



# Final questionnaire analysis PR3 – T3.1

## Seniors for Circular Economy (SEN4CE)

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#### **COMPARED ANALYSIS**

#### Introduction

To develop a custom-tailored training course on digital Circular Economy platforms and tools for seniors, closing gaps of existing approaches and creating synergies with other projects, the SEN4CE partners conducted a needs analysis to assess the knowledge and behavioural habits regarding ICT and Circular Economy tools of its target group in the partner countries.

The questionnaire consisted of 14 questions covering different aspects such as Basic Digital Skills (e.g., ICT devices, usage patterns, etc.), Digital Circular Economy Skills (e.g., platforms related to Circular Economy, interest on Circular Economy platforms, etc.), considering socio-demographic characteristics of the target group, i.e., age, gender, education level, occupation status, and country of residence.

The questionnaire was designed by <u>CETEM</u>, a research centre whose aim is to promote R&D activities and services within a technological and innovative scope, in collaboration with all the SEN4CE partners and translated in each partner's language and distributed among seniors 60 years and older in Austria, France, Germany, Portugal and Spain.

- In Austria, BIT used different channels to distribute the questionnaire: they informed network partners working with the target group and asked them to forward the link for the online survey in their communities. They also used existing contacts from projects where they were already working directly with the target group and sent them the questionnaire. The survey was launched during January and February 2023 and after collecting 10 answers, it was closed, and the results were summarised.
- In France, E-Seniors distributed the questionnaire to its members, both in presence during an event organised by the association and online through social media and via e-mail to the seniors that are members and/or active participants of the association and its activities. They obtained the answers in about a month.
- In Germany, the questionnaire was distributed by <u>Johanniter-Unfall-Hilve e.V</u>. to the members of grandmothers for future during January and mid-February 2023.
- In Portugal, Future Balloons distributed the questionnaires by email in the beginning of January (sending the link of a Google form) to their project partners from other projects, namely from Germany, and for their network of seniors. They got the answers in about one month.
- In Spain, the questionnaire was distributed by <u>CETEM</u> through a mixed strategy: some of them were sent directly by email but others were distributed in person to seniors which used to cooperate with CETEM. After sending all the questionnaires, the organisation waited one month to collect the answers.

Overall, we obtained 62 responses from the 5 partner countries, divided as follow:

- > 10 responses from Austria
- > 10 responses from France





- > 13 responses from Germany
- > 13 responses from Spain
- > 16 responses from Portugal (11 from Portugal and 5 from Germany)

The questionnaire results will be used to develop the curriculum created for the EQF level 2-3, to ensure compatibility with the diverse learning needs of seniors 60+ and the country-specific results obtained in the framework of the respective needs analysis.

#### **Respondents' characteristics (Questions 1-5)**

From the results of the national questionnaires, we found that the respondents belong to a variety of age groups. Thus, while in Austria and Germany, most respondents were aged 66 to 70 years old; in France and Portugal, they were mostly 71-75 years old, while in Spain, they were mostly 60 to 65 years old. This shows that seniors of all ages are well represented in the SEN4CE answers.

The gender ratio was overall well balanced in Austria and Spain and with a slightly higher part of women in Portugal. However, in Germany and France, 80% of respondents were women, making females the vast majority amongst their respondents.

Regarding the countries of residence, our respondents all reside in the partner country in which they completed the questionnaire except 5 respondents collected by the Portuguese partners which were from Germany. Hence, meaning that out of the 62 respondents:

- > 10 reside in Austria.
- > 10 reside in France.
- > 18 reside in Germany.
- > 13 reside in Spain.
- > 11 reside in Portugal.

As for the level of education of our respondents, they are quite varied depending on the partner country. For instance, while respondents in Austria, France and Germany are quite highly educated, with a vast majority of them having at least completed a high school degree. However, the largest proportion of respondents in Portugal (62.5%) and Spain (46.2%) declared not having completed schooling. In Austria, the biggest group represented is seniors with a high school diploma or equivalent (60%), while in France and Germany, their seniors who completed a master's degree. Such differences in responses depending on the country might be explained by several factors. For instance, the different partner organizations in this project target different senior groups.

Finally, regarding the employment statuses, a vast majority of respondents, all countries combined, are retired, which suits the target group of the SEN4CE project and the conducted questionnaire. The less percentage was found in Spain which a 69.2%.





#### **Basic Digital Skills (Questions 6-10)**

In all partner countries, all the respondents have at least one ICT devices at home. The most frequent one was the smartphone following by the tablet and the laptop.

In Austria, only one person had no smartphone but a computer. The rest had a smartphone and almost half also had a computer (desktop or laptop) and tablet. In France, 90% were mainly smartphones and laptops. In Germany, half had a computer and a smartphone; the other half had a smartphone and a tablet. In addition, one user highlights that he or she has an e-book. In Portugal, all (16) had a smartphone, and in addition, 6 had a tablet and 5 had a laptop. Finally, in Spain 92% had a mobile phone, tablet, and computer. In addition, one user highlights that she has an Alexa.

In terms of the frequency of use of each device, a common trend can be concluded among all the countries surveyed: widespread daily use of smartphones. While the use of tablets, computers, etc. is less widespread. In the case of Austria, desktop computers are used almost daily; in France, only 50% use laptops daily; in Germany, tablet use is quite widespread (80%) daily; while in Spain and Portugal, the other devices are practically not widely used daily.

Regarding the digital skills of respondents, in general, most of them are quite digitalised. Thus, most of the respondents can look for information online using a search engine, save or store files or content and retrieve them once saved or stored, communicate with others using voice apps, use digital technologies to interact with services and buy different products and items on the internet.

However, digital skills do not change from one country to another. In the case of Austria and France, the majority (80-90%) have digital skills, indicating that the weakest skills would be the use of social networks and interaction with services such as the bank or the hospital. In the case of Germany, 90-100% of the responses are positive in terms of basic digital skills. They indicate that social media management is the weakest skill.

On the other hand, Spain and Portugal have more deficiencies in basic digital skills with lower percentages (~65%). Moreover, in the case of Portugal, several questions such as storing files, using services or shopping online have more negative responses than positive ones. In Spain, there is simply a lower percentage who know how to apply the different tools.

Finally, most respondents, all countries combined, used to downloading applications on their devices. While in Germany and France, the percentage of people who know how to download applications is high (70-80%), in the case of Austria, Portugal and Spain, this percentage is as low as 50%.

Among the most downloaded application, social networks can be highlighted. Games and services (banking, health, etc.) were also very popular, but not the last ones. Sports, language courses, cars, orders from various companies, travel apps, media, music, weather, clothes, emails, culture, translations, transport, news, reading, and household appliances are other examples of applications which should be downloaded by respondents.





#### Digital Circular Skills (Questions 11-14)

In terms of knowledge about Circular Economy platforms and applications, most responses were negative, with diversity between countries. In the case of Portugal and Spain, there is a total lack of knowledge, while in the case of Austria and Germany, 30% of the answers indicate that they are aware of this type of tools. In France, 50% are aware of these applications.

For those respondents who answered in the affirmative, they were asked to name the applications they knew about this. The responses were as follows: "*Too good to go*", "*Murfy*", "*Yuka*", "*La ruche qui dit oui*", "*Rebuy*", "*Ebay small eds*", "*nebenan*" and "toxfox".

Despite the low awareness of platforms and applications related to the Circular Economy, most respondents, from all the surveyed countries, stated that they are interested in learning about digital tools that enhance the Circular Economy. Although each country has its own preferences, the most frequently mentioned topics were "waste prevention"; "repair products and components"; "recycling" and "extension of product life".

#### Conclusions

Most respondents, regardless of the country of response, have a good understanding of digital technologies, with higher percentages of them able to search for information online, save and retrieve files, and communicate with others via voice applications.

The usage of ICT devices such as computers, smartphones, and tablets are prevalent, with more than 90% of the respondents using their smartphones daily.

However, 70% of the respondents do not know any Circular Economy related apps or platforms, but there is a high demand for such apps, with "waste prevention", "repair products and components", "recycling", and "extension of product life" being the most popular topics of interest.

To sum up, the needs analysis conducted in the SEN4CE partner countries demonstrated that our senior respondents, representing different age and gender groups and education levels, are familiar with the basic digital skills such as using ICT devices, downloading apps, etc. However, in terms of advanced digital skills related to Circular Economy they need more support. Most of them are interested on the topic, however, they don't know any application of platform to make reality Circular Economy in their daily life.

These results suggest that while designing the SEN4CE curriculum, they should focus on:

- Exploiting the use of mobile phones almost daily for seniors to gain knowledge about the Circular Economy.
- Teach them different applications and/or platforms related to Circular Economy that allow seniors to have more sustainable and circular routines and habits.
- Create material focused on promoting the most interesting issues for seniors such as "waste prevention", "repair products and components", "recycling", and "extension of product life":





- > Explaining the importance of Circular Economy practices and their impact on the environment through digital tools.
- Providing insight on how using Circular Economy practices can create a sense of community and continue to build a positive sense of environmental contribution.
- Providing the trust-worthy resources to ensure that adequate information remains accessible and accessible for people.





#### AUSTRIA

#### **Respondents' characteristics (Questions 1-5)**

As seen in the pie chart provided below, person aged 60 to 80 took part in the survey, while the age group from 66 to 70 years was the biggest (40%). This was followed by people who were 70 to 75 years old (30%):



Figure 1: To which age groups do you belong?

The gender ratio was very balanced, there were the same proportion of female and male participants.



Figure 2: What is your gender?

All participants lived in Austria.

Regarding the education level, most participants (60%) had a high school diploma or equivalent. This was followed by a master's degree or a higher degree with 40%.







Figure 3: What is the highest high school diploma you have achieved or the highest degree you have received?

As for the employment status of their respondents, a vast majority of them (80%) were retired, which suits the target group of the SEN4CE project and the conducted questionnaire. Only two respondents declared having a part-time job.



Figure 4: Which of the following categories best describes your employment status?

#### Basic Digital Skills (Questions 6-10)

As seen in the pie chart below, there was a wide variety of usage of different combinations of communication technology (ICT) devices.



Figure 5: What kind of Information and Communication Technology (ICT) devices do you have at home?





Based on the combined chart, all respondents used a computer (70% a laptop; 30% a desktop computer) and 80% a smartphone and one person a cell phone with keys.

In the following pie charts below, the usage pattern of the respective devices was evaluated.



Figure 6: Usage patter of the Information and Communication Technology (ICT) devices that you have at home.

As shown in Desktop-computer figure, most respondents (75%) who use a desktop computer (n=4), used it daily. Regarding the laptop usage, 50% of them used it every day, however, the other 50% used the laptop at least once a week.

Figure 6 shows that all participants used their smartphone predominantly daily (90 %). In addition, there are fewer participants (n=4) who used a tablet, also the usage patterns are different for all of them. One more person indicated to use a tablet daily.

Overall, their respondents were quite digitally skilled. Thus, 90% of their respondents can look for information online using a search engine, save or store files or content and retrieve them once saved or stored, communicate with others using voice apps, use digital technologies to interact with services and buy different products and items on the internet.

Statements	Yes	No
I can look for information online using a search engine	9 (90%)	1 (10%)
I can save or store files or content (e.g., text, pictures, music, videos, etc.) and retrieve them once saved or stored	9 (90%)	1 (10%)
I can communicate with others using voice apps as Skype, email, or chats like WhatsApp	9 (90%)	1 (10%)





I can use digital technologies to interact with services (hospitals, banks, etc.)	8 (80%)	1 (20%)
I know social networking sites and online collaboration tools	8 (80%)	1 (20%)
I can buy various products and items on the internet	9 (90%)	1 (10%)

Finally, respondents were asked if they are used to download applications in their mobile phones. The half part of respondents answered positively.



Figure 7: Are you used to downloading apps on your smartphone?

Apps that used in this context refer to: social media, electronic banking, sports, language courses, cars, orders from various companies, etc. Travel apps, media, music, weather, and household appliances.

#### Digital Circular Skills (Questions 11-14)

As shown in Figure 10, 70% of the respondents did not know any CE related apps or platforms. Those three who answered yes named the app: *Too Good to Go* in this context.



*Figure 8: Do you want to learn about apps and platforms that help you implement Circular Economy practices and promote sustainability?* 

Figure 9 shows that there was a high demand for CE or sustainability related apps.







*Figure 9: Do you want to learn about apps and platform that help you implement Circular Economy practices and promote sustainability?* 

Among the different topics on CE in which respondents were most interested, there were two winners, with 60% of the answers. They were "waste prevention" and "repair of products and components". Respondents were least interested in recycling. This may be due to the high availability of information on this topic in Austria.



Figure 10: What kind of information for an app or platform would you be interested in?

#### Conclusions

As a conclusion for the SEN4CE project can state that most of the respondents (80%) were retired and had a high school diploma or higher education. The usage of ICT devices such as computers, smartphones, and tablets are prevalent, with 90% of the respondents using their smartphones on a daily basis. The respondents had a good understanding of digital technologies, with 90% of them able to search for information online, save and retrieve files, and communicate with others via voice applications. However, 70% of the respondents did not know any Circular Economy related apps or platforms, but there is a high demand for such apps, with "waste prevention" and "repair of products and components" being the most popular topics of interest.





#### FRANCE

#### **Respondents' characteristics (Questions 1-5)**

As seen in the pie chart provided below, 50% of the respondents were 71-75 years old, making it the biggest age group represented in this questionnaire, followed by respondents aged 60 to 65 and 66 to 70 years old (20% each). Finally, 10% of our respondents were over the age of 80.



Figure 1: To which age groups do you belong?

Regarding the gender of our respondents, a vast majority of them (80%) were women.



*Figure 2: What is your gender?* 







#### As expected, all our respondents were residing in France.



Regarding the education level, half our respondents declared having completed a master's degree or more, while a third obtained a bachelor's degree (30%). Overall, our respondents were thus quite highly educated, with everyone having at least completed a High School degree or equivalent.

Quel est le plus haut niveau d'études que vous avez atteint ou le plus haut diplôme que vous avez obtenu ? 10 réponses



Figure 4: What is the highest high school diploma you have achieved or the highest degree you have received?

As for the employment statuses of our respondents, a vast majority of them (90%) were retired. Only one respondent declared having a full-time job.

Parmi les catégories suivantes, laquelle décrit le mieux votre situation professionnelle actuelle ? 10 réponses







Figure 5: Which of the following categories best describes your employment status?

#### **Basic Digital Skills (Questions 6-10)**

90% of our respondents possessed a laptop and a smartphone. However, only 30% had an electronic tablet, and 20% a desktop computer.

Quel type d'appareils de technologies de l'information et de la communication (TIC) possédez-vous à la maison ?

10 réponses



Figure 6: What type of Information and Communication Technologies (ICT) devices do you have at home?

Regarding the frequency with which their respondents use these devices, the most popular appears to be the smartphone, which was used daily by 80% of our respondents. Only one respondent never used one. Laptops were also quite popular since they were used daily by 50% of our respondents, and all respondents used it at least once a month. On the other hand, desktop computers and electronic tablets were not as used: only 20% of respondents used an electronic tablet daily, and 40% for the electronic tablet. 50% of their respondents have never used a desktop computer.

Utilisez-vous l'un des dispositifs précédents dans votre vie quotidienne ? Si oui, veuillez préciser à quelle fréquence vous l'utilisez.



Figure 7: Usage patter of the Information and Communication Technology (ICT) devices that you have at home.





Overall, our respondents were quite digitally skilled. Thus, 90% to 100% of their respondents can look for information online using a search engine, save or store files or content and retrieve them once saved or stored, communicate with others using voice apps, use digital technologies to interact with services and buy different products and items on the internet. However, 40% of our respondents don't know social networking sites and online collaboration tools.

Statements	Yes	No
I can look for information online using a search engine	9 (90%)	1 (10%)
I can save or store files or content (e.g., text, pictures, music, videos, etc.) and retrieve them once saved or stored	9 (90%)	1 (10%)
I can communicate with others using voice apps as Skype, email or chats like WhatsApp	100 (100%)	0 (0%)
I can use digital technologies to interact with services (hospitals, banks, etc.)	9 (90%)	1 (10%)
I know social networking sites and online collaboration tools	6 (60%)	4 (40%)
I can buy various products and items on the internet	9 (90%)	1 (10%)

70% of their respondents were used to downloading apps on their smartphones. Regarding the types of apps used by their participants, there were a variety of answers. Several of them mentioned social media, games and services or public institutions (such as mail delivery, the bank, or transports). Others mentioned clothes, emails, travels, sports, or culture.



Avez-vous l'habitude de télécharger des applications sur votre smartphone ? 10 réponses

Figure 8: Are you used to downloading apps on your smartphone?

#### Digital Circular Skills (Questions 11-14)

Half of our respondents know an app or platform linked to the Circular Economy. Among those respondents, all of them 50% know "*Too Good to Go*", and a few of them also mentioned "*Murfy*", "*Yuka*", or "*La ruche qui dit oui*".





Connaissez-vous une application ou une plateforme liée à l'économie circulaire (applications d'information de recyclage ou anti-gaspi, par exemple Too Good to Go) ? 10 réponses



Figure 9: Do you know any app or platform related to Circular Economy (informative waste recycling or reuse apps, e.g., Too Good to Go)?

All their respondents were interested in learning more about apps and platforms that can help them implement Circular Economy practices and become more sustainable.

Aimeriez-vous en savoir plus sur les applications et les plateformes en ligne qui peuvent vous aider à mettre en œuvre des pratiques d'économie circulaire et à devenir plus responsable ? 10 réponses



*Figure 10: Do you want to learn about apps and platform that help you implement Circular Economy practices and promote sustainability?* 

Regarding the type of information, they would be interested in getting from an app or online platform, 70% to 80% of respondents mentioned remanufacturing, refurbishment and reuse of products and components; extension of product lifespan; sharing and leasing of products; and repairing products and components. 50% to 60% of them would be interested in learning about recycling; efficient use of resources; waste prevention; and shift in consumption patterns. One participant added that they would be interested in learning about gardening on small properties (balconies, small gardens), and another one mentioned learning about websites that already exist.





#### Quel type d'information aimeriez-vous obtenir d'une application ou d'une plateforme en ligne ? 10 réponses



Figure 11: What kind of information for an app or platform would you be interested in?

#### Conclusions

To conclude, French respondents seem quite digitally skilled, but don't seem to know many online platforms or apps on Circular Economy practices. However, they would all be very interested in such tools and seem eager to be able to learn about a variety of Circular Economy practices thanks to these online tools.

These results suggest that while designing the SEN4CE curriculum, partners should focus not so much on how to use electronic devices, but more on shedding light on the already existing online platforms and apps addressing Circular Economy issues that could be useful for seniors.





#### GERMANY

#### **Respondents' characteristics (Questions 1-5)**

As seen in the pie chart supplied below, person aged 60 to 75 took part in the survey, while the age group from 66 to 70 years is the biggest (67%). People who were 60-65 and 70 to 75 years old make up 17% each.



*Figure 1: To which age groups do you belong?* 

The gender ratio showed that 85 % of the respondents were female.



*Figure 2: What is your gender?* 









*Figure 3: What is your country of residence?* 

Regarding the education level, approx. half of the participants had a university degree (47%) and 37 % had learned a profession through vocational training, while 10 % said they had finished secondary school.



Figure 4: What is the highest high school diploma you have achieved or the highest degree you have received?

As for the employment statuses of their respondents, a vast majority of them (92%) are retired, which suits the target group of the SEN4CE project and the conducted questionnaire. Only one respondent declared having a part-time job. One lady said she was retired, caring for her mother and environmental activist.







Figure 5: Which of the following categories best describes your employment status?

#### **Basic Digital Skills (Questions 6-10)**

All respondents used at least two communication technology (ICT) devices. This is mostly a smartphone and laptop or desktop computer. Five respondents additionally used a tablet, one uses Smartwatch and eBook-Reader additionally.



Figure 6: What kind of Information and Communication Technology (ICT) devices do you have at home?







Figure 7: Usage patter of the Information and Communication Technology (ICT) devices that you have at home

As shown in Desktop-computer figure, most respondents (80%) who use a desktop computer (n=5), use it in a daily frequency. One person, who also owns a laptop, tablet and smartphone only uses it once a month. Regarding, the laptop, 75 % of those who own one use it daily.

Figure 7 shows that all participants use their smartphone predominantly daily. In addition, those who own a tablet mostly also use it daily (80%). One person uses it at least once a week.

Overall, their respondents are quite digitally skilled. Thus, 90-100% of our respondents can look for information online using a search engine, save or store files or content and retrieve them once saved or stored, communicate with others using voice apps, use digital technologies to interact with services and buy different products and items on the internet.

Statements	Yes	No
I can look for information online using a search engine	13 (100%)	0 (0%)
I can save or store files or content (e.g., text, pictures, music, videos, etc.) and retrieve them once saved or stored	12 (92%)	1 (8%)





I can communicate with others using voice apps as Skype, email or chats like WhatsApp	13 (100%)	0 (0%)
I can use digital technologies to interact with services (hospitals, banks, etc.)	12 (92%)	1 (8%)
I know social networking sites and online collaboration tools	10 (77%)	3 (23%)
I can buy various products and items on the internet	13 (100%)	0 (0%)

Finally, respondents were asked if they are used to download applications in their mobile phones, and 77% respondents answered that they are used to it. Apps that are used in this context refer to social media, electronic banking, sports, health, translation, search engines, car sharing, public transport, national transport, travel apps, media, music, news, weather, and shopping.

#### Digital Circular Skills (Questions 11-14)

As shown below in Figure 10, 69% of the respondents do not know any CE related apps or platforms. Those three who answered yes named the app: *"Too Good to Go", "Rebuy", "Ebay small eds", "nebenan.de" and "toxfox"* in this context.



Figure 10: Do you know any app or platform related to Circular Economy (informative waste recycling or reuse apps, e.g., Too Good to Go)?

Almost all the respondents were interested in learning more about apps and platforms that can help them implement Circular Economy practices and become more sustainable.

Regarding the type of information, 84% would be interested in recycling as a topic, 69% in remanufacturing, repairing, and reusing products, followed by 61% interested in sharing economy. 53% are interested in information on the efficient use of resources. Least information is needed on waste avoidance. Only 30% were interested in it.







*Figure 11: Do you want to learn about apps and platform that help you implement Circular Economy practices and promote sustainability?* 



Figure 12: What kind of information for an app or platform would you be interested in?

#### Conclusions

As a conclusion for the SEN4CE project can stated that most of the respondents (92 %) were retired and well educated. The usage of ICT devices such as computers, smartphones, and tablets were prevalent, with 100% of the respondents using their smartphones daily. The respondents had a good understanding of digital technologies, with 100% of them able to search for information online, save and retrieve files, and communicate with others via voice applications. However, 66 % of the respondents did not know any Circular Economy related apps or platforms, but there is a high demand for such apps, with "Recycling and "repair of products and components" being the most popular topics of interest.





#### PORTUGAL

#### **Respondents' characteristics (Questions 1-5)**

Qual é o seu país de residência?

Of those surveyed, 62,5% were women. As seen in the pie chart provided below, respondents between 71-75 years old was the biggest age group represented in the questionnaire. This was followed by 25% of respondents aged 60-65 and 66-70, followed by 12,5% with more than 80 years old and finally 6,3% of respondents between 76-80 years old.



Figure 1: To which age groups do you belong?

Regarding the country of residence, 68,8% of the respondents were Portuguese and 31,3% were from Germany.



Figure 2: What is your country of residence?

As for their level of education, the majority indicated that they had not completed their schooling (62,5%). Then, 12,5% of the respondents had a high school degree or equivalent, a trade, technical and vocational training, and a bachelor's degree.





## Qual é o nível de escolaridade que completou?



Figure 3: What is the highest high school diploma you have achieved or the highest degree you have received?

Regarding their employment status, the vast majority (81,3%) were retired. However, there was a minority of 18,8% of employed, working full-time respondents.

Qual das seguintes categorias descreve melhor o seu estatuto profissional? 16 respostas



Figure 4: Which of the following categories best describes your employment status?

#### **Basic Digital Skills (Questions 6-10)**

Regarding the basic digital skills of the participants, they began by asking what types of Information and Communication Technology (ICT) devices they had at home. The most frequent was to have a smartphone (15 responses), followed by people with a tablet (6 responses), 5 people with a laptop, 4 people with a desktop computer and only 1 person with an old phone, not a smartphone.





#### Que tipo de dispositivos tecnológicos tem em casa?

16 respostas



Figure 5: What kind of Information and Communication Technology (ICT) devices do you have at home?

Regarding the use of these devices, the majority (14) state that they use the smartphone daily. However, in the case of desktop computers, it was different... Only two people used it daily and another 2 people used it at least once a week and 11 people never use it.

The laptop is used only by 2 people daily, 1 person use it at least once a week, and 2 people use it at least once a month, and 11 people never use it.

Regarding the tablet, 2 people say they used it daily, while another 6 indicate that they only use it less than once per month. 3 people say that they used it at least once per month and 3 people say that they never use it.

Utiliza algum dos dispositivos anteriores na sua rotina diária? Em caso afirmativo, por favor especifique com que frequência o utiliza.



Figure 6: Usage patter of the Information and Communication Technology (ICT) devices that you have at home.

Regarding their digital skills, the majority can perform some actions that were asked.

The most voted was "I can communicate with others using voice apps as Skype, email or chats like WhatsApp" followed by "I know social networking sites and online collaboration tools" and "I can look for information online using a search engine".





The most difficult things to the respondents were the use of digital technologies to interact with services (11 answers) followed by buying products on the Internet (10 answers) and store and save files or content (9 answers).

Statements	Yes	No
I can look for information online using a search engine	11 (69%)	5 (31%)
I can save or store files or content (e.g., text, pictures, music, videos, etc.) and retrieve them once saved or stored	7 (44%)	9 (56%)
I can communicate with others using voice apps as Skype, email, or chats like WhatsApp	15 (94%)	1 (6%)
I can use digital technologies to interact with services (hospitals, banks, etc.)	5 (31%)	11 (69%)
I know social networking sites and online collaboration tools	12 (75%)	4 (25%)
I can buy various products and items on the internet	6 (38%)	10 (62%)

Finally, respondents were asked if they are used to download applications in their mobile phones. The majority (56,3%) answered negatively.



Está habituado a descarregar aplicações no seu smartphone (telemóvel)? <sup>16 responses</sup>

Figure 7: Are you used to downloading apps on your smartphone?

The other 7 answers (43,8%), who answered positively, were asked what kind of applications they used to download, and the answers were:

- 1. Social networking and other related articles of clothing, tools, electronic devices, accessories, and applications for the home, etc.
- 2. Applications for Social Networking, Language Learning, Shopping...
- 3. Sports, services (e.g., banking, email)
- 4. News/transportation
- 5. Sports, social media
- 6. Games (2)





#### Digital Circular Skills (Questions 11-14)

Respondents were asked to reply if they know any platform or tool related to Circular Economy and all answered negatively.

Conhece alguma aplicação ou plataforma relacionada com a Economia Circular (aplicações informativas de reciclagem ou reutilização de resíduos, por exemplo, Too Good to Go)? <sup>16 responses</sup>



Figure 8: Do you know any app or platform related to Circular Economy (informative waste recycling or reuse apps, e.g., Too Good to Go)?

Respondents were asked if they would like to learn more about apps and platforms that help them implement Circular Economy practices and become more sustainable. The majority said yes (81,3%) but 18,8% of the respondents said that they do not like to learn more about apps that would help them to become more sustainable.



Gostaria de saber mais sobre aplicações e plataformas que o ajudem a implementar práticas de economia circular e a tornar-se mais sustentável? 16 responses

*Figure 9: Do you want to learn about apps and platform that help you implement Circular Economy practices and promote sustainability?* 

Finally, they were asked what kind of information they would like to receive from an app or platform and the most voted answer (8 votes) was "Recycling".

The second and third one (both with 7 answers) responded "Prevention of waste" and "Extension of product life".

6 respondents chose "Efficient use of resources" while 5 respondents chose "Repairing products and components".

"Sharing and leasing of products" and "Remanufacturing, refurbishment, and reuse of products and components" got 3 answers each.





#### Only 1 person responded, "Shift in consumption patterns".

#### Em que tipo de informação estaria interessado para uma aplicação ou plataforma? 16 responses



Figure 10: What kind of information for an app or platform would you be interested in?

#### Conclusions

The results show that all respondents had a mobile phone and used it almost every day. As for other devices, tablets were another very common device in their households. However, computers (desktop or laptop) were less common and, those who have them, used them less frequently.

This requires Consortium if they want users to be interested in the SEN4CE project course, the e-learning platform must be accessible via mobile.

Regarding the use of applications, most of them had difficulties in the most basic actions such as the use of ICT to interact with services and buying products on the Internet. Still, the percentage of users who know how to download applications is lower. This should also be considered if we show them during the project some tools to download and configure.

Finally, as the knowledge about Circular Economy applications and tools is null, there were many possibilities to integrate in the project. Especially, they were interested, in decreasing order, about:

- 1. "Recycling"
- 2. "Prevention of waste" and "Extension of product life"
- 3. "Efficient use of resources"
- 4. "Repairing products and components".
- 5. "Remanufacturing, refurbishment, and reuse of products and components" and "Sharing and leasing of products".





#### **SPAIN**

#### **Respondents' characteristics (Questions 1-5)**

A total of 13 responses were obtained from the analysis carried out in Spain during the month of January. Of those surveyed, 53.8% were women. As seen in the pie chart provided below, respondents in the 60-65 age range were the biggest age group represented in the questionnaire (38.5%). This was followed by 23.1% of respondents aged 71-75 and 76-80, followed by 15.4% in the 66-70 years old range.



Figure 1: To which age groups do you belong?

As for their level of education, the majority indicated that they had not completed their schooling (46.2%) or only the graduate or equivalent (23.1%). Then, with a 15.4% there were commercial/VET level qualification and respondents with baccalaureate or equivalent.



¿Cuál es el nivel de estudios más alto que has completado o el título más alto que has recibido? 13 respuestas

Figure 2: What is the highest high school diploma you have achieved or the highest degree you have received?

Regarding their employment status, the vast majority (69.2%) were retired. However, there was a minority of 7.7% of disabled people (unable to work), people employed full time, people employed mid-term and unemployed people.







¿Cuál de las siguientes categorías describe mejor tu situación laboral? 13 respuestas

Figure 3: Which of the following categories best describes your employment status?

#### **Basic Digital Skills (Questions 6-10)**

Regarding the question on the ICT devices that respondents have in their homes, the most frequent response was the smartphone (12/13 respondents chose this option). Likewise, 8 people have a tablet and 7 have a desktop computer. In addition, only 2 people have a laptop and other claims to have an Alexa.



¿Qué tipo de dispositivos de Tecnologías de la Información y la Comunicación (TIC) tienes en casa?

Figure 4: What kind of Information and Communication Technology (ICT) devices do you have at home?

Regarding the use of these devices, the majority (12) said that they use the mobile almost daily. However, in the case of desktop computers, there was a distinction... Only one person used it daily; most (3) used it once a week, but another three people claimed to use it once a month or even never.

Regarding the tablet, 4 people said they use it daily, while another 4 indicate that they only used it at least once a week. Another person affirmed that he/she never uses it.

Regarding the laptop, two people state that they use it daily, while another two indicated that they use it once a week and never.





#### Finally, the Alexa device is used daily.

¿Utilizas alguno de los anteirores dispositivos en su rutina diaria? En casa afirmativo, especique con qué frecuencia lo utilizas



Figure 5: Usage patter of the Information and Communication Technology (ICT) devices that you have at home

Statements	Yes	No
I can look for information online using a search engine	10 (77%)	3 (23%)
I can save or store files or content (e.g., text, pictures, music, videos, etc.) and retrieve them once saved or stored	8 (62%)	5 (38%)
I can communicate with others using voice apps as Skype, email or chats like WhatsApp	12 (92%)	1 (8%)
I can use digital technologies to interact with services (hospitals, banks, etc.)	10 (77%)	3 (23%)
I know social networking sites and online collaboration tools	10 (77%)	3 (23%)
I can buy various products and items on the internet	8 (62%)	5 (38%)

Regarding their digital skills, the majority can perform the different actions that were asked:

Finally, respondents were asked if they are used to download applications in their mobile's phones. The majority (53.8%) answered negatively.

¿Estás acostumbrado a descargar aplicaciones en tu smartphone?



Figure 6: Are you used to downloading apps on your smartphone?

The other 6 answers (46.2%), who answered positively, were asked what kind of applications they used to download, and the answers were:

- Social Media (5 times)
- Sports (2)





- Games (2)
- Weather (1)
- Music (1)
- Reading (1)
- Bank (1)

#### Digital Circular Skills (Questions 11-14)

As seen in the pie chart provided below, any of the respondents known any platform or tool related to Circular Economy. However, they all were interested in acquiring knowledge about this topic to allow them to apply more Circular Economy practices and being more sustainable.

¿Conoces alguna app o plataforma relacionada con la Economía Circular (sobre reiclaje de residuos, reutilización, etc.) como, por ejemplo, Too Good to Go? 13 respuestas



Figure 7: Do you know any app or platform related to Circular Economy (informative waste recycling or reuse apps, e.g., Too Good to Go)?

Finally, they asked what kind of information they would like to receive from an app or platform and the most voted answer (11 votes) were "Repairing products and components". The second and third one (both with 9 answers) were "recycling" and "extension of product life". "Efficient use of resources", "shift in consumption patterns" and "prevention of waste" were also relevant for the respondents with six votes.







¿Qué tiipo de información te gustaría que cubriera la app o plataforma? 13 respuestas

Figure 8: What kind of information for an app or platform would you be interested in?

#### Conclusions

The results show that all respondents had a mobile phone and used it every day. As for other devices, tablets were another quite common device in their households. However, computers (desktop or laptop) were less common and, those who have them, used them less.

This requires Consortium if they want users to be interested in the SEN4CE project course, the e-learning platform must be accessible via mobile.

Regarding the use of applications, most of them mastered the most basic actions such as accessing the bank, social networks, etc. However, the percentage of users who known how to download applications was lower. This should also be considered if we show them during the project some tools to download and configure.

Finally, as the knowledge about Circular Economy applications and tools is null, there were many possibilities to integrate in the project. Especially, they are interested in "Repairing products and components", "recycling" and "extension of product life".