The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Evolving appetites: an in-depth look at European attitudes towards plant-based eating.

A follow-up to the 2021 survey report, '*What Consumers Want*'

November 2023

www.smartproteinproject.eu

Content Overview

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

I. What is the Smart Protein project?

The Smart Protein project is a €10 million EU-funded project that seeks to develop the next generation of foods

One of the most **innovative** plant-based projects

A collaboration of **33 partners** from more than **20 countries**

4 years in duration (2020-2024)

An **EU-funded research project** (Horizon 2020) with a €9+ million budget

Objective: *innovative, cost-effective, and resource-efficient EU-produced plant proteins from:*

chickpeas, lentils, quinoa, and fava beans

Innovative protein *products from plants*

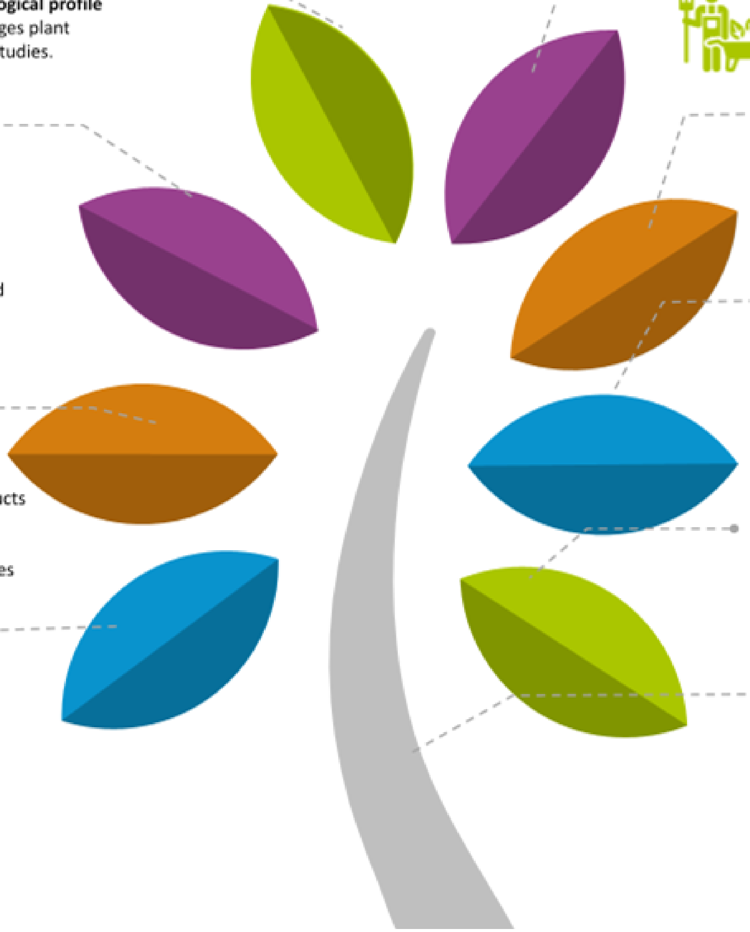
yeast and fungi

New protein ingredients

byproducts of pasta, bread, and beer

*A **circular economy** will be created by upcycling side streams*

Smart Protein project strategy: A Farm to Fork Initiative



WP4 – Food nutrition and health

Objectives: Optimisation of the nutritional and biological profile of the Smart Protein food ingredients/foods/beverages plant based products prototyped via human intervention studies.
Key players: Food and beverage industries

WP3 – Food processing

Objectives: Protein-protein interaction, protein functionality, development of food ingredients/foods/beverages plant based products. Formulate protein combinations for partial or full substitution of protein sources traditional utilised. Industrial validation and demonstration of developed food and beverage prototypes.
Key players: Food and beverage industries

WP2 – Plant protein processing and side stream up-cycling

Objectives: Protein extraction validation at the industrial environment, up-cycling side-stream products generates from Smart Protein partners, mycelium, mushroom protein production.
Key players: Food and beverage ingredients companies

WP1 – Protein crop, soil and water management

Objectives: Water management, soil fertility protection, protein crops validation and production strengthening.
Key players: Farmers, farmers support associations, plant breeders

WP5 – Exploitation & business development

Objectives: Assessment of the commercial feasibility and safety of protein channels through its live interaction among the WP1-WP4 – Business case-development
Key players: Farmers/Industries/Food retailers, consumers/support, associations

WP6 – Consumer studies

Objectives: Development and implementation of plant-based food and beverage prototypes to enhance consumer's acceptance, consumer readiness, network and promoting activities.
Key players: Food retailers, consumers/support associations

WP7 – Dissemination and communication

Objectives: Disseminate, exploit and communicate the results of the Smart Protein project within and outside the consortium to the public and relevant professional sectors such as food industry, manufacturing and production, food and regulatory authorities.
Key players: Farmers/Industries/Food retailers, consumers/support, associations, policy makers

WP8 – Sustainability Assessment

Objectives: Environmental impact profiles of protein food covering the whole protein food supply chain (from cradle to grave).
Key players: Farmers/Industries/Food retailers, consumers/support, associations, policy makers

WP9 – Project management and coordination

Objectives: Overall management of the project, establishment of an effective communication infrastructure and foster the integrative process within the consortium, ensure consortium's performance.

33 partners from over 20 countries

Horizon2020
European Union Funding
for Research & Innovation

Objectives

- **To identify readiness towards consumption of plant-based foods by EU citizens**, to determine their current habits, the key drivers of food choices and consumer trust towards plant-based foods to implement a predictive platform of industrially relevant information for product development and marketing activities.

- **Evaluate determinants of consumer trust towards plant-based foods,** consumer food-technology-neophobia and trust towards the food industry actors.

- It was repeated (in an updated version) after 24 months to **evaluate developments** in trust towards alternative plant based foods & proteins.

ProVeg International is a food awareness organisation working to transform the global food system

OUR MISSION

Replacing 50% of animal products globally with plant-based and cultivated foods by 2040.

OUR VISION

A world where everyone chooses **delicious** and **healthy** food that is good for **all humans**, **animals**, and our **planet**.

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

II. Background and methodology

Consumer-survey methodology

Online survey conducted by Innova Market Insights

20-minute-long questionnaire

June 2021 and June 2023

10 European countries

Total (7.500 respondents)

Austria (750 respondents)

Denmark (750 respondents)

France (750 respondents)

Germany (750 respondents)

Italy (750 respondents)

The Netherlands (750 respondents)

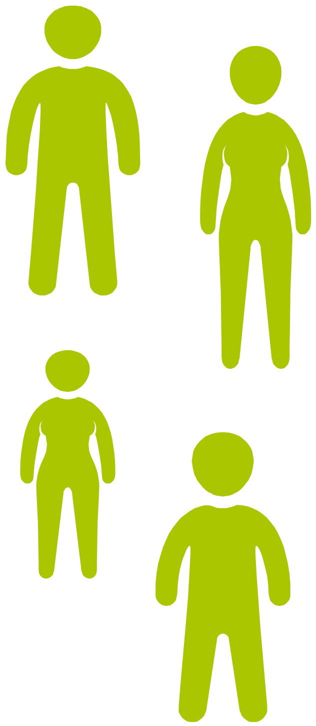
Poland (750 respondents)

Romania (750 respondents)

Spain (750 respondents)

United Kingdom (750 respondents)

Sample distribution



18-24 years old

25-34 years old

35-44 years old

45-54 years old

55-70 years old

20% of participants in each age group

Female

Male

Diverse

50% men and 50% women

→ Only consumers who are responsible for household grocery shopping participated

Consumer survey

Consumer Attitudes	Consumer Behaviors	Market Opportunities	Trust	Opinions on Policy	Social Media
Dietary Lifestyle	Product Familiarity	Drivers	Increase/ decrease of trust	Opinion on what to implement	Social media freqn. usage
Motivations	Consumption frequency	Barriers	Trust by statements		Social media - engagement
Food related lifestyles - dimension	Extent of Reduction of meat	Place of purchase	Trust by types		Social media - situations
Food related lifestyles - dimension: PRICE, ORGANIC, TASTE	Intent to replace, consume, purchase	Place of consumption	Media trust		Social media - attitudes
COM-B Model	Consumption frequency	Product expectations			

Additions to the 2023 survey, based on 2021 results

- **New deep dive analysis on evaluating consumers' perception** towards and intentions to consume plant based alternatives across segments of Food Related Lifestyles.

- **Investigating further the determinants of intentions** to consume processed and unprocessed plant-based alternatives by using the COM-B (Capabilities, Opportunities, Motivations) model.

- Investigate **to what extent consumers' social media activities influence** the intention to try/consume/purchase plant-based food alternatives.

Overview of questions (1/5)

Q3	Which category best describes your current dietary lifestyle?
Q4	How long have you been following your current dietary lifestyle?
Q5	Which of the following phrases best describes your current dietary habits or situation?
Q6	How familiar are you with the following food products?
Q7	Which statement best describes how frequently you consume the following food products?
Q8	Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating at the moment?
Q9	Which of the following food products have you decreased your consumption of the most?
Q10	Which of the following reasons best describes why you have chosen to decrease your consumption of meat or dairy products?

Overview of questions (2/5)

	Please indicate how much you disagree or agree with each of the following statements.
Q11	I intend to replace animal-based foods in my diet by eating more … in the next 6 months.
Q12	I intend to consume more … in the next 6 months.
Q13	I intend to purchase more … in the next 6 months.
Q14	What are the most important factors when choosing plant-based food alternatives?
Q15	Which of the following do you encounter as barriers when choosing plant-based food alternatives?
Q16	Where are you likely to purchase plant-based food alternatives most frequently in the future?
Q17	In which of the following locations do you normally consume plant-based food alternatives?
Q18	What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)?

Overview of questions (3/5)

Q19	When thinking about your overall knowledge and experience with plant-based food alternatives, has your current trust increased or decreased in comparison to three years ago?
Q20	When thinking specifically about plant-based food alternatives, please indicate how much you disagree or agree with each of the following statements.
Q21	Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least). Please rank which you trust the most, in order of importance.
Q22	There is much discussion in the food industry about what actions policymakers should take. In your opinion, how much do you agree or disagree with the following statements regarding the actions that policymakers should take?
Q23	Please indicate how much you agree or disagree with the following statements regarding eating and cooking.
Q24	Please indicate how much you agree or disagree with the following statements regarding your food consumption.

Overview of questions (4/5)

Q25	Please indicate how much you disagree or agree with each of the following statements regarding food consumption and cooking.
Q26	Please indicate how much you disagree or agree with each of the following statements.
Q27	Please indicate how much you disagree or agree with each of the following statements regarding opportunities for the consumption of plant-based food alternatives.
Q28	Please indicate how much you disagree or agree with each of the following statements regarding social opportunities for the consumption of plant-based food alternatives.
Q29	Please indicate how much you disagree or agree with each of the following statements regarding plant-based food alternatives.
Q30	Eating plant-based food alternatives is something that…
Q31	In general, how much do you trust information about plant-based food products from…
Q32	On a typical day, how much time do you spend on these social media platforms?

Overview of questions (5/5)

Q33	How often do you engage with the following activities?
Q34	How often do you experience the following situations?
Q35	Please indicate how much you disagree or agree with each of the following statements concerning social media and food attitudes.
Q36	How many people live in your household, including yourself?
Q37	How many members of your household, including yourself, follow each of the eating patterns indicated below?
Q38	How many children live in your household?
Q39	What is the highest level of education that you have completed?
Q40	How would you describe your own financial situation?
Q41	Which phrase best describes the area where you live?

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

III. Summary and key insights: 2021 and 2023

Key takeaways 2021: total overview

	#1	Huge potential due to flexitarians
	#2	Animal-based products are being replaced by plant-based options
	#3	Plant-based food alternatives come with challenges such as availability and price
	#4	Trust in plant-based foods is a given
	#5	Plant-based poultry, beef, salmon, tuna, mozzarella, and sliced cheese are the most missed products
	#6	For flexitarians, it’s all about taste and health
	#7	Availability of plant-based foods in discount stores is key
	#8	Search engines and health/nutrition-society websites are used the most

Key takeaways 2023: total overview

NEW

	#1	**51% of European meat consumers claim to have reduced their yearly meat intake,** up from 46% in 2021. Germany (59%), France (57%), and Italy (59%) lead the way in terms of meat reduction.
	#2	On average, **45% of Europeans claim to have adhered to a non-meat-based dietary lifestyle** (flexitarian, vegan & vegetarian) **for more than 2 years.**
	#3	62% of European respondents identify as omnivores, with Poland leading at 76%. 27% identify as flexitarians, with Germany leading at 40%. 5% identify as vegetarians, with the UK leading at 7%. 4% identify as pescatarians, with Denmark leading at 5%. 3% identify as vegans, with Austria leading at 5%. **Flexitarians are once again the second-largest consumer group in the EU.**
	#4	**Interest in flexitarian dietary lifestyles transcends generational boundaries**, with 29% of Boomers, 27% of Gen X, 28% of Millennials, and 26% of Gen Z identifying as flexitarians.
	#5	**The primary motivation for reducing meat consumption is health (47%),** particularly in Romania and Italy. Followed by environmental concerns (29%), predominantly in Denmark and the Netherlands, and animal welfare (26%), mainly in Germany and the Netherlands.
	#6	57% of Europeans claim to consume legumes at least once a week, with 53% expressing a desire to consume them even more frequently, making **legumes as the favourite plant-based food for European consumers.**

Key takeaways 2023: total overview

#7	On average, 28% of Europeans claim to consume at least one plant-based food alternative at least once a week, up from 21% in 2021. **Plant-based milk is the most consumed plant-based alternative, with 36% of Europeans consuming it at least once a week.**
#8	**Perceptions around price (38%) and taste (30%) continue to be the main barriers** for many European consumers when choosing plant-based alternatives.
#9	**46% of Europeans report an increase in their trust in plant-based alternatives** compared to two years ago.
#10	More than **54% of consumers claim** to know that eating **plant-based alternatives is good for their health or the environment.**
#11	On average, over **50% of Europeans do not appear to consider information about plant-based alternatives** communicated in mainstream online media to be particularly **trustworthy.**
#12	**Cultivated meats seem to be trusted the most by omnivores and men.** Denmark ranks the highest in the acceptance of cultivated protein sources, followed by Germany and Spain.
#13	63% of consumers say they would like to see increased standards for transparency in product certifications, while **62% would like taxes to be zero-rated for foods that have a positive impact on health and the environment.**

NEW

Detailed results, by topic (1/4)

Consumption behaviour

- Overall, **27%** of participants identify as **flexitarian**. Germany (40%) and the Netherlands (35%) had the highest share of flexitarians. **7%** of the total sample are **plant-based eaters** (vegan & vegetarians).
- Compared to 2021, there was a slight decrease (3 percentage point decrease) of flexitarians overall. However in Germany, there was a 10% **increase of flexitarians**, compared to two years ago.
- 48% of European consumers are either **outsiders, deniers or lapsed**, when it comes to plant-based food. 27% are within a **reachable stage to change their diets**.
- 51% of consumers continue to **reduce their yearly meat intake**, more than 5% than in 2021. Germany (59%), Italy (59%) and France (57%) are reducing the most meat intake. The decrease in meat intake is mostly coming from flexitarians (71%), when compared to Omnivores (43%).[1]
- **Beef** (35%) and **pork** (31%) are the products with the **biggest reduction** in consumption. Consumption of dairy products (Milk: 6%; Cheese: 5%; Eggs: 4%; Yoghurt: 3%) were barely reduced.
- **Health** (47%) is by far the most important motive for people to reduce meat or dairy consumption. **Animal welfare** (29%), followed by **environmental reasons** (26%), especially for Flexitarians.

1: Share of people who selected ‘A lot less’+‘Slightly less’ at the respective statement

Detailed results, by topic (2/4)

Plant-based food alternatives

- European consumers are most likely to go to the **supermarket** (60%) and **discount stores** (41%) when purchasing plant-based alternatives. Compared to 2021, more consumers now shop at organic supermarkets , online grocery stores and drug stores.
- European consumers are most likely to eat plant-based alternatives **at home** (67%) or at a **restaurant** (37%). Out of those who eat at the restaurant, the majority eats at restaurants that serve both, animal and plant-based meals (56%), compared to restaurants only serving plant-based food (44%).
- Europeans consumers are most likely to replace animal-based meat with **legumes** (43%), followed by **plant-based dairy alternatives** (37%) **and legume-based foods** (37%). Plant-based meat alternatives received the lowest share of agreement (34%). [1]
- Europeans most likely agree to consuming **legumes** (53%), **plant-based dairy alternatives** (41%) and **plant-based meat alternatives** (39%) in the next 6 months. [2]
- European consumers are most likely agree to purchase **legumes** (53%) and **plant-based dairy alternatives** (41%) in the next 6 months.[3]

1, 2, 3: Share of people who selected 'Strongly agree'+'Agree'+'Somewhat agree' to the respective statement

Detailed results, by topic (3/4)

Plant-based food alternatives

- **Taste** (53%), **health** (46%) and **price** (45%) are most important, when choosing plant-based alternatives. Compared to 2021, price now plays a bigger role then freshness.
- **Price** (38%) and **taste** (30%) **are main barriers** when choosing plant-based alternatives. Especially flexitarians think that plant-based food is too expensive, while omnivores think that they are not tasty enough.
- Consumers are asking for **more plant-based sweets and snacks (30%), meat alternatives (30%)** and **plant-based milk (29%).**
- **Trust** towards plant-based alternatives **has increased** by 46% compared to three years ago. Especially consumers in Italy (58%) and in Denmark (50%) have gained trust in plant-based alternatives. [1]
- Consumers trust that plant-based alternatives are **safe** (57%), **accurately labelled** (56%) and **reliable** (55%).[2]
- Flexitarians trust **plant-based proteins** the most, followed by **fungi** and **algae-based proteins**. Insect-based protein was trusted the least.[3]

1: Share of people who selected 'Significantly increased'+'Somewhat increased' 2: Share of people who selected 'Strongly agree'+'Agree' 3: Ranking from 1 (trust the most) to 5 (trust the least)

Detailed results, by topic (4/4)

Attitudes, beliefs and social media influence

- 63% of consumers ask **for increased standards for transparency in product certifications**. Another 62% ask policymakers to remove the tax on healthy and sustainable food products.[1]
- Consumers trust **health or nutrition society websites** (45%) and **search engines** (44%) the most, when it comes to information about plant-based alternatives. Online blogs (28%) and online forums (25%) were trusted the least among individuals.[2]
- **YouTube** (41%), **Facebook** (36%), **Instagram** (33%), **and TikTok** (32%) are the most used social media platforms.[3]
- 27% of consumers use social media **to search for information or discounts or promotions about plant-based alternatives**. 26% of customers said they use it to read about **opinions about certain plant-based alternatives from people with the same interests**.[4]
- 27% of consumers notice **new food information they were not looking for**, when using social media.[5]
- 44% of consumers' **desire to eat increases when seeing food on social media**. 37% state that they are especially interested in dishes **shared by food influencers** on social media.[6]

1: Share of people who selected 'Strongly agree'+'Somewhat agree'+'Agree' 2: Share of people who selected 'Very trustful'+'Fairly trustful' with the respective statement 3: Share of people who stated that they spent '4 or more hours+'2-4 hours'+'1-2 hours' on this platform daily 4,5: Share of people who selected 'Very often'+'Often' 6: Share of people who selected 'Strongly Agree'+'Agree'+'Somewhat agree'

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

IV. Detailed results

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Current dietary lifestyles and outlook

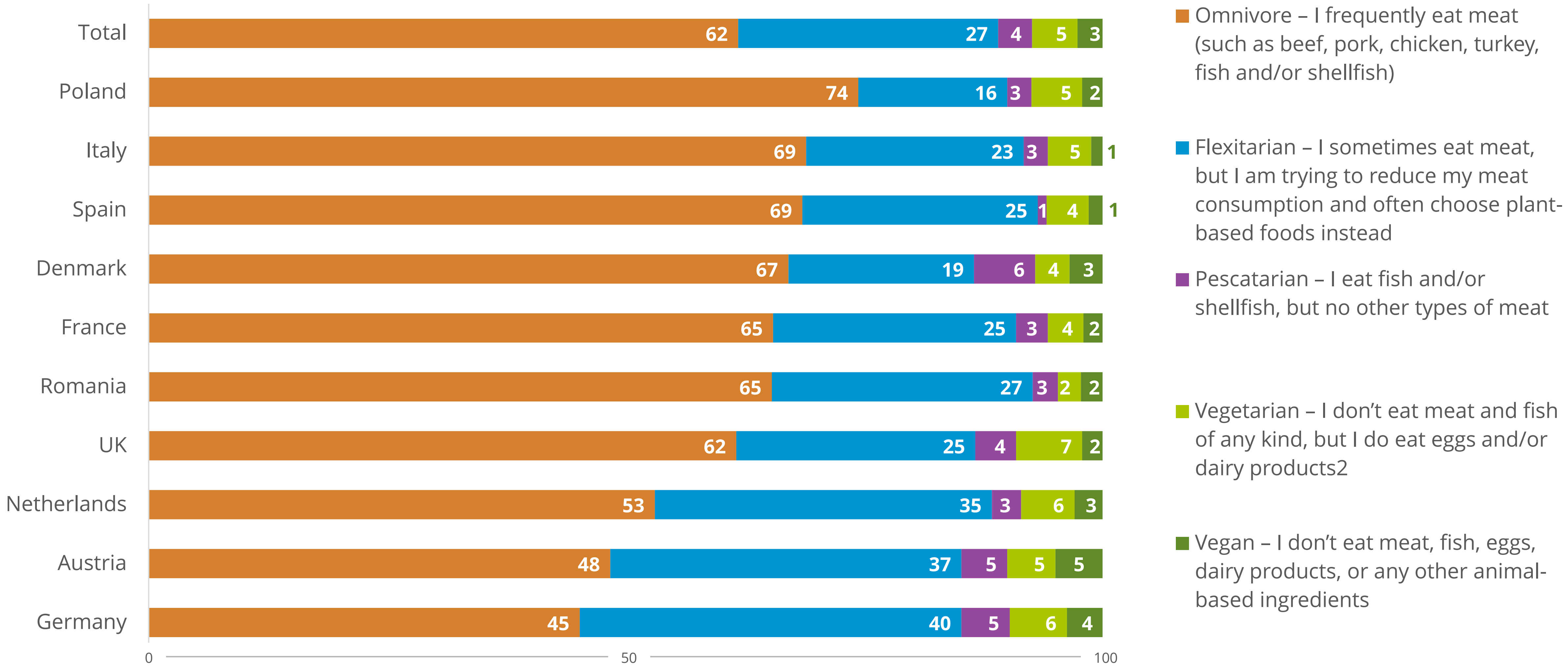
www.smartproteinproject.eu

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q3 “Which category best describes your current dietary lifestyle?”

Flexitarians continue to be an important consumer group in EU. Germany, Austria and NL take the lead

Dietary lifestyle by country (%)



Q3: Which category best describes your current dietary lifestyle? | Single selection

Some countries have increased their number of omnivores.
Germany stands out opposite to the overall trend

Dietary lifestyle by country 2021 vs. 2023 (%)

	Omnivore – I frequently eat meat (such as beef, pork, chicken, turkey, fish and/or shellfish)			**Flexitarian** – I sometimes eat meat, but I am trying to reduce my meat consumption and often choose plant-based foods instead			**Pescatarian** – I eat fish and/or shellfish, but no other types of meat			**Vegetarian** – I don't eat meat and fish of any kind, but I do eat eggs and/or dairy products			**Vegan** – I don't eat meat, fish, eggs, dairy products, or any other animal-based ingredients		
Year / +- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp
Sample Size	**750**	**750**		**750**	**750**		**750**	**750**		**750**	**750**		**750**	**750**	
Total	**62**	**61**	**1**	**27**	**30**	**-3**	**4**	**3**	**1**	**5**	**5**	**0**	**3**	**2**	**1**
Austria	48	56	-8	37	35	2	5	2	3	5	5	0	5	2	3
Denmark	67	62	5	19	24	-5	6	5	1	4	5	-1	3	4	-1
France	65	65	0	25	27	-2	3	4	-1	4	4	0	2	2	0
Germany	45	58	-13	40	30	10	5	3	2	6	7	-1	4	3	1
Italy	69	67	2	23	25	-2	3	3	0	5	5	0	1	1	0
Netherlands	53	48	5	35	42	-7	3	4	-1	6	5	1	3	2	1
Poland	74	68	6	16	24	-8	3	2	1	5	5	0	2	1	1
Romania	65	54	11	27	40	-13	3	3	0	2	3	-1	2	1	1
Spain	69	62	7	25	30	-5	1	2	-1	4	3	1	1	3	-2
UK	62	65	-3	25	23	2	4	3	1	7	6	1	2	3	-1

Q3: Which category best describes your current dietary lifestyle? | Single selection | +/- pp= increase/decrease in percentage point

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

The intention to reduce meat consumption transcends generational boundaries

Dietary lifestyle by generations 2023 (%)

	Boomers (1946- 1964)	Gen X (1965-1980)	Millennials (1981-1996)	Gen Z (1997-2012)
Flexitarians	29%	27%	28%	26%
Omnivores	64%	64%	61%	58%
Pescatarian	3%	3%	3%	5%
Vegetarian	1%	2%	3%	4%
Vegan	3%	4%	5%	7%
Total	**100%**	**100%**	**100%**	**100%**

Q3: Which category best describes your current dietary lifestyle? | Single selection

Total= 7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n=267 | Vegan n=197 | Vegetarian=357

The intention to reduce meat consumption is mostly visible among female and diverse** consumers

Dietary lifestyle by gender 2023 (%)

	Female	Male	Diverse**
Flexitarians	31%	23%	43%
Omnivores	58%	66%	26%
Pescatarian	3%	4%	4%
Vegetarian	2%	3%	13%
Vegan	6%	3%	13%
Total	**100%**	**100%**	**100%**

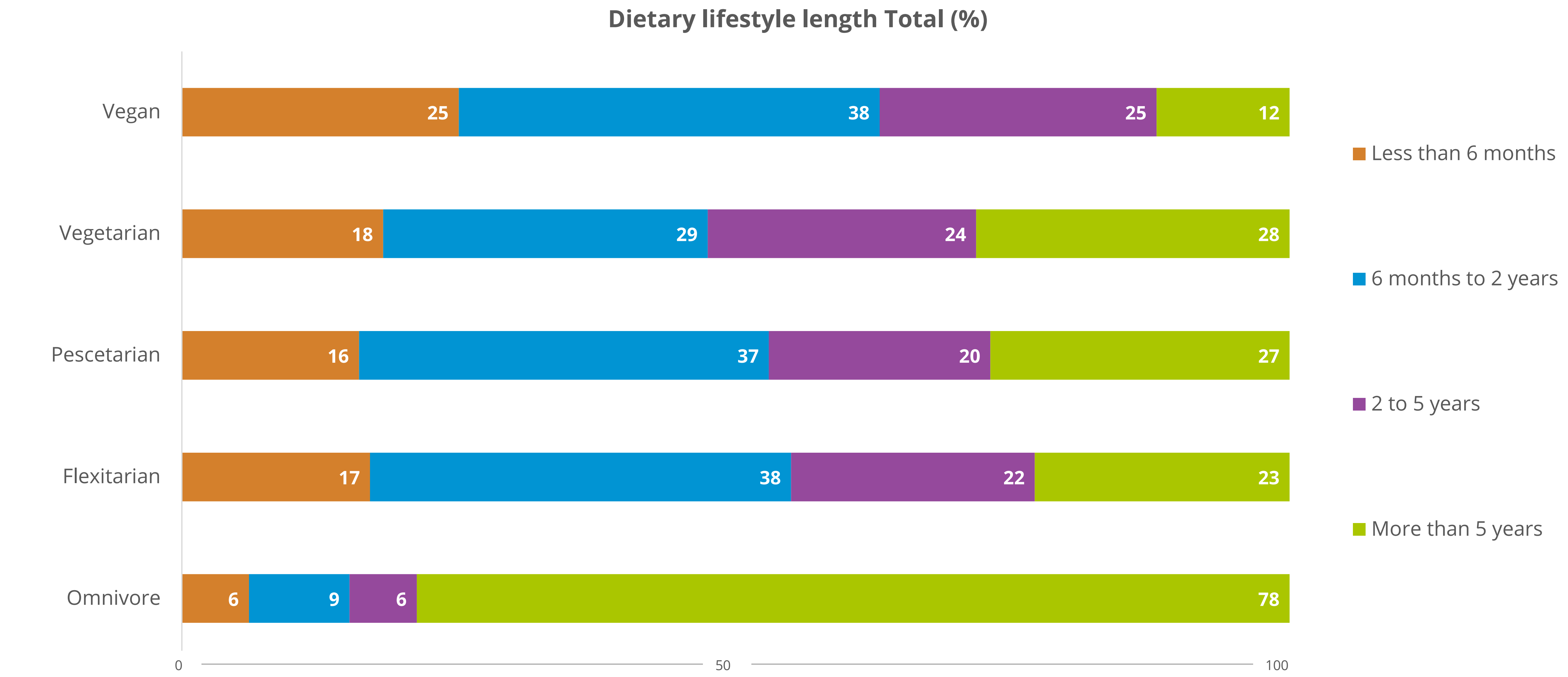
Q3: Which category best describes your current dietary lifestyle? | Single selection | **Sample size below 30 and it is showed only for reference

Total= 7500 | Female n= 3742 | Male n=3735 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n= 267 | Vegan n=197 | Vegetarian n=357

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q4 "How long have you been following your current dietary lifestyle?"

45% of EU consumers have been **flexitarian for more than two years**



Q4: How long have you been following your current dietary lifestyle?| Single choice

Many consumers are shifting away from omnivore diets as they continue to change their dietary lifestyles

Dietary lifestyle length Total 2021 vs. 2023 (%)

	Less than 6 months			6 months to 2 years			2 to 5 years			More than 5 years		
	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp
Flexitarian	17	14	3	38	36	2	22	23	-1	23	27	-4
Omnivore	6	7	-1	9	6	3	6	3	3	78	84	-6
Vegetarian	18	10	8	29	28	1	24	21	3	28	40	-12
Pescatarian	16	19	-3	37	27	10	20	21	-1	27	32	-5
Vegan	25	20	5	38	28	10	25	31	-6	12	21	-9

Q3: Which category best describes your current dietary lifestyle? | Single selection
Q4: How long have you been following your current dietary lifestyle?| Single choice | +/- pp= increase/decrease in percentage point

Total= 7500 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n= 267 | Vegan n=197 | Vegetarian n=357

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q5 "Which of the following phrases best describes your current dietary habits or situation?"

There is a visible majority of consumers being either **Outsiders** (27%) or **Reachable** (27%)

Outsiders

27%

"No one in my social environment (including myself) eats plant-based meals or thinks about adopting a plant-based diet".

Deniers

17%

"Some people in my social environment think I should eat mostly plant-based meals, but I don't want to change".

Reachable

27%

"I realize the importance of a plant-based diet, but I'm not sure that I'm ready to change."

Considerers

8%

"I plan to start a plant-based diet in the next six months."

Committed

7%

"I have taken definite actions to adopt a plant-based diet in the past six months."

Won

7%

"I feel confident about maintaining my plant-based diet for six months or longer."

Flight Risk

4%

"I am working to maintain a plant-based diet but it is getting more."

Lapsed

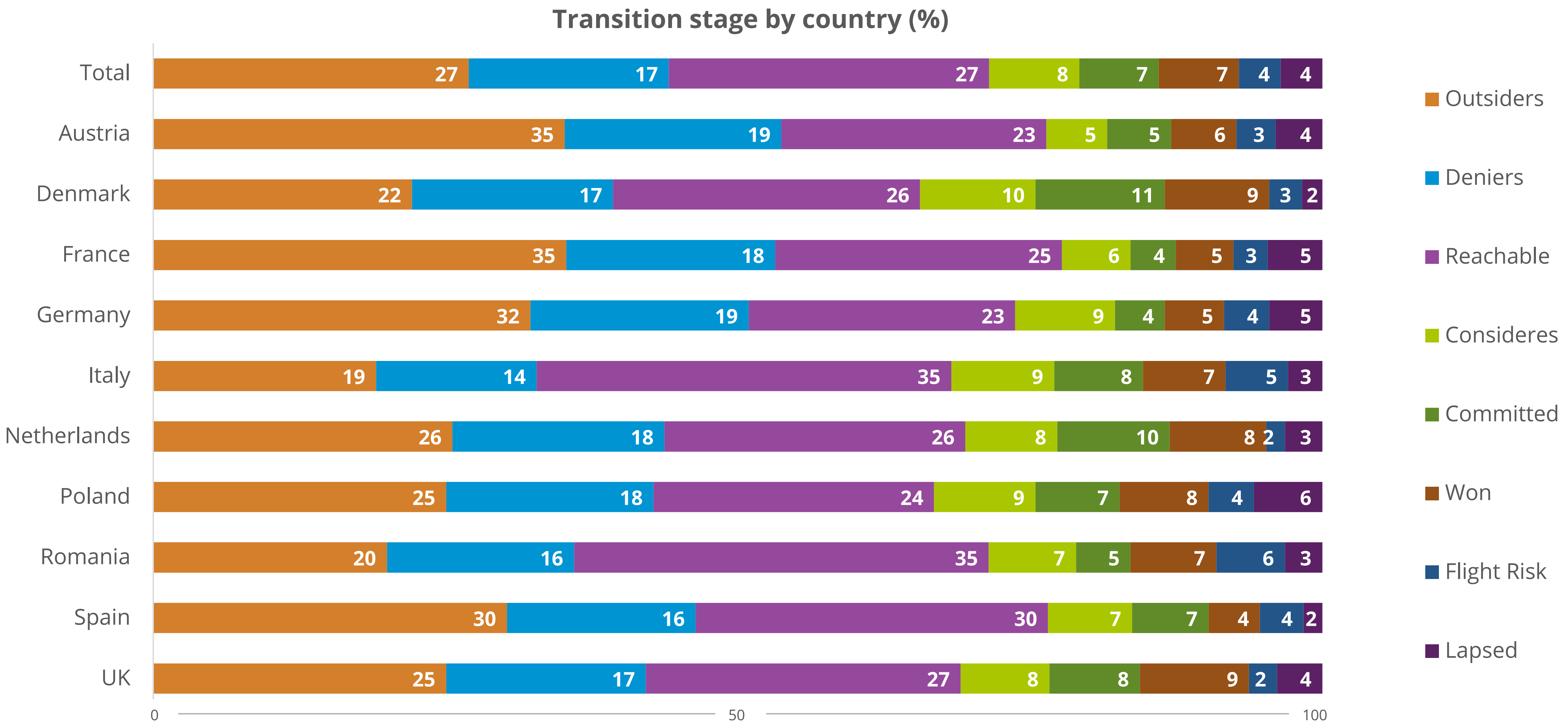
4%

"I had a plant-based diet but I lost interest/motivation."

Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice

Total= 7500 | Outsiders n= 1800 | Deniers n=1275 | Reachable n=2025 | Considerers n=600 | Committed n=525 | Won n=525 | Flight Risk n= 300 | Lapsed n=300

Italy and Denmark are **the most open** to plant-based diets, while the UK and the Netherlands are the **most committed**



Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Boomers are the generation most disconnected from plant-based eating, with Gen Z being the most connected

Transition stage by generations (%)

	Total	Boomer	Gen X	Millennial	Gen Z
I am **working to maintain** a plant-based diet but it is getting more challenging every day.	**4**	3	3	4	4
No one in my social environment (including myself) eats plant-based meals or thinks about adopting a plant-based diet.	**27**	37	30	24	21
I realize the importance of a plant-based diet, but I'm not sure that I'm ready to change.	**27**	27	27	28	28
Some people in my social environment think I should eat mostly plant-based meals, but I don't want to change.	**17**	12	15	18	21
I plan to start a plant-based diet in the next six months.	**8**	5	8	9	8
I had a plant-based diet but I lost interest/motivation.	**4**	3	4	4	4
I have taken definite actions to adopt a plant-based diet in the past six months.	**7**	8	7	7	7
I feel confident about maintaining my plant-based diet for six months or longer.	**7**	6	6	7	7
	100%	100%	100%	100%	100%

Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice

Total= 7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

The **biggest difference between flexitarians and omnivores** can be observed within the **Outsider** group

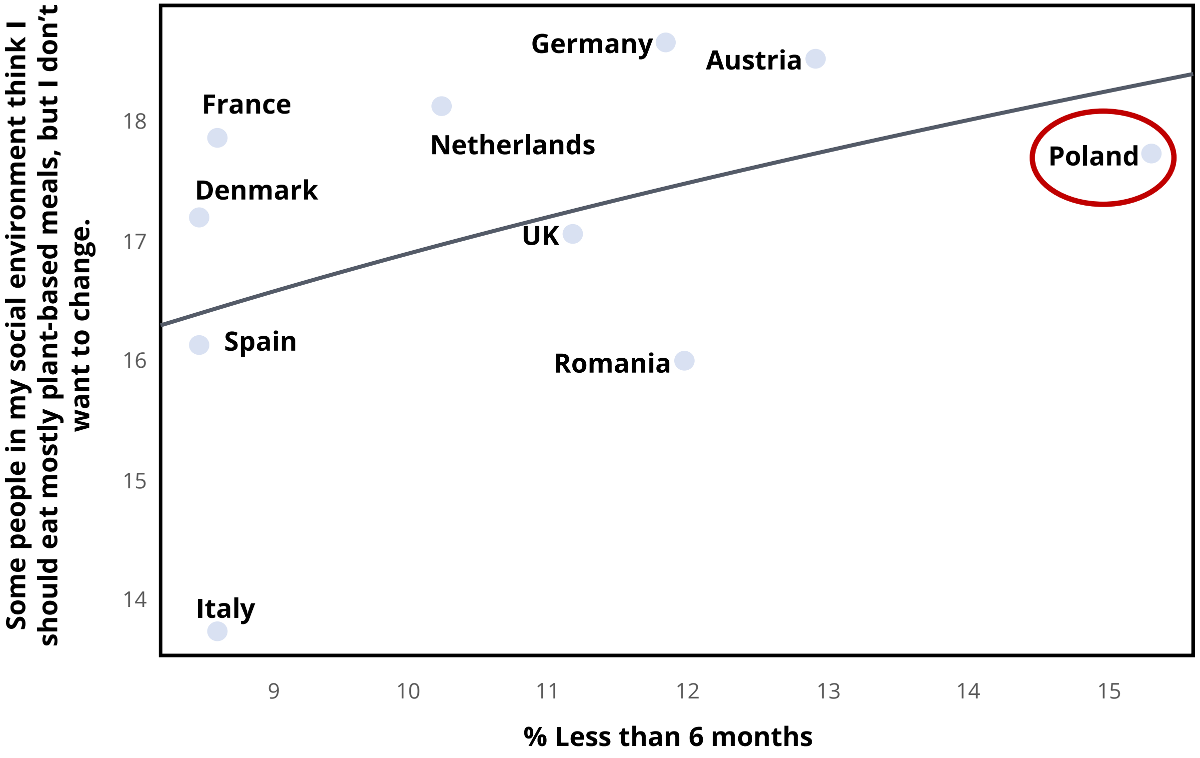
Transition stage by dietary lifestyles (%)

	Omnivores	Flexitarians
I **realise the importance of a plant-based diet**, but I'm not sure that I'm ready to change.	28	30
No one in my social environment (including myself) eats plant-based meals or thinks about adopting a plant-based diet.	34	16
Some people in my social environment think **I should eat mostly plant-based meals**, **but I don't want to change.**	17	16
I have **taken definite actions to adopt a plant-based diet** in the past six months.	4	11
I feel **confident about maintaining my plant-based diet** for six months or longer.	3	10
I plan to **start a plant-based diet in the next six months**.	7	8
I am **working to maintain a plant-based diet** but it is getting more **challenging** every day.	3	5
I had a plant-based diet **but I lost interest/motivation**.	4	3
Total	**100**	**100**

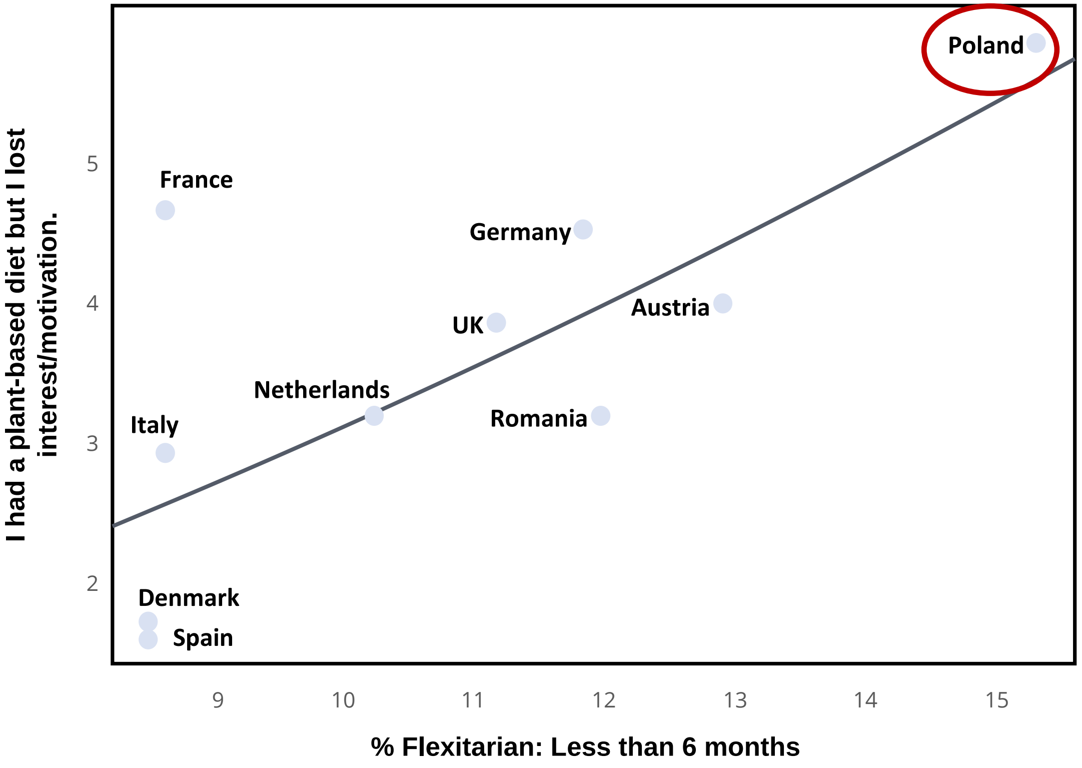
Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice

Total= 7500 | Omnivores n=4635 | Flexitarians n=2044

Social pressure often drives dietary change at first, but there's a high chance of **lapsing within six months**, especially in Poland



R = 0.44 at 95% Confidence Band



R = 0.70 at 95% Confidence Band

Please note that the presented correlation analyses in this study aim to identify potential relationships between variables. While significant correlations may suggest associations, they do not necessarily imply causation. Additional factors and complexities that influence the observed patterns might need further analysis.

Correlation measurements	
Weak positive correlation	0.1 to 0.3
Moderate positive correlation	0.3 to 0.5
Strong positive correlation	0.5 to 1.0

Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice
Q4: How long have you been following your current dietary lifestyle?| Single choice

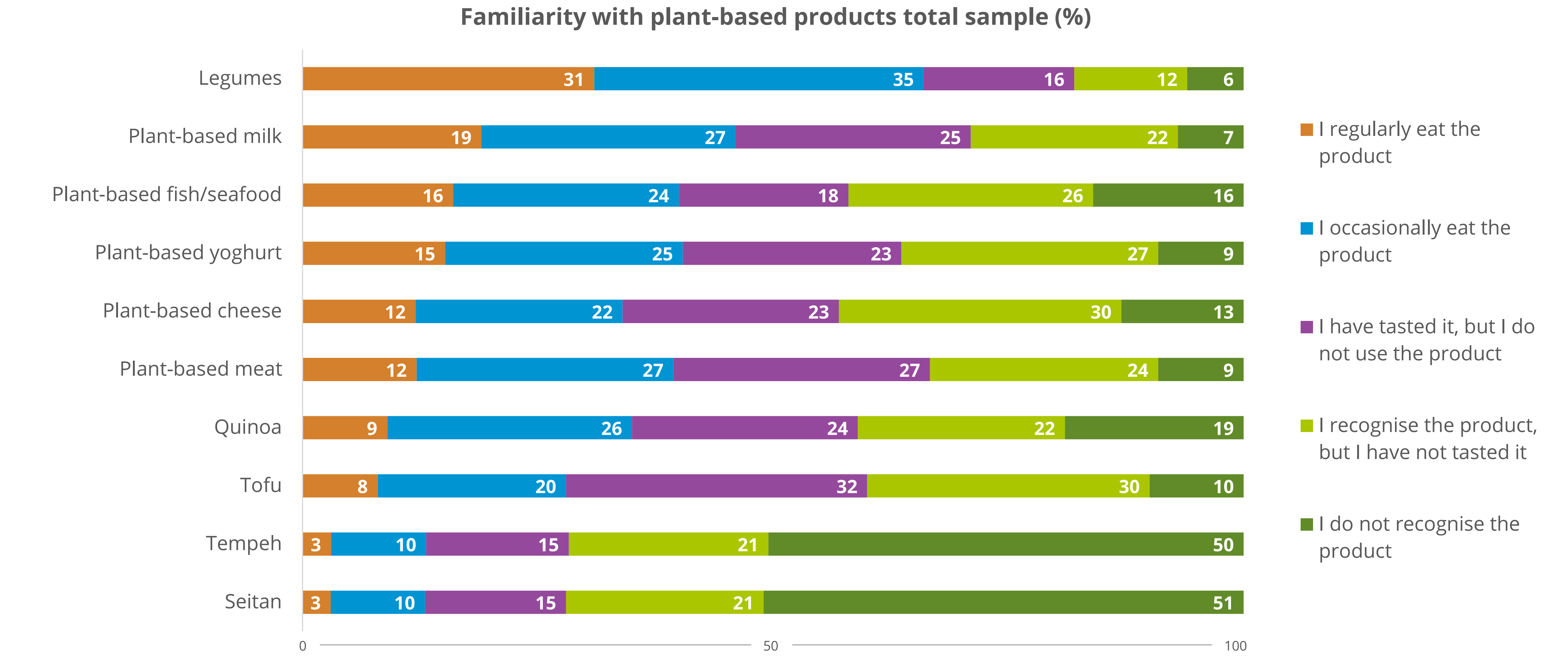
The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Familiarity and current consumption patterns: animal and plant-based food products

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q6 “How familiar are you with the following food products?”

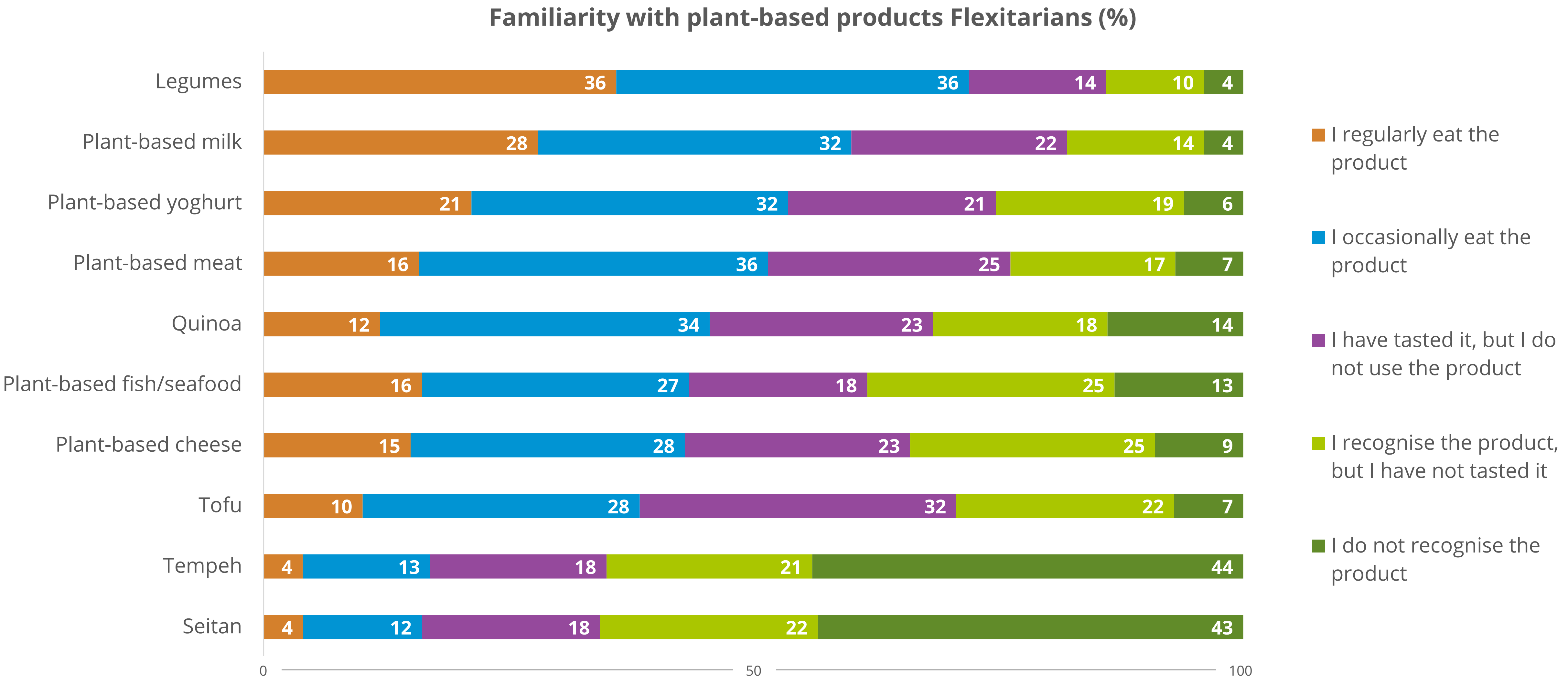
Legumes are eaten the most often, while tofu is the most frequently tried product



Q6: How familiar are you with the following food products?| Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Flexitarians consume plant-based foods more frequently than the average EU consumer



Q6: How familiar are you with the following food products? – Flexitarians | Single choice

Total: n= 2044 | Austria n=276 | Denmark n=146 | France n=191 | Germany n=300 | Italy n=171 | Netherlands n=265 | Poland n=117 | Romania n=205 | Spain n=185 | UK n=188

Flexitarians are more familiar with plant-based yogurt and milk compared to the average European

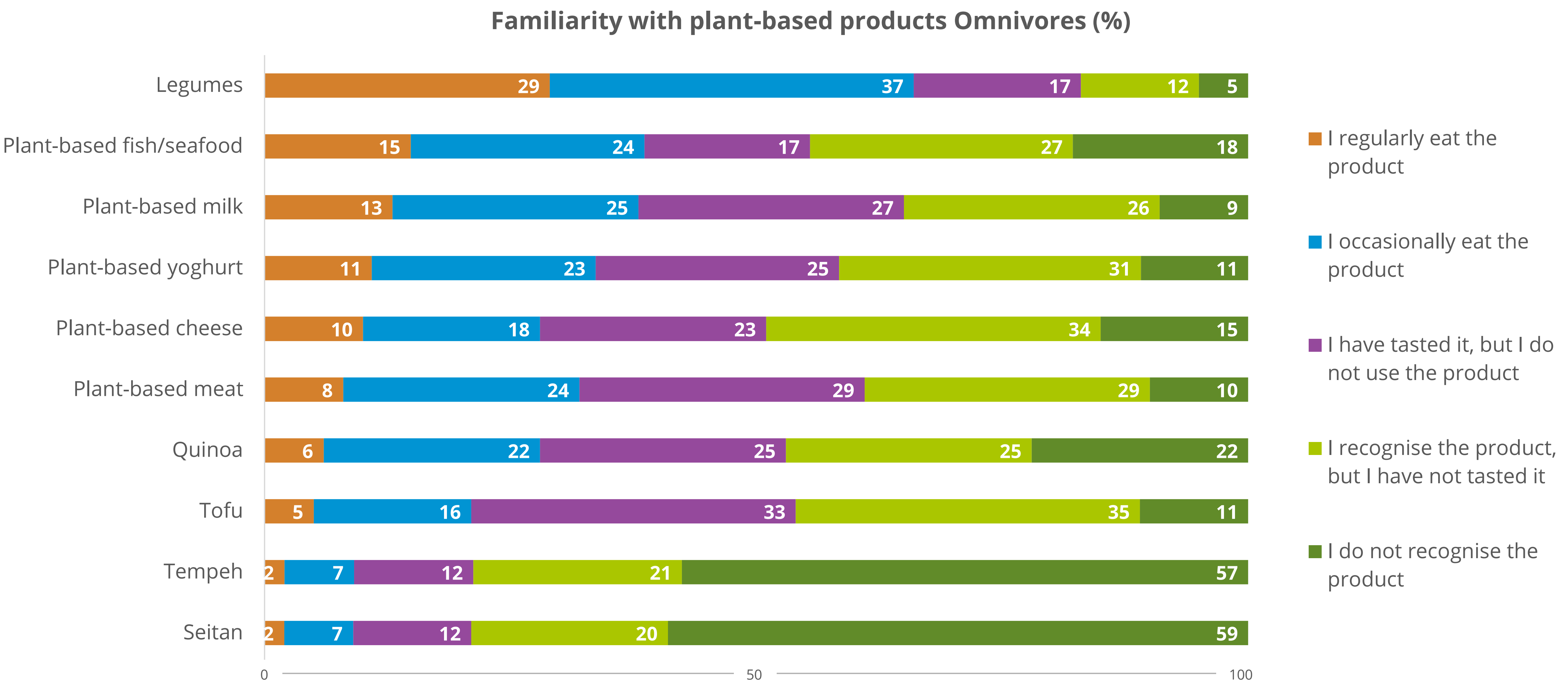
Familiarity with plant-based products Flexitarians vs total sample (%)

	Flexitarian – I sometimes eat meat, but I am trying to reduce my meat consumption and often choose plant-based foods instead				
% difference to total sample	**I regularly eat the product**	**I occasionally eat the product**	**I have tasted it, but I do not use the product**	**I recognize the product, but I have not tasted it**	**I do not recognize the product**
Legumes	+5	+1	-2	-2	-2
Tofu	+2	+8	0	-8	-3
Tempeh	+1	+3	+3	0	-6
Seitan	+1	+2	+3	+1	-8
Quinoa	+3	+8	-1	-4	-5
Plant-based yoghurt	+6	+7	-2	-8	-3
Plant-based cheese	+3	+6	0	-5	-4
Plant-based milk	+9	+5	-3	-8	-3
Plant-based meat	+4	+9	-2	-7	-2
Plant-based fish/seafood	0	+3	0	-1	-3

Q3: Which category best describes your current dietary lifestyle? – Flexitarians | Single selection
Q6: How familiar are you with the following food products?| Single choice

Total: n= 2044 | Austria n=276 | Denmark n=146 | France n=191 | Germany n=300 | Italy n=171 | Netherlands n=265 | Poland n=117 | Romania n=205 | Spain n=185 | UK n=188

Among omnivores, most plant-based foods are already widely consumed occasionally



Q6: How familiar are you with the following food products? - Omnivores| Single choice

Total: n= 4635 | Austria n=363 | Denmark n=503 | France n=491 | Germany n=339 | Italy n=517 | Netherlands n=398 | Poland n=558 | Romania n=490 | Spain n=514 | UK n=462

Omnivores are as familiar with plant-based fish, seitan, and tempeh as the average European consumer

Familiarity with plant-based products Omnivores vs total sample (%)

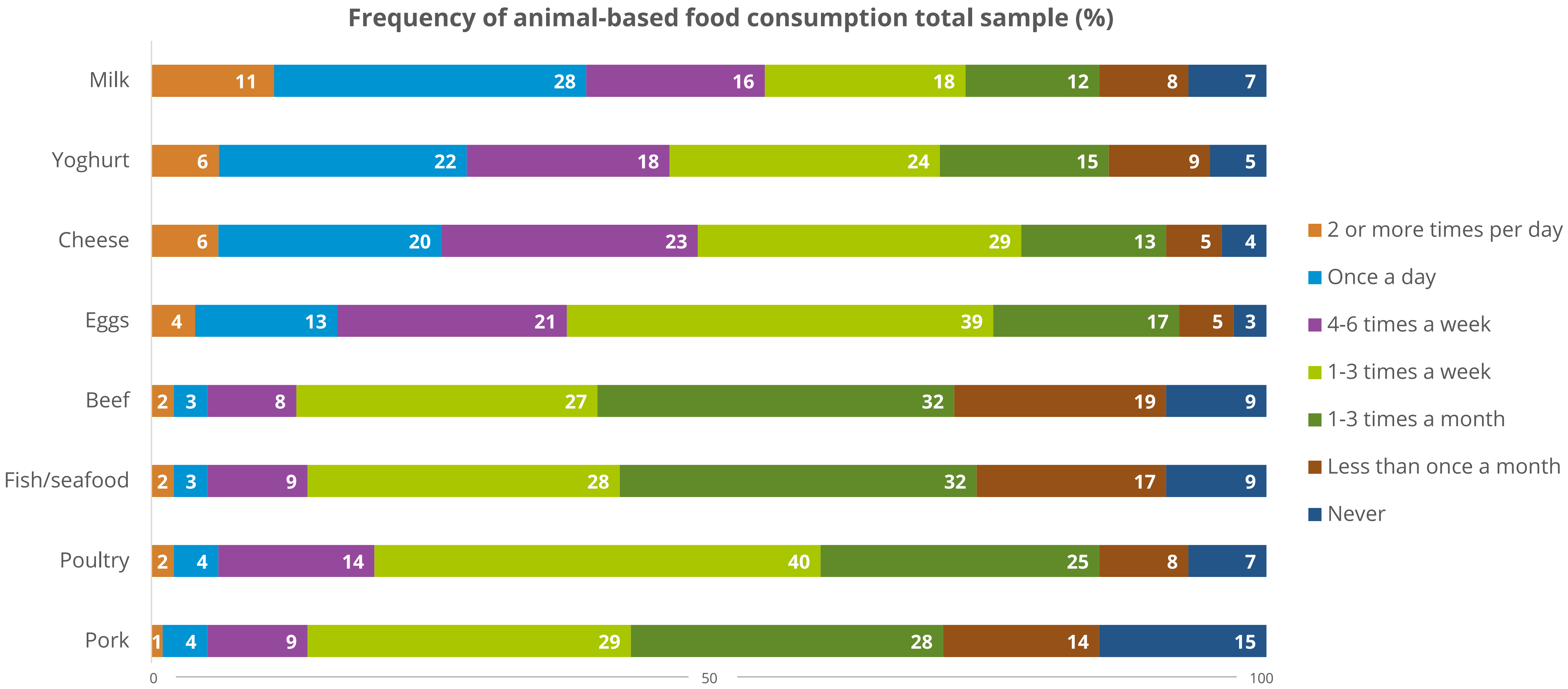
	Omnivore – I frequently eat meat (such as beef, pork, chicken, turkey, fish and/or shellfish)				
% difference to total sample	**I regularly eat the product**	**I occasionally eat the product**	**I have tasted it, but I do not use the product**	**I recognize the product, but I have not tasted it**	**I do not recognize the product**
Legumes	-2	2	+1	0	-1
Tofu	-3	-4	+1	+5	+1
Tempeh	-1	-3	-3	0	+7
Seitan	-1	-3	-3	-1	+8
Quinoa	-3	-4	+1	+3	+3
Plant-based cheese	-2	-4	0	+4	+2
Plant-based yoghurt	-4	-2	+2	+4	+2
Plant-based milk	-6	-2	+2	+4	+2
Plant-based meat	-4	-3	+2	+5	+1
Plant-based fish/seafood	-1	0	-1	+1	+2

Q6: How familiar are you with the following food products? - Omnivores| Single choice

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q7 “Which statement best describes how frequently you consume the following food products?”

Milk, yoghurt, and cheese are daily staples, while eggs and poultry are more typically consumed on a weekly basis



Q7: Which statement best describes how frequently you consume the following food products?| Single choice

Total: n= 7500

Compared to 2021, there has been **an overall increase** in self-reported consumption of **animal-based products**

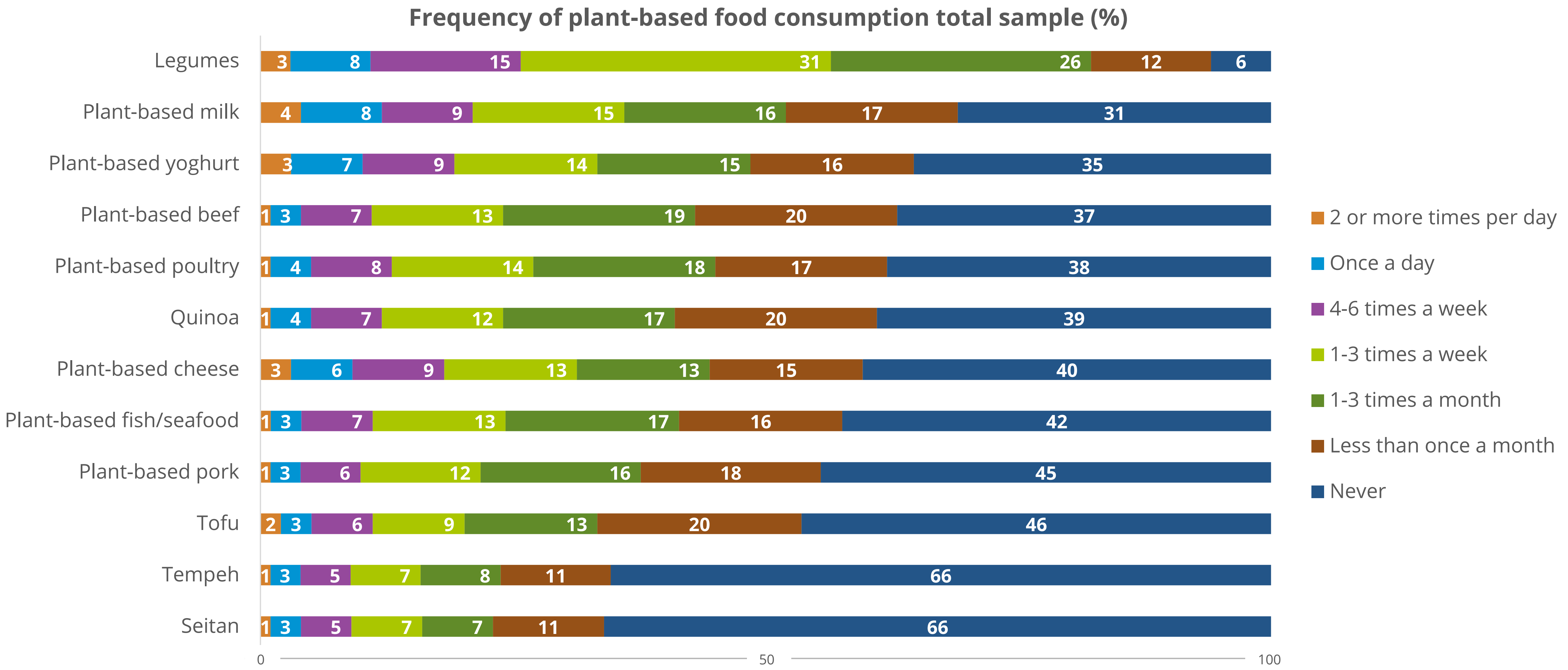
Frequency of animal-based food consumption 2023 vs. 2021 (%)

	Never			Less than once a month			1-3 times a month			1-3 times a week			4-6 times a week			Once a day			2 or more times per day		
	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp
Beef	9	11	-2	19	24	-5	32	32	0	27	23	4	8	6	2	3	3	0	2	1	1
Poultry	7	8	-1	8	10	-2	25	27	-2	40	40	0	14	11	3	4	3	1	2	1	1
Pork	15	14	1	14	17	-3	28	29	-1	29	28	1	9	8	1	4	3	1	1	1	0
Fish/seafood	9	12	-3	17	19	-2	32	31	1	28	28	0	9	6	3	3	3	0	2	1	1
Milk	7	10	-3	8	9	-1	12	11	1	18	18	0	16	14	2	28	26	2	11	12	-1
Yoghurt	5	7	-2	9	11	-2	15	16	-1	24	24	0	18	17	1	22	20	2	6	5	1
Cheese	4	5	-1	5	6	-1	13	13	0	29	29	0	23	22	1	20	19	1	6	6	0
Eggs	3	3	0	5	7	-2	17	22	-5	39	42	-3	21	16	5	13	8	5	4	2	2
Average			**-1.4**			**-2.3**			**-0.9**			**+0.3**			**+2.3**			**+1.5**			**+0.6**

Q7: Which statements best describes how frequently you consume the following food products?| Single choice | +/- pp= increase/decrease in percentage point

Total 2023 n= 7500 |Total 2021 n=7590

Plant-based dairy and legumes are the most-consumed plant-based product categories



Q7: Which statement best describes how frequently you consume the following food products?| Single choice

Compared to 2021, **regular consumption of plant-based products is increasing**

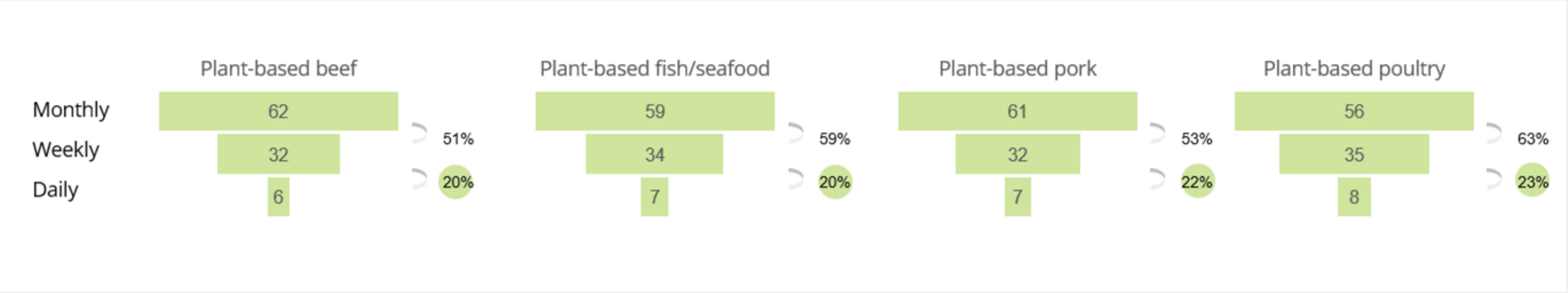
Frequency of plant-based food consumption 2023 vs. 2021 (%)

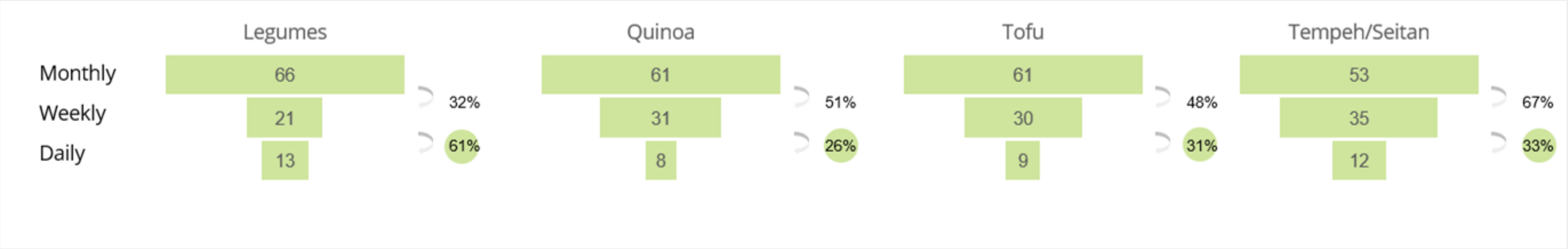
	Never			Less than once a month			1-3 times a month			1-3 times a week			4-6 times a week			Once a day			2 or more times per day		
	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp	2023	2021	+/- pp
Quinoa	39	48	-9	20	19	1	17	13	4	12	10	2	7	6	1	4	3	1	1	1	0
Legumes	6	6	0	12	13	-1	26	26	0	31	31	0	15	15	0	8	6	2	3	3	0
PB Yoghurt	35	51	-16	16	15	1	15	11	4	14	10	4	9	7	2	3	4	3	3	2	1
PB Poultry	38	50	-12	17	16	1	18	13	5	14	11	3	8	6	2	3	3	1	2	1	0
PB Pork	45	54	-9	18	15	3	16	12	4	12	9	3	6	6	0	3	3	0	1	1	0
PB Milk	31	44	-13	17	16	1	16	12	4	15	11	4	9	7	2	8	7	1	4	3	1
PB fish/seafood	42	55	-13	16	14	2	17	12	5	13	10	3	7	5	2	3	3	0	1	1	0
PB Cheese	40	55	-15	15	14	1	13	11	2	13	10	3	9	6	3	6	3	3	3	1	2
PB beef	37	45	-8	20	17	3	19	16	3	13	12	1	7	6	1	3	3	0	1	1	0
Average			-10.6			+1.3			+3.4			+2.6			+1.4			+1.2			+0.4

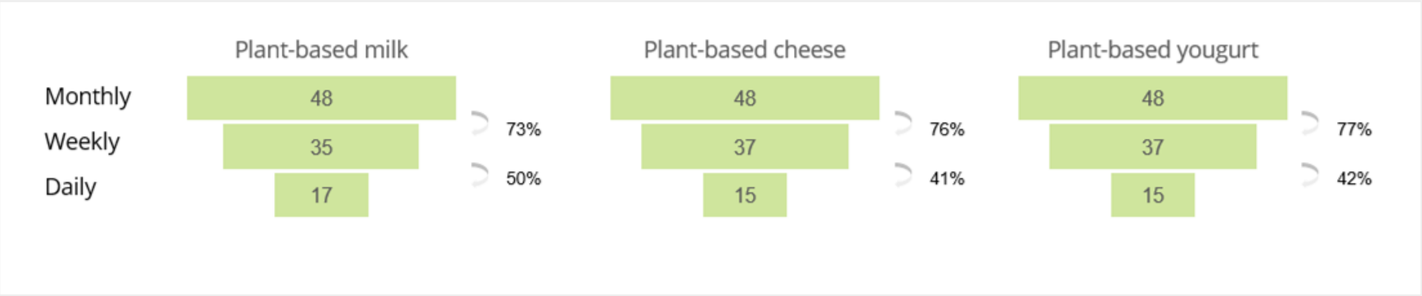
Q7: Which statement best describes how frequently you consume the following food products?| Single choice | +/- pp= increase/decrease in percentage point | *Tofu was not asked in 2021

Total: n= 7500

Conversion rates: plant-based foods







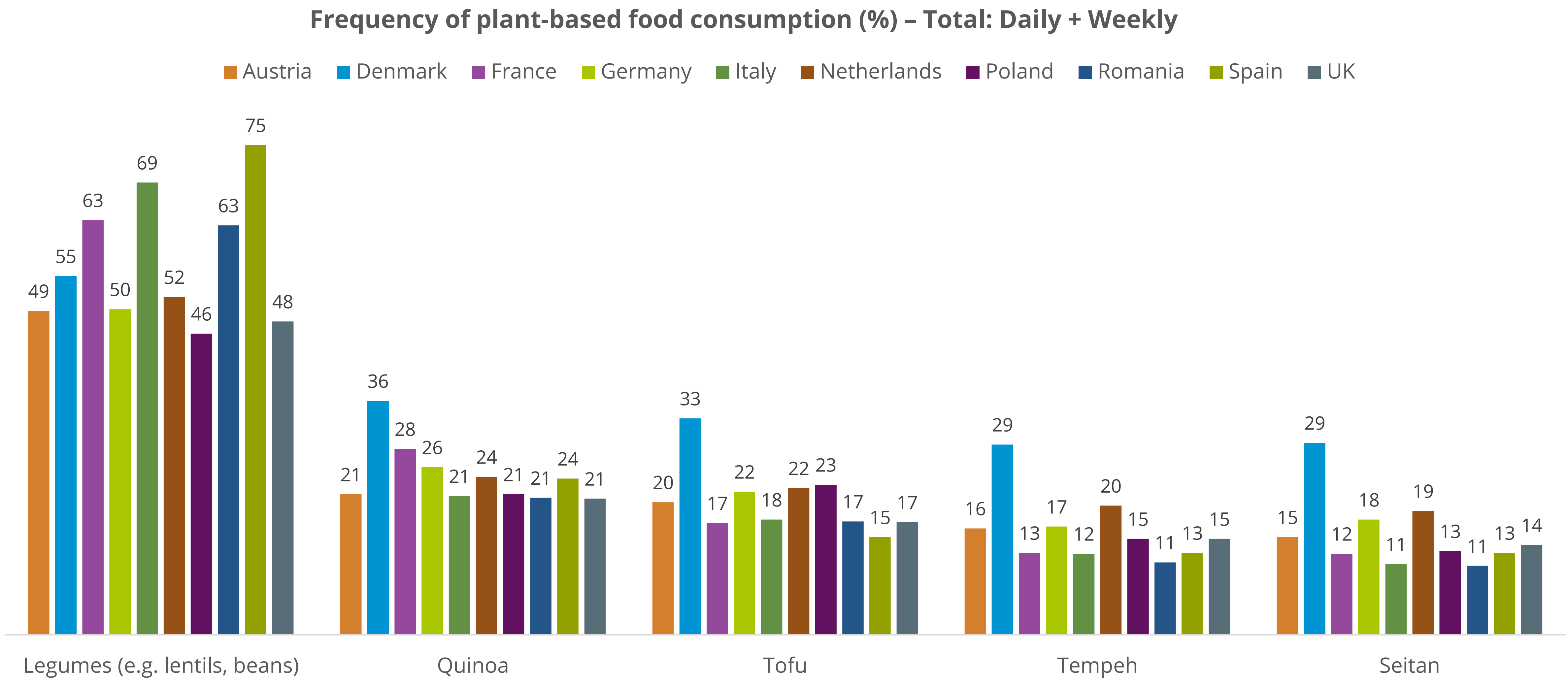
Conversion rates, in the context of consumption frequency, refer to the percentage of individuals who transition from lower consumption levels to higher consumption levels over a given period. Essentially, it measures how successful a product or concept is in persuading individuals to increase their frequency of consumption. Conversion rates allow organizations to assess the success of their efforts in convincing consumers to adopt higher consumption frequencies.

For example, if a plant-based product aims to encourage consumers to switch from consuming it once a month to consuming it once a week, the conversion rate would represent the percentage of individuals who successfully make this transition within the specified timeframe.

Q7: Which statement best describes how frequently you consume the following food products?| Single choice

Total: n= 7500

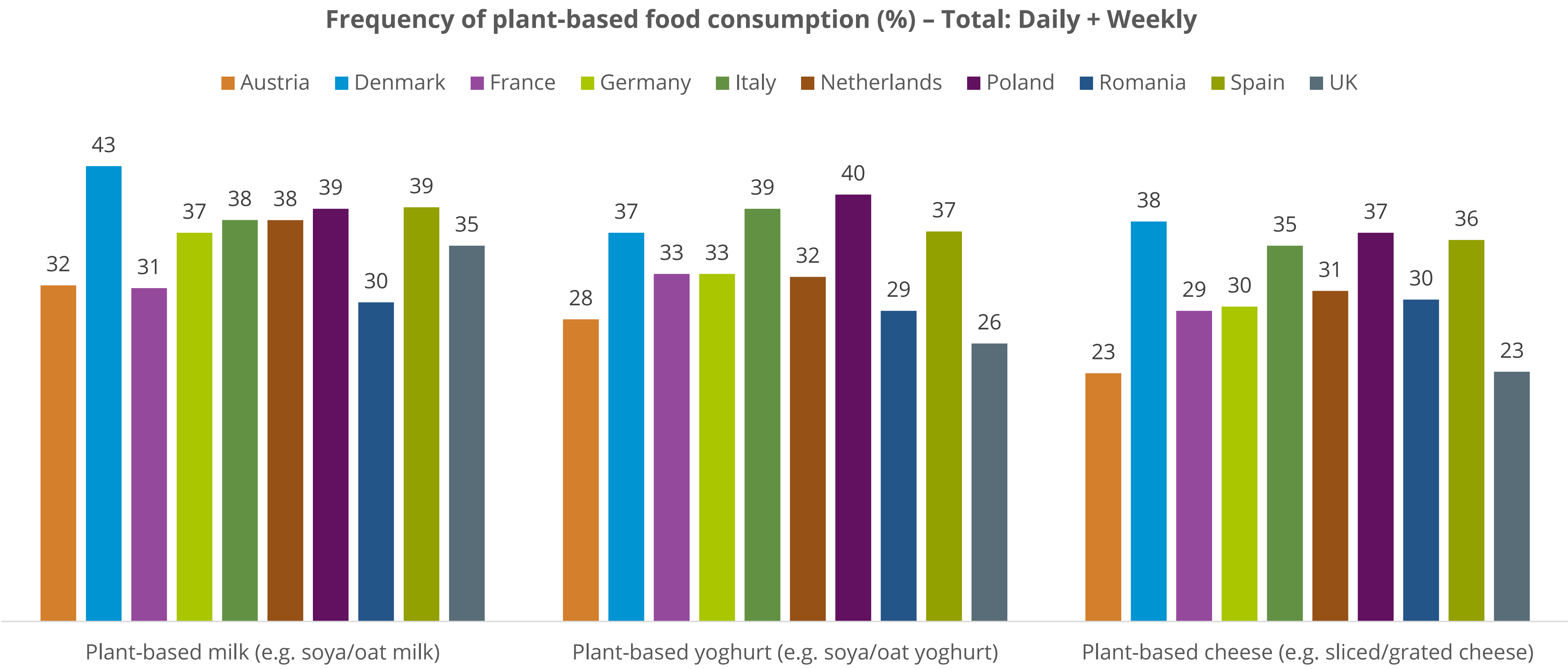
Legumes are highly consumed in Italy, while other plant-based foods are highly consumed in Denmark



Q7: Which statement best describes how frequently you consume the following food products? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

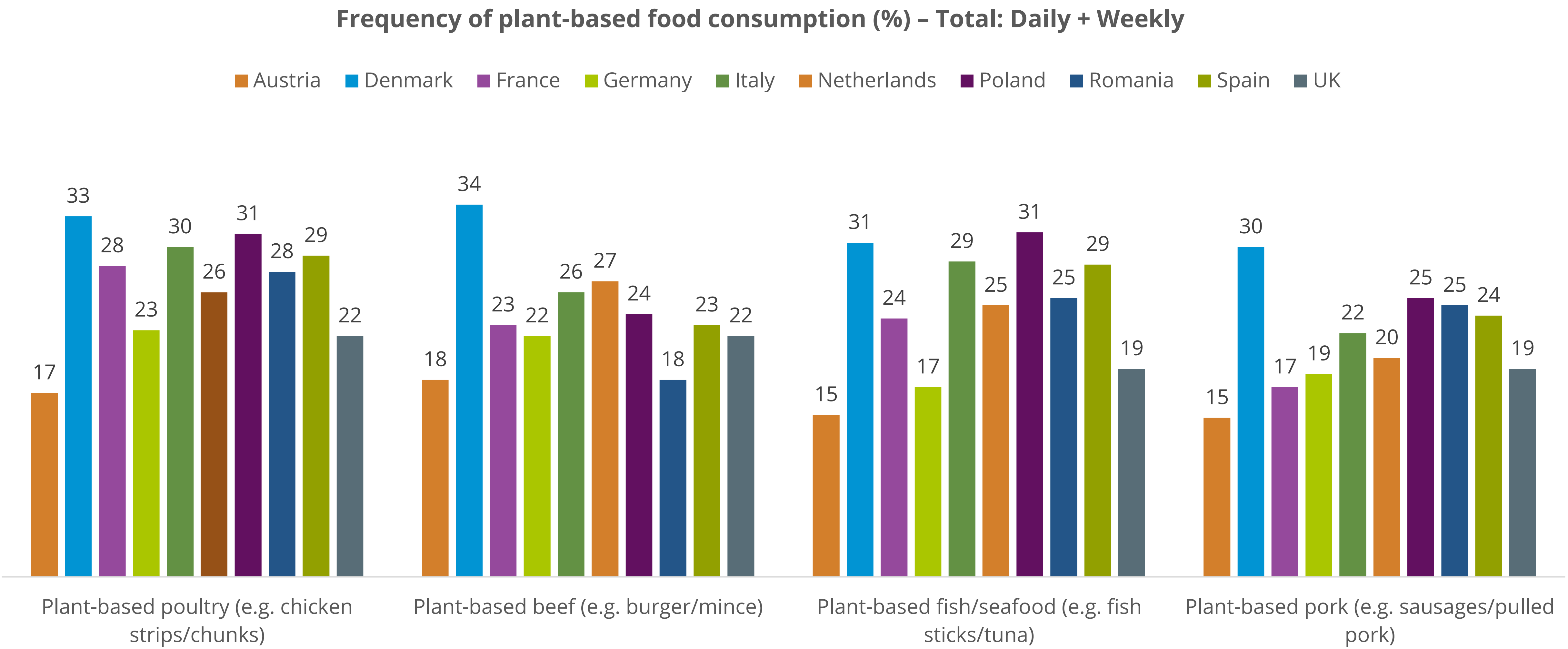
Consumers in Denmark consume the most plant-based dairy alternatives vs. other countries



Q7: Which statement best describes how frequently you consume the following food products? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

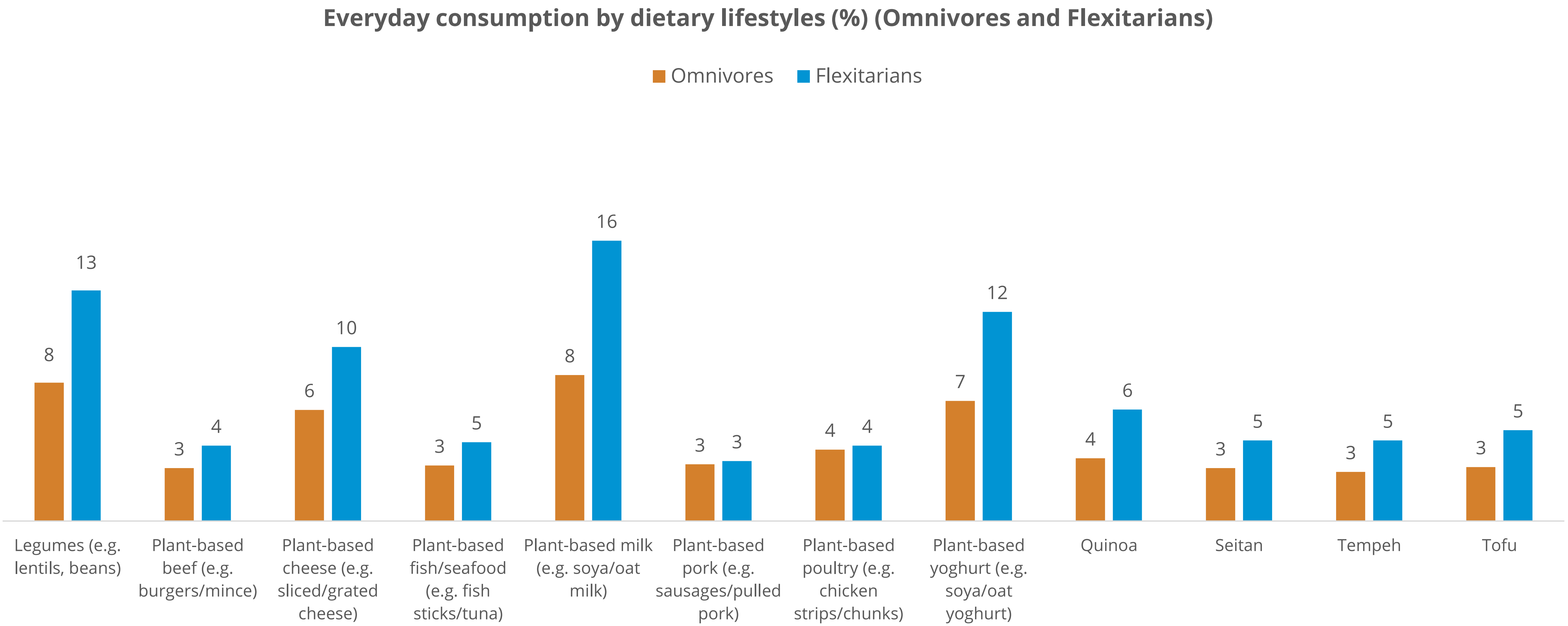
A similar trend is observed within plant-based meat alternatives



Q7: Which statement best describes how frequently you consume the following food products? | Single choice

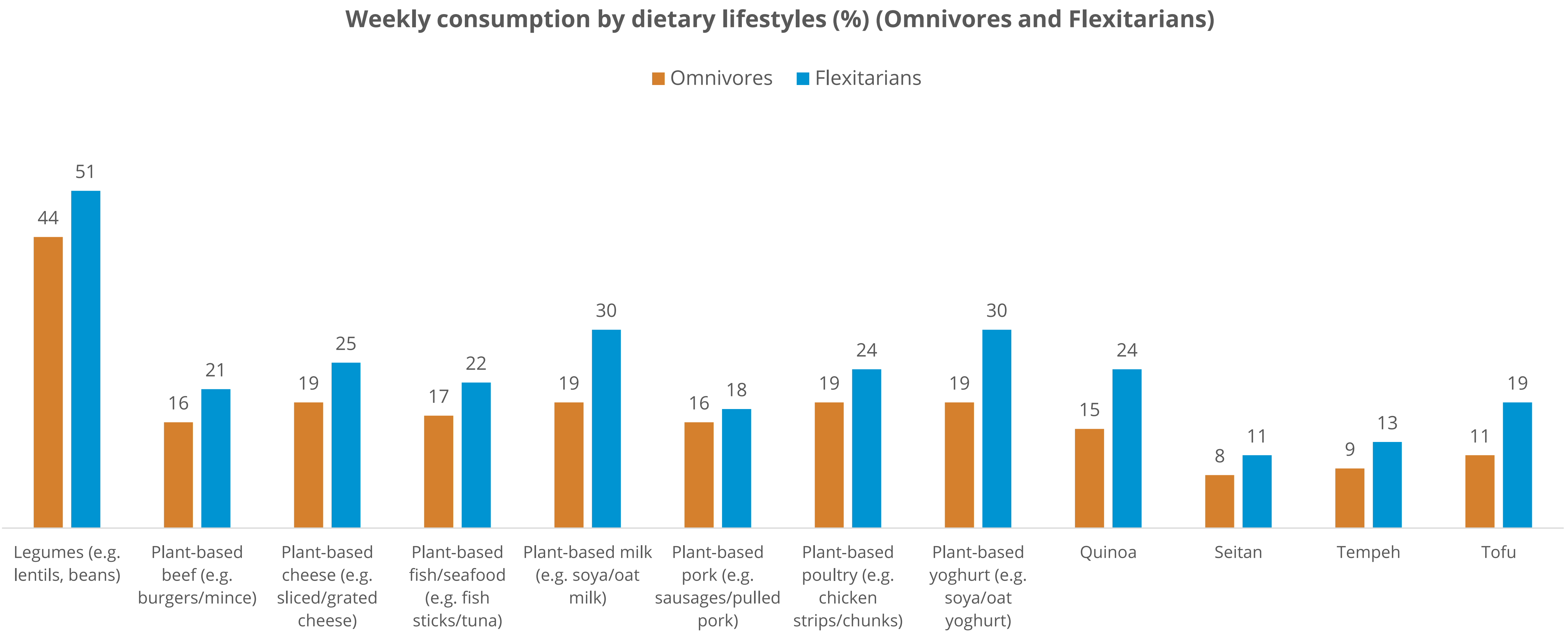
Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Daily consumption, by dietary lifestyle



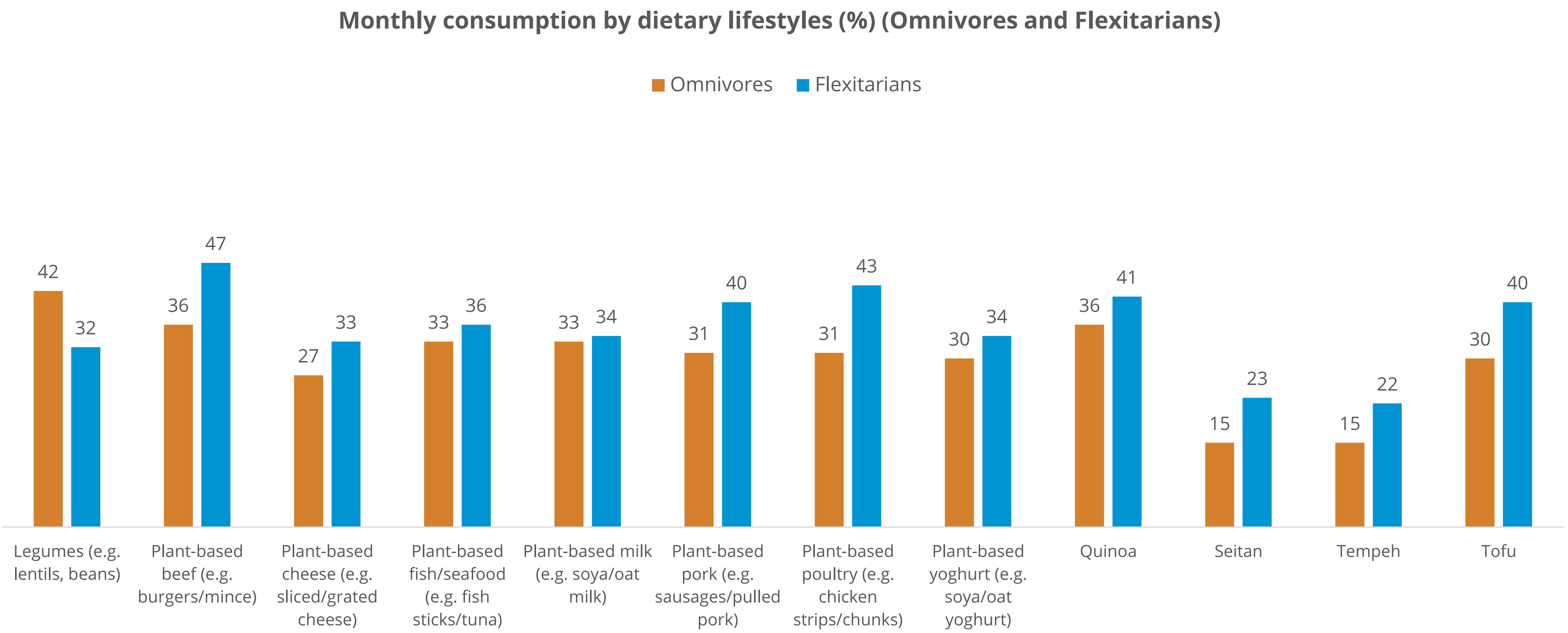
Everyday consumption: Sum of ‘Once a day’ + ‘2 or more times per day’
Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Weekly consumption, by dietary lifestyle



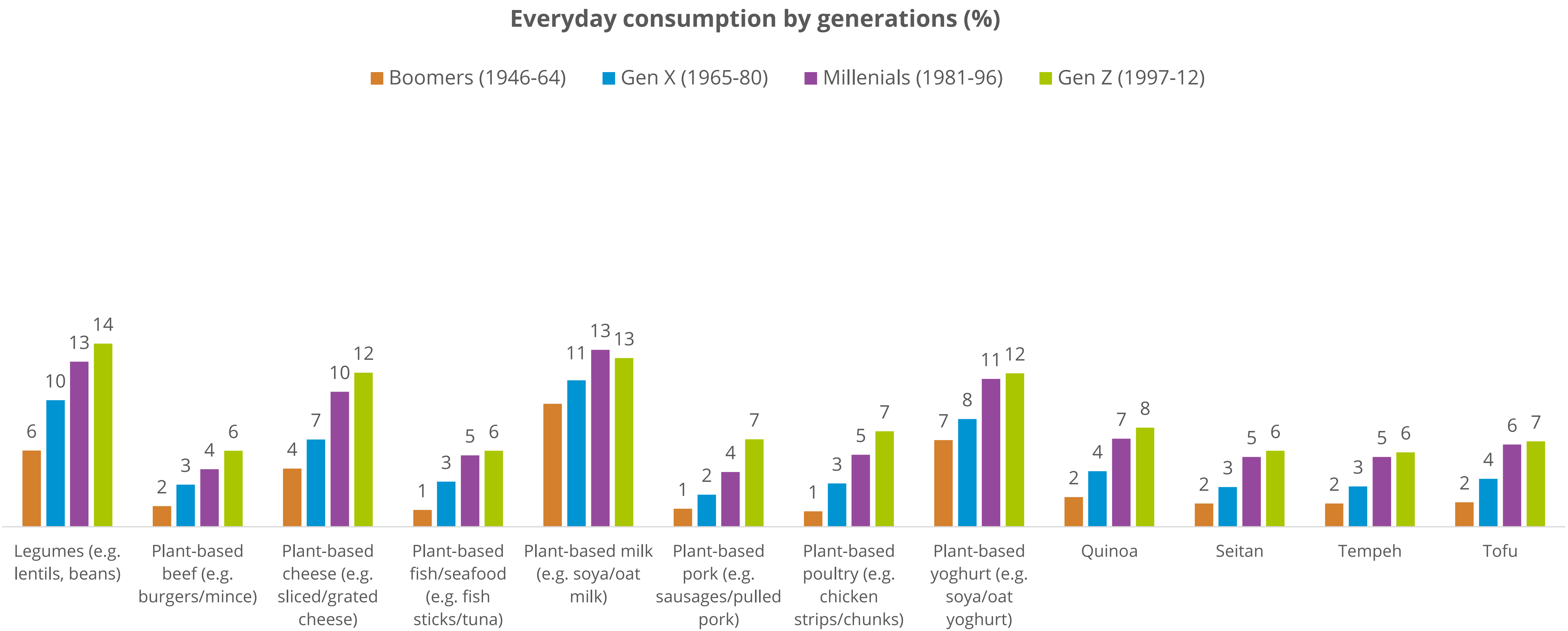
Weekly consumption: Sum of '1-3 times a week' + '4-6 times a week'
Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Monthly consumption, by dietary lifestyle



Monthly consumption: Sum of ‘1-3 times a month’ + ‘Less than once a month’
Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Daily consumption, by generation

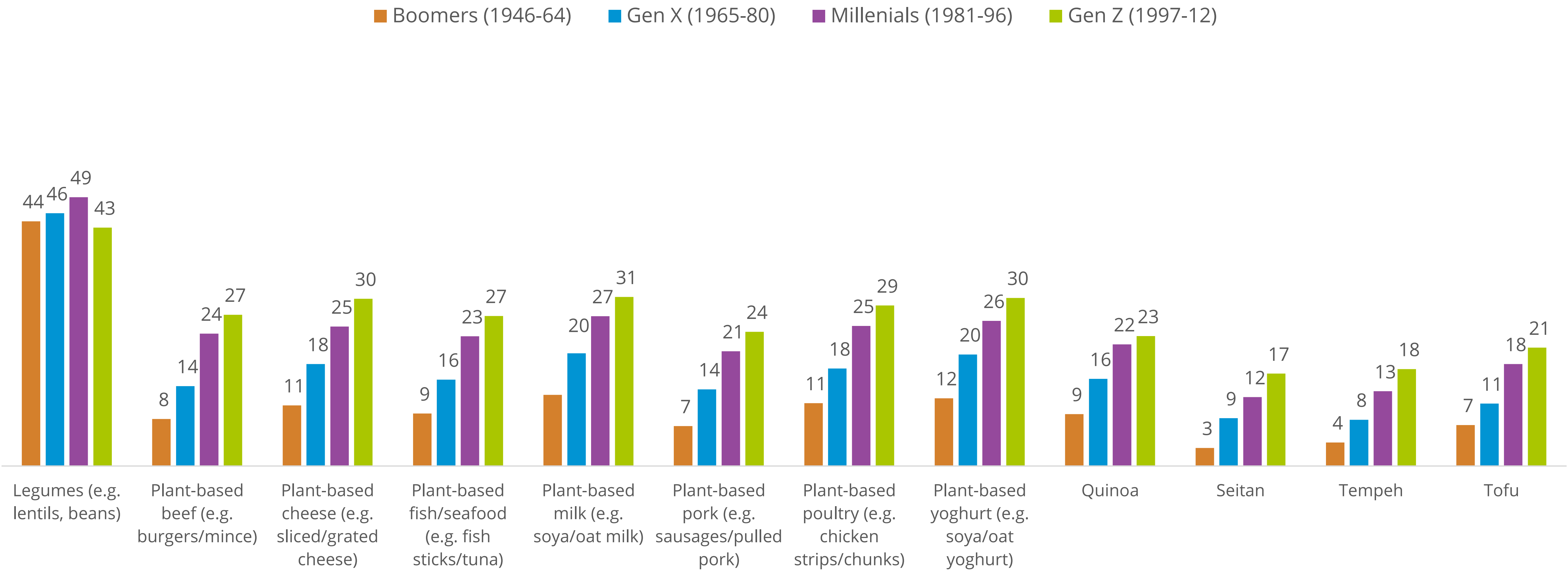


Everyday consumption: Sum of ‘Once a day’ + ‘2 or more times per day’
Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Total n= 7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

Weekly consumption, by generation

Weekly consumption by generations (%)

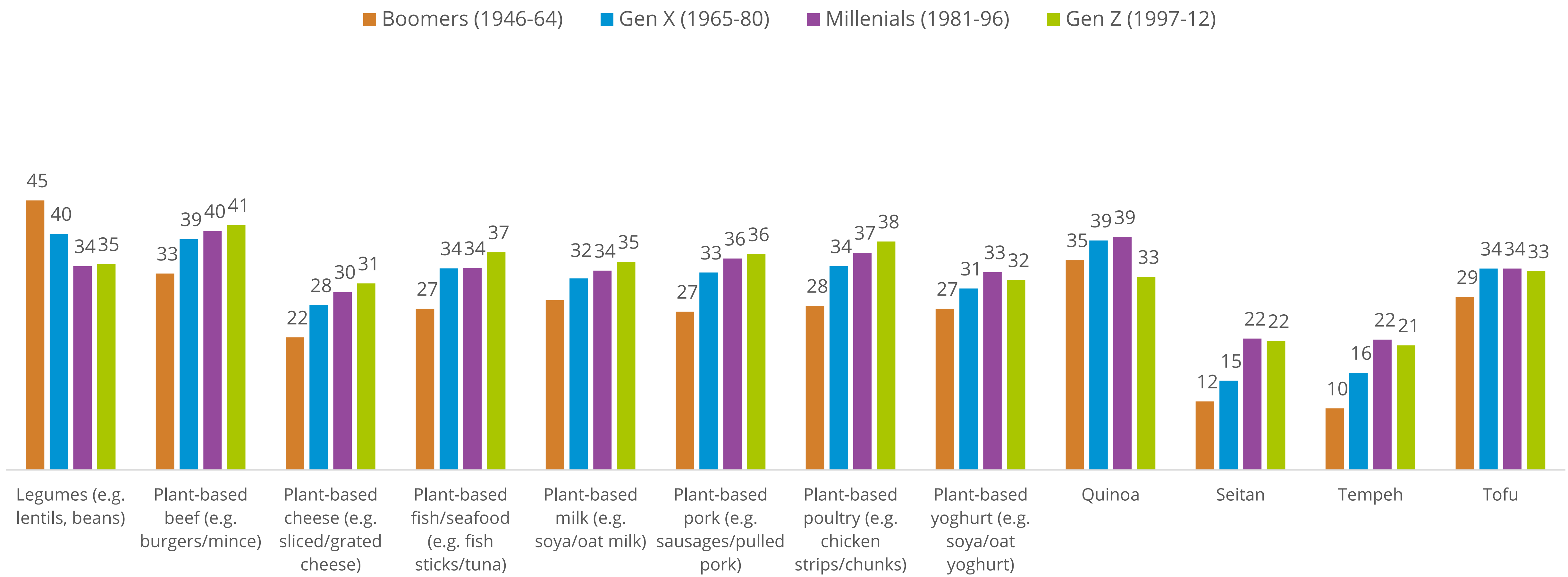


Weekly consumption: Sum of '1-3 times a week' + '4-6 times a week'

Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Monthly consumption, by generation

Monthly consumption by generations (%)



Monthly consumption: Sum of ‘1-3 times a month’ + ‘Less than once a month’
Q7: Which statements best describes how frequently you consume the following food products? | Single choice

Total= 7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q8 “Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now?”

51% of European meat consumers are actively reducing their meat consumption, up from 46% in 2021

Actual meat consumption vs a year ago (Omnivores and Flexitarians) (%)

	2023	2021
A lot less	**15%**	**14%**
Slightly less	**36%**	**32%**
No change	39%	48%
Slightly more	7%	5%
A lot more	2%	1%

Q8: Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now? | Single choice

Total n= 6679 | Flexitarians n=2044 | Omnivores n=4635

Meat consumers in Germany, France, and Italy are leading in terms of **reducing their meat consumption**

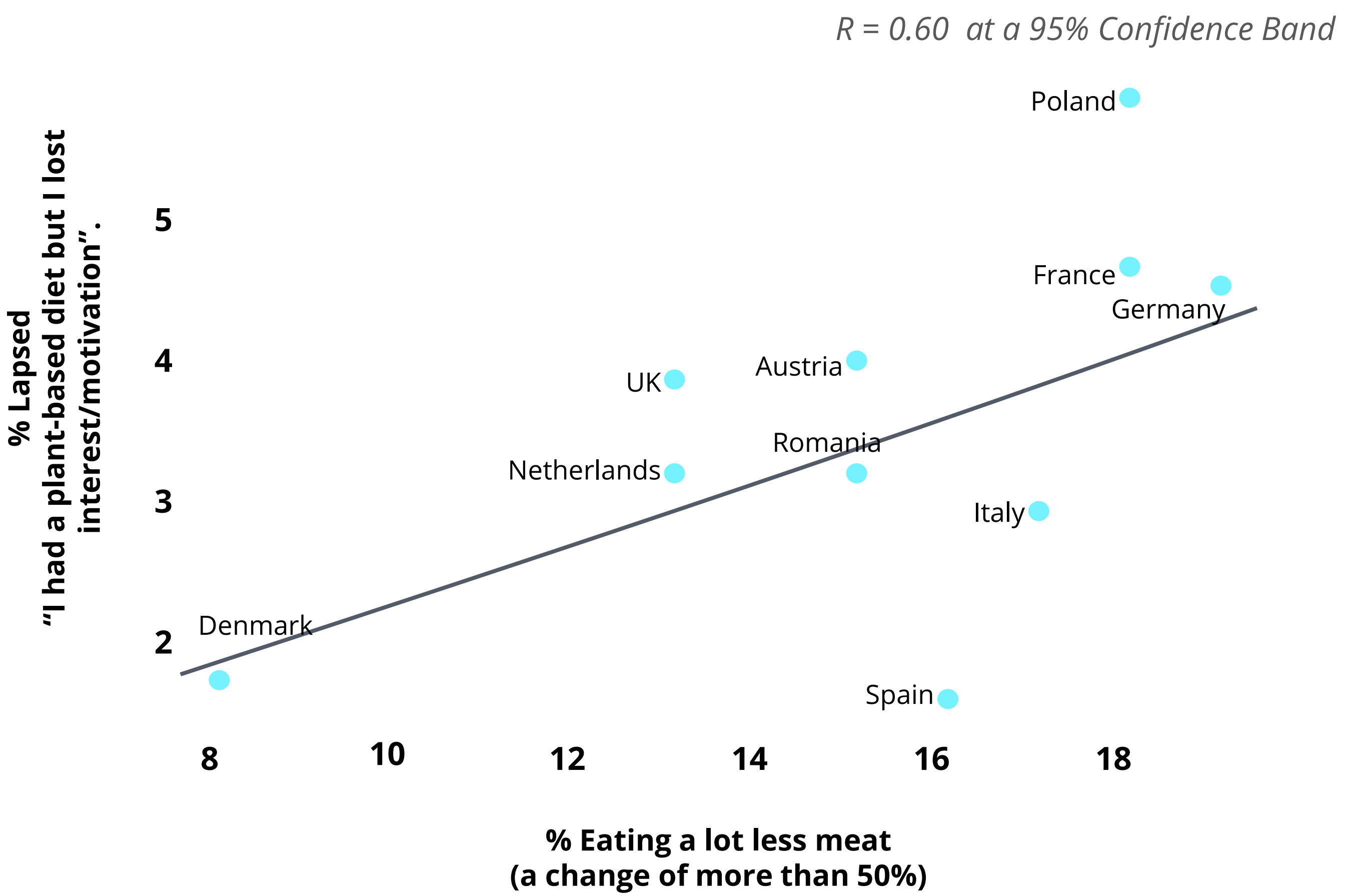
Changes in meat consumption since last year (%) – by country

	A lot less (a change of more than 50%)	**Slightly less** (a change of less than 50%)	**No change**	**Slightly more** (a change of less than 50%)	**A lot more** (a change of more than 50%)
Total	**15%**	**36%**	**39%**	**7%**	**2%**
Germany	19%	40%	34%	5%	2%
France	18%	39%	34%	6%	2%
Poland	18%	30%	44%	6%	2%
Italy	17%	42%	33%	7%	2%
Spain	16%	32%	43%	7%	2%
Austria	15%	36%	41%	6%	2%
Romania	15%	33%	40%	10%	2%
Netherlands	13%	36%	43%	7%	1%
UK	13%	35%	41%	8%	3%
Denmark	8%	39%	39%	11%	2%

Q8: Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

When reduction surpasses 50%, lapses are more likely, emphasising the importance of a gradual approach



Please note that the presented correlation analyses in this study aim to identify potential relationships between variables. While significant correlations may suggest associations, they do not necessarily imply causation. Additional factors and complexities that influence the observed patterns might need further analysis.

Q5: Which of the following phrases best describes your current dietary habits or situation? | Single choice
Q8: Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now? | Single choice

Correlation measurements	
Weak positive correlation	0.1 to 0.3
Moderate positive correlation	0.3 to 0.5
Strong positive correlation	0.5 to 1.0

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Meat consumption is declining mainly among flexitarians. Omnivores are making more modest reductions

Actual meat consumption vs a year ago (Omnivores and Flexitarians) (%)

	Total	Omnivores	Flexitarians
A lot less (a change of more than 50%)	15%	10%	27%
Slightly less (a change of less than 50%)	36%	33%	44%
No change	39%	48%	20%
Slightly more (a change of less than 50%)	7%	8%	7%
A lot more (a change of more than 50%)	2%	2%	2%
Total	**100%**	**100%**	**100%**

Q8: Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now? | Single choice
Q3: Which category best describes your current dietary lifestyle? | Single selection

Total n=7500 | Flexitarians n=2044 | Omnivores n=4635

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q9 “Which of the following food products have you decreased your consumption of the most?”

Beef and pork consumption has substantially declined, while dairy products show only a minor reduction

Decrease of food consumption (%) – Total sample

	2023
Beef	**35%**
Pork	**31%**
Fish	7%
Poultry	6%
Milk	6%
Cheese	5%
Eggs	4%
Yoghurt	3%
I don't know	3%

Q9: For which of the following food products have you decreased your consumption of the most? | Multiple choice

Total: n= 7500

Most demographics tend to focus on decreasing beef consumption rather than pork.

Decrease of annual pork and beef consumption (%) – by key demographics

	Pork	Beef
Flexitarians	36%	36%
Omnivores	35%	26%
Boomers	47%	35%
Gen X	39%	32%
Gen Z	27%	25%
Millennials	32%	31%
Deniers	33%	28%
Committed	36%	32%
Lapsed	26%	29%

Q9: For which of the following food products have you decreased your consumption of the most? | Multiple choice

Total= 7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed= 525 | Lapsed= 300

Consumption of beef and pork more than three times a week, by country

+3 times per week consumption of pork and beef - by country 2023

% of people who…	**Eats Beef + 3 times per week**	**Eats Pork + 3 times per week**	**Eats Poultry + 3 times per week**	**Eats Fish +3 times per week**	**Intent to reduce total meat consumption**
Total	**13%**	**14%**	**20%**	**14%**	**51%**
Denmark	24%	19%	26%	20%	47%
France	16%	14%	23%	14%	57%
Netherlands	15%	14%	18%	13%	49%
UK	12%	8%	20%	14%	48%
Italy	12%	11%	17%	12%	59%
Poland	11%	17%	26%	15%	48%
Spain	11%	13%	16%	13%	48%
Germany	10%	14%	18%	12%	59%
Austria	10%	11%	14%	9%	51%
Romania	8%	20%	23%	13%	48%

Q9: For which of the following food products have you decreased your consumption of the most? | Multiple choice | Top 3 per column highlighted in green, Top 4 & 5 highlighted in yellow

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Readiness and intention to change current food choices

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q10 "Which of the following reasons best describe why you have chosen to decrease your consumption of meat or dairy products?"

Health is the primary reason for people reducing their meat consumption, with **animal welfare** coming second

Reasons for decrease of meat/dairy consumption (%) – Omnivores and flexitarians

	Total	Omnivores	Flexitarians
Health	**47**	**42**	**54**
Animal welfare	**29**	**22**	**40**
Environment	**26**	**21**	**32**
Taste	15	15	15
Concerns over antibiotics	15	12	18
Other	12	17	6
My social environment	10	10	9
Major outbreaks of animal-to-human diseases (e.g. COVID-19)	9	8	10

Q10: Which of the following reasons best describe why you have chosen to decrease your consumption of meat or dairy products? | Multiple choice

Total n=7500 | Flexitarians n=2044 | Omnivores n=4635

For **all generations,** the top drivers are health, animal welfare, and environmental factors

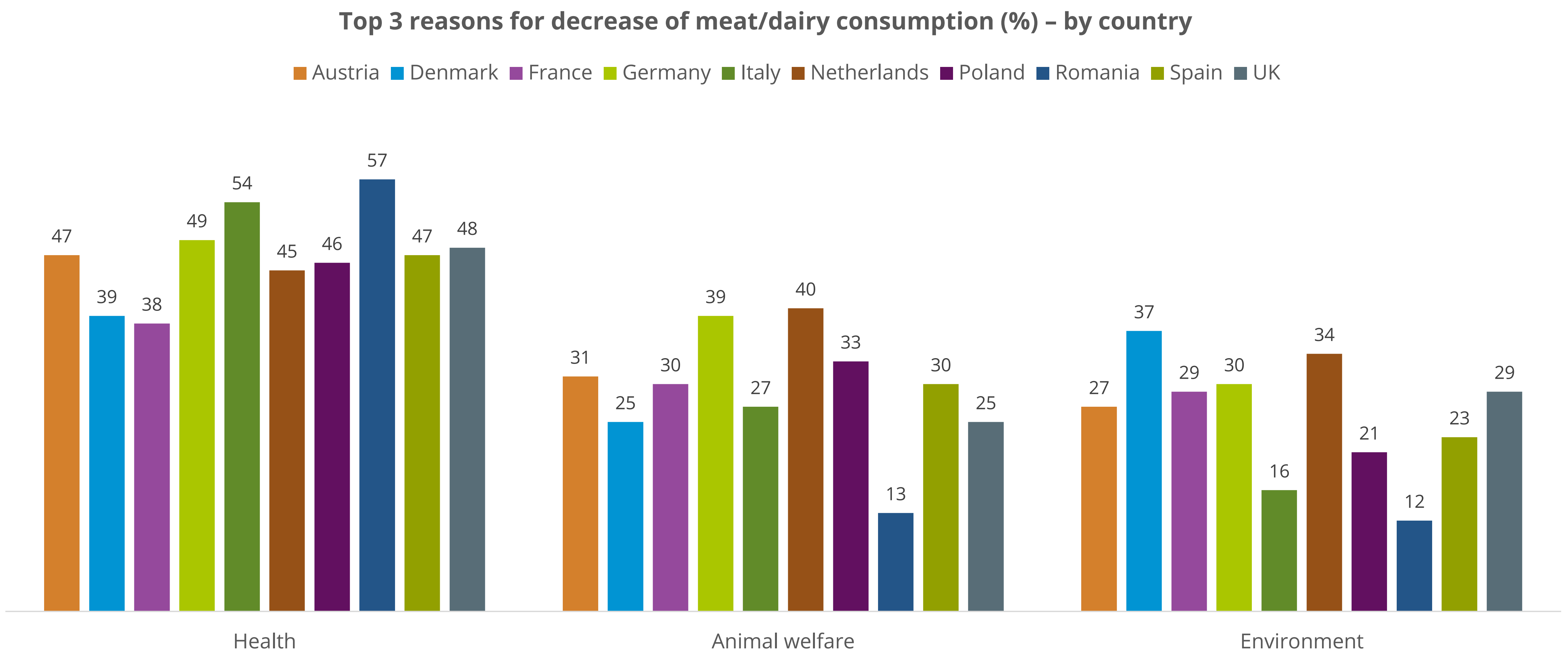
Reasons for decrease of meat/dairy consumption (%) – by generations

	Total	Boomers	Gen X	Millennials	Gen Z
Health	**47**	57	52	45	36
Animal welfare	**29**	36	29	29	27
Environment	**26**	33	24	26	22
Taste	15	11	11	15	22
Concerns over antibiotics	15	19	16	15	10
Other	12	13	15	11	9
My social environment	10	7	9	11	11
Major outbreaks of animal-to-human diseases (e.g. COVID-19)	9	9	8	9	9

Q10: Which of the following reasons best describe why you have chosen to decrease your consumption of meat or dairy products? | Multiple choice

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

In **Romania, health concerns** are driving reductions, while in **Germany** and the **Netherlands**, it's **animal welfare**



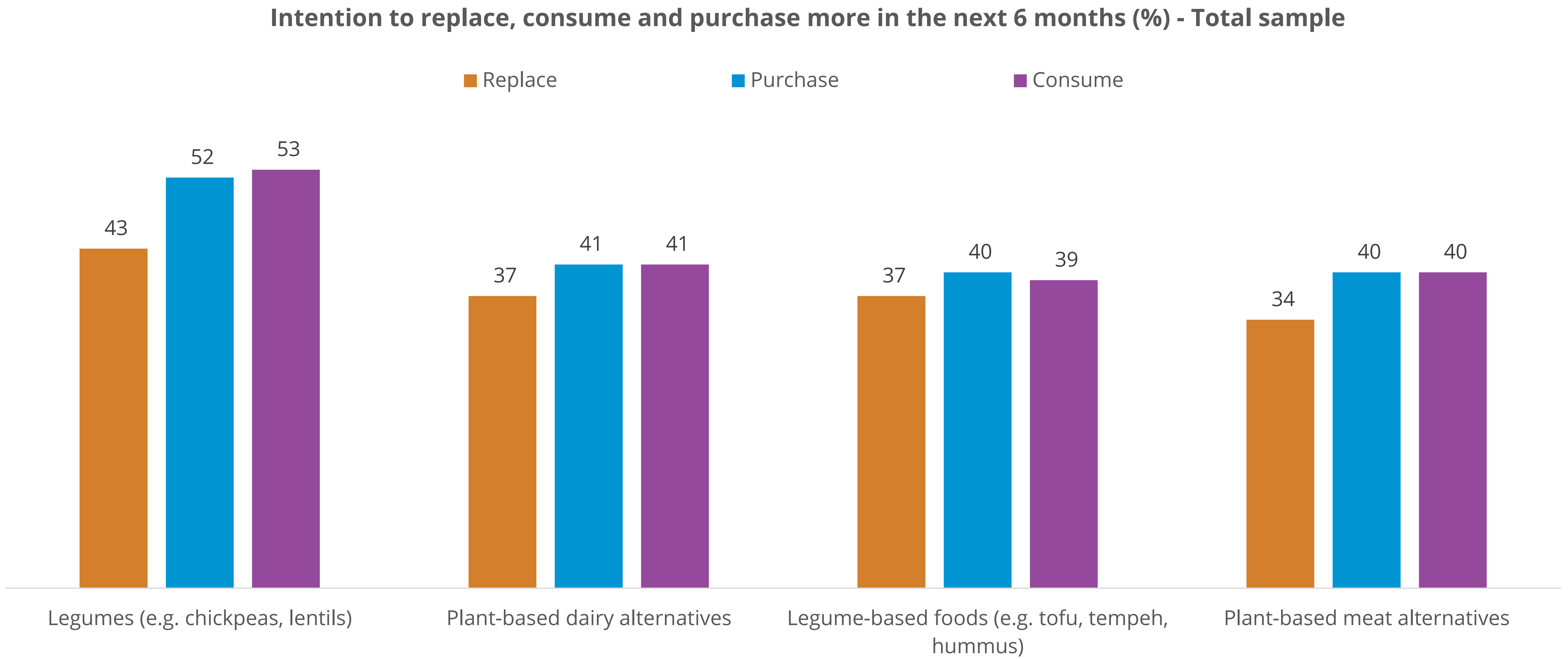
Q10: Which of the following reasons best describe why you have chosen to decrease your consumption of meat or dairy products? | Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q 11/12/13 “Please indicate your agreement to the following statements.”

In general, **Europeans are open to including more plant-based foods in their dietary lifestyles**



Q11: Please indicate your agreement to the following statements. I intent to replace animal-based foods in my diet by eating more… in the next 6 months | Single choice | Sum of 'Strongly agree' + 'Agree' + 'Somewhat agree'

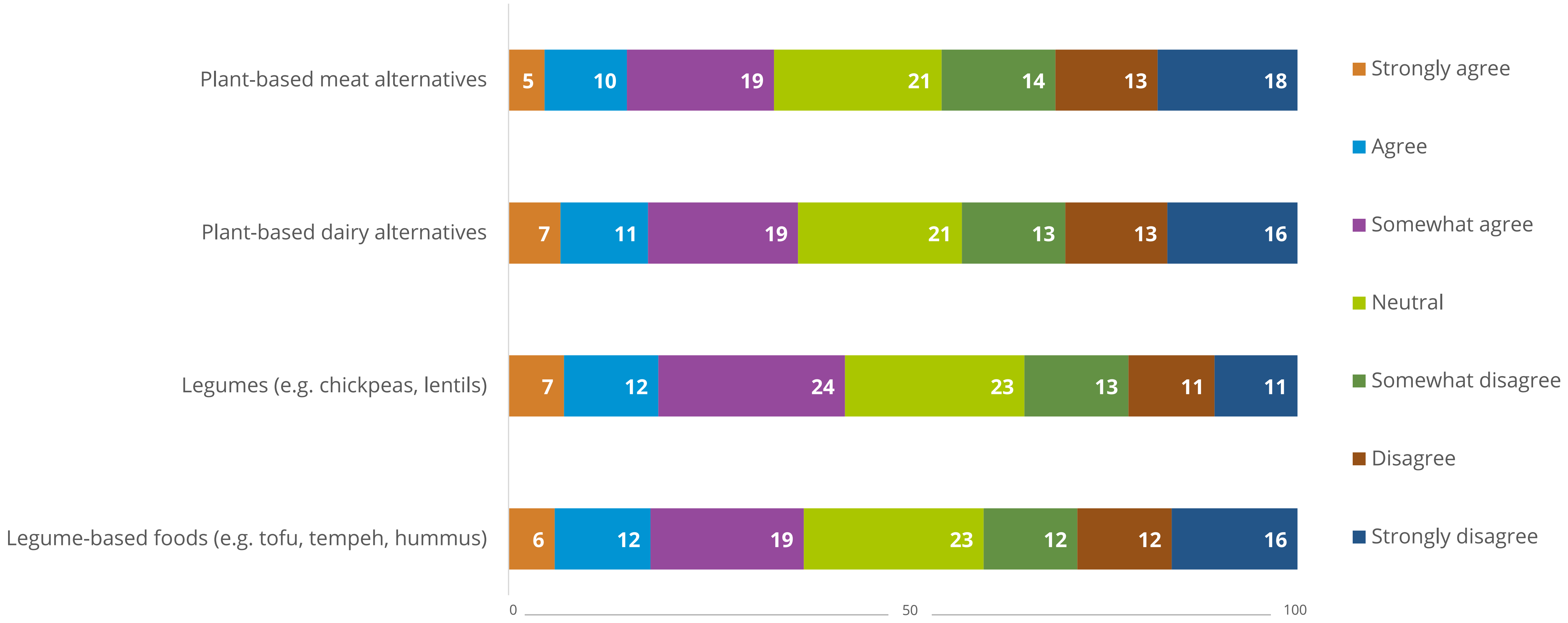
Total: n= 7500

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q11 "I intend to replace animal-based foods in my diet by eating more… in the next 6 months."

Most consumers intend **replacing** animal-based meat with legumes, plant-based dairy, and legume-based foods

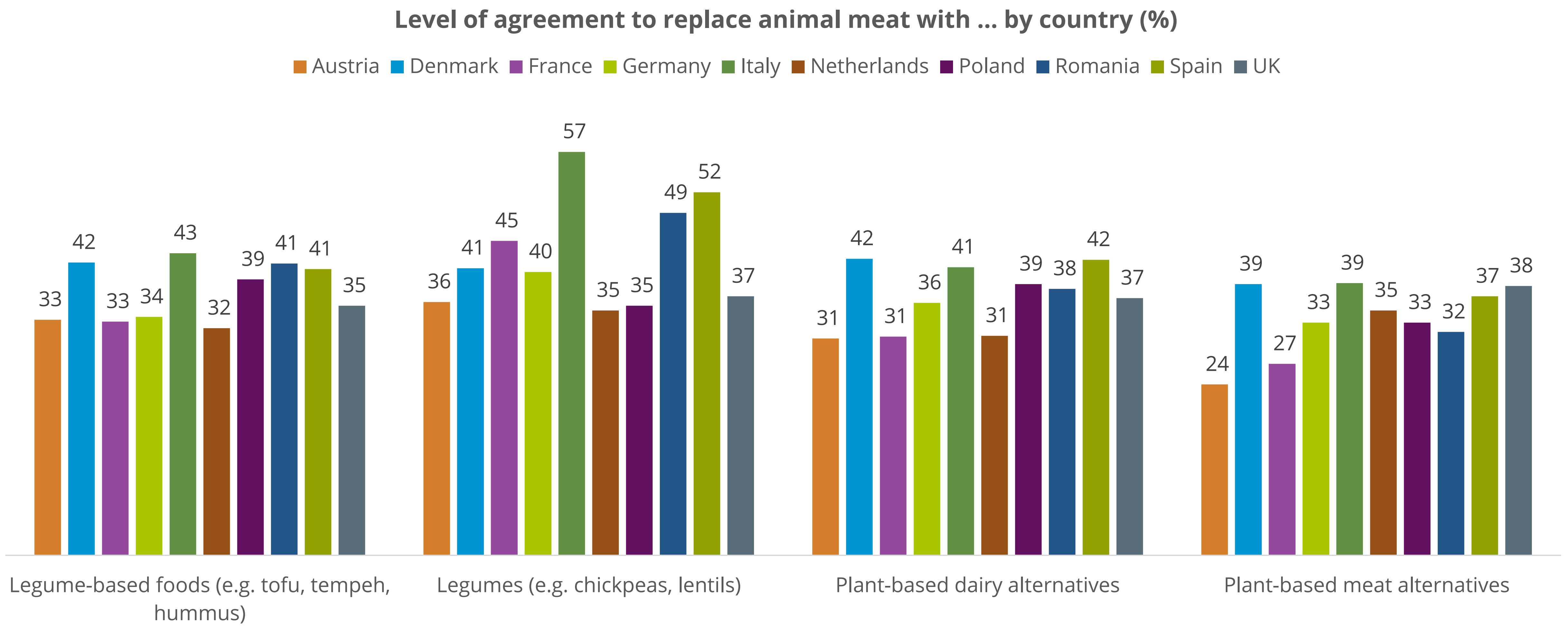
Level of agreement to replace animal meat with ... Total sample (%)



Q11: Please indicate your agreement to the following statements. I intent to replace animal-based foods in my diet by eating more... in the next 6 months | Single choice

Total: n= 7500

Danish, Italian and Spanish consumers stand out within the overall European trend



Q11: Please indicate your agreement to the following statements. I intent to replace animal-based foods in my diet by eating more… in the next 6 months | Single choice | Sum of 'Strongly agree' + 'Agree' + 'Somewhat agree'

Total n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Replacement intentions, by dietary type, generation, and dietary stage

Level of agreement to replace animal meat with … by key demographics (%)

Replace	**Legumes**	**Legume-based**	**Plant-based dairy**	**Plant-based meat**
Flexitarians	57%	50%	49%	47%
Omnivores	35%	29%	29%	25%
Boomers	48%	29%	28%	26%
Gen X	43%	34%	34%	31%
Gen Z	35%	40%	39%	34%
Millennials	46%	42%	41%	39%
Deniers	33%	33%	31%	27%
Committed	62%	60%	63%	59%
Lapsed	40%	36%	30%	28%

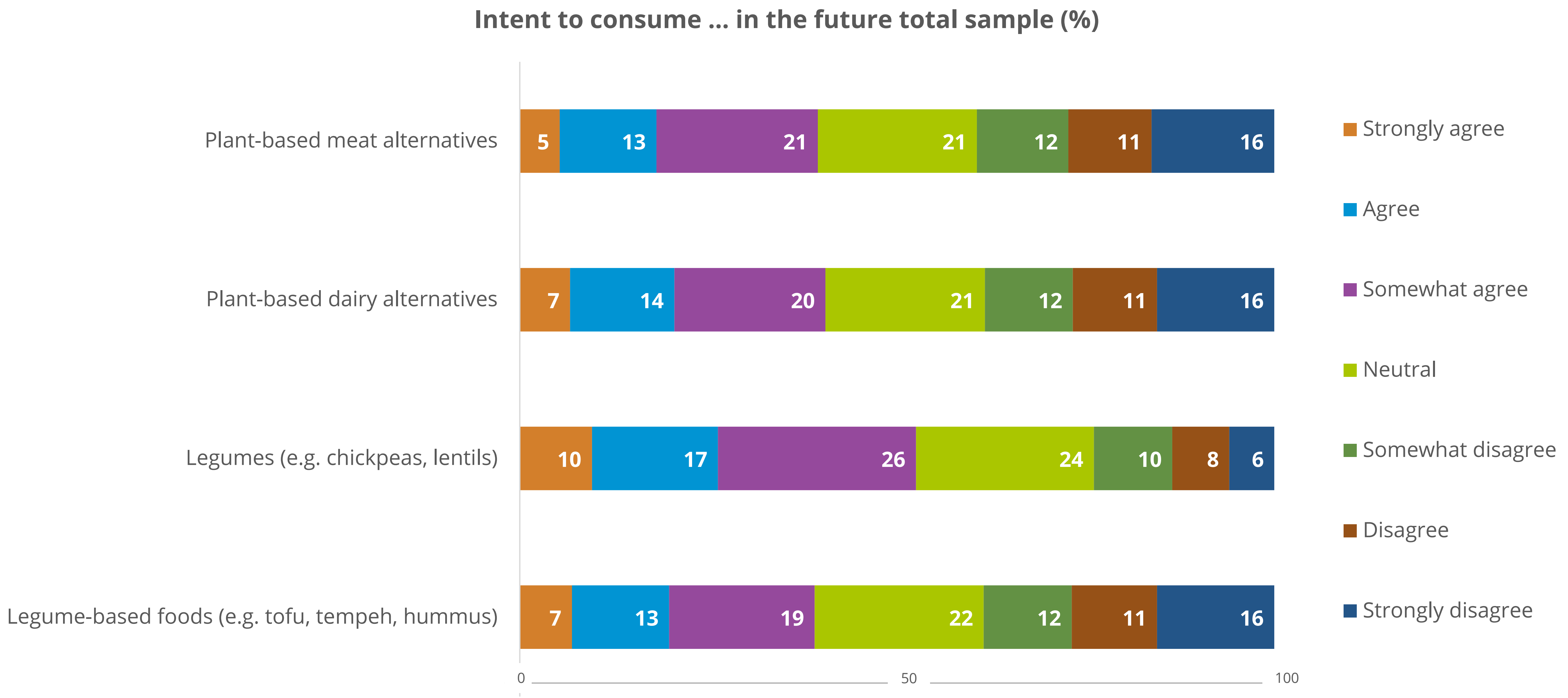
Q11: Please indicate your agreement to the following statements. I intent to replace animal-based foods in my diet by eating more… in the next 6 months | Single choice | Sum of 'Strongly agree' + 'Agree' + 'Somewhat agree'

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q12 "I intend to <u>consume</u> more … in the next 6 months."

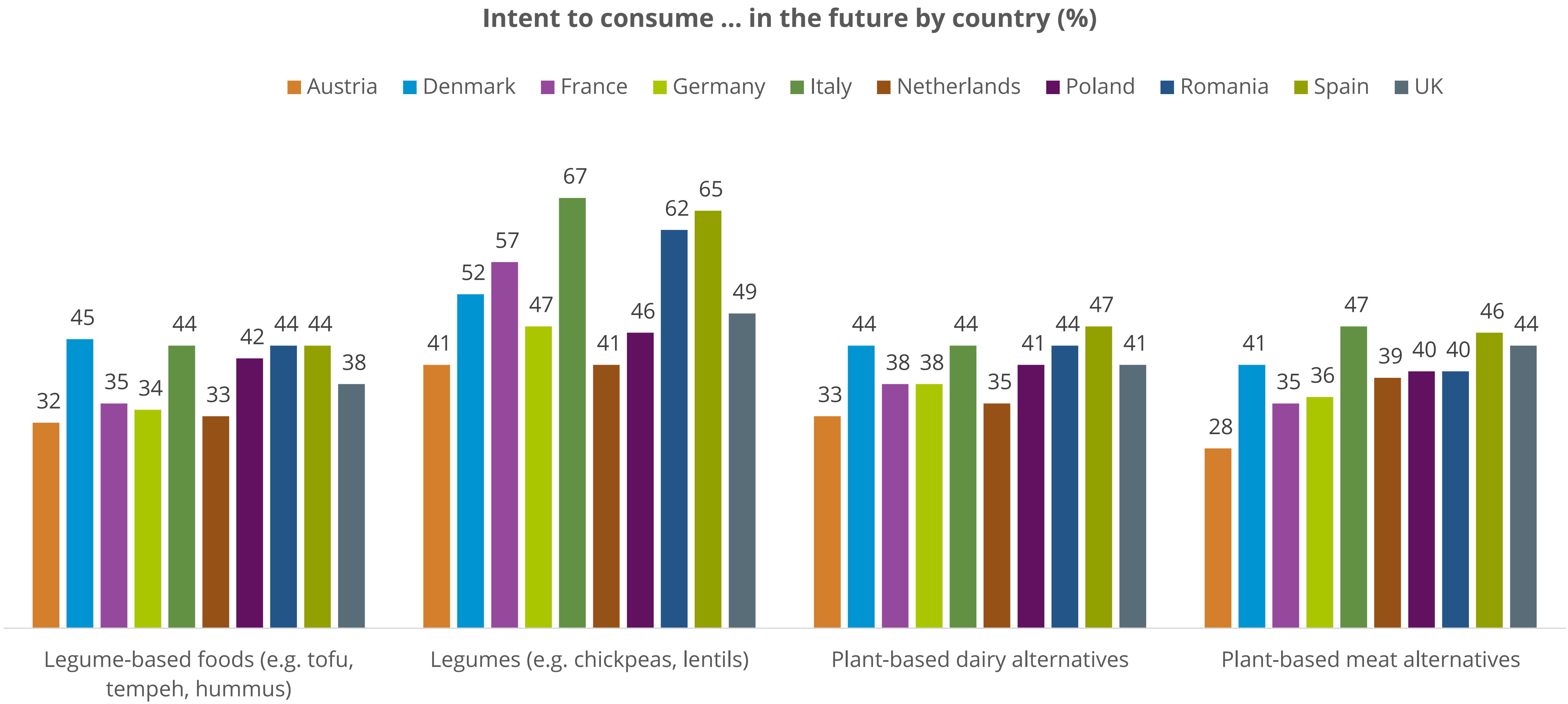
Most consumers intend consuming **more legumes** in the future, followed by **plant-based dairy** products



Q12: Please indicate your agreement to the following statements. I intend to consume more … in the next 6 months. | Single choice

Total: n= 7500

Danish, Italian and Spanish consumers stand out within the overall European trend



Q12: Please indicate your agreement to the following statements. I intend to consume more … in the next 6 months. | Single choice

Intention to purchase, by dietary type, generation, and dietary stage

Intent to consume … in the future by key demographics (%)

Consume	**Legumes**	**Legume-based**	**Plant-based dairy**	**Plant-based meat**
Flexitarians	63%	53%	54%	52%
Omnivores	47%	30%	33%	31%
Boomers	56%	31%	30%	30%
Gen X	54%	35%	39%	36%
Gen Z	46%	42%	43%	43%
Millennials	45%	44%	45%	44%
Deniers	46%	35%	36%	35%
Committed	70%	62%	66%	64%
Lapsed	48%	38%	37%	37%

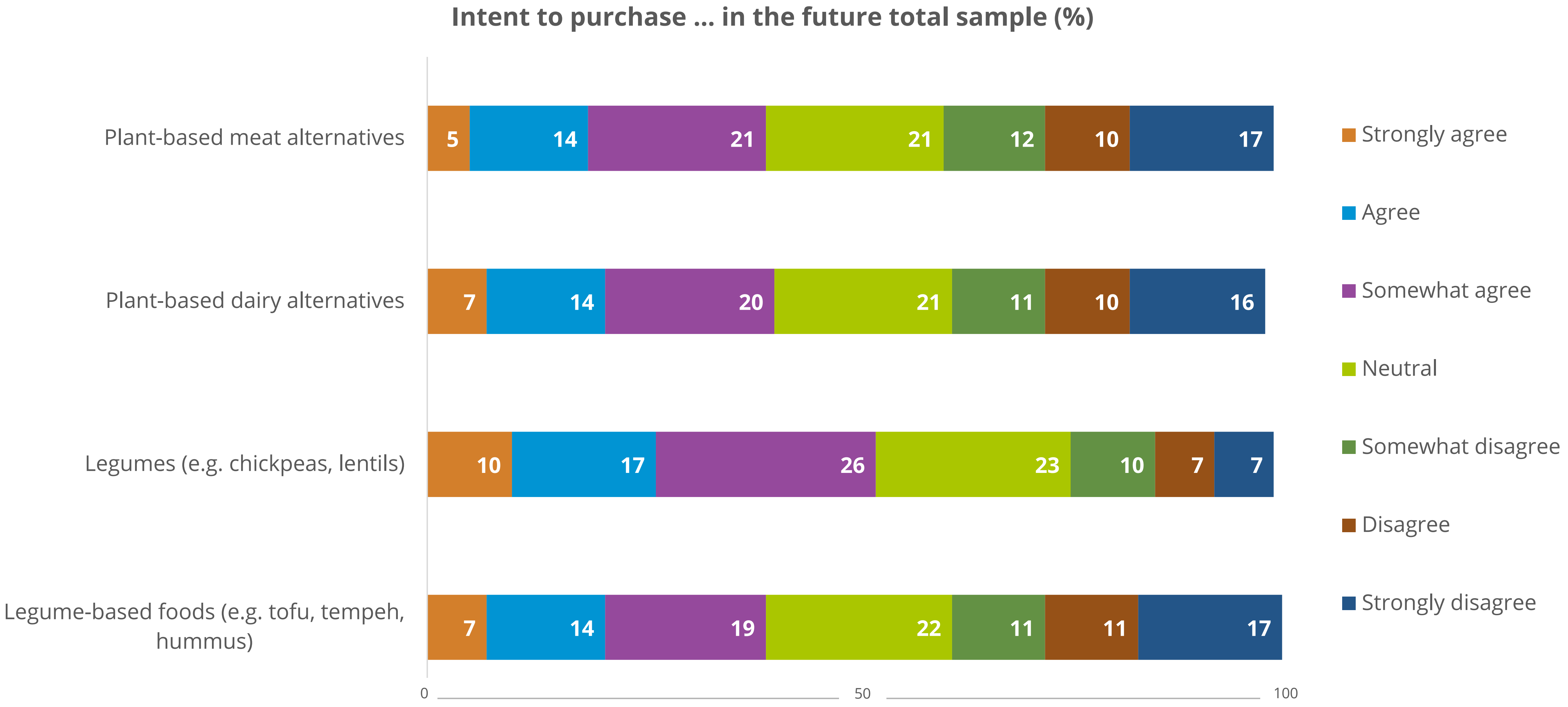
Q12: Please indicate your agreement to the following statements. I intend to consume more … in the next 6 months. | Single choice | Sum of 'Strongly agree' + 'Agree' + 'Somewhat agree'

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q13 "I intend to purchase more … in the next 6 months."

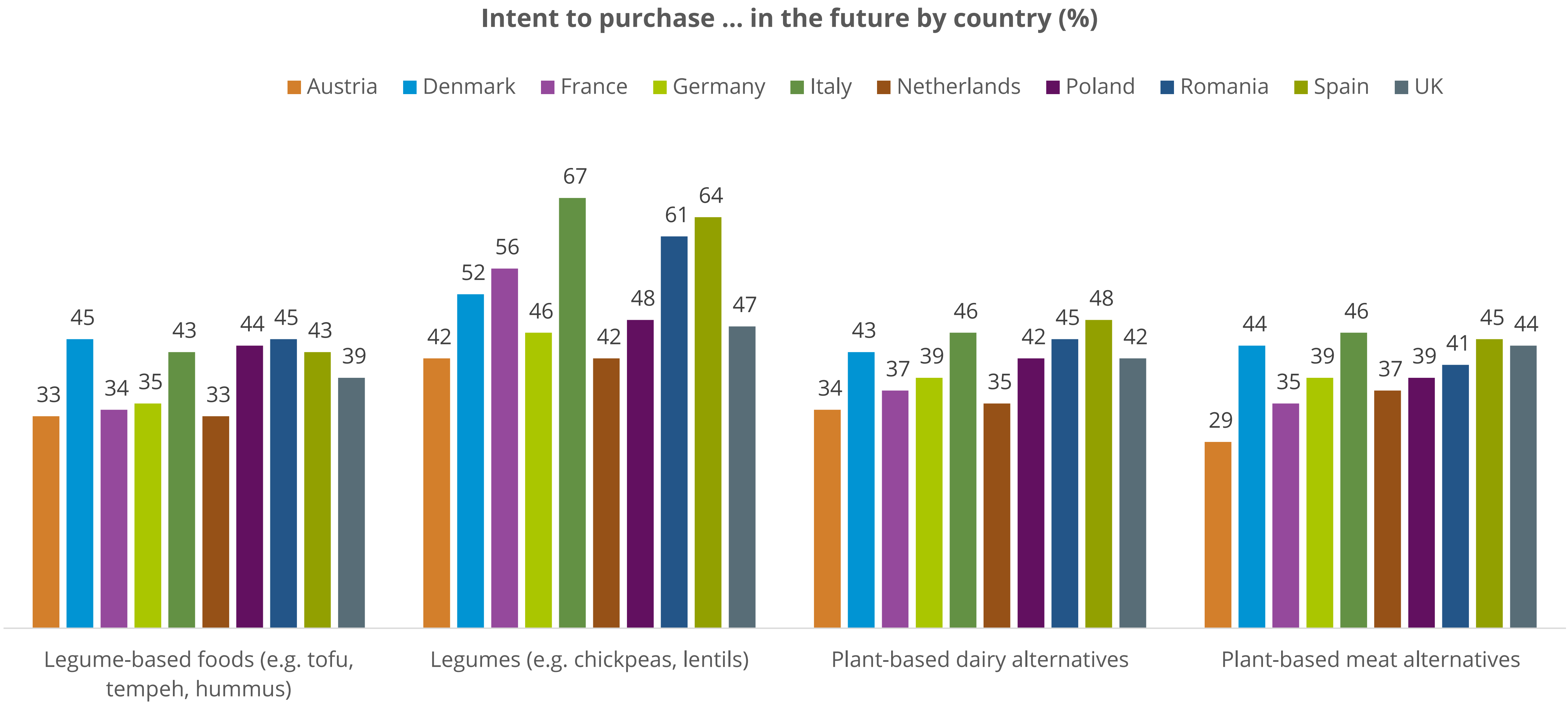
Most consumers intend purchasing **more legumes** in the future, followed by plant-based dairy products



Q13: Please indicate your agreement to the following statements. I intend to purchase more ... in the next 6 months.| Single choice

Total: n= 7500

Intention to consume, by country



Q13: Please indicate your agreement to the following statements. I intend to purchase more … in the next 6 months.| Single choice

Total n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Purchase intentions, by dietary type, generation, and dietary stage

Intent to purchase … in the future key demographics (%)

Purchase	Legumes	Legume-based	Plant-based dairy	Plant-based meat
Flexitarians	62%	52%	54%	52%
Omnivores	47%	31%	33%	31%
Boomers	48%	29%	30%	45%
Gen X	53%	37%	49%	42%
Gen Z	56%	42%	55%	46%
Millennials	59%	44%	53%	46%
Deniers	45%	36%	35%	35%
Committed	71%	59%	63%	65%
Lapsed	50%	36%	40%	38%

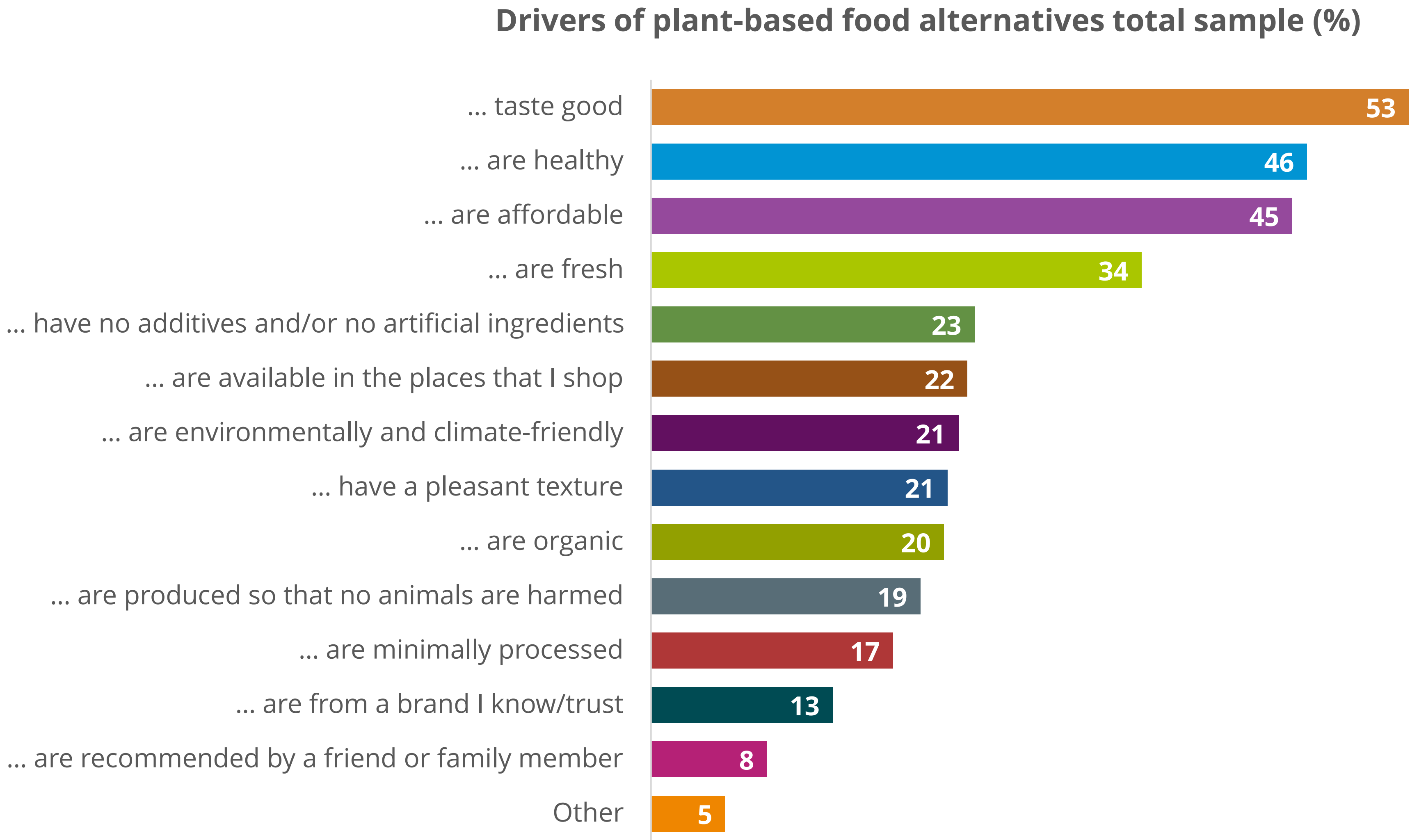
Q13: Please indicate your agreement to the following statements. I intend to purchase more … in the next 6 months.| Single choice | Sum of ‘Strongly agree’ + ‘Agree’ + ‘Somewhat agree’

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q14 "What are the most important factors when choosing plant-based food alternatives?"

Taste, health and price are the most important factors to consumers when choosing plant-based food alternatives



Rank top 10 in 2021:

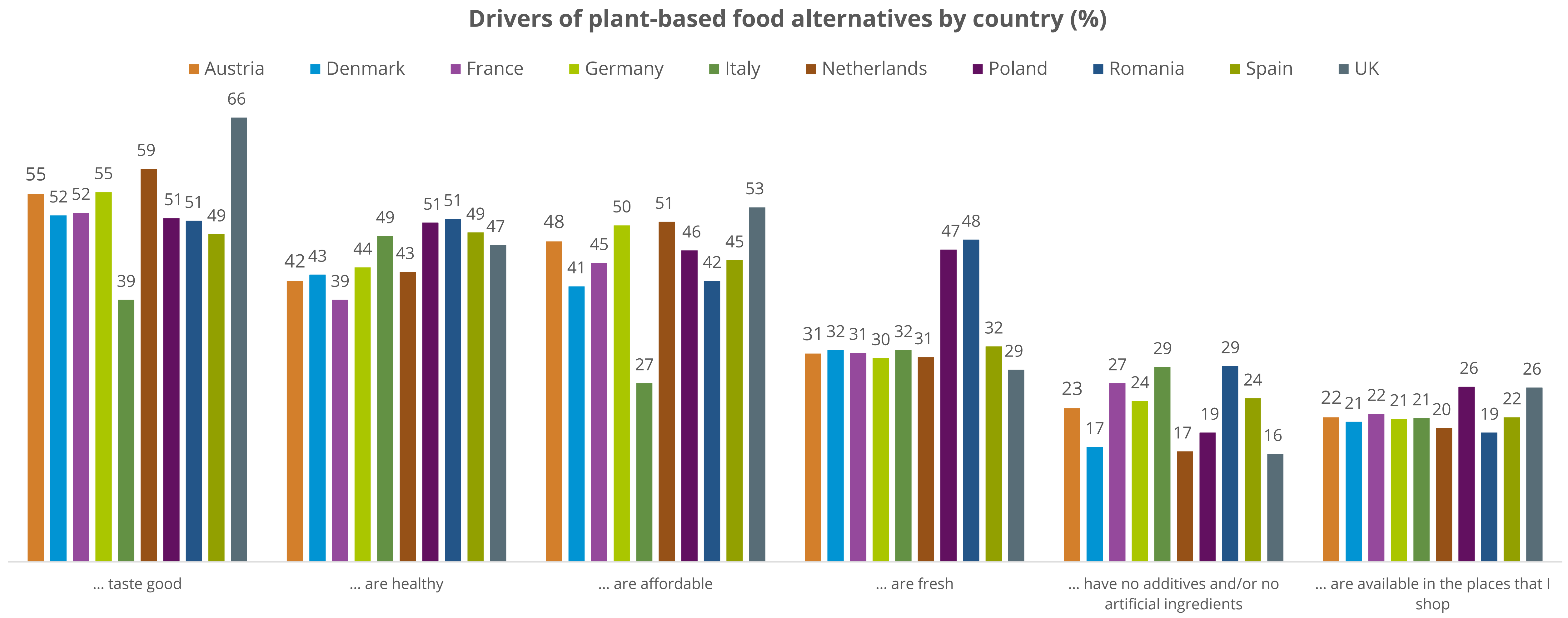
1. Taste
2. Health
3. Fresh
4. No additives
5. Cheap
6. Environmentally friendly
7. Produced in a way that no animals are harmed
8. Organic
9. Pleasant texture
10. Minimally processed
11. Easy to prepare

Please note that we made changes to the attributes in 2023, which means that the data is not directly comparable to 2021. However, we can still observe trends and draw valuable insights from the data.

Q14: What are the most important factors when choosing plant-based food alternatives? It is important to me that the plant-based food alternatives I choose... | Multiple choice (max 5)

Total: n= 7500

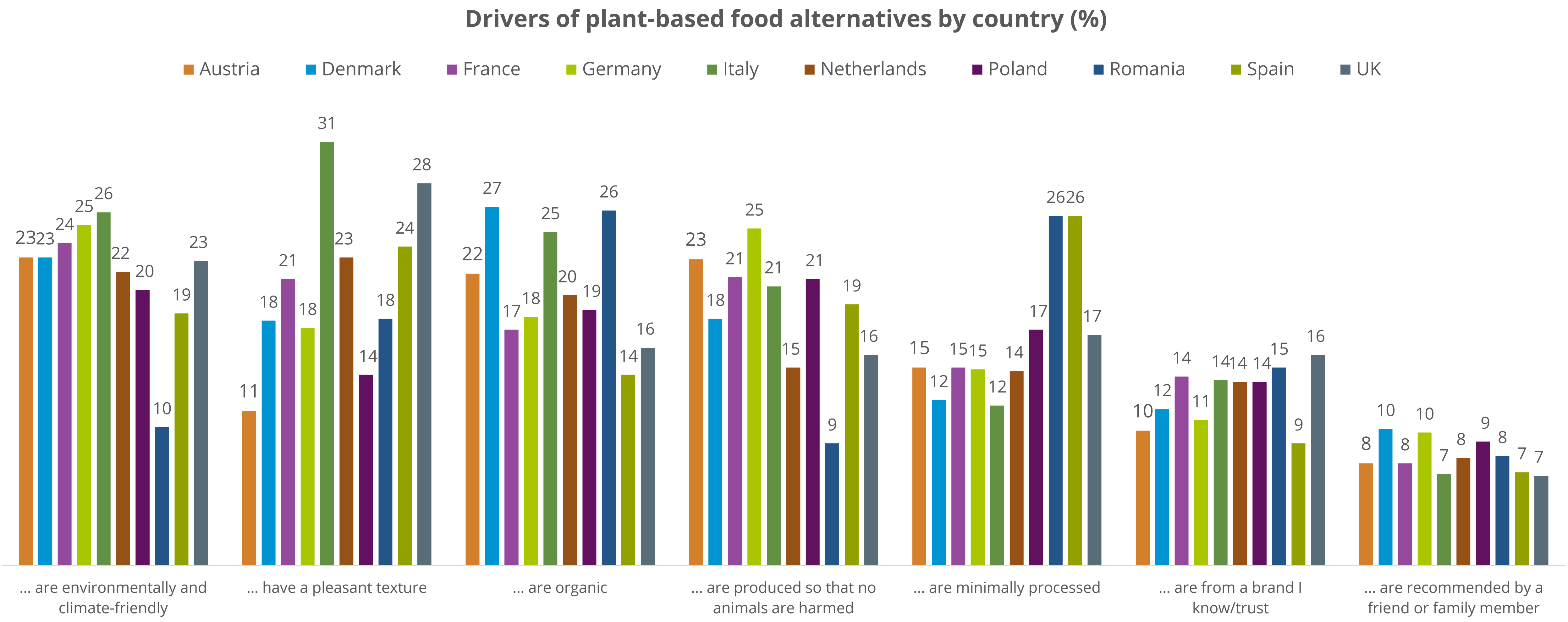
Taste and affordability are key drivers in the UK and the Netherlands…



Q14: What are the most important factors when choosing plant-based food alternatives? It is important to me that the plant-based food alternatives I choose… | Multiple choice (max 5)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

…while health and freshness are key drivers in Poland and Romania.



Q14: What are the most important factors when choosing plant-based food alternatives? It is important to me that the plant-based food alternatives I choose… | Multiple choice (max 5)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Intention to purchase, by dietary type, generation, and dietary stage

Top 3 drivers of plant-based food alternatives by key demographics (%)

Intent to Purchase	**Taste**	**Affordability**	**Health**
Flexitarians	54%	48%	52%
Omnivores	54%	45%	44%
Boomers	56%	47%	47%
Gen X	54%	46%	47%
Gen Z	51%	43%	43%
Millennials	51%	44%	46%
Deniers	50%	42%	41%
Committed	50%	45%	53%
Lapsed	55%	49%	46%

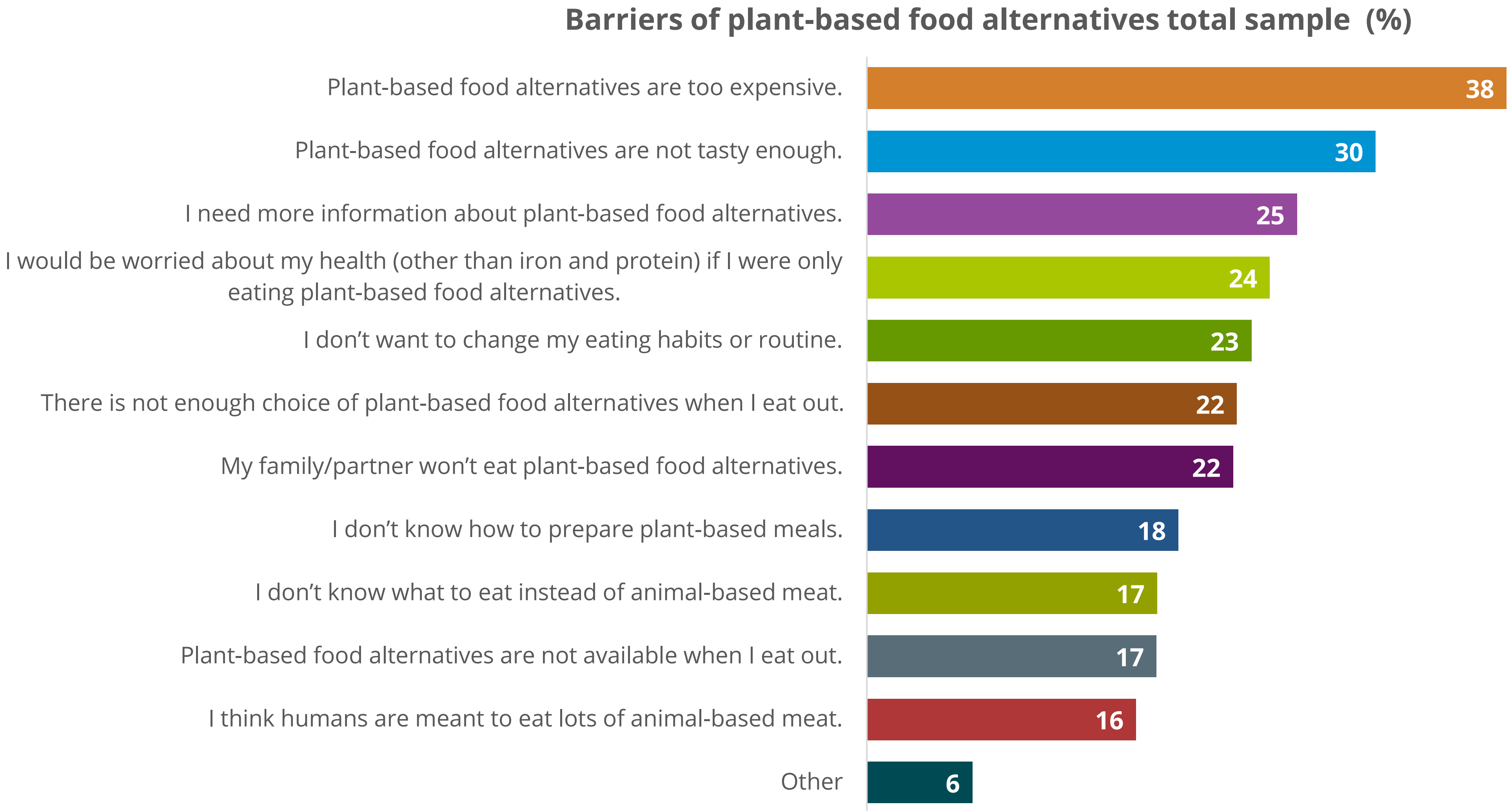
Q14: What are the most important factors when choosing plant-based food alternatives? It is important to me that the plant-based food alternatives I choose... | Multiple choice (max 5)

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q15 "Which of the following do you encounter as barriers when choosing plant-based food alternatives?"

Price and **taste** are the main **barriers** when choosing plant-based alternatives



Rank top 10 in 2021:

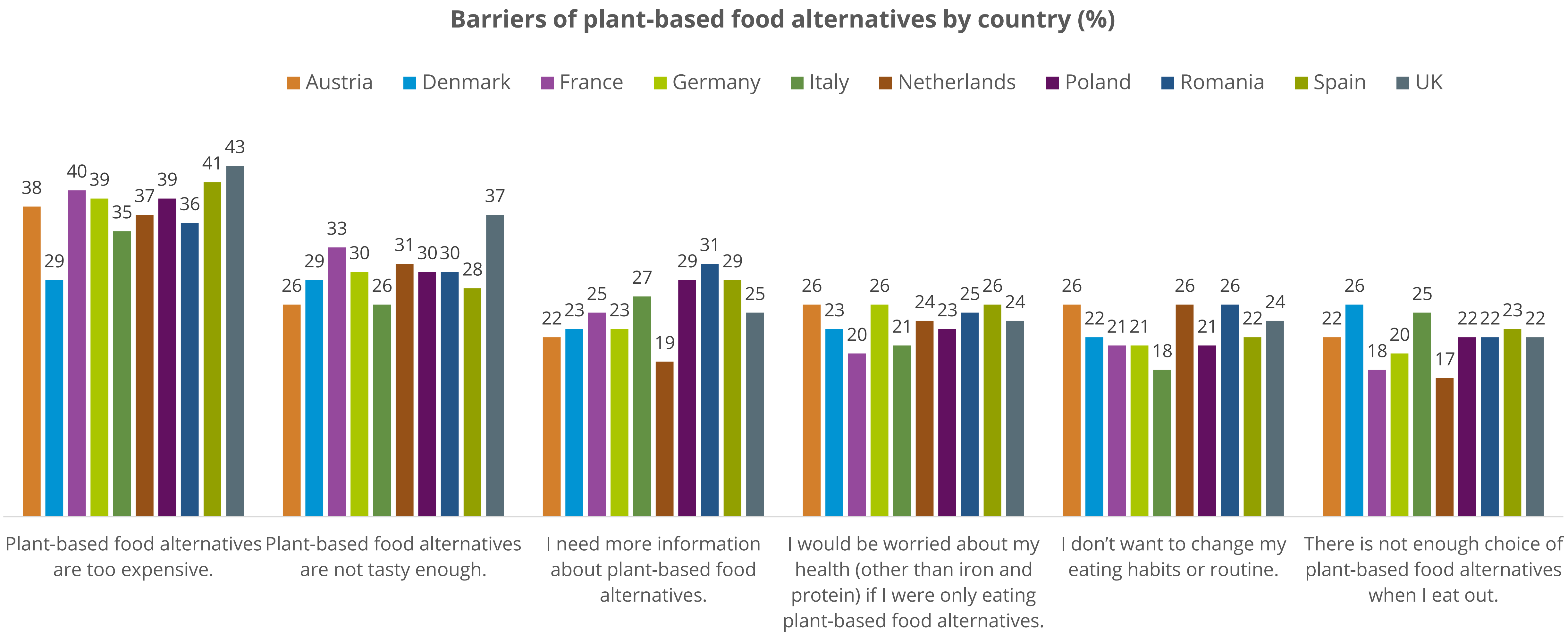
1. Too expensive
2. Not enough choice
3. Family/partner
4. Not tasty
5. Don't want to change habits
6. Need more information
7. Not available when eating out
8. Would be worried about my health
9. Humans are meant to eat lots of animal-based meals
10. Don't know how to prepare
11. Don't know what to eat

Please note that we made changes to the attributes in 2023, which means that the data is not directly comparable to 2021. However, we can still observe trends and draw valuable insights from the data.

Q15: Which of the following do you encounter as barriers when choosing plant-based food alternatives?| Multiple choice (max 5)

Total: n= 7500

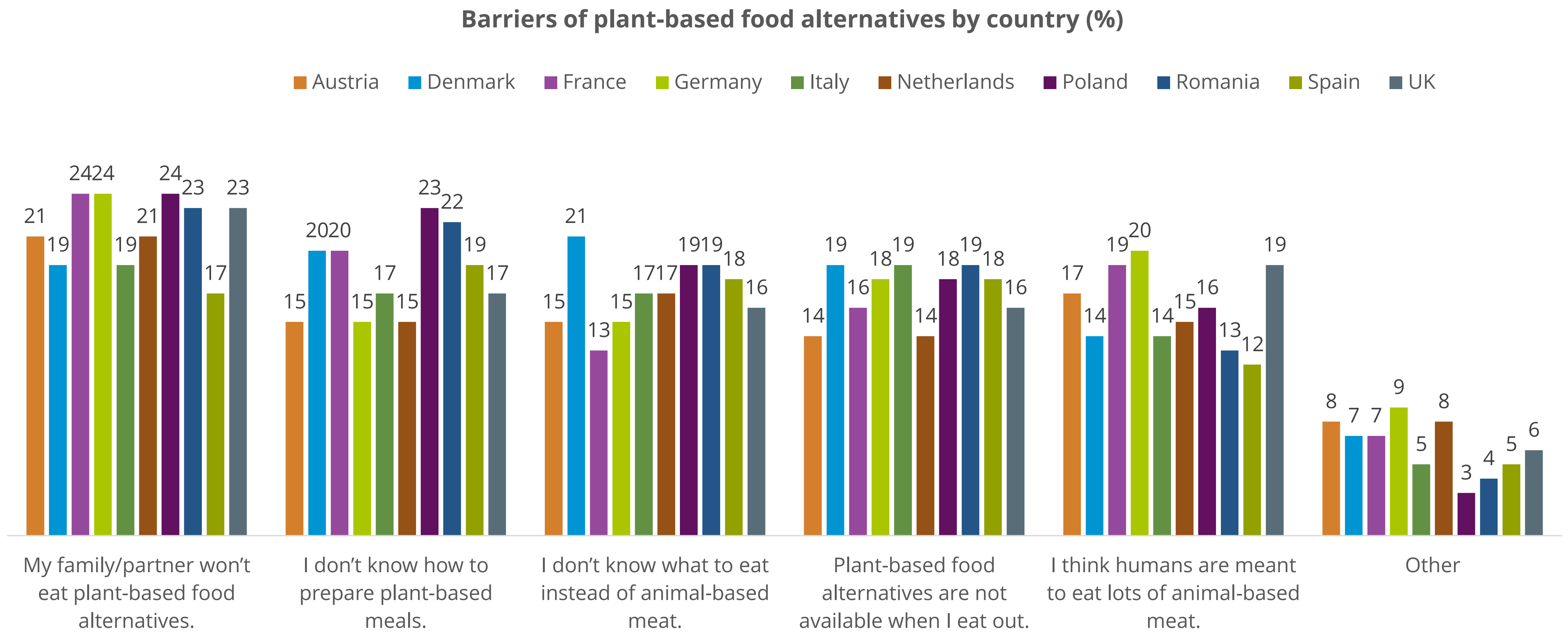
Denmark, Italy, and Romania are the least price-sensitive when it comes to plant-based products



Q15: Which of the following do you encounter as barriers when choosing plant-based food alternatives?| Multiple choice (max 5)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

... while the UK and Spain are the most price sensitive.



Q15: Which of the following do you encounter as barriers when choosing plant-based food alternatives?| Multiple choice (max 5)

Total n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Barriers to plant-based consumption, by dietary type, generation, and dietary stage

Barriers of plant-based food alternatives by key demographics (%)

	Expensive	Not Tasty	Need more information
Flexitarians	42%	28%	28%
Omnivores	36%	32%	24%
Boomers	38%	32%	27%
Gen X	37%	31%	26%
Gen Z	36%	27%	25%
Millennials	39%	30%	24%
Deniers	32%	29%	25%
Committed	38%	26%	29%
Lapsed	43%	30%	22%

Q15 What are the most important factors when choosing plant-based food alternatives? It is important to me that the plant-based food alternatives I choose… | Multiple choice (max 5)

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

Barriers to plant-based consumption, by consumption location

Barriers of plant-based food alternatives by location (%)

	At a restaurant that serves both animal and plant-based meals	At a restaurant that serves only plant-based meals	At home	School or work canteen	Takeaways or when ordering online
Plant-based food alternatives are too expensive.	42%	37%	42%	38%	40%
Plant-based food alternatives are not tasty enough.	32%	30%	32%	32%	31%
I need more information about plant-based food alternatives.	33%	34%	28%	31%	32%
I would be worried about my health (other than iron and protein) if I were only eating plant-based food alternatives.	29%	30%	24%	31%	31%
There is not enough choice of plant-based food alternatives when I eat out.	31%	32%	24%	28%	30%
My family/partner won't eat plant-based food alternatives.	25%	25%	22%	27%	26%
I don't want to change my eating habits or routine.	22%	20%	19%	24%	21%
I don't know how to prepare plant-based meals.	23%	24%	18%	25%	24%
Plant-based food alternatives are not available when I eat out.	23%	28%	18%	28%	26%
I don't know what to eat instead of animal-based meat.	20%	22%	17%	23%	23%
I think humans are meant to eat lots of animal-based meat.	18%	18%	14%	22%	19%
Other	5%	5%	5%	5%	5%

Q15: Which of the following do you encounter as barriers when choosing plant-based food alternatives?| Multiple choice (max 5)

Total: n= 7500

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

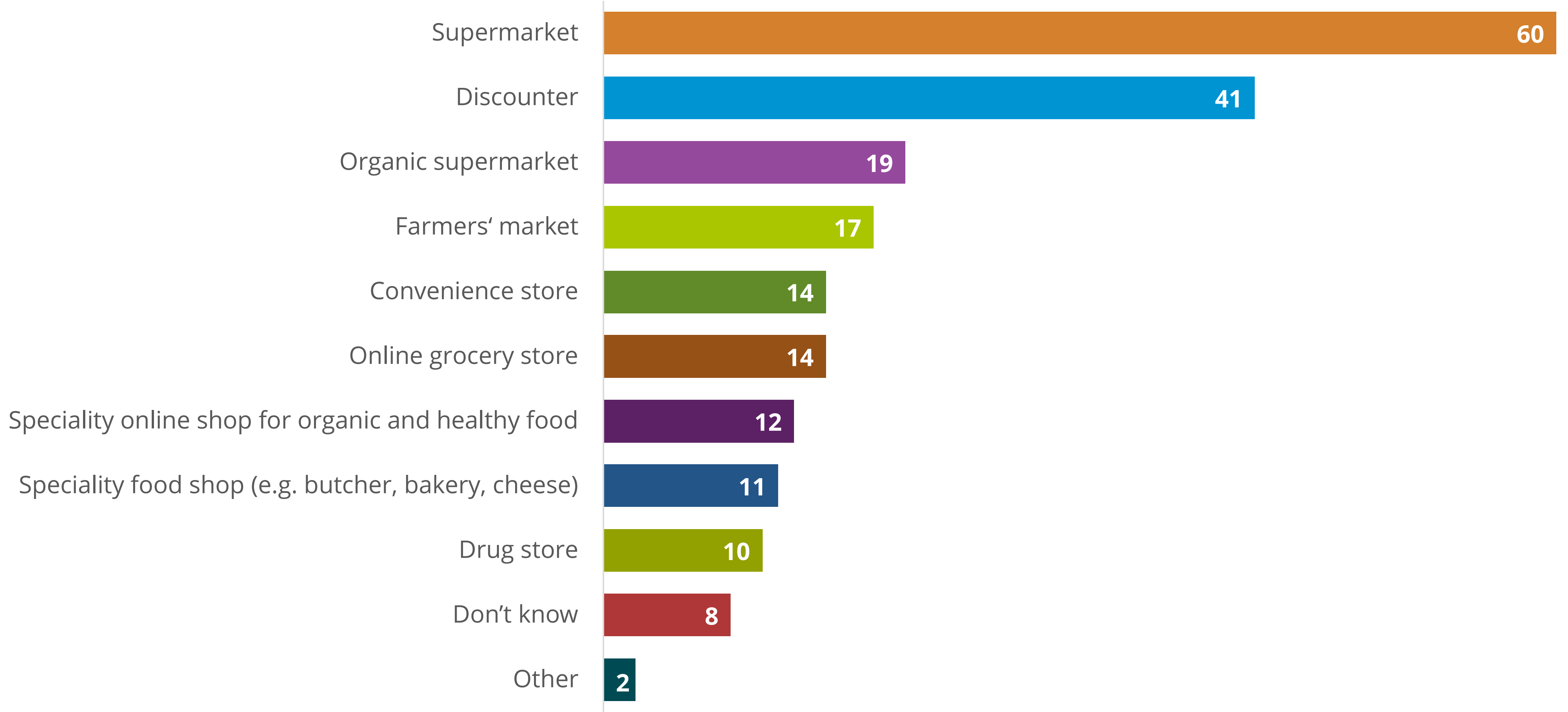
Place of purchase for plant-based food: by location and occasion

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q16 "Where are you likely to purchase plant-based food alternatives most frequently in the future?"

Supermarkets and **discounters** are the most common purchase locations for plant-based food alternatives

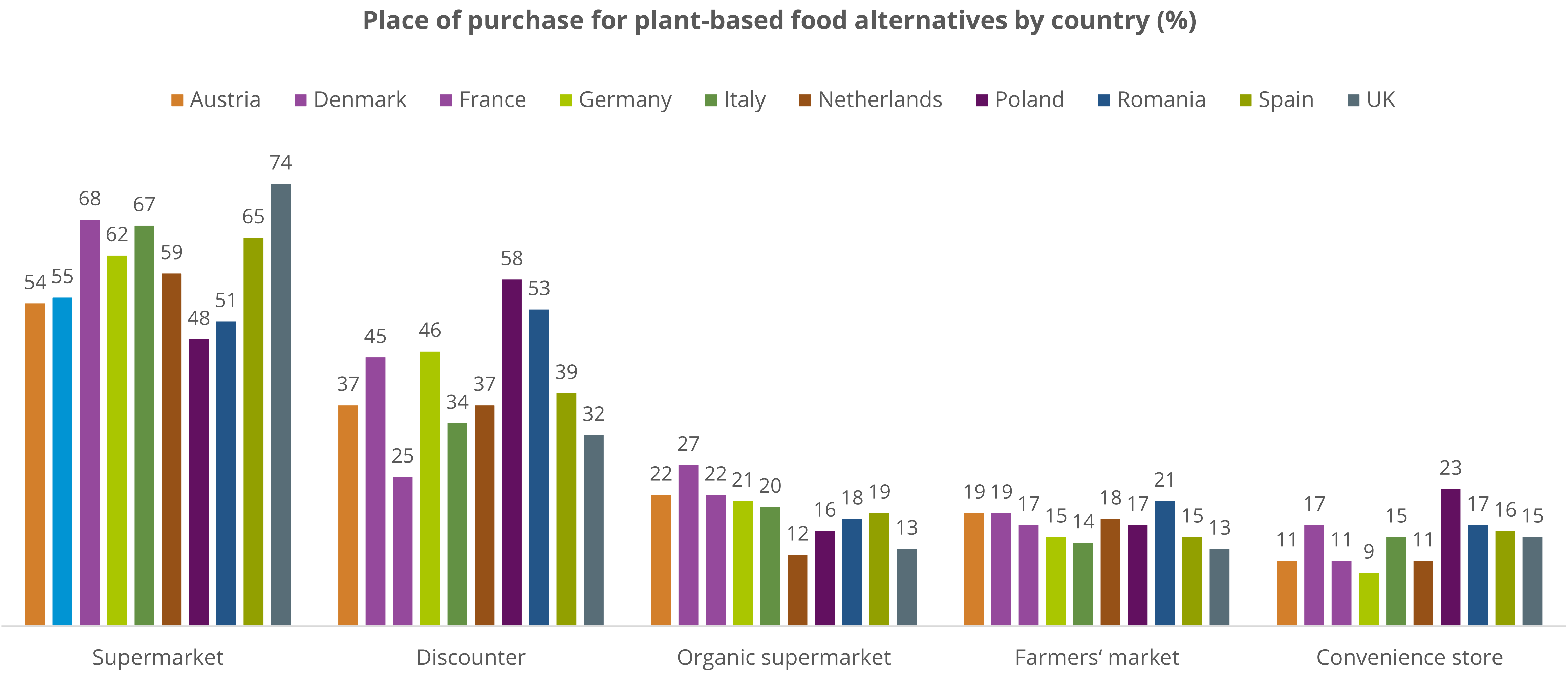
Place of purchase for plant-based food alternatives total sample (%)



Q16: Where are you likely to purchase plant-based food alternatives most frequently in the future? | Multiple choice

Total: n= 7500

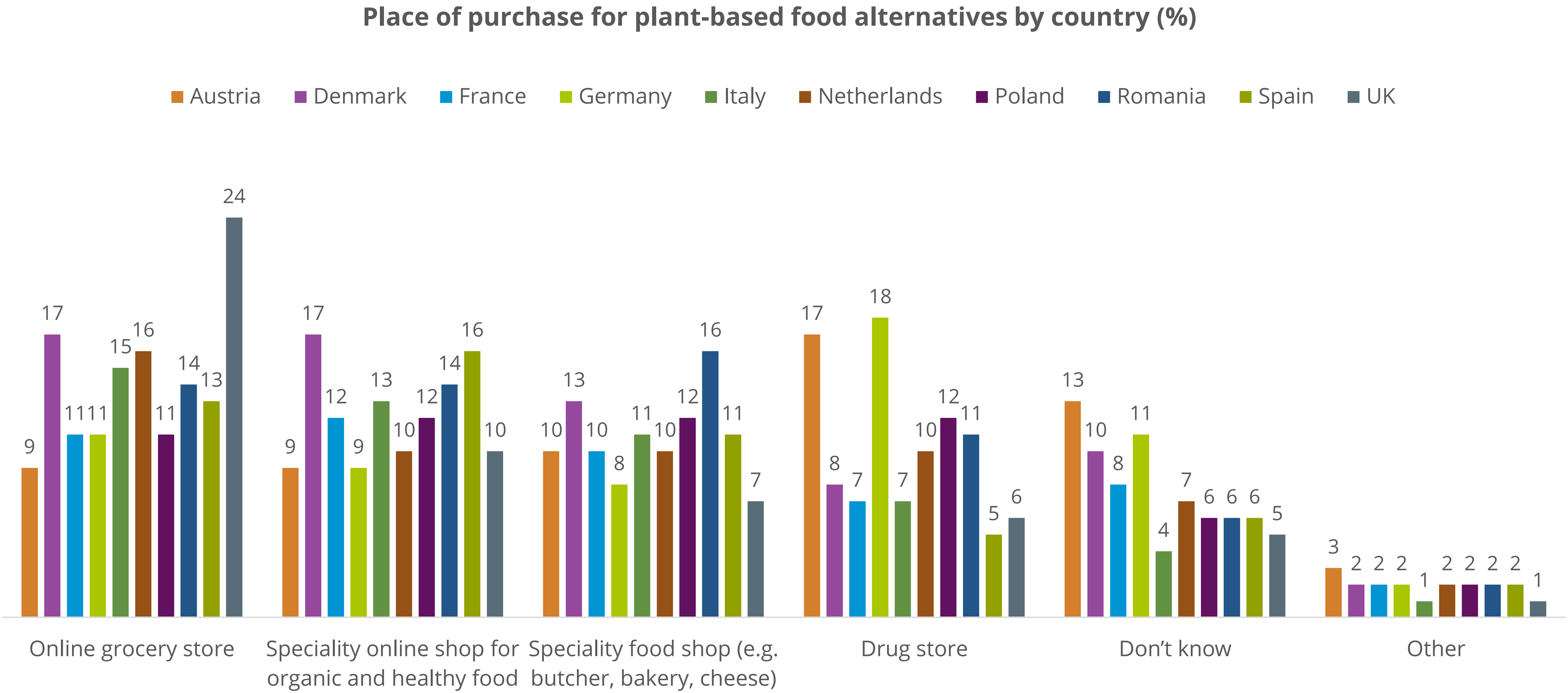
In the UK, France, and Italy, plant-based alternatives **are predominantly purchased in supermarkets…**



Q16: Where are you likely to purchase plant-based food alternatives most frequently in the future? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

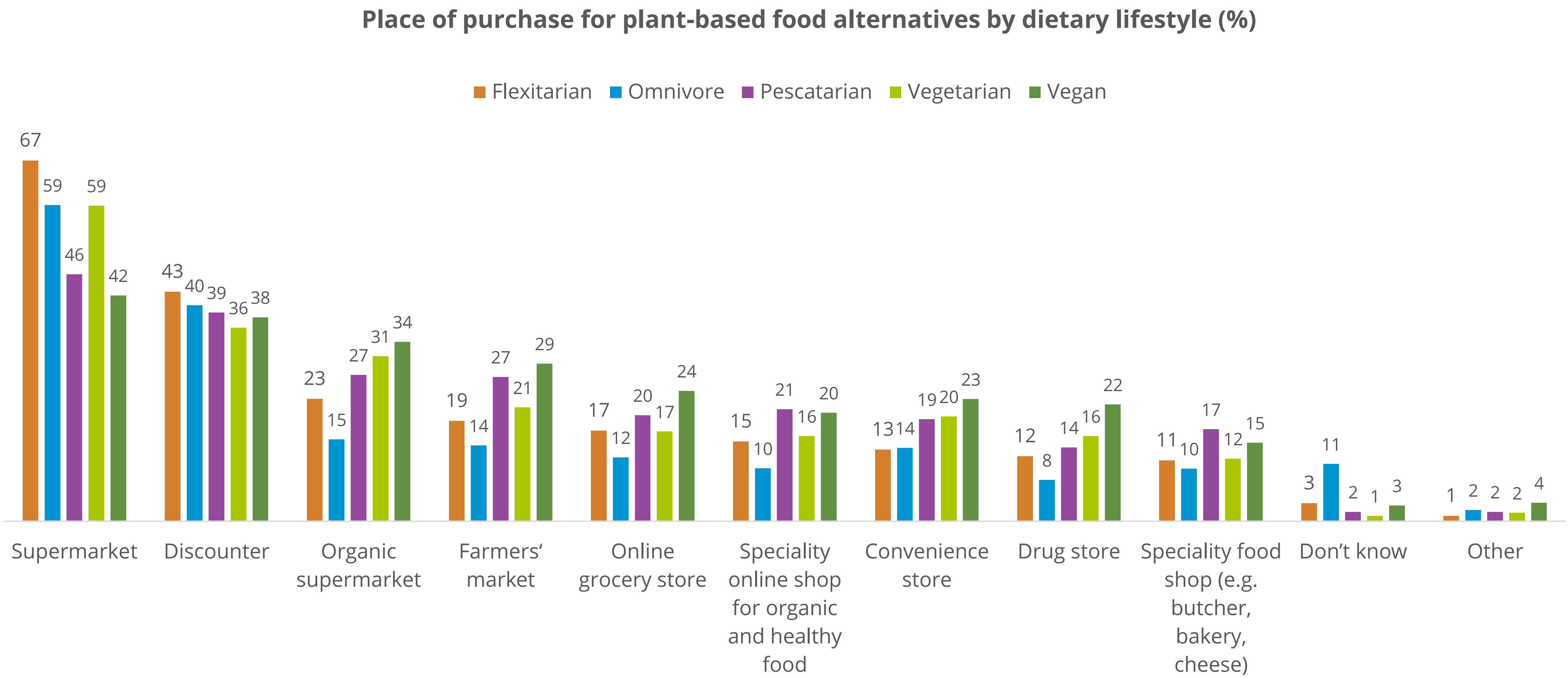
...while **UK** consumer by far use **online grocery stores** the most.



Q16: Where are you likely to purchase plant-based food alternatives most frequently in the future? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

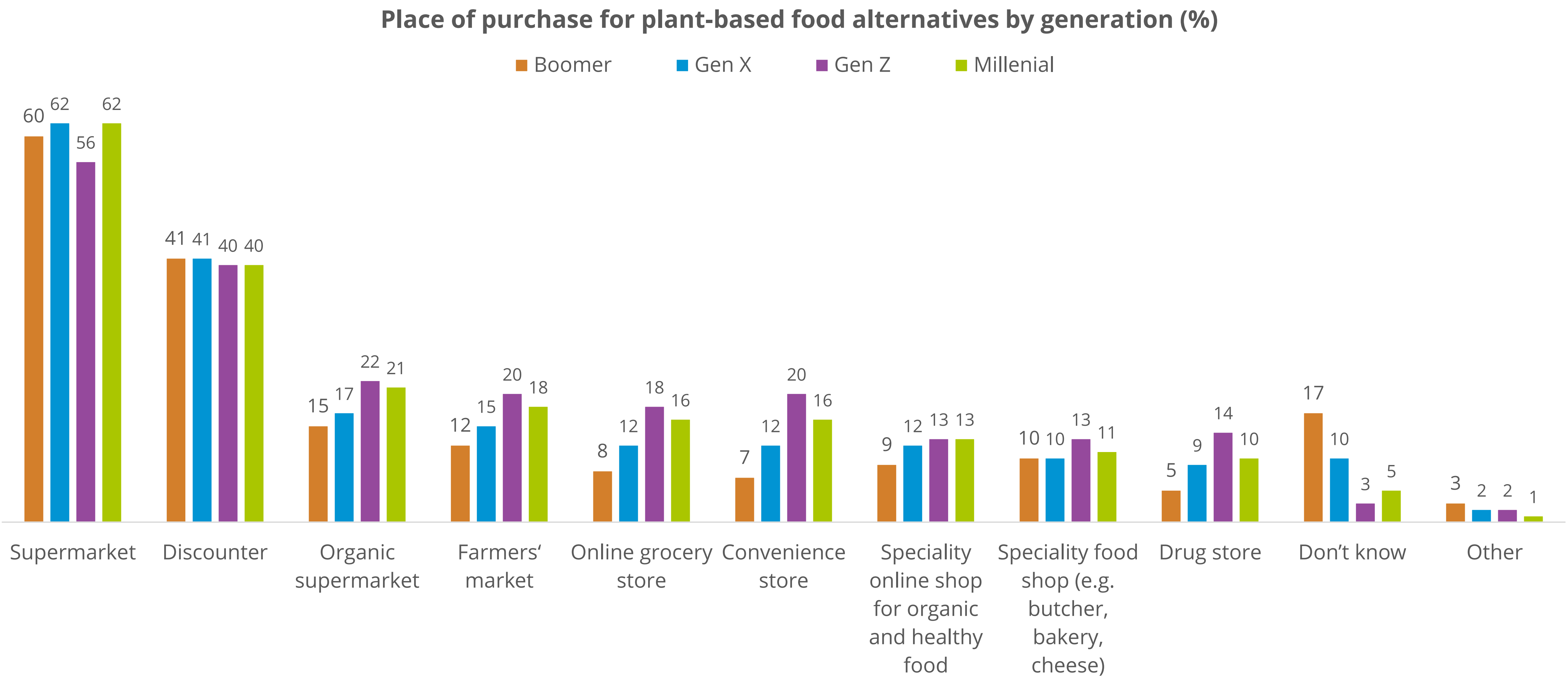
Purchase location, by dietary lifestyle



Q16: Where are you likely to purchase plant-based food alternatives most frequently in the future? | Multiple choice

Total= 7500 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n= 267 | Vegan n=197 | Vegetarian n=357

Purchase location, by generation

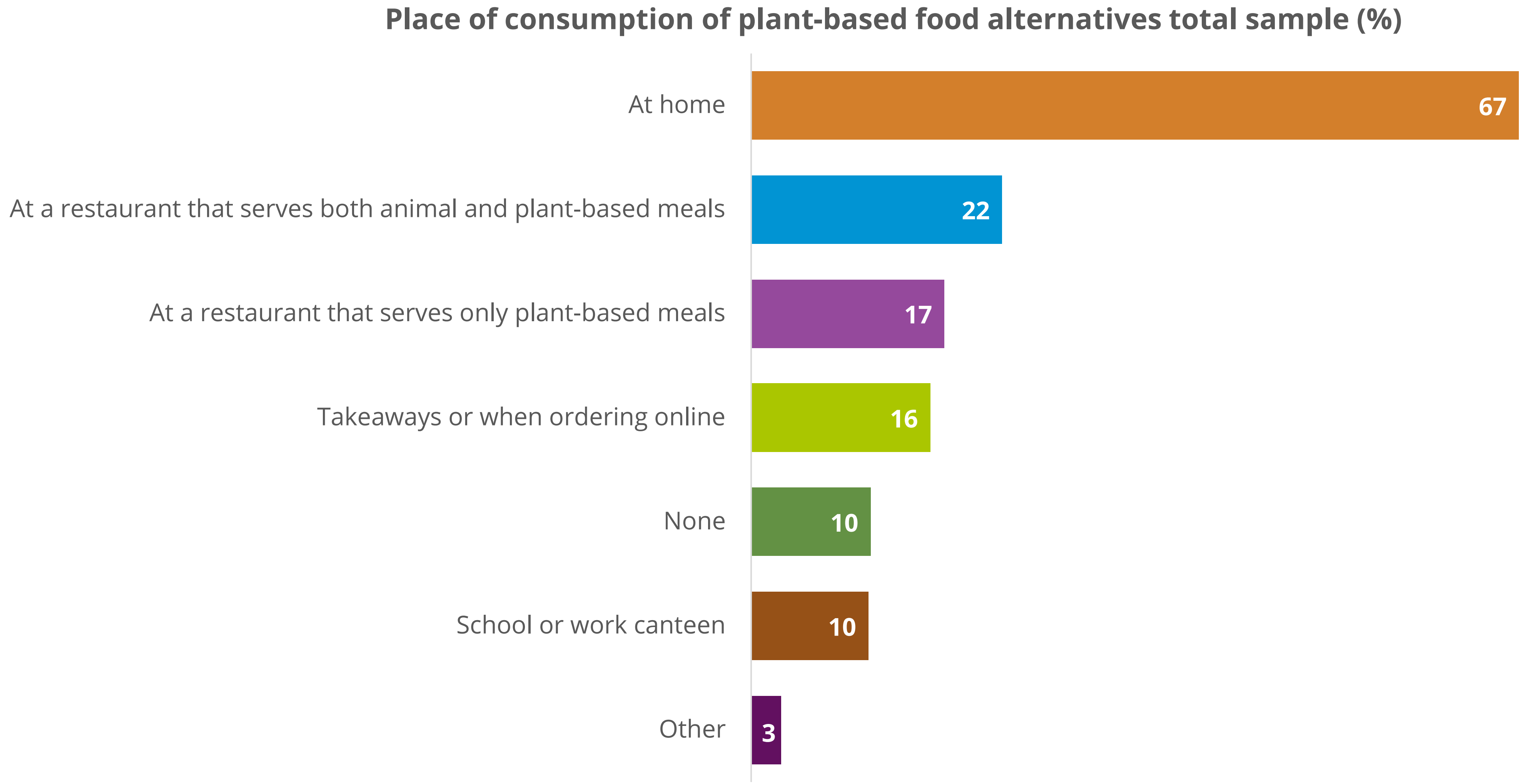


Q16: Where are you likely to purchase plant-based food alternatives most frequently in the future? |Multiple choice

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q17 "In which of the following locations do you normally consume plant-based food alternatives?"

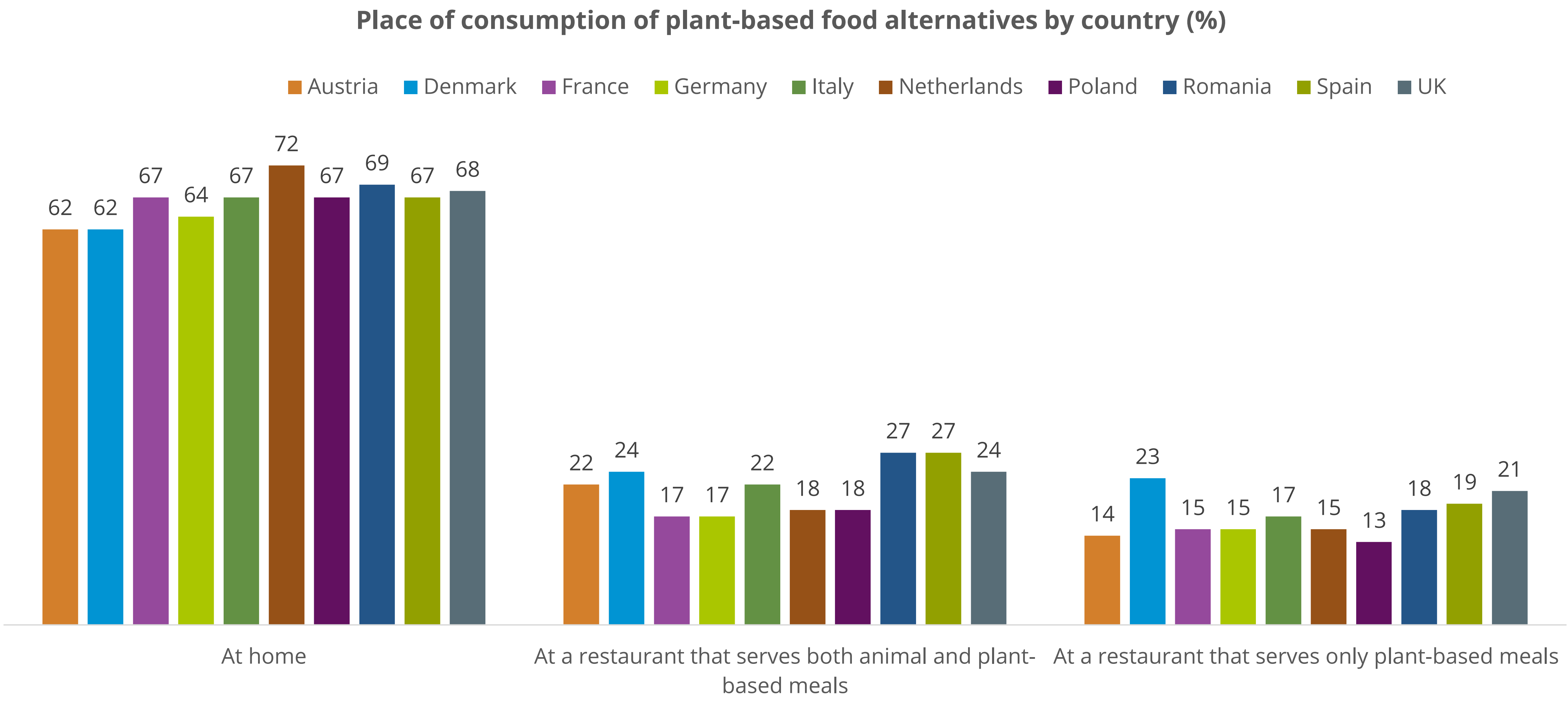
Consumers are most likely to eat plant-based alternatives **at home** and **in restaurants**



Q17: Where are you likely to consume plant-based food alternatives most frequently in the future? |Multiple choice

Total n= 7500

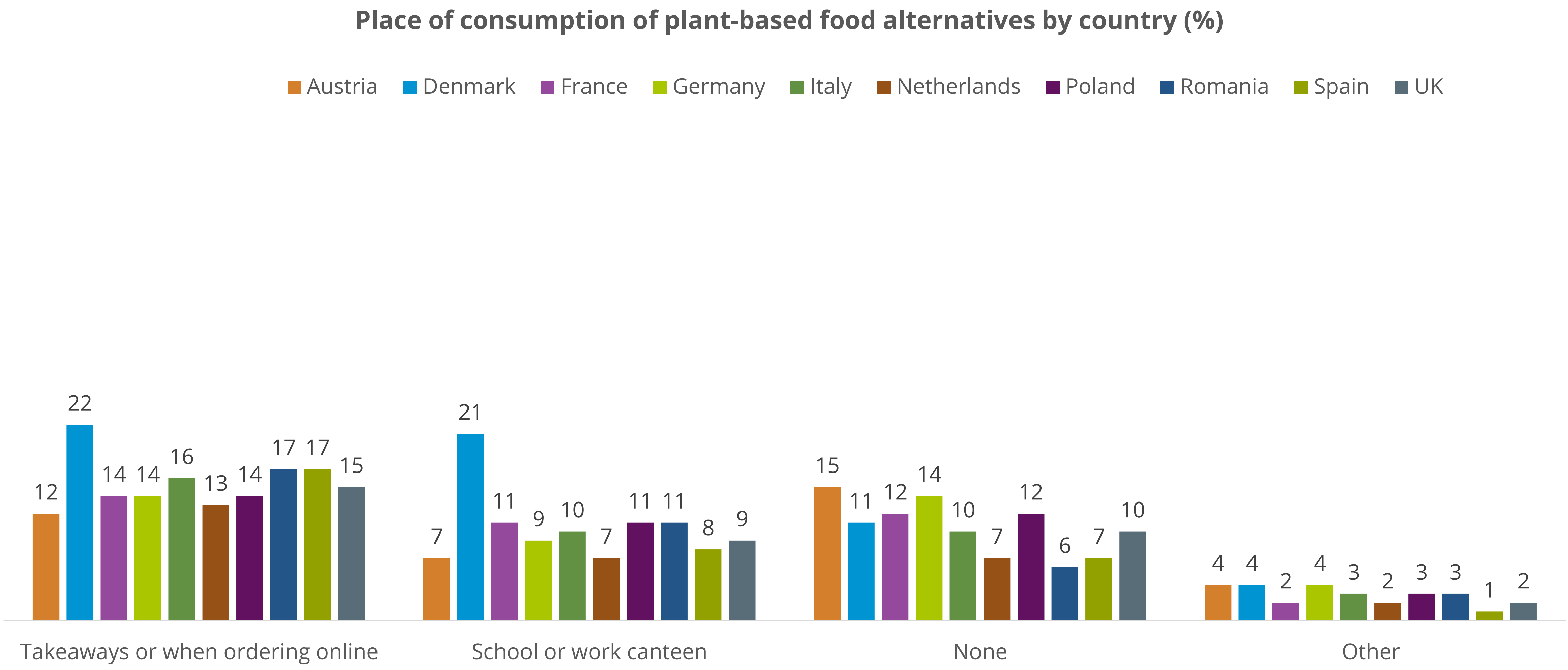
Dutch consumers prefer to consumer plant-based food alternatives **at home**…



Q17: In which of the following locations do you normally consume plant-based food alternatives? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

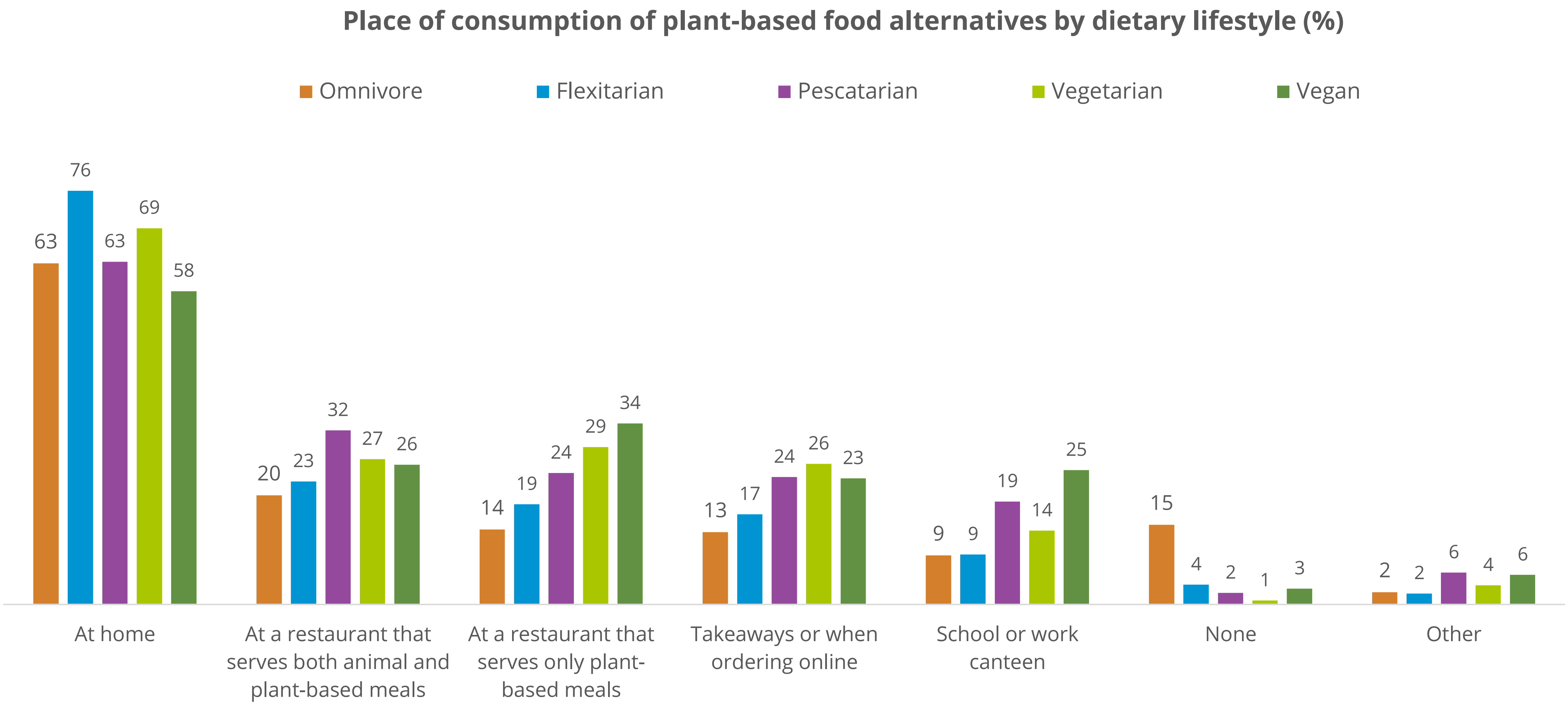
...while **Denmark** leads in the consumption of plant-based food in canteens, and via online and takeout orders



Q17: In which of the following locations do you normally consume plant-based food alternatives? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

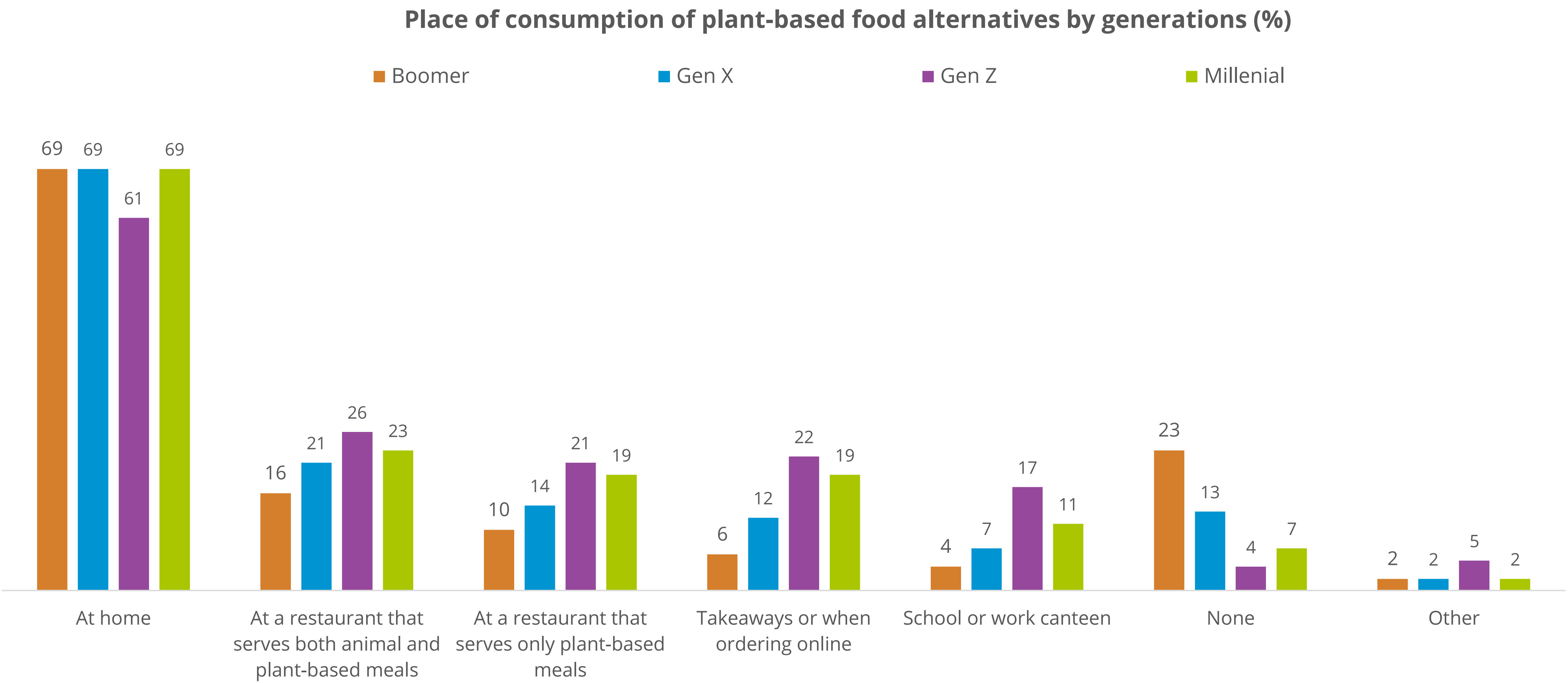
Consumption location, by dietary lifestyle



Q17: In which of the following locations do you normally consume plant-based food alternatives? |Multiple choice

Total= 7500 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n= 267 | Vegan n=197 | Vegetarian n=357

Consumption location, by generation



Q17: In which of the following locations do you normally consume plant-based food alternatives? |Multiple choice

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Consumers expectations at points of purchase or consumption: Plant-based food alternatives

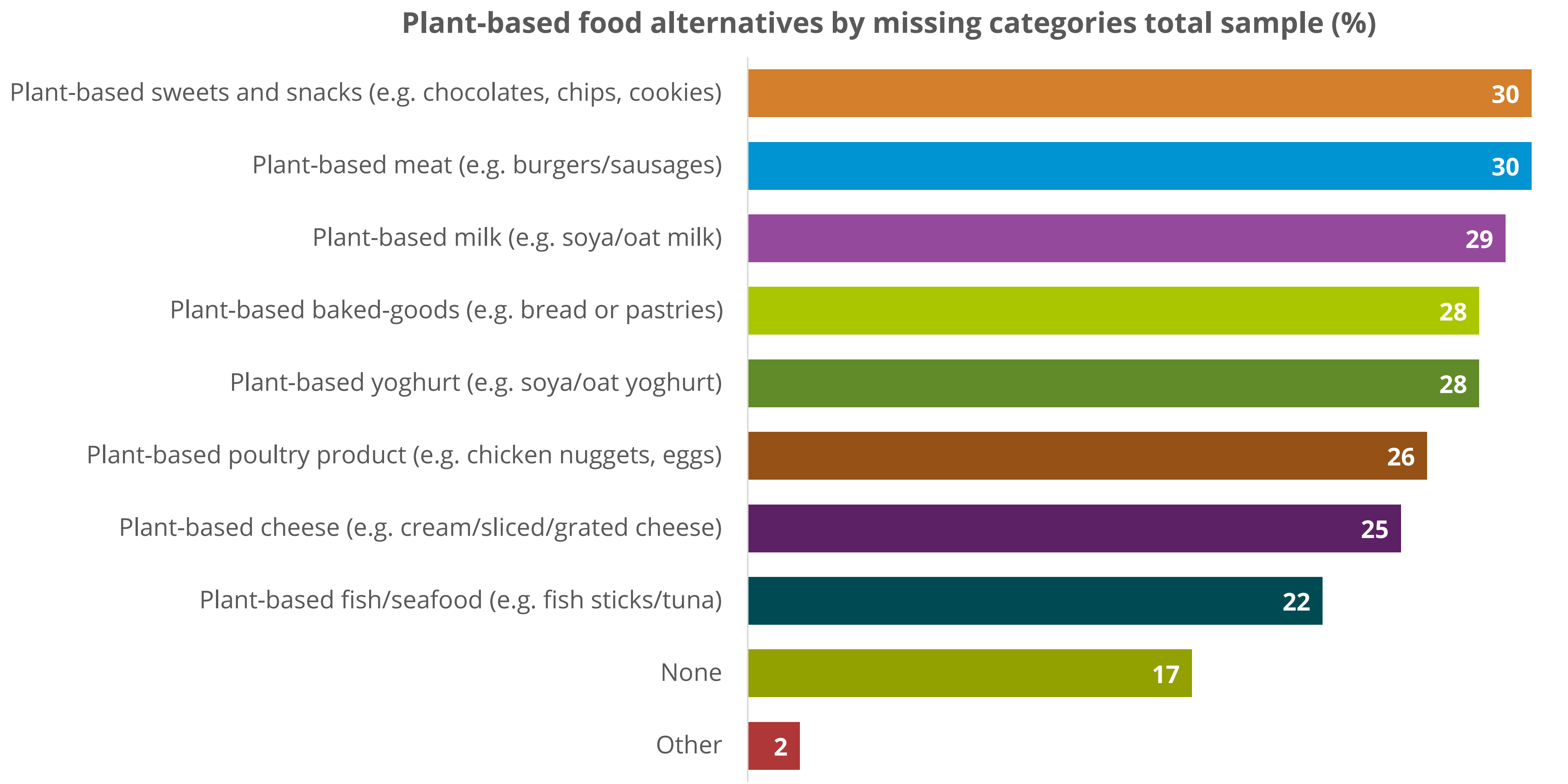
www.smartproteinproject.eu

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q18 "What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g. restaurants, cafes, etc.)?"

Consumers especially ask for **more plant-based sweets and snacks**, **plant-based meat and plant-based milk**

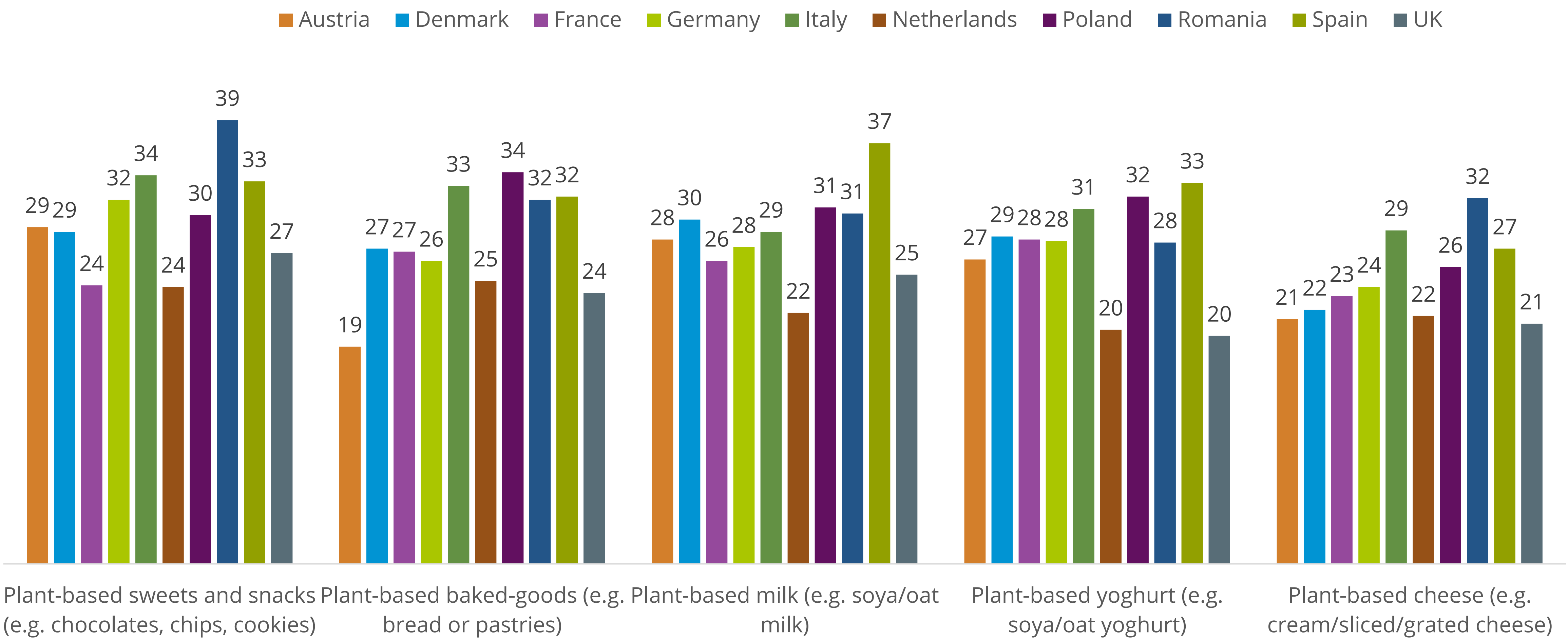


Q18: What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)? |Multiple choice

Total n= 7500

Consumers in **Spain, Poland, Romania and Italy** express a **need for more** plant-based food across all categories

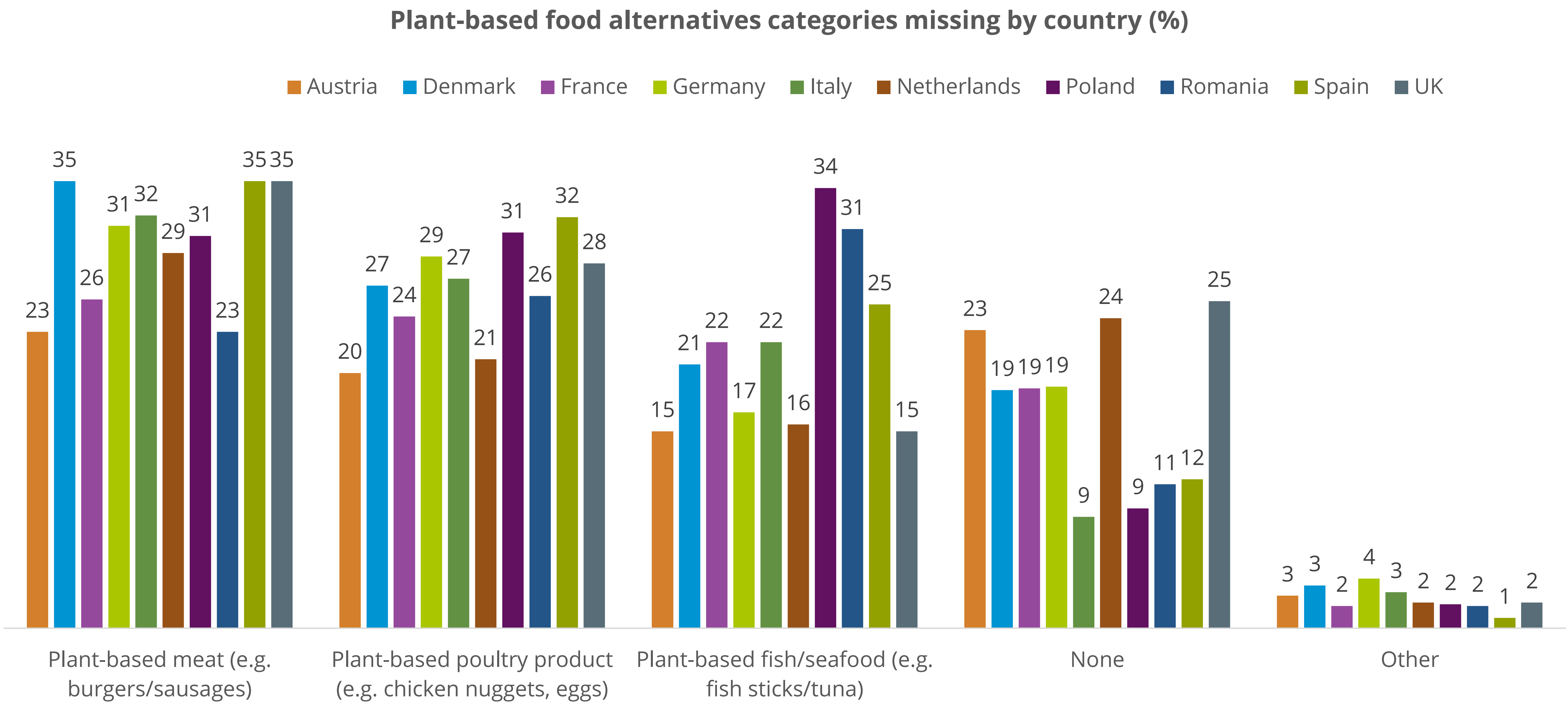
Plant-based food alternatives categories missing by country (%)



Q18: What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

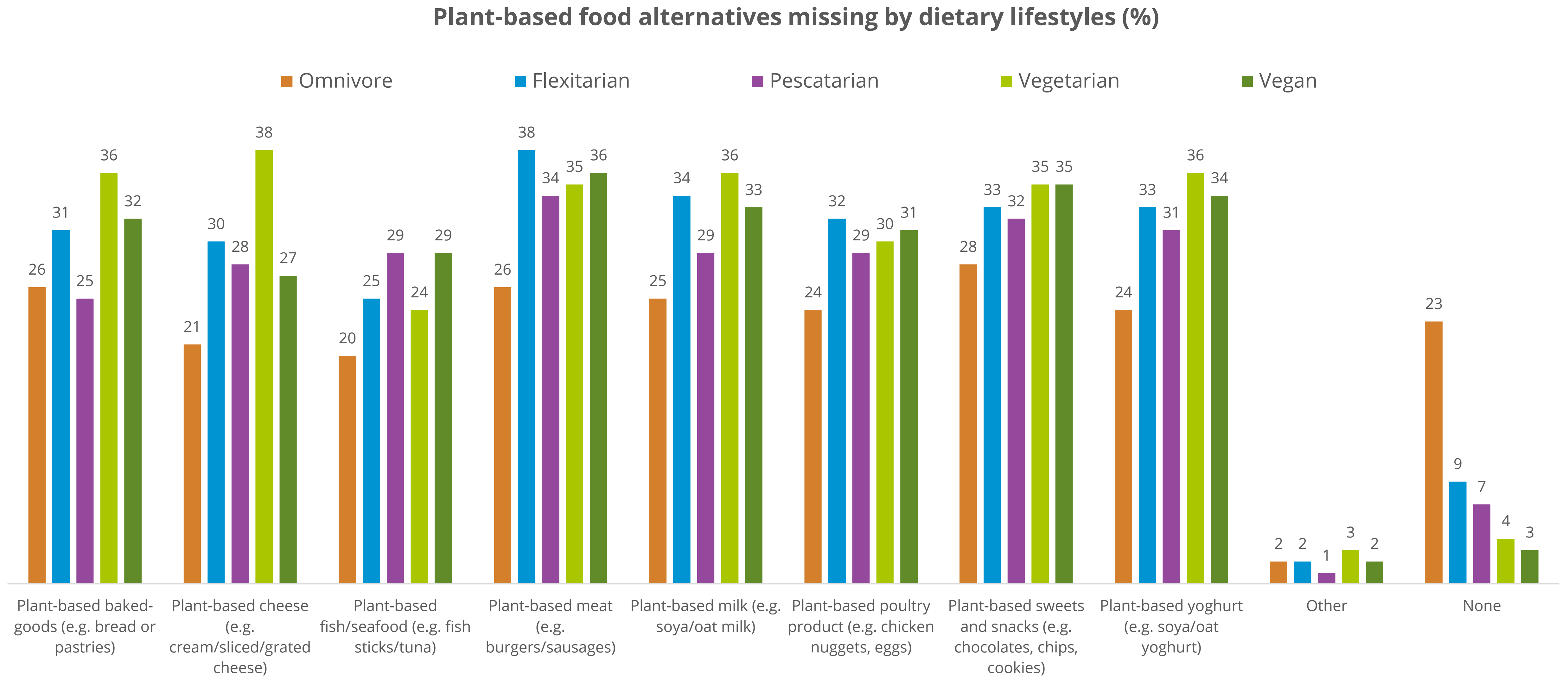
Consumers in **Spain, Poland, Romania and Italy** express a **need for more** plant-based food across all categories



Q18: What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)? |Multiple choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

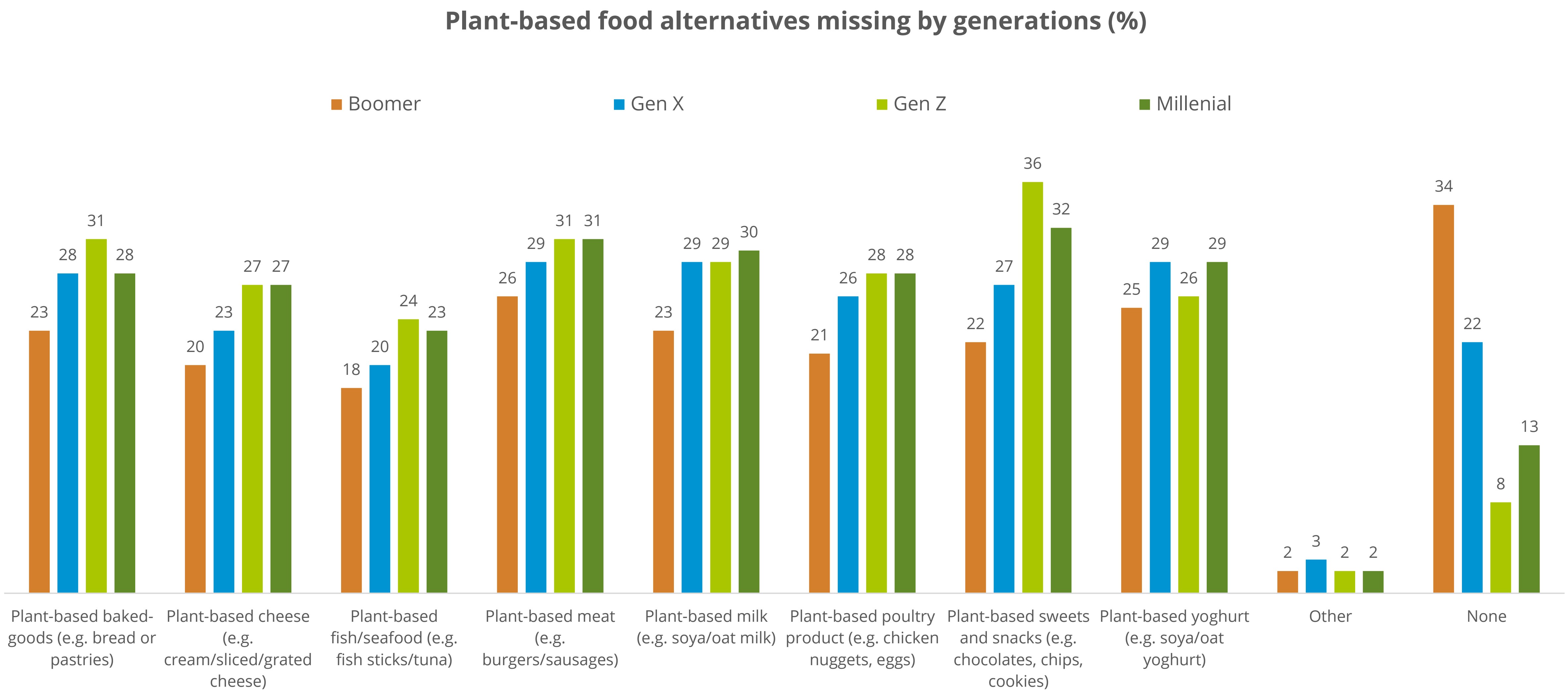
Category missing, by dietary lifestyles



Q18: What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)? |Multiple choice

Total n= 7500 | Flexitarians n=2044 | Omnivores n=4635 | Pescatarian n= 267 | Vegan n=197 | Vegetarian n=357

Category missing, by generation



Q18: What kind of plant-based food alternative(s) do you wish you could buy more often in the supermarket or at points of consumption (e.g restaurants, cafes, etc.)? |Multiple choice

Total n=7500 | Boomer n=1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Levels of trust towards plant-based food alternatives: a change in perceptions

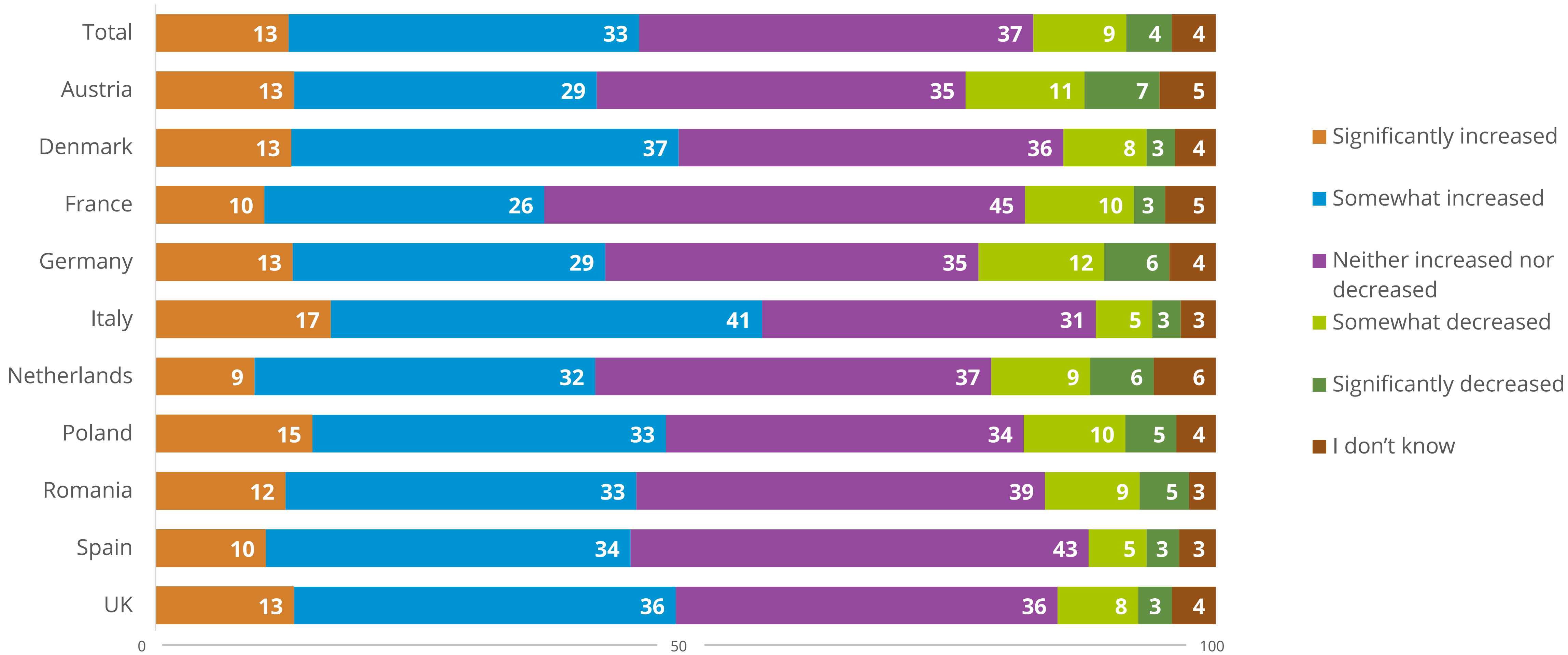
smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q19 "When thinking about your overall knowledge and experience with plant-based food alternatives, has your current trust increased or decreased in comparison to three years ago?"

Trust levels for plant-based alternatives **have increased** overall, particularly **in Italy and Denmark**

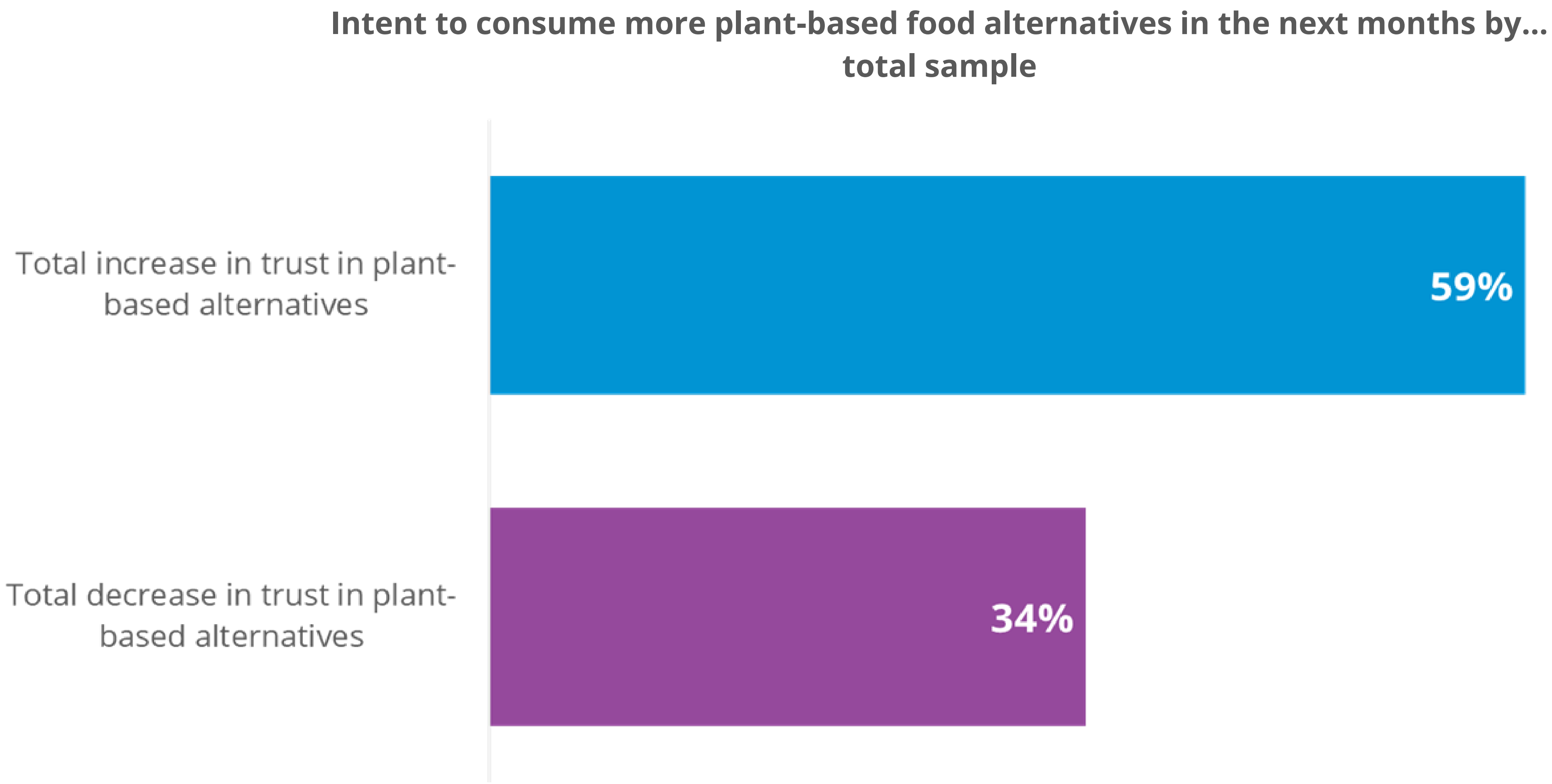
Trust towards plant-based food alternatives (%)



Q19: When thinking about your overall knowledge and experience with plant-based food alternatives, has your current trust increased or decreased in comparison to three years ago? | Single choice

Total n=7500

Europeans who trust plant-based food alternatives are more likely to increase their consumption



Q19: When thinking about your overall knowledge and experience with plant-based food alternatives, has your current trust increased or decreased in comparison to three years ago? | Single choice| Q12 Please indicate your agreement to the following statements: I intend to consume more … in the next 6 months. (5 scale answer)

Total intent to consume more n=3,000

Changes in trust levels, by dietary lifestyle, generation, and dietary-transition stage

	Increased (Top3Box)	Decreased (Bottom3Box)
Flexitarians	57%	39%
Omnivores	39%	13%
Boomers	39%	8%
Gen X	43%	11%
Gen Z	48%	17%
Millennials	49%	14%
Deniers	42%	16%
Committed	65%	10%
Lapsed	45%	12%

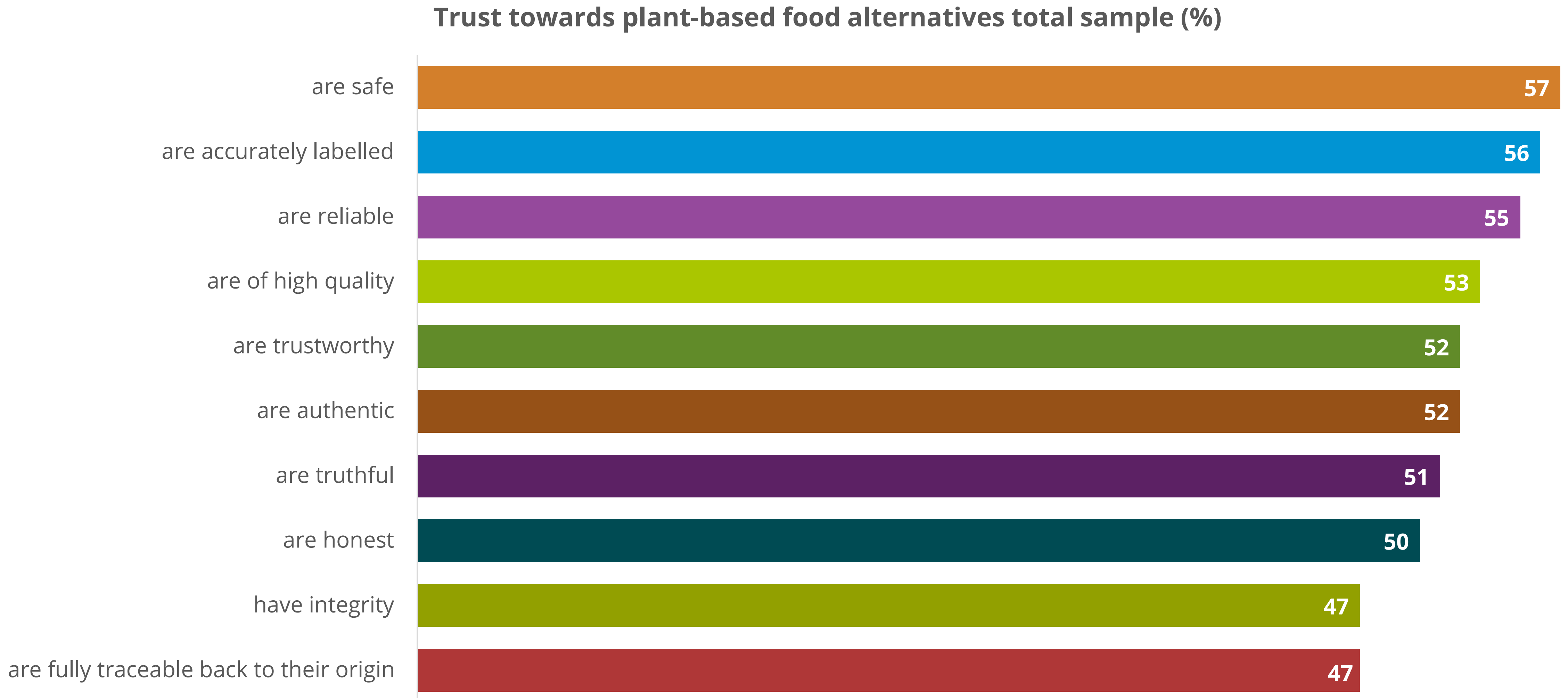
Q19: When thinking about your overall knowledge and experience with plant-based food alternatives, has your current trust increased or decreased in comparison to three years ago? | Single choice

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q20 "When thinking specifically about plant-based food alternatives, please indicate how much you disagree or agree with each of the following statements."

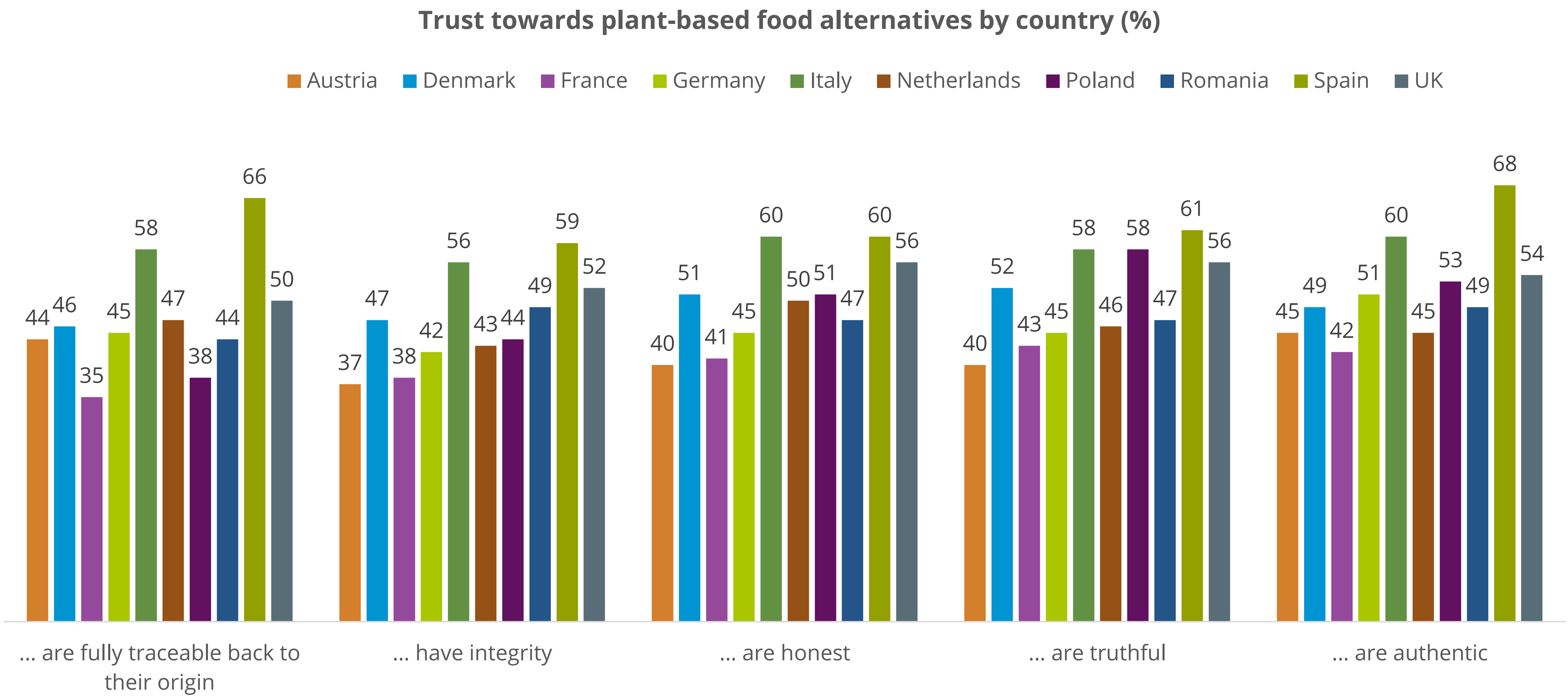
Honesty, truthfulness, and integrity are perceived as key elements in building trust



Q20: When thinking specifically about plant-based food alternatives, please indicate how much you disagree or agree with each of the following statements. I trust that plant-based food alternatives... |Single choice | Total agreement level (Strongly agree + Agree + Somewhat Agree)

Total n=7500

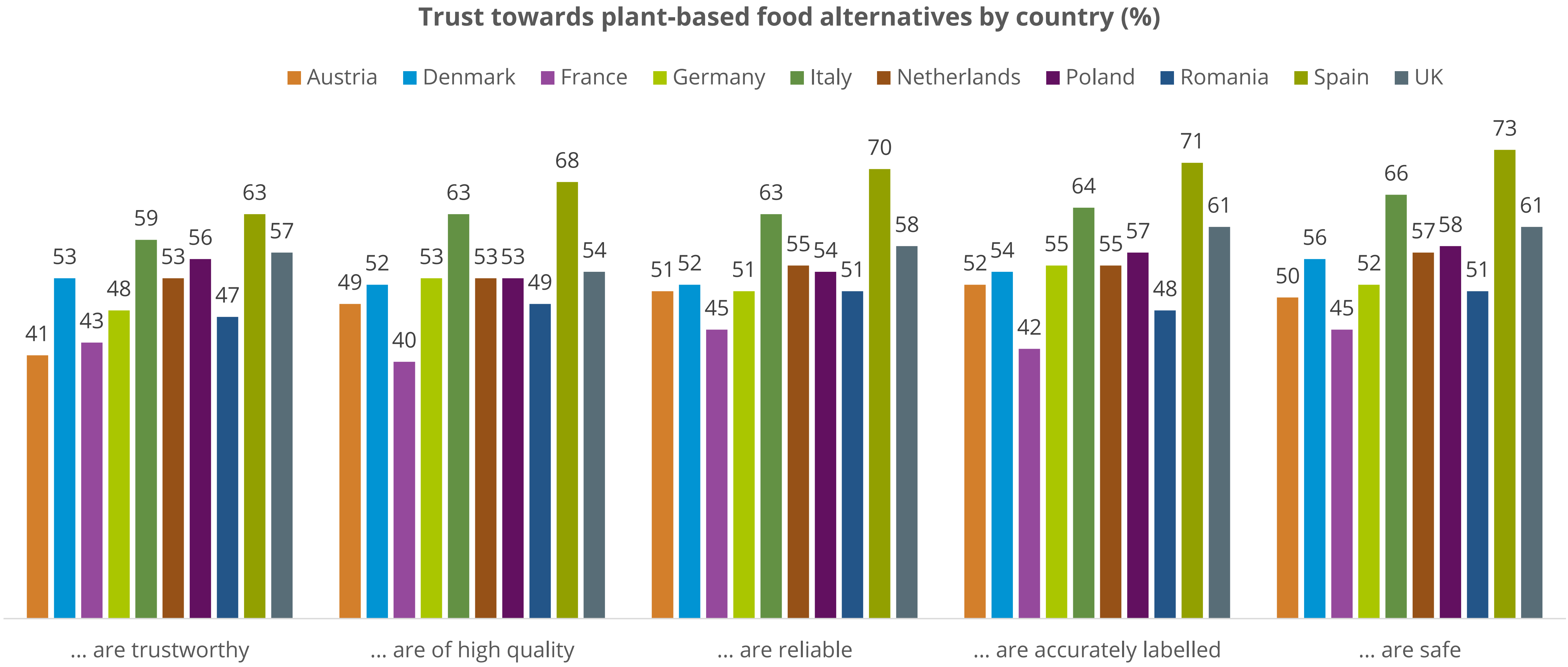
Consumers in most countries, especially in Spain and Italy, think that **plant-based food alternatives are authentic**



Q20: When thinking specifically about plant-based food alternatives, please indicate how much you disagree or agree with each of the following statements. I trust that plant-based food alternatives... |Single choice | Total agreement level (Strongly agree + agree)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Consumers in most countries, especially in Spain and Italy, think that **plant-based food alternatives are safe**



Q20: When thinking specifically about plant-based food alternatives, please indicate how much you disagree or agree with each of the following statements. I trust that plant-based food alternatives... |Single choice | Total agreement level (Strongly agree + agree)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

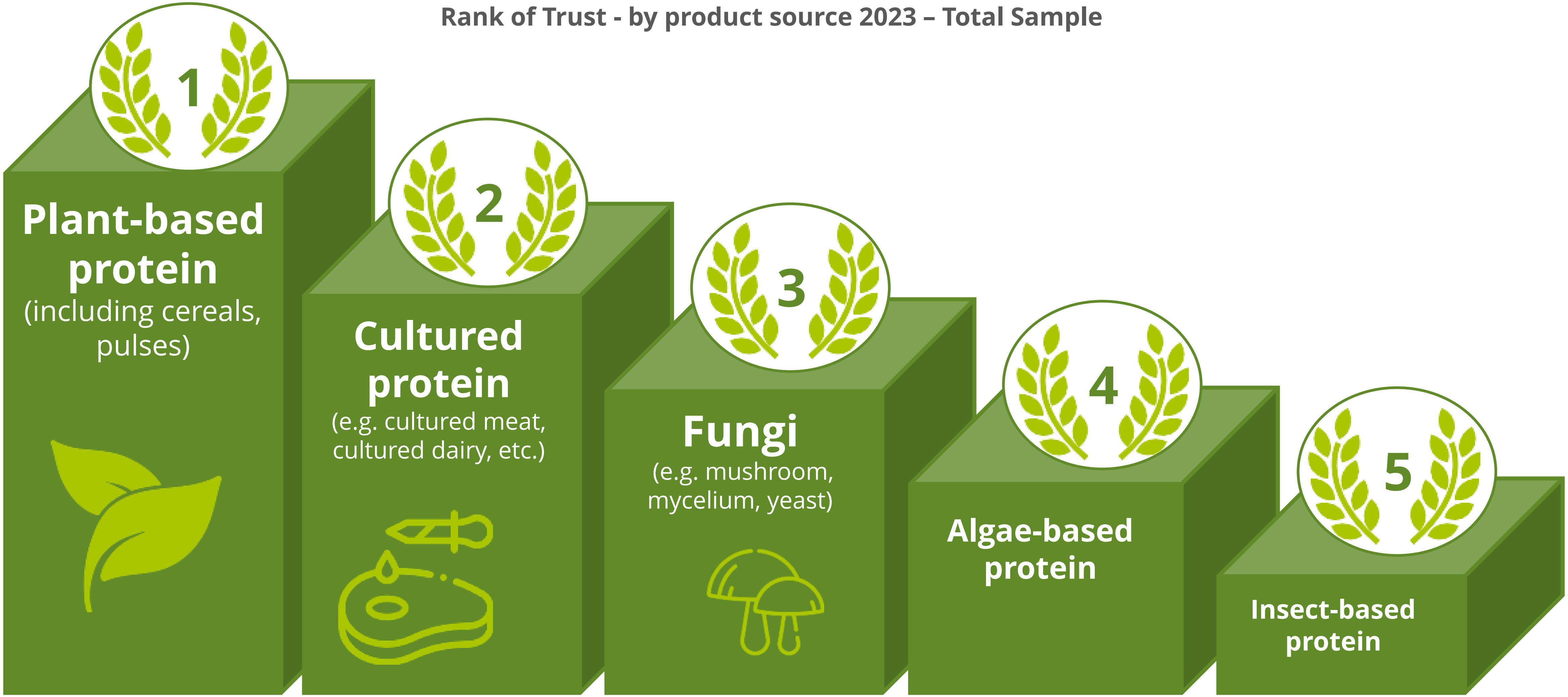
smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q21 "Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least)."

European trust plant-based protein the most, followed by cultured protein and fungi-based protein

Rank of Trust - by product source 2023 – Total Sample



Q21: Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least). | Single choice

Total: n= 7500

Plant-based protein and cultivated meat both showed **significant increases in trust levels** in 2023

Ranking (1) of alternative proteins – 2023 vs. 2021 (%)

	2023	2021	% change
Plant-based protein (including cereals, pulses)	43	39	+4
Cultivated protein (e.g. cultivated meat, cultivated dairy, etc.)	20	14	+6
Fungi (e.g. mushroom, mycelium, yeast)	17	18	-1
Algae-based	11	13	-2
Insect-based protein	9	16	-7

Q21: Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least). | Single choice

Total 2023 n= 7500 |Total 2021 n=7590

Plant-based protein is especially trusted by females, flexitarians or vegetarians

Ranking alternative proteins – by mentions – most trustworthy

	By dietary lifestyle Top 2 segments	By generation Top 2 segments	By gender
Plant-based protein (including cereals, pulses)	Flexitarians, Vegetarians	Boomer, Gen X	Female
Cultivated protein (e.g. cultivated meat, cultivated dairy, etc.)	Omnivores, Vegans	Gen Z, Millennial	Male
Fungi (e.g. mushroom, mycelium, yeast)	Vegans, Omnivores	Boomer, Gen X	Male
Algae-based	Pescatarian, Vegan/Vegetarian	Gen Z, Millennial	Male
Insect-based protein	Pescatarian, Vegan	Gen Z, Millennials	Male

Q21: Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least). | Single choice

Total n=7500 | Boomer n= 1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438 | Flexitarians n=2044 | Omnivores n=4635 | Deniers n=1275 | Committed n=525 | Lapsed n=300

Plant-based protein is most trusted by Italian consumers **while cultivated protein is most trusted in Denmark**

Ranking alternative proteins – by mentions – most trustworthy

	Top 1	Top 2	Top 3
Plant-based protein (including cereals, pulses)	Italy	Netherlands	Poland, Spain, UK
Cultivated protein (e.g. cultivated meat, cultivated dairy, etc.)	Denmark	Germany	Spain
Fungi (e.g. mushroom, mycelium, yeast)	Austria	Poland, Romania, UK	Denmark, France, Germany
Algae-based	France, Romania	Spain	Italy
Insect-based protein	Netherlands	Austria, Germany	Denmark, France

Q21: Which of the following alternative proteins do you trust the most? Rank them from 1 (trust the most) to 5 (trust the least). | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Opinion on actions required from policymakers

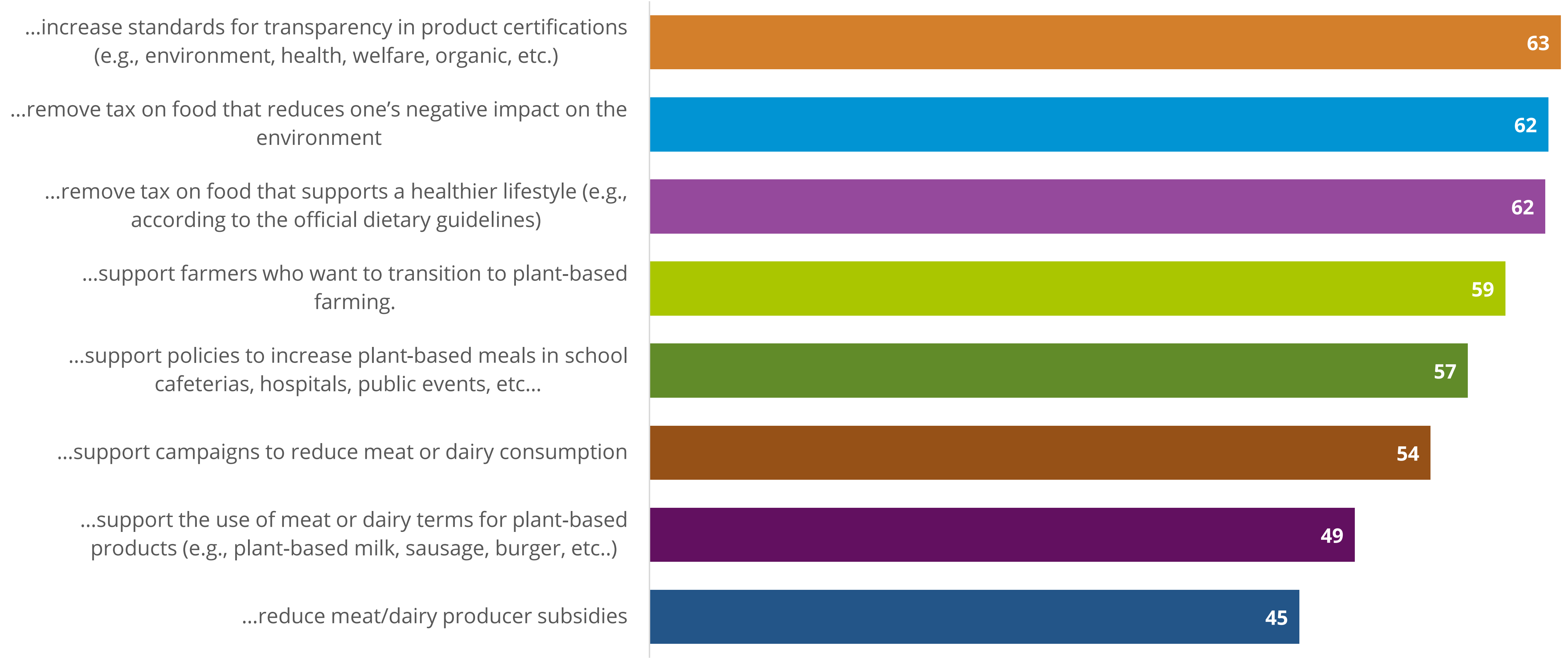
www.smartproteinproject.eu

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q22 "In your opinion, how much do you agree or disagree with the following statements regarding the actions that policymakers should take?"

Consumers would like to see **increased transparency** and **lower taxes** for healthy food products

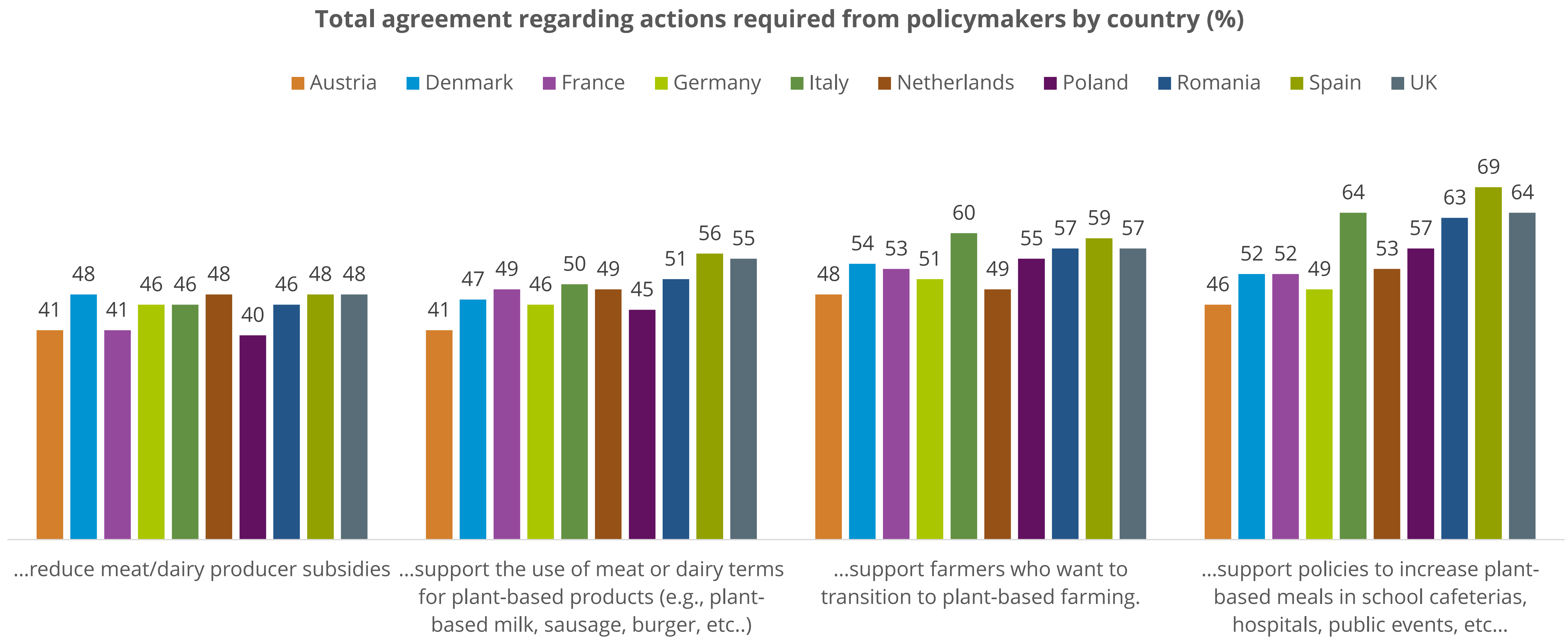
Total agreement regarding actions required from policymakers total sample (%)



Q22: In your opinion, how much do you agree or disagree with the following statements regarding the actions that policymakers should take? I believe that my government should... | Single choice | Total agreement level (Strongly agree + Somewhat agree + Agree)

Total n= 7500

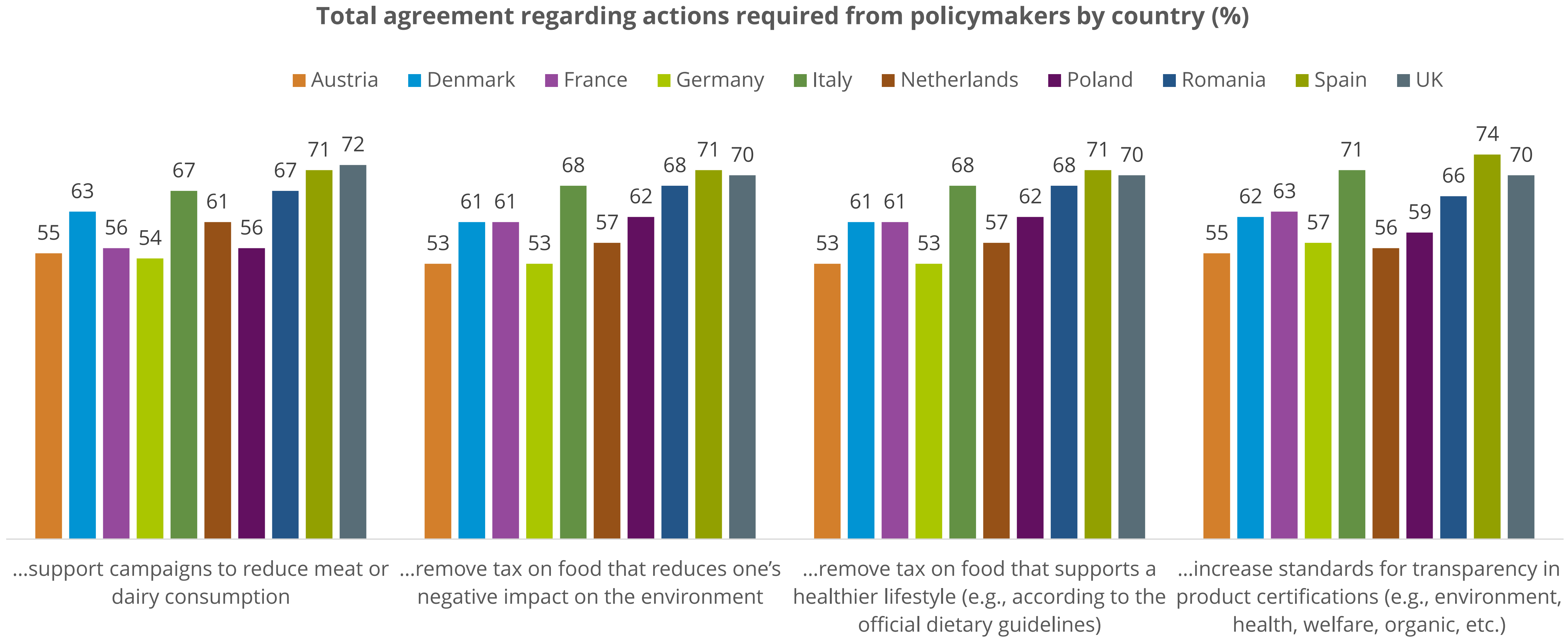
Most consumers think that **policymakers should take actions** to support a transition to plant-based diets



Q22: In your opinion, how much do you agree or disagree with the following statements regarding the actions that policymakers should take? I believe that my government should... | Single choice | Total agreement level (Strongly agree + Somewhat agree + Agree)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Most consumers think that **policymakers should take actions** to support a transition to plant-based diets



Q22: In your opinion, how much do you agree or disagree with the following statements regarding the actions that policymakers should take? I believe that my government should… | Single choice | Total agreement level (Strongly agree + Somewhat agree + Agree)

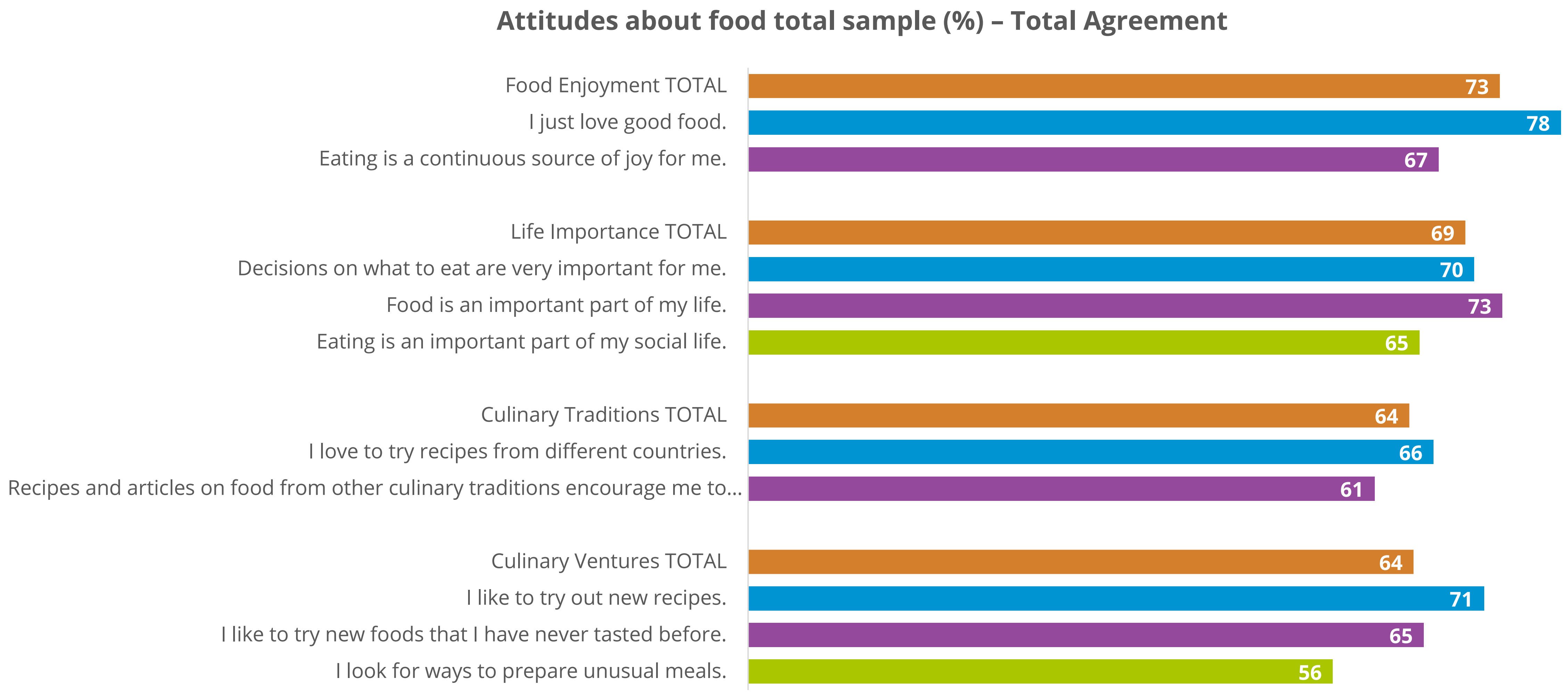
The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Attitudes

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q23/Q24/Q25 “Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking.”

Food enjoyment constitutes an integral aspect of people's identity

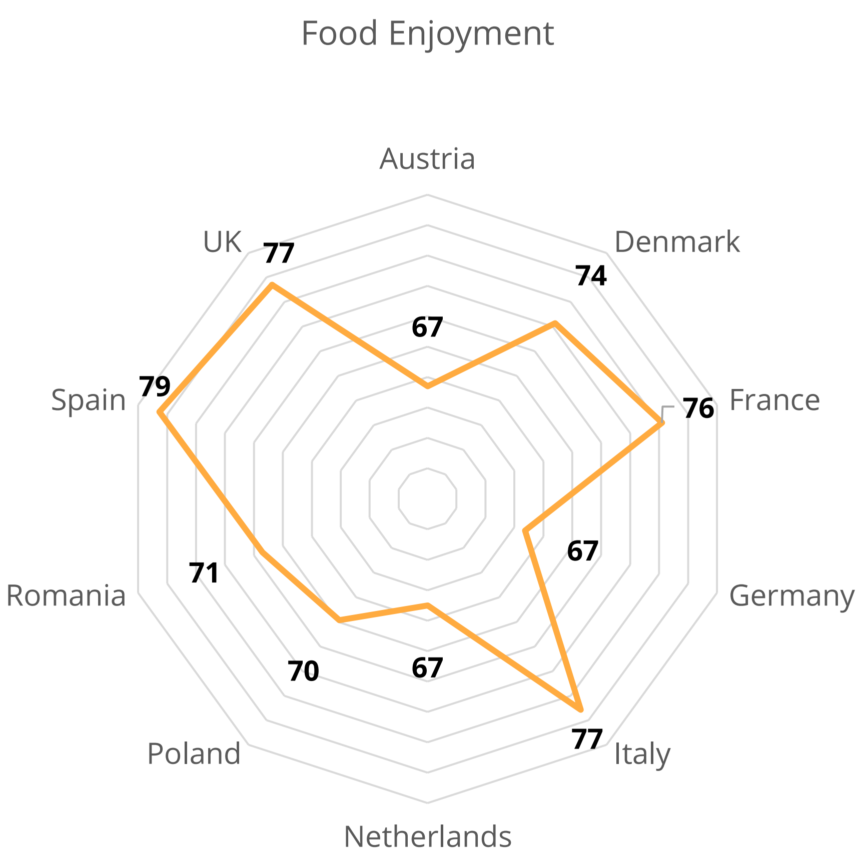


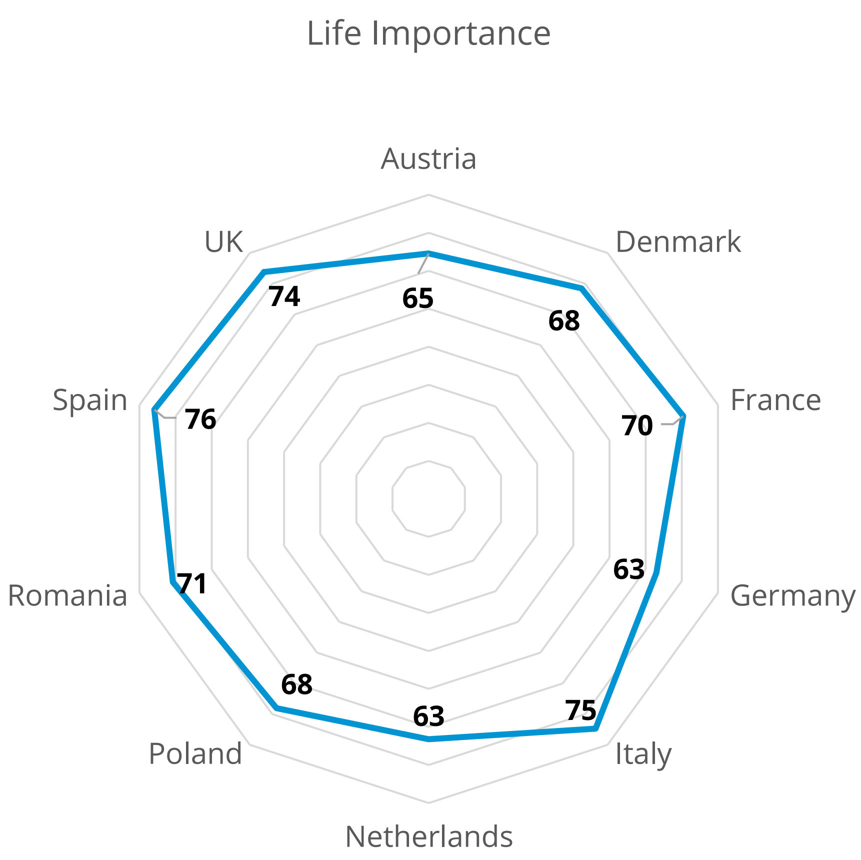
Q23/Q24/Q25 “Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking.” | Single choice (7 point scale)

Total: n= 7500

Food enjoyment varies by country, but food choices remain a vital part of people's lives

Attitudes about food by country (%) – Total Agreement





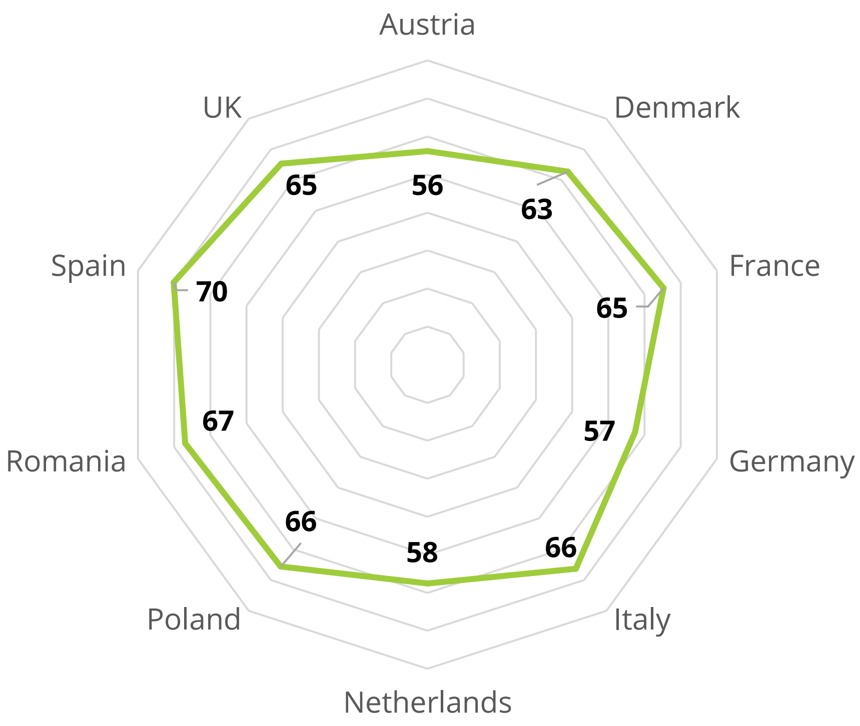
Q23/Q24/Q25 "Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking." | Single choice (7 point scale)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

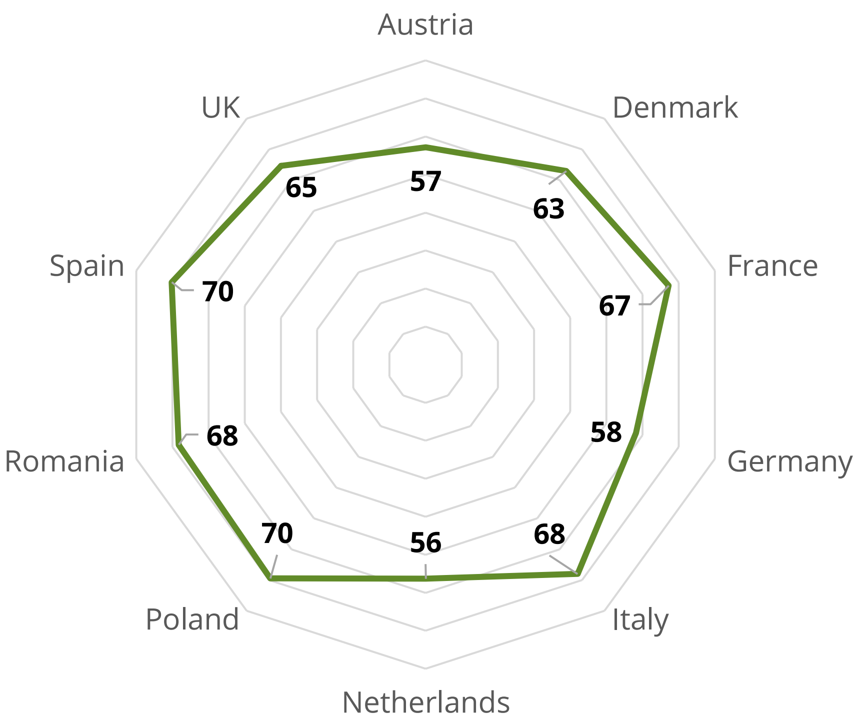
Consumers across European countries equally value **trying new recipes and sticking to traditional cuisine**

Attitudes about food by country (%) – Total Agreement

Culinary Traditions



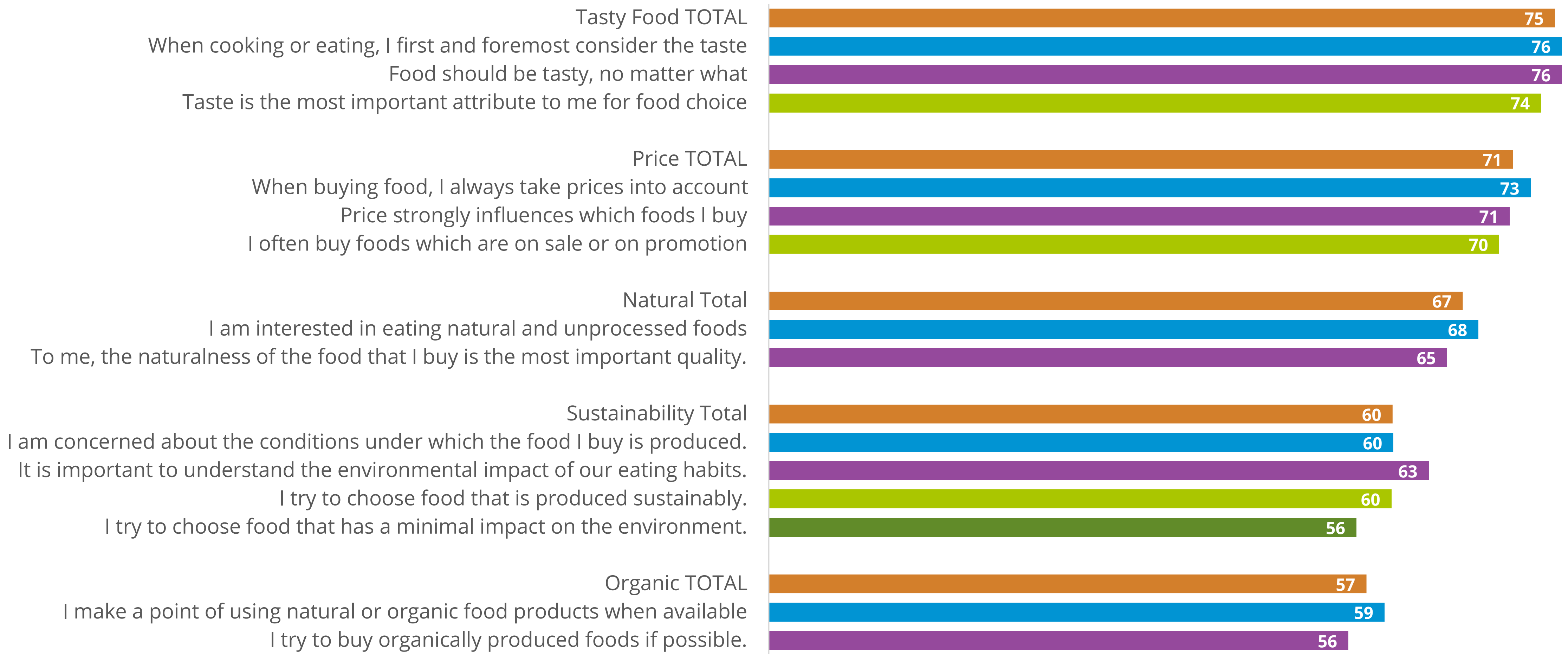
Culinary Ventures



Q23/Q24/Q25 “Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking.” | Single choice (7 point scale)

European consumers prioritise price and taste, with sutainability and naturalness as secondary concerns

Attitudes about food consumption total sample (%) – Total Agreement

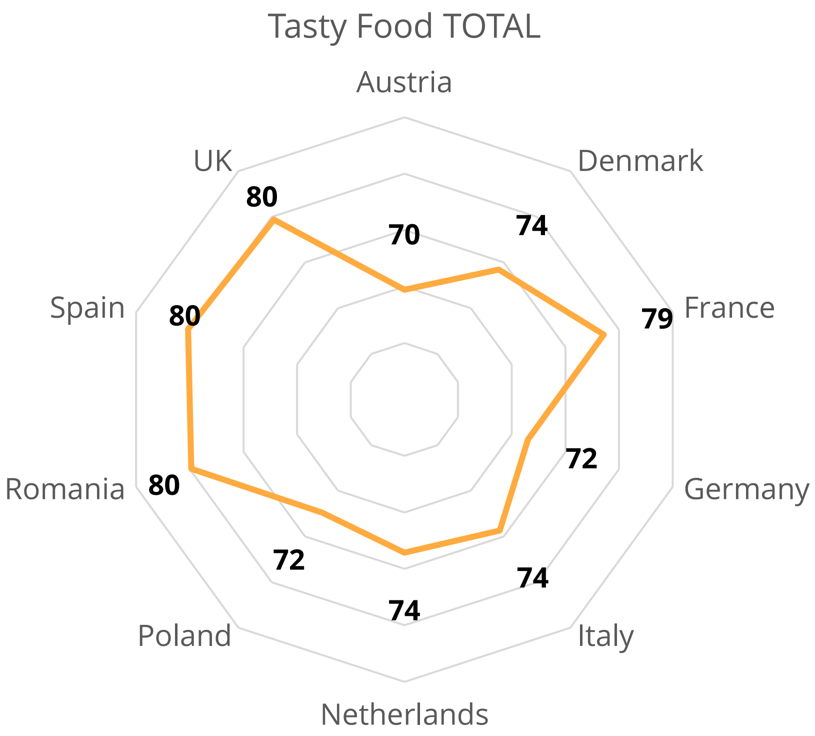


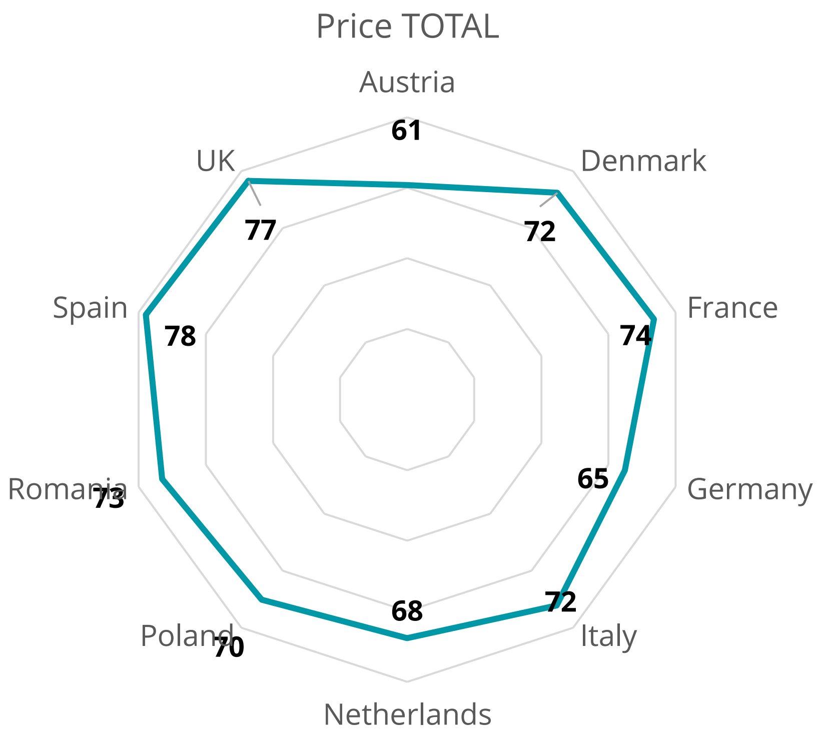
Q23/Q24/Q25 “Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking.” | Single choice (7 point scale)

Total: n= 7500

Taste is more crucial in some countries, while price remains consistent important in all countries

Attitudes about food by country (%) – Total Agreement

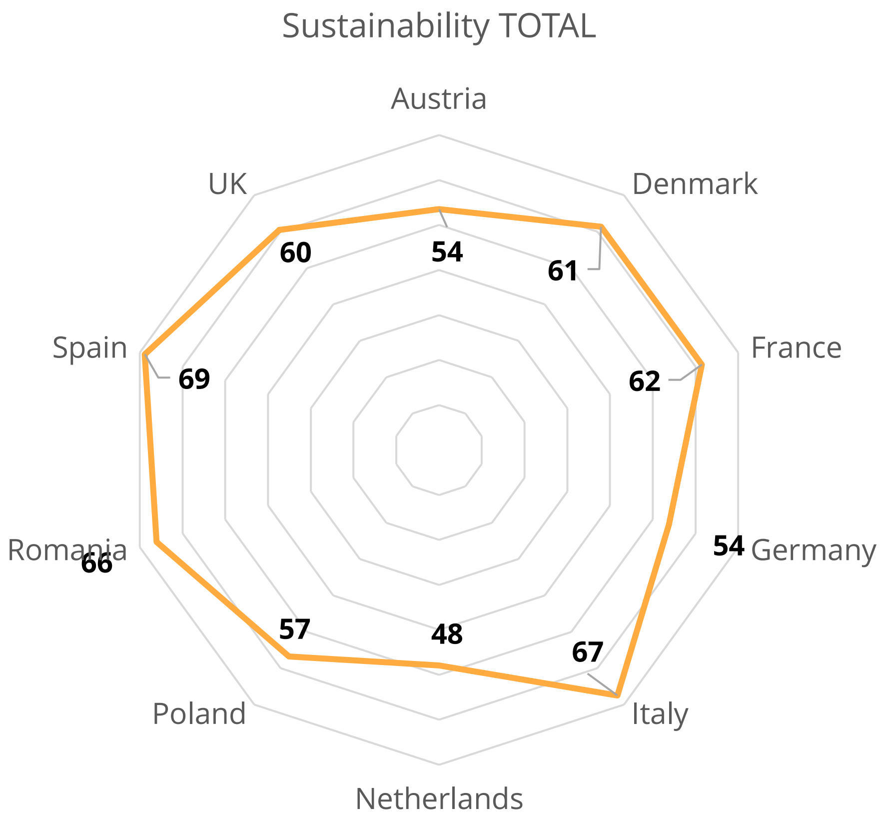


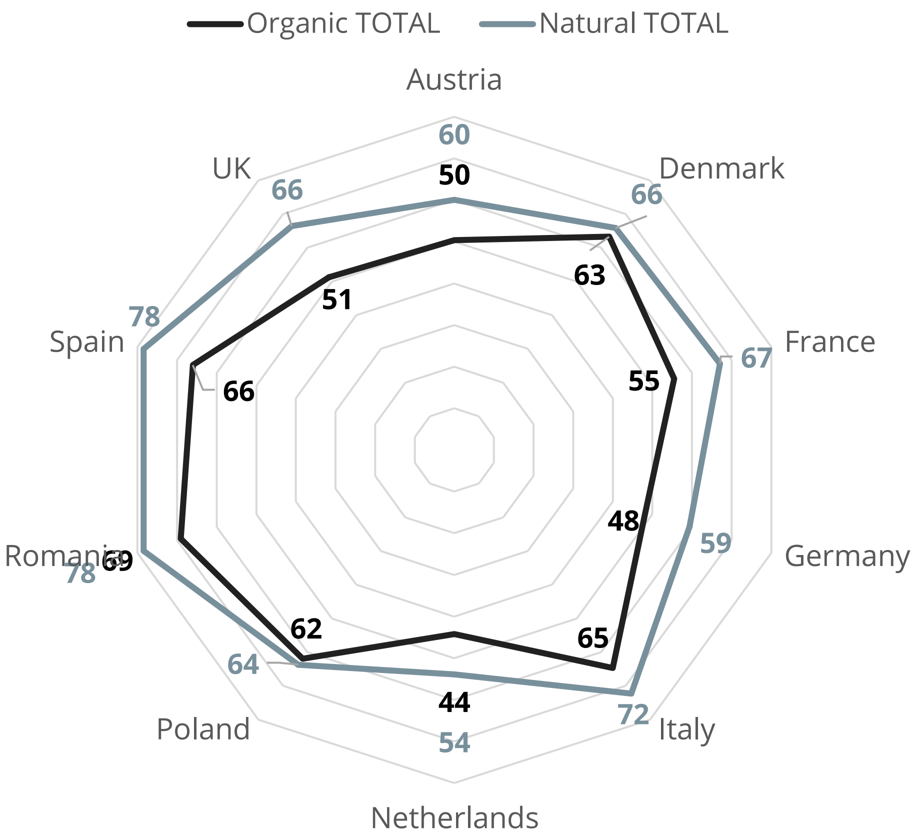


Q23/Q24/Q25 "Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking." | Single choice (7 point scale)

Italy stands out for its strong concerns around preparation methods and the impact of food choices

Attitudes about food by country (%) – Total Agreement





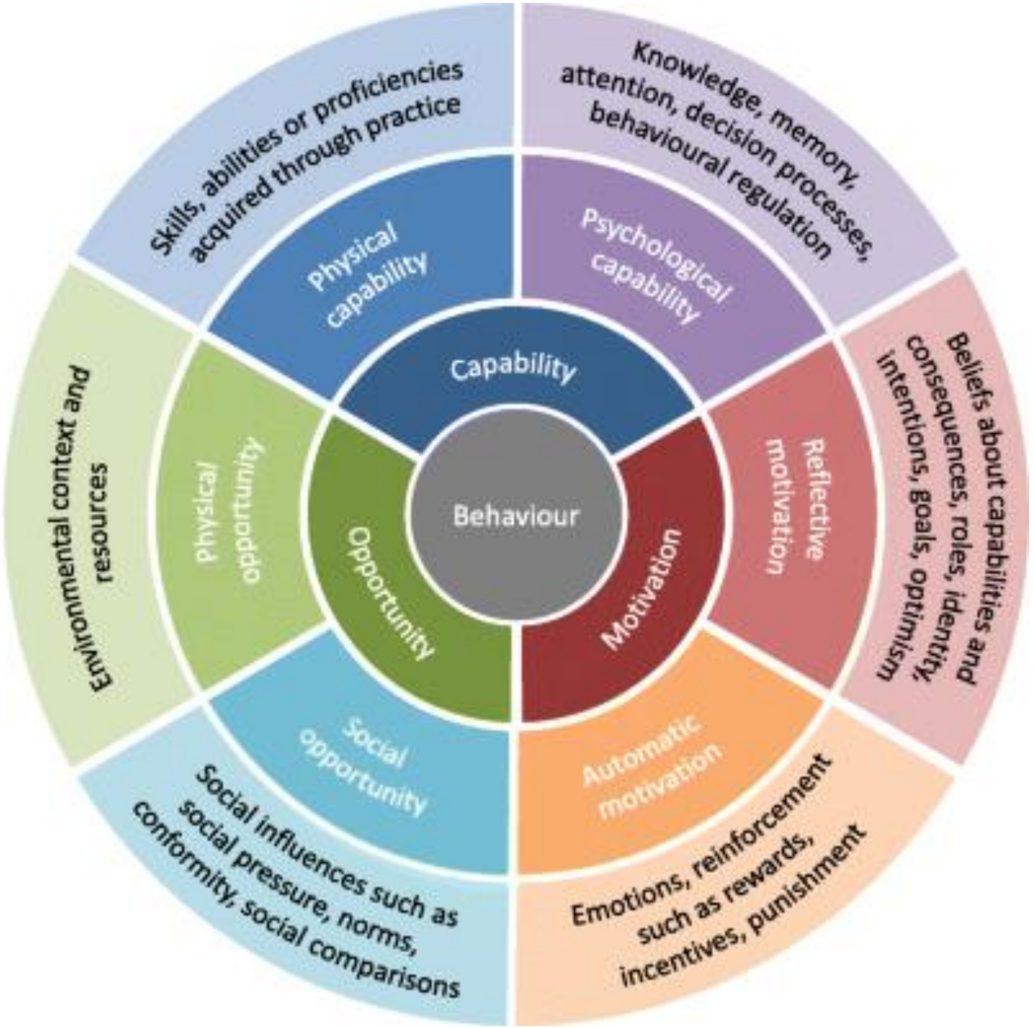
Q23/Q24/Q25 “Please indicate your agreement to the following statements regarding eating and cooking/your food consumption/regarding food consumption and cooking.” | Single choice (7 point scale)

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

COM-B: plant-based alternatives

The **COM-B model i**s a theoretical framework used to understand and analyse behavior change



Capabilities

	Total	Austria	Denmark	France	Germany	Italy	Netherlands	Poland	Romania	Spain	UK
Physical Total	**41%**	**33%**	**43%**	**38%**	**34%**	**45%**	**38%**	**45%**	**48%**	**46%**	**44%**
I find it easy to locate plant-based food alternatives in (online) supermarkets and stores	48%	41%	48%	44%	42%	51%	44%	51%	54%	49%	51%
I find it easy to get reliable information about plant-based food alternatives	44%	36%	44%	38%	39%	49%	42%	50%	51%	49%	45%
I find it easy to locate plant-based food alternatives in restaurants	37%	28%	41%	35%	29%	40%	31%	40%	45%	42%	41%
I find it easy to locate plant-based food alternatives at takeaways and delivery restaurants	36%	28%	40%	33%	28%	39%	33%	41%	43%	42%	37%
Psychological Total	**47%**	**40%**	**50%**	**42%**	**42%**	**51%**	**44%**	**49%**	**53%**	**52%**	**48%**
I know the benefits of consuming plant-based food alternatives	54%	45%	59%	48%	48%	57%	48%	56%	59%	60%	57%
I find it easy to prepare a plant-based meal	46%	40%	48%	43%	41%	51%	43%	49%	54%	51%	46%
I find it easy to come up with meals that are plant-based	44%	39%	46%	39%	38%	50%	41%	44%	50%	49%	45%
I know how to replace animal-based ingredients with plant-based food alternatives in various dishes	43%	35%	47%	38%	40%	44%	42%	45%	50%	46%	46%

Q26/Q27/Q28/Q29/Q30 “Please indicate your agreement to the following statements. |Single choice (7 point scale)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

Opportunities

	Total	Austria	Denmark	France	Germany	Italy	Netherlands	Poland	Romania	Spain	UK
Physical TOTAL	**44%**	**40%**	**47%**	**41%**	**45%**	**43%**	**46%**	**45%**	**48%**	**40%**	**46%**
...are on sale often enough	59%	56%	67%	56%	61%	55%	64%	62%	61%	51%	60%
...are easily available (e.g. in supermarkets, restaurants)	47%	41%	47%	42%	44%	47%	48%	51%	54%	43%	54%
...are located in easy-to-access places	47%	40%	45%	46%	47%	46%	49%	48%	51%	43%	50%
...are easy to find	47%	39%	48%	47%	48%	45%	51%	47%	49%	42%	53%
...are available in many varieties	46%	43%	44%	38%	47%	44%	49%	48%	53%	42%	49%
...are recommended enough in the media	43%	41%	43%	39%	45%	46%	47%	47%	47%	38%	40%
...are advertised enough (e.g. on television, in magazines)	40%	38%	44%	38%	43%	38%	41%	39%	43%	36%	44%
...are affordable	35%	33%	42%	31%	36%	33%	33%	34%	40%	33%	33%
...are easy to obtain at discounted prices	32%	25%	39%	30%	34%	30%	29%	32%	38%	33%	29%
Social TOTAL	**35%**	**25%**	**41%**	**31%**	**29%**	**37%**	**35%**	**40%**	**40%**	**42%**	**34%**
People who are important to me would approve if I ate plant-based food alternatives most of the time	40%	24%	42%	31%	31%	41%	45%	54%	44%	48%	43%
People in my environment eat more and more plant-based food alternatives	37%	30%	45%	33%	32%	37%	37%	41%	41%	43%	36%
People who are important to me think I should eat plant-based food alternatives most of the time	32%	22%	40%	31%	27%	34%	31%	32%	38%	38%	30%
Eating plant-based food alternatives is part of my culture	32%	26%	36%	28%	27%	37%	29%	33%	37%	40%	26%

Q26/Q27/Q28/Q29/Q30 "Please indicate your agreement to the following statements. |Single choice (7 point scale)

Motivation

	Total	Austria	Denmark	France	Germany	Italy	Netherlands	Poland	Romania	Spain	UK
Reflective TOTAL	**49%**	**38%**	**53%**	**45%**	**42%**	**55%**	**45%**	**53%**	**54%**	**56%**	**52%**
Eating plant-based food alternatives is good for my health	55%	45%	58%	53%	47%	66%	49%	54%	58%	65%	57%
Eating plant-based food alternatives will reduce negative effects on the environment.	54%	42%	61%	51%	47%	58%	53%	57%	55%	60%	59%
Eating plant-based food alternatives will help me to lose or maintain weight.	46%	35%	50%	40%	38%	53%	39%	53%	54%	55%	47%
Plant-based food alternatives are tasty	46%	36%	49%	41%	40%	47%	43%	49%	53%	50%	48%
Eating plant-based food alternatives is enjoyable	45%	35%	49%	41%	37%	49%	40%	49%	51%	51%	48%
Automatic TOTAL	**39%**	**34%**	**44%**	**37%**	**37%**	**41%**	**37%**	**39%**	**43%**	**42%**	**36%**
Eating plant-based food alternatives is something that is natural for me to do	41%	36%	46%	41%	38%	42%	41%	44%	45%	45%	37%
Eating plant-based food alternatives is something that I do without thinking	38%	33%	44%	37%	38%	40%	35%	37%	41%	40%	34%
Eating plant-based food alternatives is something that I do automatically	37%	32%	42%	33%	35%	41%	36%	37%	43%	40%	35%

Q26/Q27/Q28/Q29/Q30 “Please indicate your agreement to the following statements. |Single choice (7 point scale)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Sources of information, by trustworthiness

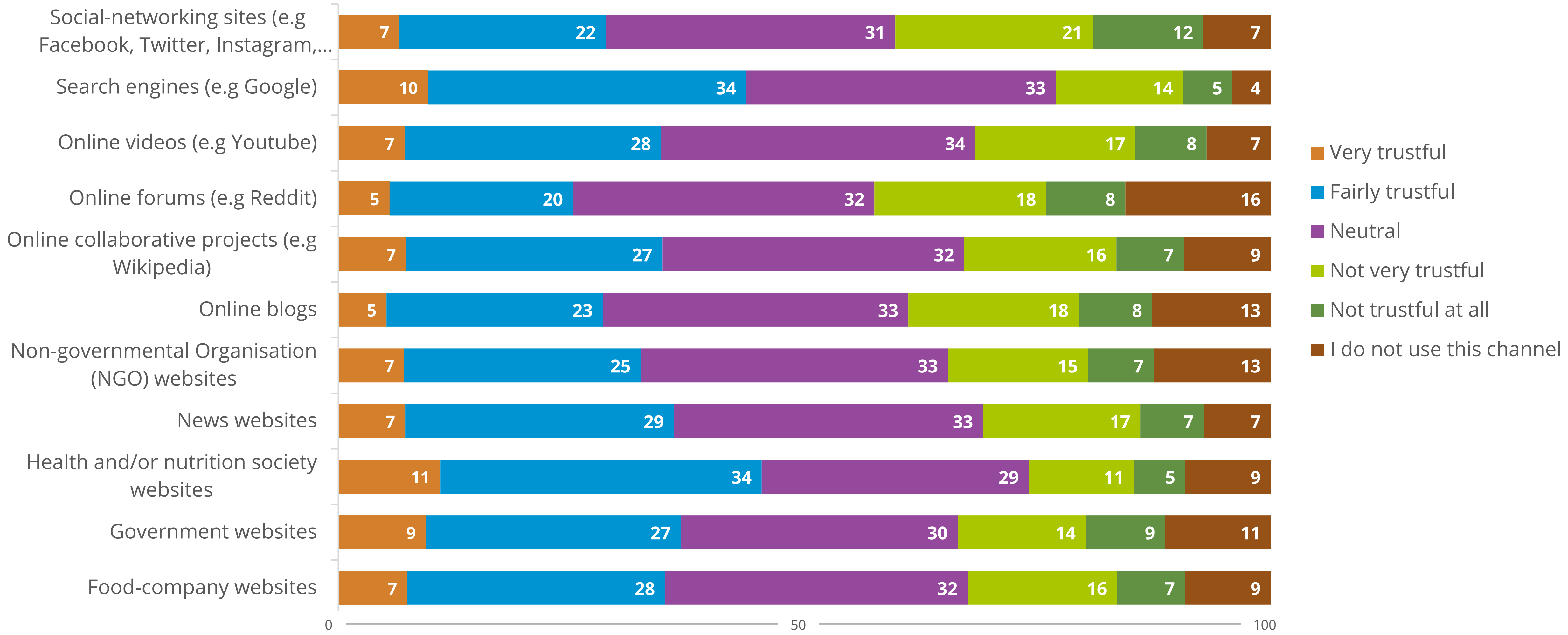
smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q31 "In general, how much do you trust information about plant-based food alternatives from..."

Health and nutrition websites, and search engines are trusted by consumers the most

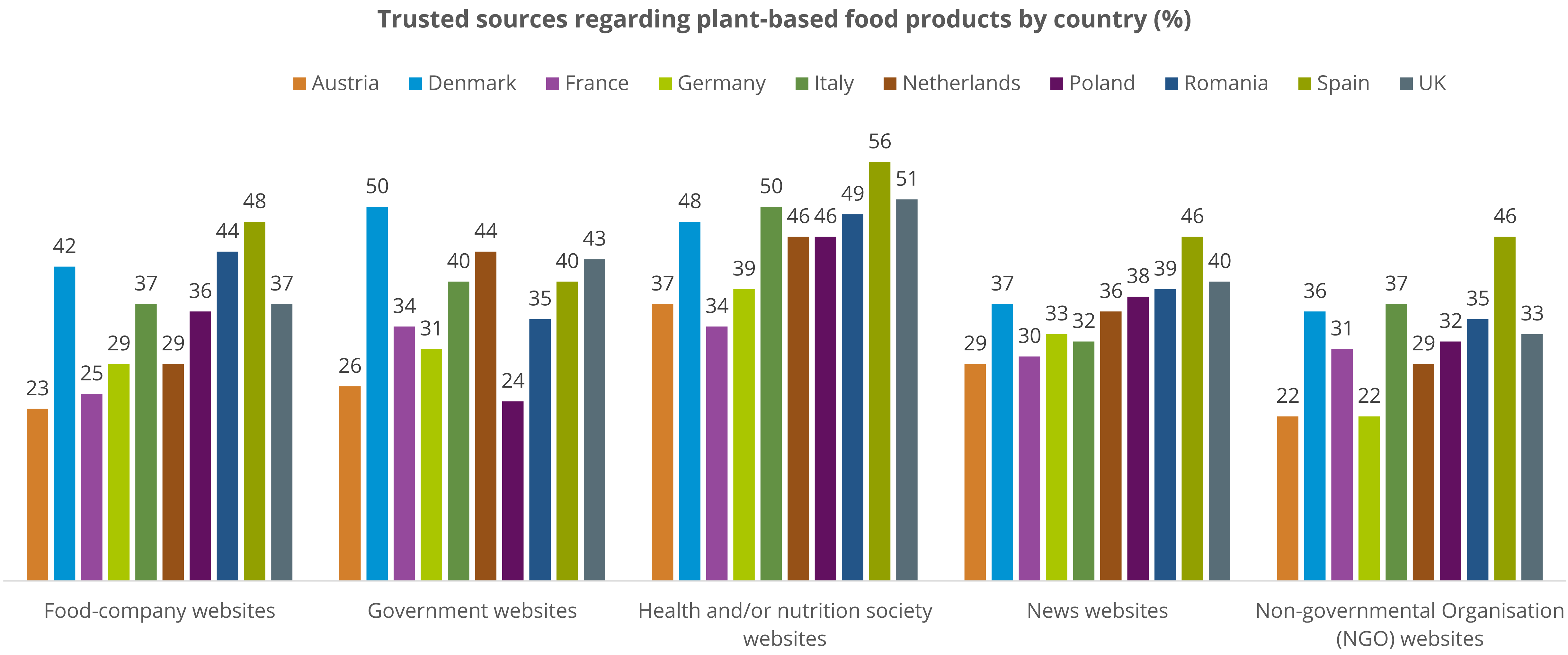
Trusted sources regarding plant-based food products total sample (%)



Q31: In general, how much do you trust information about plant-based food products from...| Single choice

Total: n= 7500

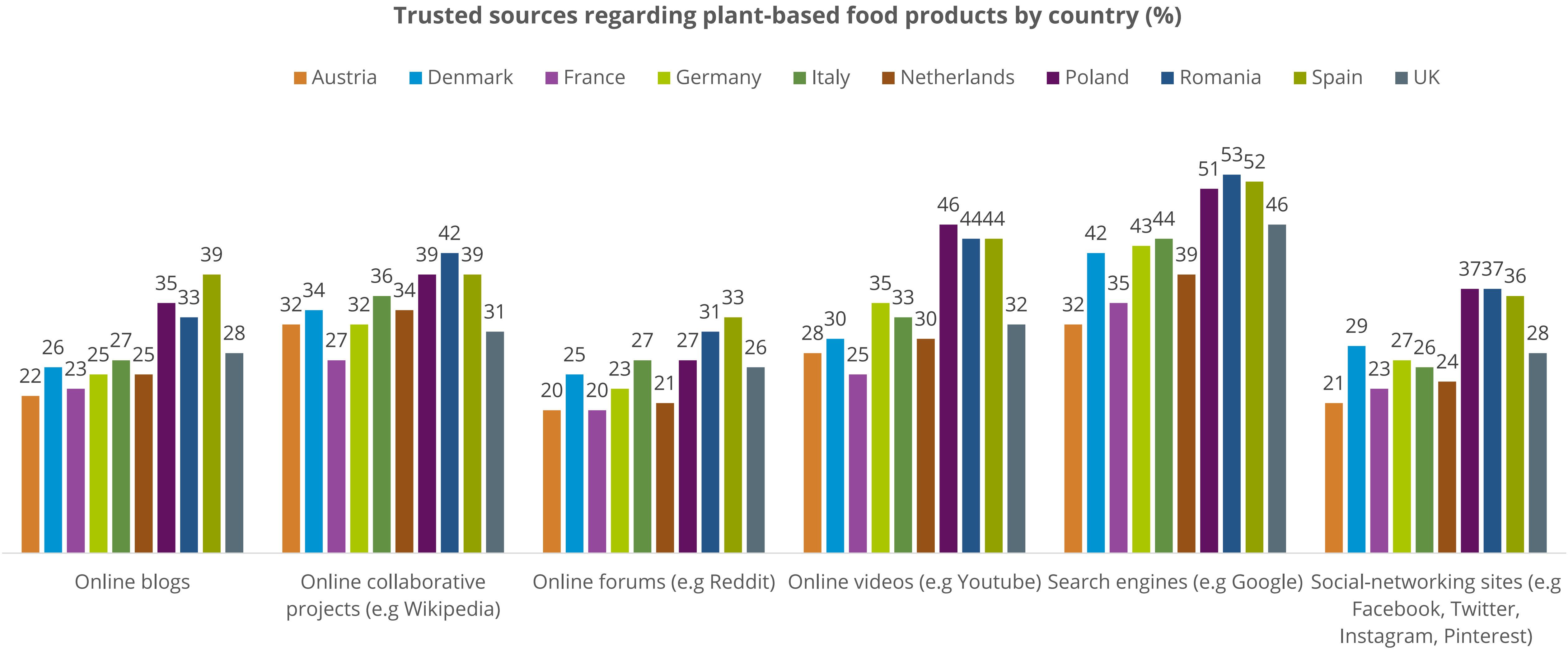
Consumers' levels of **trust** of information about plant-based food **varies substantially** across the countries



Q31: In general, how much do you trust information about plant-based food products from…| Single choice | Total trust level (Very trustful + fairly trustful)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

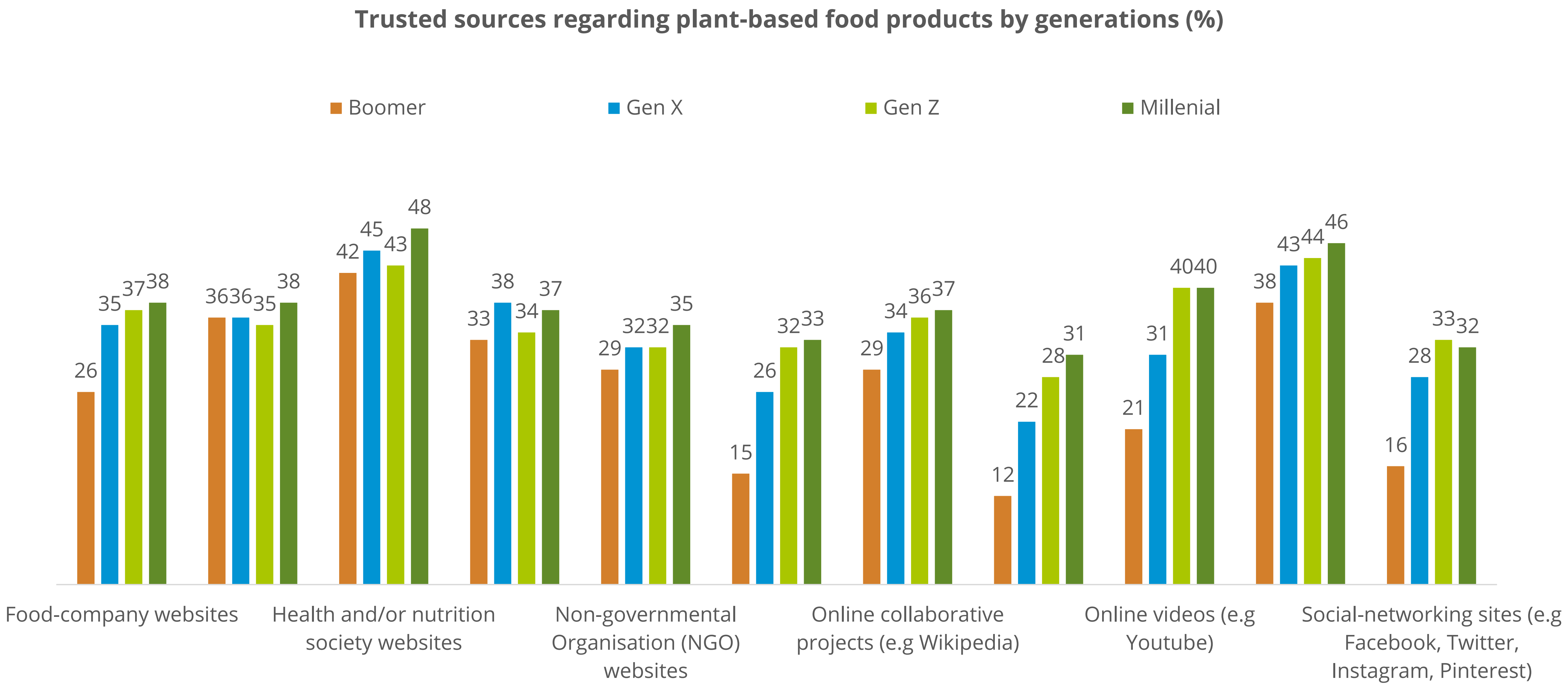
Consumers' levels of **trust** of information about plant-based food **varies substantially** across the countries



Q31: In general, how much do you trust information about plant-based food products from...| Single choice | Total trust level (Very trustful + fairly trustful)

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

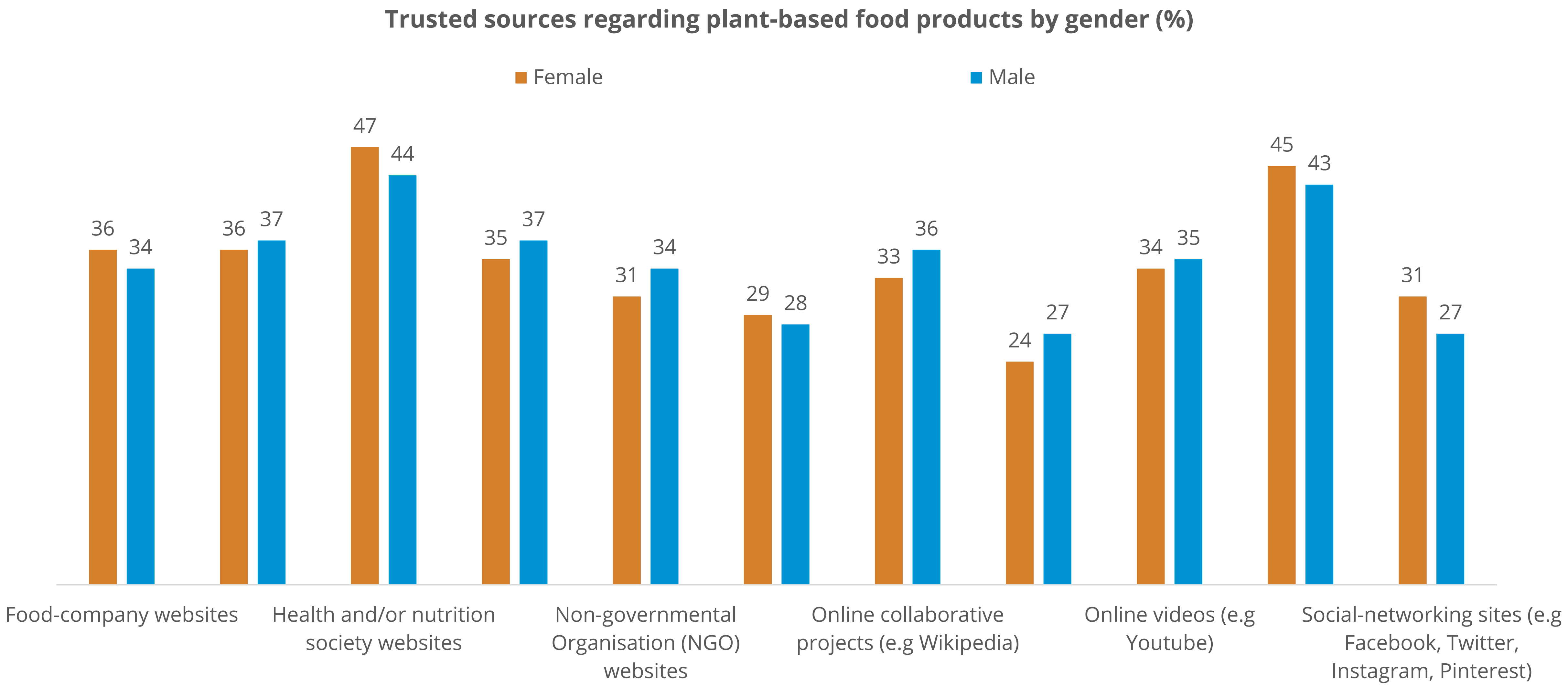
Trusted sources, by generation



Q31: In general, how much do you trust information about plant-based food products from...| Single choice | Total trust level (Very trustful + fairly trustful)

Total n=7500 | Boomer n=1013 | Gen X n=2238 | Gen Z n=1811 | Millennial n=2438

Trusted sources, by gender



Q31: In general, how much do you trust information about plant-based food products from…| Single choice | Total trust level (Very trustful + fairly trustful)

Total: n= 7500 | Female n= 3742 | Male n=3735

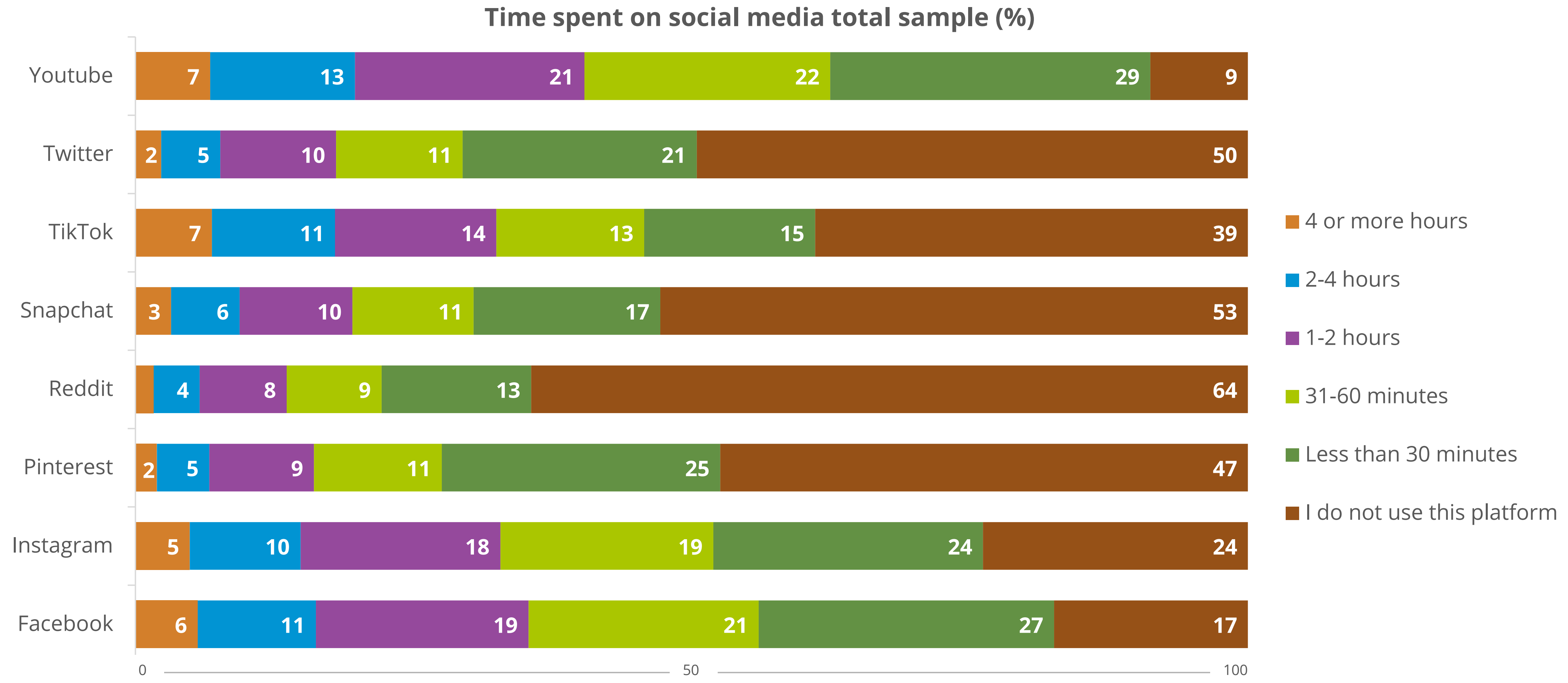
The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Social media usage

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q32 "On a typical day, how much time do you spend on these social media platforms?"

YouTube, TikTok, Facebook, and Instagram are the most-used social-media platforms



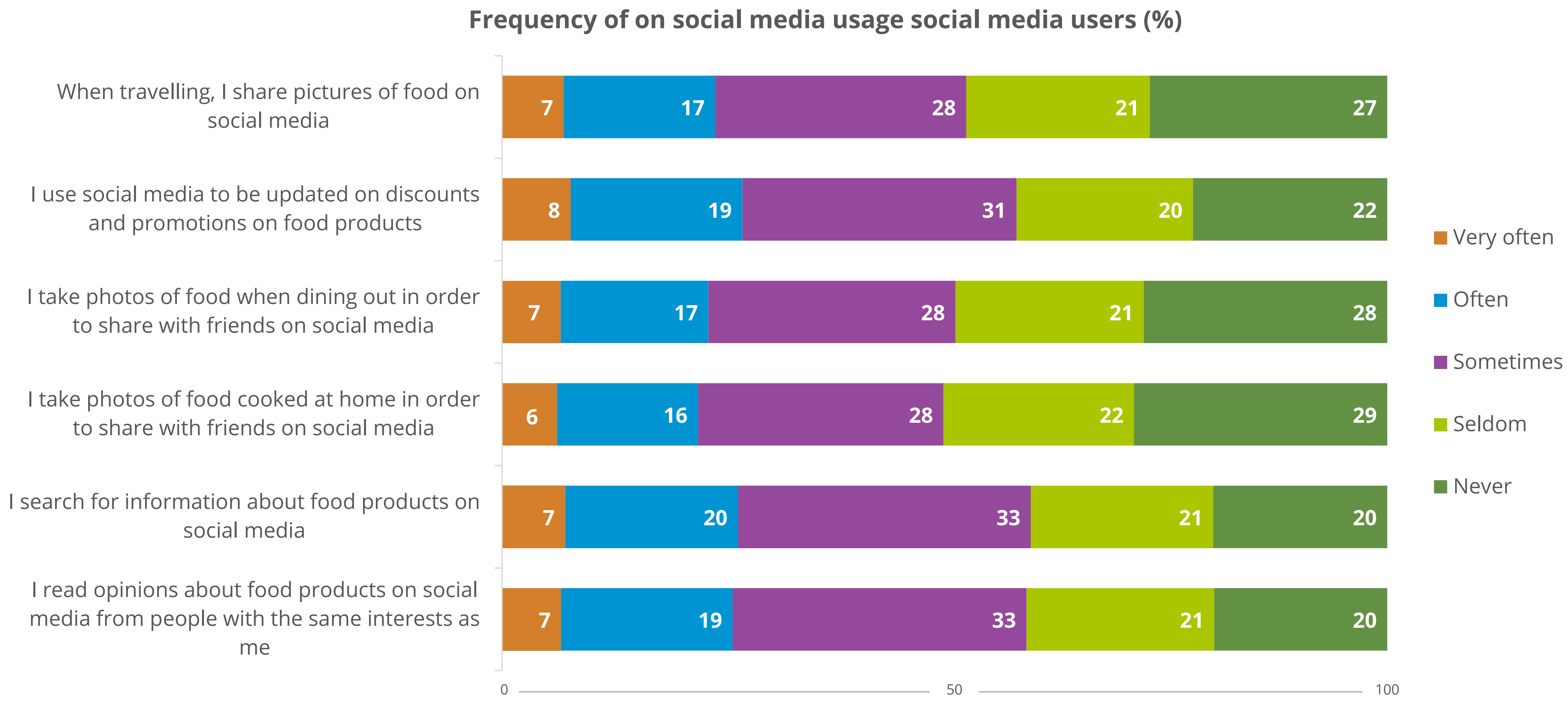
Q32: On a typical day, how much time do you spend on these social media platforms? | Single choice

Total: n= 7500

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q33 "How often do you engage with the following activities?"

Frequency of social-media usage



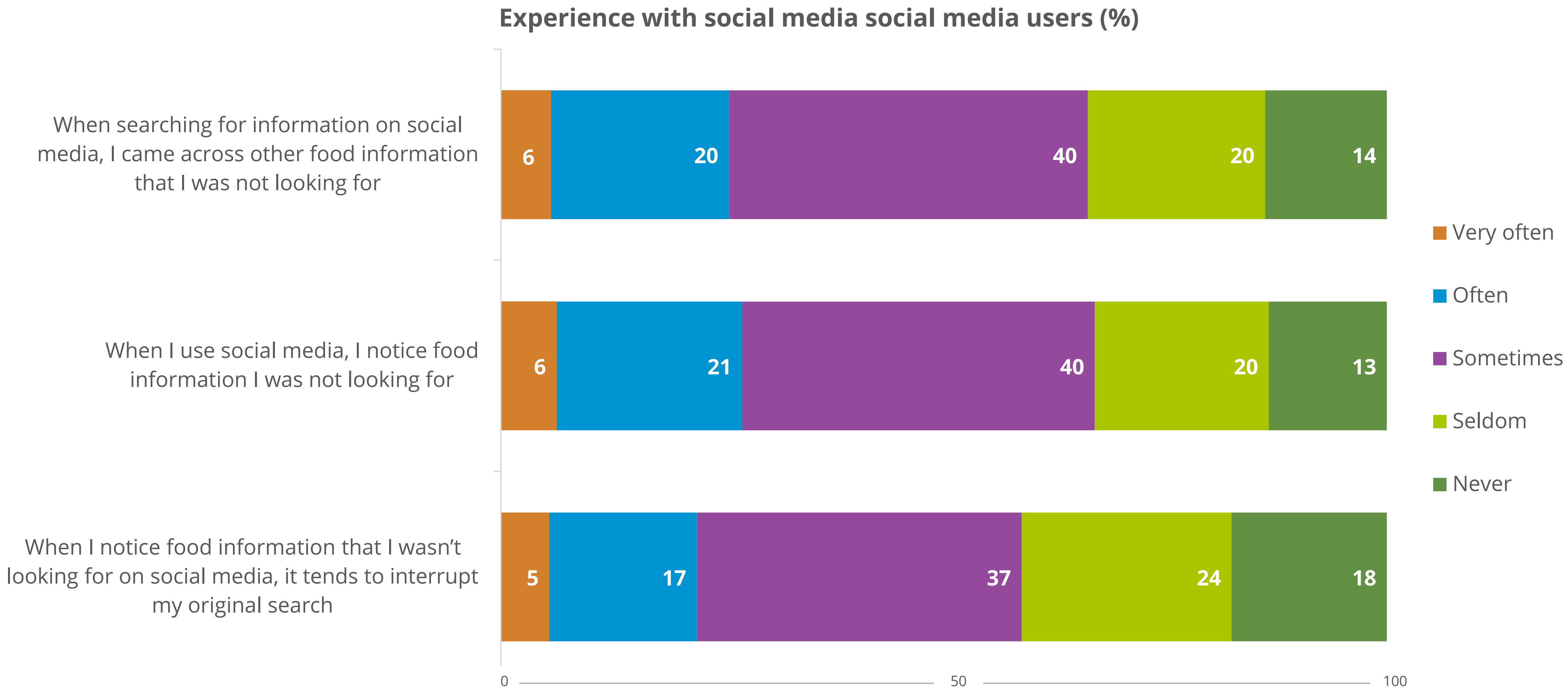
Q33: How often do you engage with the following activities? | Single choice

Total: n= 7500

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q34 "How often do you experience the following situations?"

Many consumers become aware of **new food information** when using social media



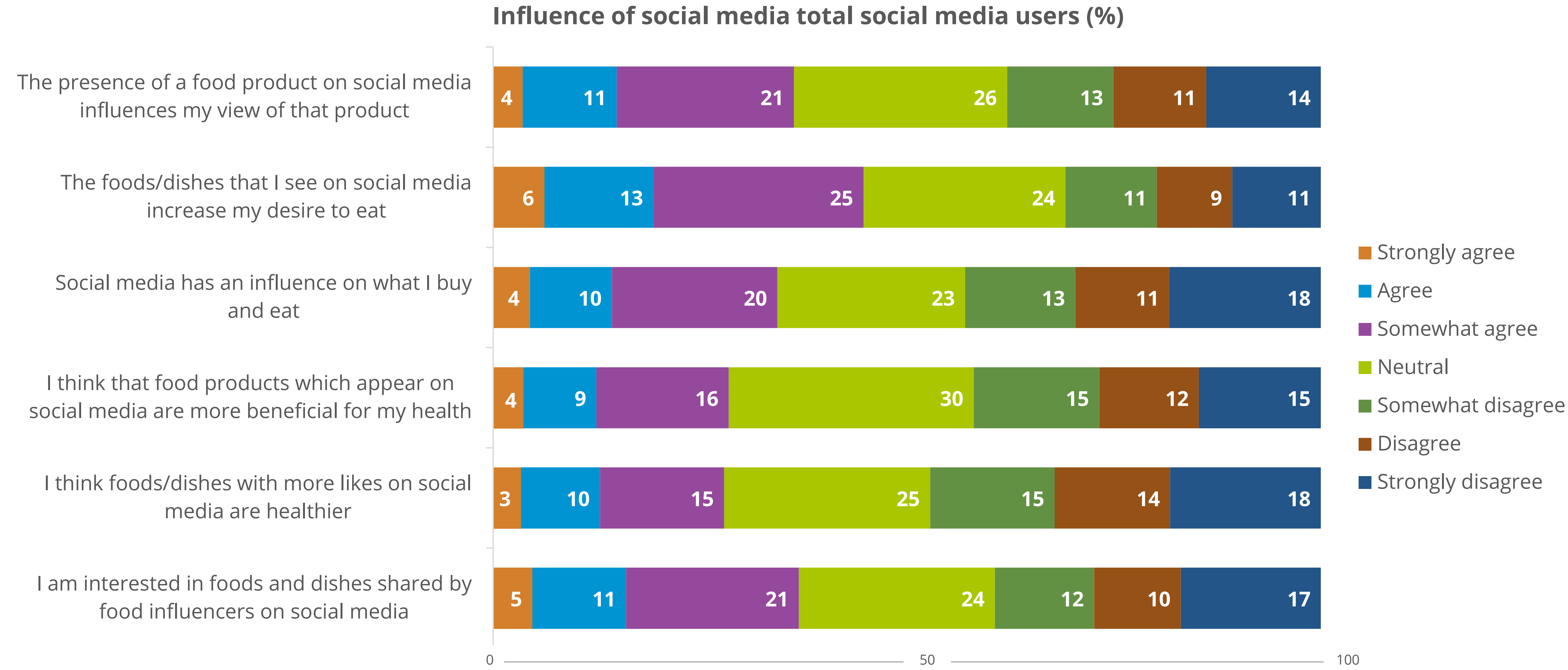
Q34: How often do you experience the following situations? | Single choice

Total: n= 7500

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

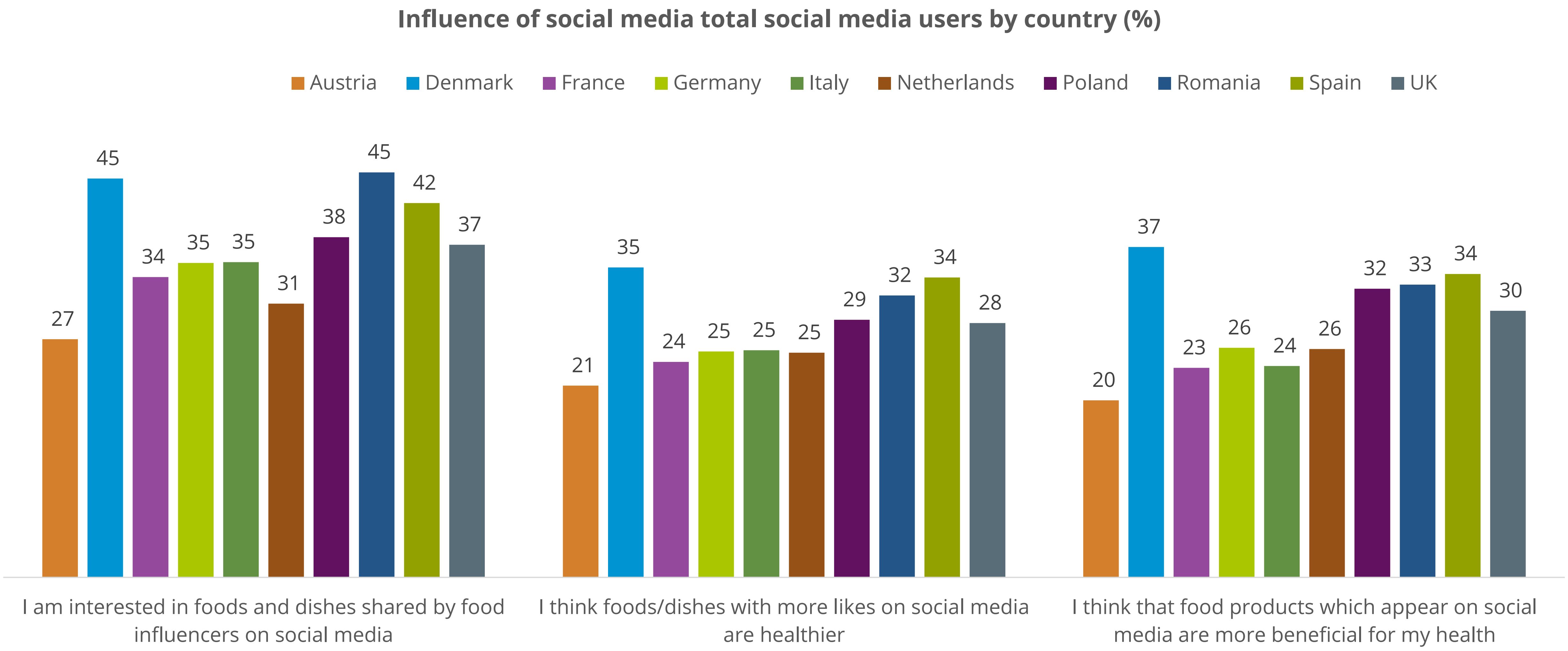
Q35 "Please indicate how much you disagree or agree with each of the following statements concerning social media and food attitudes."

Consumers' appetites increase when seeing food on social media or when shared by influencers



Q35: Please indicate how much you disagree or agree with each of the following statements concerning social media and food attitudes.| Single choice

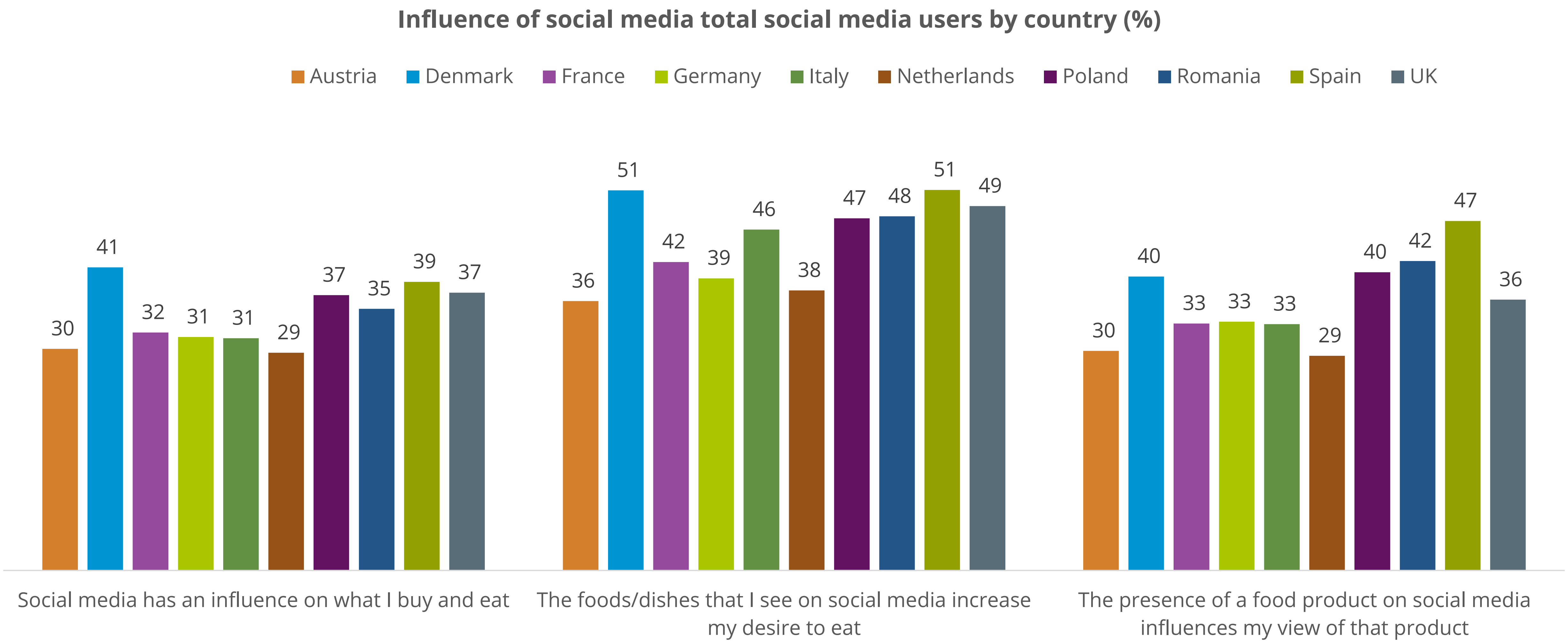
Especially consumers in **Denmark and Romania are interested in foods when shared by influencers**



Q35: Please indicate how much you disagree or agree with each of the following statements concerning social media and food attitudes.| Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

European consumers, **especially in Spain and Italy** say that food on social media increases their appetite



Q35: Please indicate how much you disagree or agree with each of the following statements concerning social media and food attitudes.| Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

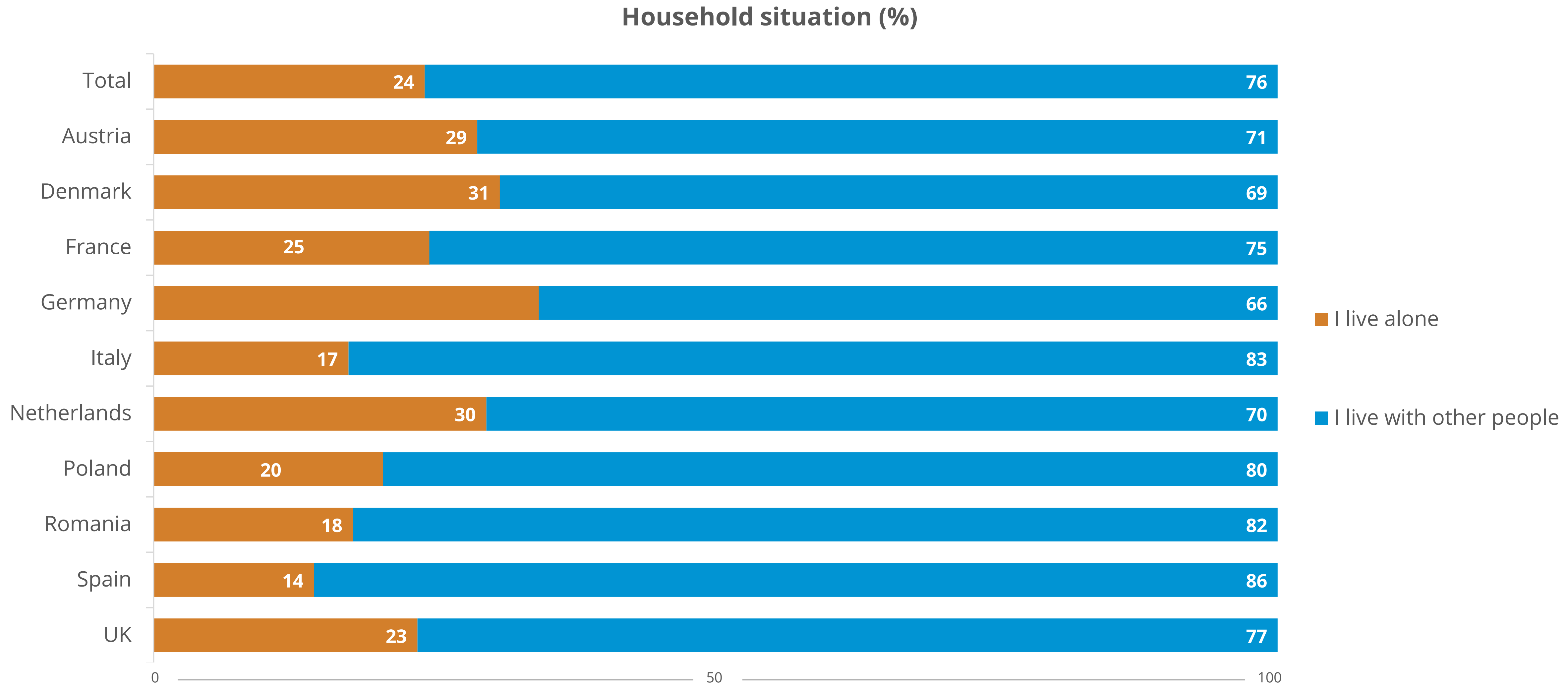
The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Socio-demographic data

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q36 "How many people live in your household, including yourself?

Household situation

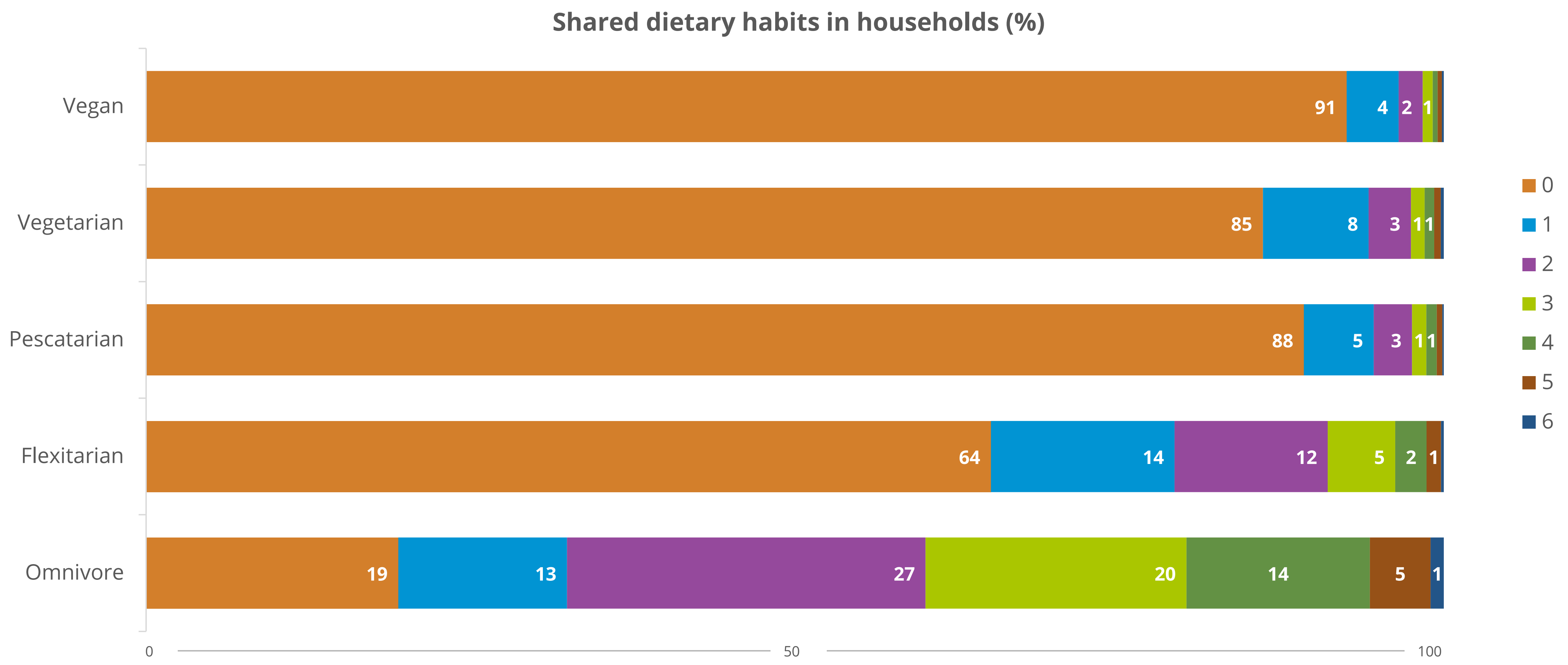


Q36: How many people live in your household, including yourself?" | Single choice

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q37 "How many members of your household, including yourself, follow each of the eating patterns indicated below?"

Shared dietary habits in households



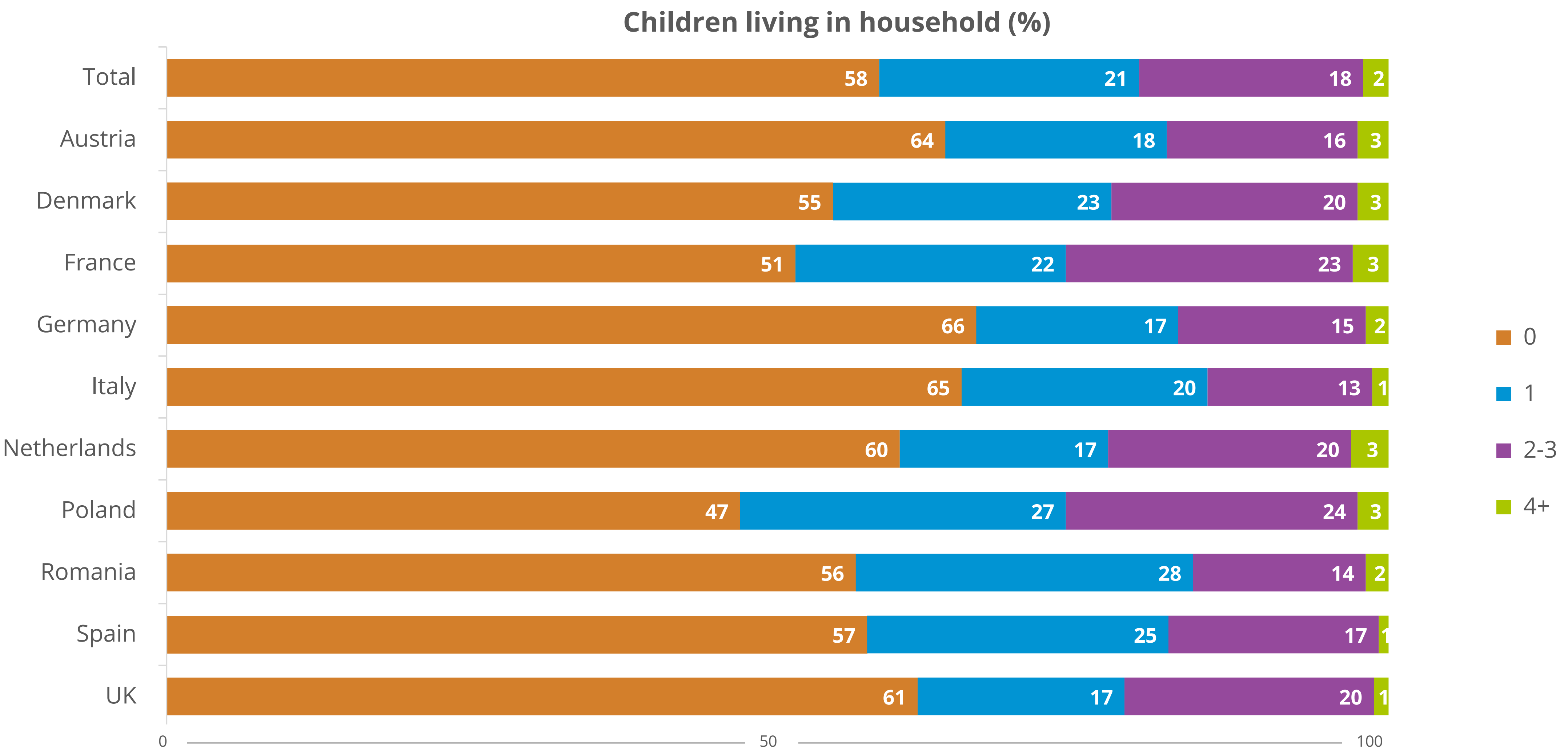
Q37: "How many members of your household, including yourself, follow each of the eating patterns indicated below? | Single choice

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q38 “How many children live in your household?”

Number of children in household



Q38: How many children live in your household? | Single choice

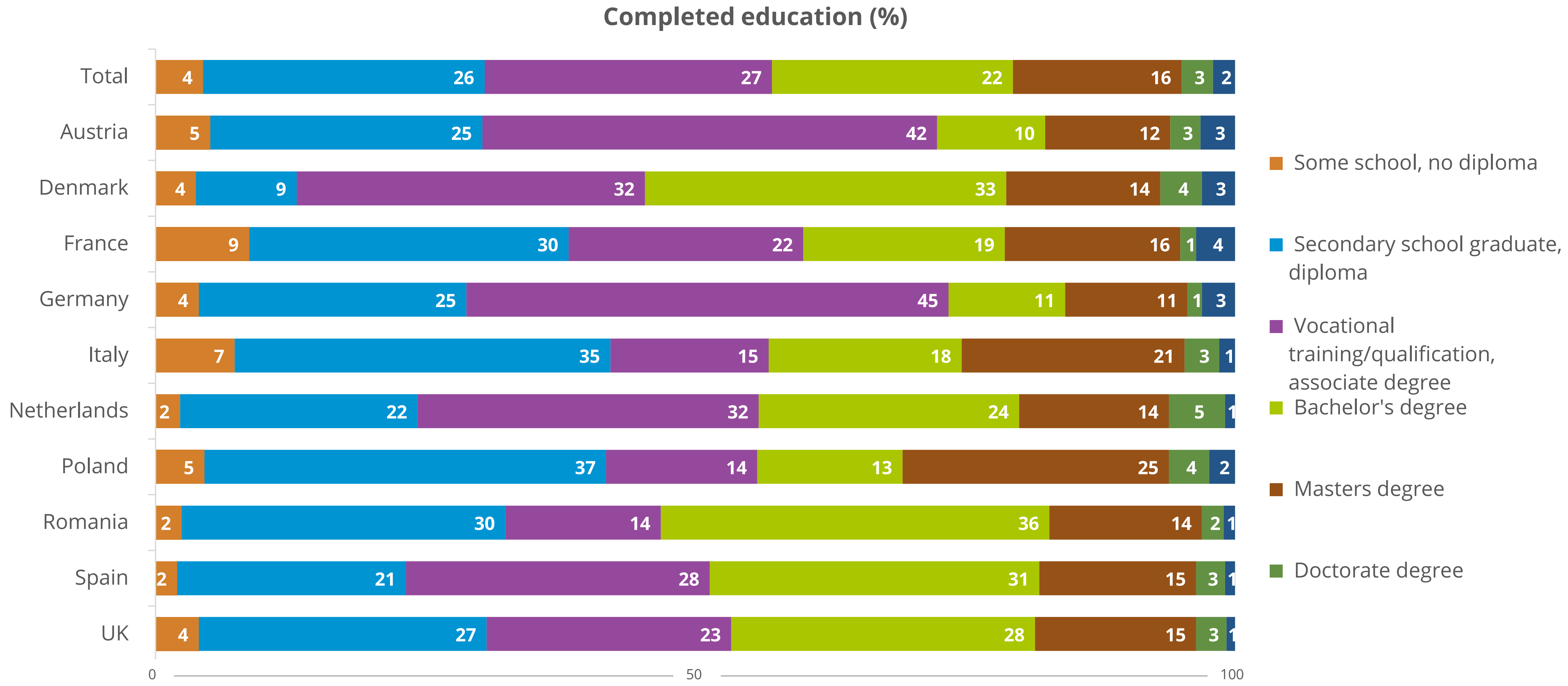
Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q39 “What is the highest level of education that you have completed?”

Education level



Q39: What is the highest level of education that you have completed? | Single choice

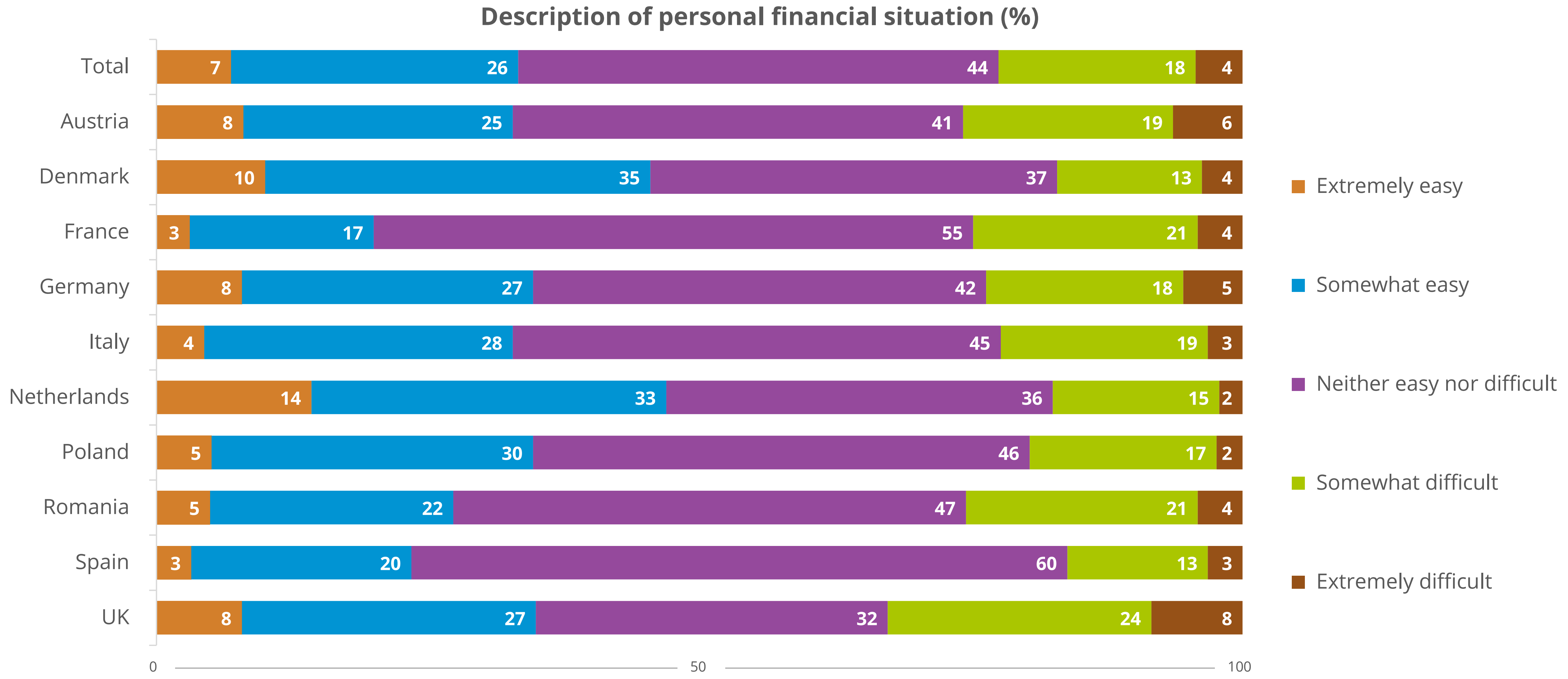
Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

smart protein

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q40 "How would you describe your own financial situation?"

Financial situation in households



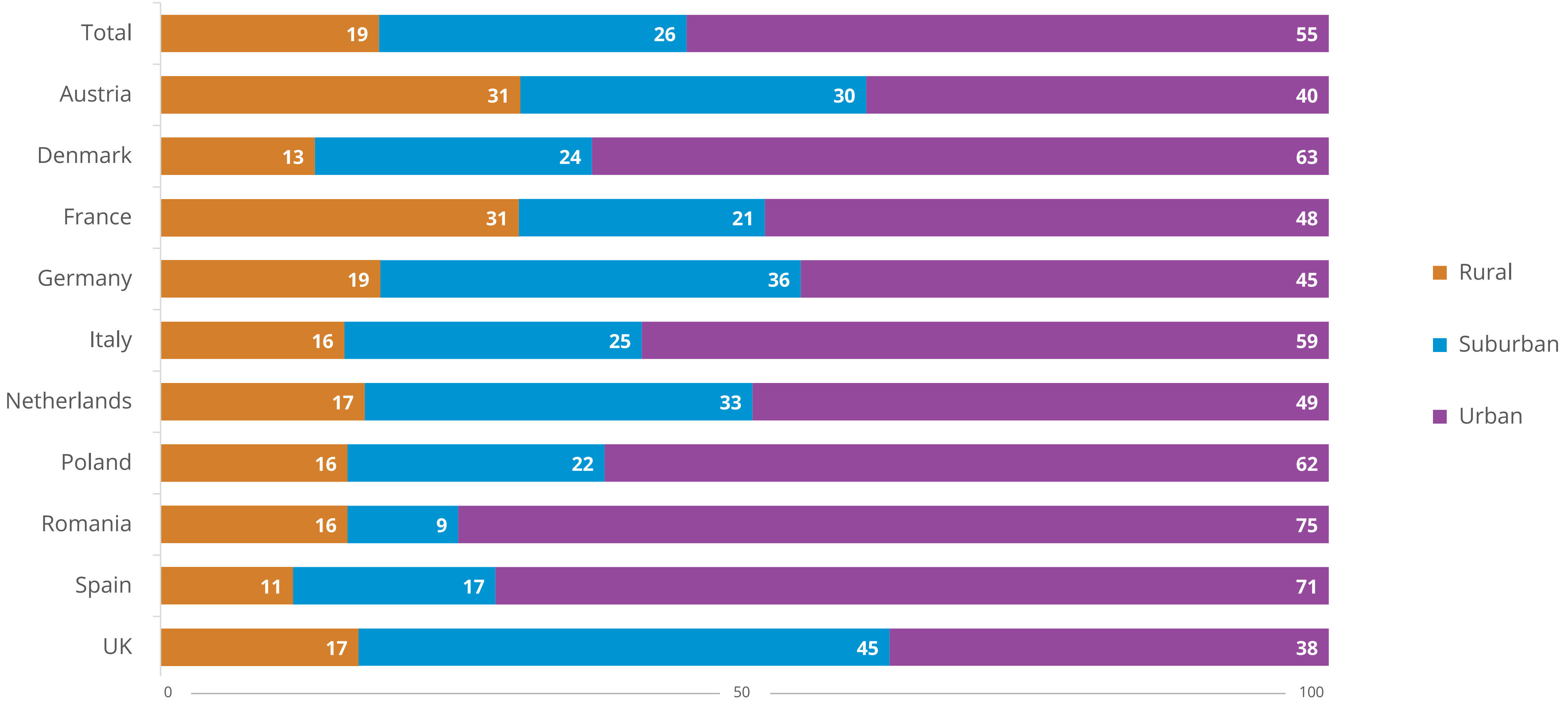
Q40: How would you describe your own financial situation? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Q41 “Which phrase best describes the area where you live?”

Rural, suburban, or urban



Q41: Which phrase best describes the area where you live? | Single choice

Total: n= 7500 | Austria n=750 | Denmark n=750 | France n=750 | Germany n=750 | Italy n=750 | Netherlands n=750 | Poland n=750 | Romania n=750 | Spain n=750 | UK n=750

The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Suggested citation:
Evolving appetites: an in-depth look at European attitudes towards plant-based eating. A follow-up to the 2021 survey report, 'What Consumers Want'
European Union's Horizon 2020 research and innovation programme (No 862957) (2023).

Presentation managed and compiled by
ProVeg International, the University of Copenhagen, and Ghent University.
Contact: info@smartproteinproject.eu