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The consumer data give and take

A study by Deloitte and Ahold Delhaize into European attitudes on the use of consumer data by grocers

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Deloitte and Ahold Delhaize worked together to develop consumer research focused on transparency and ethics in the use of personal consumer data to help further a pan-European dialogue among leading grocers, consumers, and regulators. An online survey was commissioned in 15 European countries, across a representative group of 15,000 consumers. In this report we share the results of the survey—what it could mean for Europe's leading grocery retailers, and how they define or refine their own data ethics principles, strategies, and processes.

Foreword

The introduction of loyalty programs, the growth of online shopping, and digital marketing are just some of the influences that have changed the face of retail, and grocery in particular. What used to be a sector heavily reliant on operational process excellence is increasingly data-driven, both for the optimization of end-to-end supply chain operations and also for enriching grocers' interactions and relationships with consumers. Grocers now have vast amounts of consumer data at their disposal, and efforts are being made by leading grocers to make much greater use of it–for the benefit of consumers, themselves, and their partners. The rapid increase in the number of engagement propositions and the personalization of messaging, content, pricing, promotion, and services all have the potential promise to make the grocery experience even more attractive and convenient for customers. This has the tremendous potential of benefiting those grocers if they do it right.

But as this trend accelerates, and as consumers become more data-savvy (and potentially cynical), important questions are starting to emerge. How do customers feel about their data being used? How do they feel about grocers using this data? For what types of services would they be willing to share their data? As consumers become more aware of the insights that their transactions generate, we predict they will increasingly recognize both the value of their data and also the potential disadvantages from its use by others. To explore these questions, Deloitte and Ahold Delhaize launched a European-wide consumer research survey, in the hope that, in doing so, we can jointly encourage a conversation about this topic among Europe's consumers, grocers, and regulators. Our online consumer research covered approximately 15,000 respondents across 15 countries.

So what does this research tell us?

The research reveals a willingness among consumers to share their data with grocery retailers, who are generally trusted by consumers, and more so than many other types of organizations. There may be an even better than expected opportunity for grocery retailers to develop data-enabled business models and services for the mutual benefit of both themselves and their customers. However, consumers feel there is room for improvement in how European grocery retailers deal with consumer data when it comes to transparency, choice, and control over their personal data.

Consumers also have strongly varying intuitions about the sharing of data, dependent on the types of data being considered. This varies greatly across demographics and geographies, and we expect these data-specific intuitions to evolve over time. We also described a number of potential data-enabled grocery services to our respondents for their feedback. The greatest interest was in services that offer a mix of convenience and inspiration in their shopping, with varying levels of interest in other data-enabled services around, for example, consumer health, consumer finance, and ethical sourcing. Responses differed significantly between countries in the survey, implying varying levels of enthusiasm around data sharing and using data-enabled services. There are also noticeable differences across age and demographic groups. There is clearly no such thing as a "European" grocery consumer, so there should not be a standard offering of data-enabled services. Grocers should continue to zoom in and understand local consumer preferences and innovate from there and avoid the temptation to treat all European consumers as a homogeneous group.

There is a tremendous opportunity for grocery retailers to leverage the potential value-add of consumer data, provided that they use consumers' data for the benefit of the parties involved and in particular for the consumer. Our expectation is that increasingly consumers will want to be in control of how their data is being used. This research is a first step in a pan-European dialogue amongst grocers on how to take advantage of the consumer data opportunities.

Adgild Hop
European Grocery Lead Partner
Deloitte Netherlands

Wouter Kolk
CEO, Ahold Delhaize
Europe & Indonesia

Introduction

In the past, consumer marketing relied heavily on the attractiveness of strong brands. There is now an accelerated shift toward using data and analytics to provide meaningful insights into consumer habits and preferences and use these insights to tailor or personalize the message or offering. As described in Deloitte's Consumer Love publications, retailers, manufacturers, and the global technology platforms are all competing for the "most meaningful role" in the lives of consumers. Personalization has been talked about for many years as a way forward. Through better understanding of the needs and preferences of customers and presenting them with relevant personalized products or services at the right moment, retailers have the opportunity to offer them greater value.[1]

Consumer data is at the core of this aspiration. But how do consumers feel about this? On the one hand, they have become used to experiences with powerful digital-first tech companies. They increasingly value hyper-convenience and expect a seamless shopping experience from retailers and brands across all touch points. On the other hand, consumer attitudes to data privacy and security are shifting. In a previous Deloitte study, *To share or not to share*, some respondents felt they had lost control over the way their personal data is collected and used.[2]

Grocery is an interesting domain when it comes to personal data, given the important role that grocers play in consumers' lives and the share of household spending that goes into it. Grocery shopping data is a potential source of valuable insights into consumers' lives, providing information, for example, about household composition, lifestyle preferences, general health, household wealth, dietary preference and grocery shopping data used to be anonymous (largely based on basket composition), but the introduction of loyalty cards and the move to online has increased retailers' potential understanding of the behavior and preferences of individual consumers. This increased ability to understand consumers needs to be used responsibly, with consumers' preferences at the core.

"Data ethics is about addressing the unintended consequences of digital technology used in society, it is dedicated to uncovering and understanding risks to societal values in order to mitigate or prevent those risks."

Aimee van Wynsberghe, Associate Professor, Ethics of Technology, TU Delft

"For a multinational grocer like Ahold Delhaize, data ethics is top of the digital transformation agenda. Every week its brands process 50 million transactions, online and in-store. With 5.4m active mobile app users per month, customers trust the brands with some of their personal information, whether for checking their home address for grocery deliveries, accessing their shopping history to make shopping easier or receive personalized benefits, or confirming account details for online orders."

Wouter Kolk, CEO, Ahold Delhaize Europe and Indonesia

Why Deloitte and Ahold Delhaize undertook this consumer study

If companies wish to use or share their customer data, our view is that in future they will increasingly need the trust and consent of consumers and make clear the benefits to them. Consumers should be able to trust that the way in which organizations use their data is not just transparent and in line with regulations but also ethical in a broader sense.

Creating trust in today's digital society requires that companies pay attention to the emerging domain of "data ethics"—the ways in which they collect data, combine data sources, and use data with other digital technologies, for example, data-driven algorithms. Ethics are not the same as law, and sometimes doing something legal does not necessarily mean that it is ethical or acceptable by the public's standards. Creating trust in the digital space requires that companies create responsible data practices to align with data ethics principles. To do this, organizations will need to become transparent about their governance, guiding principles, and practices in dealing with consumer data. It will also mean giving a voice to consumers, and even helping consumers understand what they should expect from organizations when it comes to data ethics.

In the past decade we have witnessed serious privacy scandals, data leaks, and cybersecurity breaches targeted at both companies and governments. We have seen more and more examples of data-driven algorithms that lead to undesired conclusions due to the underlying training data or design principles not being validated from an ethical point of view. This has resulted in regulatory responses such as the General Data Protection Regulation (GDPR) and a growing awareness of the importance of privacy and data security among consumers who increasingly demand value in return for sharing personal information.

Ahold Delhaize and Deloitte worked together to develop research focused on transparency and ethics in the use of personal consumer data to help further a pan-European dialogue among leading grocers, consumers, and regulators. An online survey was commissioned in 15 European countries, across a representative group of almost 15,000 consumers.[3] In this report we share the results of the survey and what this could mean for Europe's leading grocery retailers and how they define or refine their data ethics principles, strategies, and processes.

"As online transactions in the grocery business continue to rise significantly, and the majority of customers using our brands' loyalty programs, personalized recommendations and dietary advice, for example, it is important that grocery retailers fully understand what customers are willing to share, against which conditions, and for what purposes. For that reason, working together with Deloitte in this research further enables us to earn and maintain customers' trust in working with the data they provide."

Wouter Kolk, CEO, Ahold Delhaize Europe and Indonesia

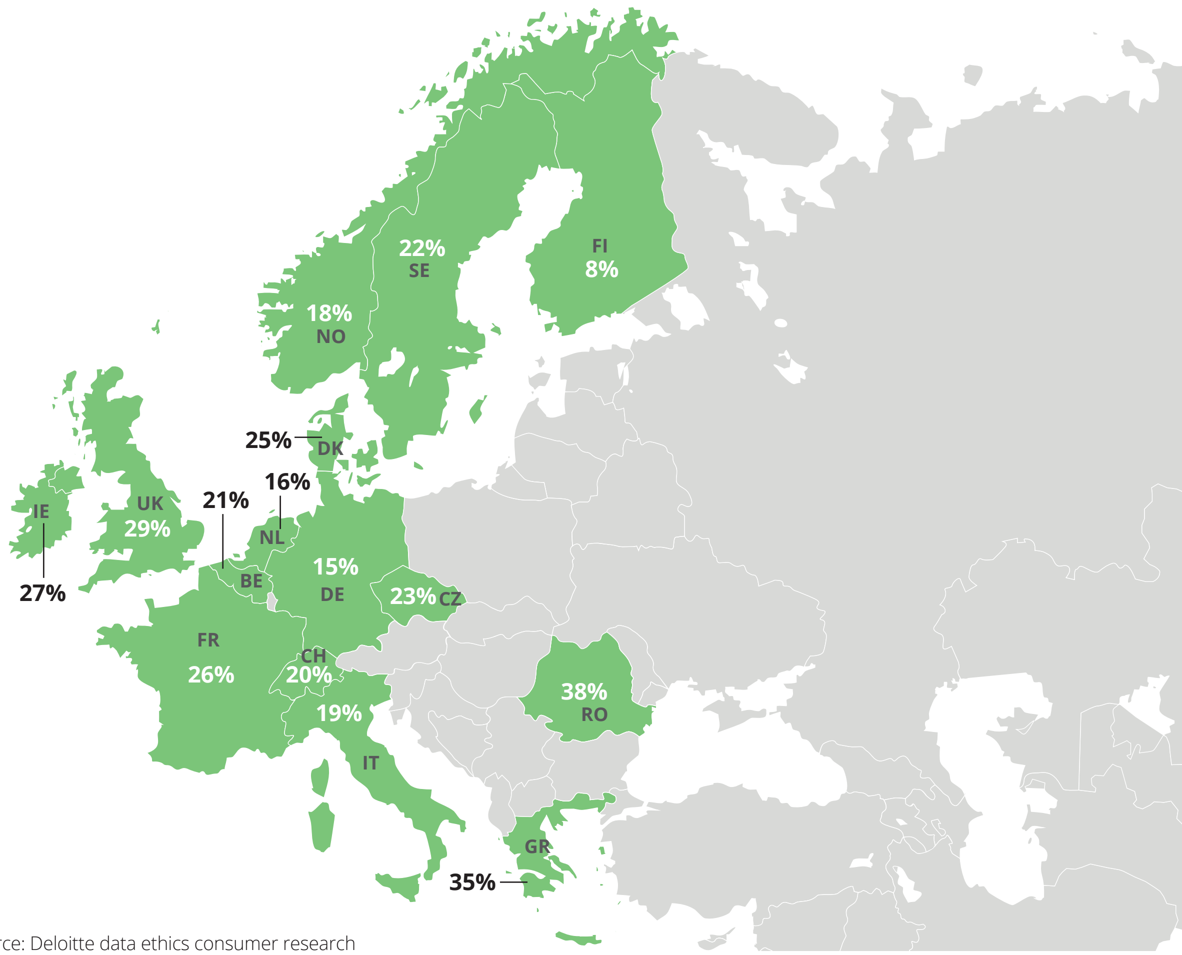
Willingness of consumers to share their data

Differences between countries, age groups, and online shopping behavior

We asked respondents about their willingness to share personal data, without being specific about whom they would share it with or what the purpose of it would be. Respondents were presented several personal data items and could answer on a scale from 1 (very unwilling) to 5 (very willing). We found substantial differences between countries, age groups, and online grocery shopping behavior when it came to the willingness of respondents to share personal data. Respondents were asked about their willingness to share 18 types of personal information, such as demographic data and information about health and income. Overall, the willingness to share information (averaged over these 18 types of personal data) was 2.8 on the scale of 1 to 5: this lies between “somewhat unwilling” and “neither willing nor unwilling.”

Respondents from Romania and Greece were the most willing to share personal information: 38% and 35% respectively are “somewhat willing” or “very willing” to do so. Finland and Germany were the least willing, with 8% and 15% respectively being “somewhat willing” or “very willing.” Compared to consumers from Finland and Germany, those from the Netherlands (16%) and Belgium (21%) were a little more willing to share their data, followed by consumers from France (26%) and the United Kingdom (29%). This could be due to cultural differences between countries, local legislation, and the pace at which countries adopt and embrace technology.

Figure 1. Percentage of consumers who are “somewhat willing” to share their data, by country

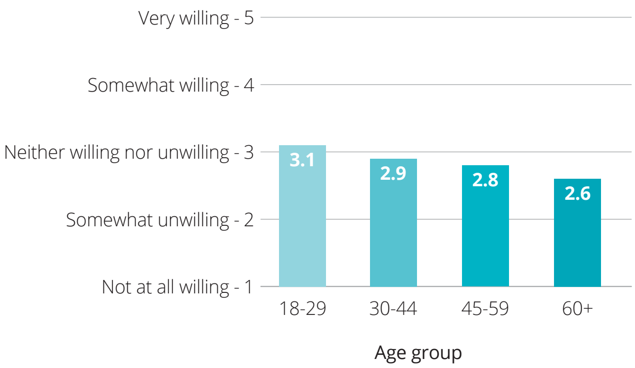


Source: Deloitte data ethics consumer research

The survey also found differences between age groups. Young people in the 18–29 age group are more willing to share personal data (an average of 3.1 on the scale 1 to 5) than those who are 60 years or older (2.6). Respondents who frequently conduct their grocery shopping online are more willing to share their information.

The average for individuals who shop online on a weekly basis was 3.3, compared to 2.7 for those who never shop online. This could indicate a more relaxed attitude toward sharing personal information among younger people and as online grocery shopping becomes a more established practice.

Figure 2. Overall willingness to share data according to age group



Source: Deloitte data ethics consumer research

Figure 3. Overall willingness to share data according to online shopping frequency

Source: Deloitte data ethics consumer research

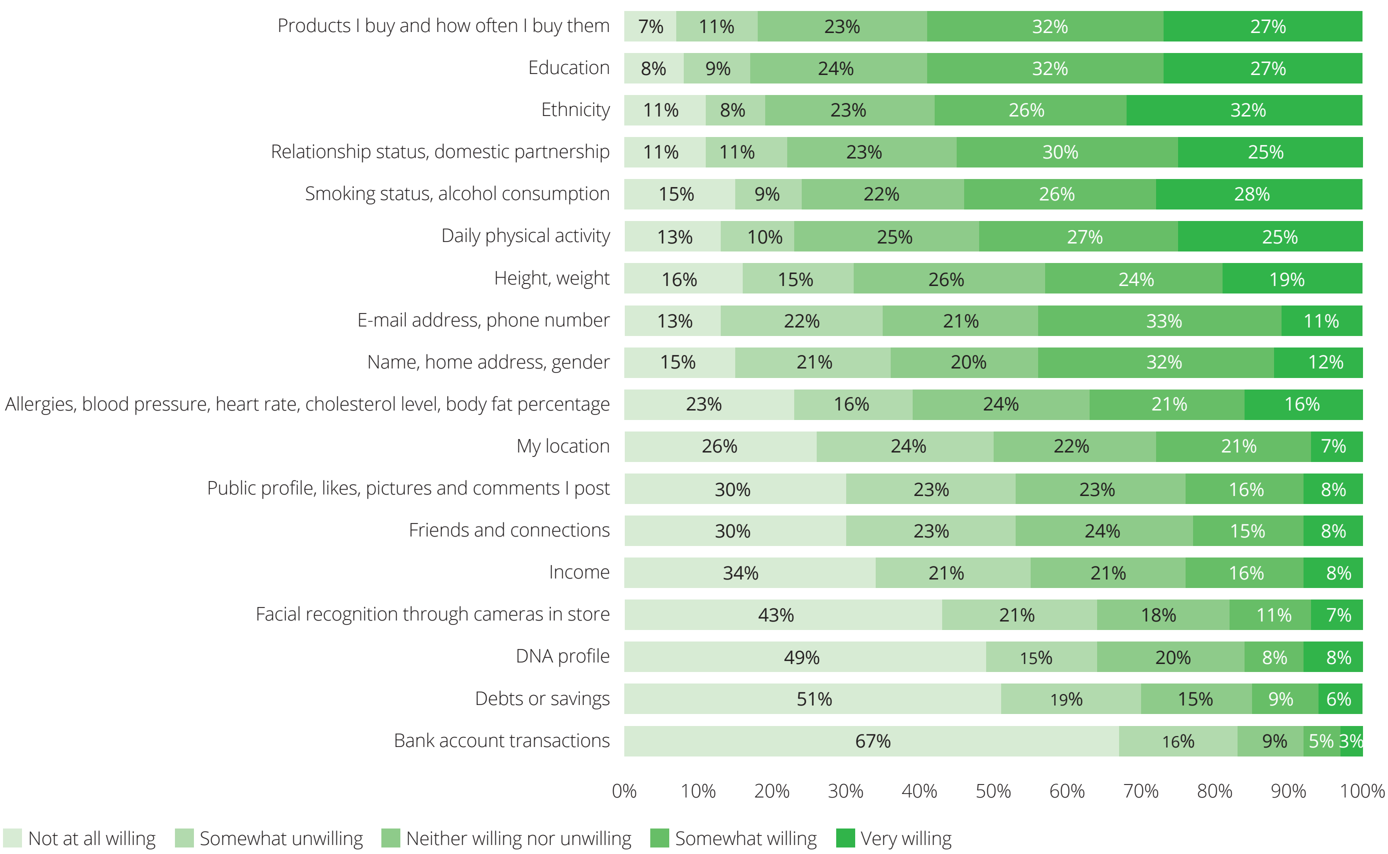
Different types of personal data

Yes to shopping behavior data, no to bank account transactions

There are interesting results from the survey about the attitude of consumers to sharing different types of personal data. In general, they are willing to share data on demographics and about the products they buy and how often—59% are "very willing or "somewhat willing" to share data on product purchase and their level of education. Almost 40% of respondents are willing to share detailed health information such as allergies and heart rate, but only 28% are willing to share location data.

They are most unwilling to share data about bank account transactions, even more so than sharing income or DNA profile information. Two-thirds of the respondents were "not at all willing" to share their bank account transactions (see Figure 4.)

Figure 4. Willingness to share different types of data



Source: Deloitte data ethics consumer research

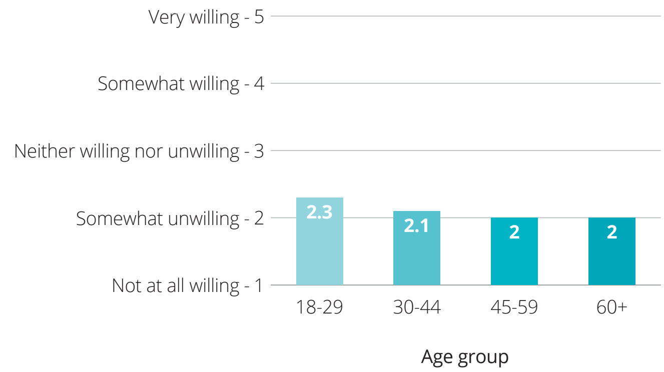
Detailed health information rather than social media data
In general, respondents were more willing to share descriptive data (for example, about their education) than personal contact details such as their phone number, e-mail address, and home address. This could indicate that consumers might be interested in personalized offerings but are hesitant when it comes to companies contacting them directly.

More than half of our respondents do not want their social media information to be shared or used, such as their public profile, likes, pictures and comments. Respondents are more willing to share detailed health data, such as allergies, blood pressure, heart rate, and cholesterol level and body fat percentage, than social media data. This is a clear indicator for companies that they need to be careful when it comes to collaborating with social media companies—they cannot assume that consumers will not mind if their social network information is shared and/or used for purposes other than those for which it was intended.

In other words, just because data has been generated in one context for one purpose, and may be public, this does not mean that the same data can be given to another organization for a different purpose. The ubiquity of data sharing and the lack of transparency about how it is used (or for what it is used) are two reasons why consumers and regulators are starting to demand more control and choice over personal data and its use. Given how much personal data consumers share on platforms, such as their preferences, likes, and dislikes, consumer education may need to be an important aspect of discussions about data ethics that need to take place across Europe, among grocers, regulators, and consumers.

DNA profile: a shift in attitudes or a need for more education?
A surprising result from the survey is the willingness of respondents to share their DNA profile. Only 49% of respondents are “not at all willing” to share this highly sensitive information; 15% are “somewhat unwilling”; 20% are “neither willing nor unwilling”; and 16% are “somewhat” or “very willing.” Those respondents who are 18 to 29 years old and those who frequently shop online are more willing to share their DNA profile. However, we should be careful about drawing conclusions here. Having and giving access to personal DNA information is a relatively new phenomenon, and individuals may not yet understand all the ramifications. It is likely that more education on this topic is needed.[4,5,6] Moreover, the fact that sharing certain types of information is technically and legally possible doesn’t mean that it is ethical for companies to ask for the data and build products around it.

Figure 5. Willingness to share DNA profile according to age group



Source: Deloitte data ethics consumer research

Figure 6. Willingness to share DNA profile according to online shopping frequency

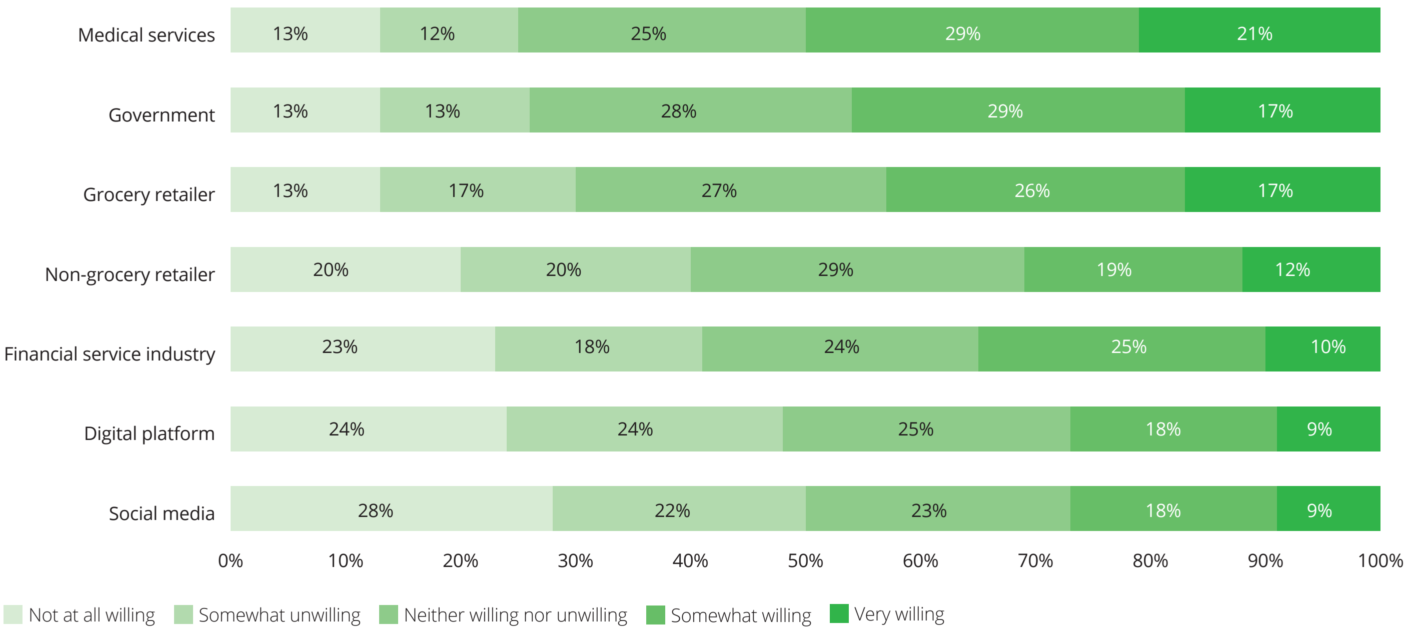
Source: Deloitte data ethics consumer research

Willingness to share data with grocery retailers

The grocery retailer as a trusted custodian of personal data
The survey explored consumer attitudes toward sharing personal data specifically with grocery retailers. The results indicate that European consumers see grocery retailers as trusted custodians: 70% of respondents are not opposed to sharing personal data with them. This is slightly less than for providers of medical services (75%) and government institutions (74%).

However, respondents are in general more willing to share their data with grocery retailers than with other retailers and organizations such as financial institutions and digital and social media platforms. Possible explanations for the higher level of trust in grocery retailers could be the long-standing role that they have in consumers' lives.

Figure 7. Willingness to share personal data with different types of organizations



Source: Deloitte data ethics consumer research

In all the countries in the survey, grocery retailers were among the top four types of organizations with which consumers are most willing to share personal information (see Table 1). In Greece, the United Kingdom, and France, they were even at the top of the list of most trusted entities, more so than medical institutions and governments—despite the UK affection for its National Health Service.

This means there may be potential to leverage this trust to build closer relationships between grocery retailers and their customers—but this comes with the imperative to earn that trust.

Table 1. Ranking: Willingness to share personal data with organizations, by country

Countries by % consumers 'not unwilling' to share data with grocery retailers	GR 80.7%	UK 77.8%	IE 75.4%	BE 74.6%	RO 74.3%	FR 72.2%	SE 71.9%	CH 71.3%	IT 69.0%	CZ 65.7%	DE 65.1%	NL 63.4%	DK 62.1%	NO 59.7%	FI 58.5%	OVERALL 69.8%
Medical services providers	3	2	1	1	1	2	1	2	1	1	2	1	2	2	2	1
Government institutions	2	3	3	3	2	3	2	1	2	3	1	2	1	1	1	2
Grocery retailer	1	1	2	2	3	1	3	4	3	4	3	3	4	3	4	3
Non-grocery retailers	4	5	6	4	7	4	5	5	4	5	4	4	5	5	5	4
Financial services provider	7	4	4	5	4	5	4	3	7	2	5	5	3	4	3	5
Digital platforms	5	6	5	6	5	6	7	6	5	6	6	7	6	7	6	6
Social media platforms	6	7	7	7	6	7	6	7	6	7	7	6	7	6	7	7

Source: Deloitte data ethics consumer research

Criteria for sharing personal information

Consumers appear willing to share personal information with grocery retailers, but they also make it clear that they have high expectations when it comes to transparency, control, and choices about what data is being collected and how it is used.

Respondents were given nine suggestions about what grocery retailers might do to make them feel more comfortable about sharing their personal information (see Table 2). They considered all nine to be important, with scores for each suggestion ranging from 4.1 to 4.5 on the scale of 1 to 5 (between "somewhat important" and "very important").

These responses send a clear message to grocery retailers about consumer expectations when it comes to either data sharing or data monetization. The message is that consumers are not necessarily against the idea, but they expect grocers to be transparent about how they will use the data, and they expect to be asked in advance for their explicit consent.

Table 2. Importance criteria for sharing data with grocery retailers

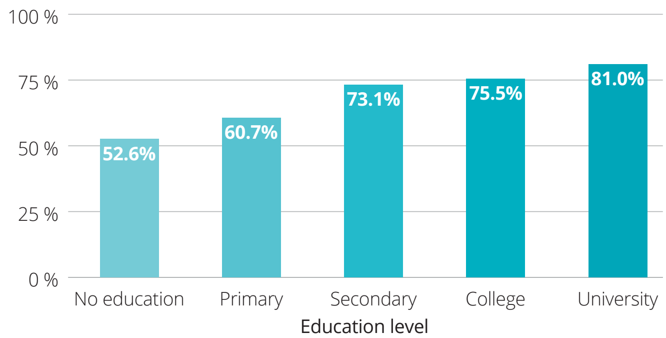
Factor	Importance
Don't share my data with any other third party without my explicit consent	4.5
Guarantee 100% safety of my data	4.4
Make it easy for me to choose what kind of data I share	4.3
Make it easy for me to select the level of personalization of the data I share	4.3
Allow me to select the data I want to share	4.3
Offer clear and valuable benefits if I choose to share my data	4.2
Offer privacy agreements that are short and easy to understand	4.2
Be transparent about how they are going to use my data	4.2
Provide easy insight in the data they have collected from me	4.1

Source: Deloitte data ethics consumer research

The survey reveals a strong relationship between education and the importance given to the listed data protection measures–the higher the level of education that respondents have, the more they indicate that the proposed measures are, on average, at least “somewhat important.”

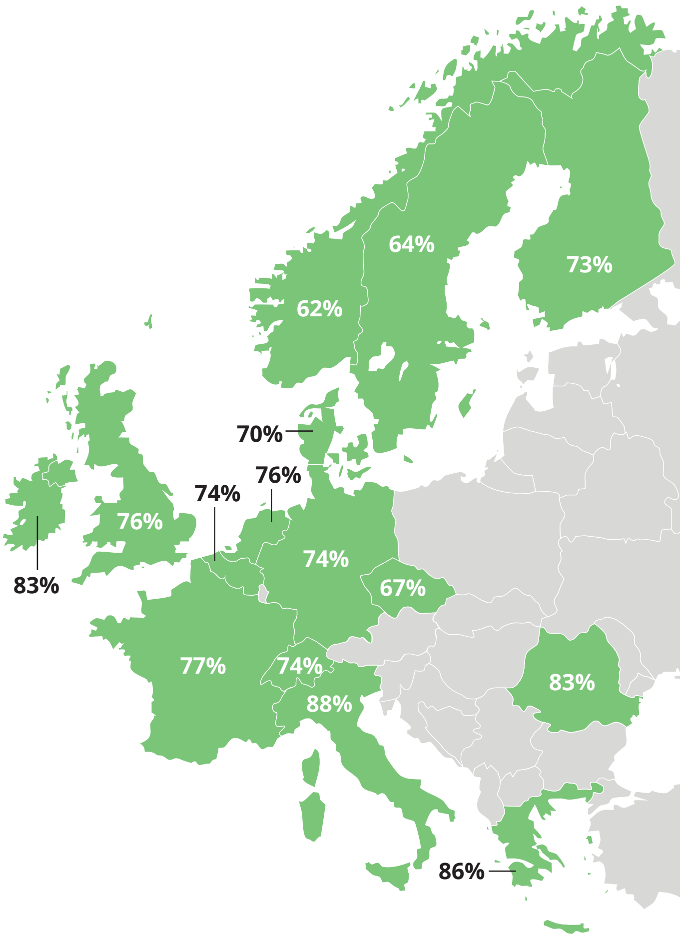
There are also differences between countries (see Figure 9). For example, in Italy and Greece, 88% and 86% of the respondents respectively considered the nine suggestions at least “somewhat important,” compared to Norway (just 62%) and Sweden (64%).

Figure 8. Analysis by education level: Percentage of consumers who rate the importance criteria at least “somewhat important”



Source: Deloitte data ethics consumer research

Figure 9. Percentage of consumers who rate the importance criteria at least “somewhat important”, by country



Source: Deloitte data ethics consumer research

How are grocery retailers currently performing against these criteria?

While in general, consumers rated data protection measures by grocery retailers to be very important, their level of satisfaction with how grocery retailers currently operate is less positive.

A little more than half of the respondents say they are satisfied with how grocery retailers use their data. Around a quarter rate the performance of grocery retailers as "insufficient" or "very poor," and more than 20% say they do not have a view on this matter. This suggests that some grocery retailers could improve their efforts when it comes to personal data protection measures, and that improved communication in particular is a key requirement.

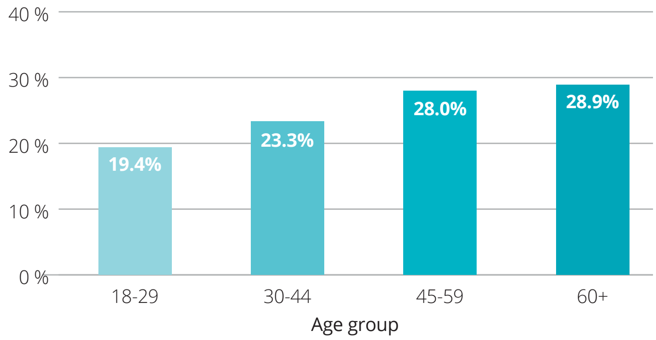
Table 3. How grocery retailers are performing against the importance criteria, according to consumers

Factor	% that responded at least "average"	% that responded "insufficient" or worse	% that responded "I don't know"
Make it easy for me to select the level of personalization of the data I share	51.3%	26.1%	22.6%
Allow me to select the data I want to share	51.5%	26.8%	21.7%
Provide easy insight in the data they have collected from me	51.9%	26.4%	21.7%
Make it easy for me to choose what kind of data I share	52.2%	25.8%	22.0%
Offer clear and valuable benefits if I choose to share my data	52.4%	24.7%	22.9%
Don't share my data with any other third party without my explicit consent	52.6%	22.7%	24.7%
Offer privacy agreements that are short and easy to understand	53.0%	25.5%	21.5%
Guarantee 100% safety of my data	53.3%	23.1%	23.6%
Be transparent about how they are going to use my data	56.8%	20.7%	22.5%

Source: Deloitte data ethics consumer research

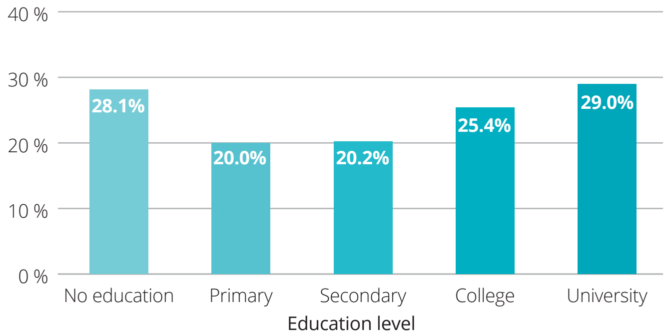
Respondents who are older, and/or have a higher income, and/or have a higher level of education tend to be more critical about how grocery retailers handle their personal data.

Figure 10a. Percentage of respondents who are dissatisfied with the use of personal data by grocery retailers according to age group



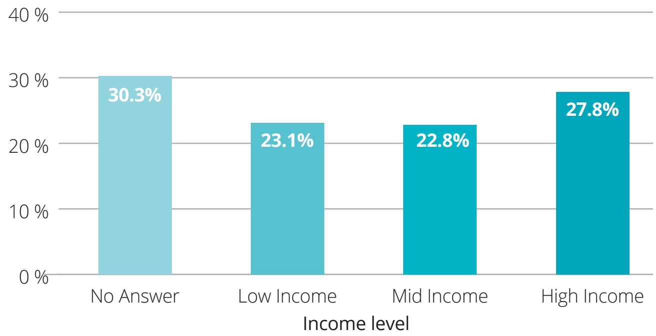
Source: Deloitte data ethics consumer research

Figure 10c. Analysis by education level: Percentage of respondents who are dissatisfied with the use of personal data by grocery retailers



Source: Deloitte data ethics consumer research

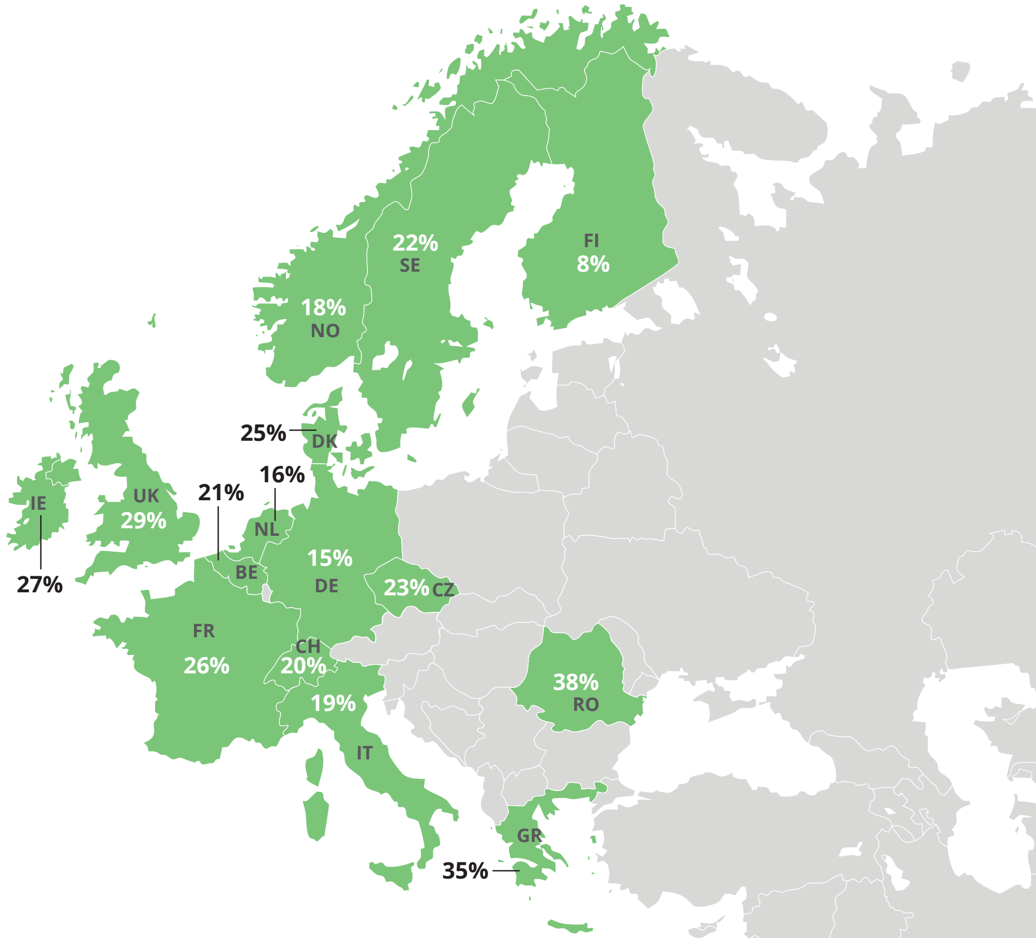
Figure 10b. Analysis by income level: Percentage of respondents who are dissatisfied with the use of personal data by grocery retailers according to income level



Source: Deloitte data ethics consumer research

There are also differences between countries in respondents' perceptions (see Figure 10d.) The views of consumers in France are the most negative, while those in Greece and Romania are the most positive.

Figure 10d. Percentage of consumers who are dissatisfied with the use of personal data by grocery retailers, by country



Source: Deloitte data ethics consumer research

Data-enabled services that grocery retailers might offer

Companies can use customers' personal data not only to improve existing services, but also to create new ones.[7] While product, price, promotion, and placement have always been important in marketing, they have become increasingly difficult to use as differentiators to create customer loyalty. Data has changed everything; since the mid-1990s, leading grocery retailers have invested heavily in data-driven loyalty programs. Initially, these focused on customer rewards in exchange for regular shopping. In more recent years, this has evolved—driven partly by online shopping best practices—toward recommendations and personalized promotions.

The next step for retailers is hyper-personalization, which involves targeted specific offers based on a deep understanding of the needs and desires of the individual consumer. Hyper-personalization increases the impact and engagement of the consumer-retailer relationship, which leads to increased loyalty and a larger share of customers' grocery spending.

However, the introduction of personalized data-driven products requires trust from consumers. The survey proposed a number of existing or potential data-driven services that grocery retailers might offer to customers as an exercise in understanding how consumers feel about an exchange of personal data for services. The suggested services in our questions to respondents were not meant as a statement that grocery retailers are or should be offering them.

The services are grouped around four themes:

- Services that offer convenience or inspiration in shopping, such as personalized promotions or a "frictionless check-out."
- Services that offer guidance toward ethically sourced products, such as their supply chain, which has a big impact on carbon footprint, or animal-friendly production.
- Services that support a healthier lifestyle, such as personalized food advice tailored to the individual's lifestyle and characteristics.
- Services that offer support in managing finances, such as suggestions for cheaper alternatives or increased insight into the individual's spending.

For each of the services, respondents were asked to rate their interest, ranging from 1 to 5 ("not at all interested" to "very interested"). They were then asked if they would be willing to share different types of personal information in return for each of the specific services.

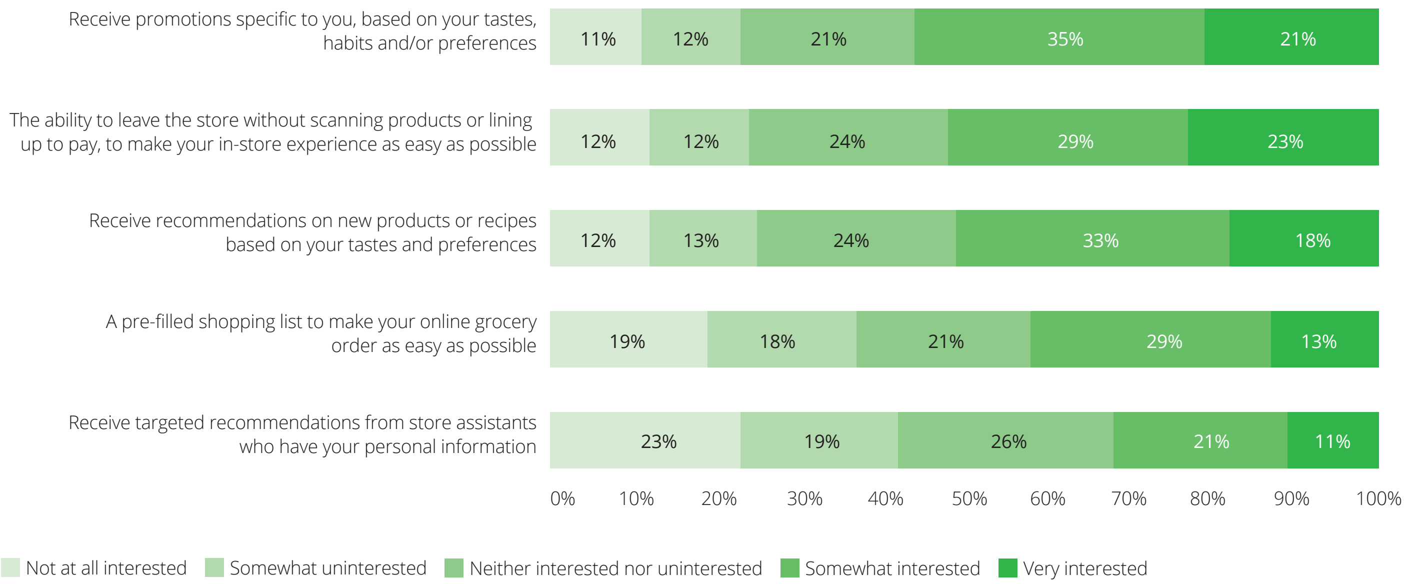
"At Ahold Delhaize and its European brands we listed our ethical principles for the use of data that serve as our compass in making the right decisions every day. What is ethical and what is not cannot always be captured in rules and processes and we ask ourselves questions like: do we truly need this data—and how can our customers benefit from this in making services richer, faster, and more efficient?"

Wouter Kolk, CEO, Ahold Delhaize Europe and Indonesia

Data-enabled services that offer more convenient shopping

Personalized services have a lot to offer when it comes to convenience and inspiration, for instance, by supporting consumers in making decisions or helping them to save time. Consumers appear to be quite interested in these services—more than half of the respondents are at least somewhat interested in personalized promotions (56%), the ability to leave the store without scanning products (52%), and in receiving recommendations on new products based on your tastes and habits (51%). They are somewhat less enthusiastic about a pre-filled shopping list (42%) and in targeted advice in-store through store assistants (32%).

Figure 11. Interest in receiving personalized shopping services



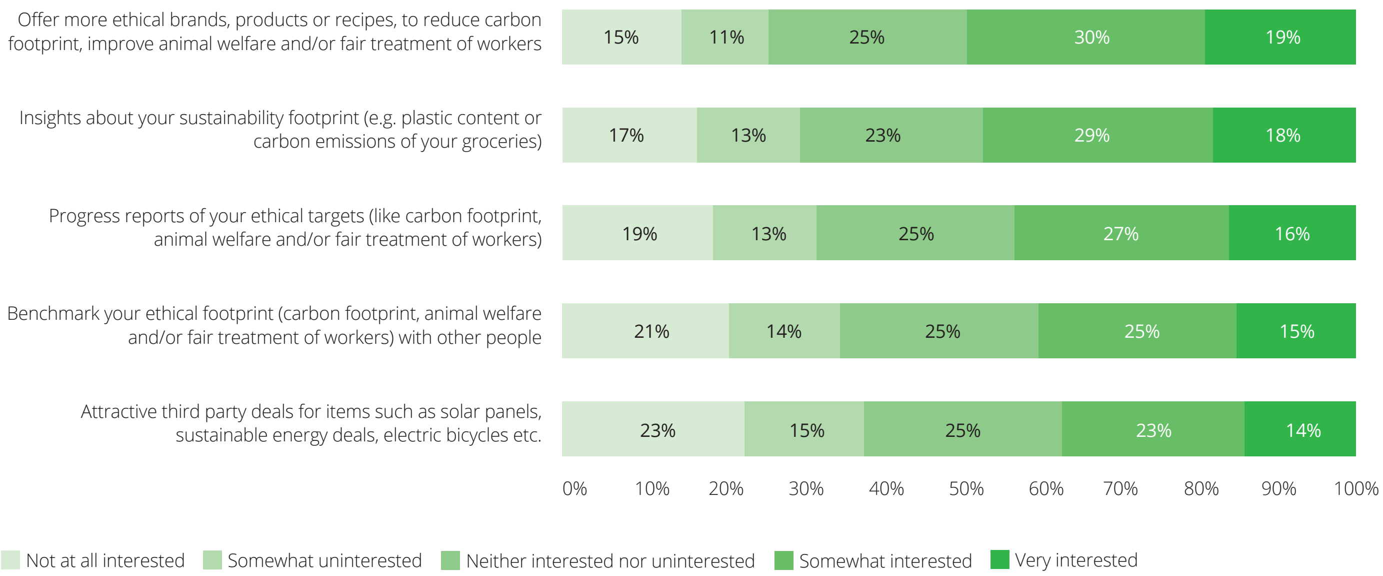
Source: Deloitte data ethics consumer research

Data-enabled services that offer personalized ethical guidance

Respondents were also asked about potential grocery retailer services that could help them to purchase ethically sourced products. In line with an ongoing trend toward responsible consumption, grocery retailers could help consumers with ethical shopping based on their personal data. When presented with a list of possible services, 49% of respondents said they were at least "somewhat interested" in receiving offers of more ethical brands, products, or recipes.

This was followed by being given insights into their sustainability footprint, for example, the plastic content in their groceries and carbon emissions (47%) and progress reports on their ethical targets (43%). They were less interested in comparing their ethical footprint with others (40%) and third-party deals (37%).

Figure 12. Interest in receiving ethical guidance services

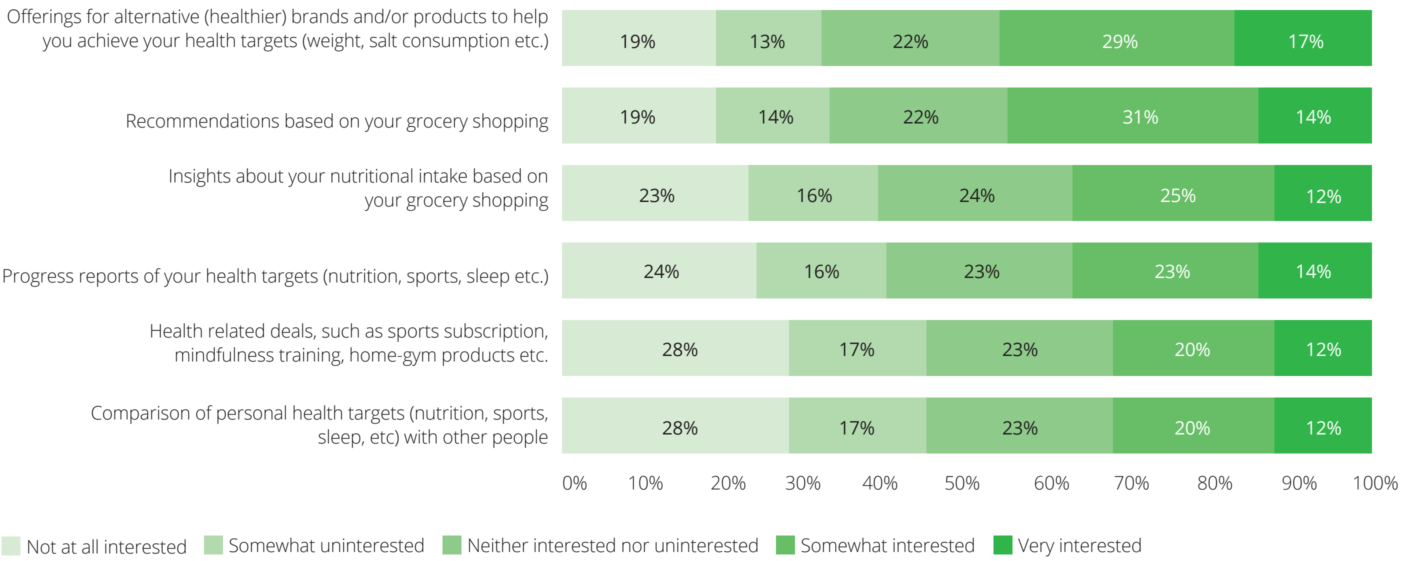


Source: Deloitte data ethics consumer research

Data-enabled services that offer personalized health guidance

Grocery retailers may have data for an in-depth understanding of their customers' lifestyles and could use this knowledge to develop personalized services to help them improve their health. When respondents were asked how interested they would be in data-enabled services, they expressed the most interest in offerings for alternative, healthier brands (46%), followed by recommendations based on their shopping behavior (45%). They were less interested in services that give insights into their nutritional intake (37%), progress reports on their health targets (37%), health-related deals (32%), or comparing their health targets with other people (33%).

Figure 13. Interest in receiving health guidance services



Source: Deloitte data ethics consumer research

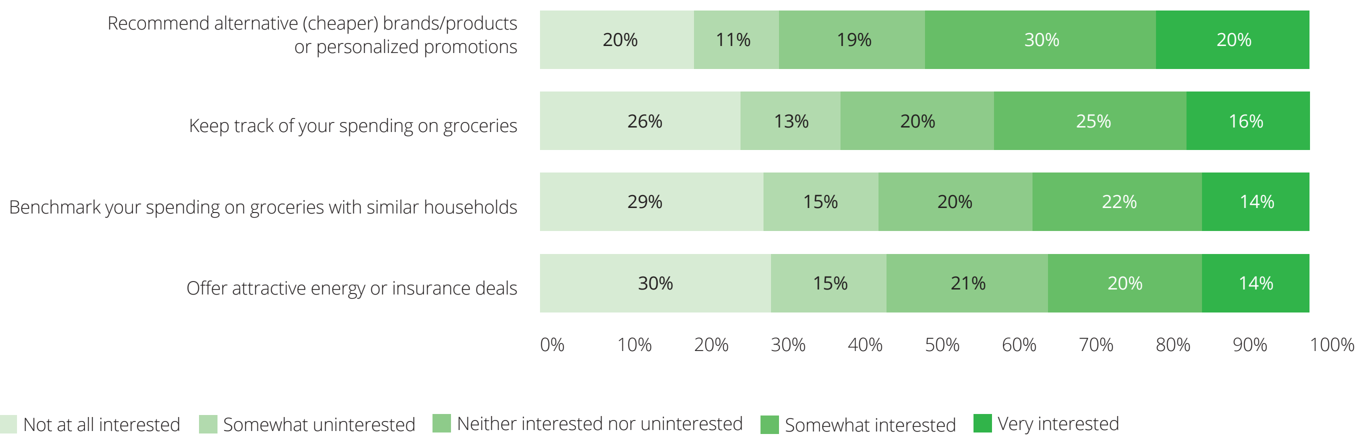
Data-enabled services that offer personalized financial guidance

Grocery retailers could help their customers manage their budget, based on their financial situation. Half of the respondents indicate they are at least "somewhat interested" in recommendations of cheaper brands or products, based on their shopping behavior.

They are less interested in services that help them keep track of their grocery expenses (41%), comparing their grocery expenses with similar households (36%), or attractive energy and insurance deals (34%).

Nevertheless, a large proportion of respondents seem to be quite interested in services that offer personalized financial guidance, despite the fact that they are very reluctant to share personal finance information such as debt, savings, and bank account transactions.

Figure 14. Interest in financial guidance services



Source: Deloitte data ethics consumer research

Demographic and regional differences in attitudes toward these services

Of all the personalized services suggested, respondents were most interested in receiving promotions specific to them, based on their tastes, habits or preferences (56%), followed by the ability to leave the store without scanning products or lining up to pay (52%). This indicates that with respect to personalized data-driven services, respondents seem to be mostly interested in convenience, which is close to the core service model of a grocery retailer.

Other types of services around health, ethically sourced products, or budget are interesting to a smaller but still substantial proportion of the consumer base. This indicates that there is an opportunity for grocery retailers to address different segments of their consumer base with different types of service.

Table 4. Ranking and percentage of consumers who are at least "somewhat interested" in the top 5 personalized services, by country

Countries by average % consumers at least 'somewhat interested' in given services	RO 62%	GR 61%	IE 52%	IT 48%	FR 45%	CZ 44%	UK 43%	BE 41%	SE 35%	CH 35%	FI 34%	DE 31%	NO 31%	DK 30%	NL 30%	Total 40%
Receive promotions specific to you, based on your tastes, habits and/or preferences	1 73%	2 74%	1 64%	3 65%	1 59%	2 56%	1 63%	1 59%	1 53%	3 43%	2 49%	6 37%	1 45%	1 42%	1 51%	1 56%
The ability to leave the store without scanning products or lining up to pay, to make your in-store experience as easy as possible	4 69%	3 73%	3 61%	1 69%	4 54%	1 65%	7 46%	3 51%	3 48%	5 41%	4 42%	2 40%	3 43%	2 42%	2 42%	2 52%
Receive recommendations on new products or recipes based on your tastes and preferences	2 71%	6 70%	6 57%	5 62%	3 57%	4 52%	3 50%	2 55%	2 48%	1 47%	3 42%	3 39%	2 43%	6 39%	3 41%	3 52%
Recommend alternative (cheaper) brands/products or personalized promotions	3 70%	1 74%	2 63%	6 57%	5 51%	3 53%	2 51%	5 48%	4 44%	4 43%	1 49%	4 38%	4 42%	4 41%	4 37%	4 50%
Offer more ethical brands, products or recipes, to reduce carbon footprint, improve animal welfare and/or fair treatment of workers	5 67%	4 72%	4 60%	2 68%	2 57%	7 47%	4 48%	4 50%	5 42%	2 46%	8 39%	1 40%	7 33%	3 41%	5 36%	5 50%

The top 3 services for each country are shaded in green.

Source: Deloitte data ethics consumer research

In all the countries included in the survey, younger respondents and respondents who frequently shop online tended to be more interested in data-driven personalized services. However, there are big differences between countries. Respondents in countries of Eastern Europe are far more interested in these services than those in Northern Europe. In Romania and Greece for example, 62% and 61% of respondents respectively were at least "somewhat interested" in the suggested services, compared to only 30% of respondents from Denmark and the Netherlands.

However, what consumers find most attractive is more or less the same everywhere. For instance, the ability to receive personalized promotions is in the top three preferences of respondents in all countries, except for Germany. The ability to leave the store without having to scan products or line up to pay is among the top three for most countries, and in the top five for all except the United Kingdom. Since preferences are consistent across Europe, grocery retailers have opportunities for scale by operating across different countries.

Willingness to share data for specific services

The survey also investigated the willingness of consumers to share personal information in return for a specific service. Table 5 shows the minimum types of personal data that are needed to provide a specific service; and Table 6 shows the percentage of respondents who are either "somewhat" or "very" willing to share the required data.

Overall, most respondents (around 80% to 90%) who are interested in a service are willing to share the minimum required data. This reinforces the idea that consumers demand value in return for sharing their personal information.

There is one notable exception–only 47% of respondents who are interested in a service enabling them to leave a store without scanning a product say they are willing to share detailed GPS-information when entering a store, although this is potentially a requirement for this service. Leaving a store without scanning a product is a new idea, and it is possible that consumers will become more willing to share their data once they learn more about it. In other words, this as an indicator that a greater level of transparency over what such data will be used for, and what it will not be used for, is needed to establish trust for such an offering.

Table 5. Personal data types required to offer top 10 preferred services

	Required data type I	Required data type II	Required data type III
Receive promotions specific to you, based on your tastes, habits and/or preferences	Products I buy and how often I buy them at this retailer	Descriptive data (education, relationship status etc.)	
The ability to leave the store without scanning products or lining up to pay, to make your in-store experience as easy as possible	GPS location (10m), Micro-location (less than 5m)		
Receive recommendations on new products or recipes based on your tastes and preferences	Products I buy and how often I buy them at this retailer	Descriptive data (education, relationship status etc.)	
Recommend alternative (cheaper) brands/products or personalized promotions	Products I buy and how often I buy them at this retailer		
Offer more ethical brands, products or recipes, to reduce carbon footprint, improve animal welfare and/or fair treatment of workers	Products I buy and how often I buy them at this retailer		
Insights about your sustainability footprint (e.g. plastic content or carbon emissions of your groceries)	Products I buy and how often I buy them at this retailer	Products I buy and how often I buy them at other retailers	
Offerings for alternative (healthier) brands and/or products to help you achieve your health targets (weight, salt consumption etc.)	Products I buy and how often I buy them at this retailer	Descriptive data (education, relationship status etc.)	Health data (height, weight + allergies etc.)
Recommendations based on your grocery shopping	Products I buy and how often I buy them at this retailer		
Progress reports of your ethical targets (like carbon footprint, animal welfare and/or fair treatment of workers)	Products I buy and how often I buy them at this retailer	Products I buy and how often I buy them at other retailers	
A pre-filled shopping list to make your online grocery order as easy as possible	Products I buy and how often I buy them at this retailer		

Source: Deloitte data ethics consumer research

Table 6. Percentage of respondents who are at least "somewhat willing" to share the required data types

Country	RO	GR	IE	FR	UK	CZ	IT	BE	FI	CH	SE	NO	DE	DK	NL
Receive promotions specific to you, based on your tastes, habits and/or preferences	89%	89%	82%	82%	84%	83%	85%	79%	80%	80%	76%	75%	75%	78%	72%
The ability to leave the store without scanning products or lining up to pay, to make your in-store experience as easy as possible	54%	47%	57%	54%	65%	46%	42%	46%	49%	49%	53%	51%	55%	50%	47%
Receive recommendations on new products or recipes based on your tastes and preferences	88%	91%	84%	84%	88%	84%	86%	80%	83%	76%	78%	77%	72%	77%	76%
Recommend alternative (cheaper) brands/ products or personalized promotions	94%	94%	91%	91%	92%	89%	88%	87%	89%	89%	88%	86%	89%	81%	88%
Offer more ethical brands, products or recipes, to reduce carbon footprint, improve animal welfare and/or fair treatment of workers	94%	93%	90%	92%	91%	91%	86%	90%	88%	90%	87%	88%	85%	82%	86%
Insights about your sustainability footprint (e.g. plastic content or carbon emissions of your groceries)	95%	92%	89%	91%	91%	92%	84%	85%	85%	87%	83%	87%	82%	80%	79%
Offerings for alternative (healthier) brands and/ or products to help you achieve your health targets (weight, salt consumption etc.)	87%	86%	87%	77%	87%	77%	81%	80%	69%	73%	77%	73%	70%	80%	70%
Recommendations based on your grocery shopping	97%	98%	94%	95%	93%	96%	94%	95%	97%	95%	96%	94%	93%	93%	92%
Progress reports of your ethical targets (like carbon footprint, animal welfare and/or fair treatment of workers)	94%	94%	92%	94%	93%	92%	88%	91%	87%	90%	88%	90%	87%	88%	85%
A pre-filled shopping list to make your online grocery order as easy as possible	96%	98%	95%	96%	96%	94%	94%	93%	93%	94%	93%	93%	92%	88%	91%

Source: Deloitte data ethics consumer research

Conclusion

Our survey reveals that grocery retailers generally enjoy high levels of consumer trust: 70% of the respondents are not opposed to sharing personal information with grocery retailers and in general are more willing to share data with grocery retailers than with other organizations such as financial institutions, or digital and social media platforms. This should strengthen the resolve among grocery retailers to become more data-savvy and to accelerate the use of consumer data for the benefit of the consumer. But this brings great responsibility.

Although consumers regard grocery retailers as a trusted custodian of personal data, they see room for improvement in how the grocery retailer collects it, shares it, and uses it. Respondents value transparency, choice, and control when it comes to personal information. Around a quarter of consumers feel the performance of grocery retailers in handling personal data is "insufficient" or worse, and more than 20% say they "don't know." This indicates that grocery retailers need to step up their data collection, protection, and usage measures and, equally important, improve communication on these matters. It also says something about the need for consumer education on this issue.

The survey also reveals differences in attitudes between groups of consumers. Younger people and people who shop online frequently are more willing to share personal data and are more interested in data-enabled services. This does not necessarily mean that either of these groups should be targeted for data-enabled services; rather, since their exposure to online services is higher, this may explain their more relaxed attitude to data sharing. Moreover, there are significant differences between countries and it is clear that there is not a typical European consumer.

These variations indicate a need for differentiation when it comes to offering localized data-enabled services. Overall, a large proportion of consumers appear to be interested in various personalized grocery services, and would be willing to share data in return, although under certain conditions. Grocery retailers therefore have an opportunity to strengthen their connection to local consumers by addressing the various consumer groups with appropriate services.

"We have been working hard and continue to work hard to earn our customers' trust in all the European markets our brands operate in. There is a lot we can take away from this and share across markets. It is important that we continue to gather these insights. Customers become more acquainted with the ins and outs of data privacy and become more vocal on what they expect from organizations."

Wouter Kolk, CEO, Ahold Delhaize Europe & Indonesia

In today's increasingly digital and data-enabled society, the relationship between grocery retailers and consumers is changing. Using personal data obtained from consumers' grocery transactions can provide retailers an opportunity to add value for their customers by offering convenience, inspiration, and advice. In doing so, there is significant potential benefit for the grocers themselves to strengthen and cement their role in consumers' lives.

There has been a shift in how society looks at organizations in general. Words like "ethics" and "purpose" are now more important in an age where every aspect of our life is a data set for someone else to use. Data ethics in the European grocery retail sector needs to be discussed openly, recognizing that we do not have all the answers. Our intent is that this report should prompt a wide-ranging discussion about the responsibilities of companies, their responses to the regulation of personal data, and consumer expectations. This discussion will be critical to the shaping of both regulation and consumer expectations.

At Deloitte, we believe that the discussion around data ethics is very important and very timely. We are proud that Ahold Delhaize, as a leading global grocer, has worked with us on this consumer research. Both organizations understand the tremendous opportunity that data entails—but we also recognize that with this opportunity there is the need for responsibility and ethics.

"It's time for companies to be more transparent about what data they are collecting, what they are doing with it, what third-party data they are purchasing, and how are they leveraging it. As consumers, we need to understand that data-use allows for personalization of products, enabling companies to be more efficient, and create a better customer experience. But these benefits are only possible with trust: trust that the data economy is ultimately about serving the customer and not just about leveraging customer data for corporate benefit."

Aimee van Wynsberghe, Associate Professor, Ethics of Technology, TU Delft

"This extensive report shows many insights into what European customers are willing to share with grocery retailers, against what conditions and for which benefits. An important take away is the clear differences per country, underlining once more the great diversity in the European markets. It also underlines the importance for any multinational company to not have a top-down, centralized approach to data ethics and allow national brands to do what is right for their customer base."

Wouter Kolk, CEO, Ahold Delhaize Europe & Indonesia

Methodology

Target population and sample

The target group for this study are European consumers who are at least 18 years old and who are either responsible for or influence the choices of their household's grocery purchases. The online questionnaire was distributed in 15 countries in Europe: Belgium, Czech Republic, Denmark, Germany, Finland, France, Greece, Ireland, Italy, the Netherlands, Norway, Romania, Sweden, Switzerland and the United Kingdom.

Samples of 800 anonymous respondents were chosen in each country, except in the Netherlands, Belgium, and the United Kingdom, where the sample size was 1,600. The samples were stratified by age.

Questionnaire

The Deloitte-designed questionnaire contained 22 main questions and approximately 100 sub-questions. The following topics were included:

- Demographics and sub-demographics
- Willingness to share different types of personal data
- Willingness to share personal data with different types of companies
- Interest and willingness to share personal data for proposed services
- The importance of, and the grocery retailer's performance on, the control of data, transparency of the use of data, and security of data

Most questions were asked on a Likert scale varying from "not at all willing" to "very willing" or "not at all interested" to "very interested." The willingness to share different types of personal data was measured before services were proposed and after different types of services were proposed.

Results, responses, and transformation of data

The questionnaire was completed by more than 15,000 respondents from 15 countries over a two-week period in March 2020. A few of these were removed as a question about income was missing and the final sample consisted of 14,954 responses. For some analyses, Likert scales are divided into two groups. For example, to identify respondents that are "at least somewhat interested," the percentages of "somewhat interested" and "very interested" were added together. Another example, to indicate the percentage that is "not unwilling" would be a result of adding "very willing," "somewhat willing," and "not willing nor unwilling" together.

When standard practice rounding of percentages is applied, some of the results in the graphs and tables may not add up to 100%. In such cases, to avoid confusion when interpreting the numbers, we have corrected some of the values using the Largest Remainder Method so that the totals add up to 100%.[8]

Generalization of the results

Sampling was used for this study. Therefore, results in the population might deviate slightly from the results in the sample. To make sure the findings are interpreted correctly, they have been tested for statistical significance using a 0.05 level of significance.

A t-test was used to determine if there is a significant difference between the means of two groups. An analysis of variance (ANOVA) was used to determine if there is a significant difference between the means of three or more groups. In essence, it compares the amount of variation between groups with the amount of variation within the groups. Note that the differences mentioned in the report were all significant using a 0.05 level of significance, but that most were significant using a 0.01 level of significance.

To determine the relative importance of different demographics on target variables (for example, the willingness to share data), an Ordinary Least Squares regression was used using standardized input variables. Again, these results were significant using a 0.05 level of significance or noted otherwise.

Endnotes

1 Building engagement in Deloitte's 'Consumer Love' series. 2020. https://publications.deloitte.nl/consumer-love-engagement-full/consumer-love-engagement-full/

2 To share or not to share. Deloitte Insights. 5 September 2017. https://www2.deloitte.com/us/en/insights/industry/retail-distribution/sharing-personal-information-consumer-privacy-concerns.html

3 Detailed information about the research approach of this survey can be found in the Methodology section.

4 The Harvard Personal Genome Project. https://pgp.med.harvard.edu/about

5 23andMe. https://www.23andme.com

6 Legislation of direct-to-consumer genetic testing in Europe: a fragmented regulatory landscape. 18 November 2017. https://link.springer.com/article/10.1007/s12687-017-0344-2

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8 https://en.wikipedia.org/wiki/Largest_remainder_method

Contacts

Adgild Hop
European Grocery
Lead Partner
Deloitte Netherlands
ahop@deloitte.nl

Stefan van Duin
Partner,
Analytics & Cognitive
Deloitte Netherlands
svanduin@deloitte.nl

Hilary Richters
Senior Manager,
Data Ethics
Deloitte Netherlands
hrichters@deloitte.nl

Aimee van Wynsberghe
Associate Professor,
Ethics of Technology, TU Delft
Edge Fellow, Deloitte Center for the Edge
https://aimeevanwynsberghe.com

Pieter ten Bruggencate
External Relations
Ahold Delhaize
pieter.ten.bruggencate@aholddelhaize.com

Emily Vette
Strategy Office
Europe & Indonesia
Ahold Delhaize
emily.vette@aholddelhaize.com

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Wouter Kolk, CEO, Ahold Delhaize Europe & Indonesia

Frances Franken, CDO, Ahold Delhaize Europe & Indonesia

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Caroline Fluit, Director Applied Data Science & Analytics, Ahold Delhaize

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