouse gas emissions, decreased waste, and improved animal welfare. Some respondents even believe that the removal of less sustainable products could encourage the production and consumption of healthier alternatives, aligning with both health and sustainability agendas. If APs were promoted as environmentally friendly and health-conscious choices, this could not only improve public health but also drive consumer behaviours toward more sustainable practices. In this context, the EU's role in supporting

and promoting these alternatives, particularly through media campaigns and public awareness initiatives, is seen as a key opportunity for building trust and fostering a broader societal shift toward plant-based diets.

On the other hand, several barriers to implementing such measures were also highlighted. The economic consequences of limiting traditional meat consumption are a concern, especially for farmers, producers, and other stakeholders in the meat industry. Respondents feared that reducing meat consumption could lead to job losses or decreased incomes for those involved in livestock farming. There were also concerns about the feasibility of distributing APs in rural or less accessible areas, where demand might be lower or access to these products might be limited. Moreover, some respondents expressed scepticism about the nutritional adequacy of APs, particularly for vulnerable groups like children or individuals with dietary restrictions, such as allergies. These concerns create a complex landscape where

the benefits of promoting sustainability and health must be weighed against the potential economic and social costs.

Acceptability of choice editing measures

The majority of respondents indicated that they would be open to the gradual introduction of APs, provided that the transition is managed carefully and does not abruptly limit their access to traditional animal products. Many suggested that offering the option to try APs for free or at affordable prices, along with educational campaigns to raise awareness about their benefits, would make the transition smoother and more acceptable. Importantly, most respondents would appreciate a balanced approach where both animal proteins and APs are available in the market, with consumers free to choose according to their preferences.

There is also support for government and EU-backed campaigns that promote the environmental and health benefits of APs, as long as these campaigns avoid aggressive marketing or attempts to dictate consumer choices. The idea of introducing well-known products in AP versions, such as popular dishes or fast-food items, was seen as a good way to encourage consumers to try new products without forcing them to completely abandon familiar tastes. Social media influencers and other modern marketing strategies were also mentioned as useful tools for making APs more appealing to a broad audience.

In terms of preserving autonomy, many respondents expressed strong support for policies that focus on educating consumers about the impacts of meat production while providing a variety of options in the marketplace. Phasing in APs alongside traditional animal products, and ensuring that these alternatives are affordable, nutritionally comparable, and widely available, was seen as a reasonable and respectful way to introduce change without infringing on personal choice.

While there is considerable support for promoting APs and gradually reducing meat consumption, most respondents were clear about their limits. Total removal of meat products, especially if done abruptly or without sufficient alternatives, was widely viewed as unacceptable. Many people prefer gradual reductions in availability rather than a complete ban or drastic limitations, as it respects personal autonomy and dietary preferences. The idea of having no animal products available in certain settings, such as universities or restaurants, was particularly contentious, with many respondents expressing frustration at the potential loss of familiar food products.

"Curiosity is there, especially, when alternative proteins seem tasty, healthy, and worth trying. The difficulty is that price, tradition, and everyday habits still make change feel slow."

(Participant from Poland)

Another key limit relates to personalized diets, particularly for children, allergy sufferers, or those with specific health needs. Several respondents expressed concern about how APs could meet all dietary requirements, especially in the case of young children or individuals with specialized nutritional needs. These concerns point to the importance of ensuring that APs are nutritionally sufficient and that consumers have access to clear information about their contents and benefits.

Moreover, respondents emphasized that the best way forward is not through co-

ercion but through education. Instead of prohibiting or heavily restricting meat consumption, many feel that public campaigns should focus on informing people about the environmental and health consequences of meat production. There is a desire for solutions that allow individuals to make informed choices, rather than feeling forced into a particular lifestyle. Policies such as regulating meat production practices, encouraging sustainable farming, and providing affordable plant-based alternatives were seen as more acceptable than outright limitations on traditional meat products.

Key findings by country: Slovenia

Attitudes toward choice editing

The responses to limitations in product assortment reveal a range of reactions, with both positive and negative perspectives. From a positive standpoint, many individuals are open to the idea of gradually adapting to the removal of certain products. Over time, they believe that consumers would adjust to changes, especially if these changes are communicated and implemented slowly. This approach is seen as potentially beneficial for personal health, with several respondents justifying the shift by noting that APs can be just as healthy as those from animal sources. Others argue that reducing the prominence of animal-based products in favour of APs is an environmentally friendly step, as AP products generally have a lower environmental impact.

"This kind of transition feels acceptable when it happens gradually and the alternatives genuinely deliver on quality, nutrition, and satisfaction."

(Participant from Slovenia)

However, for some, the idea of removing meat products entirely or drastically limiting availability is viewed with concern. There are those who see such limitations as a shock, and there is a fear that this could lead to protests or public opposition. For some, reducing meat availability feels like an infringement on personal freedom and cultural habits. The removal of familiar food options, especially without a gradual phase-in, might not sit well with those who are not yet accustomed to consuming a higher proportion of plant-based products.

Perceived outcomes of choice editing

Supporters of the idea argue that such measures could be a significant step toward a more sustainable and healthy future. They believe that agriculture could become more sustainable through the promotion of APs, as these typically require fewer resources than traditional livestock farming. Additionally, the sale of APs could increase, providing a market opportunity for new products and potentially contributing to better health outcomes. There is also the potential for reduced environmental destruction, such as less deforestation and fewer greenhouse gas emissions. As consumers increasingly embrace plant-based diets, fields that were once dedicated to animal feed could be repurposed for growing more diverse crops, leading to more sustainable land use practices.

On the other hand, there are barriers to this shift. One major concern is that the artificial cultivation of food, which is often involved in the production of APs, could potentially result in an unhealthy diet if not carefully managed. Moreover, such a shift could disrupt ecosystems, leading to unintended environmental consequences. Not everyone would be prepared to make dietary adjustments, especially given

that not all consumers have the knowledge or willingness to adopt plant-based alternatives. Additionally, the imposition of strict dietary restrictions could be seen as a barrier to personal choice, and some worry that it could reduce the overall amount of protein consumed, potentially affecting physical performance or well-being, particularly for those with higher protein needs.

Acceptability of choice editing measures

While there are concerns about the potential restrictions on choice, there are several measures that respondents feel would not infringe on their autonomy. One key recommendation is the need for more information sharing about APs, particularly regarding their health benefits, environmental impact, and nutritional value. Increasing public awareness through campaigns and events where consumers can try APs would also be seen as helpful in easing the transition.

What makes choice editing workable in practice?

- Information first
- Alternatives available before restrictions
- Food-centred activities
- Strong facilitation

Another widely supported approach is the gradual introduction of APs alongside traditional animal products, allowing consumers to adjust at their own pace. For example, if meat options are reduced in prominence over time, there should be an increase in the availability of APs to ensure more variety and choice. Many respondents agree that labelling APs clearly, using easy-to-understand tags to explain the benefits of these products, would be helpful in making informed decisions. There is also a call for ensuring that lower socio-economic groups are not excluded from access to APs, particularly if the prices of these products are initially higher.

The general consensus is that education and awareness should be prioritized over restrictive policies, allowing consumers the freedom to make their own choices while being informed about the benefits of APs.

Despite the general openness to transitioning towards more sustainable and healthy eating habits, there are several areas where respondents would draw the line. The most significant concern is the complete removal of meat options from one day to the next. A sudden elimination of familiar food products would likely cause resistance and dissatisfaction, especially among those who have strong cultural or personal ties to meat consumption.

Another key issue is the cost of APs. If these products are not made affordable, they could become inaccessible to a large portion of the population, particularly lower-income groups. The price of APs must be reduced to ensure that everyone has access to them, otherwise, the initiative risks deepening social inequalities.

Additionally, replacing meat products with APs in meals without informing consumers is seen as problematic. Transparency is crucial, and consumers should be fully aware of what they are eating and given the choice to opt-in to new products, rather than being unaware of the substitution.

Key findings by country: Spain

Attitudes toward choice editing

The idea of limiting conventional products to encourage more sustainable and

healthy consumption is met with mixed reactions. On the positive side, many individuals express openness to gradual changes, viewing them as an opportunity to diversify their diets, explore APs, and reduce red meat consumption. Some even see the transition as an exciting challenge, potentially leading to healthier eating habits. People who are curious about APs, such as those made from plants or other sources, appreciate the prospect of broadening their culinary horizons. The opportunity to try new ingredients and reformulate recipes is seen as a positive shift for health, especially if it results in a reduction of processed products and encourages a more plant-based diet.

However, negative reactions often centre around the abruptness of limiting access to familiar products. For many, traditional diets are deeply ingrained in cultural and family practices, and removing these products is perceived as disruptive and unsettling. People are concerned that such changes could lead to poor nutrition if APs do not meet all dietary needs. There is also fear around the potential negative health effects of untested or unfamiliar alternatives. As a result, many feel that such a shift could cause confusion, frustration, and even protests, particularly from groups that rely heavily on conventional animal-based proteins for sustenance.

Perceived outcomes of choice editing

Advancing sustainability and health through product limitations presents both opportunities and challenges. On the positive side, limiting conventional proteins could lead to a significant reduction in environmental impact, such as lower carbon emissions, reduced land use, and less animal exploitation. It could also stimulate the development of APs, foster innovation and creating new markets. New technologies, research, and product development would not only provide healthier, more sustainable options but could also boost local economies by creating jobs in emerging industries related to APs. Moreover, such a shift could reduce the health risks associated with high consumption of animal-based products, such as cardiovascular diseases, obesity, and certain cancers.

"The issue is not only whether people are willing, but whether they feel informed enough to act. Without explanation, motivation, and practical guidance, the shift risks creating confusion instead of confidence." (Participant from Spain)

However, there are considerable barriers to implementing such an approach. One key concern is the potential disruption to the agricultural sector, particularly in rural areas. Farmers and livestock producers might face job losses and economic instability, with no clear infrastructure in place to transition to AP production. Additionally, the affordability and accessibility of these new products are a major barrier. While some people would embrace APs if they are affordable and nutritionally complete, others worry that they will be priced out of the market. The shift could also create social and economic divides, particularly if low-income populations are unable to access these new products.

Furthermore, there are unknowns about the long-term health implications of consuming large quantities of APs, especially if they are derived from less traditional sources like insects or lab-grown meat. Questions about the sustainability of these production methods and their potential environmental impact remain unresolved. These uncertainties could fuel resistance and lead to social unrest, particularly if changes are perceived as forced or inadequately explained.

Acceptability of choice editing measures

To ensure that autonomy is respected while promoting a more sustainable and health-conscious food system, any transition should be gradual and well-communicated. Education and awareness campaigns are essential to inform the public about the benefits of APs and the environmental and health advantages of reducing meat consumption. People should feel empowered to make informed choices, rather than having them imposed from above.

Offering a range of options and ensuring that the new products are affordable and accessible to all socio-economic groups will be critical in maintaining autonomy. Financial support for low-income consumers, as well as incentives for producers to transition to more sustainable practices, could help ensure that no one is left behind. Additionally, transparency in food sourcing and clear labelling can help consumers make decisions based on their values and preferences.

"I could see more openness to alternative proteins if people knew what they were buying, how to prepare them, and why they should trust them nutritionally." (Participant from Spain)

Gradual introduction of alternatives, combined with the option to choose between conventional and APs, would allow individuals to transition at their own pace, preventing backlash. Maintaining a balance between choice and sustainability goals would be key in achieving long-term success without alienating large segments of the population.

While some level of regulation is necessary to guide the shift toward more sustainable and healthier food systems, it is essential to avoid drastic measures that could infringe on personal freedoms or create economic instability. Banning or severely limiting access to conventional proteins should be approached with caution, and only after comprehensive consultations with stakeholders, including farmers, producers, and consumers.

The imposition of limits should be gradual, starting with promoting reductions rather than outright bans. Encouraging the consumption of APs through incentives, rather than restrictions, would likely be more effective and better received. Policies that ensure transparency, traceability, and consumer education will help alleviate concerns and foster trust in the transition.

Key findings by country: The Netherlands

Attitudes toward choice editing

The idea of limiting product assortment, particularly with regard to meat, generated mixed reactions. Many respondents were open to the idea of limiting meat choices, provided that there were alternative options available. A significant number felt that higher prices for meat could motivate them to consume less, as long as APs became more affordable. The idea of making meat a less frequent part of one's diet was also well-received by some, especially when framed as a way to treat meat as a luxury product. However, for this approach to work, respondents emphasized the need for proper education about APs, as well as the provision of creative and easy ways to prepare these alternatives.

Another key point was the desire to limit unhealthy food products first before

addressing meat, as well as adjusting the product assortment based on regional needs, due to varying dietary habits across different areas. Many were supportive of making sustainable consumption more accessible by making alternatives available in supermarkets and ensuring they are easy to prepare. There was also a call for the EU to ensure that these measures are uniformly applied across countries. As a whole, limiting meat products could work, but only if accompanied by adequate replacements and widespread education.

On the other hand, a notable portion of respondents resisted the idea of limiting meat availability. A significant concern was the potential for consumers to bypass supermarkets and turn to local butchers or farmers for their meat. Many expressed that such limitations would infringe on their personal freedom of choice, with concerns that choice editing might result in backlash. The general consensus was that people should be allowed to decide for themselves what to buy. Respondents also feared that such policies would disproportionately affect lower-income groups, who might already struggle with the costs of healthy alternatives. Cultural and personal attachments to meat were also highlighted, with respondents pointing out the deep-rooted role of meat in traditions and daily life.

Perceived outcomes of choice editing

There was a mixed response on the justification of limiting product assortments to promote sustainability and health on the EU level. Some respondents agreed that limiting meat consumption could lead to a healthier and more environmentally friendly diet, citing the potential benefits for both personal health and the planet. Many felt that by nudging consumers towards more sustainable options, especially in supermarkets, it could help reduce the environmental impact and improve overall health outcomes. Additionally, respondents appreciated the potential for reduced animal suffering and the promotion of more ethical alternatives.

"A smarter approach would be to make alternative proteins more visible, affordable, and normal in everyday food environments. That is far more persuasive than making people feel restricted."

(Participant from The Netherlands)

On the flip side, many respondents highlighted that the economic consequences could be a major barrier. Concerns about the rising costs of food were prevalent, with many fearing that such measures could make healthy food less affordable, particularly for those already facing financial challenges. The risks of alienating certain groups, such as low-income individuals or those who rely on meat as a central part of their diet, were significant points of concern. Furthermore, many emphasized the role of farmers and the meat industry, expressing worries that the shift might have negative consequences for these sectors. There was also scepticism regarding the effectiveness of choice editing, with concerns about backlash and the potential for it to be perceived as an infringement on individual autonomy.

Acceptability of choice editing measures

Many respondents supported the idea of gradual change, suggesting that measures should be introduced slowly to allow consumers to adapt. The key to ensuring these changes would not infringe on personal autonomy was the availability of affordable, appealing APs, alongside a reduction in the price of healthy food products. Respondents were in favour of nudging consumers in the right direction through supermarkets, education, and media campaigns. Some also suggested us-

ing influencers and social media to target younger audiences and promote healthier, more sustainable eating habits. Public education, particularly in schools, was another commonly suggested approach to create long-term behavioural change.

Respondents also highlighted the importance of preserving some level of choice for consumers, ensuring that the transition was not too radical or imposing. The suggestion to focus on majority populations that are open to change was seen as a more balanced approach. Measures like reducing unhealthy food availability or increasing plant-based options in restaurants were also considered positive steps.

However, there were clear boundaries set by respondents when it came to limiting autonomy. The most significant concerns included the complete elimination of meat and any drastic or sudden shifts in the availability of food. Many respondents felt that it would be unacceptable to fully remove meat from supermarket shelves, as this would infringe on consumer choice. Additionally, concerns were raised about the elitism of APs, particularly if they became too expensive or inaccessible. Any measures that would unduly harm the livelihood of farmers, or impose significant financial burdens on consumers, were also deemed unacceptable. Transparency and clear communication were emphasized as vital for ensuring these measures did not alienate the public.

Key findings by country: Turkey

Attitudes toward choice editing

Reactions to limitations in product assortment are mixed, reflecting a spectrum of perspectives shaped by both practical and ethical considerations. On the positive side, many respondents view restrictions favourably if they can enhance human and environmental health. The idea of replacing products with affordable, healthy substitutes resonates with those who prioritize sustainability and disease prevention. However, this support is often conditional, hinging on public awareness and education. Many believe that fostering environmental consciousness and reducing prejudice toward APs through campaigns and outreach is essential. Government-led policies that ensure fairness, such as setting minimum product standards, are also seen as a way to create an egalitarian system where everyone benefits equally. Acceptance of these practices depends largely on factors like taste, price, and accessibility, with respondents emphasizing the importance of legitimacy and trust in the safety of APs. There is also recognition that public attitudes, especially around meat consumption, can shift over time if accompanied by education and thoughtful regulation.

"For many people, acceptance starts with proof: are these products safe, healthy, affordable, and genuinely beneficial?"

(Participant from Turkey)

On the other hand, many express concerns about restrictions, emphasizing the difficulty of changing deeply ingrained dietary habits. Cultural traditions and personal preferences play a significant role, with respondents wary of external forces influencing their eating choices. Resistance is rooted in the belief that such policies could feel oppressive or violate individual rights. There are fears that restrictive measures might lead to unintended consequences, such as black-market activities or adverse reactions to APs. Many advocate for preserving consumer choice, suggesting that instead of restricting traditional products, efforts should focus on

making alternatives more appealing and affordable. Ultimately, voluntary change, driven by consumer awareness rather than coercion, is seen as the preferred path forward.

Perceived outcomes of choice editing

When considering the advancement of sustainability and health at the EU level, respondents offer a nuanced perspective that balances potential benefits with significant challenges. On the positive side, many recognize the environmental and health advantages of transitioning to APs. There is optimism about the economic potential of affordable alternatives, the development of new industries, and the possibility of fostering healthier generations. Some also highlight the opportunity to introduce diverse protein sources to underserved communities and reduce disease prevalence. Additionally, there is enthusiasm for the creative possibilities that APs might bring to gastronomy and culinary innovation.

However, caution abounds. Many fear that new products could introduce unforeseen health risks or fail to provide adequate nutrition, especially for children. Practical barriers, such as the limited availability of sustainable products at scale, are also seen as significant obstacles. Cultural resistance and societal readiness are recurring concerns, with respondents emphasizing that imposing restrictions could provoke backlash and infringe on personal freedoms. The potential for social disruption and economic losses, especially if traditional products remain cheaper and more competitive, adds further complexity. Respondents advocate for a balanced approach that respects individual autonomy while fostering gradual, voluntary change.

Acceptability of choice editing measures

Respondents express a willingness to support certain measures as long as they respect personal autonomy and focus on education rather than coercion. Public awareness campaigns and widespread promotional activities are seen as critical for fostering acceptance of APs. Many believe that affordability is key, with calls for making alternative products cheaper and more accessible than traditional meat. Taste and quality also play a pivotal role, with respondents emphasizing that substitutes must closely mimic the flavour and texture of meat to gain widespread acceptance.

"The transition can be justified, but only when it is fair, evidence-based, and supported by public awareness rather than by restriction alone."

(Participant from Turkey)

Transparency and ethical governance are equally important. Respondents stress the need for clear labelling and the ethical production of APs, ensuring consumer trust. Maintaining consumer choice is vital, with suggestions to offer both traditional and alternative products in stores, possibly through dedicated sections or shelves. Decentralized decision-making, where local authorities tailor policies to community needs, is also proposed as a way to balance autonomy with sustainability goals. Ultimately, voluntary adoption, supported by education and awareness, is seen as the most acceptable path forward.

Clear limits emerge around the concepts of coercion, fairness, and transparency. Respondents strongly oppose heavy taxation on meat and any form of coercion, emphasizing the importance of voluntary change. Policies perceived as unfair or unequal are also widely rejected, with calls for support mechanisms to assist those

affected by regulations. Ensuring transparency in the production and ethical governance of alternative products is non-negotiable, with respondents demanding clear, trustworthy processes.

Equality is a recurring theme, with many insisting that policies must apply uniformly across society. Some believe that banning harmful or endangered products should be a government responsibility, not one delegated to retailers or NGOs. Ultimately, respondents prioritize respect for personal freedom and cultural values, advocating for gradual, informed change rather than sudden, imposed restrictions.

Cross country overview

Attitudes toward choice editing

Across countries, attitudes toward limiting product assortments are mixed and conditional. Many respondents expressed openness to gradual change, particularly when APs are introduced in stages, remain affordable, and are framed as expanding rather than restricting choice (All countries). Positive views often link choice editing to opportunities for healthier diets, sustainability, animal welfare, and culinary curiosity. For some, it was described as a chance to modernize food culture, inspire innovation in cooking, and increase awareness about how diets connect to climate and health goals (Denmark, Finland, Germany, Spain, Slovenia). Respondents also pointed to benefits like normalizing APs in schools and public settings, creating a healthier "default" environment for younger generations, and supporting long-term shifts in taste and expectations (Finland, Denmark, Poland).

However, concerns about autonomy, cultural identity, and freedom of choice are deeply rooted. Cultural attachment to meat and traditional food products was frequently cited as a barrier, alongside fears that abrupt restrictions would trigger backlash, protests, or a turn to informal markets (Germany, Greece, Spain, The Netherlands, Turkey, Poland, Italy). Practical worries also surface repeatedly: the need for alternatives to be accessible, nutritionally sufficient, familiar, and easy to prepare (Finland, Germany, Poland, Norway, Spain). In several countries, there is strong scepticism toward ultra-processed substitutes, concerns over suitability for children or people with allergies, and worries that price increases on conventional proteins without safeguards would disproportionately affect low-income groups (Norway, Poland, Slovenia, Spain, Turkey). Overall, support grows when measures are phased, transparent, and accompanied by education and credible alternatives, while resistance is strongest when restrictions feel imposed, unfair, or culturally insensitive.

Perceived outcomes of choice editing

When considering outcomes, respondents consistently acknowledge substantial potential benefits of choice editing for environmental sustainability, health, and animal welfare (All countries). Many saw opportunities to reduce greenhouse gas emissions, conserve resources, improve diets, and encourage responsible farming practices (Denmark, Finland, Norway, Slovenia, Spain), while also stimulating innovation in food production and creating new economic sectors (Germany, Spain, Greece, Turkey). Some highlighted benefits for public health, including reduced risks of chronic disease and improved awareness of nutrition (Italy, Finland, Po-

land, Spain). Others stressed the potential for new markets, jobs, and food entrepreneurship, where APs could generate regional or national advantages (Spain, Germany, Greece, Italy, Turkey). There was also enthusiasm for the idea that such policies could foster fairness between generations, ensuring healthier diets for children while tackling the environmental costs of current consumption patterns (Finland, Denmark, Norway, Poland).

At the same time, respondents pointed to serious risks and trade-offs. Equity concerns were front and centre: the possibility that meat could become a luxury item for the wealthy (Norway, Spain, Turkey), that rural or low-income communities might lose access to familiar products (Poland, Greece, Italy), and that vulnerable groups such as children or those with dietary restrictions could face nutritional gaps (Norway, Poland, Spain, Turkey, Italy, Greece). Economic disruption was a recurring theme, particularly the potential impacts on farmers, traditional producers, and rural economies (Germany, Spain, Italy, Norway, Greece, Poland). Scepticism about the actual sustainability or healthiness of certain alternatives, especially if highly processed, allergenic, or resource-intensive, was voiced repeatedly (Germany, Norway, Poland, Slovenia, Spain, Turkey). Finally, respondents warned of social backlash and loss of trust if restrictions are poorly explained, feel coercive, or undermine cultural practices (Denmark, Greece, The Netherlands, Turkey). In sum, perceived outcomes illustrate both the promise and fragility of choice editing as a lever for sustainability: benefits are recognized, but only if risks are anticipated and managed carefully.

Acceptability of choice editing measures

Acceptability is dependent on gradualism, transparency, and respect for autonomy. Widely supported measures include lowering the cost of APs, subsidizing sustainable farming, increasing visibility of plant-based products in supermarkets and restaurants, running awareness campaigns, and integrating education in schools (All countries). Respondents emphasized nudging strategies, such as adjusting product placement, making APs the default in some contexts, or providing tastings and familiar formats, as acceptable ways to normalize change without eliminating choice (All countries). Institutional approaches, like canteens offering AP meals, labelling standards, and chef training, were broadly supported when framed as expanding options (All countries). Many also stressed that strong communication and inclusive consultation with farmers, retailers, and consumers would enhance legitimacy and trust (All countries).

However, clear boundaries emerged: outright bans on meat, sudden removal of familiar products, heavy taxation without compensation, or pushing ultra-processed and low-quality substitutes were almost universally rejected (All countries). Measures perceived as coercive, unfair, or elitist risk alienating the public (All countries), while those that empower consumers with information, quality alternatives, and choice are more acceptable (All countries). Across countries, respondents stressed that interventions must be phased, inclusive, and backed by strong communication, with fairness across social groups and support for farmers as critical enablers (All countries).

What does this mean in a snapshot?

Taken together, these findings show that choice editing is neither universally accepted nor rejected—its success depends on how it is designed and communicated. The potential gains for health, sustainability, and innovation are widely acknowledged, but so too are the risks of inequity, economic disruption, and loss of autonomy. Public trust rests on ensuring that measures are gradual, transparent, affordable, and culturally sensitive, with viable alternatives always available. This points to a pragmatic path forward: nudging and enabling rather than coercing, supporting transitions in production as well as consumption, and creating space for consumers to adapt at their own pace. Policies that combine education, affordability, and fairness can build legitimacy, while overly restrictive or top-down measures risk backlash. In practice, this means governments, retailers, and producers must co-design interventions, monitor public response, and continually adjust to ensure that the move toward sustainable diets is both effective and socially acceptable.

The infographic below provides a distilled visual summary of the main findings.

Key ways to move forward

- Nudge and enable, don't coerce[1]
- Phase out and explain (transparent roadmap) [1]
- Make APs viable: affordable, accessible, familiar, nutritious[1]
- Build fairness safeguards[1]
- Support farmers and rural economies[1]
- Monitor public response and adjust measures[1]
- Co-design with stakeholders[1]

Acceptability

Opportunities

- Lower AP cost; subsidies; visibility; awareness; school education[1];
- Nudges (placement/defaults), tastings, familiar formats[1];
- More canteens/AP meals; labelling; chef training (as expanding options)[1];
- Multi-stakeholder communication & collaboration leading to trust/legitimacy[1]

Concerns

- Bans; sudden removal; heavy taxes without compensation; low-quality ultra-processed substitutes[1];
- Coercive/unfair/elitist measures alienate public[1];
- Lack of fairness safeguards and lack of farmer support undermines acceptability[1]

Percieved Outcome

Opportunities

- Environmental, health, animal welfare benefits recognised[1];
- Lower emissions, conservation of resources, improvement of diets , responsible farming[7];
- Innovation and new economic sectors[8];
- Public health gains (chronic disease risk; nutrition awareness)[9];
- New markets/jobs/entrepreneurship advantages[10];
- Intergenerational fairness[11]

Concerns

- Equity risks (meat as luxury)[12];
- Access loss for rural/low-income communities[13];
- Nutritional gaps for children/diet-restricted groups[14];
- Economic disruption for farmers/traditional producers/rural economies[15];
- Doubts about alternatives (processed/ allergenic/resource-intensive)[16];
- Backlash + trust loss if coercive/poorly explained/culturally undermining[17]

Attitude

Opportunities

- Phased change[1];
- Affordable APs[1];
- Expansion of choices and framing[1]; Health/sustainability/animal welfare and curiosity[1];
- Modernise food culture / cooking innovation / diet–climate–health awareness[2];
- Normalise APs in schools/public settings;
- Healthier defaults for youth[3]; Transparent approach + education + credible alternatives[1]

Concerns

- Limitations of autonomy/freedom of choice[1];
- Cultural attachment to meat/traditional foods[4];
- Backlash/protests / informal markets if abrupt[4];
- Need alternatives that are accessible, nutritionally sufficient, familiar, easy to prep[5];
- Ultra-processed scepticism; suitability for children/allergies[6];
- Unfair price impacts without safeguards[6]

(1) All countries; **(2)** DK, FI, DE, ES, SI; **(3)** FI, DK, PL; **(4)** DE, GR, ES, NL, TR, PL, IT; **(5)** FI, DE, PL, NO, ES; **(6)** NO, PL, SI, ES, TR; **(7)** DK, FI, NO, SI, ES; **(8)** DE, ES, GR, TR; **(9)** IT, FI, PL, ES; **(10)** ES, DE, GR, IT, TR; **(11)** FI, DK, NO, PL; **(12)** NO, ES, TR; **(13)** PL, GR, IT; **(14)** NO, PL, ES, TR, IT, GR **(15)** DE, ES, IT, NO, GR, PL; **(16)** DE, NO, PL, SI, ES, TR; **(17)** DK, GR, NL, TR.

5.2 Choice expansion

Choice expansion focuses on broadening the range of sustainable and healthier options available to consumers, complementing existing market choices. Together with the LL participants, we explored three main themes: packaging, sensory aspects, and overall impressions.

Regarding packaging, participants discussed what they liked or disliked about it, what kind of information they would look for on the packaging, and how branding or brand recognition might affect their willingness to buy.

When discussing sensory aspects, participants considered what they appreciated most and what needed improvement, focusing on smell, appearance, texture, mouthfeel, taste, and flavour. They also reflected on their willingness to purchase the product, the price they would pay, whether they might replace traditional protein sources with it, and if they would recommend it to others.

Finally, participants reflected on whether they had seen similar products before and how they perceived them in terms of edibility, healthiness, and environmental impact. In addition, they discussed their overall impressions of the products, considering how group discussions may have influenced their initial views, what key insights they gained, and how their perception of APs changed through the workshop.

Participants evaluated a variety of commercially available products, including uncooked items, cooked dishes, and desserts, differing in protein source and type. The following section summarises participants' main impressions and reflections, with protein sources highlighted where relevant. For a full overview of the discussion points and methodology, please refer to the LLs manual [15].

Key findings by country: Denmark

Impact of packaging and presentation on consumer perceptions

Participants treated packaging as the first filter. For pea-based ingredients and drinks, simple, familiar design and clear naming lowered the barrier to try. Participants valued front-of-pack clarity about the protein source, clear indication of protein per serving, visible allergen information and origin (Danish provenance), organic status where relevant, and a short, transparent ingredient list. Packaging that included basic preparation guidance or serving suggestions were welcomed. Sustainability cues, for example a green colour scheme and CO_2 information, attracted attention when presented credibly.

Participants disliked packs that looked dull, generic or over-marketed in relation to their actual composition. Packaging that implied more pea content or higher protein than the ingredient list supported reduced trust. Missing or unclear guidance on how to use cooking ingredients (notably pea flour) was a recurring frustration. Sustainability claims without sources were treated sceptically.

Participants repeatedly asked for actionable, front-of-pack information to make first use easy; a plainly stated protein source; an easy-to-read nutrition table with protein highlighted; visible allergen and origin cues; simple recipe or serving suggestions; and transparent statements on organic status and sourced sustainability metrics.

Branding was not a primary purchase driver in these sessions; participants prioritized clear, credible product information. Branding was referenced only in reflections as something that should be distinctive and well executed, but secondary to the fundamentals above.

"I was positively surprised by some of the products, especially when they felt familiar and easy to use, but the price still makes them hard to choose regularly." (Participant from Denmark)

Where insects were concerned, packaging could not overcome a strong baseline reluctance toward mealworms.

Sensory experiences and purchasing behaviour

Danish participants valued pleasant, familiar flavours and usable textures that made products work as ingredients or snacks (pea-based flours and crackers; pea drink as a neutral base); convincing, satisfying textures when prepared well (mycoprotein patties); and clear potential for everyday use, especially when the product did not try to mimic meat exactly but offered a credible alternative. Health and environmental cues reinforced positive impressions when they were supported by short ingredient lists and transparent claims.

When it came to barriers, participants highlighted texture failures (crumbly, tough, too dry or occasionally oily (e.g., in pea-flour-based crackers), an unappetising look or awkward shape (often mentioned for patties), soft or dry bite and weak aroma or seasoning (mycoprotein-based product), and perceptions that marketing overstated composition or protein levels (pea-based drinks). Pea-based drinks split opinions on taste and consistency, with questions about additives and organic status. Insect-based products were widely rejected when the insect form was visible.

Willingness to buy clustered around perceived value and ease of use. Participants favoured products that offered everyday utility at competitive prices. Lab participants were cautiously open to occasional main-dish alternatives if sensory and price improved (e.g., in patties), and were unlikely to purchase insect products in current formats. Readiness to recommend followed a similar logic: higher where the protein benefit and practical use-case were clear.

Overall consumer impressions and perception changes

In the Danish LLs familiarity varied by format: milk alternatives and cooking ingredients were the formats most participants recognised, while some items were newer to parts of the sample. Those less familiar asked for basic guidance on use and preparation.

Participants reported both positive surprises and reservations about taste and texture, some items tasted better than expected while others did not meet conventional equivalents. Health and environmental attributes were welcomed when they aligned with short ingredient lists, clear protein information, Danish origin, and credible sustainability data. Conversely, modest protein levels or unsourced claims led participants to question overall value. Price repeatedly emerged as a limiting factor for trial and repeat purchase.

Group tasting / social dynamics lowered barriers for some by making unfamiliar textures or flavours less intimidating and by generating ideas on how to use neutral products as ingredients. For others, prior preferences remained influential and social exposure did not change established views.

Perception shifts after the workshop were mixed. Positive changes included surprise at improved flavour or consistency for some products and increased curiosity about occasionally incorporating APs, especially as neutral, versatile ingredients. Negative or unchanged perceptions were mainly driven by price concerns, lack of clear differentiation from existing products, and remaining sensory or functional shortcomings. Participants indicated broader adoption would be supported by competitive everyday pricing, clearer preparation guidance so products succeed at home on first use, and wider availability (for instance in restaurants, enabling trial before purchase).

Key findings by country: Finland

Impact of packaging and presentation on consumer perceptions

In the Finish LLs, clear, see-through trays or small viewing windows, straightforward naming and QR codes linking to recipes helped plant-based products look familiar and easy to use. Original labels that highlighted “Produced in Finland” and explicit recycling information lowered effort and built relevance. Cardboard packaging outers and friendly illustrations improved appeal for chunk-style products, and fermentation claims explained in plain language made fermented items feel more credible.

Participants criticised plastic packaging and awkward expiry-date placement. Busy layouts, small fonts and excessive on-pack text made key facts hard to find which

increased participants' negative reactions toward a product. Plain or dull colour schemes reduced appeal for snack-like alternatives. Vague sustainability or fermentation claims without a short, clear explanation reduced confidence.

"These products seem more suitable for Finnish diets than I expected, but I still need better recipes, clearer packaging, and more confidence in how to use them." (Participant from Finland)

Participants repeatedly asked for actionable front-of-pack facts: protein per portion, storage once opened, portion size, simple cooking guidance and clear allergen/origin cues. Dry or shelf-stable products benefited from a front protein callout, a small viewing window and step-by-step usage tips. For fermented products, a brief note explaining gut-friendliness and the fermentation process was requested.

Branding was secondary to clear product information; distinct, local cues (domestic origin) were seen as helpful but packaging fundamentals mattered most.

Sensory experiences and purchasing behaviour

Finish participants liked pleasant, neutral flavours and usable textures that made products work as ingredients or snacks, especially for pea-based flours and crackers (pea-based). Participants also liked convincing, chicken-like mouthfeel, juiciness and satisfying texture when chunk-style products were well seasoned (pea + oat chunks; mince-style products). Fermented fava-based products were appreciated for an appealing taste and perceived gut-friendliness, particularly when packaging included simple preparation ideas (fermented fava). Familiar mince-like products/ingredients increased acceptability where they resembled conventional mince and came with clear cooking guidance.

Participants didn't like flour-like, dry or crumbly textures and occasional excessive saltiness, issues that appeared most in some pea and fava flour products. They also found chunk-like products unappealing straight from packaging, uneven in size, or tricky to cook without guidance (pea + oat chunks; dry formats). Some chunk and patty formats had a soft or inconsistent bite and weak seasoning or aroma (pea/

pea-based chunks), and dry formats often fried to a dull look (dry shelf-stable formats). Fermented products sometimes broke down in texture and were judged to

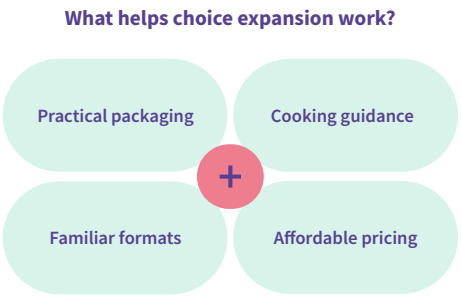
need garnish or clearer recipes (fermented fava-based products). Across products, participants questioned protein delivery relative to price and wanted clearer protein information to justify cost.

Purchasing behaviour and recommendation followed these sensory signals: participants were most willing to buy familiar, easy-to-use types, notably, mince-style and fermented options that combined good taste, texture and versatility (fava mince; fermented fava). Chunk-style items attracted purchase when appearance and cooking guidance improved (pea + oat chunks). Readiness to recommend was highest where products were easy to season and fit Finnish meals; affordability and clear, usable preparation instructions were key conditions for repeat purchase.

Overall consumer impressions and perception changes

Familiarity varied by format and source. Many respondents recognised protein formats that resembled conventional minced meat, for example, the fava bean crumble and other fava-based mince products. While chunk-style items (pea + oat strips and pea slices) and dry, shelf-stable bags were newer to parts of the sample. Fermented fava products were also relatively unfamiliar.

Taste and texture divided opinion across sources. Some fava-based mince and pea/pea-oat chunk products surprised participants positively on flavour and mouthfeel when well-seasoned, while other samples were judged flour-like or lacking meatiness. Fermented fava formats were valued for perceived gut benefits when the package explained fermentation simply. Health and sustainability claims carried weight when supported by short ingredient lists, clear protein information, and explicit domestic origin; vague claims or hard-to-find nutrition details undermined confidence. Price continued to be a major constraint on trial and repeat purchase across all sources.



Chef tips and group tasting encouraged trial and practical experimentation: cooking demonstrations and shared recipe ideas helped some participants revisit products they had initially rejected. Several participants noted that APs were easier to accept when presented as an ingredient to complement Finnish dishes rather than as a direct meat substitute.

Positive perception changes, following the workshop, included surprise at improved flavour, texture and variety in certain fava-based mince and pea/pea-oat chunk products, and increased willingness to occasionally substitute traditional proteins when a product proved easy to season and versatile. Negative or unchanged views were driven mainly by concerns about preparation difficulty (not knowing how to cook dry or fermented products), price, and lack of clear differentiation from existing options. Participants identified three practical enablers for broader adoption: tasting well-prepared dishes, plain and usable home-use instructions on pack, and credible local cues (explicit “Produced in Finland” claims and clear explanations of fermentation benefits).

Key findings by country: Germany

Impact of packaging and presentation on consumer perceptions

Participants treated the packaging as a first credibility check. Processed insect products with a modern, clear layout lowered initial friction, but respondents wanted unambiguous front-of-pack facts (which insect species, origin, protein grams per product, and sourced sustainability claims). Single-use plastic packaging reduced perceived sustainability.

Participants valued uncluttered, readable layouts, visible product or serving photos, and clear front-of-pack signposting (flavour and protein). Informative elements such as simple preparatory cues or QR-linked recipes and visible nutrition tables were appreciated. Subtle, non-graphic indicators of insect content were acceptable for processed insect bars.

Participants disliked packaging that concealed the protein source or implied claims not supported by ingredients (e.g., "no added sugar" when sweeteners are present). Busy designs, small fonts, dark "premium" marketing styles and single-use plastics undermined trust. For mycoprotein products, the term "mycoprotein" often felt unclear and participants asked for a plain description of the protein source

Participants repeatedly asked for a plainly stated protein source (with a short explanation if the term is technical), protein per portion prominent on the front, allergen and origin cues, and a short "how to use" guide (mixing or pan-fry steps as relevant). Sustainability or health claims should be sourced and verifiable.

Branding is useful but secondary: distinct identity helps shelf notice, yet packaging fundamentals (what the protein is, how to use it, and credible claims) are decisive for first trials.

Sensory experiences and purchasing behaviour

Participants liked fruity, date-bar familiarity, a clean aftertaste and conventional protein-bar-like texture when insects were processed and not visually obvious (insect-protein bars). They also liked meat-like fibres, good seasoning, juiciness and easy incorporation into meals for mycoprotein patties/strips. A minority appreciated products that fitted existing eating occasions and that did not try to disguise their form.

"The burger showed me that some alternatives are already very close in taste and texture, but packaging, price, and trust still matter a lot for that first purchase." (Participant from Germany)

Participants didn't like a dry or sticky bite in some insect bars, overly sweet formulations, or the idea of eating identifiable insects (processed presentation reduced but did not eliminate reluctance). For mycoprotein, respondents asked for a firmer bite, juicier texture, more intense seasoning and fewer additives; clearer pan-fry guidance was requested to realise best results. Protein powders and drink mixes were the weakest sensory performers: powdery or watery mouthfeel, flat or artificial flavour and unclear mixing instructions led to low acceptance.

Willingness to buy insect bars was mixed and closely tied to taste and price. Participants were willing to try insect bars that matched familiar snack profiles and every-

day price points, but many remained hesitant if insects were perceptible or pricing felt premium (insect-protein bars). Mycoprotein patties/strips commanded stronger purchase intent and a higher readiness to recommend when flavour and texture delivered a meat-like experience. Participants said they would suggest these products to friends and family when the sensory profile was convincing (mycoprotein). Protein powders and drink mixes generated low purchase intent and very low recommendation rates due to mouthfeel and flavour issues.

"I may be open to trying alternative proteins, but I want products that are clear about what they are, why they matter, and whether they really offer something better."

(Participant from Germany)

Overall consumer impressions and perception changes

Familiarity varied by source: plant-based formats (burgers, patties) were broadly recognised; processed insect bars were less familiar but aroused curiosity when insects were not visible; protein powders were familiar in form but many found their execution unsatisfactory.

Insect bars were generally judged edible and sometimes enjoyable, but environmental and health confidence dropped when sustainability claims felt vague or packaging seemed unsustainable. Plant-based mycoprotein products were trusted more when presented like conventional products and when the protein source was explained plainly. Protein drinks struggled on edibility, texture and perceived health benefits.

Group tasting reduced hesitation for some participants, trying insect products together made experimentation easier, and chef tips or serving suggestions helped participants see how alternatives could fit everyday meals. Many noted that packaging plus price determines the first purchase, while taste determines repeat purchase. Clear labelling was flagged as important to prevent unintentional consumption by those avoiding animal ingredients.

Perception shifts were mixed. Positive shifts included greater awareness of the range of alternatives and increased openness to products that cook and taste close to meat. Remaining reservations centred on highly processed products and the role of insects in everyday diets. Practical advantages such as longer shelf life and convenience for students or busy households were noted. The take-away for producers: deliver the familiar taste/texture people expect, make the protein source explicit and credible, and price products to be realistic for regular use.

Key findings by country: Greece

Impact of packaging and presentation on consumer perceptions

For Greek participants, visibility, material and clarity of the packaging determined whether a product felt approachable or off-putting.

Participants valued clean, minimalist designs, sturdy materials and small viewing windows that made snacks immediately legible. QR-linked recipes or concise nutrition panels were appreciated. Explicit origin cues and clear ingredient list increased trust, and chocolate-coated insect sweets benefitted from familiar imagery that made them feel more like a conventional treat.

Participants disliked thin or overly plastic packaging and non-resealable flour-type

bags. When it comes to insect products, large, obvious windows or imagery that emphasised whole insects reduced approachability. Busy layouts, small fonts or overly technical terminology made it hard to find key facts. Vague sustainability or fermentation claims without clear explanation provoked scepticism.

Participants repeatedly asked for unmistakable front-of-pack labelling of the protein source (e.g., “cricket”, “mealworm”, “edamame” or “pea sprout”), a clear ingredient list, protein-per-portion, origin and allergen cues, and simple “how to use” steps. For flour-oriented products they wanted re-sealability plus storage and portion guidance. For sweets and snacks, a short nutrition snapshot and a brief, verifiable sustainability statement were requested.

Branding was secondary to clarity: distinctive design helps shelf notice, but participants prioritized straightforward information and practical usability.

Sensory experiences and purchasing behaviour

Participants valued pleasant, familiar flavours and usable textures that fit Greek eating occasions, especially, for plant-based savoury formats (edamame snack; pea-sprout mini burger), which were praised for balanced seasoning, convincing meat-like bites in burger formats (pea sprout), and versatile salt/spice profiles. Chocolate-coated insect sweets sometimes earned praise for taste and crunch and insect snacks flavoured with garlic or cinnamon were more acceptable when familiar seasonings masked novelty.

Participants didn’t like floury, bland or grainy textures and underpowered flavour intensity (notably the plant-based chocolate mousse made with soy/chia). Visual cues and aroma reduced acceptance of insect-based products for many: clearly

visible insects, off-putting smell or unusual aftertaste lowered willingness to try (crickets/mealworms). Dry or hard-to-cook insect ingredients (mealworm flour) received little enthusiasm. Across sources, participants questioned protein delivery relative to price.

Participants were much more willing to buy and recommend plant-based savoury

options (edamame snack, pea-sprout burger) which fit familiar dishes and had convincing taste/texture. Plant-based dessert acceptance was mixed and less likely to prompt recommendation. Insect products showed lower purchase intent overall: chocolate-coated insect sweets and seasoned insect snacks drew curiosity and occasional trial where flavour/format masked insect cues, but cooking-ingredient forms and clearly visible insects faced strong resistance. Price expectations for insects were tighter and many said they would consider insect products only at lower prices or in more familiar formats.

"The plant-based dishes felt much closer to my expectations than I thought, while insects still felt unfamiliar — but hearing others' experiences made them a little less intimidating."

(Participant from Greece)

Overall consumer impressions and perception changes

Familiarity was high for plant-based formats and lower for insect-based products. Edamame and pea-sprout burger formats felt recognisable; insect snacks and insect-based cooking ingredients were largely unfamiliar.

Taste and texture were the decisive attributes: plant-based savoury items were often described as comparable to conventional products when seasoning and bite were right.

Health and environmental messages landed only when tied to short ingredient lists and clear local origin claims; vague sustainability statements reduced trust. Participants wanted clearer protein information to justify price.

Group tasting and peer comments played an important role: social proof encouraged some participants to sample insect products they might otherwise have avoided. Chef tips and visible usage examples helped people imagine APs in Greek dishes and increased willingness to try plant-based formats.

Perceptions shifted positively for many plant-based options following the workshops. Participants left more open to incorporating those into meals, especially savoury formats that mirror familiar dishes. Insect-based products remained polarising: curiosity increased for some (particularly when insects were processed and paired with familiar flavours like chocolate or garlic), but a substantial share stayed reluctant.

Participants identified enablers for broader adoption: clearer, credible information; normalization through media and chefs; adaptation to local dishes and recipes; reasonable pricing; and resealable, sustainable packaging. Social proof and honest preparation guidance were emphasised as practical levers to lower the highest barriers.

Key findings by country: Italy

Impact of packaging and presentation on consumer perceptions

In the Italian sessions, when it comes to packaging, participants liked clean, minimalist layouts, sturdy, paper-like materials and small viewing windows that made snacks immediately legible. QR-linked recipes and concise nutrition panels were appreciated, and explicit origin cues plus clear ingredient lists increased trust. For plant-based dairy and sweets, front-of-pack cues such as vitamin B12 were noticed, and packaging that felt similar to conventional references helped participants.

Participants disliked heavy use of plastic, non-resealable flour or deli sleeves, and over-saturated "green" colour schemes that felt performative. Busy fronts, small fonts or technical wording made key facts hard to find, and vague sustainability or fermentation claims without a short explanation provoked scepticism. Several products were read as over-processed by association, especially when long ingredient lists in the packaging clashed with health framing.

Across products, people asked for plain front-of-pack identity (what the protein is), clear nutrition with an emphasis on salt and sugars, simple ingredient lists, origin and allergen cues, and a short "how to use" prompt or recipes.

Branding was secondary to these fundamentals: a distinctive look helped with noticeability, but straightforward information and practical usability carried decisions.

Sensory experiences and purchasing behaviour

Acceptance was driven by familiar eating experiences, convincing texture, and low effort. The pea-protein tuna substitute stood out because appearance and texture closely mirrored the fish reference, making it easy to integrate into everyday meals. Ready-to-heat products were valued for convenience when reducing meat without cooking from scratch, and several participants enjoyed the indulgent flavour of rice-protein bars and the creaminess of plant-based dairy alternatives. Quick, pre-seasoned options (e.g., soy or wheat-based burgers/meatballs) appealed when the spice profile felt balanced and the vegan identity stayed in the background, allowing taste to lead.

Barriers centred on perceived over-processing and taste balance. Many products were described as too salty (and at times too sweet), with some savoury items showing dominant garlic/onion notes. Wheat-based deli slices were criticised for an unnatural colour and awkward texture, and the strawberry plant-based cream drew pushback for a curdled look and excessive sweetness. Long ingredient lists fed doubts about healthfulness, and meat-mimicking cues put off a subset of vegan consumers. Price was a decisive gatekeeper: when cost matched the animal reference, many said they would default to the conventional option.

Accordingly, willingness to buy and recommend was strongest for items that delivered on flavour/texture and saved time, and weakest where processing cues, salt/sugar levels or price felt misaligned. Some suggested using these products in sandwiches or recipes to integrate flavour and improve overall impression.

"I can see where these products fit, especially in everyday meals or when eating out, but they need to stand on their own instead of pretending to be something else." (Participant from Italy)

Overall consumer impressions and perception changes

Familiarity was uneven: soy-based items were well known, while pea- and wheat-based innovations, bars and dairy analogues felt newer. Many still preferred cooking legumes at home, setting a high bar for processed alternatives. In characteristic judgements, taste/texture strongly shaped perceived edibility and health; shorter labels and lower salt/sugar increased confidence, while plastic-heavy packaging undermined eco claims. Soy remained a debated topic (health and monoculture concerns), even as others not-

ed its predominant use in animal feed.

Social dynamics reinforced learning more than conversion. Group tasting and discussion added practical know-how and made a few sceptics more open to occasional use, especially when execution was reliable (e.g., in restaurants) and the product behaved like the reference.

Still, many reported little change in core preferences, splitting into a convenience-oriented segment that valued speed with cleaner labels and fair pricing, and an ethics/environment segment that preferred homemade, minimally processed recipes.

The clearest levers for broader adoption were consistent: deliver cleaner labels and less salt/sugar, align price with everyday references, match sustainability claims with materials, and lead first impressions with competent preparation so flavour and familiarity earn trust before the label does.

Key findings by country: Norway

Impact of packaging and presentation on consumer perceptions

In Norway, LL participants looked for clean, readable packaging with clear local cues increased trust, while poor materials and low legibility undermined it.

Participants valued front-of-pack clarity that named the protein source plainly (for example “field beans,” “mycoprotein,” “chickpea flour”), an appetising serving image, and an immediate nutrition snapshot with protein per 100 g/portion. Cardboard or clearly recyclable-feeling materials, short ingredient lists and a visible local origin or known-producer cue raised confidence. Packaging that included a short recipe or simple “how to use” steps (or a QR code linking to recipes) were welcomed, especially for less familiar formats like flours and mycoprotein.

Participants disliked small fonts, low-contrast colours and technical wording that made back-of-pack facts hard to read. Single-use plastic or mixed cardboard/plastic designs clashed with sustainability claims. For cooking ingredients, non-resealable formats or designs that signalled a single-cuisine use narrowed perceived utility.

Across products, the suggested improvements were consistent: state the protein source in plain language on the front, improve readability, show protein and allergens prominently, add short-use guidance (and re-sealability for flours), and use recyclable-feeling materials with verifiable sustainability claims.

Sensory experiences and purchasing behaviour

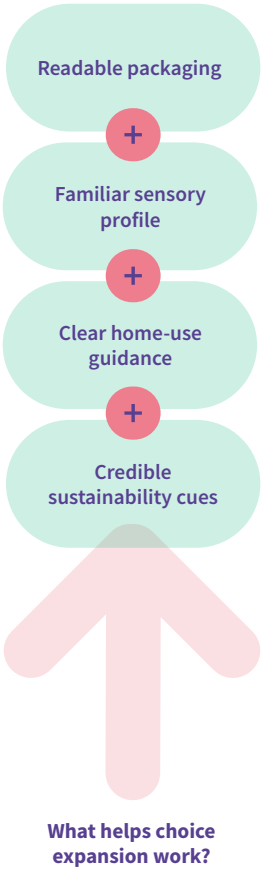
Participants’ sensory reactions clustered into likes and dislikes, with the parenthetical notes showing the protein sources most often associated with each point.

Participants liked crunchy, well-seasoned snacks that resembled familiar snack profiles (snack beans — field beans): crispy texture, balanced seasoning and an aroma that made them feel like a healthier chip or nut alternative. Chickpea-based

products earned praise for versatile functionality and good mouthfeel in baked and dessert applications (chickpea flour used for pies, meringue and waffles). Mycoprotein fillets performed when prepared well and served with sides: tasters appreciated a meat-like chew and compatibility with typical meals (mycoprotein worked best when pan-fried or combined in a composed dish).

Participants didn't like excessive saltiness, dryness or lingering aftertastes (noted for some snack beans and certain snack/bean products). Mycoprotein sometimes felt compact or a bit dry and needed clearer pan-fry guidance to reach optimal juiciness. Chickpea flour items could be slightly denser or drier than wheat benchmarks and some wanted options to make them crisper or moister. Long ingredient lists, heavy reliance on oils, or flavours that masked the base ingredient (e.g., overpowering paprika or garlic) reduced perceived healthiness and appeal.

Purchase intent followed sensory plus practical cues. Snack beans and chickpea-based products showed the strongest immediate purchase interest. Respondents liked their taste, perceived healthiness and everyday utility, and were willing to buy at modest price points (many signalled a preferred price slightly below current shelf levels). Interest in mycoprotein was positive but mixed and hinged on clear cooking instructions, perceived juiciness, and availability. Willingness to recommend mirrored this pattern: highest where the product both tasted familiar and included usable preparation guidance.



Overall consumer impressions and perception changes

Familiarity varied by source: chickpea and bean formats were most recognisable in snack and baking uses, while mycoprotein remained less familiar outside larger cities. Taste and texture were the dominant acceptance drivers across products. Matching familiar sensory expectations (snack-like crunch, waffle-like texture, or a juicy fillet when cooked) earned trust and repeat interest.

Health and sustainability cues were scrutinised: short ingredient lists, clear protein information and recyclable packaging strengthened credibility, whereas long ingredient lists, visible plastic and unclear origin undermined it. Practical signals mattered: local provenance, simple recipes on-pack, resealable packs for flours, and readable nutrition panels were repeatedly highlighted as enablers.

Group tasting and discussion tended to nudge attitudes positively by generating recipe ideas and reducing uncertainty. Several participants reported increased curiosity or concrete intentions to try APs again at home after seeing preparation methods and tasting composed dishes. Remaining barriers were consistent: price sensitivity, limited availability, and the need for clearer home-use guidance.

The clearest path forward from the Norwegian sessions is actionable: keep sensory experience close to familiar references, label the protein source and nutrition clearly, highlight local/recyclable credentials, and provide simple, everyday recipes so products succeed at home on first use.

Key findings by country: Poland

Impact of packaging and presentation on consumer perceptions

Participants valued clean, checklist-style packaging that make it quick to decide: simple paper/cardboard layouts, a modest product window, legible ingredient lists and a clear front-of-pack share of protein per portion. Local origin and "bio" cues (Polish origin, earthy styling) added trust. Practical format features such as compact, easy-to-carry packaging and resealable closures for snacks were appreciated.

Participants disliked non-recyclable foil, tiny back-of-pack fonts, cluttered or flashy graphics, and packaging lacking Polish language or a clear photo of the product. Visible insects or oversized windows that made insects prominent reduced approachability.

Requested front-of-pack essentials were consistent: plainly named protein source, protein per portion, allergens, origin, calories/energy and simple disposal guidance. Practical improvement points included swapping foil for recyclable materials, keep the front uncluttered, show the product modestly (not to alarm), and surface allergen/usage information where it's immediately visible.

Branding was a secondary factor for many: helpful if familiar or local, but not a substitute for clear, credible product information.

Sensory experiences and purchasing behaviour

Participants liked familiar flavours, crisp textures and convincing mouthfeels (chickpea snacks and algae crisps scored well for crunch and balanced seasoning; vegan feta-style cheeses were often praised for creaminess). Whole-dish presentations (e.g., banana blossom, bean purée combinations) were frequently described as restaurant-quality and filling, which boosted trial. Mildly seasoned insect snacks or chocolate-coated insect sweets reduced neophobia for some tasters when the insect element was not visually dominant.

"When alternative proteins are served in a full, well-prepared dish, they become much easier to appreciate - taste and presentation really change the experience." (Participant from Poland)

Participants disliked rubbery or spongy textures and overly salty or oily formulations (most often called out in wheat- and soy-based meat analogues). Other recurring issues were dry or mealy mouthfeel in some snacks and desserts, blandness in certain products, and visible insect form or unfamiliar aromas in whole-insect formats that triggered rejection. Price sensitivity was strong across the board: many said they would buy snacks and dairy alternatives if priced near everyday options; mains needed improved texture/seasoning or a lower price to secure repeat purchases.

Willingness to buy and to recommend tracked sensory success and perceived value. It was highest for well-seasoned chickpea snacks, convincing vegan cheeses and well-executed plated dishes; lower for rubbery mains, over-salted items and visibly insect formats. Most participants wanted everyday snack prices for routine purchases; insect products required either better familiar formats or a clear price advantage.

Overall consumer impressions and perception changes

Familiarity varied by source: plant-based snacks and dairy alternatives were commonly recognised; more novel items (banana blossom, some algae or insect formats) felt new and rarer on the Polish market. Taste and texture drove judgments: short, transparent ingredient lists and recyclable-looking packaging supported health and environmental claims, while long ingredient lists, perceived ultra-processing and plastic/foil packaging undermined trust.

Group tasting and plated dishes helped lower barriers. Social proof and chef-served preparations encouraged people to try unfamiliar items and generated practical ideas for use.

Perception shifts were mixed. Several people left more open to plant-based swaps (especially snacks and some desserts), while reservations remained where textures disappointed or prices felt unjustified.

Practical enablers for broader adoption were clear and consistent: readable, recyclable packaging that names the protein and protein amount; flavour and texture that either deliver familiar references or confidently stand on their own; visible origin/allergen cues; and everyday pricing (or strong value) plus simple cooking/serving guidance so products succeed at home on first use.

Key findings by country: Slovenia

Impact of packaging and presentation on consumer perceptions

For the Slovenian participants, in packaging, material, legibility and a clear statement of the protein source shaped whether a product felt approachable or off-putting.

Participants liked paper-style or cardboard-feel materials, small viewing windows and simple, familiar layouts that made snacks immediately legible. Local language descriptions, short front-of-pack ingredient cues (for example “mealworm”, “grasshopper”, “pea protein”), a visible protein-per-portion callout and appetising serving photos increased trust and helped shoppers imagine everyday use. For insect sweets, familiar dessert imagery and a fine-textured filling (rather than whole visible insects) improved approachability.

Participants disliked packaging that looked plasticised or non-recyclable, large windows that emphasised whole insects, and busy fronts with small fonts. Overt “vegan” or mock-meat branding sometimes created confusion or resistance. Many preferred neutral, mainstream positioning that emphasised taste and use rather than identity. Vague sustainability claims unsupported by recyclable materials provoked scepticism.

Across categories respondents repeatedly asked for a short, actionable front panel: the protein source named plainly; a short ingredient list; clear allergen and origin cues; protein per serving; and a one-line “how to use” or simple cooking suggestion. For flour and other cooking ingredients they wanted re-sealability, storage and portion guidance; for sweets they preferred milled insect inclusions over visible whole insects.

Branding was secondary to clarity: design should attract the eye, but readable, honest information was the priority.

Sensory experiences and purchasing behaviour

Participants responded most strongly to familiar, well-executed taste and texture, these attributes drove trial and framed willingness to buy. Positive reactions clustered where seasoning, mouthfeel and presentation matched everyday expectations: a juicy, well-spiced pea-protein burger won praise when bite and moisture were present, while desserts that combined chocolate or creamy elements masked novelty and led many tasters to rate appearance and taste highly. Crunch was a consistent asset for snack formats when insect snacks were crisp and seasoned like chips they produced curiosity rather than immediate rejection.

"I was more open to alternative proteins once I tasted them, especially when the flavour and texture worked well, although whole insects still remain a step too far for many."

(Participant from Slovenia)

Barriers were equally clear. Visible insect parts (legs, whole bodies) reduced approachability and created an aversion that seasoning alone could not always overcome; many participants said they preferred insects to be milled or incorporated into a familiar matrix. Dryness, grainy or underwhelming bite damaged acceptance of savoury plant-based items. A dry patty or grainy texture pushed tasters back to conventional references. For insect products, textural roughness, unfamiliar aftertaste or inadequately ground inclusions were commonly flagged as off-putting. Across sources price sensitivity closely tracked sensory judgements: more visible insect formats faced the strongest resistance and were expected to be priced lower or presented in less visible forms to attract trial.

Purchase and recommendation signals reflected these patterns. Meat-like plant formats that delivered moisture and seasoning generally earned strong recommendation and replacement interest, while whole-insect snacks showed limited purchase intent and mixed recommendation responses. Insect-based desserts, where familiar dessert framing and integrated texture reduced novelty barriers, earned notably higher recommendation and openness than other insect formats.

Overall consumer impressions and perception changes

Familiarity differed by format: plant-based products were relatively familiar and carried higher baseline edibility and health perceptions; insect-based products started from low familiarity and more scepticism but gained acceptance when flavour, crunch and seasoning were convincing. Participants repeatedly used basic checks such ingredients, protein levels, allergens and origin before feeling confident. Short, local origin cues strengthened health and sustainability claims.

Results from the characteristic ratings reinforced the sensory story: items judged higher on taste, texture and clear ingredient lists also scored higher on perceived healthiness and purchase intent. Conversely, long ingredient lists, visible plastic packaging or unsourced sustainability claims undermined trust and lowered willingness to recommend. Price remained a recurring brake on trial and repeat purchase.

Social influences mattered. Group tasting and peer comments encouraged some participants to sample insect products they might otherwise have avoided and

helped people imagine how APs could fit Slovenian dishes. Chef tips and visible usage examples increased willingness to try plant-based formats.

Perception changes were mixed but constructive. Many participants left more open to APs provided three things align: familiar formats, ground or less visible insect ingredients, and clear usage guidance that fits local eating habits. Where those elements came together, convincing seasoning, satisfying texture, honest labelling and reasonable price, respondents felt APs could become a credible, sustainable and nutritious part of the local diet rather than a novelty.

Key findings by country: Spain

Impact of packaging and presentation on consumer perceptions

Spanish participants treated packaging as a practical trust check: materials, clarity and on-pack claims determined whether a product felt honest, healthy and worth trying.

Clean fronts, transparent packaging windows and visible percent-of-ingredient claims (e.g., “90% pea”) created a friendly, nutritious impression for plant-based snacks. ECO seals, playful design and clear gluten-free or “not fried” cues helped position items as everyday family snacks. Thin plastic pouches, small fonts and busy layouts undercut sustainability claims and reduced credibility.

For insect-based items, participants wanted the same basics but more of them:

compact, on-the-go formats were appreciated only when the pack stated plainly which insect was used, where it came from, protein per portion and obvious allergen warnings. Several asked for a carbon-footprint figure or side-by-side comparisons with the conventional product to validate health and sustainability messages. Where packaging looked “eco” but was plastic, or where insect origin was subtle, trust fell and trial waned.

Practical improvement points included to make the protein source visible in plain

language, lead with protein and allergen cues, use recyclable/resealable materials, add a short "how to use" or recipe cue, and align sustainability claims with packaging choices so the story reads as credible at a glance.

Sensory experiences and purchasing behaviour

Across sources, acceptance rose when products matched familiar eating moments and delivered straightforward sensory payoffs such clear seasoning, satisfying crunch, and textures that behaved as expected in use. Plant-based snacks and pasta were often described as recognisable and easy to integrate into everyday meals, with crispness and a neutral appearance making them accessible for children and adults alike; processed insect formats that hid visible cues (e.g., chocolate-coated bites or thin, crunchy crackers with ground insect) also surprised many with an enjoyable flavour when familiar seasonings led. When these basics were included, acceptance share among participants increased.

By contrast, enthusiasm fell away with muted flavour, grainy or pasty textures, or an unpleasant aftertaste. Some plant-based cooked formats were judged dry, dense, or gummy until moisture or seasoning was improved. Several insect formats triggered aversion when insect cues were visible or aroma diverged from expectations. Cooked products that lost shape or turned dense on reheating were less liked than lighter, crunchy snacks. Across both sources, bars and highly processed desserts drew criticism for grainy, bitter, or overly dense textures.

Price and perceived value were conditioned through these points: people expected everyday prices for snack products and resisted paying a premium unless taste and texture clearly justified it.

Purchase and recommendation tracked the same determinants: intent rose when good flavour, familiar texture, and transparent on-pack information (clear ingredients, protein, allergens) aligned; it fell where sensory or labelling weaknesses remained. Insect options earned interest when offered as crunchy, well-seasoned snacks or coated treats; cooking-ingredient forms stayed niche without strong recipe guidance and reassuring labelling.

"Some of the insect-based products tasted much better than expected, but taste alone is not enough. Price, texture, and clear information still make a big difference."

(Participant from Spain)

Overall consumer impressions and perception changes

Familiarity varied by format: participants were generally comfortable with pea-based items and tended to evaluate them against conventional snacks and pasta, while insect-based products started from lower familiarity and higher initial scepticism. Taste and texture were decisive: when seasoning and crunch landed, notably for some insect crackers, acceptance and willingness to integrate the product into regular diets rose quickly. Conversely, blandness, pastiness or an unpleasant aftertaste (especially in some bars and cooked insect pasta) hardened negative impressions.

Label clarity mattered throughout: respondents repeatedly checked for ingredients, protein levels, allergens and origin before feeling confident to buy. Packaging that matched the product story, recyclable materials for ECO claims, readable protein per portion and explicit insect naming, improved trust and reduced hesitation.

Group tasting and peer comments were influential. Seeing others enjoy a sample, hearing quick reactions and discussing recipes nudged several participants to try items they would otherwise skip, and in some cases changed their view positively. That social proof was especially effective for insect snacks presented in familiar formats (crackers, chocolate-coated bites). Still, a minority remained firmly reluctant toward whole-insect presentations.

The closing message for Spanish participants was pragmatic: to scale adoption, products must deliver clear, credible information on pack, taste as good as equivalent familiar options, and be priced so perceived value matches everyday expectations. With those pieces in place many said they would be willing to move APs novelty into regular use rather than treating them as one-off curiosities.

Key findings by country: The Netherlands

Impact of packaging and presentation on consumer perceptions

Dutch participants treated the pack as a practical credibility cue: packaging sets expectations about flavour, provenance and how the item will behave in everyday cooking. Clean, uncluttered fronts that name the protein source plainly (e.g., "mycoprotein", "pea drink", "insect flour") and show a realistic serving image were widely preferred. Familiar packaging formats such as a carton shape for drink alternatives, a clear Nutri-Score, or an obvious "protein per portion" indication helped participants to compare quickly and reduce perceived risk. Small transparent windows in the packaging were useful when they revealed an appetising interior; short "how to use" tips or a single recipe idea helped people imagine the product on their plate.

Participants disliked materials and layouts that contradicted product claims: shiny plastic pouches, non-reclosable sleeves and heavy multilayer foils undermined eco-claims and felt like greenwashing. Busy graphics, low-contrast text and very small fonts made it hard to find key facts (protein content, allergens, origin) and fed scepticism about ultra-processing. Several packaging formats felt to some participants as if they were hiding what the product really was, for example, names or imagery that mimicked meat without stating the true protein source caused confusion and distrust.

Across the board people asked for the same practical packaging improvements: state the protein source clearly on the front, show a short nutrition snapshot (protein, energy, salt, sugar), flag allergens prominently, use recyclable or carton materials when sustainability is claimed, offer resealable formats for flours and snacks, and include one simple usage cue or serving suggestion.

"I was surprised by how good the insect crackers were once I got past the idea of them, but for a product like that to become normal, it has to feel useful and reasonably priced."

(Participant from The Netherlands)

Branding helps when it is familiar, but it was consistently secondary to legibility, material cues and transparent claims.

Sensory experiences and purchasing behaviour

Participants clustered their likes and dislikes around the eating experience rather than the novelty of the ingredient. What worked best were products that fit familiar

meal occasions and required no extra effort or masking. Mycoprotein pieces scored where they provided a neutral, fibrous base that absorbed spices and produced a chicken-like bite in cooked dishes; when prepared well in a stir-fry or nasi they felt natural and convincing. Insect-based snacks were liked when crunch and seasoning were front and centre and the insect element was not obvious in flavour; these felt like convenient, protein-rich everyday snacks. Pea-based savoury items were accepted when they resembled known references (pasta, crunchy snacks) and were cleanly seasoned.

Barriers were consistent and sensory-led. Texture was the single most frequent complaint: thin, dry or pasty mouthfeels in pea products and desserts (pea drinks, pea puddings) hindered acceptance; pea notes that lingered or a sticky, lumpy texture in puddings were especially off-putting. Mushroom or champignon “burgers” were judged gummy or insufficiently seasoned and often compared unfavourably with meat. Mycoprotein sometimes felt slightly soft or dry if not cooked with attention; where the bite missed the expected juiciness, enthusiasm dropped. For insect formats, visible whole insects or coarsely ground pieces reduced approachability for some tasters. Finely milled flour and familiar seasonings performed far better.

Price and perceived value acted as a gatekeeper: where flavour, texture and convenience matched everyday benchmarks, shoppers would accept current retail prices or a modest premium; but when the eating experience was only average, price became decisive and purchase intent fell away.

Willingness to recommend followed the same pattern: participants recommended mycoprotein in mixed dishes and well-seasoned insect snacks, while pea-based dessert formats and under-seasoned mushroom alternatives generated weak buy/recommend intent.

What helps choice expansion work?

- Transparent packaging
- Reliable texture
- Credible eco-message
- Everyday taste/price fit

Overall consumer impressions and perception changes

Familiarity varied by protein source: mycoprotein and pea-based milks/pasta occupied known categories, so they were judged against established references; insect products were novel for many and therefore benefited strongly from good seasoning and social proof. This familiarity shaped the bar for acceptance. Known categories were scrutinised for sensory parity, while novel items were allowed more leeway if they surprised positively.

Taste and texture were decisive for perceived edibility and healthiness. Health and sustainability messages resonated only when they matched an uncluttered ingredient list, clear origin cues and packaging materials that supported eco-claims. Vague sustainability language on plastic packs provoked scepticism; explicit nutrient signals (protein per portion, Nutri-Score) helped shoppers justify price and consider the product as a genuine alternative.

Group tasting mattered. Positive reactions from other people at the table nudged hesitant people to try insect snacks and warmed some participants to mycoprotein; peer tips on seasoning and cooking often turned neutral or negative first impressions into repeatable, positive experiences. Conversely, shared negative com-

ments about texture could harden scepticism quickly, indicating that social proof works both ways.

Perception changes were selective rather than universal. Many left more open to using mycoprotein in mixed dishes and to buying insect snacks again if they deliver crispness and flavour; pea-based dessert formats were the clear outlier and are unlikely to drive repeat purchase without reformulation.

Respondents pointed to a practical roadmap for broader adoption: make the protein source and nutrient facts unmistakable on the front, align sustainability claims with recyclable or carton packaging, improve mouthfeel through formulation or clearer cooking instructions, and price products close to familiar benchmarks unless the eating quality clearly justifies a premium. When those pieces align, credible front-of-pack claims, reliable texture and convincing taste consumers in The Netherlands were ready to move from curiosity to routine use.

Key findings by country: Turkey

Impact of packaging and presentation on consumer perceptions

For Turkish participants, the material of the packaging, clarity and provenance together decided whether a product felt trustworthy or gimmicky.

Likes clustered around packaging that looked hygienic and practical. Plain, clean layouts that clearly stated “animal-free” and showed energy or protein per portion were repeatedly praised. Small recipe prompts, single-serve pots for yogurts and clear storage guidance also reduced perceived risk of trying something new.

Dislikes were equally consistent. Plastic and aluminium sleeves undermined sustainability claims and left many respondents sceptical; participants asked for recyclable cartons or bioplastic instead. Busy fronts, small back-of-pack fonts and absent origin information reduced confidence. Several products were penalised simply for appearing imported rather than “made in Turkey.” Visible novel ingredients (e.g., whole insect pieces) reduced approachability for some consumers unless the format masked them.

Desired information on packaging boiled down to practicality: a plain front-of-pack statement of the protein source, protein per portion, allergen flags, origin and a short “how to use” line. QR codes linking to short recipe clips or production details were popular because they offer transparency without clutter.

Branding was secondary: a trusted local name helped, but only when the pack itself delivered clear, usable information.

Sensory experiences and purchasing behaviour

Across sources, the strongest acceptance drivers were familiarity of the product, convincing seasoning and textures that behaved like familiar food products. When pulse-based items (pea, chickpea) appeared in familiar savoury dishes, meatballs, burger formats or blended into sauces, participants praised balanced seasoning, a pleasant mouthfeel and the way pulses could be integrated into everyday reci-

pes. Mycoprotein pieces tended to succeed when prepared as mixed dishes: their neutral base absorbed spices well and participants valued the versatility and "almost-chicken" bite when juiciness was present. Wheat-based deli items and cured-style products won favour when spice and aroma echoed conventional references (smokiness, peppery notes). For cashew and other nut-based dairy analogues, the positives were a creamy mouthfeel and dessert applications where sweetness and texture masked novelty. Cooking ingredients and AP flours drew interest when paired with clear, local recipe ideas; people liked products they could use in everyday cooking rather than ones that felt exotic or single-use.

Texture and incomplete flavour delivery were the main barriers. Pulse products were often judged too loose, dry or grainy when the recipe didn't add moisture or fat. Participants asked for a firmer bite or slightly juicier crumb for meat-mimicking roles. Mycoprotein pieces sometimes felt a touch soft or dry and needed either a crisper exterior or more moisture inside to feel convincing. Cashew yogurts and plant milks split opinion where body was too thin or sweetness too high. Wheat-based meat analogues and cured alternatives risked being viewed as highly processed if ingredient lists looked long or opaque. Across sources, price was a topic: many felt current shelf prices outpaced perceived value, and several said they would consider APs only at a substantial discount relative to the conventional reference. Finally, visibility of novel ingredients (e.g., whole insect pieces) reduced approachability unless their presence was masked by familiar seasonings or transformed into ground/hidden formats.

Purchase intent and recommendation mapped to the sensory split: products that delivered familiar taste and handling, pieces that took seasoning, snacks with a winning crunch, or desserts with a creamy, convincing body, drew the highest willingness to buy and recommend. Items that felt texturally off, under-seasoned or overpriced saw low repeat-purchase intent. Practical levers to raise recommendation and adoption included: firmer, juicier textures for savoury pulses; crisp exterior or bite for mycoprotein pieces; thicker, less sweet dairy analogues in single-serve pots; clearer front-pack protein and origin claims; and prices aligned with everyday grocery benchmarks.

"I can see alternative proteins becoming part of daily life, but they need to be affordable, clearly explained, and easy to find before people will really adopt them." (Participant from Turkey)

Overall consumer impressions and perception changes

Participants arrived with limited awareness of the full AP landscape and left with a clearer sense of which formats felt usable. Familiar product formats, burgers, meatballs, snack bars and dessert pots, were easier to accept; novel formats required stronger labelling and recipe guidance. In characteristic ratings participants repeatedly equated sensory quality with healthiness and edibility: items that tasted good and had short ingredient lists were also perceived as healthier. Environmental credibility followed a similar logic, sustainability claims were accepted only when materials and origin matched the story.

Group tasting and discussions were powerful drivers of trial. Seeing peers taste and approve a product reduced reluctance, particularly for items that initially felt unfamiliar. Practical demonstrations and shared recipe tips helped participants picture how APs could fit into everyday cooking, shifting products from "novel" to "useful."

Conversely, negative group reactions (to texture, aftertaste, or packaging) amplified scepticism and reinforced reluctance.

Perception shifts changed and led to participants being openly cautious. Participants reported that tasting broadened their view of APs and made them willing to incorporate certain items into their diets, especially as occasional swaps or in mixed dishes. Enthusiasm was strongest for products that matched everyday formats, tasted familiar and were clearly labelled. Remaining negatives were concentrated on price and availability: several participants said they would only adopt APs more broadly if they could buy them in supermarkets at lower, everyday prices. Others remained wary of highly processed claims and asked for clearer production transparency.

Practical enablers recommended by participants to move from curiosity to regular use included: wider supermarket distribution, affordable trial sizes (single-serve pots and snack packs), clear front-of-pack protein and origin labelling, recipe cues (short QR videos or printed tips) and packaging materials that align with sustainability messages. When these elements are combined with credible sensory improvements, many Turkish participants saw APs as a realistic part of a less meat-centric diet rather than an occasional novelty.

Cross country overview

Impact of packaging and presentation on consumer perceptions

Across countries, packaging set the first impressions: they build approachability and trust but did not erase hesitation on their own.

Clear, modern fronts with legible typography, tidy layouts and an unambiguous product identity helped people orient quickly. Familiar cues such as vegan/plant logos and Nutri-Score made entry easier, whereas cluttered panels and small fonts slowed comprehension (All countries).

Branding was generally secondary to clear, credible information, with local cues helping but not replacing fundamentals (All countries).

Windows or appetising food photography-built confidence when the product looked good, while close-up visibility of insect parts dampened appeal at low familiarity (Greece, Spain, Slovenia, The Netherlands).

Information demands were consistent: name the protein type and source in plain language; show concise nutrition (protein per 100 g/protein per portion, energy, sugars, salt; often saturated fat); state allergens, origin/producer, storage and simple “how to use” cues. Where space is tight, linking to recipes and detail via QR was widely acceptable (Denmark, Finland, Germany, Italy, Norway, Poland, Spain, The Netherlands, Turkey).

Environmental claims were accepted only when specific and sourced, for example, a footprint figure with a reference. While as generic eco-slogans invited greenwashing scepticism (Spain, Germany, Poland). Materials shaped credibility: plastic and

aluminium undercut sustainability cues, whereas paper/cardboard and re-sealability read better (Finland, Italy, Norway, Poland, Spain, Turkey).

Local language and local origin increased trust; unfamiliar brand names or imports created distance for some audiences (Norway, Finland, Turkey).

Sensory experiences and purchasing behaviour

LL participants responded to sensory cues primarily by protein source and by how closely products matched familiar eating occasions. Drivers included well-executed flavour and texture that could be integrated onto everyday meals: plant-based formats that delivered balanced seasoning, crisp or juicy mouthfeel and a neutral base that could be seasoned were readily integrated into cooking; mycoprotein pieces that provided a meat-like bite or absorbed spices when pan-fried earned strong acceptance; and insect formats performed when ground or embedded (for example in crackers or coated snacks) and paired with familiar seasonings so novelty was masked. Short ingredient lists, simple preparatory guidance and easy to use products (snacks, pasta, mixed dishes) strengthened purchase intent. (All countries).

Barriers clustered around texture failures, visible form and poor value-for-money. For plant-based items the recurring problems were dry, pasty or gummy textures, lingering pea/legume notes in drinks or desserts, and under-seasoning that left products tasting unfinished. Participants disliked products that felt ultra-processed or had long, opaque ingredient lists. Mycoprotein formats stumbled when the bite was soft or compact and when home-use guidance was missing (juiciness dropped if not cooked correctly). Insect products were particularly sensitive to visibility and texture: whole insects or coarse pieces provoked rejection, while finely milled or masked forms reduced neophobia. Across sources, price sensitivity was a universal barrier. Participants benchmarked APs against conventional equivalents and resisted premiums unless there was clear added value (taste, protein, convenience) (All countries).

Willingness to purchase was highest when a familiar use case met good flavour/texture, clear on-pack information (protein per portion, allergens, origin) and everyday pricing; this held for pea/chickpea and mycoprotein formats, while insects gained trial only when ground/embedded and well-seasoned, and bars/drink mixes or pea-forward desserts under-performed without reformulation.

Readiness to recommend followed the same logic. Strongest for well-seasoned snacks and mycoprotein in mixed dishes, weakest for whole-insect formats and ultra-processed bars/drinks. Premiums were accepted only when products clearly outperformed the reference on taste, protein or convenience; otherwise, both buy and recommend intent fell away (All countries).

Overall consumer impressions and perception changes

Familiarity was highest for plant-based milks, flours and burger/patty formats; mycoprotein was known in some markets (e.g., in The Netherlands context) and insects were the least familiar. Where familiarity was higher, consumers judged products against established sensory references (e.g., pasta, chicken); where novel-

ty was higher, packaging, format and social proof mattered more.

Across countries, healthiness and environmental credibility were awarded when ingredient lists were short, origin was local and packaging materials matched eco-claims (Denmark, Finland, Norway, The Netherlands, Spain, Poland, Greece).

Group tasting and peer comments repeatedly lowered barriers: seeing others try and enjoy a product, hearing seasoning/serving tips or getting a quick chef suggestion nudged hesitant tasters to experiment—particularly for mycoprotein and processed insect snacks. Conversely, negative table comments about texture or aftertaste could harden rejection quickly. Social proof therefore operated as a strong catalyst but could swing both ways (Greece, Spain, The Netherlands, Poland, Slovenia, Norway, Turkey).

Tasting and the workshops as such frequently converted abstract curiosity into concrete interest when flavour and texture matched expectations. Several consumers reported willingness to occasionally substitute APs, especially as neutral ingredients (e.g., pea flours, snack beans) or as mixed-dish replacements (mycoprotein pieces) (Norway, The Netherlands, Turkey, Poland). Negative or unchanged shifts were driven by price, availability and preparation difficulty; products perceived as only average-tasting, highly processed (long lists) or plastic-heavy tended to reinforce scepticism (Italy, Denmark, Spain, Germany).

What does this mean in a snapshot?

Adoption rests on a simple bargain: if it eats like the reference, is fairly priced, and is explained plainly, people will use it; if one of those parts fails, curiosity stalls. Packaging should enable use rather than persuade: plainly name the protein and source, surface core nutrition and allergens, state origin, and keep claims specific and sourced while using materials that match sustainability statements (paper/cardboard/resealable where eco-claims are made). Plant-based and mycoprotein formats are the easiest on-ramps when texture and seasoning are right; insects work best ground or embedded in familiar carriers rather than presented whole. Social tasting, chef tips and foodservice availability normalise use and lower trial barriers. Still, price sensitivity and patchy availability remain the main brakes; domestic origin signals build trust and heavy processing cues undermine it. The practical takeaway is therefore consistent across markets: win on eating quality, keep prices within everyday ranges, and make the choice effortless and credible so consumers move from trial to routine. (Implications observed across Denmark, Finland, Norway, Spain, The Netherlands, Poland, Italy, Germany, Greece, Turkey, Slovenia).

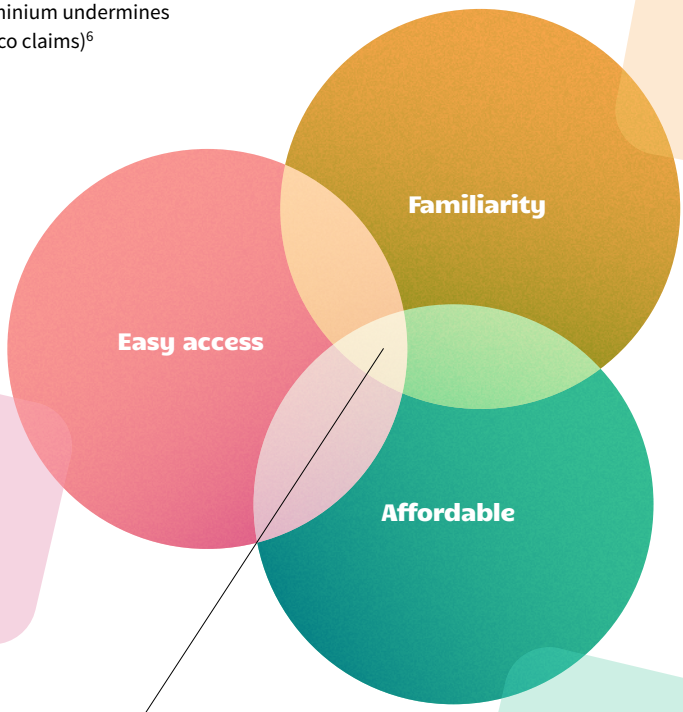
The infographic below provides a distilled visual summary of the main findings.

Plainly explained

- Short, understandable ingredient list[1]
- Simple "how to use" guidance[1]
- Key facts up front: protein, allergens, origin[1]
- QR for recipes/details when space is tight[2]
- Make the pack do the explaining: clean front + readable text[1]
- Say what it is in plain words (protein type + source)[1]
- Eco claims must be specific and sourced[1]
- Generic slogans trigger greenwashing and scepticism[3]
- "Eco/healthy" feels credible when short lists + clear origin + materials match the message[5]
- Paper/cardboard + resealable helps; plastic/aluminium undermines (esp. with eco claims)[6]

Eats like the reference

- Feels like "real food" (good bite; not soft)[1]
- Works in everyday cooking (takes seasoning well)[1]
- Tastes right (well-seasoned; crisp/juicy)[1]
- Novel proteins are easiest when subtle (e.g., insects ground/embedded)[1]
- Trying together reduces hesitation: tastings + peer/chef tips help[7]
- Negative comments on texture/ aftertaste can quickly put people off[7]
- For insects, keep it subtle: appetising photos/windows help; visible parts reduce appeal[8]



Everyday prices

- Compared directly to the conventional option[1]
- People pay more only when it clearly delivers (taste, protein, convenience)[1]
- Trust comes easier when it feels "local": local language + domestic origin cues help[4]

Sweet spot

Familiar + affordable + easy to use = becomes routine[1]

Adoption grows when APs feel familiar, affordable, and easy to use.

(1) All countries; **(2)** DK, FI, DE, IT, NO, PL, ES, NL, TR; **(3)** ES, DE, PL; **(4)** NO, FI, TR; **(5)** DK, FI, NO, NL, ES, PL, GR; **(6)** FI, IT, NO, PL, ES, TR **(7)** GR, ES, NL, PL, SI, NO, TR; **(8)** GR, ES, SI, NL

5.3 Choice environment

The concept of the choice environment concerns how the settings in which we make food decisions are designed, influencing behaviour through product availability, placement, defaults, visual cues, and other ambient elements. In this lab iteration, discussions with participants focused on supermarkets and restaurants as key food environments, and on behavioural tools such as defaults, priming, and pricing strategies that can shape consumer choices.

For supermarket settings, participants discussed which shelving style (integrated or segregated) made it easier to find and choose APs, and how seeing these products next to conventional ones affected their trust and willingness to try them. They reflected on whether the layout supported easy comparison and what product placement implied about quality, importance, or normality.

For restaurant settings, conversations centred on how the integration or separation of dishes influenced curiosity and motivation to try APs, which setup felt more intuitive for quick decisions, and whether such presentation would affect their regular food choices.

When exploring defaults, priming, and pricing, participants considered how defaulting to APs might guide choices, which visual or messaging cues (images, colours, wording) influenced their decisions, and how pricing or discounts shaped their willingness to choose alternatives. They also discussed emotional and practical factors, such as curiosity, confidence, and convenience, as well as barriers or doubts that could discourage selection.

Discussions also covered labelling, examining how consumers perceive, trust, and use labels when choosing between conventional and AP products. Participants rated their awareness, trust, and use of environmental, social, and economic information and reflected on what makes a label appealing, credible, and easy to understand.

The following section summarises participants' perspectives across all three stations and the labelling discussions, situating these insights within the wider European context of how choice environments shape sustainable food decisions.

Key findings by country: Denmark

Impact of environmental design: the case of supermarkets and restaurants

Environmental design was indicated as important in shaping choices in both supermarkets and restaurants, particularly regarding vegetarian or AP options by the participants in the Danish LL. Danish participants valued the way offerings are arranged and the ease of finding items, confirming that product placement and accessibility directly affect consumer satisfaction and choice.

In supermarkets, some found integrated shelves more convenient, as they allowed both conventional and APs to be located in the same place and occasionally made alternatives appear more trustworthy and appealing. Others preferred segregated shelves, arguing that this made APs easier to distinguish and reduced the risk of mistakenly buying the wrong product. At the same time, several participants stressed that clear labelling was crucial for making grocery shopping easier, regardless of shelving style. While integration could inspire trust for some, others felt it might come across as deceptive or an attempt to "trick" consumers.

In restaurants, integration of dishes in menus often sparked curiosity and inspired participants to try more APs, as it made menus feel more exciting and offered greater variety. Many found integrated menus more intuitive and convenient for quick decisions, especially when supported by clear labels. Others, however, preferred segregated menus for the clarity they provided. Presentation itself was not always seen as decisive, though attractive dish names helped APs appear more satisfying and legitimate.

Influence of other behavioural change tools

Beyond environmental design, a range of behavioural change tools, including pricing, nudging, and wording, influence consumer choices.

When APs were presented as the default option on menus, Danish participants were curious and encouraged to try them, particularly when they are the first items they would notice. Visual cues like logos and green symbols attracted attention and prompted further interest. Nonetheless, wording such as "meat-free" or "vegan" was perceived negatively by some, as they had the feeling that something was being taken away from them, reflecting a sense of loss aversion.

Price had mixed influence as for some, affordability and discounts made APs more attractive, while others emphasized that quality mattered more than cost. Emotional motivators such as curiosity encouraged choices, but there were also strong emotional barriers. Many rejected insect- or krill-based products, seeing them as incompatible with their values, while others hesitated to choose APs in general out of fear that meals without meat would feel incomplete. Suggestions like hybrid meals and clearer information on preparation and taste were highlighted as ways to reduce doubts and build trust.

Role of labels in consumer decision making

Labels played a significant role in shaping how Danish participants approached APs, though reactions were mixed. Many agreed that labels are designed to guide

consumer behaviour, and a majority felt capable of understanding them. Yet trust was divided as some expressed confidence, while others questioned whether labels truly delivered on their promises.

Well-known certifications such as the EU Organic label and the V-Label were the most trusted, seen as credible because of their recognisability, institutional backing, and clear visual design. By contrast, lesser-known or less intuitive labels were often viewed with suspicion or confusion, with some participants unsure what they actually represented. In general, respondents valued labels that indicate product quality and that are easy to identify or familiar. Participants emphasised the need for clarity and simplicity. Too many labels, or overly complex schemes like detailed scoring systems, were described as overwhelming and impractical in everyday shopping situations. This underlines the role of design elements such as layout, colour, and readability, in enhancing communication effectiveness.

"Alternative proteins become more interesting when they are visible and easy to spot, but they should not feel like they are trying to trick me into choosing them."

(Participant from Denmark)

When it comes to the use of labels for specific types of information, the results show clear variation. Labels are most frequently used to find environmental information, while the use of labels for social and economic information was lower. However, while eco-friendly or "green" claims were appealing to some, they also raised suspicions of greenwashing, showing that credibility depends not just on the label itself but also on the organisation behind it.

Key information that consumers wanted to see on AP products and labels were protein content and information if the AP is plant-based or not.

Overall, Danish participants saw labels as potentially helpful tools for making informed choices, but only when they are simple, recognisable, and backed by trusted institutions. Too many, too similar, or unclear labels risk undermining trust and reducing their effectiveness.

Key findings by country: Finland

Impact of environmental design: the case of supermarkets and restaurants

Finnish participants placed strong importance on the way offerings are arranged and the ease of finding products. In supermarkets, most participants preferred segregated shelves for plant-based products and meat, as this made it easier to locate items they intend to buy, particularly during quick shopping trips. Integrated shelves were sometimes perceived as confusing, raising concerns about accidental selection, especially for individuals with impaired sight or limited language skills. However, integrated shelves might increase the chance to try out new products.

Visual cues, such as green price tags, improved clarity about the protein source and made it easier to identify different products, particularly on integrated shelves. Some participants noted that knowing how to prepare or cook a product was more important than placement alone. Among elderly participants, habitual purchasing dominated as they tended to buy familiar staples and rarely experimented with new products, relying more on routine than environmental cues.

In restaurants, integrated menus with visual nudges were appreciated by many participants when they highlight vegetarian or vegan options, while others preferred segregated menus or defaulted to dishes, they already knew, especially when there was a lack of time (e.g. during lunch breaks). Appealing dish names, increased the willingness to try APs across age groups, while elderly participants were also particularly sensitive to readability and clear cues.

Influence of other behavioural change tools

Behavioural interventions, such as defaults, discounts, and menu nudges, influenced consumer decisions, but effectiveness varied by context and personal preference. Defaults like "dish of the day" could encourage AP trial, particularly when paired with price incentives. However, many explained that they would usually stick to their regular choices, often preferring familiar meat or fish dishes over alternatives.

"I might try more alternative proteins when they are clearly marked and easy to imagine in a meal, but I still choose mostly based on habit, taste, and what feels practical."

(Participant from Finland)

A few noted that a well-prepared vegetarian meal in a restaurant could encourage them not only to order it but also to experiment with APs at home. Many participants highlighted that visual cues generally help to navigate through a menu or supermarket shelf, especially when the language is unfamiliar.

Curiosity was occasionally mentioned as a reason to try Aps. Still, most participants tended to stick to their habitual preferences e.g., vegetarians choosing APs and meat-eaters sticking with meat.

However, many participants noted that discounts increased their willingness to try APs, as the lower cost reduced the perceived risk of spending money on a product they might not enjoy. They suggested that free tastings in restaurants or supermarkets could be an effective way to increase interest and reduce uncertainty.

The most important things participants paid attention to when choosing between products was price, then taste, and nutritional value.

Role of labels in consumer decision making

Labels were widely recognized and generally trusted, though their direct impact on purchases varied. Familiar certifications such as the V-Label, EU Organic and Fairtrade were considered clear and credible. The credibility of the organization behind the label was a key factor in whether it was trusted.

Environmental information on labels appears to be the most frequently used, followed by economic and social aspects. Most LL participants found the number of labels on products reasonable, though many did not hold a strong opinion on this issue.

The design and format of labels were considered highly important for understanding. Finnish participants valued clear, visible, and informative labels that allowed quick interpretation of nutrition, quality, or product origin. However, especially elderly participants relied on packaging information or product familiarity over labels to guide purchases, particularly for routine items. Labels influenced choices

primarily when they confirmed expectations about quality or nutrition, rather than prompting trial of new products. Locality and country of origin were additional considerations, with some elderly participants preferring domestic products.

Key findings by country: Germany

Impact of environmental design: the case of supermarkets and restaurants

Environmental design strongly shapes consumer interactions with AP products for German participants.

In supermarkets, shelf arrangement, whether segregated or integrated with conventional products, affects both visibility and ease of comparison. Integrated shelves without clear visual cues made it difficult for inexperienced consumers to locate APs, often requiring careful inspection of packaging. While this could cause confusion or unintentional purchases, it might on the other hand encourage reluctant consumers to try new products. Segregated shelves, particularly when positioned near conventional products, facilitated easy identification and comparison, but placing APs too far away from the conventional ones reduced their likelihood of being noticed. Participants emphasized that segregated shelving might be most convenient for vegetarian and vegan shoppers while integrated shelving might help flexitarians to compare products on prices, protein content and ingredients. Coloured price tags, labels, or recognizable vegan certifications like the V-Label were considered most effective for quick identification, especially by flexitarians or those opting for plant-based options.

What makes choice environment work in practice?

- Easy comparison in shelves and menus
- Appealing wording and visuals
- Fair pricing and promotions
- Simple, credible labels

Most participants did not feel that their perception changed depending on whether the alternatives were displayed separately or alongside conventional products which suggests that product placement had only a limited influence on how German consumers perceive AP products in supermarkets. Instead, many focused on nutritional value as a more decisive factor than the protein source itself. This highlights again that easy comparison is a key factor for many German participants, which is facilitated when products are placed next to each other, whether on an integrated shelf or a nearby segregated one.

In restaurants, menu design had a similar influence. Integrated menus with subtle eco-symbols were generally preferred for visual appeal and to spark curiosity, whereas separate sections for APs were highlighted as convenient but could feel niche and potentially discourage exploration. Placement on the menu also mattered as listing traditional dishes first often led to familiar choices, whereas mixing dishes or highlighting vegetarian options encouraged APs selection. Some participants highlighted that taste and preferences are highly individual. Nevertheless, providing a larger selection of dishes enables appeal to a broader audience with diverse tastes. Familiarity with the establishment increased willingness to try something new, while visual cues and appealing wording enhanced curiosity without feeling intrusive.

Influence of other behavioural change tools

Beyond environmental design, other behavioural nudges influenced perceptions.

Defaults, such as listing vegetarian dishes first or presenting them as the "standard" option, were seen by German participants as effective in raising awareness, provided they did not feel intrusive or manipulative. Such measures could draw attention and normalize alternatives.

Visual cues and wording also shaped perceptions. Logos, colours, and playful wording (e.g., "Vurst" instead of "Wurst") influenced whether products were perceived as fun and curious. On the other hand, words like "alternative" could cause negative emotions for some people, highlighting the need to adapt product names so they feel more appealing and relatable. AP products with packaging similar to conventional ones and indicative pictures can make it easier to understand which conventional product the alternative is meant to represent, whereas pictures of insects may cause rejection. Eco-labels on packaging and menus guided choices, though some participants were sceptical about their credibility.

"What convinces me is not the word 'alternative', but a product that feels transparent, comparable, and worth trying in terms of taste, nutrition, and price." (Participant from Germany)

Participants' views on the influence of pricing and discounts on AP choices varied. For some, cost was less important than nutritional value, which guided their decisions. Others emphasized that the price-performance ratio and discounts play a key role, noting that AP products are often more expensive and have smaller portion sizes than conventional options. In this context, lower prices or promotions could encourage trial by reducing the perceived risk of trying unfamiliar items. Several participants suggested that alternatives should generally be cheaper than conventional counterparts to better represent true environmental and social costs. However, price alone cannot overcome all barriers for German participants. For some participants, food neophobia and a general aversion to insect protein, was a barrier that prevented purchase, even when prices were low.

In general, hesitation towards APs arose mainly from unfamiliar ingredients and high processing. Among elderly participants, habitual purchasing strongly influenced choices, with most buying familiar staples and rarely trying APs unless motivated by family members or curiosity. Discounts, defaults, and nudges were less effective for elderly participants, who prioritized familiarity, practicality, and ease of use. Educational efforts, especially for children, were recognized as shaping long-term attitudes and willingness to experiment.

Role of labels in consumer decision making

German participants acknowledged that labels are designed to guide behaviour, but their impact was weakened by low levels of trust. Especially elderly participants said they looked more closely at ingredients and nutritional value than at labels. Nevertheless, familiar and institutional certifications, such as the EU Organic label, the V-Label, or Demeter, were widely recognised and trusted. In contrast, less familiar or less intuitive labels often generated scepticism or confusion. When considering what they look for in labels, participants placed strong emphasis on sustainability and ethical production.

LL participants preferred simple, clear, and visually recognisable formats that are easy to recognize and understand at a glance. Visual cues, such as colour coding or

pictograms, were considered particularly helpful, while lengthy or technical explanations tended to discourage engagement. Participants criticised the sheer number of labels and their similarity, which made them confusing and impractical for everyday shopping. "Green claims" attracted attention for some but also provoked suspicion of greenwashing.

For AP products, participants desired additional information on protein content, nutritional value, degree of processing, sustainability, allergens, and additives, ideally presented clearly without cluttering the packaging. For younger participants, QR codes or interactive information at supermarkets were suggested to improve transparency and comprehension.

Key findings by country: Greece

Impact of environmental design: the case of supermarkets and restaurants

The design of the shopping environment emerged as a decisive factor in food choices, especially for APs.

In supermarkets, Greek participants strongly preferred clearly separated shelves for conventional and AP products, as this structure made the decision process faster and easier. Integrated shelves attracted participants who were more curious or willing to experiment, and these consumers indicated they were more likely to choose APs once engaged. Although integrated shelves were often seen as confusing and time-consuming, a few participants highlighted that integration could spark curiosity among those who would not usually look for APs. Separated shelves sometimes gave APs a "gourmet" or higher-quality image, while integration helped normalize them and encourage comparison with conventional products.

"I can be curious about alternative proteins, especially when they are presented clearly and attractively, but unfamiliar ingredients still need much more explanation before they feel acceptable."

(Participant from Greece)

Visual cues, such as coloured price tags or a vegan label, improved product visibility, especially in integrated settings, though participants cautioned that too many signals can be tiring and push them back toward familiar options. Lack of product transparency remained a major barrier as APs often required more browsing time because their protein source or level of processing was not immediately apparent.

In restaurants, participants were more open to experimentation. The dining context, such as going out for a special meal or to try a new cuisine, was often more influential than the structure of the menu itself. Integrated menus helped normalize APs and encouraged their selection without forcing a separate choice. Menu design quality mattered greatly as attractive layouts and creative, appetizing dish descriptions were particularly effective at sparking curiosity. Unlike in supermarkets, time pressure was not an issue, allowing guests to engage more deeply with the options before making a choice.

Influence of other behavioural change tools

Beyond environmental design, other behavioural change tools shaped engagement with APs. Defaults had mixed effects as listing APs as the first or "default" option could encourage experimentation, especially when the alternative was framed as

healthier or more appealing than processed meats. However, if defaults felt confusing or imposed, participants reverted to familiar conventional options.

Visual and messaging cues helped some consumers identify APs and increased trust. At the same time, overuse of cues risked confusion or "green fatigue". Confusion arose when visual symbols that are normally used for vegetarian or vegan ingredients (e.g., a leaf) were used for APs in general, which could contain animal-based proteins like insects and krill. Packaging design strongly influenced choices as transparent or attractive designs reassured some consumers, while unclear names or unfamiliar wording triggered hesitation.

Greek participants demonstrated price sensitivity, acknowledging that cost plays a role in their purchasing decisions and that AP products are generally more expensive than conventional options. In supermarkets, many participants said they would switch back to conventional proteins if AP were more expensive, though others were willing to pay more or similar prices for AP. In the restaurant context, price sensitivity was reduced, as some consumers were willing to pay more when visiting a restaurant. Nevertheless, participants who favoured more familiar options could be discouraged by substantially higher prices.

Participants' choice of APs was influenced by both emotional and practical factors across supermarket and restaurant contexts. In supermarkets, practical convenience played a role, with frozen plant-based products favoured. Emotionally, curiosity emerged as a primary motivator in supermarkets and restaurants, while negative perceptions of meat consumption prompted some participants to try alternatives.

In supermarkets, unfamiliar products provoked hesitation, particularly when messaging was unclear or illegible. Wording was also important as some participants noted that negatively associated terms (e.g., "worms") could discourage choice, suggesting that careful naming could enhance appeal. Participants suggested educational and promotional touchpoints to increase familiarity with nutritional value and flavour profiles, as well as more appealing packaging shapes to reduce deterrents.

Role of labels in consumer decision making

Greek participants recognised that labels are meant to guide behaviour but also reported confusion due to the sheer number of labels and lack of standardisation. Many found labels difficult to understand without extra education. Familiar and trusted labels stood out as the EU Organic label was the most convincing, followed by the V-Label and for some also Demeter. These were seen as credible thanks to recognisability and institutional backing. In contrast, less familiar labels or unclear visuals struggled to inspire trust.

Participants indicated they mainly use labels to find environmental information, such as organic or sustainability claims. Social aspects like fair working conditions are appreciated in principle but rarely noticed or understood, while economic information is largely overlooked or associated only with price. Respondents valued clarity, transparency, and easy-to-understand information in labels. They appreci-

ated labels that communicate sustainability, animal welfare, and fair working conditions. Information about origin, production methods, and the degree of processing was also highly valued. Participants expressed that labels should provide clear, essential insights that help them make responsible and informed decisions without requiring additional research. However, there was a limit to how much detail consumers found helpful as overly complex or information-dense labels were viewed as confusing and even discouraging. They preferred fewer, harmonised labels that convey clear, non-overlapping messages.

Trust was tied to the actor behind the label as international or well-known certifiers were seen as more credible than unknown organisations. Importantly, explanations provided during the session increased trust – showing that education and clear communication can make labels more effective.

Effective labelling was seen not just as a decision-support tool but also as a way to normalize APs and build their legitimacy as high-quality options. Short educational prompts, for example, explaining what a lesser-known label means, were seen as a way to close comprehension gaps and further increase trust.

Key findings by country: Italy

Impact of environmental design: the case of supermarkets and restaurants

The way offerings are arranged and the ease of finding products were described as important factors in shaping consumer satisfaction in Italy.

In supermarkets, many participants preferred segregated shelving, valuing the clarity and efficiency it provides, especially, those who already consume APs and want to locate products quickly. Segregation was also seen as reducing the risk of accidental purchases. At the same time, integrated shelving was recognized for its potential to increase visibility and spark curiosity, particularly among omnivores who might otherwise overlook these products. Seeing APs integrated made them more appealing as a normalized and accepted protein source for many participants. However, for some, the perception of quality did not change between different placements. Younger participants were more open to integrated shelving, having grown up with APs as part of the mainstream offer. Participants suggested a hybrid solution, with conventional and APs displayed side by side in clearly marked columns, organized by protein type (soy, pea, etc.). This would allow shoppers to easily compare prices, ingredients, and nutritional values while still signalling product differences. The preferred strategy was seen as depending on store size and layout.

"I am more open to alternative proteins when they are presented as real meal options and not as something marginal, but trust still depends on clarity about what is actually inside."

(Participant from Italy)

In restaurants, integrating APs into the main menu was viewed as a way to normalize their presence and present them as equal choices to conventional dishes, particularly when priced competitively. However, a separate section was valued by consumers who avoid meat, as it provides clarity and signals that the kitchen treats these dishes seriously, possibly with specialized chef expertise. Additionally, to that, some participants believe that a segregated menu is more intuitive and aligned with the Italian traditional menu structure. Some participants warned that integrated menus without

clear labelling could confuse diners or lead to unintended choices. The discussion also revealed mixed attitudes toward insect-based proteins: some were curious and open to trying them in familiar formats like burgers, while others were strongly opposed and even discouraged to try AP options altogether, fearing they might unintentionally consume them. This underlines the need for clear and explicit labelling.

Influence of other behavioural change tools

Price was repeatedly identified as a decisive factor in the choice of APs in Italy. Discounts, promotions, and price parity with conventional meat were seen as essential to encourage trial, both in supermarkets and restaurants, making participants more likely to try APs even when unsure about taste or ingredients. Social context played a stronger role in restaurants, where some participants reported opting for conventional dishes to avoid social judgment. At the same time, seeing APs presented as a chef's specialty or as positioning them as the first choice could positively influence choice, especially when the price is lower than conventional options.

The "sustainable choice" symbol in the menu provoked mixed reactions. While it stimulated curiosity for some and might lead to the purchase of dishes with new ingredients, others found it confusing or misleading, especially when applied to non-vegan products or inconsistently across similar items. Participants suggested reserving it for plant-based dishes or using clearer terminology.

When APs dishes were presented attractively and integrated naturally into menus, Italian participants felt more comfortable and willing to try them.

At the same time, many participants expressed hesitation and doubt, particularly regarding product ingredients and the actual content of APs. This uncertainty often stemmed from limited familiarity with certain ingredients, such as insects or krill, and from unclear or inconsistent labelling, hinting to food neophobia. To overcome this, participants called for transparent, easy-to-read labelling systems that clearly indicate whether a product is plant-based or another form of AP. Overall, the find-

ings show that trust and clarity are central to acceptance for Italian consumers. Curiosity and openness can motivate them to try APs, but without clear labelling and transparency, these positive emotions are easily undermined by uncertainty.

Role of labels in consumer decision making

Labels emerged as a crucial driver of trust and informed choice. Participants showed a clear awareness that labels are designed to influence consumer behaviour. They recognised that labels play an active role in guiding choices rather than simply providing neutral information. However, awareness did not automatically translate into trust. Many participants remained sceptical about how reliable and transparent labels actually are. Consumers tended to trust institutional and well-established certifications, such as the EU Organic, Fairtrade, and the V-Label, which they associated with credibility, long-term presence, and clear standards. Labels backed by governmental or independent organisations were seen as more credible than those issued by private companies or brands themselves.

When it came to the type of information sought, participants were most interested in environmental aspects, followed by social and economic information. Many participants felt that labels contain too much information or use technical language that is difficult to interpret quickly. They highlighted the importance of having simple, concise, and visually clear designs that make it possible to understand the key message at a glance. Many reported that they are overwhelmed by the number of labels on products. While some appreciated having more information available, others found it confusing and tiring, leading to disengagement rather than informed choice. This "label fatigue" was especially apparent in supermarket contexts, where too many overlapping symbols competed for attention. They expressed a preference for concise explanations and consumer education that clarify label meaning and criteria, enabling quick and confident decision-making. Italian participants wanted to understand at a glance what a label represents, who stands behind it, and why it matters.

In terms of content, participants wished for clear and easy-to-grasp information on the type of AP used, the presence of preservatives, and key health or sustainability information. This was considered especially important for highly processed products, where ingredient lists are often hard to interpret.

Key findings by country: Norway

Impact of environmental design: the case of supermarkets and restaurants

Environmental design in supermarkets and restaurants influences consumer behaviour in Norway, though not always straightforwardly.

In the context of supermarkets, participants' opinions were divided on shelving styles. Many found segregated shelves more organized and intuitive, making it easier to locate APs and avoid mistakes. Others valued integrated shelves for enabling easier comparison of prices, though some found integrated shelves cluttered and worried about accidentally selecting the wrong product. Clear labelling and colour coding (e.g., green tags) were seen as essential to improve clarity.

Many participants agreed that integrated shelving normalizes APs, but it did not alter their impression about the quality of the products. However, a few participants noted that AP products tend to be perceived as the healthier option when positioned directly beside their conventional counterparts, particularly when presented in green packaging.

"Alternative proteins become easier to consider when the setting feels safe: a trusted restaurant, a clear label, or a product that fits how I already cook and eat." (Participant from Norway)

In restaurants, opinions about the menu setup were divided. Segregated menus were often preferred for quick navigation, especially by those who already avoided meat, while integrated menus sometimes sparked curiosity by placing APs side by side with conventional options. However, many noted that dining out was a special occasion where they sought safe, familiar meals rather than experimentation. Descriptions and labelling were crucial as attractive wording and icons (like a leaf for vegetarian options) increased legitimacy, whereas vague or confusing naming (e.g., "pea meat") could deter interest. Additionally, some participants emphasized the importance of offering an equal number of conventional and alternative dishes, noting that a smaller selection of alternative options could make them appear inferior. Others expressed a preference for a buffet-style format, as it would allow them to sample AP dishes in small portions without the perceived risk of committing to a full meal, particularly when paying a premium at a restaurant.

Influence of other behavioural change tools

Making APs the default option in a restaurant encouraged some Norwegian participants to try them, especially if descriptions were inviting or prices were lower, while others resisted, particularly if products seemed overly processed or unfamiliar like insect protein. Many stated that they already have an idea on what they would like to order before arriving at a restaurant, and that their choice is influenced by hunger, personal preferences, and price rather than the menu setup.

However, visual cues such as eco-labels, green packaging, or product icons were valued for drawing attention in supermarket shelves. In the restaurant setup, many participants were sceptical about the eco-friendly label as it was not explained what it meant and why animal-based ingredients were included in some of those dishes.

Many participants agreed that high prices raise expectations of superior quality and increase the risk of disappointment if the product fails to meet those expectations. They supported the idea of introductory offers or temporary price reductions to encourage trial, as they reduced the perceived risk of trying something unfamiliar. Still, once products became part of the regular assortment, most participants expected fair but realistic pricing comparable to conventional options.

Curiosity and a willingness to try something new were frequently cited as positive motivators, alongside practical factors like convenience and clear information. On the other hand, doubts about ultra-processing, ingredient origins, and nutritional completeness often created hesitation. Hybrid solutions (e.g. blended-meat products) and opportunities to taste before buying were mentioned as ways to reduce these barriers.

Role of labels in consumer decision making

Labels were widely recognized as powerful but contested tools in Norway. Most participants agreed they could guide behaviour, but trust was mixed. Familiar and institutional labels, such as EU Organic, Fairtrade, MSC, or V-label, inspired more confidence, while lesser-known or visually confusing labels often led to scepticism.

While environmental cues are the most used and trusted, social aspects are appreciated but less visible, and economic dimensions remain largely absent from consumer awareness. Clarity and simplicity were key as many participants preferred labels that were easy to read and not overloaded. Especially for AP products, they seek essential details such as nutritional value, carbon footprint, or degree of processing. However, excessive complexity or multiple overlapping certifications were seen as confusing and time-consuming, sometimes eroding overall trust ("label inflation").

At the same time, many valued educational or explanatory elements, such as QR codes linking to more detail or simple keywords clarifying the label's meaning. Local origin and sustainability information were especially appreciated, with several noting that they would trust Norwegian-produced alternatives more than imported ones. Overall, labels can enhance credibility and visibility when they are well-known, transparent, and easy to interpret but they risk scepticism if they appear misleading, overly complex, or disconnected from consumers' everyday concerns.

Key findings by country: Poland

Impact of environmental design: the case of supermarkets and restaurants

Participants in Poland consistently emphasized the importance of arrangement and ease of finding products, showing broad agreement that clear organization is central to shopping satisfaction.

In supermarkets, a segregated layout, where APs are displayed thematically and neatly, is preferred by many for its ease of navigation and clarity in distinguishing between alternative and conventional protein products. In particular, vegans, vegetarians and those who regularly consumer APs favour this style. However, segregation can hinder product comparison and create a perception that APs are "not normal". In contrast, segregated displays were perceived by some as emphasizing higher quality, exclusivity, or specialness, though they also reinforced the sense that APs are less common or niche. Conversely, an integrated layout, while overwhelming for some, can facilitate price comparisons and increase attention towards APs, encouraging their consideration as meat substitutes. Yet, according to LL participants, integrated displays may cause discomfort among some consumers, who feel that the proximity of vegetarian or vegan options to meat products increases the risk of accidental meat purchases.

Similarly, in restaurants, segregated menus offer quick decision-making and clarity, while integrated menus can spark curiosity and promote AP choices. Clear markings are essential in integrated menus to identify AP options. Especially for those already eating vegan or vegetarian, segregated menus felt clearer and safer, making it easy to find suitable options without fear of accidentally choosing meat. Others,

particularly omnivores, found integrated menus more stimulating and inspiring, as they exposed them to AP dishes they might not otherwise notice and made choosing based on mood or curiosity easier.

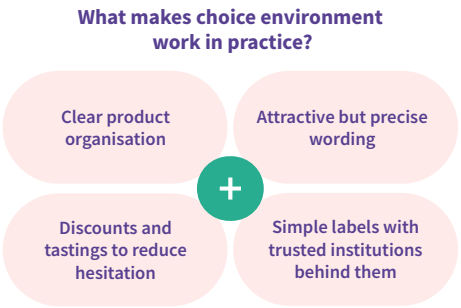
Most participants stated that menu design alone would not fundamentally change their eating habits, though some suggested that attractive wording and presentation and clear labelling could encourage occasional choices of AP dishes.

Influence of other behavioural change tools

Beyond environmental design, behavioural change tools like pricing strategies, descriptive wording, and visual cues significantly influence consumer decisions in Poland. When APs are the default option, participants indicated that are more likely to try them, especially if the dishes looked tasty, interesting, or well-priced. Lower prices and discounts attracted participants, especially those already familiar with or curious about APs. Insect-based dishes were the main exception, often prompting a switch back to conventional options reflecting elements of food neophobia among participants.

The presentation and descriptions of dishes were also influential. Descriptive and sensory language ("gyros style," for example) helped convey taste expectations. However, several participants disliked terms that mimicked meat (e.g., "pea meat"). Clear, consistent labelling and icons were repeatedly mentioned as crucial for facilitating confident, effortless decision-making.

Many participants reported that lower prices or discounts would increase their likelihood of choosing APs. However, others associated discounts with lower quality, poor sales, or nearing expiration dates, creating distrust rather than attraction. While price reductions could serve as initial motivators, product quality, composition, and taste were ultimately seen as more decisive factors.



Curiosity, ethics, health, and convenience were key motivators to try out APs. Hesitations focused on taste, heavy processing, additives, and insect-based products. Concerns about unclear ingredients, sustainability claims, and excessive packaging also limited trust. Participants called for transparent information on composition, nutrition, and production to ease doubts, and suggested tastings or well-prepared dishes as effective ways to build confidence.

Role of labels in consumer decision making

Most consumers recognized that labels are designed to guide behaviour and generally felt capable of understanding the information provided. While most respondents agreed that labels influence them and are important for understanding product information, relatively few expressed strong trust in their accuracy or credibility. The EU Green Leaf and V-Label were described as the most trustworthy because they are recognizable, official-looking, and connected to the European Union, which participants associate with high regulatory standards. This highlights the importance of reliable organisations behind label certifications. Although many said they use labels to find details about a product's environmental information, far

fewer looked for social or economic indicators, suggesting that these dimensions are either poorly communicated or not perceived as relevant during purchasing decisions. In practice, most people use labels to check whether a product is vegan, vegetarian, or plant-based, rather than to evaluate its sustainability credentials.

"I am curious about alternative proteins, but I need to feel certain about what I am buying: clear labels, clear composition, and no sense that something is pretending to be something else."

(Participant from Poland)

The format of labels was widely acknowledged as critical for comprehension. Almost everyone agreed that a clear, well-designed label helps them feel more confident in their choice. However, when labels were too complex, visually crowded, or contained too many symbols, participants felt overwhelmed and even suspicious of the product's quality. Many expressed a preference for minimalistic, easy-to-read icons, such as a simple green leaf, and requested the inclusion of additional information for AP products: local origin, protein content, allergen data, and the source or processing level. For insect-based products, participants even suggested creating a dedicated certification symbol that could signal cleanliness, legality, and nutritional value to normalize this category. Additionally, there was an ambivalence toward "green" claims for some consumers. While many participants appreciate eco-friendly or sustainable branding, they are also wary of "greenwashing." Phrases such as "eco", "bio", or "environmentally friendly" can trigger distrust if they appear vague or overly promotional. Instead, participants prefer transparent information supported by familiar institutions.

Key findings by country: Slovenia

Impact of environmental design: the case of supermarkets and restaurants

Environmental design influences consumer choices in both supermarkets and restaurants in Slovenia, particularly regarding AP products.

In supermarkets, segregated displays were preferred by many participants because they enhance visibility and make it easier to find and select AP products. This preference was especially strong among those who actively considered APs in their shopping choices. Displaying APs alongside conventional products in an integrated shelf had mixed effects on participants' perceptions. For some, integrated placement made APs appear more trustworthy, appealing, and of comparable or even higher quality, supporting their normalization as part of everyday choices. However, others perceived them as less attractive, lower quality, or less important, suggesting that placement alone does not consistently convey positive signals. Other participants even felt unaffected by the shelf layout at all.

In restaurants, most of the participants indicated that a separate layout for AP dishes made them more likely to try them, as this layout offered clarity, helped them identify meat-free options easily, and made APs feel intentional and trustworthy. Additionally, many found separate layouts in restaurants more intuitive for quick meal selection. On the other hand, some participants found APs more trustworthy and normalized when placed next to conventional options, and there's a risk that APs might seem "special" when listed separately. An integrated design was seen by some of the participants as very helpful for comparing APs and conventional dishes. Ultimately, the effectiveness of each approach depends on consumer preferenc-

es and shopping goals within each specific setting.

Influence of other behavioural change tools

Beyond environmental design, several behavioural change tools shape consumer behaviour in Slovenia. Most participants said they would keep APs if they were the default menu option, indicating general openness and acceptance when these dishes are presented as the standard choice. A smaller group preferred to switch to

conventional options, mainly due to taste preferences or habit, while others were undecided and said their choice would depend on the specific dish or ingredients.

Attractive product images, familiar branding, and colour coding, especially green tones associated with sustainability, helped draw attention and created positive associations. Clear ingredient descriptions and sustainability labels also supported trust and curiosity. On the other hand, poor or unappealing visuals, confusing nutritional information, and negative past experiences discouraged interest. Price had a mixed influence. Many participants reported that cost did not affect their choice while others were price-sensitive. Those felt encouraged by discounts or were deterred by higher prices compared to conventional options.

Health and dietary preferences were the most important motivators for selecting APs in Slovenia, followed by curiosity and ethical or environmental considerations. Some participants were also influenced by trust in product quality or by convenience, such as easy availability.

A smaller group expressed hesitation or doubt when choosing APs, mainly due to concerns about taste, texture, price, or unfamiliar brands. To address these barriers, participants suggested offering tastings and product trials to help people experience the flavours firsthand. They also called for clearer information about preparation, ingredients, and nutritional value, as well as educational initiatives and advertising that highlight practicality rather than ideology. Lower prices, improved packaging, and subtle, authentic communication were also seen as ways to build confidence.

Role of labels in consumer decision making

Slovenian participants generally recognised that labels are designed to guide consumer behaviour, and most felt confident in understanding the information they provide. However, this understanding did not always translate into full trust. While many participants considered labels useful and reliable, a few participants expressed some scepticism, often questioning whether label claims, such as "vegan," "organic," or "sustainable," were properly verified or simply marketing tools.

"A label helps when it tells me something quickly and clearly, ingredients, sustainability, organic production, not when it just adds another symbol I have to interpret."

(Participant from Slovenia)

Slovenian participants tended to view labels as helpful orientation tools that support quick decisions, especially for environmental information. Only few relied on labels for social or economic information, showing that such dimensions remain secondary to environmental cues. They valued clarity, simplicity, and transparency, preferring labels that are easy to read and understand at a glance. Many felt that current labels are often too small, cluttered all over the packaging, or require additional research to interpret.

The EU Organic label and V-Label were the most familiar and trusted, appreciated for their recognisable design and clear association with official certification. Other labels were noticed for their informative and aesthetic appeal but still required stronger public recognition to inspire full confidence. Participants highlighted the importance of the issuing authority behind each label. Trust was closely tied to who provides the certification, and official, government-backed, or EU-level schemes were seen as more reliable than private or unfamiliar ones. Alongside this, ingredient transparency (e.g. "non-GMO" or allergens), health benefits (e.g. "high protein content ", "low fat", "no additives"), and environmental benefits (e.g. carbon footprint, local ingredients) were identified as desired information, especially for AP products. Participants also called for greater public education about what different labels mean, suggesting that confusion and inconsistency undermine their impact.

Key findings by country: Spain

Impact of environmental design: the case of supermarkets and restaurants

The layout of supermarkets and restaurants influences consumer choices in Spain. In supermarkets, participants preferred segregated shelving, particularly among elderly and rural participants. Clear separation made APs easier to identify, reduced mistakes, and aligned with familiar shopping habits reducing cognitive load. By contrast, younger and urban participants with vegan or vegetarian family members were more comfortable with integrated displays, which allowed direct comparisons of nutritional contents, explore new options and made alternatives feel more mainstream and comparable in quality. Some participants found it reassuring and a sign of normalisation when APs were placed next to conventional ones, while others felt confused or even "tricked", especially without clear visual cues like coloured price tags as this could lead to unwanted purchases). Overall, placement strongly shaped perceptions, segregation framed APs as niche or experimental, while integration made them appear more normal but sometimes raised concerns about trust or quality. Many participants expressed a need for clearer labelling and more trans-

parent information to assess quality and nutritional value.

In restaurants, both segregated and integrated menus sparked curiosity, but in different ways. Segregated menus provided clarity and structure, making it easy to distinguish between traditional and alternative dishes, and were often preferred by those less familiar with new proteins. Integrated menus, on the other hand, helped normalise APs by presenting them alongside conventional options, which was especially appealing to younger and more open-minded diners. Attractive descriptions, familiar ingredients, and eco-friendly or health labels made alternative dishes seem more satisfying and legitimate, while unfamiliar items like insects still generated hesitation. Many said they would be more willing to try alternatives if offered in small portions, such as tapas, or if recommended by a trusted restaurant or chef.

Influence of other behavioural change tools

Behavioural change tools, including nudging, defaults, and strategic wording, according to Spanish participants, could help steer consumers toward APs. Some participants said they would stick with an AP default out of curiosity or convenience, particularly if the dish looked appetising, was well described, or came from a trusted venue. Others admitted they would revert to conventional choices, driven by habit, taste preferences, or scepticism about unfamiliar proteins. Visual and verbal cues such as green logos, eco-labels, or appetising imagery (e.g., fresh ingredients, eco-friendly icons) encouraged trial, while terms like “worms” or “insects” triggered rejection, even when the rest of the dish was appealing.

What makes choice environment work in practice?

- Shelf and menu layouts that reduce confusion
- Appealing descriptions and small-portion trial options
- Curiosity supported by promotions
- Clear labels with essential information

Pricing had a context-dependent influence. While some participants claimed that price was not a decisive factor, especially when dining out or shopping for health, others were more price-sensitive and responded positively to discounts and promotions. Offers were particularly effective when applied to familiar or previously tried products. However, if the discounted item was perceived as too unfamiliar or unappealing, the price reduction alone was not enough to motivate purchase.

Curiosity was the main motivator for APs, especially among participants who were open to trying new products or who had prior exposure to alternative diets. Confidence in the product’s quality, nutritional value, and the reputation of the seller (e.g., a trusted restaurant or supermarket) further encouraged selection. Ethical and environmental considerations were mentioned, but less frequently than taste, health, and practicality. On the other hand, many participants expressed hesitation, particularly regarding taste, texture, and lack of information. Concerns about over-processing, additives, and unfamiliar ingredients were common. To address these doubts, participants suggested offering free tastings, clearer labelling, and more transparent communication about nutritional benefits and ingredient origins. Some also recommended educational campaigns or chef recommendations to build trust and familiarity.

Role of labels in consumer decision making

Food labels are critical for guiding consumer choices regarding health, sustainabil-

ity, and ethical production in Spain. Participants generally agreed that labels guide consumer behaviour, but trust was uneven. Well-known and widely recognised certifications, such as EU Organic and Nutri Score, were seen as the most credible, and labels with clear icons (e.g., V-Label) were also considered inviting because they communicated their message without requiring prior knowledge or additional reading. Lesser-known labels were often perceived as less reliable. While adults trusted labels they had seen repeatedly, younger participants were more likely to trust labels that aligned with their values (e.g., sustainability, animal welfare).

"I appreciate labels when they help me make sense of a product quickly, but many still feel too small, too technical, or too vague to really support my choice." (Participant from Spain)

Spanish consumers valued labels as useful tools for making informed choices, particularly when they related to health, sustainability, or ethical production. Participants stressed that clarity, credibility, and simplicity are the most important features of a label. Overly complex or crowded labels were described as confusing, while minimalistic designs with concise information were preferred. While older participants preferred labels with visual cues and minimal text, younger participants were more open to interpreting slightly more complex designs. However, many participants emphasised the need for labels that communicate essential information at a glance, without requiring the consumer to decipher codes or read fine print. Transparent information on ingredient origin, health benefits, cooking instructions, allergen information, and environmental impact was stated as particularly important for AP products. In general, consumers familiar with APs wanted more transparency about production methods and ethical sourcing, while sceptical consumers demanded clear, verifiable claims to overcome doubts.

Key findings by country: The Netherlands

Impact of environmental design: the case of supermarkets and restaurants

The design and layout of supermarkets and restaurants play an important role in shaping consumer choices in The Netherlands regarding AP products, although habitual behaviour and personal preferences often play a role in these effects.

In supermarkets, the layout of products influences visibility and convenience. Integrated shelving was seen as facilitative of price comparison, which many participants identified as a key factor in their decision-making. This arrangement also exposes meat buyers to vegetarian options, occasionally encouraging reconsideration of their choices. However, it can create expectations about quality and taste that not all alternatives meet, potentially leading to disappointment. Conversely, many participants, particularly for vegetarians or people with dietary restrictions, preferred separate shelving for clarity, as it made products easier to locate and aligned better with their shopping habits. Overall, ease of finding products was highlighted as the most important factor in the shopping environment, followed by sustainability claims, visual appeal, and freshness.

In restaurants, menu organization similarly affected consumer choices. Most participants favoured integrated menus that list vegetarian and meat options together, describing them as more fun, logical, and inclusive. Integrated menus were also perceived as more satisfying and legitimate, making consumers more likely to se-

lect APs. Segregated menus appealed mainly to those who wanted clarity or more explicit vegetarian sections, but the overall trend pointed to integration helping alternatives blend into mainstream choices. Some highlighted that they prefer visual cues for vegan and vegetarian options in an integrated menu to be able to easier locate them. Descriptive language, such as “fresh,” “homemade,” or “juicy”, was often more influential than menu layout in guiding choices.

Influence of other behavioural change tools

Behavioural nudges such as defaults, green logos, or eco-friendly labels had mixed or limited impact in The Netherlands. When APs were set as defaults on menus, many participants did not notice, and defaults rarely shifted their choices.

Coloured price tags in supermarkets helped some identify products but also drew critical attention to price differences, sometimes reinforcing negative perceptions. In restaurants, the “eco-friendly” label split opinions as some valued the reassurance of making an environmentally positive choice, while others dismissed them as greenwashing or even found it misleading as it also included animal-based proteins like insects or krill.

Discounts and pricing differences mattered more in supermarkets than in restaurants as several participants said they would switch to cheaper vegetarian options when shopping, but in dining contexts, price was less decisive.

Overall, curiosity and convenience were stronger motivators than behavioural nudges alone. While some participants were intrigued by unusual options like buffalo worms, while others were curious about them. Presenting APs as direct substitutes for meat could create negative perceptions if consumers felt the products were too different from familiar food products. For them, the main challenge was not the idea of eating APs but knowing how to use them effectively in everyday cooking. Some felt that more information or demonstrations about preparation methods could make these products easier to integrate into regular diets. Habitual shopping practices played a strong role as many participants relied on pre-planned shopping lists and reported low interest in APs, often cooking familiar meals. Some participants suggested exploring hybrid options, combining plant and animal ingredients, as a more gradual and familiar introduction for mainstream consumers.

“Clear, simple labels help, but too many overlapping signs make the message weaker instead of stronger, then I start relying on what I already know or trust.”

(Participant from The Netherlands)

Role of labels in consumer decision making

Dutch participants recognised that labels are designed to guide behaviour, but trust was often limited. Widely known certifications, such as the EU Organic label, Fairtrade and the V-Label, inspired the most confidence, while less familiar ones sometimes triggered scepticism or confusion. Trust often depended on the perceived reliability of the organisation behind the label-official or government-backed labels inspired more confidence than private or vague ones.

Many valued clarity, simplicity, and readability. Too many or overly complex labels were perceived as overwhelming or misleading. Labels that were small or difficult to read, particularly for elderly consumers, reduced usability. While some appre-

ciated eco-friendly messaging, others suspected greenwashing, emphasising that credibility is as important as visibility. Overall, only a few participants seek out specific information in labels, such as social, environmental or economic information. However, nutritional information was important for some of the participants. Some participants emphasized that brand trust outweighs label trust in guiding their purchase decisions.

Many Dutch participants preferred simple symbols or colour systems, like traffic light formats, that communicate essential information at a glance. Participants also suggested that complex topics such as sustainability could be simplified through clear, visual scoring systems, supported by explanatory information on packaging or via QR codes. Vegan and vegetarian labels were considered the easiest to understand and most appealing, offering a straightforward yes/no answer on animal content.

Overall, participants expressed a desire for labels indicating product origin, protein content, pesticide use, and the number of additives, and some wanted a general health label applicable across all product categories. They also emphasized the need for consumer education to ensure proper understanding of labels, noting that overly complex labelling often fails to communicate effectively.

Key findings by country: Turkey

Impact of environmental design: the case of supermarkets and restaurants

In supermarkets, many consumers in Turkey placed high value on how offerings are arranged and the ease of finding products. Most preferred segregated shelves, as grouping APs separately made them easier to locate, saved time, and reduced the risk of confusion or mistakes. However, younger participants favoured integrated shelving, arguing that it allowed faster shopping, better product comparison, and greater exposure to new options. Elderly participants found integrated layouts confusing and less trustworthy, particularly when price differences with conventional protein products became more visible. Others noted that segregated placement reduced the perceived price gap and strengthened trust by presenting alternatives as a distinct and valid choice. Across groups, there was agreement that direct comparison with conventional protein products is essential. This could be achieved either through integrated shelving or by placing segregated sections close to conventional products, particularly in the case of meat. Proximity enabled comparison of price, environmental impact, and ingredients. While integrated placement increased visibility and normalization, informative labelling on the product itself was considered even more influential in communicating quality and importance than shelf placement alone.

"Curiosity can open the door, but affordability, clear labelling, and confidence in the product are what would make alternative proteins part of everyday life."

(Participant from Turkey)

In restaurants, opinions were split. About half preferred segregated menus, where AP dishes were presented separately, as this made them more noticeable and easier to evaluate quickly. The other half favoured integrated menus, arguing that listing conventional and alternative dishes side by side normalized alternatives and increased their appeal. Supporters of integrated menus noted that visibility improved when alternative dishes were included alongside familiar options, mak-

ing them seem more valid and appealing. Supporters of segregation emphasized the importance of clear labelling, menu transparency, and additional information on environmental and health impacts to enable informed decisions. Overall, most participants agreed that integrated menus in local restaurants would positively influence their willingness to choose APs. Familiarity with and trust in the restaurant, combined with the ability to compare prices directly, appetising wording, and familiar ingredients encouraged trial, while confusing terms or insect-based options provoked hesitation.

Influence of other behavioural change tools

Other behavioural change tools, such as defaults, pricing, and visual cues, had mixed influence in Turkey. When APs were presented as the default option, many participants said they would accept them, as long as the product met their expectations in terms of price, health benefits, and environmental impact. Others preferred to stick with familiar conventional choices, reflecting strong eating habits. Price and discounts were consistently identified as critical as equal or lower prices encouraged trial of APs, while higher costs reduced willingness to buy.

Visual and messaging cues, such as green logos, or eco-friendly icons, were viewed as useful for signalling sustainability and building awareness. Yet, terms like “alternative” or “meat-free” were sometimes considered off-putting, and eco-claims could raise suspicions of greenwashing. Curiosity, environmental values, and convenience were more powerful motivators than design nudges alone, though practical tools such as recipes, tastings, and QR codes offering additional information were suggested to help overcome doubts.

Role of labels in consumer decision making

Turkish participants widely agreed that labels matter, but trust and clarity were uneven. Well-known and familiar certifications, such as EU Organic, Nutri-Score, and the V-Label, inspired the most confidence, as they were recognisable and perceived as credible due to their institutional backing. Environmental and social information on labels was seen as valuable, but participants emphasised that these claims must be substantiated and easy to understand. Participants requested clearer, simpler, and more accessible labels. Small logos or complex designs were seen as barriers, especially for elderly participants. At the same time, especially younger participants emphasized that visual cues alone are not sufficient. Labels should be combined with accessible, detailed information provided through barcodes or QR codes. Desired content for AP products included environmental impact, protein content, fair production practices, food safety, and nutritional information. While participants saw labels as a positive guide, they emphasised that labels alone cannot build trust. Transparency, credible institutions behind the certifications, and straightforward messaging were considered essential for labels to genuinely influence purchasing decisions.

Cross country overview

Impact of environmental design: the case of supermarkets and restaurants

Across all countries, the design of shopping and dining environments shaped consumers' ability to notice, evaluate, and choose APs.

In supermarkets, respondents consistently linked shelf organisation to convenience, confidence, and perceived normality. Segregated shelving was viewed as more intuitive and time-saving, especially by consumers who already sought out plant-based options or wanted to avoid accidental purchases (Finland, Italy, Poland, Spain, Turkey). Participants described this layout as clear and efficient, helping them to locate products quickly and feel secure about ingredient content. The separation also conveyed that AP form an established and credible category, though some perceived it as reinforcing a sense of "difference."

By contrast, integrated shelving often sparked curiosity and exploration, particularly among flexitarian and omnivorous consumers (Denmark, Germany, The Netherlands, Greece, Slovenia). Many said that seeing these products next to traditional proteins made them feel more trustworthy, comparable, and "normal". Integration encouraged direct comparison of price, nutritional value, and quality, which participants viewed as an indicator of transparency and fairness. Yet, without clear cues, integration could feel confusing or deceptive, particularly for those with dietary restrictions.

In restaurant settings, menu organisation had a similar impact on curiosity, convenience, and perceived legitimacy. Integrated menus, where alternative and conventional dishes appeared together, were frequently described as more inviting and contemporary, encouraging diners to explore unfamiliar options (Denmark, Greece, Italy, The Netherlands, Spain). Participants felt this presentation normalized APs and presented them as satisfying and legitimate meals. Segregated menus were preferred by those who wanted clarity and speed, particularly vegetarians or those with specific dietary goals (Finland, Norway, Slovenia, Turkey).

If integrated menus were adopted in local restaurants, many said they would be more inclined to try APs, especially when combined with transparent labelling and trusted venues (Denmark, Greece, Italy, The Netherlands, Spain, Turkey). In general, integration fostered openness, while segregation supported certainty; the most effective menus balanced both, offering intuitive navigation alongside appealing presentation (Finland, Norway, Slovenia, Spain, The Netherlands, Turkey).

Influence of other behavioural change tools

Behavioural interventions, such as defaults, visual cues, and pricing, played a role in influencing consumer decisions across contexts.

When APs were presented as the default option (e.g. the first item on a menu or the "dish of the day"), many respondents indicated they would accept the default out of curiosity, convenience, or trust in the chef's expertise (Denmark, Finland, Germany, Greece, Spain). Others noted they would switch back to conventional dishes if the default felt forced or inconsistent with expectations (Poland, Norway, Turkey).

Defaults were most effective when framed as inviting and flexible rather than prescriptive.

Visual and linguistic cues were another strong influence. Symbols like green leaves or eco-logos, natural colour palettes, and appetising imagery made products appear more appealing, healthy, and environmentally friendly (Finland, Greece, Spain, Norway, Slovenia). Positive, sensory-based wording ("fresh," "local," "home-made") increased curiosity and trust, whereas negative or technical language ("meat-free," "AP") reduced willingness to try (Denmark, Greece, Poland). Excessive or inconsistent eco-messaging sometimes led to green fatigue, where consumers grew sceptical or overwhelmed (Greece, Spain, The Netherlands).

Pricing consistently affected purchasing decisions. In many countries, affordability and promotions were critical to acceptance as discounts and price parity encouraged experimentation (Italy, Greece, Poland, Turkey). Participants emphasised that equal or lower prices reduce the perceived risk of disappointment, while high prices raised expectations of quality that were not always met. In other countries, consumers placed greater emphasis on taste, nutritional value, and product integrity than on cost (Denmark, Germany, Norway, The Netherlands).

Curiosity, confidence, and convenience were the main positive emotional motivators. Curiosity drove initial trials, particularly in social or exploratory dining contexts (Greece, Spain, The Netherlands). Confidence grew with familiarity, transparent information, and trustworthy brands. Convenience, both physical availability and ease of preparation, was repeatedly cited as a condition for regular use (Finland, Slovenia, Turkey).

Hesitation stemmed from concerns about taste, texture, unfamiliar ingredients, level of processing, and unclear labelling (Denmark, Germany, Greece, Italy, Norway, Poland, Spain, Turkey). Across countries, especially insect-based proteins provoked aversion and discomfort among many participants. They were often described as unappetising, regardless of presentation (Denmark, Germany, Greece, Italy, Poland, Spain, Turkey). This rejection was largely driven by food neophobia and negative associations with insects (Denmark, Germany, Greece, Poland, Italy, Turkey). Even when incorporated into familiar dishes such as burgers, awareness of insect ingredients markedly reduced willingness to try them (Germany, Greece, Italy, Poland, Spain, Turkey).

Overall, participants recommended tastings, clear preparation guidance, hybrid meals, and educational touchpoints as ways to reduce uncertainty and build confidence in APs (Finland, Germany, Greece, Poland, Slovenia, Spain, The Netherlands, Turkey). Together, these findings indicate that behavioural tools work best when they enable choice rather than pressure consumers, making alternatives attractive, comprehensible, and accessible instead of compulsory (All countries).

Role of labels in consumer decision making

Across countries, participants showed were aware that labels are designed to guide behaviour, reflecting recognition of their influence on purchasing decisions. Trust in labels varied widely. High trust was consistently linked to well-established,

institutional certifications such as the EU Organic, V-Label, Fairtrade, and Demeter (Denmark, Finland, Germany, Italy, Norway, Poland, Spain, The Netherlands). These were perceived as credible because of recognisable design, official endorsement, and long-term presence. Governmental or EU-level schemes were viewed as most credible, followed by independent NGOs (Denmark, Finland, Germany, Italy, Norway, Poland, Slovenia, Spain). In contrast, less-familiar or brand-created labels often elicited scepticism, with participants questioning who verified them or whether they were marketing tools (Greece, Slovenia, Turkey). Several respondents expressed conditional trust, saying they rely on familiar institutional logos but remain cautious toward new or private ones (Finland, Germany, Poland, Italy, Spain). Education and public communication about certification processes were repeatedly mentioned as trust-building measures (Greece, Norway, Turkey, Spain). Additionally, QR codes could help to provide detailed information (Germany, Norway, Turkey, The Netherlands).

Regarding understanding, most participants felt able to interpret common labels, especially those with simple symbols and clear colour contrasts (Finland, Germany, Slovenia, Spain, The Netherlands). Comprehension declined when labels were dense or technical. Elderly and hurried participants (shoppers) cited small print and too many symbols as barriers to use (Finland, Norway, Spain). Across contexts, participants stressed that format strongly determines comprehension – legibility, colour, and concise text were valued over complexity (Denmark, Finland, Germany, Norway, Spain, The Netherlands).

When asked how they use labels, the majority said they look primarily for environmental information such as sustainability, origin, or production methods (Denmark, Germany, Greece, Italy, Poland, Slovenia, Spain, Turkey). Social information, like fair labour or welfare standards, was appreciated but seldom acted upon, largely because it was less visible (Greece, Slovenia, Turkey). Economic aspects, including price fairness or producer income, were rarely sought out, remaining marginal to decision-making (Finland, Poland, The Netherlands).

Views on whether the number of labels on products was reasonable diverged. Many respondents across markets described “label overload” as confusing and counterproductive (Denmark, Germany, Italy, Poland, Spain, The Netherlands), while some valued multiple certifications as reassurance of credibility (Finland, Slovenia). The general preference leaned toward fewer, harmonised schemes combining key environmental and social data in one recognisable design (Denmark, Finland, Germany, Italy, Norway, Poland, Spain, Slovenia, The Netherlands, Turkey).

The format and design of labels emerged as crucial. Simple, high-contrast visuals – green leaves, stars, or traffic-light colours – were considered inviting and easy to read (Finland, Germany, Norway, Spain, The Netherlands). Overly detailed or text-heavy labels discouraged engagement (Denmark, Germany, Italy, Poland, Spain). Many participants agreed that simpler labels with concise information would make it easier to choose products confidently (Finland, Germany, Spain, The Netherlands, Turkey).

Regarding desired characteristics, consumers wished for explicit information on

protein source, nutritional value, processing level, and environmental footprint, especially for APs (Germany, Italy, Poland, Slovenia, Spain, Turkey). Additional details, such as allergen information, additives, and ethical sourcing, were also valued (Finland, Greece, Norway, The Netherlands).

In summary, across Europe, consumers are aware of labels and use them selectively, valuing them as tools for informed decision-making when they are clear, credible, and visually coherent. Confidence in labelling grows with institutional backing and readability, while inconsistency or information overload undermines trust. Labels that combine simplicity, transparency, and authority best support consumers in distinguishing between conventional and APs.

What does this mean in a snapshot?

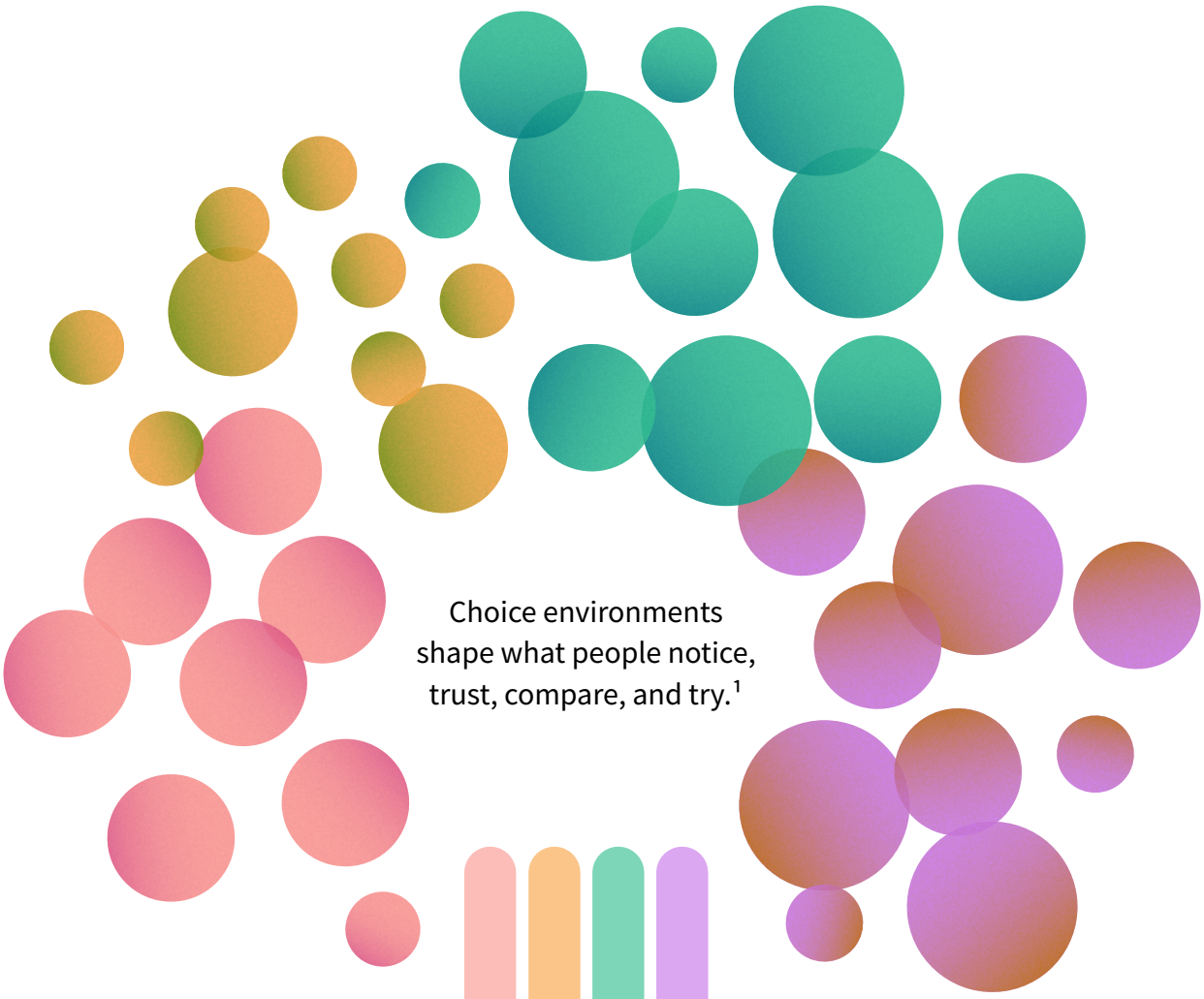
Taken together, the findings highlight that environmental design, behavioural nudges, and labelling can all influence consumer decisions, but none operate in isolation. Segregated shelves are preferred by vegetarians, vegans, and adult and elderly consumers for their clarity, while integrated shelves appeal to younger shoppers and flexitarians by normalising alternatives and enabling price comparisons. In restaurants, integrated menus often legitimise alternatives and spark curiosity, whereas segregated menus offer reassurance and quick recognition.

Beyond layout, behavioural tools such as defaults, pricing, and visual cues influence choices, though their impact depends on context. Equal or lower prices encourage trial, but discounts can also raise suspicion. Visual cues and appetising wording attract attention, while terms like “meat-free” or references to insects often deter. Free tastings, clear preparation guidance, and trusted brands were repeatedly highlighted as effective ways to reduce uncertainty.

Labels are seen as essential but only when they are simple, clear, and credible. Well-known certifications like the EU Organic label and the V-Label inspire trust, while lesser-known or complex schemes often create confusion or scepticism. Across countries, participants called for concise, transparent information on nutritional value, protein content, processing, origin source, allergens, and sustainability, alongside credible backing to avoid greenwashing.

In short, integration normalises alternatives while segregation provides clarity, behavioural nudges help but trust and taste matter more, and labels guide choices only when they are simple and credible.

The infographic below provides a distilled visual summary of the main findings.



Choice environments shape what people notice, trust, compare, and try.[1]

Layout: integrated vs. seggregated

Emotions & social dynamics

Defaults, pricing, prompts

Trust & comprehension: labels and information

- appears across many countries / in multiple contexts
- appears in several countries, often conditional
- specific to a smaller set or mixed reactions

Layout: integrated vs. seggregated

- Segregated shelves = clear, fast, reassuring.[2]
- Integrated shelves = curiosity + “normal.”[3]
- Integrated shelves enable easy comparisons.[4]
- Integration can confuse without clear cues.[5]
- Integrated menus feel modern and legitimise APs.[6]
- Segregated menus = quick recognition.[7]
- Best: integrate, but keep navigation clear.[8]
- Integrated menus work best with clear labels + trusted venues.[9]

Defaults, Pricing, Promts

- Defaults can prompt trial (curiosity/convenience/ chef trust).[10]
- Defaults backfire if they feel forced.[11]
- Price parity/discounts encourage trial.[12]
- High price raises expectations; low price lowers risk.[13]
- Sometimes taste/quality matter more than price.[14]
- Green cues + appetising visuals boost appeal.[15]
- Positive words (“fresh/local”) build trust.[16]
- “Meat-free/AP” wording can deter.[17]
- Too much eco messaging → “green fatigue.”[18]

Trust & comprehension: labels and information

- Trust is highest in institutional labels.[19]
- Government/EU labels > NGOs for credibility.[20]
- Unknown/private labels trigger scepticism.[21]
- Explain certifications to build trust.[22]
- Simple, high-contrast labels read best.[23]
- Dense/technical labels reduce use.[24]
- Small print/too many symbols block use.[25]
- Label overload feels confusing.[26]
- Multiple labels can reassure some.[27]
- Prefer fewer, harmonised schemes.[28]
- Labels used mainly for enviro/origin info.[29]
- Wanted: source + nutrition + processing + footprint.[30]

Emotions & Social Dynamics

- Curiosity drives first trials.[31]
- Convenience is key for repeat use.[32]
- Tastings + peer/chef tips boost trial.[33]
- Negative comments can stop trial fast.[34]
- Barriers: taste/texture, ingredients, processing, unclear labels.[35]
- Insects often trigger aversion.[36]
- Aversion linked to neophobia/associations.[37]
- Knowing it’s insect lowers willingness (even embedded).[38]
- Best supports: tastings, prep help, hybrids, education.[39]
- Tools work best when enabling, not pressuring.[1]

(1) All countries; **(2)** FI, IT, PL, ES, TR; **(3)** DK, DE, NL, GR, SI; **(4)** DK, DE, NL, GR, SI; **(5)** DK, DE, NL, GR, SI; **(6)** DK, GR, IT, NL, ES; **(7)** FI, NO, SI, TR; **(8)** FI, NO, SI, ES, NL, TR; **(9)** DK, GR, IT, NL, ES, TR; **(10)** DK, FI, DE, GR, ES; **(11)** PL, NO, TR; **(12)** IT, GR, PL, TR; **(13)** IT, GR, PL, TR; **(14)** DK, DE, NO, NL; **(15)** FI, GR, ES, NO, SI; **(16)** DK, GR, PL; **(17)** DK, GR, PL; **(18)** GR, ES, NL; **(19)** DK, FI, DE, IT, NO, PL, ES, NL; **(20)** DK, FI, DE, IT, NO, PL, SI, ES; **(21)** GR, SI, TR; **(22)** GR, NO, TR, ES; **(23)** FI, DE, SI, ES, NL; **(24)** DK, DE, IT, PL, ES; **(25)** FI, NO, ES; **(26)** DK, DE, IT, PL, ES, NL; **(27)** FI, SI; **(28)** DK, FI, DE, IT, NO, PL, ES, SI, NL, TR; **(29)** DK, DE, GR, IT, PL, SI, ES, TR; **(30)** DE, IT, PL, SI, ES, TR; **(31)** GR, ES, NL; **(32)** FI, SI, TR; **(33)** GR, ES, NL, PL, SI, NO, TR; **(34)** GR, ES, NL, PL, SI, NO, TR; **(35)** DK, DE, GR, IT, NO, PL, ES, TR; **(36)** DK, DE, GR, IT, PL, ES, TR; **(37)** DK, DE, GR, PL, IT, TR; **(38)** DE, GR, IT, PL, ES, TR; **(39)** FI, DE, GR, PL, SI, ES, NL, TR

5.4 Beyond choice

The beyond choice dimension focuses on factors outside the immediate food environment such as language, messaging, and education that still influence consumer attitudes and decisions. Together with the LL participants, we explored how communication strategies and learning experiences can shape perceptions and choices around APs.

In the language and messaging session, participants reflected on memorable campaigns or advertisements and discussed what made them effective. They then evaluated different behaviourally informed messaging approaches—including incentives, nudges, social influences, framing, and emotional appeals—rating them for clarity and potential impact on behaviour. Group discussions explored which messages resonated most, what patterns made them persuasive, and how such tools could influence public attitudes toward APs.

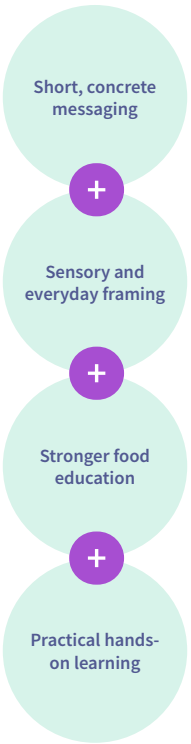
During the plenary reflection, participants debated whether impactful communication is best achieved through short, powerful messages or through long-term storytelling, considering how sustained engagement could help normalise sustainable eating behaviours.

The session on sustainable education touchpoints examined how food education across different life stages, from school to adulthood, shapes dietary habits. Participants mapped key educational milestones across formal, informal, and public settings, identifying when and how sustainability or APs first entered their awareness and what lessons had the most lasting influence.

Finally, in a future visioning exercise, participants imagined a 2035 scenario where sustainable diets and APs are fully integrated into European education systems. They envisioned what students of all ages would learn, how teachers and canteens could support this, and what policies might make it possible. The discussions concluded with reflections on how education and communication can drive long-term change toward healthier, more sustainable food choices.

The following section summarises participants' insights from these discussions, highlighting the potential of communication, behavioural messaging, and education to complement structural interventions in guiding consumers toward more sustainable and health-conscious food choices.

What makes beyond-choice approaches work in practice?



Key findings by country: Denmark

Messaging and language that move: communication strategies to influence behaviour

Participants agreed that the language should speak broadly to different audiences, while still feeling relevant to those both familiar and unfamiliar with plant-based eating. There was a clear preference for short, concrete, and straightforward communication. Longer or more abstract phrasing was seen as less effective, particularly when it came across as speaking down to the audience or demanding decisive lifestyle changes. Participants emphasized that messaging should be approachable and respectful, avoiding tones that feel overly moralizing or political.

Sensory and personal associations were noted as more engaging than abstract framings. References to taste, quality, and everyday accessibility were seen as especially powerful in motivating change, while nostalgic or emotionally warm framings also resonated positively. In contrast, appeals that relied on collective responsibility or broad societal goals were perceived as vague or distant.

Educational foundations and influences

For most Danish participants, early exposure to food education came through school subjects and family habits, with many recalling learning about nutrition in childhood. Some also pointed to later influences during teenage years, higher education, or adult life, though these were less common. Despite this exposure, a clear majority indicated that their dietary patterns had changed over time, suggesting that early lessons were not always sustained into adulthood.

When asked specifically about plant-based or APs, the results revealed a major gap in formal education. The overwhelming majority reported that these topics were never or rarely addressed in school or university. This disconnect was further reinforced by participants' experiences in canteens: most described a mismatch between what was taught and what was offered, with few examples of consistent alignment between nutritional education and the food environment.

The impact of school food education on long-term choices appeared limited. While some participants acknowledged moderate or significant influence, most stated that it had little or no effect on their current dietary beliefs or habits. This points to a missed opportunity for education systems to create lasting change.

Looking ahead, participants expressed moderate confidence in schools' ability to prepare students for sustainable food futures. The majority judged current efforts as only adequate at best, with clear room for improvement. Very few felt that sustainability is strongly integrated into education today, highlighting the need for a more consistent and visible approach.

Future visioning and engagement pathways

Looking ahead to 2035, participants in Denmark imagined that the most meaningful changes in food education would come from embedding sustainability and global food issues, including APs more centrally into learning. Many stressed the value of hands-on projects, such as growing mushrooms or beans, or even exper-

imenting with new food technologies, as these practical experiences would make lessons more engaging and memorable. Others highlighted the potential of weekly cafeteria activities linked to classroom learning, where students could explore nutrition, sustainability, and innovation through real-life choices. More structured approaches, such as labelling meals with environmental impact measures and connecting this to maths or geography classes, were seen as useful for linking daily habits with wider consequences. Participants also found appeal in cross-subject projects where students could design their own sustainable food businesses, blending creativity and problem-solving. Finally, there was strong support for practical skill-building classes, giving students the tools to cook and experiment with alternative ingredients in ways that feel relevant for everyday life. Together, these ideas reflect a vision of education that is interactive, applied, and strongly connected to both personal habits and broader societal challenges.

Key findings by country: Finland

Messaging and language that move: communication strategies to influence behaviour

Participants emphasized that effective communication around APs should be clear, concise, and visually appealing. Messages that were short, easy to understand, and supported by attractive visuals were seen as more likely to capture attention than text-heavy or abstract campaigns. Positive framing, particularly when highlighting personal benefits such as improved health, financial savings, and the ease of making small dietary changes, resonated most strongly. These approaches were perceived as motivating and supportive, enabling individuals to see plant-based eating as both feasible and rewarding.

"Sustainable eating makes more sense to me when it is introduced in a practical way, because otherwise it stays too abstract to influence daily habits." (Participant from Finland)

At the same time, participants recognized the potential role of critical or fear-based framing, such as highlighting the environmental or health costs of continued meat consumption. While such approaches could be impactful, they were considered controversial and effective only when balanced with clear, constructive alternatives. Importantly, respondents consistently stressed the value of autonomy: campaigns were more acceptable when they nudged rather than coerced, offering encouragement and choice rather than obligation.

There was broad agreement that visual appeal and concreteness are crucial. Ads that depicted appetizing food, used colour, or provided tangible information (e.g., health impacts, price comparisons) were judged far more effective than vague or overly moralistic messaging. Campaigns that relied on abstract notions of collective responsibility, without clear individual relevance, were often dismissed as unconvincing.

When reflecting on campaign longevity, participants were divided. Some viewed one-time impactful initiatives as powerful in creating immediate awareness, particularly in social media contexts, while others favoured longer-term campaigns that evolve over time. The latter were considered more effective for building familiarity, reinforcing habits, and gradually shifting perceptions.

Educational foundations and influences

For Finnish participants, formal education played a central role in early food learning, with school lessons, the plate model, and food pyramids frequently recalled. Home economics classes were particularly important, as they not only introduced nutrition but also taught practical cooking, hygiene, and food safety. School canteens were also remembered as implicit teachers of what healthy eating looked like, though the quality and content of meals varied across time. A few mentioned vocational or culinary schools as places where sustainability and a wider variety of products, including AP-based, were covered in more depth.

Beyond school, family environments shaped food habits strongly. Parents introduced ideas of balance and moderation, sometimes by limiting unhealthy food products. Allergies within families exposed some to soy and other plant-based products earlier on, creating familiarity through necessity. Informal influences also came from siblings or relatives, such as a vegetarian brother who spoke about animal rights, planting early seeds of reflection on meat consumption.

In adulthood, many reported learning through rehabilitative kitchen programs, documentaries, social media, and independent research. Platforms like TikTok, blogs, and recipes online were frequently mentioned as new and accessible sources of food knowledge. Travel also expanded awareness, especially around the variety of plant-based options in different countries. Importantly, many participants emphasized that such experiences made sustainable diets feel both more concrete and more desirable.

When asked about sustainability, most first encountered the concept in school, though usually in a limited or fragmented way-biology or geography classes, or occasional field trips to farms. More direct education on plant-based diets typically appeared only in later vocational settings. Informal and adult learning then became the dominant space for engaging with sustainability, especially through media and campaigns.

Looking back, participants felt that schools rarely addressed plant-based proteins directly, and canteens only partially reflected the nutritional guidance taught in class. For some, this created a sense of "mixed signals." While the early education shaped general ideas of what a balanced plate should include, participants often felt that plant-based options were overlooked, leaving them to discover these later in life.

"I pay attention to communication that is short, clear, and visually appealing, especially when it helps me imagine how a product would actually fit into a meal." (Participant from Finland)

The long-term influence of school food education varied. Some said it gave them lasting habits around vegetables and protein, while others described it as having little impact because meals were "forced" or too narrowly framed. Several participants highlighted that their current plant-forward choices came despite, not because of school teachings, and that they might have transitioned earlier if exposed to APs sooner.

Regarding current schools, participants were uncertain but cautiously positive. Some noted that plant-based options are now more available, and that younger generations are being introduced to vegetables more systematically. However, oth-

ers felt sustainability education is still limited, too focused on vegetables in general, and not broad enough on APs.

Future visioning and engagement pathways

Looking ahead to 2035, participants in Finland envisioned education systems where sustainability and APs are embedded across all levels-from kindergartens to universities and lifelong learning. Reactions were varied: some strongly supported reducing meat to just once or twice a year and teaching environmental and ethical issues early, while others were uncertain, liking meat but acknowledging benefits. A few were more sceptical, insisting meat remains essential, yet most agreed that the rapid growth of vegetarian and vegan products in the past decade shows such a future is realistic.

For children, the most impactful approaches were playful and experiential-tasting new food products in kindergartens, visiting farms and gardens, cooking with teachers, and learning through songs, games, and animations. Teenagers were thought to engage best through peer influence, integrated classes, and digital tools such as apps that show health or environmental scores. Adults could be reached through intergenerational exchange, workplace meals, and preventive health care. Across ages, participants stressed that practical exposure, cooking, tasting, growing, and collective initiatives like vegetarian months, would normalise plant-based diets.

Teachers were seen as key to enabling this shift. They would need not only knowledge about nutrition, environmental and ethical aspects, but also practical skills for cooking with new ingredients, creative teaching tools, and confidence to integrate themes across subjects. Training programs would evolve to include farm visits, growing food in schools, and digital learning methods. Policy measures such as mandatory vegetarian periods, funding for school gardens, and updated meal standards were seen as essential supports, along with closer cooperation between schools, families, and communities.

When reflecting on their own childhoods, participants noted that early exposure would have been transformative, since habits are harder to change in adulthood. Practical skills, especially cooking, were considered crucial for ensuring AP products are adopted in daily life. Suggested first steps included vegetarian days, affordable alternatives, and emphasising the tastiness of these products to make sustainable diets appealing.

When asked which classroom experiences would have made the biggest impact if they were back in school, participants consistently prioritised practical lessons, particularly, cooking classes teaching how to prepare plant-based meals that are both tasty and healthy. Hands-on growing projects and community gardens were also valued for teaching where food comes from and building respect for resources. Interdisciplinary projects and cafeteria challenges were viewed as useful ways to connect lessons with daily life, though environmental labels were seen as less effective unless made engaging and age-appropriate. Overall, participants emphasised that interactive and practice-oriented learning is what would make sustainable choices stick.

Key findings by country: Germany

Messaging and language that move: communication strategies to influence behaviour

German participants highlighted the importance of clarity, concreteness, and emotional resonance in communication strategies. Messages that were clear and directly conveyed consequences, such as health risks or environmental impacts, were described as more effective than those that were vague, overly demanding, or left questions unanswered. Campaigns that emphasized costs, savings, or tangible benefits were seen as especially compelling, reflecting a belief that money and measurable outcomes can strongly influence behaviour.

At the same time, participants stressed that campaigns should avoid being too moralizing or aggressive. While direct framings around emissions or health risks were recognized as emotionally powerful, they were also described as potentially defensive or alienating if the tone was too harsh. There was a preference for messages that invite reflection without imposing obligations, as some participants noted discomfort with concepts such as pledges or commitments.

"What convinces me is not a dramatic message on its own, but whether the product or idea feels understandable, realistic, and worth trying in everyday life."

(Participant from Germany)

Patterns across feedback emphasized the value of less text, more visuals, and appealing design elements. Colour, symbols, and graphics were viewed as helpful in making messages easier to understand, while overly technical or scientific language reduced accessibility. Participants suggested that playful or challenge-based campaigns could encourage engagement in a more positive and approachable way.

When reflecting on campaign longevity, opinions were split between the appeal of one-time impactful messages and longer-term evolving narratives. Some stressed that clear, attention-grabbing communication could have immediate impact, while others emphasized the need for repetition to build recognition and gradual change.

Educational foundations and influences

For German participants, family was the first and most lasting source of food learning. Parents emphasized fruits, vegetables, and balance, while mealtime traditions and cooking together shaped early preferences. Messages such as "finish your plate" or placing high value on meat reflected cultural norms around food's economic and social importance. School also played a role. Kindergarten lessons connected sugar with tooth health, and elementary schools introduced concepts like the food pyramid or cooking basics. Still, participants stressed that hands-on experiences, such as gardening with grandparents or cooking with peers, created stronger emotional connections and memories than abstract lessons.

As they grew older, critical life moments deepened awareness. Moving out and becoming independent was often described as a turning point, as participants had to decide for themselves what and how to eat. Health issues also pushed some to reconsider dietary choices, making food education personally relevant in adulthood. Informal influences, such as eating with friends from different cultural backgrounds, expanded perspectives, while documentaries and online sources intro-

duced arguments for vegetarian and vegan diets.

When it came to sustainability, school exposure was limited to geography or project weeks that touched on sustainable agriculture and healthy eating. The more impactful encounters came later, through media, friends, or campaigns. Some remembered inconsistencies, for example, school promoting fair traded products yet mostly offering sweets, which blurred the message of what healthy or sustainable meant.

Despite these experiences, formal education on APs was nearly absent. A large majority reported they were never taught about them, and only a small fraction encountered them even occasionally. Canteens also offered mixed signals: about a quarter recalled having no cafeteria at all, while others saw little alignment between lessons and food options. Most participants felt that early school food education had limited or no influence on their current diets.

Looking to today's schools, the group was sceptical. A majority rated schools as poorly prepared to teach sustainable food futures, pointing to outdated approaches and a lack of integration. Many expressed that missed opportunities lay in not providing more practical, age-appropriate experiences such as gardening, cooking, or tasting APs in school settings.

Future visioning and engagement pathways

Participants in Germany imagined education systems where sustainability and APs are part of everyday learning, from kindergartens to adult education. For young children, learning should be playful and visual such as using images, cooking activities, and hands-on experiences to introduce healthy diets early. By adolescence, lessons would combine practical cooking with anatomy and physiology, helping teens understand how diets affect both body and mind. For adults, lifelong learning opportunities were highlighted, with emphasis on making healthy eating relevant across stages of life.

"I think food education would have stayed with me more if it had been more practical, because information alone is easy to forget when it is not connected to experience."

(Participant from Germany)

Teachers were seen as needing new tools and attitudes to confidently deliver this content. AI was mentioned as a way to adapt lessons to different ages and formats, while training programs would need to focus on practical methods, such as cooking, gardening, and integrating food into multiple subjects. School gardens and cooking sessions were viewed as essential living classrooms, where students not only learn where food comes from but also gain direct experience with preparation and appreciation.

Policy changes were considered critical to ensure inclusivity and equity. Suggestions included giving students more time to eat so meals are less stressful, ensuring participation of those from lower socio-economic backgrounds, and even offering healthy cooking courses for future parents to improve children's diets from the earliest stages. These measures underline the belief that food education should not only target schools but extend to families and communities.

When reflecting on the most impactful approaches, participants consistently emphasised practical and experiential learning. Cooking with one's own produce,

workshops with dietitians, and shared experiences such as cafeteria challenges or group cooking were highlighted as ways to make food education meaningful. Interdisciplinary approaches and extracurricular opportunities were also suggested to broaden the scope. While subjects on food and climate and environmental impact labels were valued, participants stressed that knowledge alone is not enough and skills and appreciation must be cultivated through doing.

In a vision of future classrooms, the experiences considered most transformative were hands-on growing projects, practical cooking skills, and interactive challenges that connect theory with everyday life. These were seen as powerful not only for shaping healthier and more sustainable diets but also for fostering a deeper respect for food and its origins.

Key findings by country: Greece

Messaging and language that move: communication strategies to influence behaviour

Participants recalled campaigns that stood out for being emotional, sensory, or cleverly memorable. Real-time plant life cycle demonstrations were described as educational, while immersive depictions of animal mistreatment provoked strong emotions and motivated reflection on hidden aspects of meat production. Jingles and wordplay, especially when tailored to Greek, were sticky in memory, sometimes prompting children to ask for products they didn't enjoy but still felt compelled to try. Yet trust faltered when execution disappointed, for example, surplus food initiatives where low quality undermined otherwise good intentions.

"I am more likely to engage with a message when it connects to health, routine, or something I already care about, not when it feels too broad or ideological."

(Participant from Greece)

Across message types, clarity and ease of action proved decisive. Incentives and rewards appealed to younger audiences but were ignored if relevance was missing. Nudges like "simple switch" felt achievable, while "just one click" was confusing or controlling. Social norm appeals divided opinion: some valued belonging and collective good, others perceived influencer-driven pushes as manipulative. Information provision was welcomed when practical and adult-oriented, but tones that felt childish or prescriptive were dismissed.

Framing and messaging worked best when highlighting health, vitality, and small achievable steps. Positive appeals such as "feel better, eat smarter" resonated by linking wellbeing with low-effort change, while negative framings like "the cost of doing nothing" risked sounding preachy. Habit-formation messages were effective when gradual, but gamified systems were rejected as trivial. Emotional appeals succeeded when offering a sense of agency and leadership, but faltered when relying on fear.

Tagline testing reinforced these lessons. Sensory-forward phrases like "juicy" and "satisfying" resonated most, anchoring new products in familiar experiences. Collective calls like "millions have already made the switch" added legitimacy but needed clearer cues on taste, health, and price to feel personal. Identity-driven frames ("what does your plate say about you?") intrigued some but risked alien-

ating with judgement. Nostalgic cues such as “your grandma would love” added warmth and memorability but required stronger links to flavour and health to avoid gimmickry.

Finally, participants leaned toward evolving, long-term narratives rather than one-off messages. Campaigns that built a story over time, reinforced by consistent delivery and credible product experiences, were seen as more likely to shape habits and sustain trust. The guidance for Greece is clear: use positive, empowering language, emphasise taste and vitality, make first steps easy and non-demanding, and preserve choice and dignity. Social influence should invite, not pressure. Above all, the product must deliver on its promise because poor eating experiences can quickly erase the impact of even the most compelling message.

Educational foundations and influences

For most participants in Greece, early lessons around food came from family settings rather than classrooms. Grandmothers and mothers were central figures, teaching about balanced meals, legumes, vegetables, and the value of breakfast. Religious practices also shaped awareness, with Orthodox fasting traditions introducing cycles of plant-forward eating. Healthcare professionals became influential later in life, especially when health issues arose, with doctors, dietitians, or fitness trainers offering guidance that felt both authoritative and personally relevant.

Formal education was remembered as limited and inconsistent. Almost everyone recalled the primary school food pyramid, but beyond that, nutrition education faded. In high school, a few encountered courses like “Mediterranean diet,” though these often struggled with low attendance or support. At university, exposure was rare and usually program-specific. Overall, participants described school-based food education as fragmented, with canteens sending contradictory signals. While curricula promoted healthy eating in theory, cafeterias sold processed, sugary, or fried foods, normalising unhealthy choices and undermining credibility.

On sustainability, participants consistently reported a near absence of education in their school years. Both older and younger groups said it was never addressed in formal lessons. At most, they recalled isolated mentions of organic food or ecology without clear dietary links. Only in the last decade have sustainability concepts entered curricula, mostly through elective workshops, often poorly organised. More often, people encountered such ideas as adults—through professional training, online resources, or seminars. The internet emerged as a key gateway, with APs and sustainable eating information only becoming visible after 2015.

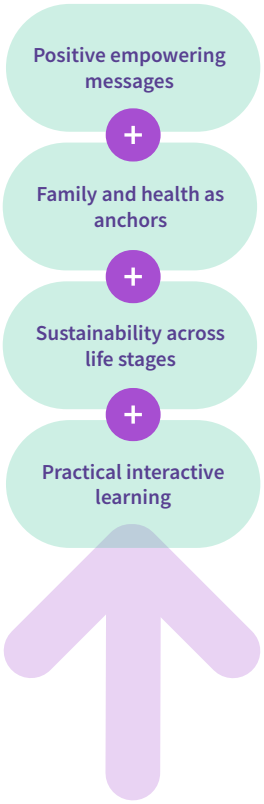
Conversations about reducing meat or trying new proteins were mixed. Families sometimes encouraged eating less meat for health reasons, while friends pushed in the opposite direction, emphasising indulgence and tradition. Doctors recommending substitutions like lentils or rice made the strongest impression. Online self-research also played a role, especially for younger adults motivated by fitness or curiosity.

Looking back, participants felt early lessons stuck unevenly. Family teachings about legumes or meal structure often persisted, while formal education had little

long-term impact. Polling reflected this: many said school food education influenced them only "moderately" or not at all, and most felt today's schools still prepare students poorly for sustainable food futures. Missed opportunities included aligning canteen offerings with lessons, offering practical cooking or gardening, and embedding sustainability as a normal part of food education.

Future visioning and engagement pathways

By 2035, learning about sustainability and everyday choices is adapted across ages. For young children, playful activities such games, theatre, storytelling, or planting seeds make lessons engaging and tangible. Familiar formats, like shaping plant-based meals into burgers, help reduce resistance, while parental modelling reinforces values. Teenagers are drawn to digital platforms, interactive projects, and peer influence. They connect when issues are framed around health, fairness, or the environment, and when they can experiment through cooking or media. For older adults, health becomes the main driver, supported by trusted channels such as doctors, TV programs, or supermarket cues. Sustainability is linked to longevity, care for family, and leaving a legacy.



What makes beyond-choice approaches work in practice?

APs are normalised in education. They are part of daily meals, classroom projects, and interactive tools. Younger learners encounter them through fun, age-appropriate activities; secondary students explore their environmental and health impacts; and older learners focus on how to integrate them into daily diets.

Teachers gain stronger knowledge and tools. Training programs cover technical understanding, hands-on practice, and digital resources. Educators are positioned as facilitators rather than just information-givers, creating open environments that encourage curiosity and dialogue.

School canteens become living classrooms. Menus highlight plant-based and AP options, supported by clear information, digital displays, and workshops. Fast food and heavily processed options are phased out, replaced with healthier, sustainable choices.

Policy shifts anchor these changes. Sustainability and nutrition become mandatory topics, backed by stricter canteen standards, expanded teacher training, and public awareness campaigns. Parents and communities play an active role, while hands-on activities such cooking, gardening, field visits embed lessons in daily life.

Participants reflected that, had such opportunities existed in their youth, their habits and choices would have been more deeply shaped. For today, they prioritised structured, compulsory education, complemented by playful and practical cooking workshops to make learning stick.

When asked what would have the biggest impact in 2035, participants highlighted a core subject on sustainable living, closely followed by Future Skills classes teaching cooking with APs. Hands-on growing projects, cafeteria challenges, and impact labels were also valued, showing that practical experience and relevance are the strongest drivers of change.

Key findings by country: Italy

Messaging and language that move: communication strategies to influence behaviour

Italian participants tended to connect with campaigns that were personally relatable or rooted in everyday family life. Ads evoking familiar table scenes, nostalgia, or playful scenarios stood out, while others were memorable for being uncomfortable or overly intimate. This underlines the importance of ensuring that messages feel authentic, respectful, and aligned with cultural norms.

Messages emphasizing health and personal well-being resonated most strongly, as individual benefits were seen as the clearest motivators for dietary change. Incentives such as discounts or bonuses were also appreciated for making alternatives more accessible, though many felt that focusing only on cost was too superficial. Participants expressed a preference for communication that integrates health, environmental impact, and a sense of purpose, which felt more genuine and engaging.

At the same time, some were wary of campaigns that placed too much emphasis on individual performance or peer pressure, as these risked creating stress rather than genuine motivation. Messages framed in a positive and supportive tone, allowing space for personal choice, were generally more effective than those perceived as coercive or fear-based.

Participants valued campaigns that offered practical guidance and gradual steps, such as meal plans or suggestions to make small, manageable changes. These approaches reduced the sense of effort required and made alternative options feel more accessible. Information-based messages, especially those linking food to climate impact or health outcomes, were well received when presented in a clear, non-judgmental way.

"What matters to me is whether a message feels relevant to how people actually eat, because otherwise it risks sounding well intentioned but detached from real life."

(Participant from Italy)

A recurring pattern was that messages worked best when they were simple, informative, and visually appealing, without oversimplifying the issue. Participants highlighted that effective campaigns balance clarity with emotional resonance, supporting people in making their own choices rather than imposing them.

When asked about strategy, most favoured long-term narratives that build gradually over time. While some saw value in immediate, high-impact campaigns for sparking attention, sustained storytelling was considered essential to create lasting awareness and encourage real behaviour change.

Reactions to shorter taglines reflected these preferences: health-focused and sensory appeals were seen as engaging, while references to social movements or identity were often met with scepticism or resistance. Many also stressed the importance of stronger visuals, better design, and attention to cultural food traditions, noting that Italian cuisine is deeply tied to meat and that this context must be acknowledged for campaigns to succeed.

Educational foundations and influences

For Italian participants, learning about food happened through a mix of formal education, family traditions, and life experiences. Schools and universities played some role, from elementary meal programs to university canteens with macrobiotic menus and even academic courses on food consumption. Yet, many recalled that the strongest lessons came from family relationships, whether through parents, grandparents, or children introducing new habits such as vegetarianism. Informal sources like books, workshops, documentaries, and a countryside lifestyle, growing and eating fruit and vegetables from orchards, also shaped lasting impressions. Some highlighted that public health crises, such as Mad Cow Disease, COVID-19, or the cholera outbreak in Naples, were moments that pushed them to reconsider what was safe and healthy to eat.

Life transitions were especially influential. Events such as pregnancy, widowhood, retirement, or developing lactose intolerance reshaped dietary choices and sparked curiosity about alternatives. For some, trying plant-based options, like vegan cookies that looked "normal", shifted assumptions and opened space for new habits. Social relationships also mattered: partners, children, and extended family often influenced decisions around meat consumption and encouraged eating more legumes or reducing daily meat intake.

On sustainability, awareness often emerged later in life. Most said schools had not addressed plant-based diets, meat reduction, or environmental links in their own education, though they noticed these topics are becoming more present in their children's or grandchildren's schooling. Instead, documentaries, exhibitions, and radio programs, along with social media recipes, introduced sustainability and plant-based perspectives. Still, many noted a preference for simple, accessible plant-based dishes over complex recipes that require unusual ingredients, showing the importance of practicality in adopting new behaviours.

Messages that remained with participants often cantered on the environmental impact of intensive farming, particularly concerns around pollution and water use. Others stressed the idea that food is tied to overall well-being, encouraging more mindful and balanced choices. This was reflected in practices such as avoiding daily meat consumption while still reserving traditional dishes like lasagna or tortellini for special occasions.

Formal education on plant-based proteins was described as minimal, and canteens were often seen as poorly aligned with what little nutrition or sustainability education was provided. Overall, many felt that food education in schools had only a limited influence on their long-term choices and beliefs. At the same time, there was scepticism about how well schools today prepare students for sustainable food futures, with the perception that families, personal experience, and external sources continue to play the bigger role.

Future visioning and engagement pathways

In their future visioning exercise, participants in Italy envisioned education systems where sustainable diets and APs are woven into everyday learning. For young children, one suggestion was to foster empathy by connecting them with farm animals

basically helping them see pigs, cows, or chickens as sentient beings rather than just sources of food. This emotional bond was viewed as a powerful way to shape lifelong awareness and compassion.

"I learned much more from moments when food became personal, through health, family, or daily responsibility, than from formal information on its own." (Participant from Italy)

When reflecting on what students of different ages might learn about APs, participants did not provide detailed answers. However, they emphasised that teachers need more than environmental knowledge. Educators should be able to connect lessons on food and nutrition to social inequalities, cultural issues, and political dynamics, including the risks of unequal access where wealthier groups continue to eat meat and fish while others are left with alternatives. Teacher training was therefore imagined as interdisciplinary, combining environmental science, social justice, and political economy to prepare educators for this broader responsibility.

Canteens were not seen merely as spaces for changing menus but as part of wider systemic reform. Participants argued that true transformation requires addressing the economic interests that currently shape food availability and education itself. Policies were suggested to push schools away from suppliers tied to unsustainable practices, instead aligning procurement with values of health, fairness, and sustainability. Some even proposed taxes on meat or phasing out subsidies for the meat industry, though this raised concerns about exacerbating inequality between social groups.

In terms of advocacy, participants proposed a clear step forward: supporting more sustainable and values-driven procurement in schools. By ensuring that what is served in canteens reflects educational goals, young people could learn not just from textbooks but directly through daily experiences of eating. This was framed as essential for linking theory with practice and helping children, families, and communities internalise the meaning of responsible consumption.

When asked about future learning experiences, participants highlighted the importance of practical and hands-on approaches. They valued activities that connect knowledge with everyday life, encourage creativity, and build concrete skills in areas such as cooking with APs, gardening, or exploring the environmental impact of food choices. While not every method was seen as equally impactful, the common thread was the need for education to be engaging, applicable, and relevant across age groups.

Key findings by country: Norway

Messaging and language that move: communication strategies to influence behaviour

Norwegian participants emphasized that familiarity, trust, and repetition are central to effective communication. Campaigns that consistently featured the same person or recognizable group were seen as more memorable and trustworthy, with humour, music, colour, and unexpected elements further increasing their appeal. Food waste campaigns emphasizing on "look, smell, taste" were frequently recalled as a successful example, underscoring the value of practical, actionable guidance presented in a relatable way.

Messages that resonated most were those framed in a positive, solution-oriented tone. Participants appreciated campaigns that combined clear information with personal benefits, such as improved health, savings, or environmental contributions. Practical tools like recipes, discounts, or simple steps were particularly valued, as they made sustainable choices feel easy and attainable. By contrast, shame-based or guilt-inducing messages were strongly disliked, although some acknowledged that highlighting negative consequences of traditional protein consumption could still have an informative function if balanced with empowering solutions.

Patterns in feedback pointed to a preference for minimal text, concise phrasing, and visually appealing formats. Real or cartoon-style images were favoured over AI-generated visuals, which were viewed as untrustworthy. Colour played a significant role: greens and blues created positive associations, while heavy use of red or brown was perceived as oppressive. Accessibility was also considered important, with participants noting the effectiveness of large fonts, short sentences, and universal design principles that make content inclusive.

When reflecting on campaign longevity, participants leaned towards initiatives that evolve over time, suggesting that repetition with familiar elements builds trust and recognition. However, they also noted that single impactful messages could work if tied to a consistent visual or symbolic element that reinforces the brand and message.

Educational foundations and influences

Participants in Norway traced their first lessons about food and nutrition back to family and early school years, especially the school kitchen, which provided both practical cooking experience and exposure to ideas about balance and variety. At home, many grew up with strong traditions of reducing waste, using local produce, and relying on hunting or fishing for protein. This lifestyle was not framed as “sustainable” but was remembered as frugal, resourceful, and respectful of available resources.

Life events such as moving out, living abroad, pregnancy, or financial pressures also shaped dietary habits and deepened awareness of health and nutrition. Several participants noted that while health education in school focused on sugar reduction, balanced meals, and the plate model, the influence of family traditions and daily practice often had a stronger and longer-lasting impact. Over time, these lessons evolved into modern habits, such as increasing protein intake for exercise, incorporating more vegetables and salads, and drawing inspiration from international cuisines.

Exposure to sustainability as a food topic varied. Some recalled school kitchens introducing local food items or health-oriented lessons, while others emphasized that most of their knowledge came from documentaries, books, and online media. Participants also highlighted how limited financial means in earlier times naturally encouraged sustainable practices: avoiding food waste, using all parts of animals, and relying on seasonal, local produce. Messages about eating less meat or trying new proteins were rarely introduced through formal education, and instead came later from media, family members, or social networks.

The lasting lessons most often mentioned were the importance of variety, moderation, cooking from scratch, and avoiding waste. Participants agreed that these values continue to shape their current food choices, though modern life, including busy schedules, cost constraints, and children's preferences, sometimes makes it difficult to uphold them consistently. Some felt that more explicit early education about sustainability and APs could have created stronger habits earlier in life.

Future visioning and engagement pathways

Participants in Norway envisioned education systems where sustainable diets and APs are deeply embedded from early childhood onward. They emphasized the importance of hands-on, practical experiences, beginning in kindergarten with playful activities such as growing crops, cooking from scratch, and learning through doing. As children grow older, this could evolve into more advanced opportunities like managing plots in allotment gardens or becoming shareholders in local farms, ensuring continued engagement with sustainable practices in a way that feels relevant at different life stages.

"Food habits become easier to change when they are connected to cooking, growing, or preparing meals, because then sustainability feels like something tangible."

(Participant from Norway)

Participants highlighted that students of all ages should learn about the nutritional value and health benefits of APs, with the aim of both reducing red meat consumption and ensuring access to food products that are nutritious, appealing, and familiar. This dual focus on health and sensory qualities was seen as key to normalising such options in everyday diets.

For teachers to guide this transition, participants argued for dedicated courses in teacher training programs, covering topics like crop cultivation, sustainable eating, and APs. Such programs should not only provide scientific knowledge but also equip educators with practical cooking skills and positive attitudes towards these AP products, supported by engaging tools such as animations, apps, or interactive lessons. While some teachers and kindergarten staff already take initiatives on their own, participants stressed the need to make such training systematic and accessi-

ble to ensure long-term impact.

Practical learning was also imagined to extend beyond classrooms into school canteens and kitchen gardens. Suggestions included each class taking turns to prepare meals for the whole school in collaboration with the canteen, with menus emphasising sustainability and APs. In this way, food preparation becomes part of the curriculum and a lived experience rather than an abstract concept.

Policy change was seen as essential to sustain these efforts. Participants called for free school lunches to ensure equal access, alongside systematic training for teachers to integrate sustainability into different subjects. Reflecting on their own childhoods, many noted that living sustainably used to be a matter of necessity, hunting, fishing, growing vegetables, and avoiding waste, rather than an explicit value. Today, they argued, education can turn this way of life into a deliberate and forward-looking practice.

When asked what could be done immediately, participants pointed to three advocacy priorities: introducing free school meals that include sustainable and AP sources, engaging children through hands-on activities like growing and cooking food, and offering structured teacher courses to make food education part of mainstream curricula.

In terms of specific learning experiences, participants leaned strongly towards practical and engaging methods. Hands-on growing projects were seen as especially impactful, sparking curiosity and helping students understand where food comes from. Practical cooking classes were also valued for making plant-based options appealing and accessible, while interdisciplinary projects and cafeteria challenges were recognised for encouraging creativity and reflection. The overall consensus was clear: learning must connect knowledge with lived experience, ensuring that sustainable choices become both meaningful and enjoyable.

Key findings by country: Poland

Messaging and language that move: communication strategies to influence behaviour

Participants emphasized the effectiveness of simple, specific, and memorable communication. Messages that were concise, easy to understand, and avoided unnecessary complexity were seen as the most convincing. In particular, participants responded well to messages that highlighted health benefits, focused on the body's wellbeing, and provided clear, actionable steps. Campaigns that paired slogans with positive tone and practical guidance, rather than guilt or moral pressure, were perceived as more engaging and motivating.

Several participants appreciated formats that treated the recipient as an active decision-maker rather than a passive target. Strategies linked to feedback, nudging, and goal setting resonated most, as they combined agency with concrete information. Messages that suggested increased agency or otherwise framed consumers as empowered to act were described as particularly attractive.

Beyond health and agency, cultural familiarity and nostalgia emerged as strong drivers of impact. Participants recalled past national campaigns from their childhood, such as school milk programs, food pyramids, or humorous snack ads, that remained memorable because they were repetitive, widely visible, and socially embedded. This underlined the role of campaigns that become part of everyday culture in shaping long-term attitudes.

Patterns of effectiveness also pointed to the importance of balancing practicality with emotion. While participants stressed the need for numbers, data, and straightforward proposals for change, they also valued humour, warm associations, and creative slogans that evoked positive feelings. References to family, tradition, or light humour made campaigns more approachable and relatable, particularly when paired with visual appeal and simple design.

When discussing memorable initiatives, participants underscored that strong campaigns should avoid forcing choices but instead motivate by offering clear benefits, such as rewards, points, or small practical steps. They also highlighted that neutral and encouraging tones supported a more positive image of dietary change and were more likely to inspire action.

Educational foundations and influences

For many Polish participants, the first encounters with healthy eating came through school lessons, particularly nature or science classes. Memorable examples included visual aids such as a soda can displayed next to a bag of sugar, which made the concept of hidden sugars tangible. Across different school stages, participants noted a progression: food pyramids in primary school, followed by the healthy plate and broader nutrition philosophies in later years. Some schools even took practical steps, like closing tuck shops to reduce access to unhealthy snacks.

"I trust communication more when it is specific and respectful, because I want guidance that helps me act, not a message that makes me feel pushed." (Participant from Poland)

Family environments were highly varied. Some grew up in households with strict dietary rules, such as sports-oriented diets, though not always practiced consistently by parents. Others described homes where little to no guidance was offered, with plentiful traditional meals but no discussions about balance or health. In some cases, food education only became meaningful after children were born, when parents wanted to establish better eating habits for their families. Personal turning points often came through illnesses, pregnancy, or engagement with sports, which pushed participants to seek out their own information, often from online sources such as YouTube or social media.

Exposure to sustainability in food was often delayed until high school or university, or even later through documentaries, friends, and restaurants. Some encountered ideas about sustainable diets through entertainment platforms or peer networks where vegan or plant-based eating was becoming trendy. Teachers occasionally mentioned the health risks of eating too much meat, while others recalled parents restricting sweets or encouraging moderation. Media, books, and social platforms also played a significant role in shaping awareness about meat consumption, vegetarianism, and the environmental impacts of food.

Participants reflected that schools and families often conveyed a binary view of good and bad food products: sweets and fast food were clearly framed as bad, while fruits, vegetables, and meat were framed as good. This framing extended into adulthood, with some participants describing feelings of guilt when eating sweets or fast food, or a lasting association of meat with being unhealthy. Experiences like trying APs at university workshops, visiting sustainable restaurants, or engaging with plant-based social media trends encouraged many to reduce or eliminate meat consumption, and in some cases, adopt fully vegetarian diets.

Missed opportunities were frequently highlighted: participants felt that primary and secondary schools should have placed more emphasis on sustainability and balanced diets, rather than leaving young people to rely on social media or tri-al-and-error learning later in life. Several also mentioned the importance of parents introducing healthy eating habits earlier and promoting science-based approaches, rather than leaving children to absorb trendy but unreliable online content.

The most lasting messages were those that directly connected food to health risks or to environmental and ethical issues. At the same time, more moderate lessons and dietary patterns (mixing sustainable and non-sustainable) also resonated with some, providing a balanced perspective.

Plant-based or APs were rarely taught in schools according to Polish participants. School canteens provided mixed experiences: some aligned moderately well with nutrition teachings, while others presented disconnects between education and practice. The perceived impact of food education on current eating habits was split—some reported lasting influence, while others felt school teachings had little to no effect. Opinions on how well schools prepare students for sustainable food futures leaned toward poor or only adequate, with few believing the issue is being addressed effectively.

Future visioning and engagement pathways

Participants in Poland imagined schools where sustainable diets and APs are fully integrated into education at every level. For children, this could mean workshops and tastings of familiar products / products made with new ingredients. Teenagers would be best reached through influencers and social media, while older adults might benefit from guidance by healthcare professionals or information through morning TV programmes.

Students of all ages were expected to learn both the health and environmental ben-efits of sustainable diets and how to prepare meals with APs. Preschoolers could be taught that these food products are as important as fruit and vegetables, while older students could explore how to make diets both nutritious and fulfilling. The emphasis was on showing not only what to reduce but also what can be gained.

Teachers were seen as central to this change but in need of funding, training, and new tools. Participants suggested university modules, additional nutrition courses, and playful methods for younger children (such as plush toys shaped like beans or mushrooms). Teacher education should cover sustainability from the earliest grades through to higher levels, ideally in cooperation with the food sector.

School canteens were envisioned as living classrooms, offering not only sustainable meals but also workshops and demonstrations on cooking with APs. Educational campaigns, posters, and even carbon footprint information on menus could reinforce these lessons. Crucially, sustainable meals should be made affordable and more accessible than animal-based ones, ensuring education aligns with real-life food options.

On the policy side, participants emphasised the need for separate, mandatory classes on sustainability, preferential pricing for plant-based meals in canteens, and carbon footprint labels on menus. They also argued that broader economic measures such as subsidies for APs, tax breaks for producers, and potential meat taxes would be essential to make these shifts affordable and equitable.

Reflecting on their own childhoods, participants noted that even if they had received better education, such products were not available or affordable in stores. For future efforts to succeed, knowledge must be matched by accessibility and affordability.

When discussing priorities, participants stressed the role of influencers and campaigns to make sustainable choices attractive and aspirational.

With regard to future learning experiences would be most impactful, participants strongly favoured practical, skill-based classes, especially those teaching students how to cook with APs. Hands-on projects, cafeteria challenges, and interdisciplinary assignments were also valued, but the consensus was that combining knowledge with practice is the most effective way to drive lasting change.

Key findings by country: Slovenia

Messaging and language that move: communication strategies to influence behaviour

Slovenian participants valued campaigns that were clear, relatable, and visually appealing, with a preference for messages that conveyed practical benefits and achievable actions. Messages highlighting personal health improvements, small and easy steps, and everyday relevance were viewed as particularly motivating. Campaigns that gave the impression of intrinsic motivation and encouraged long-term change were considered far more effective than those relying on external rewards or nudges.

Patterns show that clarity, brevity, and simple design were crucial in making communication more effective. While many stressed the importance of keeping messages short and to the point, some also valued being shown progress and recognition for their efforts, as this helped maintain motivation. A few noted that guidance and direction, such as being clearly told what to do or how to act, strengthened the sense of agency and made messages more actionable.

Participants responded best to positive, encouraging tones and words that appealed to the senses, such as “juicy” or “satisfying.” Messages tied to community or environmental benefits also resonated, though some found them too vague or

impersonal. Certain approaches split opinion: while some participants appreciated humorous or nostalgic angles, others found them overly long or off-putting. This highlighted that different audience segments vary in their receptiveness, and not all forms of messaging resonate equally.

Educational foundations and influences

For many Slovenian participants, formal education offered only limited exposure to food and nutrition. A few biology lessons on vitamins and digestion or short health courses were mentioned, but these felt disconnected from daily habits. Only at university did some gain a deeper understanding, linking food to production systems and environmental issues.

"A clear and simple message works better for me than one that tries too hard, because if I need too much effort to decode it, I lose interest quickly."

(Participant from Slovenia)

Family traditions played a stronger role. Parents encouraged basics like eating one's vegetables while grandmothers promoted seasonal, homemade, and waste-conscious cooking. Cooking was often learned at home, and later social media, friends, and siblings introduced plant-based recipes or encouraged reduced meat consumption.

Other influences included documentaries, health scares, parenting, and work in food-related jobs, which triggered reflection on nutrition and sustainability. For some, COVID-19 intensified awareness of food choices and packaging.

The first encounters with sustainability often came from university classes, family, or campaigns rather than school. Social media, gyms, and supermarkets introduced ideas like oat milk, plant-based protein shakes, or "ugly veggies." At school and at home, meat remained central to what was considered a proper meal, with vegetarian options described as limited.

These experiences shaped current habits in various ways. Some now check food origins, buy local, or include vegetarian meals several times per week, while others emphasized avoiding food waste, a lesson reinforced since childhood. Shifts to oat milk or reduced packaging often came from personal learning rather than formal teaching.

Participants pointed to missed opportunities: schools focused on calorie counts or cooking basics but rarely connected food to global issues. Public campaigns linking food to climate change came late, and earlier exposure to environmental data could have been impactful.

The messages that stuck were often simple and practical: the food pyramid, a teacher's reminder that "your diet is your daily medicine," and family sayings like "don't waste food, someone worked hard to grow it." Campaigns such as "Think global, eat local" or "Buy ugly veggies" were also remembered as clear and relatable.

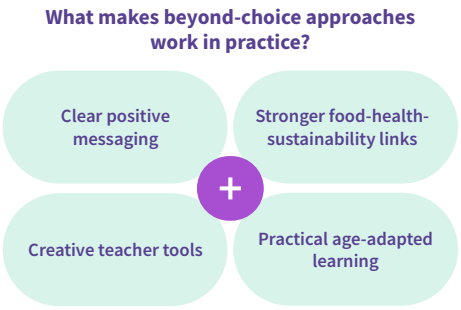
Participants indicated that plant-based or APs were rarely taught, and canteens reinforced meat-heavy meals. The influence of school food education was generally weak, and while today's schools are seen as improving, most participants felt they are only preparing students adequately at best for sustainable food futures.

Future visioning and engagement pathways

In imagining 2035, participants in Slovenia highlighted a future where learning about food and sustainability is interactive, practical, and tailored to different life stages. For children as young as six, excitement would come from planting seeds, visiting farms, and learning through games and cartoons. Teenagers would engage through cooking classes, debates on food systems, and exposure to influencers promoting sustainable diets, while older adults would benefit from gardening, cooking classes focused on local food products, and more active guidance from healthcare professionals.

Students across ages were imagined to gain both practical and theoretical knowledge about APs, from tasting and comparing different products to learning about their health and environmental impacts. This approach aimed to normalise sustainable diets and empower students to make informed choices.

For teachers, confidence in delivering these topics was seen as dependent on new tools and training. Ideas included virtual farms, interactive games, and hands-on cooking skills, moving beyond traditional lectures. Teacher training would become interdisciplinary, with educators gaining direct exposure to farms, gardens, and kitchens alongside access to online platforms with ready-made resources.



School canteens were envisioned as extensions of the classroom, where students would co-create menus, work alongside chefs, and learn from visual cues like posters explaining sourcing and environmental impact. This would turn mealtimes into educational experiences.

Policy changes were considered essential to sustain these efforts. Proposals included public funding for local and plant-based ingredients, mandatory gardening and cooking classes, and stronger links between schools and local farms. This would institutionalise food education as a core part of learning rather than a side activity.

Reflecting on their own experiences, participants noted that a more hands-on and engaging approach in childhood would have helped them develop cooking skills and make better food choices earlier in life.

Looking forward, they advocated for food and sustainability to become a core subject, teacher training across disciplines, and school partnerships with local producers. These measures were seen as crucial to embedding real-world, practical learning into everyday education.

When asked which future food education experiences would be most impactful, Slovenian participants expressed broad support across several approaches. Equal enthusiasm was given to core subjects on sustainability, hands-on growing projects, and weekly cafeteria challenges, all valued for their practicality and engagement. Interdisciplinary projects designing food startups were also highlighted as fostering responsibility and innovation. While fewer respondents favoured cooking classes on APs, these were still recognised as valuable in equipping students with

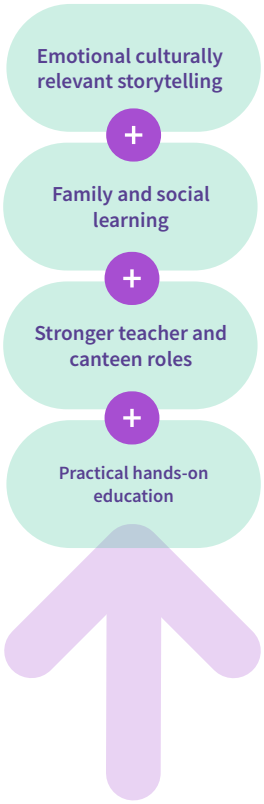
future skills. The overall message was that a mix of practical experiences and integrated learning would best prepare students for sustainable food futures.

Key findings by country: Spain

Messaging and language that move: communication strategies to influence behaviour

Spanish participants described a strong emotional connection to campaigns that evoked family values, cultural identity, and shared traditions. Messages that created feelings of warmth, reflection, and togetherness were especially memorable, while aesthetic appeal, aspirational imagery, and celebrity endorsements also played an important role in increasing impact.

At the same time, participants noted that traditional advertising is losing influence, with social media campaigns becoming more prominent, particularly those using influencers, strong visuals, and disruptive tones to capture younger audiences.



What makes beyond-choice approaches work in practice?

Messages that were visually striking, emotionally engaging, and personally relevant resonated most strongly. Some were effective by focusing on negative consequences such as health risks, while others emphasised positive outcomes, offering achievable steps and highlighting benefits for health and the environment. Clear calls to action, bold visuals, and practical incentives increased persuasiveness.

Participants generally preferred campaigns that build a story and evolve over time, seeing them as better suited to create lasting change. However, there was also recognition that a single strong impact can be useful at the start, particularly when launching new products. Effectiveness was seen as depending on tailoring: younger people responded better to fast-paced, visually engaging content, while older audiences valued messages tied to sentiment, health, or shared values.

Reflections on shorter messages showed that sensory language (e.g., “juicy” or “satisfying”) created curiosity, while outdated or abstract wording risked alienating audiences.

Educational foundations and influences

Spanish participants described a wide range of formative influences on their food learning, with family, school, and cultural traditions standing out most strongly. Mothers and grandmothers were often remembered as central figures, passing on knowledge through daily cooking, mealtime routines, and food values. These early lessons were practical rather than theoretical, and carried strong emotional and cultural weight. Schools added another layer, introducing models like the food pyramid or “five-a-day” initiatives. University studies, particularly for those in nutrition-related fields, helped connect everyday choices to scientific principles. School canteens also played a role, though experiences varied widely: for some they were associated with enjoyable meals and shared routines, for others with poor quality food or disconnects between lessons and what was served.

Life transitions were critical turning points. Moving out, becoming a parent, or experiencing health issues often prompted people to take greater responsibility and

reflect more deeply on their diet. For some, food education became relevant only once they had to cook and provide for others. Media and social networks added to this shift: television programmes or influencers were mentioned as important modern sources of nutrition advice. The rise of plant-based diets, debates on ultra-processed products, and concerns over meat's environmental impact made sustainability and health topics more visible and accessible in everyday life.

"I notice communication more when it gives me something concrete to hold onto, a feeling, an image, or a clear benefit, instead of staying too conceptual." (Participant from Spain)

Sustainability awareness typically arrived later than basic nutrition. Older participants recalled early school lessons focusing on recycling or ecology, but not diets. For many, the first exposure came through friends or peers who were vegetarian or vegan, often in recent years, while others became curious after trying APs in restaurants or seeing them in media. Reactions to these messages varied: some felt curious and open, others reported scepticism, anxiety, or fear about health implications.

Participants felt there were missed opportunities in schools, where nutrition education was often outdated, rigid, or disconnected from canteen practices. At home, cultural traditions reinforced meat as the centre of meals, leaving little space for APs. They suggested that earlier, practical education and more visible plant-based options could have normalised change earlier.

The messages that stayed were those tied to clear, simple guidance like "5-a-day" or "drink two litres of water" alongside cultural attachments to traditional meals and more recent media-driven campaigns highlighting health risks of conventional protein diets or novelty experiences (such as insect-based products). Campaigns that combined practical benefits like health, affordability, or convenience were also seen as memorable and motivating.

According to participants, plant-based proteins were rarely covered in school, canteens generally fell short, and formal education had little influence compared to family or self-learning. Schools today were seen as making some improvements, but overall efforts were described as uneven and still insufficient to prepare students for sustainable food futures.

Future visioning and engagement pathways

In Spain's vision for 2035, food and sustainability education was imagined as something deeply practical, culturally relevant, and adapted to different life stages. For children, learning was described as most effective when delivered through play, gardening, and visual tools like the Harvard Plate. Teenagers were seen as most influenced by peers, influencers, and social media trends, while older adults engaged more with food education through healthcare professionals, family contexts, and their role as parents or grandparents.

Students of all ages were expected to gain exposure to APs, though at different points in life. For many, these products only became familiar after 2015, often through friends, health concerns, or online media. By 2035, however, participants envisioned children growing up with such food products as part of the norm, while adolescents and adults would approach them through social influence, curiosity,

or necessity.

Teachers were seen as needing updated knowledge, scientific grounding, and better cultural awareness. Participants felt that educators today lack the authority of influencers, and suggested that training programs should include nutrition, sustainability, and practical cooking skills, equipping teachers to become stronger references for students.

School canteens were imagined as living classrooms, where plant-based options are seamlessly integrated into everyday menus rather than treated as special. Catering companies were expected to expand variety, with the goal of making sustainable meals visible, affordable, and normalised in daily life.

Policy changes were considered crucial, with participants calling for structured food education from early childhood, subsidies for sustainable food, faster approval of novel proteins, and more nutritionists in schools. Public procurement policies were also highlighted as a lever for change, ensuring that what schools serve aligns with what they teach.

Looking back, many participants said they would have benefited from earlier exposure to APs and more critical food education. Some felt they might have avoided unhealthy processed meat habits or been more open to trying new food products if these had been normalised earlier.

To shift food education now, participants emphasised the importance of structured and regulated programs in schools, political leadership, and greater visibility of sustainable options in supermarkets and canteens. They also stressed that flavour and affordability must be prioritised if such education is to make a real impact.

When asked which types of learning experiences would have been most impactful, participants frequently mentioned systematic lessons on the connection between food and sustainability, alongside hands-on projects such as gardening or cultivation. Cooking classes focused on practical skills with APs were particularly popular, reflecting a shared view that autonomy and familiarity with new products are essential. Other ideas such as cafeteria challenges, environmental impact labels, and interdisciplinary startup projects were also valued, though often seen as complementary to more practical approaches. Overall, the responses pointed toward a blend of theory, hands-on learning, and cultural adaptation as the most effective way to prepare future generations.

Key findings by country: The Netherlands

Messaging and language that move: communication strategies to influence behaviour

Dutch participants engaged strongly with campaigns that were simple, clear, and thought-provoking. They recalled advertisements that left a lasting impression through recognisable figures, jingles, or visuals. Ads featuring trusted celebrities, iconic characters, or playful mascots stood out for their ability to foster trust and emotional connection. Nostalgic elements, such as well-known personalities,

rhyming phrases, or child-friendly imagery, were remembered for their simplicity, consistency, and emotional resonance. These examples highlight how relatable figures and repeated cues can strengthen impact and memorability.

In discussions of new messages, participants responded well to communication that challenged assumptions about what is considered “normal” eating habits, prompting reflection without being overly forceful. They also valued clear comparisons that highlighted practical advantages, such as health benefits or lower prices, which in some cases even motivated them to consider trying new products. Humour and surprise added to the appeal, especially when delivered in a light, approachable way.

Across the discussions, price and health emerged as particularly persuasive themes. Many felt that messages work best when they allow people to feel they are making their own choices, rather than being pressured. Aggressive or moralising tones reduced effectiveness, while friendly encouragement and clear advantages increased openness to change.

Shorter messages drew mixed reactions: sensory words sparked curiosity, while vague or abstract phrasing (such as linking food choices to identity or the future) was often seen as confusing or unrelatable. References to family traditions provoked both warmth and scepticism, showing the risk of leaning too heavily on nostalgia for a diverse audience.

Educational foundations and influences

Participants in The Netherlands described a patchwork of formal lessons, family habits, and later self-learning as shaping their food knowledge. At school, nutrition education appeared at different stages, most often through biology classes and the well-known five food groups guideline. Home economics courses and occasional school videos reinforced basic ideas of healthy versus unhealthy food, though many felt these lessons were fragmented and inconsistent. Informal learning played a major role: moving out and cooking independently, managing health conditions like high cholesterol, and exposure through sports or professional settings

provided deeper awareness. Media sources, such as the popular TV programmes documentaries, and later social media platforms like Instagram and TikTok, were also important in shaping perceptions.

Sustainability was first learned at home through parents promoting seasonal eating, but broader awareness often came later, through documentaries, campaigns, or public debates around climate change. Informal experiments, such as trying meat-free months or cutting back after a health scare, were more influential than formal schooling. Family traditions and cultural habits remained strong, but personal experiences increasingly shaped sustainable choices.

Messages from schools and canteens typically reinforced meat as central to a "proper meal," while fruit and dairy were highlighted as healthy. Plant proteins were rarely addressed in education, and vegan options were often marginalised. This left many participants feeling that schools missed opportunities to connect health and sustainability. A few noted positive community initiatives, such as healthy cooking courses or campaigns promoting cheap, nutritious food, which offered more practical support.

Most participants reported that plant-based proteins were rarely or never covered, canteens provided little alignment with nutritional education, and school food education had limited influence on current habits. Views on how well schools are preparing students for sustainable food futures were generally medium to negative, with most rating efforts as minimal or only adequate.

Future visioning and engagement pathways

In the Dutch vision for 2035, food and sustainability become core parts of education. From kindergarten, children learn through cooking, gardening, and grocery shopping, while school milk is replaced with plant-based options and vegetarian days become routine. These activities help children experience sustainable eating as something normal and enjoyable. Teenagers are engaged through debates, practical cooking, school gardens, and taste challenges, with social media also reinforcing interest. Adults, especially those around 60, value health, affordability, and visibility of AP products in supermarkets, showing that education must adapt across generations.

Students of all ages gain a mix of practical and conceptual knowledge. Young children explore food through playful activities, while older students connect it with health, environmental impacts, and cooking skills. Many stressed that learning to prepare food themselves is key, as this builds autonomy and makes sustainable eating easier. Adults highlighted that cost advantages and convenience are strong motivators for change.

Teachers require stronger preparation and tools. Participants suggested that food should be a mandatory subject, supported by workshops, cooking lessons, and digital resources. Teachers should be trained not only in nutrition and sustainability but also in how to engage students creatively across subjects. Many said that without better training and empowerment, teachers cannot compete with the influence of peers or social media.

School canteens were envisioned as living classrooms, where menus, posters, tasting opportunities, and cafeteria challenges reinforce classroom learning. Vegetarian defaults, more variety, and visible changes in school food were seen as central to normalising plant-based diets. Some noted that while environmental labels may not be effective on their own, highlighting financial benefits of eating more plant-based could be more persuasive.

"Food education would be more meaningful if it was tied to cooking, shopping, and real choices, because that is where knowledge becomes part of daily behavior."

(Participant from The Netherlands)

Policy ideas included school gardens, mandatory cooking programs, and structured food education throughout school years. Public procurement was also mentioned as a lever, ensuring schools prioritise local, seasonal, and AP products. These shifts were seen as essential to align education with broader societal goals.

Reflecting on their own childhoods, participants said they would have been more engaged, confident, and healthier if schools had provided more fun, practical, and hands-on lessons. To shift education today, they called for making food a core subject, increasing plant-based visibility, and leveraging social media and influencers to reach students effectively.

When asked which future experiences would have the most impact, participants most often chose practical cooking classes and food as a core subject, seeing these as essential foundations. Growing projects, cafeteria challenges, and interdisciplinary projects were also valued, especially as complements. Overall, participants agreed that practical, enjoyable learning is the most powerful way to embed sustainable eating into future generations' lives.

Key findings by country: Turkey

Messaging and language that move: communication strategies to influence behaviour

Participants in Turkey responded most strongly to messages that combined emotional storytelling with clear, actionable information. Many highlighted the power of visuals that evoked family, animals, or community, noting these made them pause and reflect more deeply. Messages showing real people adopting APs fostered a sense of belonging, while positive and empowering tones made change feel exciting rather than guilt-inducing.

Patterns revealed that the most effective communication blended emotional resonance with factual grounding. Short, simple messages backed by scientific data on impacts like CO_2 or water use were considered convincing. Participants also valued suggestions that emphasized small, achievable steps, such as trying plant-based meals once a week, as these felt realistic and motivating.

Social proof was a key driver: seeing behaviours already normalized in other communities gave participants confidence that change was both possible and socially acceptable. Humour and lightness also helped make messages more approachable, while aggressive or moralizing tones were viewed as counterproductive.

When asked about strategy, participants strongly favoured campaigns that evolve

over time and build a narrative. Long-term storytelling was seen as essential for creating lasting impact, strengthening emotional connection, and sustaining motivation. One-off campaigns were recognized as useful for sparking attention, but not sufficient for meaningful change on their own.

Reactions to shorter messages showed a mix of enthusiasm and critique. Appeals to taste and pleasure helped make plant-based eating feel more accessible, while references to tradition and innovation, such as linking new products to familiar recipes, were appreciated by some but rejected by others as disconnected. More

abstract or judgmental phrasing, especially when framing food as a reflection of personal worth, risked alienating audiences.

Importantly, participants underscored the cultural role of traditional food products. This suggests that effective campaigns in Turkey must not only emphasize health or environmental benefits but also respect cultural food traditions and show how APs can be integrated without loss of identity.

Educational foundations and influences

Participants in Turkey described a mix of formal lessons, family traditions, and later self-learning as shaping their food awareness. In school, nutrition education often came through primary lessons on local products or short health modules, while a few recalled dietitians or university exchanges introducing plant-based eating. At home, mothers and grandmothers stressed not wasting food and finishing what was on the plate, while gardening, military service, and festivals added practical lessons. Documentaries and media later prompted many to rethink health and sustainability.

Food education felt most relevant during life transitions e.g., parenthood, the pandemic, health scares, or unemployment. These moments made nutrition either a survival tool or a way to balance sustainability with affordability. Early notions of sustainability were framed through gardens, compost, or seasonal eating, though the word itself only appeared much later through university courses or climate doc-

umentaries. Traditionally, schools and families promoted meat as essential, while APs were marginalised or ridiculed. Social media and YouTube later became major sources of new information.

Schools reinforced meat as real food: canteens prioritised meat dishes, posters promoted fruit and dairy, but plant proteins were absent. University settings often labelled vegan meals as unusual. These experiences left mixed effects—some developed lifelong habits around vegetables, reducing waste, and seasonal eating, while others had to "unlearn" meat's centrality to move toward plant-based diets. Regional moves (e.g., adopting olive oil in the Aegean) and health challenges further shaped habits.

Participants highlighted missed opportunities in early education: food was rarely connected to the environment, farming and gastronomy were undervalued, and practical plant-based cooking was never taught. The messages that stuck ranged from cultural imperatives like "finish your plate" to health slogans ("fried food products are harmful," "drink milk to grow strong"), and even political ones like "eating is a political act." Media campaigns and cartoons also left impressions.

What makes beyond-choice approaches work in practice?

- Emotional storytelling with clear facts
- Food learning through family and life transitions
- Teacher and policy support
- Practical culturally relevant education

According to participants plant-based proteins were almost never taught, school food often disconnected from lessons, and education had only weak to moderate influence on current habits. Schools today are still seen as poorly preparing students for sustainable food futures.

Future visioning and engagement pathways

When participants in Turkey imagined 2035, a sense of scepticism about whether change was possible often came through. Concerns about the climate crisis and political will shaped the conversation, yet within an optimistic scenario, participants highlighted creative and practical approaches for future food education.

For young children, the focus was on playful learning. Storytelling with vegetable characters, school gardens, and simple cooking tasks were seen as ways to spark curiosity and create an emotional connection to food. For teenagers, food was tied to identity, social justice, and experimentation. Learning how food choices affect climate, animals, and human rights made the topic personal, while testing new recipes or trends kept it relevant. For older adults, food education was linked to health, legacy, and family covering nutrition for aging, sharing meals with grandchildren, and returning to traditional practices like seasonal eating and reducing waste.

Participants envisioned APs as a normal part of education. Primary school children might grow beans and cook them, high school students could experiment with lab-grown meat, and university students might design startups using fermented proteins. This staged approach combined curiosity, science, and entrepreneurship.

Teachers were imagined as facilitators of change. Training would equip them with cooking skills, knowledge of nutrition and climate, and cultural awareness. Tools

such as virtual farms and interactive cooking labs would make lessons engaging. Teacher education itself would include food literacy, experiential garden work, and internships in food innovation.

School canteens were reimagined as living classrooms. Menus displayed carbon footprints, food waste was tracked in projects, and students co-designed meals or hosted plant-based cooking clubs. These daily experiences were seen as crucial for turning lessons into practice.

Policy proposals included laws requiring daily plant-based meals, integrating food literacy into national curricula, and government-funded programs for "green cafeteria" transitions. Incentives for local sourcing and stronger community-school partnerships were also mentioned as essential for equity.

Looking back, participants said early exposure could have fostered healthier habits and made plant-based eating feel normal rather than "alternative." Some noted it might even have influenced their careers. For today, they recommended advocating for food literacy as a core subject, supporting school gardens, running national campaigns, and building partnerships with local farmers and companies.

When asked which experiences would have the most impact, practical and participatory approaches stood out. Food as a core subject was valued for linking daily choices with global responsibility. Growing projects and cafeteria challenges were praised for being fun and memorable. Environmental labels were seen as useful when combined with other methods. Startup projects and cooking classes were considered empowering, building skills, confidence, and ownership. Overall, participants emphasized that hands-on learning and cultural change in schools would have the strongest impact on future generations.

Cross country overview

Messaging and language that move: communication strategies to influence behaviour

Across countries, clarity, brevity, and concreteness consistently outperformed abstract or moralising appeals. People responded best to short, plain-language prompts that emphasise immediate, personal payoffs such taste, health/energy, ease, and value, rather than distant collective goals (Denmark, Finland, Germany, Slovenia, Spain, The Netherlands, Turkey). Sensory-forward cues e.g., juicy, satisfying, crisp and appetising visuals reliably lifted interest, especially when paired with simple next steps (Greece, Spain, Poland). By contrast, preachy or guilt-based tones, identity judgments, or heavy jargon dampened receptivity; even when risk framing was credible, it worked best only if balanced with clear alternatives and small, doable actions (Germany, Finland, Greece).

Positive, empowering framing (using terms such as feel better, small switch big impact, try this once a week) was preferred to directives or pledges that imply obligation. People wanted autonomy preserved and options offered, not imposed (Denmark, Finland, Greece, The Netherlands). Social proof helped when it felt authentic, like many are already doing this, but influencer-heavy pushes risked

backlash if seen as manipulative or preachy (Greece, Spain). Humour, warmth, and nostalgia could add stickiness (jingles, family cues, familiar icons) provided they stayed respectful and didn't trivialise the message (Denmark, The Netherlands, Spain, Poland).

Visually, respondents favoured clean design, few words, strong icons/colour, and relatable imagery over dense text or technical charts (Germany, Norway, Slovenia). Value signalling (fair, everyday pricing; savings) and practicality (prep tips, where to find it) were potent motivators, particularly where cost sensitivity is high (Germany, The Netherlands, Poland, Turkey). On campaign cadence, many preferred evolving narratives that build familiarity and trust over one-off hits, though a single striking message can effectively launch or punctuate a longer story (Finland, Greece, Norway, Spain, Turkey).

Bottom line for messaging: lead with eating quality and ease, show how to start in small steps, keep tone inviting not judging, and back claims with crisp, human-centred visuals—letting people feel they are choosing, not being told (All countries).

Educational foundations and influences

Most participants traced their earliest learning to family routines-grandmothers' and parents' cooking, norms about finishing plates, using seasonal produce, and avoiding waste (Germany, Greece, Norway, Slovenia, Spain, Turkey). Formal schooling supplied basic models (pyramid/plate) and occasional home economics, but was often fragmented, outdated, or inconsistently reinforced by school food environments (Denmark, Finland, Germany, Netherlands, Poland, Slovenia, Spain). Many recalled misalignment, canteens normalising processed or meat-heavy options while lessons promoted balance, reducing credibility and long-term impact (Denmark, Germany, Greece, Netherlands, Poland, Spain).

Direct teaching about APs was rare or absent for most cohorts, with familiarity typically arriving later via media, peers, health moments, or travel (Denmark, Germany, Greece, Italy, Netherlands, Poland, Slovenia, Spain, Turkey). Critical life transitions such moving out, becoming a parent, health scares, sport/fitness phases often catalysed self-education and habit shifts (Germany, Italy, Norway, Poland, Spain, Turkey). In recent years, digital platforms (YouTube, TikTok, blogs) became major learning channels, especially for practical skills and recipe ideas (Finland, The Netherlands, Poland, Spain, Turkey).

Looking back, many judged school influence on current choices as moderate at best; sustained habits came more from hands-on practice, cultural routines, and credible adult guidance (doctors, dietitians) than from classroom theory alone (Denmark, Greece, Poland, Spain). Participants widely felt that earlier practical exposure through e.g., cooking, gardening, tasting would have normalised alternatives sooner and built confidence to act (Finland, Germany, Norway, Slovenia, Spain, Turkey).

Implication for foundations: bridge the gap between what is taught and what is offered, prioritise practice over lecture, and integrate trusted messengers (families, healthcare, local producers) with modern digital how-to formats (All countries).

Future visioning and engagement pathways

Across countries, the 2035 vision centres on practical, age-tuned learning that embeds sustainable choices into daily life while keeping choice and cultural identity intact (Denmark, Finland, Germany, Greece, Italy, The Netherlands, Norway, Poland, Slovenia, Spain, Turkey).

For young children, the emphasis is playful, sensory, and hands-on: planting seeds, simple cooking, farm visits, stories and games that make new products familiar and fun (Finland, Greece, The Netherlands, Norway, Slovenia, Spain, Turkey). For teenagers, engagement rises through interactive projects, peer influence, social media, and real-world challenges that link personal health, fairness, and broader impacts to everyday choices; practical cooking remains a high-impact anchor (Denmark, Finland, Germany, The Netherlands, Poland, Spain, Turkey). For adults and older learners, messages flow via trusted channels such as healthcare and community settings and focus on wellbeing, affordability, and legacy (Greece, Norway, Spain, Turkey).

APs are normalised as one set of options among many—appearing in school meals, kitchen labs, growing projects, and cross-subject tasks (from biology to entrepreneurship). Success hinges on familiar formats, strong taste/texture, clear prep, and fair pricing, not on the novelty of the source (Finland, Germany, Greece, The Netherlands, Poland, Slovenia, Spain).

Educators are recast as facilitators equipped with updated knowledge, practical skill-sets, and adaptive tools (from virtual farms to AI-aided resources). Training becomes interdisciplinary and experiential, spanning garden/kitchen practicums, local producer links, and strategies to navigate values, culture, and misinformation (Finland, Germany, Greece, Italy, The Netherlands, Norway, Slovenia, Spain, Turkey).

Food environments are reframed as teaching spaces: many groups envisioned canteens as living classrooms where defaults favour balanced options, students co-design menus, and signage or digital prompts connect choices to health, cost, and broader impacts—provided the food tastes good and feels normal (Denmark, Finland, Germany, Greece, The Netherlands, Poland, Slovenia, Spain, Turkey).

Policy scaffolding underpins scale: mandatory, age-appropriate learning on everyday choices, teacher training, aligned procurement, canteen standards, and support for gardens, cooking programs, and producer partnerships. Affordability is pivotal: value parity or clear added benefits are needed to ensure equity and adoption (Finland, Germany, Italy, The Netherlands, Poland, Spain, Turkey).

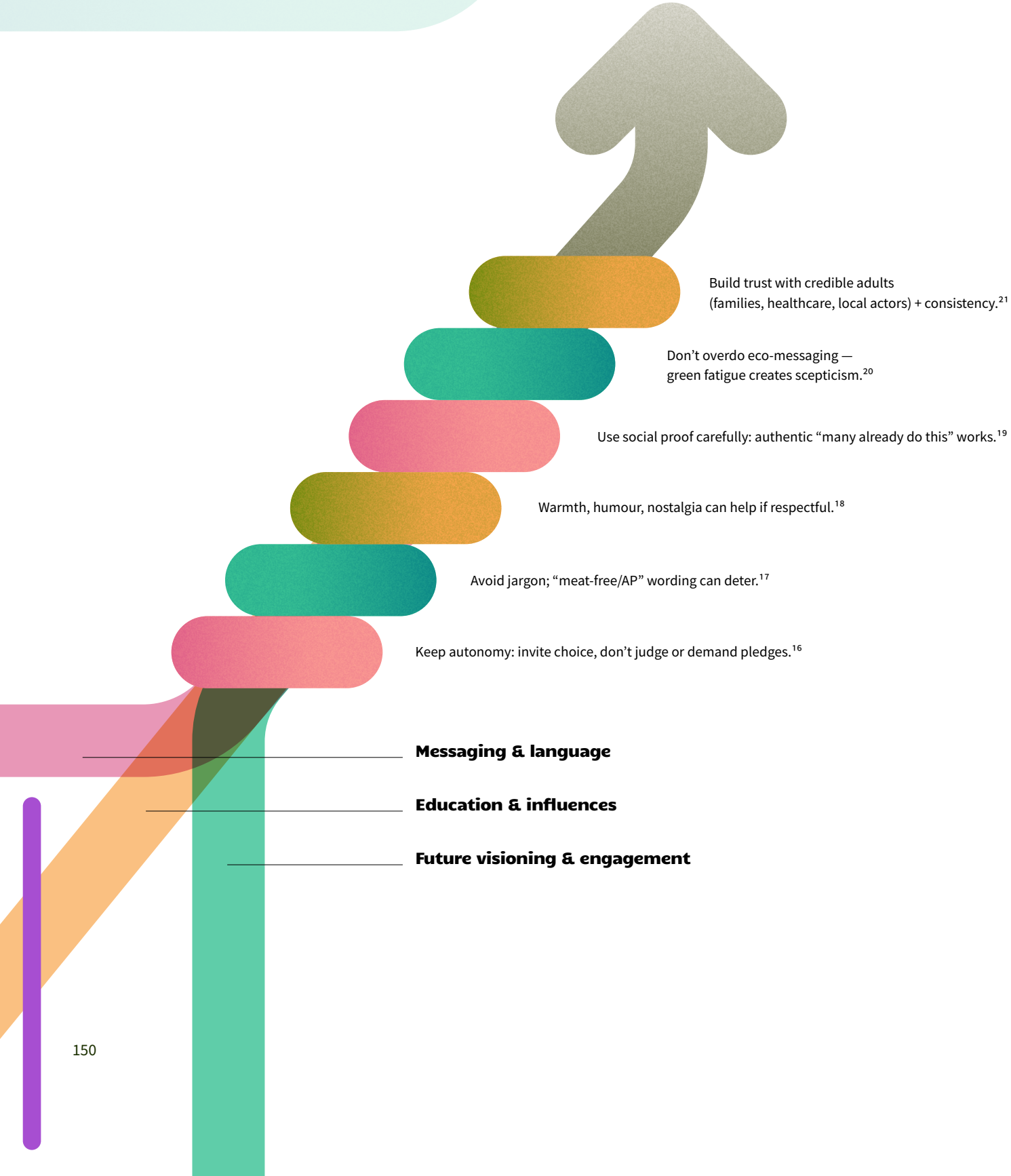
When asked what would have helped most, participants repeatedly elevated practical skills—especially Future Skills cooking classes—followed by growing-to-table projects, real-time challenges, and light-touch impact cues that prompt reflection without scolding (Denmark, Finland, Germany, Poland, Slovenia, Spain, Turkey). Many noted they would have adopted new habits earlier had hands-on learning and supportive environments been present in childhood (Finland, Greece, Norway, Spain).

What does this mean in a snapshot?

Taken together, these findings show that communication, education, and long-term visioning for sustainable diets are neither uniform nor straightforward. Success depends on how strategies are framed, taught, and experienced. Clear, relatable, and practical messages are widely preferred, while abstract or moralising tones risk disengagement. Education has strong potential but remains uneven, with families and life events often shaping choices more than schools. Looking ahead, participants consistently emphasised the power of hands-on, experiential learning and the importance of embedding new skills across life stages. The path forward lies in combining credible, accessible messaging with consistent and practical education, ensuring that transitions feel achievable, relevant, and culturally grounded. If interventions are participatory, gradual, and attentive to everyday realities, they can build trust and accelerate adoption; if they are top-down or disconnected from lived experience, they risk resistance.

The infographic below provides a distilled visual summary of the main findings.

- Combine credible messaging + practical education to build trust and accelerate adoption.[22]
- Best when participatory, gradual, culturally grounded, and rooted in daily life.[22]



Messaging & Language

- Clear, concrete prompts beat abstract or moralising appeals.[1]
- Lead with personal payoffs: taste, energy/health, ease, value.[1]
- Make it doable: “try once a week” + simple next steps.[2]
- Design matters: few words + strong icons + relatable visuals.[3]

Education & Influences

- Early habits come from family routines and culture.[4]
- School learning is uneven; often not reinforced by food environments.[5]
- Misalignment (lessons vs canteen reality) weakens credibility.[6]
- Hands-on practice normalises sooner: cook, taste, grow.[7]
- Life transitions trigger change (moving out, parenting, health moments).[8]
- Digital how-to channels build practical skills (recipes, tips).[9]

Future visioning & engagement

- 2035 vision: practical, age-tuned learning that keeps choice + identity.[10]
- Young kids: playful, sensory, hands-on (plant, cook, visit farms).[11]
- Teens: projects + peers + social media + cooking challenges.[12]
- Adults/older: healthcare + community channels; wellbeing + affordability + legacy.[13]
- Food settings as classrooms: co-designed menus + prompts + good taste.[14]
- Scale needs teacher training, standards, procurement, and affordability.[15]

(1) DK, FI, DE, SI, ES, NL, TR; **(2)** DK, FI, GR, NL; (3) DE, NO, SI; **(4)** DE, GR, NO, SI, ES, TR; **(5)** DK, FI, DE, NL, PL, SI, ES; **(6)** DK, DE, GR, NL, PL, ES; **(7)** FI, DE, NO, SI, ES, TR; **(8)** DE, IT, NO, PL, ES, TR; **(9)** FI, NL, PL, ES, TR; **(10)** DK, FI, DE, GR, IT, NL, NO, PL, SI, ES, TR; **(11)** FI, GR, NL, NO, SI, ES, TR; **(12)** DK, FI, DE, NL, PL, ES, TR; **(13)** GR, NO, ES, TR; **(14)** DK, FI, DE, GR, NL, PL, SI, ES, TR; **(15)** FI, DE, IT, NL, PL, ES, TR; **(16)** DK, FI, GR, NL; **(17)** DK, GR, PL; **(18)** DK, NL, ES, PL; **(19)** GR, ES; **(20)** GR, ES, NL; **(21)** All countries

6. What does this mean for the future? - an outlook

Food remains at the heart of daily life, shaping health, culture, and identity. As societies across Europe re-evaluate how and what they eat, the movement toward more sustainable, diverse protein sources reflect a broader transformation of food systems. The growing interest in APs and related products marks both a technological and cultural shift—one that challenges how food is produced, marketed, and understood. To realise this transition, insights from behavioural, environmental, and educational perspectives must now be translated into strategy. The question is no longer whether change is needed, but how it can be made attainable, trusted, and lasting.

Reframing the food transition

Transforming food systems requires more than innovation; it requires reframing how choice and responsibility are shared. Regulation, market incentives, and education must work together so that sustainable choices become the easiest, most rewarding defaults across different environments where we as consumers make our food choices. This does not mean restricting personal freedom but reshaping default conditions, with transparent opt-outs, fair pricing, practical usage cues/recipes, and credible labelling, so health, sustainability, and accessibility align.

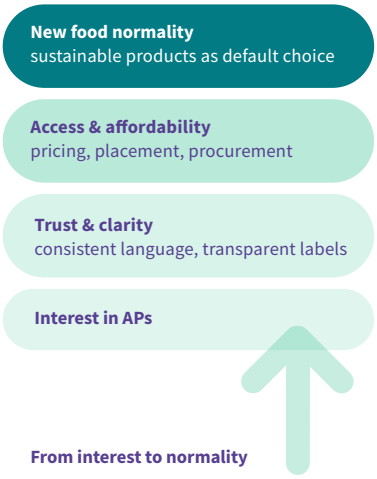
Equally, this transition must be guided by evidence rather than ideology. Food should be understood as a universal good, a matter of collective wellbeing rather than political division. Trust in science, transparency in data, and accountability across sectors are preconditions. Policy and innovation should rest on robust evidence, nutrition, environment, equity, not vested interests or moral polarisation. When guided by facts, food becomes a space of collaboration: better outcomes for people and the planet.

Across Europe, change should be incremental, inclusive, and context-sensitive. Supportive pricing, transparent information, and balanced product placement can make APs part of everyday experience. In doing so, governments and markets move from promoting alternatives to establishing a new norm of balanced, responsible consumption.

Clarifying language and strengthening trust

For APs to gain legitimacy, communication must evolve. Current terminology is fragmented and often confusing, limiting understanding and acceptance. Establishing a clear and consistent vocabulary, covering terms such as plant-based, cultivated, or fermentation-derived proteins, will be essential to improve consumer confidence and create a level playing field across markets.

Equally, clarity is needed in how alternative and conventional proteins are discussed together. Terms like vegan chicken or plant-based burger help consumers situate unfamiliar products, yet they can also challenge existing norms or raise questions of authenticity. Striking a balance means finding neutral, inclusive language that respects cultural traditions while allowing comparison and coexistence. For example, using universal food terms such as burger to describe preparation style rather than source, provided labelling remains transparent.



This balance, between clarity, familiarity, and respect for dietary heritage, is essential to normalising sustainable food products without alienating existing culinary identities. When communication aligns honesty with inclusivity, innovation and tradition can coexist within a shared food vocabulary.

Trust grows with transparency. People want to know what they are eating, where it comes from, how it was produced, and what it contributes to their health and the planet. Standardised front-of-pack essentials (protein per portion, allergens, origin, storage/usage tips), verifiable sustainability claims (with concise references or QR-linked detail), and packaging that matches the claim (e.g., paper/cardboard, resealability) reduce uncertainty and prevent greenwashing. When words, images, and standards align, APs move from novelty to normality.

Making sustainable food accessible

Awareness alone does not guarantee adoption. For sustainable diets to take root, availability, affordability, and visibility must converge across all food environments, from supermarkets and restaurants to schools, hospitals, and public canteens. When APs are priced competitively and integrated seamlessly into daily routines, they become a genuine everyday option rather than an ethical exception.

Policies that expand access are key. Public procurement can accelerate normalisation by including sustainable food products in public institutions, while incentives for producers and retailers can ensure equitable pricing. Accessibility must also extend to vulnerable groups and those facing food insecurity, ensuring that nutritional and sustainable options are not limited by income or geography. Integrating APs into community programmes and affordable meal schemes can make sustainability a shared rather than exclusive experience.

A fair transition means that sustainable food is not only a personal choice but a collective right, accessible, affordable, and relevant for all.

Innovating for quality and resilience

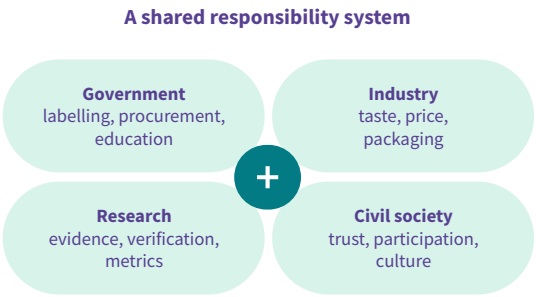
Scientific and technological advances remain central to scaling sustainable food products, but innovation must be paired with resilience and systemic sustainability. Supply chains for APs are still developing and face structural bottlenecks, from sourcing raw materials to processing, packaging, and distribution. Ensuring long-term impact will require investment in local production capacity, logistics efficiency, and fair resource use to reduce dependence on fragile global networks.

A sustainable transition must not replicate the weaknesses of the current system. Overreliance on imported crops, energy-intensive production, or single-region suppliers could undermine the environmental promise of APs. Future policy and industry collaboration should therefore focus on building transparent, circular, and diversified supply chains, grounded in lifecycle assessment and resource efficiency.

Digital innovation, through traceability tools, blockchain, and AI analytics, can further strengthen accountability and verification, ensuring that sustainability claims are measurable and credible. In this way, innovation becomes not only a matter of technological progress but of rebuilding confidence in the integrity and resilience of the entire food system.

Embedding learning and participation

Long-term change relies on education that connects knowledge to practice. People learn not only from information but from experience, through cooking, tasting, and sharing. Embedding sustainability into education and daily food environments ensures that new habits are intuitive rather than imposed.



Formal education can make sustainability and nutrition core life skills by integrating them into curricula and linking theory to practice. Teachers and educators need access to training, digital tools, and partnerships with local producers to make learning hands-on and relevant. Beyond schools, adult and intergenerational learning reinforces the idea that food literacy is lifelong. Families and communities that learn, cook, and experiment together build continuity between tradition and change.

Education thus becomes an enabler of inclusion, helping individuals and societies navigate the transition confidently and creatively.

Strategic directions for a sustainable food future

The collective insights from across Europe point to a clear conclusion: the transformation of food systems will succeed only if it is integrated, transparent, and grounded in shared evidence. Governments, industry, academia, and civil society each hold part of the solution, but progress depends on alignment rather than parallel effort.

Governments can provide stability and vision by harmonising labelling standards, aligning packaging and sustainability claims, supporting research and Life Cycle Assessment (LCA) infrastructure, and embedding sustainability in education and public procurement so APs appear as everyday options in public meals. Industry can translate these frameworks into practice through reformulation that delivers taste/texture, affordable pricing, recyclable/reusable packaging, credible front-of-pack information, and clear usage cues, plus, tastings and chef partnerships that help foods perform in real life. Research institutions contribute independent data, verification methods, and open metrics that underpin accountability, from nutrition profiles and environmental footprints to social equity indicators, and make results comparable across markets. Civil society connects systemic change with social legitimacy, co-creating messages that respect culture, facilitating community tastings and skills programmes, and holding both public and private actors to consistent, evidence-based standards.

When these actors work in concert, the outcome is more than market evolution; it is a redefinition of what normal food looks like. A system where nutritious, affordable, and sustainable food products are the everyday standard; where trust replaces ideology; and where innovation and culture reinforce rather than oppose each other. Evidence, equity, and cooperation will form the foundation of this new era, one where food remains a universal good that sustains people, economies, and the planet alike.

Through collaboration, consistency, and communication, Europe can move from fragmented initiatives to a coherent transformation of its food system. The future of food is not about replacing traditions, but redefining normality, where nutritious, sustainable, and accessible products, in this context in the form of APs, become the everyday standard. In this vision, innovation and trust go hand in hand, ensuring that the evolution of food systems benefits people, society, and the planet alike.

7. Where do we go next and conclusions?

Consumers, as the primary drivers of demand, play a central role in shaping both markets and food system transformation. When it comes to sustainability, and particularly the promotion of APs as a pathway toward healthier and more sustainable diets, it is essential to engage with them meaningfully: listening to their needs, understanding their preferences, and recognising them as key stakeholders in designing credible, transparent, and lasting solutions.

The LIKE-A-PRO project embodies this principle of active consumer engagement through the creation of LLs across 11 European countries, spanning North, South, East, and West Europe. These LLs have served as real-world spaces for exchange, reflection, and co-creation, enabling citizens to engage directly with research and innovation processes. They have helped uncover how people think about, experience, and make choices regarding APs in their everyday food environments-highlighting both shared and context-specific drivers and barriers to adoption.

Through the application of the CCF and the COM-B model, the project has identified where and how interventions can most effectively encourage positive dietary change. Together, these approaches have clarified the interplay between individual capability, social and physical opportunity, and motivation-pointing to concrete leverage points within food environments where sustainable choices can be made easier, more visible, and more rewarding.

Building on these insights, the project's next phase focuses on behavioural intervention pilots (Task 4.3) across supermarkets, restaurants, canteens, and digital platforms. These pilots aim to test practical strategies for expanding the availability and appeal of APs while respecting consumer autonomy. The results, both of the LLs and behavioural intervention pilots, will directly inform the development of a comprehensive set of governance mechanisms that translate behavioural evidence into actionable system-level change.

These governance mechanisms will serve as a bridge between research and policy, ensuring that consumer insights lead to structural and lasting impact. They encompass:

- Modalities for policy action that limit unsustainable and unhealthy food products while promoting sustainable public procurement processes;
- Guidelines for marketing AP products in food environments, with particular attention to choice architecture;
- A proposed labelling format, informed by consumer preferences and behaviour, to improve transparency and comparability;
- Recommendations for communication campaigns that highlight the most effective messaging frames, language, and consumer-driven narratives; and

- A framework for integrating sustainability and health principles into school schemes and curricula, positioning APs as enablers of long-term change.

Together, these mechanisms form coherent solutions that align consumer engagement, market innovation, and policy implementation.

In conclusion, the LIKE-A-PRO project demonstrates that achieving meaningful and sustained dietary change requires not only informed consumers but also enabling governance and coordinated system design. By embedding consumer perspectives into evidence-based policy, market practices, and educational systems, Europe can move closer to a food environment where sustainable, nutritious, and appealing protein choices become accessible and affordable to all. The path forward is inherently collective-uniting all stakeholders in shaping a food system that supports both people and the planet.

References

[1] Bashi, Z., et al. (2019). *APs: The race for market share is on.* McKinsey & Company.

[2] European Commission. (n.d.). *A European Green Deal: Striving to be the first climate-neutral continent.* https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

[3] European Union. (2020). *Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system.* https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en

[4] ING Economics Department. (2017). *The protein shift: Will Europeans change their diet?* ING. https://think.ing.com/reports/the-protein-shift

[5] Hartmann, C., et al. (2021). Consumers' evaluation of the environmental friendliness, healthiness, and naturalness of meat, meat substitutes, and other protein-rich foods. *Food Quality and Preference, 97*, 104486. https://doi.org/10.1016/j.foodqual.2021.104486

[6] Gelski, J. (2018, June 12). Eliminating the pea flavour in pea protein. *Food Business News.* https://www.foodbusinessnews.net/

[7] Bechtold, H., et al. (2020). *European consumer survey on plant-based foods: Describing the product landscape and uncovering priorities for product development and improvement.* ProVeg International.

[8] Lockwood, A. (2021, April 5). Vegan meat price parity: Why cost, not kindness, will end animal agriculture. *Plant Based News.* https://plantbasednews.org/

[9] Szejda, K., & Parry, J. (2020). *Strategies to accelerate consumer adoption of plant-based meat: Recommendations from a comprehensive literature review.* The Good Food Institute. https://gfi.org/reports/strategies-to-accelerate-consumer-adoption-of-plant-based-meat/

[10] World Business Council for Sustainable Development. (2020). *Plant proteins: A key lever to accelerate food system transformation.* https://www.wbcsd.org/

[11] Specht, L., et al. (2020). *Advancing solutions for APs project report: A systemic analysis of the plant protein, fermentation, and cultivated meat industries.* The Good Food Institute.

[12] Xhelili, A., & Nicolau, M. (2021). *From intention to action: Multi-stakeholder recommendations for making sustainable food consumption a reality.* Wuppertal. https://doi.org/10.5281/zenodo.5337036

[13] Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterizing and designing behaviour change interventions. *Im-*

plementation Science, 6(1), 42. https://doi.org/10.1186/1748-5908-6-42

[14] Xhelili, A. (2024). *Governance framework.* In *The LIKE-A-PRO's Food Environment Citizen Innovation Living Labs.* LIKE-A-PRO.

[15] Xhelili, A. (2025). *Living Labs implementation manual.* In *The LIKE-A-PRO's Food Environment Citizen Innovation Living Labs.* LIKE-A-PRO.

[16] Severens, F., Prins, I., & Xhelili, A. (2024). *Participant recruitment and engagement strategy.* In *The LIKE-A-PRO's Food Environment Citizen Innovation Living Labs.* LIKE-A-PRO.

[17] Grossi, F., & Mai, L. (2024). *Train the trainers.* In *The LIKE-A-PRO's Food Environment Citizen Innovation Living Labs.* LIKE-A-PRO.

Facilitating Factors - Capability (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Capability

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Health conditions & physical restrictions	
• Illnesses, allergies, or intolerances linked to conventional proteins make APs necessary alternatives	NO PL
• APs provide safer options: easier to digest, no allergens, no salmonella risk	DE PL SI
• APs allow for higher protein intake without allergy risk	PL
• Safer for group cooking with less risk of food-borne illness (e.g. tofu instead of meat)	DE
Knowledge, education & familiarity	
• Familiarity with APs (e.g. pea, mushroom-based) increases willingness to try	PL ES
• Early introduction via schools and kindergartens, plus educational campaigns, increases knowledge & familiarity	NO ES
• General and formal education (schooling, campaigns, peer explanation, prior knowledge) increases acceptance	DE DK GR IT
• Documentaries, research and traditional media (TV, radio, newspapers) inform and shape perceptions	GR IT ES
• Increased awareness of replacing animal with plant proteins & learning more about APs drives acceptance	IT
Cooking skills	
• Building cooking skills supports integration of APs into diets	GR PL DK
• Recipes, product trials and canteen inspiration increase use	DK FI DE
• Cooking shows and influencers can normalise and increase skills around AP use	GR NL
• Personal cooking enthusiasm and experimentation ease adoption	IT PL
• Prior vegetarian habits and existing AP cooking knowledge help integration	IT PL
• APs are easy and quick to cook compared to meat, or useful in everyday meals, facilitating adoption	DE DK IT

Facilitating Factors - Capability (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Capability

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Awareness of product availability	
• Information on where to find APs, their availability and traceability of production increases adoption	DE GR PL NL ES
• Online searchability and access to acceptable AP sources supports adoption	PL
• Advertising and promotion increase awareness of product existence	DE PL ES NL FI
Perceptions of nutritional value	
• Belief that APs are protein-rich, nutritious and beneficial for health	DE GR PL SI
• Awareness of APs as sources of fibre, minerals and digestibility	PL
• Consideration of nutritional profile when deciding to purchase	ES PL
• Interest in meal composition and nutritional balance	PL
Information processing	
• Clear, accessible information reduces confusion and anxiety	DE PL NL
• Assurance that APs are not dangerous makes consumers less hesitant	PL
• Substantive, rational argumentation justifying AP benefits supports decision-making	PL
Self-efficacy & sense of responsibility	
• Consumers feel capable when they understand how to cook with APs and integrate them into meals	PL IT
• Consumers feel capable when they have education that boosts confidence in using APs	DE DK GR IT
• Consumption of APs seen as a personal contribution to collective good and future sustainability	IT DE
• Feeling responsible for food decisions motivates willingness to change	All 11 countries

Facilitating Factors - Opportunity (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Opportunity

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Availability & accessibility	
• Widely available in supermarkets, shops and other food environments; ease of finding APs increases adoption	IT ES DE PL TR NO NL DK GR FI
• Visibility in supermarkets tempts consumers to try	ES
• Inclusion in mainstream restaurant menus, canteens and schools normalises APs and makes them accessible to more people	DE DK GR NO FI IT
• Strategic product placement (protein shelves, integration with conventional products, aesthetic displays, packaging) increases trial	ES NL DE PL
• Trial opportunities (sampling, tasting in supermarkets, festivals, kids' camps) encourage adoption	DE NO PL ES
• Staff training and food-handler education build confidence in AP promotion	FI ES
Affordability & price perception	
• Some APs seen as cheap/affordable (lentils, beans, soy, tofu), increasing willingness to adopt	FI NO IT
• Willingness to buy if cheaper than meat or cost-effective compared to conventional products	GR IT NO ES NL TR PL
• Price sensitivity and affordability is important for low-income families to consider AP products	NL TR ES
• Incentives, discounts and offers increase appeal	ES
• Perceived fair price should reflect cooking effort to incentivise adoption	NO
• Homemade preparation helps reduce costs	IT
• Rising meat prices make APs comparatively attractive	DE GR ES NL TR NO

Facilitating Factors - Opportunity (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Opportunity

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Convenience & practicality	
• Easy and quick to cook, suitable for time-limited situations	DK IT NO ES DE
• APs are often easier than meat to prepare	FI NO PL
• Familiar recipes can be adapted by replacing meat with APs	NL
• Versatility and variety of APs (tofu, legumes, vegetable proteins) are appreciated	DK FI NL DE IT
• Long shelf-life and ready-made/semi-finished formats add convenience	IT TR PL ES
• Non-perishable, suitable packaging and attractive formats increase suitability	ES
• Ease of integration into daily life for some consumers	IT
• Perception that it's easier to eat meatless in urban environments	DE
• Time to learn more and evaluate APs influences willingness	GR NL
Packaging, labelling & marketing	
• Attractive presentation and packaging drive trial	DE PL ES
• Trustworthy labels (local sourcing, clean labels, no palm oil / deforestation) matter	DE ES
• Naming of dishes influences acceptance	FI NL
• Marketing that highlights taste and quality — not just climate or animal welfare — drives interest	DE
• Better product placement, advertising and promotional incentives increase visibility	NO ES

Facilitating Factors - Opportunity (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Opportunity

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Social norms, cultural acceptance & media influences	
• Mainstreaming APs in society (restaurants, public sphere, cultural acceptance) boosts adoption	DK DE ES TR
• Influence from friends, family, peers and partners strongly shapes behaviour	DE PL NL TR GR SI ES IT FI
• Consuming APs to impress others or due to peer pressure can be influential	GR ES DK
• Media portrayal, influencers, chefs and role models normalise AP consumption	FI DE GR IT PL ES
• Trends (Veganuary, Meat-Free Mondays, social movements) reinforce adoption	DE PL SI ES
• Cultural and religious factors shape AP acceptance	IT NL
• International influence and exposure abroad increase openness	IT
• Endorsement by authorities (WHO, governments) validates APs as healthy and credible	PL TR
Policy & structural factors	
• Price signals (making meat more expensive, rationing) would encourage AP consumption	NO TR DE GR ES NL
• Institutional support and lobbying are shaping AP markets	PL
• Legal obligations could compel adoption	ES

Facilitating Factors - Motivation (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Motivation

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Health & well-being	
• Eating APs for physical health / benefits (better sleep, digestion, overall wellbeing, reduced cholesterol, blood pressure, weight management, muscle mass, less animal fat)	DK IT ES NL TR SI DE GR PL NO
• Specific prevention / treatment (Alzheimer's, cardiovascular disease, gout)	DE ES TR
• Guidance from health professionals (nutritionists, prescriptions) increases adoption	IT ES
• Health-conscious consumers actively seek information and diversify diets	IT SI ES
• Athletes / sporty people value APs for high-protein diets and sport performance	ES PL TR SI
• Reduced trust in meat safety pushes consumers toward APs	PL TR
• Health arguments motivate not only individuals but also family choices (e.g. healthier diet for children)	ES TR
• Most people interested if APs are proven healthy	GR TR
Environmental sustainability	
• Willingness to adopt APs for environmental benefits: lower footprint, biodiversity protection, less pollution, circular economy, sustainable agro-industry	PL SI GR TR ES NL IT DK
• Concern about climate change motivates openness	DK IT GR
• Positive informative content on environmental benefits motivates adoption	GR
• Seeing environmental protection as a duty (e.g. "we must adapt")	TR
• Wider adoption can drive systemic sustainability transitions	TR
Ethics & animal welfare	
• Eating APs to reduce animal harm, for better conscience, or because meat is unethical	DK FI GR IT ES NL DE TR PL
• Ethical sourcing and production valued	PL GR
• Rejection of meat when source is unknown	ES
• Willingness to pay more for ethically produced APs	FI

Facilitating Factors - Motivation (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Motivation

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Economic value & local support	
• Willingness to buy APs if prices are fair, good value, or lower than meat	ES FI IT GR
• Preference for locally produced APs to support the economy	FI GR IT ES NL TR
• Seen as efficient use of resources and job creation	ES
• Creating demand would equal increasing acceptance	GR ES
Taste & sensory experience	
• Taste is critical: people will eat APs if tasty, well-prepared or similar to familiar food products	DK GR NO ES NL TR IT DE FI PL
• Positive experiences with taste and texture (lentils, beans, mushrooms, seaweed, peas, insects) correlate with acceptance	DK GR NO NL TR ES IT DE PL SI
• Negative taste experiences with meat (too salty, chewy, declining quality) push toward APs	NL ES PL IT DE
• Taste improvements possible with spices, sauces, seasoning drive acceptance	NO TR
• Closer resemblance to meat would equal easier acceptance	DE IT TR FI
Curiosity & openness to new food products	
• Curiosity, excitement, willingness to try new things, food trends, seeking new experiences, open to new ideas	DK DE GR IT NO PL SI ES NL TR
• Overcoming disgust or prejudice (e.g. toward insects, APs in general) when presented logically	PL NL ES GR NO

Facilitating Factors - Motivation (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Motivation

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Trust & credibility	
• Greater acceptance if APs are backed by reputable brands, traditional companies or specialised producers	PL ES TR
• Quality control and safety certifications increase confidence	ES TR
• Distrust of meat (microplastics, unsafe production) drives trust in APs	TR PL
Habits & lifestyles	
• APs adopted due to lifestyle (vegetarian / vegan diets, less appetite for meat, replacing meat in recipes, variety-seeking, progressive values)	FI DE IT PL ES NL TR GR

Hindering Factors - Capability (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Capability

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Health & safety concerns	
• Food restrictions and allergies make AP consumption difficult — many vegetarian dishes contain gluten, soy, nuts or legumes	FI DE NO PL SI ES NL
• Health issues prevent incorporation into the diet	GR
• Uncertainty whether APs can be used in special diets (dysphagia, athletes, babies)	ES
• Not being able to digest APs well or doubts about how the body responds	GR ES
• Perception that more people are getting sick due to eating AP products like insects and microbes	ES
• Negative bodily reactions (e.g. stomach pain, discomfort) after consuming plant-based products	DE NO PL ES
Lack of knowledge & education	
• Lack of education and insufficient knowledge on APs prevents purchase	DE GR NO PL SI ES NL TR
• Children are not educated about food and nutrition	NO
• Not knowing / knowing little about the existence of APs	DE GR IT SI ES
• Only knowing limited AP options (tofu, peas, mushrooms)	DE GR SI IT
• Not knowing how to substitute conventional proteins with APs	ES
• Lack of reliable information about APs, varying terminology and difficulties accessing trustworthy sources	ES PL DE NO
• Poor marketing and misinformation regarding APs	PL ES
• Lack of awareness of existing research and data on APs	GR ES

Hindering Factors - Capability (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Capability

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Cooking skills & preparation	
• Not knowing how to cook with APs or how to use them in meals	DK FI DE NO PL SI ES NL
• Lack of good recipes for APs	DE IT NO TR
• Not knowing how to season APs	PL
• Uncertainty about how to store APs and their use-by dates	ES
• Not having the kitchen utensils to cook with APs	ES
• Wanting more recipes for APs prepared differently from traditional products	IT
Perceived necessity & value	
• Belief that APs are not necessary, lack of conviction about the necessity of using them	GR PL
• The definition of APs is seen as too broad or misleading, including both processed and fresh products	IT
• Consumers feel APs do not offer any real advantage over conventional proteins	GR
• Not realising APs can be integrated into one's diet	GR
Product availability & transparency	
• Lack of reliable and clear information on where to buy APs or whether they are of good quality	IT ES
• Lack of transparency regarding cultivation methods and production processes	IT PL ES TR GR
• Perception that APs are primarily associated with Asian cuisine, leading to cultural misalignment	DE ES
• Belief that cultured meat is the same as 3D-printed meat, causing confusion	ES
Nutritional knowledge & concerns	
• Lack of knowledge regarding the nutritional values, processing levels and health effects of APs	DE IT NO ES NL
• Concern that consumers are not getting enough nutrients or protein with APs (iron, vitamin B12)	DK DE FI PL
• Perception that APs have low amino-acid values	TR

Hindering Factors - Opportunity (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Opportunity

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Product availability, accessibility & appeal	
• APs are often not offered or distributed in many retail and dining settings, limiting consumer access	GR DK NO SI NL TR DE PL IT
• Availability of APs depends on the type of shop or restaurant; some do not offer them at all	IT TR
• Supermarket placement and lack of promotional efforts make APs difficult to locate and access	DE NO ES NL
• Limited availability in rural and smaller towns results in fewer options compared to urban areas	DE ES
• Short product lifespans and limited stock reduce the reliability of AP availability	FI ES DE IT
• Lack of savoury options and diverse flavours limits the appeal of APs to a wider audience	DE ES
• Few organic options and concerns about the quality of available APs reduce their attractiveness	DE DK
• Cultural dietary restrictions (e.g. halal options) are not always met, limiting accessibility	DE TR
• Unattractive product presentation in stores makes APs less appealing than conventional meat products	DE
• Vegan labelling often creates negative perceptions, especially when APs are compared directly to meat	DK NL
• Small or unclear labels make it difficult for consumers to distinguish between vegan and vegetarian options	DE
• APs are not typically seen as main dishes in restaurants, reducing their likelihood of being consumed regularly	DE

Hindering Factors - Opportunity (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Capability

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Cooking skills & preparation	
• Not knowing how to cook with APs or how to use them in meals	DK FI DE NO PL SI ES NL
• Lack of good recipes for APs	DE IT NO TR
• Not knowing how to season APs	PL
• Uncertainty about how to store APs and their use-by dates	ES
• Not having the kitchen utensils to cook with APs	ES
• Wanting more recipes for APs prepared differently from traditional products	IT
Perceived necessity & value	
• Belief that APs are not necessary, lack of conviction about the necessity of using them	GR PL
• The definition of APs is seen as too broad or misleading, including both processed and fresh products	IT
• Consumers feel APs do not offer any real advantage over conventional proteins	GR
• Not realising APs can be integrated into one's diet	GR
Product availability & transparency	
• Lack of reliable and clear information on where to buy APs or whether they are of good quality	IT ES
• Lack of transparency regarding cultivation methods and production processes	IT PL ES TR GR
• Perception that APs are primarily associated with Asian cuisine, leading to cultural misalignment	DE ES
• Belief that cultured meat is the same as 3D-printed meat, causing confusion	ES
Nutritional knowledge & concerns	
• Lack of knowledge regarding the nutritional values, processing levels and health effects of APs	DE IT NO ES NL
• Concern that consumers are not getting enough nutrients or protein with APs (iron, vitamin B12)	DK DE FI PL
• Perception that APs have low amino-acid values	TR

Hindering Factors - Motivation (COM-B)

COUNTRY COVERAGE 1 2–3 4–6 7–11

DK Denmark **FI** Finland **DE** Germany **GR** Greece **IT** Italy **NL** Netherlands **NO** Norway **PL** Poland **SI** Slovenia **ES** Spain **TR** Turkey

Motivation

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Health concerns & perceived benefits of meat	
• Meat is perceived as healthier than APs by many consumers, especially in countries with strong meat-eating traditions	TR NO PL SI NL
• Concerns about malnutrition from cutting out meat (lack of essential nutrients like protein and vitamins) prevent adoption	TR DE ES NO
• Belief that meat is essential for optimal nutrition — particularly for muscle building and protein intake	PL NL TR
• Uncertainty about the health impact of APs, especially when compared to conventional meat	NL IT NO TR ES DE
• Negative perceptions of APs, especially insect-based or ultra-processed options, as harmful or overly complex for optimal nutrition, deter adoption	DE IT NO ES
Sustainability & environmental concerns	
• Concerns about the sustainability of AP production (environmental impact of soy and other crops), questioning whether APs are truly more sustainable than meat	FI IT NL ES
• Concerns about transportation costs for APs produced abroad are seen as an obstacle to making APs sustainable and affordable	NO NL
• Ethical issues (consequences for conventional farms, animal welfare, environmental impact of shifting away from animal farming) hinder adoption	ES NL DE
Habits & perceptions	
• Meat consumption deeply embedded in habits, making widespread acceptance of APs difficult	GR DE IT NO PL TR
• Prejudices against APs — negative connotations about insects or plant-based proteins — create resistance	IT GR ES
• Food is an emotional barrier — many people unwilling to change dietary habits, even knowing the environmental or ethical benefits	GR IT NL
• Fear of new and unfamiliar products leads to reluctance in adopting APs	PL SI ES NL

Hindering Factors - Motivation (COM-B) (continued)

COUNTRY COVERAGE 1 2–3 4–6 7–11

Motivation

SUB-TOPICS AND CONSUMER FINDINGS	APPLICABILITY BY COUNTRY
Taste, texture & perceived quality	
• Taste and texture of APs (especially those meant to replace meat) are seen as inferior or unappealing compared to conventional meat, deterring adoption	DE DK FI IT NO ES NL
• Negative experiences with APs or previous disappointment with taste contribute to a lack of interest in trying them again	DK IT DE
• Some AP products are seen as overly processed, leading to concerns about additives, chemicals and health implications	DE IT PL SI NL
• Preference for fresh produce over processed products leads some consumers to avoid APs, often sold in processed forms	NL ES
• Concerns about APs' nutritional adequacy and low trust in their long-term health effects, plus lack of expert verification, raises doubts	GR TR PL
• Distrust due to negative media portrayals or misinformation	ES GR

Like a PRO

like-a-pro.eu

Funded by
the European Union

cscp