D4.2 Consumer insights datasets

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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].

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. In addition, for better digestion of the information, the report will be designed.

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 **Table 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 **Table 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 **physica**l 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 **geographical 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 **Table 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 4.3.**

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 implementers 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**.

Table 1. Participants overview and demographic summary by country

	DK	FI	DE	GR	IT	NL	NO	PL	SI	ES	TR	Total
	FCBSD	DEMOS	CSCP	ACG-RC	UNIBO	WWM	Moreforsking	USWPS	ITC	CNTA	Zeytince	
KPIs (as in the GA)	**500**	**120**	**230**	**800**	**130**	**250**	**120**	**130**	**200**	**300**	**250**	**3030**
Total number of participants	**608**	**130**	**237**	**805**	**244**	**255**	**155**	**160**	**205**	**716**	**266**	**3729**
Gender (%)												
Women	67.3	72.3	62.4	53.3	59.0	59.2	42.6	68.1	60.5	65.8	56.8	60.6
Men	31.2	24.6	34.6	44.1	39.3	40.8	57.4	30.6	39.5	33.1	38.0	37.5
Non-binary	1.2	0.8	0.8	1.6	0.0	0.0	0.0	1.3	0.0	0.7	3.0	1.0
Prefer not to say / other	0.3	2.3	2.1	1.0	1.6	0.0	0.0	0.0	0.0	0.4	2.3	0.8
Age (%) *												
<19 (not all above 18) ***	6.4	3.3	6.8	4.0	2.9	3.9	0.0	16.3	0.5	0.4	5.3	5.5
19-34	47.2	34.7	62.4	79.9	47.5	32.2	42.8	70.0	34.0	28.6	60.9	49.9
35-44	11.0	10.7	12.7	5.7	9.9	11.0	10.3	8.1	28.1	23.0	24.1	13.9
45-64	23.7	28.1	9.3	9.3	31.0	24.7	32.4	5.6	30.5	36.2	8.6	21.5
65+	11.7	23.1	8.9	1.1	8.7	28.2	14.5	0.0	6.9	11.7	1.1	9.2
Education (%)												
Less than high school	8.1	18.6	17.1	0.7	2.5	0.8	1.9	13.1	4.9	5.4	1.9	5.5
High school	15.1	48.1	44.9	36.6	48.5	18.8	28.6	45.6	42.0	5.4	12.1	26.0
Some college / associate	21.9	10.9	16.7	14.8	18.4	24.3	19.5	5.0	15.6	15.9	14.7	16.9
Bachelor's or higher	54.9	22.5	21.4	47.8	30.5	56.1	50.0	36.3	37.6	73.2	71.3	51.7
Household size (%)												
1 person	28.3	33.3	23.3	16.5	25.5	14.5	20.0	24.4	16.0	10.9	30.5	20.1
2 people	35.5	37.2	43.2	24.3	26.9	46.7	45.2	33.1	23.5	34.8	15.0	32.1
3+people	36.2	29.5	33.5	59.1	47.6	38.8	34.8	42.5	60.5	54.3	54.5	47.7
Income (%)												
Above average	29.9	17.8	20.6	32.0	34.4**	40.4	26.6	52.5	28.6	28.6	26.3	29.1
About average	18.3	17.1	17.6	48.7	43.4**	35.6	21.4	45.6	49.3	51.8	45.5	37.4
Below average	51.8	65.1	61.8	19.3	22.1**	24.0	51.9	1.9	22.1	19.6	28.2	33.4
Place of residence (%)												
Large metro (>1M)	55.3	69.8	21.5	68.9	16.6	55.7	6.5	40.6	0.0	51.7	67.7	49.5
Medium city (100k-1M_	18.4	9.3	56.5	20.7	52.3	16.1	7.8	41.3	1.7	16.1	21.1	22.8
Small town / rural	26.3	20.9	21.9	10.3	31.1	28.2	85.7	18.1	98.3	32.3	11.3	27.7

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).*

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 Europeans' and APs: an overview of behavioural determinants

4.1.1 Facilitating factors for consumer acceptance of APs

This section showcases the **facilitating factors** that support consumer acceptance of APs. Using the COM-B framework, the factors have been identified and then **clustered according to key behavioural determinants**. The tables present these clusters alongside the **countries where they apply**, allowing for both thematic and cross-country insights.

Table 2. Facilitating factors – Capability (COM-B)

CAPABILITY	
Consumer findings grouped under main sub-topics	**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 foodborne illnesses (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 to children via schools and kindergartens, plus educational campaigns increase knowledge and familiarity	NO, ES
• General and formal education (schooling, campaigns, peer explanation, prior knowledge) increases acceptance	DE, DK, GR, IT
• Documentaries, research, and traditional media coverage (TV, radio, newspapers) inform and shape perceptions	GR, IT, ES
• Increased awareness of replacing animal with plant proteins and their benefits, as well as learning more about APs drives acceptance	IT
Cooking skills	
• Building cooking skills supports integration of APs in one's diets	GR, PL, DK
• Recipes, product trials, and canteen inspiration increase use	DK, FI, DE
• Cooking shows and influencers can normalize and increase skills on 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 every day meals facilitating adoption	DE, DK, IT
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 and 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 increased adoption	IT, DE
• Feeling responsible for food decisions motivates willingness to change	All countries

Table 3. Facilitating factors – Opportunity (COM-B)

OPPORTUNITY	
Consumer findings grouped under main sub-topics	**Applicability by country**
Availability and accessibility	
• Widely available in supermarkets and shops and other food environments, as well as ease to find AP products increase 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 makes APs more normalized, and available / accessible to more people	DE, DK, GR, NO, FI, IT
• Strategic product placement in supermarkets (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 and price perception	
• Some APs seen as cheap/affordable (lentils, beans, soy, tofu) leading to increased 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
Convenience and 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, 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 and 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 drive interest	DE
• Better product placement, advertising, and promotional incentives increase visibility	NO, ES
Social norms, cultural acceptance and 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 an influential factor	GR, ES, DK
• Media portrayal, influencers, chefs, and role models normalize 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 and 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

Table 4. Facilitating factors – Motivation (COM-B)

MOTIVATION	
Consumer findings grouped under main sub-topics	**Applicability by country**
Health and well being	
• Eating APs for physical health/benefits (better sleep, digestion, overall wellbeing, reduced cholesterol, high 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 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 and 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
Economic value and local support	
• Willingness to buy APs if prices fair, good value, or lower than meat	ES, FI, IT, GR
• Preference for locally produced APs to support economy	FI, GR, IT, ES, NL, TR
• Seen as efficient use of resources and job creation	ES
• Creating demand would equal to increasing acceptance	GR, ES
Taste and sensory experience	
• Taste is critical: people indicated they 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 and 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

Trust and credibility	
• Greater acceptance if APs are backed by reputable brands, traditional companies, or specialized 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 and 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

4.1.2 Hindering factors for consumer acceptance of APs

This section showcases the **hindering factors** that impede consumer acceptance of APs. Using the COM-B framework, the factors have been identified and then **clustered according to key behavioural determinants**. The tables present these clusters alongside the **countries where they apply**, allowing for both thematic and cross-country insights.

Table 5. Hindering factors – Capability (COM-B)

CAPABILITY	
Consumer findings grouped under main sub-topics	**Applicability by country**
Health and safety concerns	
• Difficult to consume APs due to food restrictions and allergies, since many vegetarian dishes contain gluten, soy, nuts, legumes	FI, DE, NO, PL, SI, ES, NL
• Health issues that prevent incorporation into the diet	GR
• Uncertainty whether APs can be used in special diets, such as dysphagia, athletes, or babies	ES
• Not being able to digest APs well or doubts about whether APs are received well by the human body	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 and 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, like 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
Cooking skills and 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 what their use-by dates are	ES

• Not having the kitchen utensils to cook with APs	ES
• Wanting more recipes for APs that are prepared differently from traditional products	IT
Perceived necessity and value	
• Belief that APs are not necessary or lack 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 that APs do not offer any real advantage over conventional proteins	GR
• Not realizing that APs can be integrated into one's diet	GR
Product availability and 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 and 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, such as iron and vitamin B12	DK, DE, FI, PL
• Perception that APs have low amino acid values	TR
• Concern that APs may not be satiating enough compared to meat	TR, ES
• Lack of certification from experts ensuring that APs provide adequate protein and nutrition	GR

Table 6. Hindering factors – Opportunity (COM-B)

OPPORTUNITY	
Consumer findings grouped under main sub-topics	**Applicability by country**
Product availability, accessibility and 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
• The availability of APs depends on the type of shop or restaurant, with some not offering these products at all	IT, TR
• Supermarket placement and the 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 APs 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, such as the need for halal options, are not always met, limiting accessibility for some consumers	DE, TR

• Unattractive product presentation in stores makes APs less appealing compared to 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
Pricing and economic	
• Consumers perceive the cost of APs as too high compared to traditional animal-based proteins, deterring adoption	Fi, DE, GR, IT, NO, PL, SI, ES, NL, TR
Time and cooking	
• Time-consuming preparation of raw APs (e.g., beans, lentils, peas) is a major deterrent for busy consumers	DK, DE, IT, NO, PL, SI, ES
• The lack of time to cook with APs or to learn how to use them effectively prevents many from adopting them	PL, NO
• Cooking with APs is seen as more difficult than cooking with meat, which is easier and faster for many consumers	FI, NO, NL
• Preparing extra dishes for social gatherings without meat is time-consuming and considered impractical	DE, NO, PL
Social and cultural acceptance	
• Social pressure from family and peers to consume meat often prevents individuals from trying APs	GR, PL, NL, NO
• Cultural perceptions of APs as exotic or niche products, often linked to specific cuisines (e.g., Chinese or vegan), deter many consumers from adopting them	GR, ES, DK, IT, DE
• Mainstream food cultures focused on meat make it challenging for APs to gain widespread acceptance	DK, FI, DE, GR, NO, PL, TR
• Rejection of APs due to unfamiliarity and a lack of cultural integration	GR, ES
• Negative perceptions of APs, especially insect-based products, discourage many from considering them as viable alternatives	GR, PL, ES
• Cultural stereotypes, particularly in working-class communities, make it harder for certain demographics (e.g., men) to embrace APs	DE, PL

Table 7. Hindering factors – Motivation (COM-B).

MOTIVATION	
Consumer findings grouped under main sub-topics	**Applicability by country**
Health concerns and 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 (e.g., due to lack of essential nutrients like protein and vitamins) prevent many from adopting APs	TR, DE, ES, NO
• Belief that meat is essential for optimal nutrition, particularly for muscle building and protein intake is widespread	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 and environmental concerns	

• Concerns about the sustainability of AP production, including the environmental impact of soy and other crops, are common, with some consumers 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
• Perceptions of ethical issues, such as the potential consequences for conventional farms, animal welfare, and the environmental impact of shifting away from animal farming, hinder adoption	ES, NL, DE
Habits and perceptions	
• Meat consumption deeply embedded in habits making widespread acceptance of APs difficult	GR, DE, IT, NO, PL, TR
• Prejudices against APs, including negative connotations about insects or plant-based proteins creates resistance	IT, GR, ES
• Food is an emotional barrier, with many people unwilling to change their dietary habits, even if they know the environmental or ethical benefits of APs	GR, IT, NL
• Fear of new and unfamiliar products leads to reluctance in adopting APs	PL, SI, ES, NL
Taste, texture and perceived quality	
• Taste and texture of APs, especially those meant to replace meat, are seen as inferior or unappealing compared to conventional meat, which deters many consumer	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, which are often sold in processed forms	NL, ES
• Concerns about APs' nutritional adequacy and low trust in their long-term health effects as well as lack of expert verification raises doubts	GR, TR, PL
• Distrust due to negative media portrayals or misinformation	ES, GR

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

This section presents a cross-country summary of the **facilitating** and **hindering factors** 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.

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*).

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.

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 6.**

4.3 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 **Table 8** 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.

Table 8. Awareness and eating behaviours regarding APs

	DK	FI	DE	GR	IT	NL	NO	PL	SI	ES	TR	Total
Awareness (%)												
Cultured (lab-grown) meat and seafood	55.9	55.4	71.7	52.3	44.7	72.9	61.9	36.9	47.3	46.4	49.2	53.6
Plant proteins and plant-based meat and dairy analogues	96.1	90.0	94.1	78.4	67.2	95.3	93.5	99.4	72.7	82.5	54.9	83.1
Fermentation-derived protein products (e.g., mycoprotein)	42.8	46.2	45.1	24.8	27.0	44.3	47.1	35.6	39.0	34.4	47.4	36.8
Macroalgae (seaweed) and microalgae-based products	64.5	53.1	60.8	25.8	35.7	48.6	71.6	76.3	62.0	57.1	42.9	50.3
Edible insects	72.0	57.7	78.9	31.2	54.5	75.3	75.6	83.1	60.0	63.0	50.8	58.7
Eating behaviour (%)												
I have cut down on my overall meat	41.3	39.7	35.4	20.4	35.1	32.5	20.1	0.6	20.0	17.6	22.3	26.8
I have cut down on my consumption of particular types of meat products	21.2	28.9	20.1	27.2	22.1	12.9	26.6	31.9	29.3	27.8	20.8	23.9
I have not cut down my usual meat consumption	28.1	22.3	27.1	50.4	31.7	39.2	48.7	46.9	41.4	51.3	46.0	41.1
I do not eat meat	9.4	9.1	17.5	2.0	11.1	15.3	4.5	2.6	9.3	3.4	10.9	8.2
Would you consider in the future to reduce your protein intake (and replace it with other types of non-animal products)? (%)												
Yes	90.0	74.1	76.8	47.1	74.2	58.8	53.3	68.1	51.3	67.2	59.6	65.7

Figure 1: Impressions of the LLs across the different countries - batch 1

Figure 2: Impressions of the LLs across the different countries - batch 2

Figure 3: Impressions of the LLs across the different countries - batch 3

Figure 4: Impressions of the LLs across the different countries - batch 4

5. Promoting APs in the European market: 4 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.

5.1.1 Key findings by country: Denmark

5.1.1.1 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 emphasized 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**.

5.1.1.2 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 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.

5.1.1.3 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.**

5.1.2 Key findings by country: Finland

5.1.2.1 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.

5.1.2.2 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**.

5.1.2.3 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).

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**. Completely 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.

5.1.3 Key findings by country: Germany

5.1.3.1 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.

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.

5.1.3.2 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.

5.1.3.3 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**.

5.1.4 Key findings by country: Greece

5.1.4.1 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.

5.1.4.2 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**.

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. Respondents 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.

5.1.4.3 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 businesses or individuals who did not comply with "choice editing" policies.

5.1.5 Key findings by country: Italy

5.1.5.1 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**.

5.1.5.2 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**.

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**.

5.1.5.3 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**.

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**.

5.1.6 Key findings by country: Norway

5.1.6.1 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 dietary 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.

5.1.6.2 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.

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**.

5.1.6.3 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, provided 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.

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**.

5.1.7 Key findings by country: Poland

5.1.7.1 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.

5.1.7.2 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**.

5.1.7.3 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.

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 coercion 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.

5.1.8 Key findings by country: Slovenia

5.1.8.1 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.

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.

5.1.8.2 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.

5.1.8.3 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.

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.

5.1.9 Key findings by country: Spain

5.1.9.1 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.

5.1.9.2 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**.

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.

5.1.9.3 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.

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.

5.1.10 Key findings by country: The Netherlands

5.1.10.1 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.

5.1.10.2 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**.

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**.

5.1.10.3 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 using **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.

5.1.11 Key findings by country: Turkey

5.1.11.1 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**.

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.

5.1.11.2 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**.

5.1.11.3 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.

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**.

5.1.12 Cross country overview

5.1.12.1 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**.

5.1.12.2 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, Poland, 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**.

5.1.12.3 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).*

5.1.12.4 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.

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].

5.2.1 Key findings by country: Denmark

5.2.1.1 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.

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

5.2.1.2 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.**

5.2.1.3 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).

5.2.2 Key findings by country: Finland

5.2.2.1 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**.

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.

5.2.2.2 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.

5.2.2.3 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).

5.2.3 Key findings by country: Germany

5.2.3.1 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 c**lear 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.

5.2.3.2 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.

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 **everyday 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**.

5.2.3.3 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.

5.2.4 Key findings by country: Greece

5.2.4.1 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.

5.2.4.2 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.

5.2.4.3 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.

5.2.5 Key findings by country: Italy

5.2.5.1 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.

5.2.5.2 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.

5.2.5.3 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 noted 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.

5.2.6 Key findings by country: Norway

5.2.6.1 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**.**

5.2.6.2 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.

5.2.6.3 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.

5.2.7 Key findings by country: Poland

5.2.7.1 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 c**lear 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.

5.2.7.2 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**.

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.

5.2.7.3 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.

5.2.8 Key findings by country: Slovenia

5.2.8.1 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.

5.2.8.2 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.

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.

5.2.8.3 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.

5.2.9 Key findings by country: Spain

5.2.9.1 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.

5.2.9.2 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.

5.2.9.3 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.

5.2.10 Key findings by country: The Netherlands

5.2.10.1 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.

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

5.2.10.2 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.

5.2.10.3 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 comments** 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.

5.2.11 Key findings by country: Turkey

5.2.11.1 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.

5.2.11.2 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 recipes**. 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.

5.2.11.3 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.

5.2.12 Cross country overview

5.2.12.1 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).*

5.2.12.2 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).*

5.2.12.3 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 novelty 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).*

5.2.12.4 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*).

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.

In supermarkets, 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**.

In restaurants, 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.

5.3.1 Key findings by country: Denmark

5.3.1.1 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**.

5.3.1.2 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.

5.3.1.3 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**.

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.

5.3.2 Key findings by country: Finland

5.3.2.1 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**.

5.3.2.2 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.

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**.

5.3.2.3 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.

5.3.3 Key findings by country: Germany

5.3.3.1 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.

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.

5.3.3.2 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.

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.

5.3.3.3 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.

5.3.4 Key findings by country: Greece

5.3.4.1 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.

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.

5.3.4.2 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.

5.3.4.3 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 appreciated 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.

5.3.5 Key findings by country: Italy

5.3.5.1 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.

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.

5.3.5.2 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 findings 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.

5.3.5.3 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 i**ndependent 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.

5.3.6 Key findings by country: Norway

5.3.6.1 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.

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 **conventiona**l 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.

5.3.6.2 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.

5.3.6.3 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.

5.3.7 Key findings by country: Poland

5.3.7.1 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.

5.3.7.2 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.

5.3.7.3 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.

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.

5.3.8 Key findings by country: Slovenia

5.3.8.1 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 preferences and shopping goals** within each specific setting.

5.3.8.2 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.

5.3.8.3 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.

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.

5.3.9 Key findings by country: Spain

5.3.9.1 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 transparent 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.

5.3.9.2 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.

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.

5.3.9.3 Role of labels in consumer decision making

Food labels are critical for guiding consumer choices regarding health, sustainability, 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).

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.

5.3.10 Key findings by country: The Netherlands

5.3.10.1 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 select 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.

5.3.10.2 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.

5.3.10.3 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 appreciated **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.

5.3.11 Key findings by country: Turkey

5.3.11.1 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.

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**, making 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.

5.3.11.2 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.

5.3.11.3 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.

5.3.12 Cross country overview

5.3.12.1 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).*

5.3.12.2 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," "homemade") **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).*

5.3.12.3 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.

5.3.12.4 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**.

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.

5.4.1 Key findings by country: Denmark

5.4.1.1 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**.

5.4.1.2 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.

5.4.1.3 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 experimenting 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**.

5.4.2 Key findings by country: Finland

5.4.2.1 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.

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**.

5.4.2.2 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.

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

5.4.2.3 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.

5.4.3 Key findings by country: Germany

5.4.3.1 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.

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.

5.4.3.2 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 introduced 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.

5.4.3.3 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.

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.**

5.4.4 Key findings by country: Greece

5.4.4.1 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.

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 alienating 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.

5.4.4.2 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.

5.4.4.3 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.

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.**

5.4.5 Key findings by country: Italy

5.4.5.1 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**.

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.

5.4.5.2 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.

5.4.5.3 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.

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.**

5.4.6 Key findings by country: Norway

5.4.6.1 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.

5.4.6.2 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.

5.4.6.3 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.

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 accessible 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.

5.4.7 Key findings by country: Poland

5.4.7.1 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.

5.4.7.2 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.

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 trial-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.

5.4.7.3 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 benefits** 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.

5.4.8 Key findings by country: Slovenia

5.4.8.1 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.

5.4.8.2 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**.

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.

5.4.8.3 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**.

5.4.9 Key findings by country: Spain

5.4.9.1 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.

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.

5.4.9.2 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.

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.

5.4.9.3 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.

5.4.10 Key findings by country: The Netherlands

5.4.10.1 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.

5.4.10.2 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.

5.4.10.3 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.

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**.

5.4.11 Key findings by country: Turkey

5.4.11.1 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**.

5.4.11.2 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 documentaries**. 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.

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**.

5.4.11.3 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**.

5.4.12 Cross country overview

5.4.12.1 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*).

5.4.12.2 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*).

5.4.12.3 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*).

5.4.12.4 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.

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.

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