2023 edition

Consumer Digital Empowerment Index

Research Report

CONSUMER
EMPOWERMENT
PROJECT

Powered by

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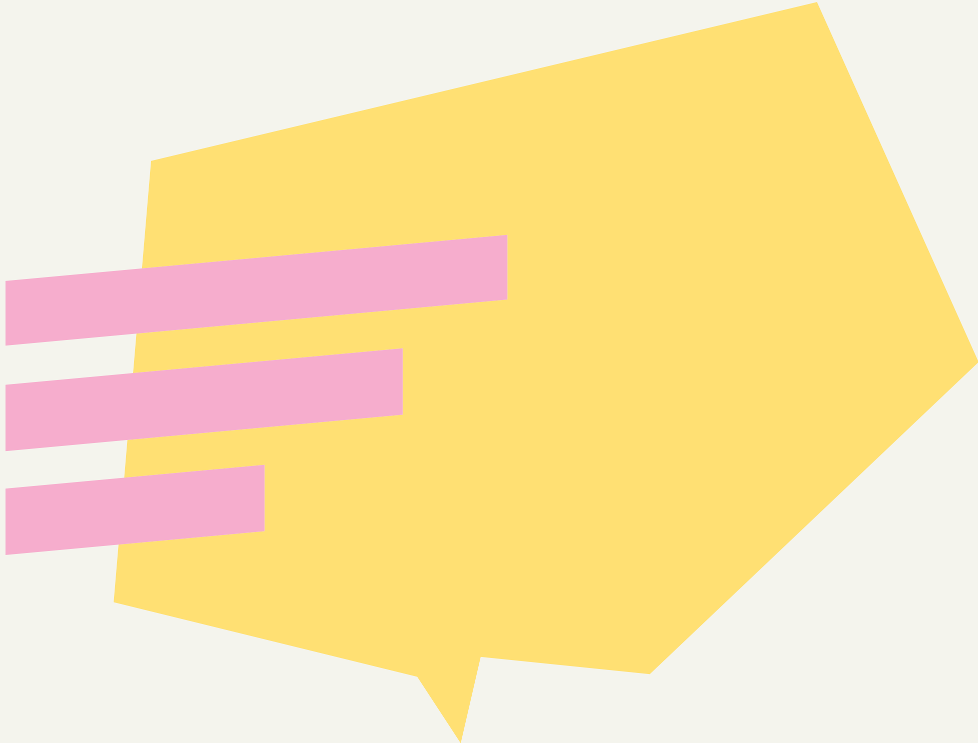

01

Introduction

The Consumer Digital Empowerment (CDE) Index is a research study, designed to quantify and provide insights into how digital services empower consumers in their daily lives. It is a flagship research study of the Consumer Empowerment Project (CEP) aiming to provide relevant, actionable and robust data about the choices that consumers face when using digital services. The index did not address areas such as digital fraud or data privacy.

About The Consumer Empowerment Project (CEP)

Euroconsumers and Google partnered to form the Consumer Empowerment Project (CEP) to help improve the digital ecosystem for consumers. CEP aims to help consumers understand their rights so that they can make better-informed decisions about using services online. CEP is open to stakeholders who can help create a space where consumer organisations, industry and civil society can come together to discuss and address key issues relating to consumer empowerment.

For more information about CEP, please go to cep-project.org.

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Executive Summary

The CDE Index shows if and how digital services empower consumers in their daily lives across a wide range of consumption areas such as online learning, streaming websites or online payments. The CDE Index is built on consumers' experiences and opinions, and it serves as a comparative overview across the following European countries: Belgium, Bulgaria, Denmark, France, Germany, Italy, Poland, Portugal, Spain, and Sweden. Additionally, it is an authoritative source of how consumers use web services in different geographies.

Overall, the index aims to:

- Assess the availability or (need for) awareness of digital services in key European countries.
- Outline which digital services consumers access online.
- Provide a view on if and how these digital services empower consumers in their daily lives.
- Provide relevant, and robust data about important topics such as consumer choice, barriers to entry and other key issues that consumers face when leveraging digital services.

The CDE Index was not intended to provide any measurement related to phenomena such as digital fraud or data privacy.

Digital services have become an essential part of consumer journeys by providing easier access, wider choice, and more information.

A large majority of users using digital services in the last 24 months found them useful, easy to use and preferable to offline services.

Among the most empowering services are online banking, messaging and emails, shopping and social media.

Portugal had the strongest scores across almost all areas, indicating the highest level of consumption of digital services among the selected countries. Specifically, out of the six selected countries, it ranks first in 8 areas, and second in the Health, Wellbeing & Sport and in the Shopping areas. On the other hand, Bulgaria had the weakest scores in 6 areas, except for Community & Communication, Shopping, Information & Media, and Training & Education.

3 out of 4 consumers believe that ten years from now our consumption experiences will be mostly digital

The digital divide is alive and well, as Millennials (persons born between the early 1980s to 1996) and Gen Z (persons born between 1997 and early 2010s) with higher education levels and with higher levels of disposable income feel twice as empowered compared to Baby Boomers (persons born between 1946 to 1964) with lower incomes and lower levels of education. In some areas, people who live alone also feel less empowered as online consumers.

Among the ten consumption areas, Community & Communication had the highest score, with Instant messaging platforms and email being the most empowering indicator. Money & Investment is the second most relevant consumption area, as consumers find particularly empowering managing their bank accounts online. Finally, Shopping had the third-highest score, with online shopping being the most digitally powerful indicator.

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A Pan-European Snapshot: Key Insights

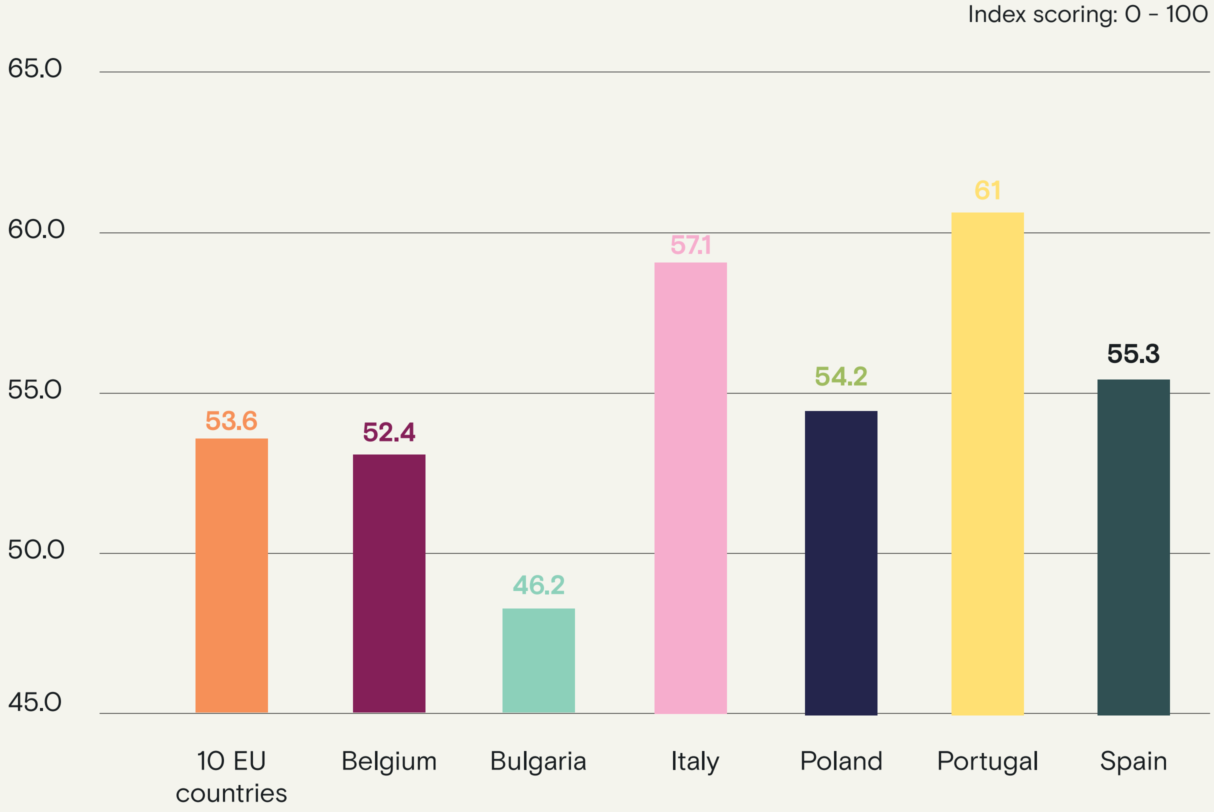
Although digital services empower most consumers, there is still room for improvement, especially when it comes to the usage of digital services.

The consumption areas with the lowest empowerment scores are Mobility & Tourism, Training & Education and Home & Domestic Energy. Therefore, what makes consumers less empowered when using digital services? The biggest obstacles are a lack of awareness that such services exist, for example, trackers that monitor energy consumption (25% total) and a lack of trust in providers when using certain services, such as personal finance and open banking (11%), managing bank accounts online (10%) and using social media (8%).

In the following section a list and overview of the 10 consumption areas of the Index can be seen. For each digital service, a score is provided in parentheses. The areas of Community & Communication, Money & Investment and Shopping had the highest empowerment scores, according to consumers. Areas of Education & Training, Mobility & Tourism and Home & Domestic Energy still have room for improvement. The last two were specifically highlighted by experts among the most important for consumer empowerment, alongside Government & Public Administration.

The comparison of empowerment between countries in this full section has been conducted only among selected countries (Belgium, Bulgaria, Italy, Poland, Portugal, and Spain).

Overall Index



Consumption Areas	Digital Service	Overview
 Government & Public Administration (58.3)	Making online payments to public entities (e.g. paying fines, fees for public services, etc.) (63.7) Filing a tax declaration online (61.7) Using digital identity authentication for public administration procedures (60.1) Requesting documents or certifications online from public entities (e.g.: registration in the city administration, birth certificate) (49.7)	Government & Public Administration is ranked fourth for empowerment. It scored 58.3 out of 100, making it an area consumers feel empowered by. The most empowered country in this area is Portugal (with a score of 69.6) while the least empowered is Bulgaria (with a score of 38.3). The most empowered profiles here are highly-educated, financially comfortable individuals. The least empowered profile is individuals with a low level of education, that just manage to cover basic living costs each month.

Money & Investment (61.7)

Managing your bank accounts online (84)

Using apps for transferring small amounts of money directly from person to person, outside of your normal banking app (64.7)

Using platforms to compare insurance and financial products (deposits, accounts, credit cards...) by different aspects (price, service, reliability...) (48.5)

Managing all your bank accounts and financial tools from a single platform (open banking and finance) outside of your normal banking app (45.4)

Money & Investments is ranked second for empowerment. It scored 61.7 out of 100. The most empowered country in this area is Portugal (with a score of 67) while the least empowered is Bulgaria (with a score of 56.6). The most empowered consumer profiles are Millennials, who live with plenty of disposable income.
The least empowered profiles are Baby Boomers, with a low or medium level of education, just managing to cover basic living costs each month or increasingly in debt..

Training & Education (36.2)

Learning about a certain topic informally (without an official course or exam) through online tutorials, self-learning materials, forums, etc. (46.6)

Official online learning (taking courses, exams, certifications, etc.) (37.1)

Accessing and managing children's academic information (report cards, online lessons, contacts with professors, etc.) (35.4)

Using platforms to compare academic credentials and programmes at different universities/schools (26.6)

The Education & Training area is the least empowering consumption area in the Index. It scored just 36.2. The use of platforms to compare academic credentials of different institutions ranked in the top three lowest of the study, signalling that this service has room for improvement.
The most empowered country in this area is Portugal (with a score of 48.1) while the least empowered is Belgium (with a score of 31.2).
The most empowered consumer profiles are Gen Z individuals, with a high level of education, living in a large or medium city.
The least empowered profiles are Baby Boomers, with a low level of education, that live alone.

Information & Media (56.3)

Online translation (for both text and multimedia sources) (72.5)

Consulting online newspaper and news channels (69.4)

Online sources for checking the trustworthiness of information (websites for news/fact checking or tracing the origin of content, ranking of bias in media, disclaimers of sponsored content, etc.) (50.6)

Bypassing censorship (VPNs, secure connectivity, dedicated apps) (35.4)

Information & Media area is ranked fifth for empowerment. It scored 56.3 out of 100, rating average compared to other consumption areas. The most empowered country in this area is Portugal (with a score of 64.8) while the least empowered is Belgium (with a score of 55.1). The most empowered consumer profiles are Millennials with a high level of education, who live comfortably with disposable income.
The least empowered profiles are Baby Boomers with a low level of education, who live alone.

Culture & Entertainment (49.3)

Using platforms for streaming of audio or video content (70.5)

Buying tickets or getting information about physical cultural events, online (57.7)

Accessing library services online (the catalogue, checking out books, etc.) and buying e-books (41.1)

Using platforms for crowdfunding cultural and artistic projects (22.6)

Culture & Entertainment is ranked seventh for empowerment. It scored 49.3 out of 100, making it an area with room for improvement. Use of platforms for crowdfunding cultural projects was the least empowering service of the entire study. The most empowered country in this area is Portugal, (with a score of 54.4) while the least empowered is Bulgaria (with a score of 41). The most empowered consumer profiles are highly educated Gen Z individuals. The least empowered profiles are Baby Boomers with a low level of education, that just manage to cover basic expenses each month or are increasingly in debt.

Community & Communication (personal & professional reasons) (72.5)

Using messaging tools (e.g.: WhatsApp, Telegram) or email services for communication (with friends, relatives, work related, etc.) (84)

Using social media (80.8)

Video calling another person or a group of people (friends, relatives, work related, etc.) (73.3)

Contacting companies or consumer services via live chats (52.1)

Community & Communication is the most empowering area in the study. It scored 72.5 out of 100. Using messaging tools or email to communicate is the most empowering service in the whole study, together with managing your bank accounts online (Money & investment area).The most empowered country in this area is Portugal (with a score of 79.7) while the least empowered is Belgium (with a score of 70.0). The most empowered profiles for this consumption area are those in Gen Z and Millennials, who are highly educated and have some or plenty of disposable income.
The least empowered profiles are Baby Boomers, with a low level of education, that live alone.

Health, Wellbeing & Sport (52.3)

Booking a consultation with a doctor (65.1)

Accessing your online health profile/history (viewing health records, test results, etc.) (58.6)

Getting medicine prescriptions online (53)

Using wearables and apps for monitoring health conditions and assisted living solutions (e.g.: emergency button for elderly) (28.8)

Health, Wellbeing & Sport is ranked sixth for empowerment. It scored 52.3 out of 100, making it an area with room for improvement to empower consumers. The most empowered country in this area is Italy (with a score of 59.2) while the least empowered is Bulgaria (with a score of 38.8) The most empowered profiles for this consumption area are those who are highly educated, who live comfortably with disposable income and not living alone.
The least empowered profiles are the Baby Boomers increasingly in debt and living alone.

Mobility (local & long distance) & Tourism (44.4)

Booking a long-distance trip (flight, train, etc.) online (58)

Booking a local public transportation ticket online (to be stored on your smartphone) (50.7)

Using platforms for booking rides (e.g: Taxi, Uber) (42.2)

Using shared mobility platforms/solutions (car, scooter, or bike sharing, carpooling, etc.) (28.4)

Mobility & Tourism consumption is ranked eighth for empowerment. It scored 44.4 out of 100, making it an area with room for improvement to empower consumers.
The most empowered country in this area is Portugal (with a score of 50.5) while the least empowered is Bulgaria (with a score of 35.2).
The most empowered consumer profiles are Millennials, living in a large or medium city, that live comfortably with disposable income. The least empowered profiles are Baby Boomers with a low level of education, that live alone.

Home & Domestic Energy (36.7)

Signing up fully online for services and utility providers (water, Internet, energy, waste management etc.) (43.5)

Using platforms to compare energy providers by different aspects (price, quality, etc.) (42.1)

Using digital trackers for domestic energy and water consumption (32.8)

Automatically switching to the most convenient energy provider based on your habits and available offers, via a dedicated service (27.8)

Home & Domestic Energy is ranked ninth for empowerment. It scored 36.7 out of 100, making it a less empowering area for consumers.
The most empowered country in this area is Portugal (with a score of 43.2) while the least empowered is Bulgaria (with a score of 25.1).
The most empowered consumer profiles are Millennials, living comfortably with disposable income, with other people.
The least empowered profiles are Baby Boomers, that just manage to cover basic expenses or are increasingly in debt, living alone.

Shopping (61.4)

Buying products online (from digital shops and marketplaces) (80.9)

Using online consumer reviews of products (70.9)

Using platforms to compare products by different aspects (price, characteristics, reliability, quality, etc.) (69.4)

Borrowing or renting products instead of buying them, via online platforms (e.g.: small household appliances, clothes, tools, equipment, etc.) (24.6)

Shopping is ranked third for empowerment with a score of 61.4 out of 100, making it an area that consumers feel empowered by. Online shopping is the third most empowering service of the study, whereas borrowing or renting products is the second least empowering. The most empowered country in this area is Italy (with a score of 67.6) while the least empowered is Belgium (with a score of 58.4).
The most empowered consumer profiles are individuals from Gen Z or Millennials, who are highly educated, and have some disposable income or live comfortably. The least empowered profiles are Baby Boomers, who either just manage to cover basic expenses or are increasingly in debt and live alone.

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The most empowering digital services for consumers

Below is a ranking of the 40 digital services analyzed in the study, ordered from the most to the least empowering. Each digital service is accompanied by a score, along with the improvement compared to the previous year's results.

Ranking	Digital Service	Consumption Area	Score	Improvement
1	Managing your bank accounts online	Money & Investment	84	+0.5
2	Using messaging tools (e.g.: Whatsapp, Telegram) or email services for communication (with friends, relatives, work-related, etc.)	Community & Communication	84	-0.2
3	Buying products online (from digital shops and marketplaces)	Shopping	80.9	+0.1
4	Using social media	Community & Communication	80.8	0.0
5	Videocalling another person or a group of people	Community & Communication	73.3	-0.2
6	Online translation	Information & Media	72.5	+1.5
7	Using online consumer reviews of products	Shopping	70.9	+1.1
8	Using platforms for streaming of audio or video content	Culture & Entertainment	70.5	+1.3
9	Using platforms to compare products by different aspects	Shopping	69.4	+0.2
10	Consulting online newspaper and news channels	Information & Media	69.4	-0.2
11	Booking a consultation with a doctor	Health, Wellbeing & Sport	65.1	+2.2

12	Using apps for transferring small amounts of money directly from person to person, outside of your normal banking app	Money & Investment	64.7	+1.1
13	Making online payments to public entities	Government & Public Administration	63.7	+1.2
14	Filing a tax declaration online	Government & Public Administration	61.7	+0.4
15	Using digital identity authentication for public administration procedures	Government & Public Administration	60.1	+1.1
16	Accessing your online health profile/history	Health, Wellbeing & Sport	58.6	+0.8
17	Booking a long distance trip	Mobility & Tourism	58	+4.2
18	Buying tickets or getting information about physical cultural events, online	Culture & Entertainment	57.7	+2.8
19	Getting medicine prescriptions online	Health, Wellbeing & Sport	53	+2.2
20	Contacting companies or consumer services via live chats	Community & Communication	52.1	+1.3
21	Booking a local public transportation ticket online	Mobility & Tourism	50.7	+3.6
22	Online sources for checking the trustworthiness of information	Information & Media	50.6	+2.6
23	Requesting documents or certifications online from public entities	Government & Public Administration	49.7	+0.5
24	Using platforms to compare insurances and financial products by different aspects	Money & Investment	48.5	+1.6
25	Learning about a certain topic informally through online tutorials, self-learning materials, forums, etc.)	Education & Training	46.6	+2.1
26	Managing all your bank accounts and financial tools from a single platform outside of your normal banking app	Money & Investment	45.4	+1

27	Signing up fully online for services and utility providers	Home & Domestic Energy	43.5	+2.2
28	Using platforms for booking rides (e.g: Taxi, Uber)	Mobility & Tourism	42.2	+3
29	Using platforms to compare energy providers by different aspects (price, quality, etc.)	Home & Domestic Energy	42.1	+1.2
30	Accessing library services online (the catalogue, checking out books, etc.) and buying e-books	Culture & Entertainment	41.1	+1.2
31	Online official learning (taking courses, exams, certifications, etc.)	Education & Training	37.1	+1.4
32	Bypassing censorship (VPNs, secure connectivity, dedicated apps)	Information & Media	35.4	+1.9
33	Accessing and managing childrens' academic information	Education & Training	35.4	+0.6
34	Using digital trackers for domestic energy and water consumption (32.8) (+3.5)	Home & Domestic Energy	32.8	+3.5
35	Using wearables and apps for monitoring health conditions and assisted living solutions (e.g.: emergency button for elderly)	Health, Wellbeing & Sport	28.8	+1.6
36	Using shared mobility platforms/ solutions	Mobility (local & long distance) & Tourism	28.4	+1.7
37	Automatically switching to the most convenient energy provider via a dedicated service	Home & Domestic Energy	27.8	+2.2
38	Using platforms to compare academic credentials and programmes at different universities/schools	Education & Training	26.6	+1.7
39	Borrowing or renting products instead of buying them, via online platforms	Shopping	24.6	+1.7
40	Using platforms for crowdfunding cultural and artistic projects	Culture & Entertainment	22.6	+1.1

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Conclusion

The overall Consumer Digital Empowerment Index has remained stable over the last year, improving from a score of 52.2 in 2022 to a score of 53.6 in 2023, without significant changes. The country with the highest CDE Index score is Portugal, while the country with the lowest score is Bulgaria. Furthermore, Italy is the country with the most notable progress, followed by Portugal and Spain.
The solidity of the approach and the possibility of making a comparison with previous years, will increasingly allow us to dive deeper into the results and to highlight the most relevant trends in the use of digital services over the years.

The Consumer Empowerment Project strives to improve the digital environment for consumers of all age groups and to educate them about their rights to make informed choices for a beneficial online experience. For more information on the Consumer Digital Empowerment Index, the Consumer Empowerment Project and to dive deeper into the data, please visit cep-project.org.

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Annex

Take a deep dive into the Index data by exploring consumption areas or digital services and see how countries within the Euroconsumers network scored. Learn more about the sustainability impact of various digital services by scanning the QR code and visiting the CEP website.

- Factsheet Aggregated Results
- Factsheet Belgium
- Factsheet Bulgaria
- Factsheet Italy
- Factsheet Poland
- Factsheet Portugal
- Factsheet Spain
- Methodology

Explore the data

How empowered do consumers actually feel accessing digital services?

The Consumer Digital Empowerment Index sets a benchmark across 10 European countries to identify how useful, usable, or preferable consumers currently find digital services and highlight unmet needs

- **55% of respondents** already use **at least 20 of the 40 digital services** studied
- **More than 3 out of 4** of consumers surveyed believe that ten years from now **our consumption experiences will be mostly digital**
- At least **69%** of respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Online bank accounts
- Instant messaging platforms and email
- Buying products online

2023 least empowering digital services

- Platforms for crowdfunding cultural and artistic projects
- Platforms for borrowing or renting products
- Platforms to compare academic credentials and programmes at different universities/schools

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with notable improvements and few drawbacks

The digital services that have improved the most compared to last year were:

- Booking a long-distance trip online (+4.2)
- Booking a local public transportation ticket online (+3.6)
- Digital trackers for domestic energy and water consumption (+3.5)

Whereas the digital services whose empowerment decreased over the last year were:

- Online newspaper and news channels (-0.2)
- Videocalling another person or a group of people (-0.2)
- Instant messaging platforms and email (-0.2)

'Awareness' and 'trust' are key to increasing the use of digital services across the region

- **25%** of consumers that **haven't tracked their energy consumption digitally** over the past 2 years, didn't do so because they were not aware the service was available
- **23%** of consumers that **haven't used fact-checking services to verify the validity of information over the past 2 years**, didn't do so because they weren't aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services: 11% for open banking, **11%** for bank accounts online, **10%** for social media, **8%** for apps for transferring money directly from person to person outside of the normal banking app.

Work needs to be done to ensure that socio-economic factors having an impact on digital divide (like age, education and income) do not leave consumers disenfranchised

- **Millennials** ranked most empowered when engaging with **Community & Communication, Money & Investment, and Shopping**
- **Gen Z** ranked most empowered engaging with **Community & Communication, Shopping, and Information & Media** consumption areas
- **Baby Boomers** consistently ranked lower than younger counterparts at a regional level

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn't at the expense of consumer safety online

- Only **50%** of consumers surveyed install and update **antivirus** software on their computer, while **54%** try to detect **phishing** and deceptive emails
- Experts agree **30%** of the digital services surveyed will have **a very positive** impact on sustainability from an environmental, social, and economic perspective, with all other services having at least some benefit on sustainability

When consumers use digital services, they are improving the sustainability of the goods and services they depend on every day

Overall, the most sustainable digital services in the study were:

- Filing a tax declaration online **(64% of respondents do this)**
- Requesting documents or certifications online from public entities **(48% of respondents do this)**
- Shared mobility platforms/ solutions **(21% of respondents do this)**

Whereas the least sustainable were:

- Buying products **(89% of respondents do this)**
- Using social media **(89% of respondents do this)**
- Contacting companies or consumer services via live chats **(52% of respondents do this)**

In Belgium, consumers feel most empowered by Community & Communication services, and score second highest in both Government & Public administration and Home & Domestic energy

- **54%** of Belgian respondents use at least 20 of the 40 digital services studied
- **70%** of Belgian consumers surveyed, 4% more than in 2022, believe that ten years from now our **consumption experiences will be mostly digital**
- At least **65%** of Belgian respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Online bank accounts
- Instant messaging platforms and email
- Buying products online

2023 least empowering digital services

- Platforms for borrowing or renting products
- Platforms for crowdfunding cultural and artistic projects
- Platforms to compare academic credentials and programs at different universities/schools

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with notable improvements and few drawbacks

The digital services that have improved the most compared to last year were:

- Digital trackers for domestic energy and water consumption (+3.3)
- Getting medicine prescriptions online (+3.1)
- Booking a long distance trip online (+3)

Whereas the digital services whose empowerment decreased over the last year were:

- Online translation (-1.8)
- Videocalling another person or a group of people (-1.8)
- Accessing and managing childrens' academic information (-1.6)

'Awareness' and 'trust' are key to increasing the use of digital services in Belgium

- **16%** of consumers (8% less than in 2022) that **haven't tracked their energy consumption digitally over the past 2 years,** didn't do so because they were not aware the service was available
- **19%** of consumers that **haven't used fact-checking services to verify the validity of information over the past 2 years,** didn't do so because they weren't aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services: 14% for bank accounts online, **11%** for peer-to-peer payments, **11%** for social media.

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn't at the expense of consumer safety online

- Only **48%** of consumers surveyed keep their operating system and software regularly updated, whereas **63%** try to detect **phishing** and deceptive emails

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Belgium were:

- Filing a tax declaration online **(68% of Belgian respondents do this)**
- Requesting documents or certifications online from public entities **(53% of Belgian respondents do this)**
- Using shared mobility platforms/ solutions **(18% of Belgian respondents use these)**

Whereas the least sustainable were:

- Buying products **(88% of Belgian respondents do this)**
- Using social media **(88% of Belgian respondents do this)**
- Contacting companies or consumer services via live chats **(50% of Belgian respondents do this**)

In Bulgaria, consumers feel most empowered by Community & Communication and score third highest in Information & Media

- **38%** of Bulgarian respondents **use at least 20 of the 40 digital services** studied
- **67%** of Bulgarian consumers surveyed believe that ten years from now **our consumption experiences will be mostly digital**
- At least **70%** of Bulgarian respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Social media
- Instant messaging platforms and email
- Videocalling another person or a group of people

2023 least empowering digital services

- Automatically switching to the most convenient energy provider
- Platforms for crowdfunding cultural and artistic projects
- Using platforms to compare energy providers by different aspects

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with notable improvements and few drawbacks

The digital services that have improved the most compared to last year were:

- Peer-to-peer payments (+4.7)
- Getting medicine prescriptions online (+4.5)
- Booking a consultation with a doctor (+4.2)

Whereas the digital services whose empowerment decreased over the last year were:

- Online library services and e-books (-3.8)
- Online health profile/history (-3.6)
- Accessing and managing childrens' academic information (-2.3)

'Awareness' and 'trust' are key to increasing the use of digital services in Bulgaria

- 40% of consumers that **haven't tracked their energy consumption digitally over the past 2 years,** didn't do so because they were not aware the service was available
- **27%** of consumers that **haven't used fact-checking services to verify the validity of information over the past 2 years**, didn't do so because they weren't aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services:
11% for bank accounts online, **8%** for buying products online, 6% for social media

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn't at the expense of consumer safety online

- Only **40% of consumers** surveyed try to detect **phishing** and deceptive emails, whereas **76%** avoid **opening attachments** of emails sent by unknown senders

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Bulgaria were:

- Filing a tax declaration online **(31% of Bulgarian respondents do this)**
- Requesting documents or certifications online from public entities **(25% of Bulgarian respondents do this)**
- Using shared mobility platforms/ solutions **(15% of Bulgarian respondents use these)**

Whereas the least sustainable were:

- Buying products **(86% of Bulgarian respondents do this)**
- Using social media **(92% of Bulgarian respondents do this)**
- Contacting companies or consumer services via live chats **(52% of Bulgarian respondents do this)**

In Italy, consumers feel most empowered in Community & Communication and score the highest in both Shopping and Health, Wellbeing & Sport

- **66% of Italian respondents use at least 20 of the 40 digital services** studied
- **85%** of Italian consumers surveyed, 5% more than in 2022, believe that ten years from now **our consumption experiences will be mostly digital**
- At least **71%** of Italian respondents preferred the digital services they use to the alternative, offline option.

2023 most empowering digital services

- Instant messaging platforms and email
- Buying products online
- Using online consumer reviews of products

2023 least empowering digital services

- Platforms for borrowing or renting products
- Platforms for crowdfunding cultural and artistic projects
- Using shared mobility platforms/ solutions

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with notable improvements and few drawbacks

The digital services that have improved the most compared to last year were:
- Booking a consultation with a doctor (+7.9)
- Booking a local public transportation ticket online (+7)
- Booking a long distance trip online (+7)

Whereas the digital services whose empowerment decreased over the last year were:
- Managing bank accounts and financial tools from a single platform outside of the normal banking app (0,1)
- Platforms to compare insurances and financial products (+0.2)
- Borrowing or renting products via online platforms (+0.2)

‘Awareness’ and ‘trust’ are key to increasing the use of digital services in Italy

- **31%** of consumers that **haven’t tracked their energy consumption digitally over the past 2 years,** didn’t do so because they were not aware the service was available
- **31%** of consumers that **haven’t used fact-checking services to verify the validity of information over the past 2 years,** didn’t do so because they weren’t aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services: **13%** for platforms for crowdfunding cultural & artistic projects, **12%** for online consumer reviews of products, **11%** for signing up fully online for services and utility providers.

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn’t at the expense of consumer safety online

- Only **47%** of consumers surveyed install and update antivirus software on their computer, while **58%**, 3% more than in 2022, tries to detect **phishing** and deceptive emails

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Italy were:

- Filing a tax declaration online **(39% of Italian respondents do this)**
- Requesting documents or certifications online from public entities **(48% of Italian respondents do this)**
- Shared mobility platforms/ solutions **(20% of Italian respondents do this)**

Whereas the least sustainable were:

- Buying products **(96% of Italian respondents do this)**
- Social media **(93% of Italian respondents do this)**
- Contacting companies or consumer services via live chats **(60% of Italian respondents do this)**

In Poland, consumers feel most empowered in Community & Communication and score second highest in Mobility & Tourism

- **57%** of Polish respondents **use at least 20 of the 40 digital services** studied
- **81%** of Polish consumers surveyed believe that ten years from now **our consumption experiences will be mostly digital**
- At least **53%** of Polish respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Online bank accounts
- Social media
- Instant messaging platforms and email

2023 least empowering digital services

- Automatically switching to the most convenient energy provider
- Platforms for crowdfunding cultural and artistic projects
- Platforms for borrowing or renting products

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with some improvements and a few drawbacks

The digital services that have improved the most compared to last year were:

- Digital trackers for domestic energy and water consumption (+3.8)
- Platforms for streaming of audio or video content (+2.4)
- Wearables and apps for monitoring health conditions and assisted living solutions (+1.7)

Whereas the digital services whose empowerment decreased over the last year were:

- Getting medicine prescriptions online (-3)
- Online health profile/history (-2.7)
- Shared mobility platforms/solutions (-2.6)

‘Awareness’ and ‘trust’ are key to increasing the use of digital services in Poland

- **24%** of consumers **that haven’t tracked their energy consumption digitally over the past 2 years**, didn’t do so because they were not aware the service was available
- **23%** of consumers that h**aven’t used fact-checking services to verify the validity of information over the past 2 years,** didn’t do so because they weren’t aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services:
6% for getting medicine prescriptions online, **6%** for Instant messaging platforms and email, **5%** for social media.

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn’t at the expense of consumer safety online

- Only **39% of consumers** surveyed try to detect **phishing** and deceptive emails, whereas **63%** use **different passwords** for different digital services

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Poland were:

- Filing a tax declaration online **(72% of Polish respondents do this)**
- Requesting documents or certifications online from public entities (**44% of Polish respondents do this)**
- Using shared mobility platforms/solutions **(28% of Polish respondents use these)**

Whereas the least sustainable were:

- Buying products **(91% of Polish respondents do this)**
- Using social media **(91% of Polish respondents do this)**
- Contacting companies or consumer services via live chats **(52% of Polish respondents do this)**

In Portugal, consumers score the highest in almost all services, except for Shopping and Health, Wellbeing & Sport

- **72%** of Portuguese respondents **use at least 20 of the 40 digital services** studied
- **89%** of Portuguese consumers surveyed believe that ten years from now **our consumption experiences will be mostly digital**
- At least **72%** of Portuguese respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Instant messaging platforms and email
- Social media
- Online bank accounts

2023 least empowering digital services

- Platforms for borrowing or renting products
- Wearables and apps for monitoring health conditions & assisted living solutions
- Platforms for crowdfunding cultural and artistic projects

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with some improvements and a few drawbacks

The digital services that have improved the most compared to last year were:

- Digital trackers for domestic energy and water consumption (+6.8)
- Booking a local public transportation ticket online (+5.4)
- Automatically switching to the most convenient energy provider (+5.2)

Whereas the digital services whose empowerment decreased over the last year were:

- Videocalling another person or a group of people (-1.3)
- Consulting online newspaper and news channels (-1.1)
- Instant messaging platforms and email (-0.3)

'Awareness' and 'trust' are key to increasing the use of digital services in Portugal

- **33%** of consumers that **haven't tracked their energy consumption digitally over the past 2 years**, didn't do so because they were not aware the service was available
- **28%** of consumers that **haven't used fact-checking services to verify the validity of information over the past 2 years**, didn't do so because they weren't aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services: **6%** for getting medicine prescriptions online, **6%** for Instant messaging platforms and email, **5%** for social media.

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn't at the expense of consumer safety online

- Only **31%** of consumers surveyed rejects **cookie tracking** when visiting a new website, while **81%** avoids sharing sensitive **personal information through social media or instant messaging conversations**

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Portugal were:

- Filing a tax declaration online **(75% of Portuguese respondents do this)**
- Requesting documents or certifications online from public entities **(66% of Portuguese respondents do this)**
- Shared mobility platforms/ solutions **(20% of Portuguese respondents use these)**

Whereas the least sustainable were:

- Buying products **(88% of Portuguese respondents do this)**
- Social media **(93% of Portuguese respondents do this)**
- Contacting companies or consumer services via live chats **(63% of Portuguese respondents do this)**

In Spain, consumers feel most empowered in Community & Communication and score second highest in Culture & Entertainment

- **62%** of Spanish respondents **use at least 20 of the 40 digital services** studied
- **82%** of Spanish consumers surveyed believe that ten years from now **our consumption experiences will be mostly digital**
- At least **66%** of Spanish respondents preferred the digital services they use to the alternative, offline option

2023 most empowering digital services

- Instant messaging platforms and email
- Online bank accounts
- Social media

2023 least empowering digital services

- Platforms for crowdfunding cultural and artistic projects
- Digital trackers for domestic energy and water consumption
- Platforms for borrowing or renting products

2023 vs 2022: The Consumer Digital Empowerment Index is maintaining stable results with some improvements and a few drawbacks

The digital services that have improved the most compared to last year were:

- Booking a long distance trip online (+5.6)
- Buying tickets or getting information about physical cultural events, online (+4.2)
- Platforms for booking rides (+4.1)

Whereas the digital services whose empowerment decreased over the last year were:

- Online library services and e-books(-2.5)
- Requesting documents or certifications online from public entities (-1.9)
- Wearables and apps for monitoring health conditions and assisted living solutions (-1.5)

'Awareness' and 'trust' are key to increasing the use of digital services in Spain

- **31%** of consumers that **haven't tracked their energy consumption digitally over the past 2 years,** didn't do so because they were not aware the service was available
- **28%** of consumers that **haven't used fact-checking services to verify the validity of information over the past 2 years,** didn't do so because they weren't aware of the service

Where consumers express a lack of trust in the provider as the main reason for not using digital services: 13% for buying products online, **11%** for bank accounts online, **11%** for peer-to-peer payments.

Digital services can help us unlock sustainability benefits for the planet, but we need to take care it isn't at the expense of consumer safety online

- Only **37%** of consumers surveyed enables t**wo-factor authentication,** while **58%** tries to detect **phishing** and deceptive emails

When consumers use digital services, they are improving the sustainability of the goods and services they depend on everyday

Overall, the most sustainable digital services in Portugal were:

- Filing a tax declaration online **(64% of Spanish respondents do this)**
- Requesting documents or certifications online from public entities **(63% of Spanish respondents do this)**
- Shared mobility platforms/ solutions **(27% of Spanish respondents use these)**

Whereas the least sustainable were:

- Buying products **(90% of Spanish respondents do this)**
- Social media **(91% of Spanish respondents do this)**
- Contacting companies or consumer services via live chats **(64% of Spanish respondents do this)**

The research was conducted in two stages:

- From April to September 2022: Identification of digital services and development of a digital empowerment index through the DELPHI procedure involving a panel of experts.
- In September 2022 and again in September 2023: An online survey to collect data on representative samples of Internet users.

DELPHI procedure

The panel consisted of 21 experts across nine countries with diverse expertise in the digital and Internet landscape, and consumer behaviour and rights. Through four DELPHI rounds, it was possible to identify the leading 10 consumption areas, the list of the 40 most empowering digital services (4 per consumption area) and the importance to be attributed to them for the calculation of the index. In a fifth round, experts evaluated the impact of each digital service on sustainability.

About DELPHI

DELPHI is a method for structuring group communication processes so that they are effective in allowing a group of experts (commonly referred to as panelists) to deal with a research question. This is done through rounds of questionnaires where experts (also known as panelists) are asked to give their opinion on different issues, until a consensus is reached. This technique is very practical for coming to agreements between a group of experts when there is no unique answer.

To build the index, the panel was composed of 13 experts.
The main research question for the DELPHI procedure was:

"What are the most relevant consumption areas and digital services that the index should include, in order to measure consumer empowerment on digital services?"

This question was divided in 3 different sub-questions related to the consumption areas:

1. For the consumption areas proposed, which ones do you consider more relevant to be included in the index?

2. For each consumption area, which are the most relevant digital services to be included in the index?

3. What is the importance/weight that each of the consumption areas/digital services should have in the index?

Experts were selected according to the following criteria:

1. Area of expertise: digital and Internet, and consumer behaviours and rights;
2. Previous participation in projects related to the mentioned areas of expertise;
3. Being active in the field within the last 1-2 years;
4. A good command of English.

Three different methods were applied throughout the DELPHI rounds, structured as follows

1. Brainstorming: involves asking the panelists to state the most relevant elements to consider in relation to the subject under research, through open-ended questions. Then, the research team must analyse their answers to develop a structure and, through a process of progressive re-organization, order them into a list of closed items for the following rounds of the study;
2. Selection/ranking: panelists are confronted with a set of closed items from which they select and rank the ones that they consider most relevant for each research question. However, experts can provide detailed additional comments, factors or dimensions not covered in the original set that could eventually help to redefine the pre-existing list of closed items;
3. Scoring: panelists are asked to attribute 100 points to a set of closed items. The overall average is considered as the final weight of each of the items

Three different methods were applied throughout the DELPHI rounds, structured as follows

First round

Experts provided feedback on a list of consumption areas proposed by Euroconsumers and Google.
A selection/ranking method was applied: **experts were asked to rank the most relevant consumption areas from the 14 proposed. The 10 with the highest impact were selected for the CDEI.**

Second round

Experts were asked **to indicate which digital services should be included** for each of the consumption areas identified in the first round. For this stage, a brainstorming method was applied.

Third round

Starting from the results of the second round, experts were asked to **select the digital services to be included in the index**, for each consumption area. A selection/ranking method was applied.

Fourth round

Weights were attributed to the **consumption areas and digital services** based on their contribution to empower consumers. A scoring method was applied.

Index scoring

CDE Index provides a structured set of indicators to explore digital consumer empowerment, in quantitative terms, with different layers of information:

1. **The overall index score: :** a synthetic measure of a country's performance and a comparative overview across European countries.
2. **The consumption areas scores:** how the digitalization of services has empowered consumers, for each of the consumption areas.
3. **The digital services scores:** consumers' experience with each digital service.

The relative contribution of each consumption area and digital service to the CDE Index is based on the weights (W_{ca}, W_{ds}), defined by experts during the fourth round of the DELPHI procedure.

The score of a digital service is based on **the combination of consumer usage and evaluation.** For each service, respondents are asked if they have used it during the last two years and, if they did not use it, why this was the case. They are then categorised into three groups:

a. Respondents who have already used the service at least once in the past two years.

b. Respondents who have not used it in the past two years, even though they know it's available in their country.

c. Respondents who never used it because, to their knowledge, the service is not available in their country. It is assumed that the lack of awareness of the availability of an existing digital service means that that service is failing in empowering consumers. For the purposes of this project, it is the same as if the service was not available

Only respondents that used the digital service during the past two years (group 'a') are asked to evaluate it across 3 key criteria, on a scale from 1 (lower) to 5 (higher score):

1. Usefulness: how useful respondents find a service.

2. Usability: how easy a service is to use.

3. Preference: to what extent do respondents prefer the digital service, over the offline alternative.

The average of those three scores, converted on a 100 points scale, represents the digital service's score for that respondent.

For respondents who didn't use the service in the past 2 years, even if they know it was available (group 'b'), a score of 1 (corresponding to the minimum evaluation) is automatically assigned to usefulness and preference and a score of 0 to the usability criteria. The assumption here is that if consumers do not use an available service it means that it is neither essential nor attractive to them. The average of these values (0.66) is then converted on a 100 points scale.

For respondents not aware of the availability (or aware of the unavailability) of the service (group 'c'), a score of 0 is automatically assigned.

The following formula synthesises the approach:

$$ds_{ij} = \frac{(c_{usefulness,ij} + c_{usability,ij} + c_{preference,ij})}{3}$$

where ds_{ij} is the score of the i^{th} digital service, calculated for the j^{th} respondent.

$$c_{usefulness} = \begin{cases} 1 \le n \le 5, & u = 2 \\ 1, & u = 1 \\ 0, & u = 0 \end{cases}$$

$$c_{usability} = \begin{cases} 1 \le n \le 5, & u = 2 \\ 0, & u = 1 \\ 0, & u = 0 \end{cases}$$

$$c_{preference} = \begin{cases} 1 \le n \le 5, & u = 2 \\ 1, & u = 1 \\ 0, & u = 0 \end{cases}$$

$$u = \begin{cases} 2 & \textit{if used at least once in P2Y} \\ 1, & \textit{if never used in P2Y, even if they know it exists} \\ 0, & \textit{if never used and they don't think it exists} \end{cases}$$

The overall score of a digital service is calculated as the average of the scores obtained for each of the respondents.

$$ds_i = \frac{\sum_{j=1}^{N} ds_{ij}}{N}$$

where N is the total number of respondents for the country.

For each respondent, the consumption area's score is calculated as the weighted average of the scores of its digital services, as follows:

$$ca_{ij} = \frac{\sum_{n=1}^{k} w_{in} * ds_{nj}}{k}$$

where:

ca_{ij} is the score of the i^{th} consumption area, calculated for the j^{th} respondent;

k is the number of digital services of that area;

ds_{nj} is the score of the n^{th} digital service of that area, for the j^{th} respondent;

w_{in} is the weighting coefficient of the n^{th} digital service of the i^{th} consumption area.

The overall score of the consumption area corresponds to the average score of that area among the sample.

$$ca_i = \frac{\sum_{N}^{1} ca_{ij}}{N}$$

where N is the total number of respondents for the country.

Analogously, the index is calculated first at respondent level (as the weighted average of the consumption areas' scores) and then for the whole sample (as the mean value among respondents):

$$CDEI_j = \frac{\sum_{m=1}^{k} w_m * ca_{mj}}{K} \qquad CDEI = \frac{\sum_{N}^{1} CDEI_j}{N}$$

where:

$CDEI_j$ is the Index score, calculated for the j^{th} respondent;

K is the total number of consumption areas;

ca_{mj} is the score of the m^{th} consumption area, for the j^{th} respondent;

W_m is the weighting coefficient of the m^{th} consumption area

N is the total number of respondents for the country.

All the scores are rescaled on a 100 points scale, to enable meaningful comparison.

An additional fifth round focused on sustainability

The impact of digitalization and the Internet on different aspects of sustainability is undeniable but still quite difficult to assess for a consumer. Therefore, new panellists were added to the 13 that were already part of the previous four rounds. They had to have expertise in the field of digital and Internet, consumer behaviours and rights, with a focus on sustainability in general and more specifically on the role and implications of digitalization and the Internet on sustainability. In this round, experts were asked to:

- Indicate the impact of sustainability of each of the digital services included in the Index;
- Provide explanations related to their answers on the impact of digital services;
- Answer some general questions about sustainability and digitalization.

The main output of this extra round of the DELPHI procedure was to establish a synthetic indicator (on a labelled scale), for each of the digital services.

Online Survey

After having identified the digital services to be considered for the index and their importance for assessing consumer digital empowerment, an online survey was organised for collecting data on consumers' experience and digital services evaluation. The survey has been conducted twice in 10 selected countries, with the first round carried out in September 2022, and the second one in September 2023, with the purpose of evaluating the evolution of the indicators. In September 2022, a total of 18,861 respondents aged between 18 and 74 participated in the survey, while in September 2023 the number increased to 20,103. The samples were a priori stratified and a posteriori weighted to mirror the national distributions of internet users. The survey did not address topics such as digital fraud or privacy-related questions.

The second phase of the project was an online survey done in 10 countries: Belgium, Bulgaria, Denmark, France, Germany, Italy, Poland, Portugal, Spain and Sweden. In each of these countries, the questionnaire was addressed to a sample of 2,000 Internet users in the 18-74 age range.
For the purpose of this project, an "Internet user" is an individual fulfilling at least one of the following conditions:

- using an internet browser to search for products, services or information online, for personal reasons, at least once a week;
- checking a personal email account at least once a week.

Each national sample was *a priori* stratified on the basis of interlocking quotas by age, gender and geographical area and *a posteriori* weighted on the basis of interlocking quotas by age, gender, geographical area and educational level. Since data concerning the distribution of the target population were not available for all the countries, a preliminary CATI survey was conducted on the general population.

The survey was conducted, during the first half of September 2022 and of September 2023, through CAWI (computer-assisted web interviewing) method.

Data were analysed by the Euroconsumers Statistical Survey Department, using IBM SPSS Statistics. Along with the information needed for the index calculation, the questionnaire was designed to collect data for result segmentation and further in-depth analysis (consumers' choices and needs, barriers to accessing digital services, etc.).