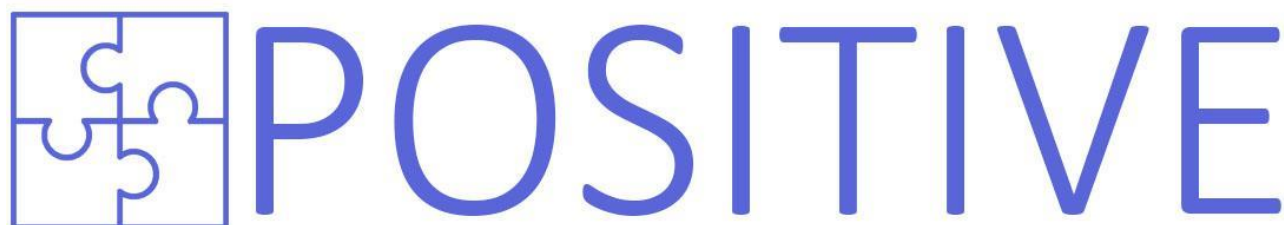


## D4.3 [Evaluation Report]



**Personalized platfOrm aSsisting senlors in healThy, fulfilled and actiVe life**

<b>Project No.</b>	<b>AAL-2018-2-118</b>
<b>Project Acronym</b>	<b>POSITIVE</b>
<b>Start date (duration)</b>	<b>01/05/2019</b>
<b>Deliverable Leader</b>	<b>FSL</b>
<b>Contributors</b>	<b>REALL, ESKT, AAIF, MAG</b>
<b>Deliverable No.</b>	<b>4.3</b>
<b>Deliverable Title</b>	<b>Evaluation Report</b>
<b>Dissemination level</b>	<b>PU</b>
<b>Status</b>	<b>Final</b>
<b>Version</b>	<b>2</b>
<b>Delivery date</b>	<b>31/10/2021</b>

**Copyright © AAL-2018-2-118 POSITIVE Consortium**

This document is proprietary of the POSITIVE Consortium. Neither this document nor the information contained herein shall be used, distributed or communicated, in any form or by any means, without the prior written consent of the POSITIVE Consortium.

## Revision History

Revision	Date	Organization(s)	Changes
1	15/04/2021	FSL	First draft of the deliverable
2	23/04/2021	REALL	Contribution to Section 2
3	23/04/2021	ESKT	Contribution to Section 2
4	26/04/2021	AAIF	Contribution to Section 2
5	26/04/2021	MAGG	Contribution to Section 3.1
6	28/04/2021	FSL	Integration of partners' contribution
7	29/04/2021	AAIF	Internal review
8	01/05/2021	REALL	Internal review
9	04/05/2021	FSL	Final Version of the deliverable
10	30/09/2021	FSL	Second draft of the deliverable
11	04/10/2021	BPC	Internal review
12	05/10/2021	AAIF	Review and input for Romanian participants
13	31/10/2021	FSL	Final version of the deliverable

Table 1 Revision History

---

## Executive Summary

This report describes the main findings of the two field trials of the POSITIVE platform conducted in four countries (Italy, Poland, Romania, Spain) by the end user organizations. Results from the adopted techniques (i.e. questionnaires, focus groups, individual interviews) are presented in order to explore the platform use and the possible impact of being socially engaged using the platform functionalities on primary and tertiary users involved in this phase of the project.

To achieve a comprehensive description of the platform use, a specific section of the present document reports the prevalent technical issues encountered by users and the possible solutions provided by the technical partners. The last section contains insights from focus groups and individual interviews conducted in Poland, Romania, Spain and Italy.

## Table of Contents

<b>Revision History</b>	<b>2</b>
<b>Executive Summary</b>	<b>3</b>
<b>List of Figures</b>	<b>6</b>
<b>List of Tables</b>	<b>7</b>
<b>1. About this Document</b>	<b>8</b>
1.1 Role of the deliverable	8
1.2 Relationship to other deliverables	8
1.3 Structure of this document	8
<b>2. Field trial execution – Pilot Operations Phase I</b>	<b>9</b>
<b>2.1 User involvement</b>	<b>9</b>
2.1.1 Primary end users	9
2.1.2 Tertiary end users	9
<b>2.2 PEUs description</b>	<b>10</b>
Romania (AAIF)	10
Spain (ESKT)	10
Italy (FSL)	11
Poland (REALL)	11
2.2.1 PEUs characteristics	11
<b>2.3 Tertiary end users description</b>	<b>13</b>
Romania (AAIF)	13
Spain (ESKT)	14
Italy (FSL)	14
Poland (REALL)	15
<b>3. Usability</b>	<b>16</b>
<b>3.1 User Experience Evaluation</b>	<b>16</b>
<b>3.2 Results</b>	<b>16</b>
3.2.1 System usability scale	16
3.2.2 After scenario questionnaire	17
<b>3.3 Technical problems and solutions</b>	<b>20</b>
<b>4. Impact on individual functioning</b>	<b>22</b>
<b>4.1 Outcome measures</b>	<b>22</b>
<b>4.2 Results</b>	<b>23</b>
4.2.1 UCLA Loneliness scale	23
4.2.2 WHOQOL-BREF	23
<b>5 .Focus Group Meetings</b>	<b>26</b>
Italy (FSL)	27

<b>Romania (AAIF)</b>	<b>27</b>
<b>Spain (ESK)</b>	<b>28</b>
<b>Poland (REALL)</b>	<b>29</b>
<b>Pilot Operations Phase I - Conclusions</b>	<b>30</b>
<b>6. Field trial execution – Pilot Operations Phase II</b>	<b>30</b>
<b>6.1 User involvement</b>	<b>30</b>
6.1.1 Primary end users	31
6.1.2 Tertiary end users	31
<b>6.2 PEUs description</b>	<b>32</b>
6.2.1 PEUs characteristics	34
<b>6.3 Tertiary end users' description</b>	<b>36</b>
<b>7. Usability</b>	<b>38</b>
<b>7.1 User Experience Evaluation</b>	<b>38</b>
<b>7.2 Results</b>	<b>38</b>
7.2.1 System usability scale	38
7.2.2 After scenario questionnaire	39
<b>7.3 Technical problems and solutions</b>	<b>42</b>
<b>8. Impact on individual functioning</b>	<b>44</b>
<b>8.1 Outcome measures</b>	<b>44</b>
8.2.1 UCLA Loneliness scale	44
8.2.2 WHOQOL-BREF	44
8.2.3 KPIs	48
<b>9. Focus Group Meetings</b>	<b>51</b>
<b>Pilot Operations Phase II – Conclusions</b>	<b>55</b>
<b>Appendix</b>	<b>57</b>
<b>References</b>	<b>65</b>

## List of Figures

FIGURE 1 GENDER OF PEUS .....	12
FIGURE 2 AGE OF PEUS .....	12
FIGURE 3 LEVEL OF EDUCATION OF PEUS .....	13
FIGURE 4 PEUS' PRIOR EXPERIENCE WITH ONLINE PLATFORMS .....	13
FIGURE 5 SYSTEM USABILITY SCALE RESULTS .....	17
FIGURE 6 ASQ TASK 1 RESULTS .....	18
FIGURE 7 ASQ TASK 2 RESULTS .....	18
FIGURE 8 ASQ TASK 3 RESULTS .....	19
FIGURE 9 ASQ TASK 4 RESULTS .....	19
FIGURE 10 ASQ TASK 5 RESULTS .....	20
FIGURE 11 ASQ TASK 6 RESULTS .....	20
FIGURE 12 UCLA LONELINESS SCALE RESULTS .....	23
FIGURE 13 WHOQOL-BREF'S PHYSICAL DOMAIN RESULTS .....	24
FIGURE 14 WHOQOL-BREF'S PSYCHOLOGICAL DOMAIN RESULTS .....	24
FIGURE 15 WHOQOL-BREF'S SOCIAL RELATIONSHIPS DOMAIN RESULTS .....	25
FIGURE 16 WHOQOL-BREF'S ENVIRONMENT DOMAIN RESULTS .....	25
FIGURE 17 WHOQOL-BREF FOUR DOMAINS' RESULTS .....	26
FIGURE 18 GENDER OF PEUS .....	34
FIGURE 19 AGE OF PEUS .....	34
FIGURE 20 LEVEL OF EDUCATION OF PEUS .....	35
FIGURE 21 PEUS' PRIOR EXPERIENCE WITH ONLINE PLATFORMS .....	35
FIGURE 22 SYSTEM USABILITY SCALE RESULTS .....	38
FIGURE 23 SYSTEM USABILITY SCALE RESULTS STRATIFIED BY STATE .....	39
FIGURE 24 ASQ TASK 1 RESULTS .....	40
FIGURE 25 ASQ TASK 2 RESULTS .....	40
FIGURE 26 ASQ TASK 3 RESULTS .....	41
FIGURE 27 ASQ TASK 4 RESULTS .....	41
FIGURE 28 ASQ TASK 5 RESULTS .....	42
FIGURE 29 ASQ TASK 6 RESULTS .....	42
FIGURE 30 UCLA LONELINESS SCALE RESULTS .....	44
FIGURE 31 WHOQOL-BREF'S PHYSICAL DOMAIN STRATIFIED BY STATE .....	45
FIGURE 32 WHOQOL-BREF'S PSYCHOLOGICAL DOMAIN STRATIFIED BY STATE .....	46
FIGURE 33 WHOQOL-BREF'S SOCIAL RELATIONSHIPS DOMAIN STRATIFIED BY STATE .....	46
FIGURE 34 WHOQOL-BREF'S ENVIRONMENT DOMAIN STRATIFIED BY STATE .....	47
FIGURE 35 KPI – PERSONAL WELLBEING STRATIFIED BY STATE .....	48
FIGURE 36 KPI – SATISFACTION WITH MY LIFE STRATIFIED BY STATE .....	48
FIGURE 37 KPI – MEANINGFUL LIFE STRATIFIED BY STATE .....	49
FIGURE 38 KPI – HAPPINESS STRATIFIED BY STATE .....	49
FIGURE 39 KPIS – FOUR MEASURES RESULTS .....	50
FIGURE 40 LEVEL OF APPRECIATION FOR POSITIVE AFTER TESTING .....	50

## List of tables

TABLE 1 REVISION HISTORY .....	2
TABLE 2 LIST OF DELIVERABLES RELATED TO D4.3 .....	8
TABLE 3 NUMBER OF PEUS INVOLVED IN PILOT OPERATION PHASE I FOR EACH COUNTRY .....	9
TABLE 4 NUMBER OF TEUS INVOLVED IN PILOT OPERATION PHASE I FOR EACH COUNTRY .....	10
TABLE 5 TECHNICAL PROBLEMS AND SOLUTIONS PILOT OPERATIONS PHASE I .....	22
TABLE 6 NUMBER OF PEUS AND TEUS INVOLVED IN THE FOCUS GROUP FOR EACH COUNTRY .....	27
TABLE 7 ITALY (FSL) FOCUS GROUP RESULTS .....	27
TABLE 8 ROMANIA (AAIF) INDIVIDUAL INTERVIEWS RESULTS .....	28
TABLE 9 SPAIN (ESKT) INDIVIDUAL INTERVIEWS RESULTS .....	29
TABLE 10 POLAND (REALL) INDIVIDUAL INTERVIEWS RESULTS .....	29

---

TABLE 11 TECHNICAL PROBLEMS AND SOLUTIONS PILOT OPERATIONS PHASE II.....	43
TABLE 12 NUMBER OF PEUs AND TEUs INVOLVED IN THE INDIVIDUAL INTERVIEWS FOR EACH COUNTRY .....	51
TABLE 13 ITALY (FSL) INDIVIDUAL INTERVIEWS RESULTS.....	52
TABLE 14 ROMANIA (AAIF) INDIVIDUAL INTERVIEWS RESULTS. ....	53
TABLE 15 SPAIN (ESKT) INDIVIDUAL INTERVIEWS RESULTS.....	54
TABLE 16 POLAND (REALL) INDIVIDUAL INTERVIEWS RESULTS. ....	54
TABLE 17 POSITIVE SECTIONS THAT BRING MOST VALUE FOR PEUs .....	55
TABLE 18 PERCENTAGE OF PEUs AND TEUs WILLING TO PAY FOR POSITIVE .....	55
TABLE 19 NET PROMOTER SCORE (NPS).....	55

## 1. About this Document

### 1.1 Role of the deliverable

This deliverable presents the main results of the two pilot testing (i.e. Pilot Operation Phase I and Pilot Operation Phase II) of the POSITIVE platform conducted in Italy, Romania, Poland and Spain. The aim is to test usability and acceptance of the platform and to evaluate possible changes in perceived quality of life of primary end users (hereafter called PEUs), especially in terms of loneliness mitigation. The whole Pilot Operation Phase I lasted 4 months (**M16 2020 – M19 2020**) while Pilot Operation Phase II lasted 8 months (**M21 – M28 2021**), including preparation and analysis of the collected data.

PEUs were recruited at each end-user organization and tested the POSITIVE platform in their own environment for a one-month period in Pilot Operation Phase I and for a six-month period in Pilot Operation Phase II. Users' personal feedback was collected before and after pilot testing through the administration of selected questionnaires. Additionally, individual interviews and focus group were conducted according to the specific COVID-19 pandemic restrictions in each country, as to derive a more fine-grained impression of users' experience. Insights about usability of the platform, difficulties in performing tasks, as well as technical problems and design aspects were collected as to provide valuable information for the further improvement of the POSITIVE system.

### 1.2 Relationship to other deliverables

The present report is related to the following POSITIVE deliverables:

Deliverable	Relation
D2.1	Co-design and Requirements Analysis
D2.2	Report on End User Recruitment and Mobilization
D2.3	System architecture and Technical Specifications
D3.5	Integrated POSITIVE System
D4.1	Validation and demonstration planning
D4.2	Pilot Operation Summary Report

Table 2 List of deliverables related to D4.3

### 1.3 Structure of this document

After a short description of the primary and tertiary end users' characteristics, their interaction with the platform will be presented. In this section, a particular attention will be given to technical issues encountered by users and the possible solutions provided by technical partners. Then, the main findings from data collected using various questionnaires will be examined. In the final section a description of the individual interviews and focus groups conducted in Poland, Romania Spain and Italy will be given.



## 2. Field trial execution – Pilot Operations Phase I

### 2.1 User involvement

Demographic characteristics (age, gender, living status, educational level) and technology usage levels (prior experience with platforms and social networks and comfort with online platforms) of the involved 60 PEUs are described below. A brief description of the 11 tertiary end users involved will follow.

#### 2.1.1 Primary end users

Each end user organisation recruited PEUs according to their specific predefined approach, as described below (section 2.2). Inclusion criteria for the volunteers were:

- age between 55 to 75 years old;
- Healthy independent seniors with minor health issues/ disabilities.

In total, **60 primary end users** were recruited in the four countries as follows:

COUNTRY	ORGANIZATION	PEUs
Romania	AAIF	18
Italy	FSL	18
Spain	ESKT	18
Poland	REALL	6

Table 3 Number of PEUs involved in Pilot Operation Phase I for each country.

Training of PEUs was performed prior to the pilot testing by the end of September and beginning of October 2020. AAIF organized 5 face-to-face training sessions for PEUs; Italy training sessions took place at FSL in three specific appointments arranged with 18 PEUs; ESKILARA performed the training online using WhatsApp and phone calls, whereas in Poland one face-to-face meeting was organized by REALL. All COVID-19 safety measures were taken.

#### 2.1.2 Tertiary end users

11 Tertiary end users (hereafter called TEUs) were identified and recruited as follows:

COUNTRY	ORGANIZATION	TEUs
Romania	AAIF	3
Italy	FSL	4

Spain	ESKT	3
Poland	REALL	1

Table 4 Number of TEUs involved in Pilot Operation Phase I for each country.

In Romania 2 online training sessions were conducted for TEUs; In Italy face-to-face training sessions were provided to each TEU; In Spain just one of the TEUs participated in a physical meeting at ESKILARA's location while for the other 2 TEUS the training session was performed online; In Poland only one face-to-face meeting was organized. All COVID- 2019 safety measures were taken.

## 2.2 PEUs description

### Romania (AAIF)

18 PEUs tested the POSITIVE platform in Romania. They were selected from the AAIF's internal database of subjects and through advertisement posted on Facebook. 7 tablets with Internet connection were given to 7 Romanian volunteers by AAIF to ensure their participation to the project because they did not have neither a device nor Internet at home.

The majority of Romanian volunteers were female i.e. 17/18. There was only one male participant. The average age was 65. 66,6 % of the Romanian volunteers were highly educated. Specifically, 8 seniors had completed university studies and 4 had completed post-university studies. The other 5 had a high school diploma and 1 completed a professional school. As for their income, 47.1% of the Romanian sample reported a monthly income of over 406 Euros (over 2000 RON). 29.4% reported an income between 243 to 406 Euros (Between 1200 and 2000 RON), and 17.6% said that their income was between 162 and 243 Euros per month (Between 800 and 1200 RON). All participants were already retired. 64.7% of the Romanian participants reported that they lived alone. 35.3% reported that they lived with someone else e.g., with a spouse and/or other family member.

As for their prior experience with online platforms, 43.8% of the Romanian sample did not have prior experience, and another 12.5% used them rarely. As for their prior experience with social networks such as Facebook, Twitter and Instagram, 55,5% of the Romanian volunteers use them on a regular basis (Always and Usually). 27.8% have never used social media prior to their participation in POSITIVE. A detailed description of each participant can be found in Annex 1

### Spain (ESKT)

In Spain 18 PEUs were involved in the POSITIVE project. The recruitment process involved the following organisations from Bilbao: Aletu Association and Uribarri's Elderly Association; and from the municipality of Gernika-Lumo: Gernika-Lumo's Retirees Association. All organisations collaborated in the selection of participants from their databases. In order to diversify the sample, the organization managed to attract seniors with different gender, living status, educational level and prior experience with platforms. 9 of the PEUs were females and 9 were males and the average age was 63. 61,1 % of the Spanish volunteers were highly educated. Specifically, 5 participants had completed post-university studies, 6 of them had completed superior studies, 5 had completed high school and 2 of the participants had completed mandatory schooling (Others). 66,6 % of them had more than € 2000 of monthly income, 27,7% of them between € 1000 and € 2000 and 5,5%

had under € 500 of monthly income. 61,1 % of them was still working, and 38,8% of them was already retired. 5,5% of them lived alone, 94,5% lived with someone else e.g. spouse and/or other family member. As for their prior experience with online platforms, 27,7% of the Spanish sample replied that they had no prior experience, and another 22,2% have used them rarely. As for their prior experience with social networks such as Facebook, Twitter and Instagram, 16,6% of the Spanish volunteers use them on a regular basis (Always and Usually). 66,6% has never used social media prior to their participation in POSITIVE (Annex 2).

### **Italy (FSL)**

In Italy 18 PEUs were involved in the POSITIVE project, all of them were recruited from a database of healthy subjects and by word of mouth. In order to diversify the sample, the organization managed to attract seniors with different gender, living status, educational level and prior experience with platforms. 10 PEUs were females and 8 were males and the average age was 68. 50 % of the Italian volunteers were highly educated. There were 4 participants with a professional school diploma, 1 had 9 years of education (Other), 4 a high school diploma, 6 a master degree and 3 attended post university studies. 61,1% of them received a monthly income higher than € 2000, 33,3 % of them between € 1000 and € 2000 and 5,5% had a monthly income below € 500. Amongst all, only one participant was still in the work force. 16,6% lived alone and 83,3 % lived with someone else e.g. spouse and/or other family member. As for their prior experience with online platforms, only 5,5% of the participants replied that they had no prior experience, and only 5,5 % have used them rarely. As for social networks such as Facebook, Twitter and Instagram, 44,4% of the Italian volunteers use them on a regular basis (Always and Usually), 27,7% have never used social media prior to their participation in POSITIVE (Annex 3).

### **Poland (REALL)**

In Poland during the first pilot testing 6 PEUs were identified and recruited from the internal POSITIVE database. The sample was randomized by choosing seniors from different organizations, backgrounds, age, socio-economic status, living status and educational level. 4 PEUs were females and 2 were males and the average age was 69. All of them had completed superior studies except for one volunteer who had professional school as a level education. 33,3% of the participants lived alone and 66,6 % lived with someone else e.g. spouse and/or other family members. 66,6 % of the participants reported earnings over 2000PLN, 16,6 % reported earnings ranging from 800 to 1200 and 16,6% reported earnings between 1200 and 2000. 50% of the PEUs were working at the time of the survey. As for their prior experience with online platforms, only 16,6 % of the participants replied that they had no prior experience, and 33,3% of the participants replied that they had used them rarely. As for their prior experience with social networks such as Facebook, Twitter and Instagram, 66,6% of the Polish volunteers use them on a regular basis (Always and Usually) and only 16,6% have never used social media prior to their participation in POSITIVE (Annex 4).

#### **2.2.1 PEUs characteristics**

Considering the whole sample of 60 primary end users, 33 % of the PEUs were males and the 67 % were females. Only Spanish PEUs were balanced in terms of gender, while the majority of recruited PEUs in Italy, Romania and Poland were females.

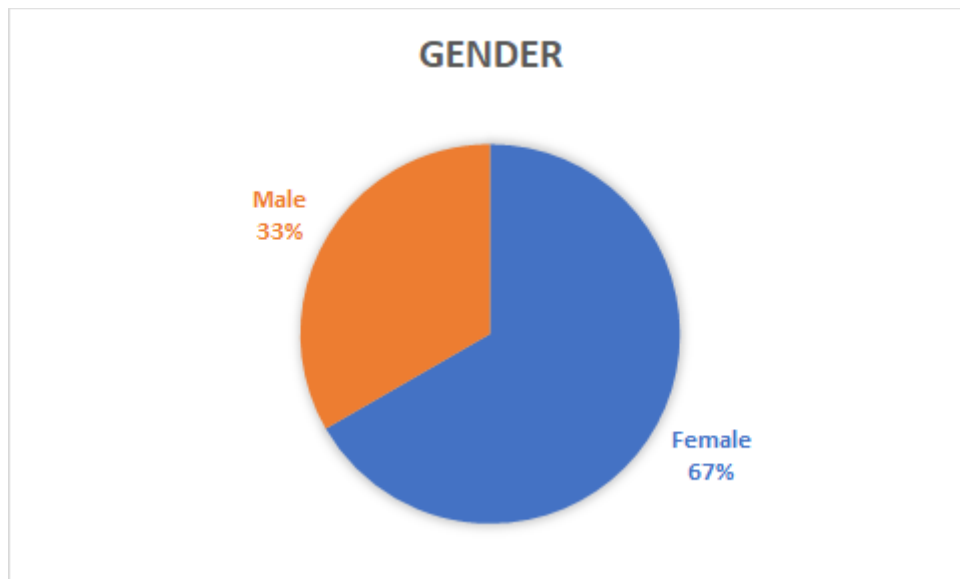


Figure 1 Gender of PEUs

The mean age for the whole sample of PEUs was 66,8, with Spanish PEUs as the youngest and Polish ones as the oldest.

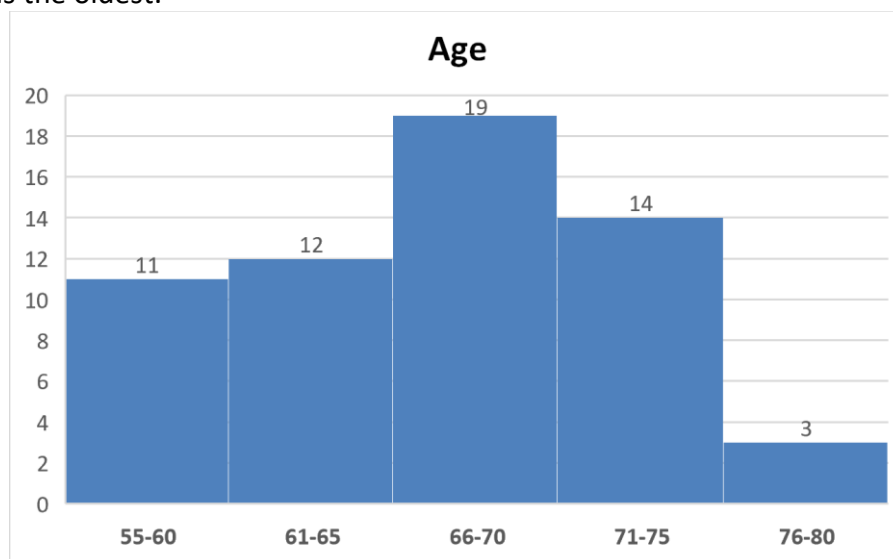


Figure 2 Age of PEUs

Regarding the level of education, 62% of participants were highly educated. The majority of PEUs have completed superior studies, except for Italian PEUs who showed equally distributed levels of education.

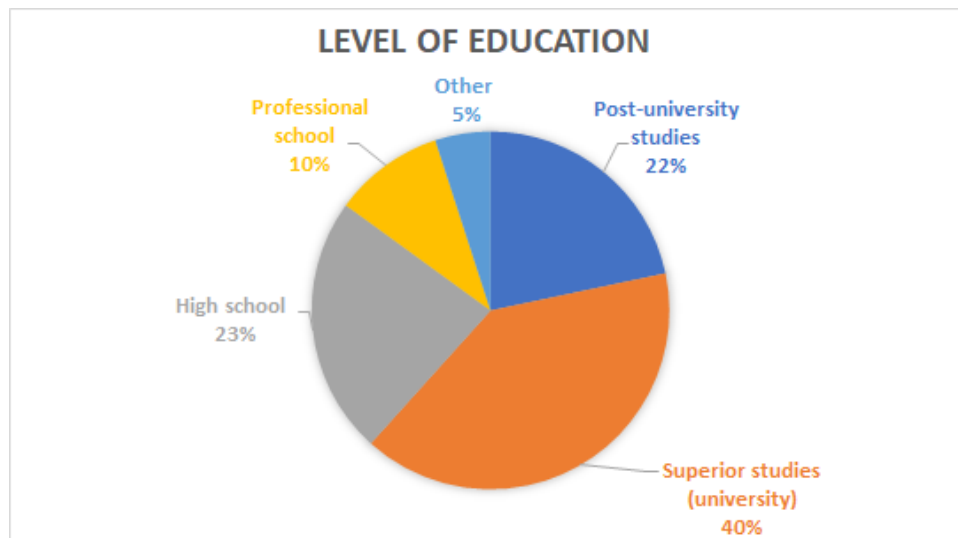


Figure 3 Level of education of PEUs

As for their prior experience with online platforms, 23% of the whole sample replied that they had no prior experience, and another 15% have used them rarely. Considering PEUs recruited from the four end user organizations, the Romanian sample resulted as the one with the lowest level of experience in using online platforms.

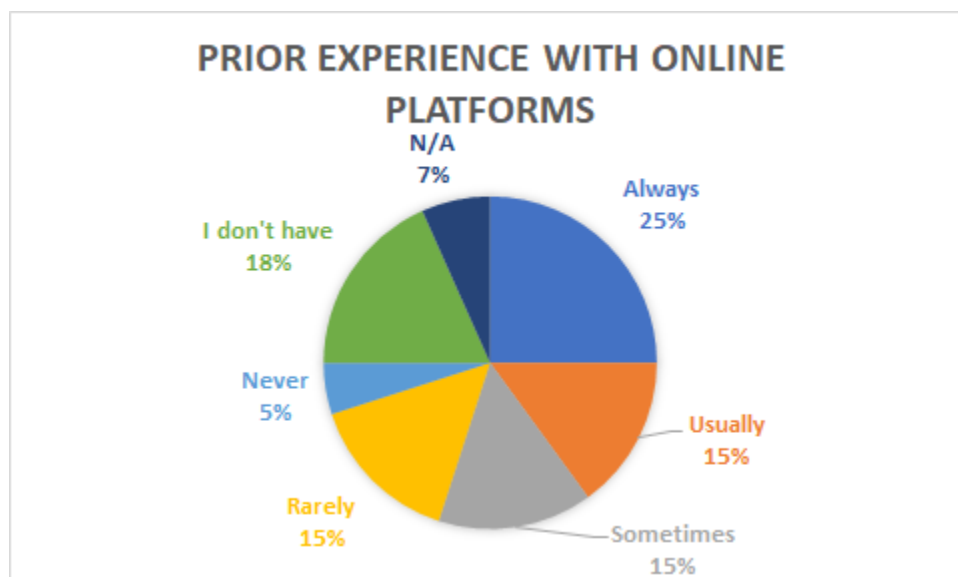


Figure 4 PEUs' prior experience with online platforms

## 2.3 Tertiary end users description

### Romania (AAIF)

Tertiary end users (hereafter called TEUs) were identified and recruited. Due to the Covid-19 pandemic, most senior clubs in Bucharest have ceased or significantly reduced their activity. They do not organize face-to-face meetings in their premises. Therefore, they were not interested in taking part in POSITIVE. However, three TEUs agreed to take part in the testing. They were

**Association “Magic Seniors”** <https://magicseniors.ro/>, **The Citizenship, Education and Action Group (GEAC)** <https://www.seniorul.ro/>, and **Association Habilitas** <https://www.habilitas.ro/index.php/en/>. All three of them are Romanian NGOs working with seniors in Bucharest. They have diverse initiatives, projects and activities aimed at improving the quality of life and wellbeing of Romanian seniors (Annex 5).

### Spain (ESKT)

Three TEUs took part in the pilot testing. They are described below and in Annex 6.

**Gernika-Lumo City council:** Gernika-Lumo is a town in the province of Biscay, in the Autonomous Community of the Basque Country, Spain. It has a population of nearly 17.000 people and it is one of the municipalities with the oldest population in the Basque Country (22,4%). There are several organizations of senior citizens in the municipality. The City Council offers different points such as the City Council itself or the House of Culture to obtain information about events, courses or trips that may be of interest to older people. In addition, it has a web page where they can make these queries electronically.

**Torrezuri gernika residence:** This is a building specifically designed for the elderly people. Spaces are wide which allows the easy and problem-free mobilization of all people, including people with disabilities and in wheelchairs. 25% of the Residence places are individual, as to enhance privacy.

**Torrezuri gerovida consulting:** This is a socio-health consulting company belonging to the Torrezuri Group whose activities are focused on:

- Collaboration with the Dignified Care Foundation in the implementation of the Libera-Ger Standard and the Life and Person Model in care centers for dependent people.
- The implementation of Quality and Excellence Management Models in residences for dependent elderly people and social health centers, in alliance with other consulting firms.
- Advice on management of social and health centers.
- The training of health and social health professionals and informal caregivers.
- Research and creation of new forms of care and new management models.

### Italy (FSL)

Four TEUs were recruited and took part in the pilot testing. Three of them were private organization and one a public institution.

**Scuola del Verde:** This is an organization established in 2015 of itinerant gardeners. They collaborate with the Botanical Garden of Rome. They organize various types of lessons and workshops in the Garden and guided visits in major green areas of Rome. One of the objectives of this organization is to stimulate people to rediscover the innate link with nature, reconsidering the role of the house and its outdoor spaces according to the identity of those who live there. The guiding principle of this school is that nature can give serenity and well-being to those who understand its benefits.

**Giulia Natali:** She is an expert yoga teacher, an educator and also a speech therapist. She uses her breathing techniques as a guide in her lessons. The most important thing of this activity is that it acts deeply on the body and soul. She also organizes workshops, group and individual yoga lessons both face-to-face and in the online modalities.

**Officina delle arti antiche:** This is an organization established in 2012 that offers art courses and workshops of various types such as fresco painting, mosaic, panel painting, miniature and ceramic decoration strictly respecting original materials and traditional methods. Moreover, they organize guided tours in the main historical sites of Rome.

**Parco Regionale dell'Appia Antica:** The Appia Antica Regional Park was established in 1988 and is a public institution. In the city of Rome, this park represents the most important place for its biodiversity, such as the presence of various vegetation and fauna. They organize numerous activities in the Park like workshops, walking tours, and guided visits.

A short description of tertiary end users is provided below and in Annex 7.

### Poland (REALL)

One TEU was recruited and took part in the pilot testing. A short description is included below and in Annex 8:

#### **Dr. Edyta Bonk - SWPS University**

Third Age University under SWPS University of Social Sciences and Humanities (SWPS University) is a leading higher education institution in Poland, excelling in Psychology, Law, Language Studies, Literature and Culture Studies, Media and Communication Studies, Management, and Design. A particularly active member of the university community and a Psychological Coordinator of the Third Age University under SWPS, that unites seniors under various associations is Dr. Edyta Bonk. She is a developmental psychologist, who deals with the psychological aspects of active aging and cognitive stimulation of seniors (memory training, creative thinking training). She organises various sessions of art therapy, the influence of movement, music and dance on the body and psyche, she collaborates with the Tri-City Universities of the Third Age and Nursing Homes. The above-mentioned university organises various initiatives for seniors with a focus on the psychological aspects and broadly understood mental wellbeing. Dr. Bonk provided us with valuable content – a series of courses she made, called “Brain Training For Seniors”, consisting of theoretical and practical classes about different memory functions and training. Moreover, she provided us with her expertise deriving from over 15 years of experience of working with seniors. She stays in touch with us and actively engages in Positive development.

### 3. Usability

#### 3.1 User Experience Evaluation

To assess this aspect, the below instruments were administered:

**a) System Usability Scale (SUS)** – The System Usability Scale is a valid tool which allows to assess in a reliable way the usability of technology, in which the users have to answer ten statements from strongly disagree (1) to strongly agree (5).<sup>1</sup>

**b) After Scenario Questionnaires (ASQs)** – After Scenario Questionnaire (hereafter called ASQs) was used at the beginning of the training. ASQs are questionnaires administrated at the end of each activity with the purpose to understand and compare which interface of the system is perceived as a problem by the users.<sup>2</sup>

Both measures are fully presented in D4.1.

#### 3.2 Results

Scores from each questionnaire collected before and after the end of pilot testing were analysed using paired sample *t*-tests allowing to compare mean differences between the two sets of observations. Post-test data for one Romanian PEU are not available (subj 5) as this volunteer dropped out, thus the final analysed sample consisted of 59 PEUs from the four end user organizations.

##### 3.2.1 System usability scale

SUS scores have a range of 0 to 100. Based on results from the item benchmark, a score of 68 is considered the centre of the Sauro-Lewis curved grading scale; according to this, scores over 68 would be considered above average and scores under 68 would be considered below average<sup>3</sup>.

A total mean value score of 62,6 was assigned to the POSITIVE platform in the pre-test session and a mean value of 61,7 in the post-test.

No statistically significant difference was evident between the pre and post-test scores [ $t_{(58)}=0,491$ ;  $p=0,625$ ].

---

<sup>1</sup> Brooke, J. (1996). Sus: a “quick and dirty” usability. *Usability evaluation in industry*, 189.

<sup>2</sup> Lewis, J. R. (1991). Psychometric evaluation of an after-scenario questionnaire for computer usability studies: the ASQ. *ACM Sigchi Bulletin*, 23(1), 78-81.

<sup>3</sup> Lewis, J. R., & Sauro, J. (2018). Item benchmarks for the system usability scale. *Journal of Usability Studies*, 13(3).



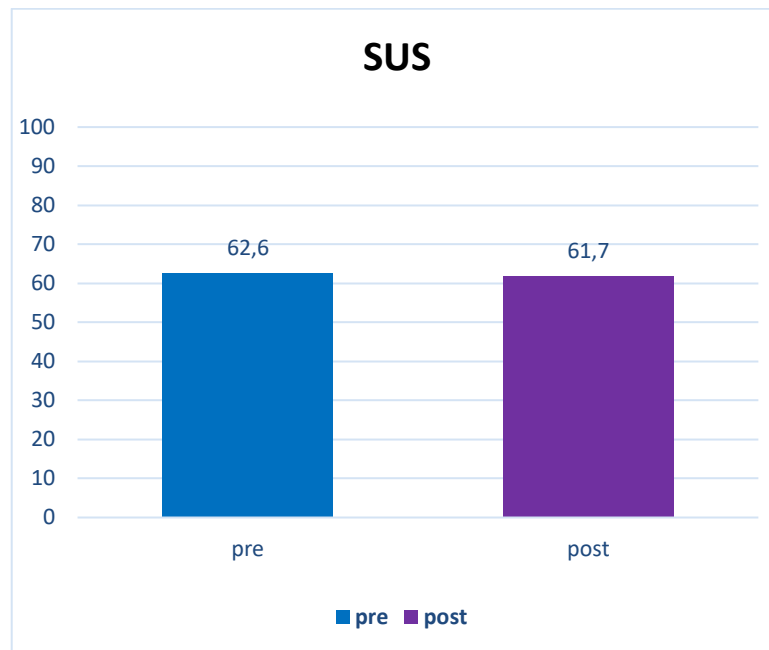


Figure 5 System usability scale results.

### 3.2.2 After scenario questionnaire

Regarding which functionality of the system was perceived as more problematic by the users and which one was the easiest for them, 6 different tasks were performed at the end of the training session as follows:

- Task 1 Registration + creation of an account:** Task 1 was performed by 24 PEUs randomly selected from the sample of recruited PEUs across the four end user organizations. 7 PEUs evaluated this task as *Very Easy*, 13 as *Easy*, 4 as *Difficult* and 0 as *Very Difficult*. 22 out of 24 PEUs were satisfied with their task-completion time and the support information given to them during the task, while the others were not.

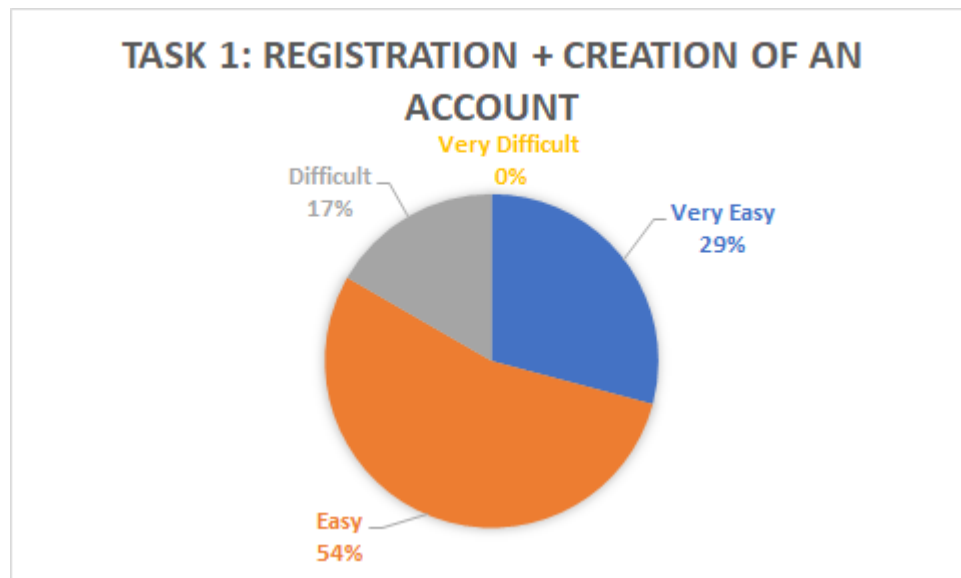


Figure 6 ASQ Task 1 results.

- Task 2 Login + New events:** Task 2 was performed by 23 PEUs. 6 of them assessed this task as *Very Easy*, 14 as *Easy*, 3 as *Difficult* and 0 as *Very Difficult*. 22 out of 23 PEUs were satisfied with their task-completion time and all of them were satisfied with the support information given to them during the task.

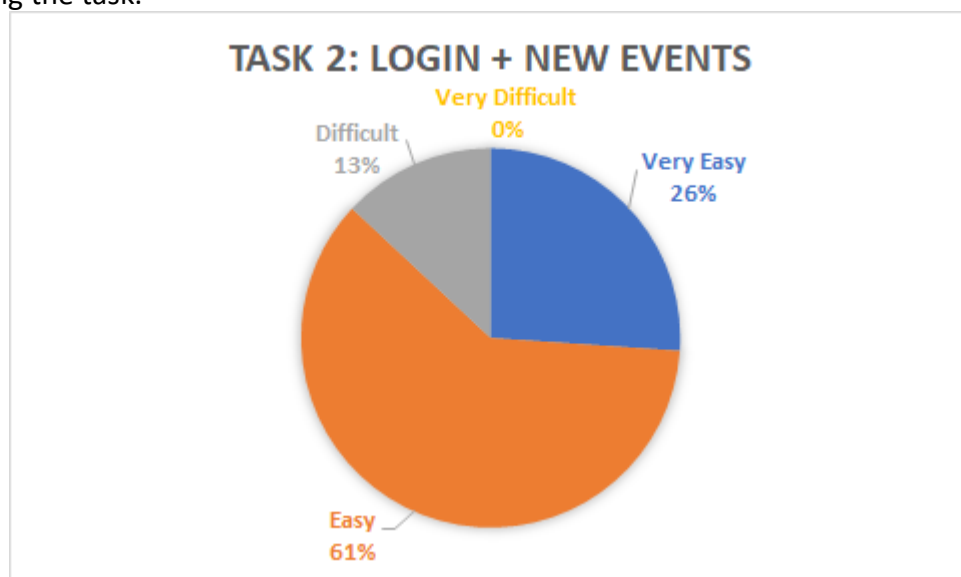


Figure 7 ASQ Task 2 results.

- Task 3 Online courses:** Task 3 was performed by 21 PEUs. 6 of them assessed this task as *Very Easy*, 13 as *Easy*, 2 as *Difficult* and 0 as *Very Difficult*. All of them were satisfied with their task-completion time and with the support information given to them during the task.

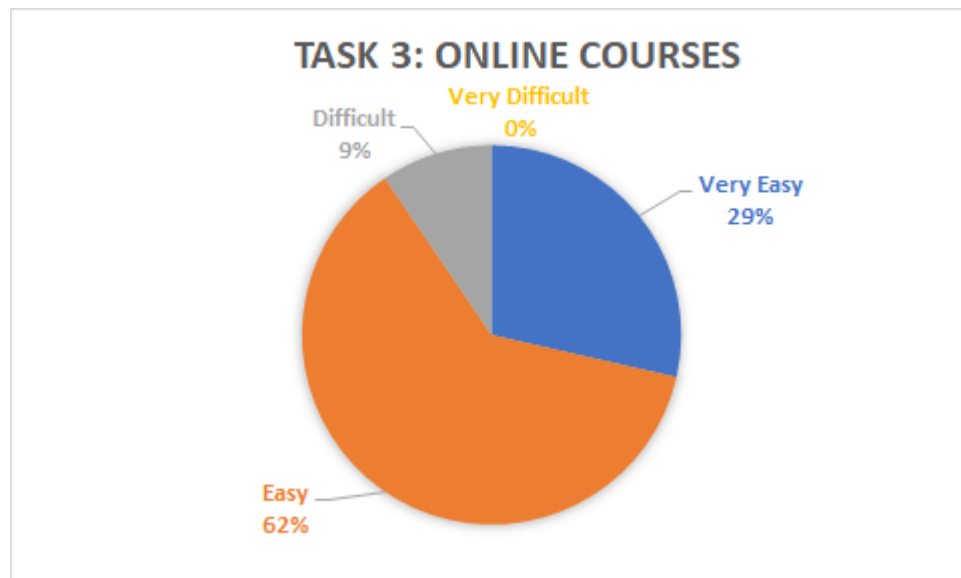


Figure 8 ASQ Task 3 results.

- **Task 4 Creation of a fictional event:** Task 4 was performed by 24 PEUs. 4 of them assessed this task as *Very Easy*, 14 as *Easy*, 4 as *Difficult* and 2 as *Very Difficult*. 19 out of 24 were satisfied with their task-completion time instead the others were not, and all of them except for 1, were satisfied with the support information given to them during the task.

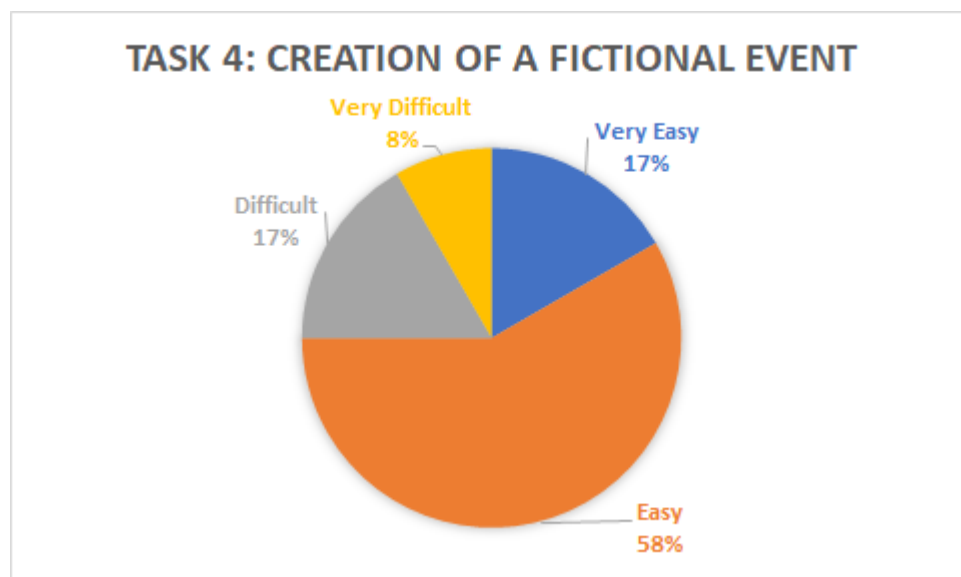


Figure 9 ASQ Task 4 results.

- **Task 5 Games section:** Task 5 was performed by 8 PEUs. 3 of them assessed this task as *Very Easy*, 5 as *Easy*, 0 as *Difficult* and 0 as *Very Difficult*. All of them were satisfied with their task-completion time and with the support information given to them during the task.

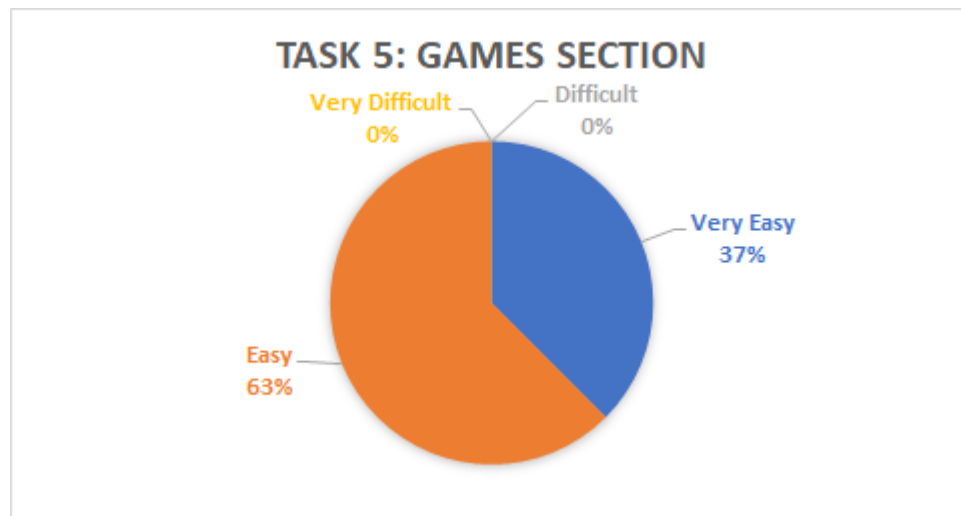


Figure 10 ASQ Task 5 results.

- Task 6 Creation of a fictional Forum thread (topic):** Task 6 was performed by 23 PEUs. 4 of them assessed this task as *Very Easy*, 15 as *Easy*, 4 as *Difficult* and 0 as *Very Difficult*. 19 out of 23 PEUs were satisfied with their task-completion time, while the others were not. 20 out of 23 PEUs were satisfied with the support information given to them during the task.

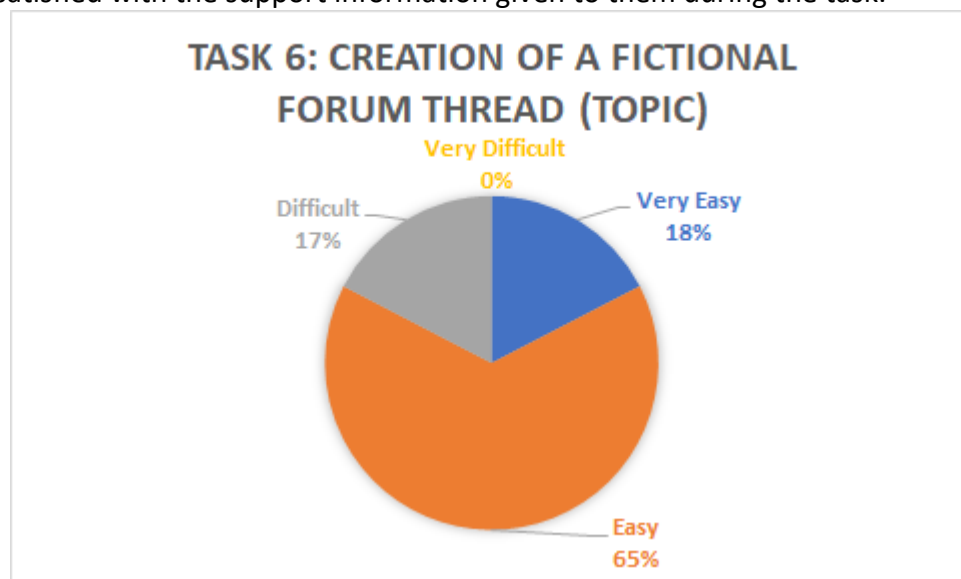


Figure 11 ASQ Task 6 results.

### 3.3 Technical problems and solutions

Pilot Testing has been particularly useful for technical partners to understand the most critical points for the POSITIVE users. Rather than to specific functionalities, most technical problems were related to UX/UI and the usability of the system. Table 5 presents the problems which were reported by PEUs and the solutions provided by the technical partners.

Problem	Solution
<b>Difficulties in the registration process</b>	<p>The registration process has been made easier thanks to the implementation of:</p> <ul style="list-style-type: none"> <li>the pop-up window has been substituted with a dedicated page with a bigger block in the middle of the screen with larger fields and bigger font.</li> <li>eye icon to show hidden password while typing and also a big button “click here to show the password”.</li> <li>additional fields that force the user to repeat email and password to avoid mistyping.</li> <li>grey and blurred instructions in each mandatory field to guide and help users in the registration phase.</li> <li>an easier to use re-captcha.</li> </ul>
<b>User experience/interface</b> <p>The results of Pilot Testing have shown that some users had problems using the platform because of size, position and usability of many graphic elements, such as:</p> <ul style="list-style-type: none"> <li>Small buttons with tiny fonts are hard to see and click for seniors.</li> <li>Small fields for filling in information.</li> <li>Small boxes and fonts for text and notifications.</li> </ul>	<p>The problems reported during Pilot Testing have been used as a starting point for a complete renewal and improvement of UX and UI such as:</p> <ul style="list-style-type: none"> <li>each module has been renewed using the same logics and graphic elements to make them all aligned to the Platform concept</li> <li>the zoom of the browser is set automatically on 125% in order to make graphic elements bigger</li> <li>bigger fonts, buttons, fields, boxes and blocks where necessary</li> <li>more coloured and pleasant interface</li> </ul>
<b>Platform responsiveness</b> <p>The Platform was not properly responsive on mobile devices.</p>	<p>Technical partners have worked to fix the usability bugs on desktop browsers and enhanced the Platform responsiveness on mobile devices, especially following the specifications of Galaxy Tab A6 provided by AAIF to many users.</p>
<b>Platform usability</b> <p>Some users faced difficulties in understanding how to use POSITIVE because they are not familiar with technology.</p>	<p>The Platform has been enriched with tooltips to help users by giving them extra information about icons or graphic elements. A dedicated section called “The POSITIVE Guide” has been create. The scope is to give the users a more detailed guidance on how to</p>

	use POSITIVE. The interface is intuitive with big icons that allows a navigation into main topics where collapsible fields that show explanations and step-by-step instructions on how to execute specific actions on the Platform can be found.
<b>Retrieving a password</b>	The actions needed to change the password have been reduced to make the process easier.
<b>Language selection</b>	Added multiple and big buttons (using an intuitive flag icon) to change the language. The system also saves the language settings on the browser so users do not need to change it anymore.

Table 5 Technical problems and solutions Pilot Operations Phase I.

### General considerations

Results from the sample of PEUs who performed the ASQ questionnaire showed that each functionality of the system, investigated through specific tasks, was considered easy indicating a good level of usability. Specifically, Task 6 (Creation of a fictional forum thread) was the less problematic task for the majority of PEUs.

Pertaining to the overall usability of the system evaluated by the whole sample of PEUs through the SUS questionnaire, no significant differences after one month of usage of the platform were observed. This suggests that first usage learnability was sub-optimal (score below 68) and that usability did not improve with repeated exposition to the system advising for a better integration of the system individual parts in order to optimise the overall system.

## 4. Impact on individual functioning

The same analytic procedure described above was applied for assessing the impact of the first POSITIVE prototype usage on individual functioning. Post-test data for one Romanian PEU are not available (subj 5) because this volunteer dropped out, thus the final analysed sample consisted of 59 PEUs from the four end user organizations.

### 4.1 Outcome measures

- 1. The UCLA 3-item Loneliness Scale** – The UCLA 3-item Loneliness Scale (hereafter called UCLA) was used to measure levels of perceived loneliness in PEUs. This is a 3-item self-report measurement tool, which nowadays is accepted as a valid and widely used tool for assessing loneliness<sup>4</sup>.
- 2. WHOQOL - BREF - WHOQOL - BREF** (see D4.1) is a tool that assesses the quality of life as it is perceived by the subject, introduced by the World Health Organization. It investigates

<sup>4</sup> Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. *Journal of personality and social psychology*, 39(3), 472.

through 26 items four areas representing factors contributing to the quality of life construct: physical health, psychological status, social relationships and environment. It was developed by the WHOQOL Group with 15 international field centres, simultaneously, in an attempt to develop a quality of life assessment that would be applicable cross-culturally<sup>5, 6</sup>.

Both measures are fully presented in *D4.1*.

## 4.2 Results

### 4.2.1 UCLA Loneliness scale

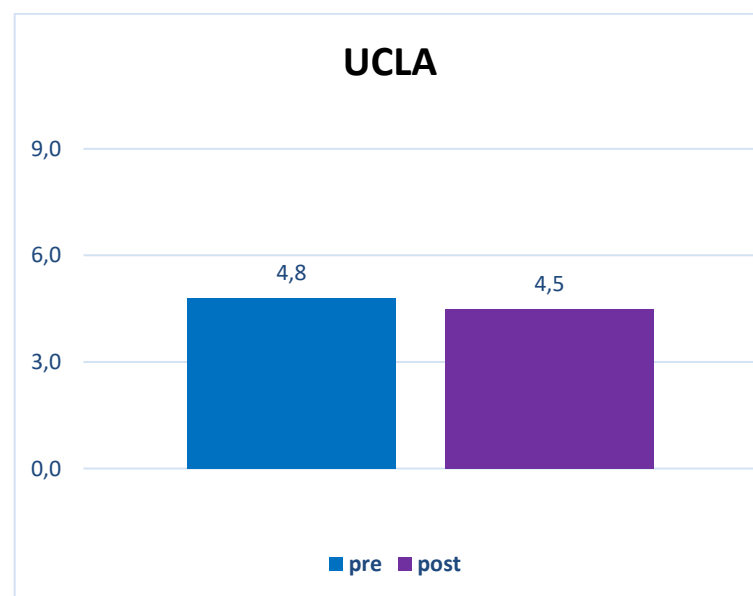


Figure 12 UCLA Loneliness Scale results.

Only 3 items of the UCLA questionnaire were administered. Scores have a range from 3 (low loneliness level) to 9 (high loneliness level). Users showed low averaged scores both in the pre-test (4,8) and in the post-test (4,5). Pre and post-test comparison results showed a trend toward a statistically significant difference, indicating a reduction of perceived loneliness after one month of POSITIVE usage [ $t_{(58)} = 1,758$ ;  $p = 0,084$ ].

### 4.2.2 WHOQOL-BREF

Only raw score per domain were used to statistically describe WHOQOL-BREF results.

**Physical domain** scores have a range from 7 to 35. Our results show a mean value of 15 in the pre-test and 15,7 in the post-test. After one month of usage of the POSITIVE platform, a trend toward

<sup>5</sup> Whoqol Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological medicine*, 28(3), 551-558.

<sup>6</sup> World Health Organization. (1996). *WHOQOL-BREF: introduction, administration, scoring and generic version of the assessment: field trial version, December 1996* (No. WHOQOL-BREF). World Health Organization.

a statistically significant improvement in perceived physical health in our PEUs [ $t_{(58)} = -1,736$ ;  $p = 0,088$ ] was observed.

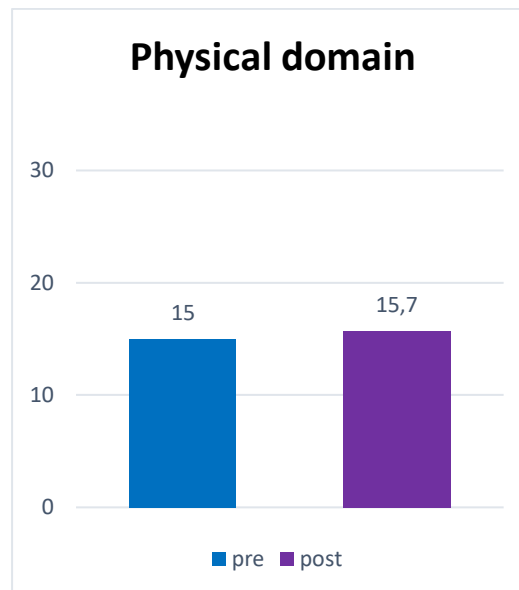


Figure 13 WHOQOL-BREF's physical domain results.

**Psychological domain** scores have a range from 6 to 30. Our results show a mean value of 17,1 in the pre-test and 17,2 in the post-test. We observed a slight improvement, although not statistically significant [ $t_{(58)} = -0,195$ ;  $p = 0,846$ ], in perceived psychological health.

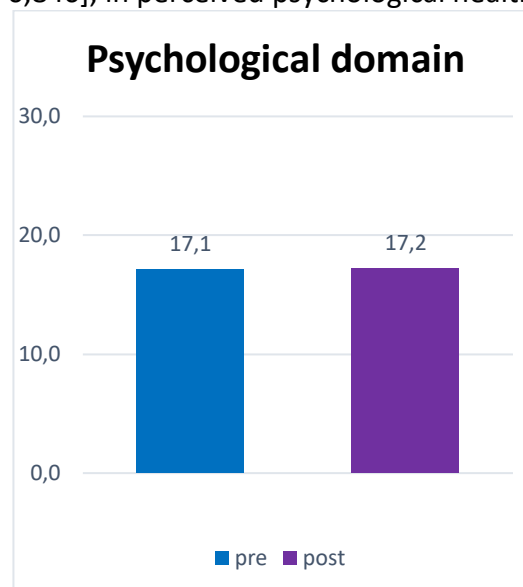


Figure 14 WHOQOL-BREF's psychological domain results.

**Social relationships** scores have a range from 3 to 15. Our results show a mean value of 10,1 in the pre-test and 9,9 in the post-test [ $t_{(58)} = 0,796$ ;  $p = 0,429$ ].



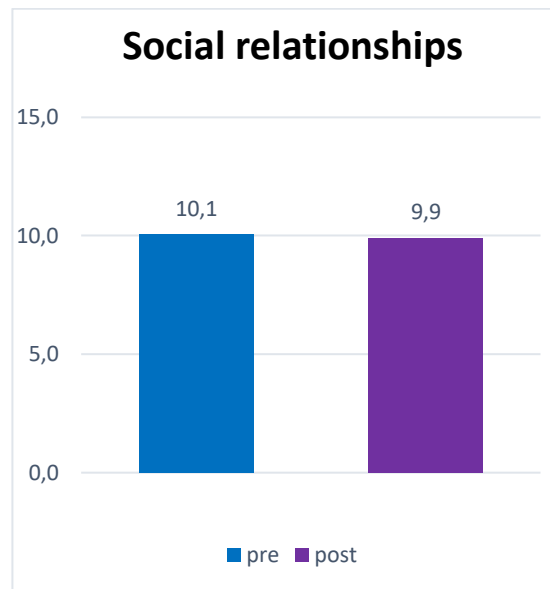


Figure 15 WHOQOL-BREF's social relationships domain results.

**Environment domain** scores have a range from 8 to 40. Our results show a mean value of 30,3 in the pre-test and 31,1 in the post-test. A slight improvement in the environment domain of our PEUs was detected; however, no statistically significant difference was found between the two measurements [ $t_{(58)} = -1,665$ ;  $p = 0,101$ ].

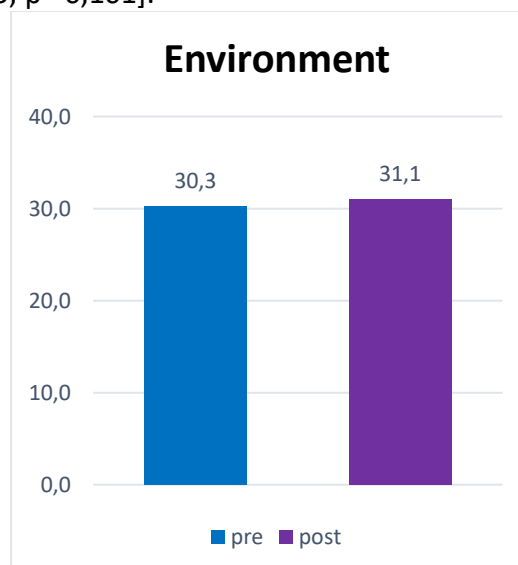


Figure 16 WHOQOL-BREF's environment domain results.

Figure 17 depicts an overall view of WHOQOL-BREF results, as to better highlight differences in pre-post test scores for each domain.

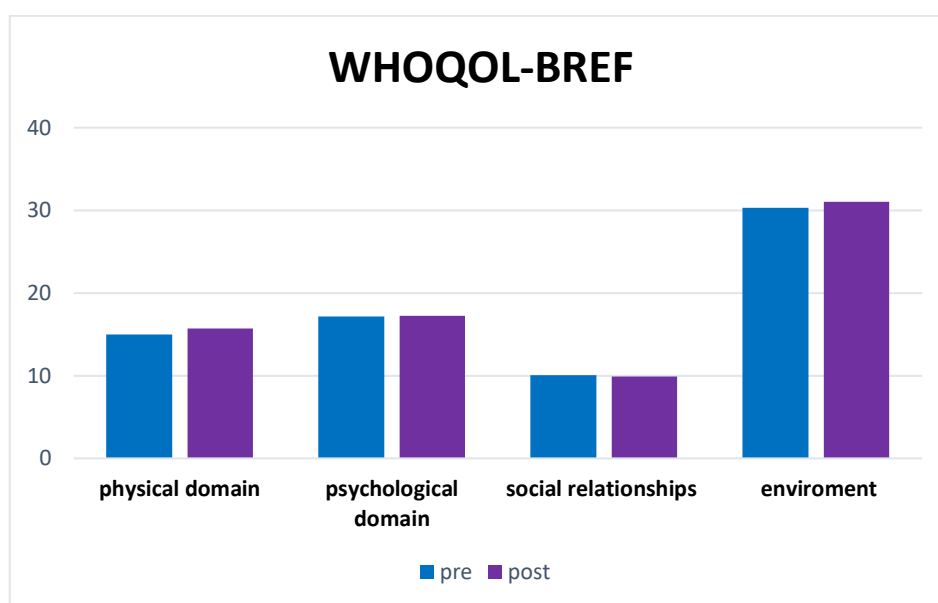


Figure 17 WHOQOL-BREF four domains' results.

### General considerations

When the whole sample of PEUs from the four end user organizations was considered, we observed a meaningful impact of the POSITIVE system usage on the majority of measures evaluating individual functioning. Specifically, both loneliness and physical health consistently improved after one month of usage, while a slight improvement of psychological status and in the environment domain was detected. Only the social relationships domain scores seem to drop in the post-test measurement. However, considering that the pilot was conducted during the COVID-19 second wave, a minor reduction in perceived sociality is reasonable.

### 5. Focus Group Meetings

In order to fully comply with Covid-19 regulations, the focus group after the end of Pilot testing has been carried out in 3 of 4 countries as follows: Romania (AAIF), Spain (ESKT) and Poland (REALL) through individual semi-structured interviews both for PEUs and TEUs. Regarding PEUs' Focus Group, Italy (FSL) organised it online through the Google Meet platform; while an individual semi-structured interview was conducted with TEUs, always respecting anti Covid-19 rules. In total, **20 PEUs** and **11 TEUs** were involved in four countries as follows:

COUNTRY	ORGANIZATION	PEUs	TEUs
Romania	AAIF	6	3
Italy	FSL	6	4

Spain	ESKT	6	3
Poland	REALL	2	1

Table 6 Number of PEUs and TEUs involved in the Focus Group for each country

The goal of the interviews was to investigate two main themes: the users' experience when interacting with POSITIVE platform and levels of loneliness, self-actualization and meaningfulness of the users. For further details about the semi-structured interviews check the *deliverable D4.1*.

## Results

A summary of the themes extracted from interviews transcripts of the Italian, Romanian, Spanish and Polish primary and tertiary end users is reported below.

### Italy (FSL)

1 PEU expressed a positive change in terms of energy, knowledge and self-confidence since the platform usage.

All PEUs enjoyed the POSITIVE system functionalities, especially the Forum (2 PEUs), Events (1 PEU) and Courses (1 PEU) sections, while 2 PEUs liked all the features and did not express a preference. No particular critical issues were reported, nor any functionality was disliked. 1 PEU suggested to improve the main layout and graphics of the platform. 4 out of 6 PEUs stated that POSITIVE enriched their life as it enabled them to meet new people with aging-related problems giving them the possibility to share opinions and learn more about their interests. Two of them were willing to pay a small amount (1 or 2 Euros per month) for platform usage, up to a maximum of 20 Euros per year. Most of them have already a busy life, but they see the platform as a way to enrich it even more. For all of them there was not enough time to establish meaningful connections with other users but they found, especially during the focus group, like-minded people.

All TEUs, except 1, already work with this age group. The preferred tools to communicate with seniors are emails, flyers, blogs and social media (Facebook, Instagram) and they are partially satisfied with them even though these tools need to be personalized to reach the elderlies. TEUs think that POSITIVE is useful for reaching this target age but, their willingness to pay for the platform depended on future developments.

<b>PEUs</b>	<ul style="list-style-type: none"> <li>• All PEUs enjoyed POSITIVE functionalities</li> <li>• 4 out of 6 PEUs stated that POSITIVE enriched their life</li> <li>• 2 out of 6 PEUs would pay for platform usage</li> </ul>
<b>TEUs</b>	<ul style="list-style-type: none"> <li>• All TEUs think that POSITIVE is useful for reaching seniors</li> </ul>

Table 7 Italy (FSL) focus group results.

### Romania (AAIF)

2 PEUs confirmed a change in their life since platform usage, while the other 4 enjoyed mostly the outdoor activities like reaching the pilot site.

Half of the AAIF participants expressed a specific preference for the opportunity to socialize with new friends as to decrease loneliness. None of the POSITIVE features was disliked by the PEUs but, 1 reported technical issues with the platform Tablet's configuration and 1 did not like the time arrangement of Events. Regarding a possible payment fee, only two PEUs expressed the willingness to pay, and one of them would accept to pay only a small amount (2-3 euros/month). For two TEUs it is easy to reach this age's group, one has some issues because it has to call primary users by phone every time. This TEU would pay for this solution, the other two were not willing to because they do not have enough money or they just do not need it. Anyway, they think that if the platform contents will be enriched it could be powerful.

<b>PEUs</b>	<ul style="list-style-type: none"> <li>• 2 out of 6 PEUs confirm a change in their life since the use of POSITIVE</li> <li>• Half of the AAIF participants expressed a specific preference for the opportunity to socialize with new friends as to decrease loneliness</li> <li>• 2 out of 6 PEUs would pay for the use of the platform</li> </ul>
<b>TEUs</b>	<ul style="list-style-type: none"> <li>• 1 out of 3 TEU would pay for POSITIVE</li> </ul>

Table 8 Romania (AAIF) individual interviews results.

### Spain (ESK)

PEUs' lives did not change since the use of the platform, but for one of them is clear that he has to use it more to feel a change. Favourite section for Spanish PEUs was Course (3 PEUs) followed by Event (2 PEUs), 2 PEUs appreciated the possibility to get some information from the platform and 1 PEU loved the possibility to interact with people from other countries. 3 PEUs found some issues with the Game section: 2 of them could not play because the games did not work, and the other PEU could not access the games correctly. 1 PEU disliked the fact that anybody in the platform can contact you. 1 PEU said that the platform enriched his life from a technical point of view because he had never used a social platform. 1 PEU would pay for POSITIVE platform a maximum of 5 euros per month and another one would pay only for the Course subscription. The platform at this state did not help them to cope with loneliness. 1 PEU found like-minded people on the platform, other PEUs did not. None of them had a meaningful connection with others PEUs because of the short time of testing.

All TEUs reach very easily seniors, both directly and with intermediation. They use mostly the personal webpage and face to face contact, but do not have a specific tool to reach them directly. POSITIVE could be a useful tool to reach this age group, but one of the TEUs asserted they would need a specific tool for caregivers. All the three organizations would pay for a tool like POSITIVE and 2 up to 3 TEUs have the possibility to involve sufficient Human Resources.

<b>PEUs</b>	<ul style="list-style-type: none"> <li>• Favourite sections were Course followed by Event</li> <li>• 2 out of 6 PEUs enjoyed POSITIVE usage for reaching people from other countries and interacting with them</li> <li>• 2 out of 6 PEUs would pay for POSITIVE</li> </ul>
-------------	---

<b>TEUs</b>	<ul style="list-style-type: none"> <li>• All TEUs consider POSITIVE a useful tool for reaching seniors</li> <li>• All TEUs would pay for the platform</li> </ul>
-------------	--

Table 9 Spain (ESKT) individual interviews results.

### Poland (REALL)

There have been no significant changes in PEUs lives since they started to use the platform, however 1 of them reported that during this pandemic period she might be use it more. 1 PEU claimed that his favourite section is the Gaming Section, while others preferred the possibility of having a reliable source of information and entertainment from the Courses section. The only issue that PEUs found was a technical problem with games. POSITIVE enriched their lives, especially 1 PEU now has more confidence with technology. 1 PEU over 2 would pay for the platform. The platform did not help them to cope with loneliness. They found like-minded people on the platform, but they did not manage to establish a meaningful connection because of the short time. The TEUs organizations find easy to reach out to this age group using local newspapers, internet and word of mouth. They would pay for a solution to reach them and they believe that if POSITIVE will become more personalized and easier to use, it could potentially solve this issue.

<b>PEUs</b>	<ul style="list-style-type: none"> <li>• POSITIVE enriched PEUs' lives, especially 1 out of 2 PEU now has more confidence with technology</li> <li>• Favourite sections were Games and the possibility to have a source of information and entertainment from the courses section</li> <li>• 1 out of 2 PEU would pay for the platform</li> </ul>
<b>TEUs</b>	<ul style="list-style-type: none"> <li>• All TEUs would pay for a solution for reaching seniors</li> </ul>

Table 10 Poland (REALL) individual interviews results.

In relation to the first theme on the response in the use of the POSITIVE platform, sections such as Courses, Forum, were the most appreciated by the majority of PEUs, whereas the least appreciated section was the one regarding Games, given that at the beginning of Pilot Testing this specific section was not fully integrated, but the users' advice is useful for its future development. Furthermore, many users have reported that thanks to this platform, their lives positively changed in terms of socialization and knowledge, although they stated that the one-month usage was too short to produce enduring effects on their lives.

As for the second theme i.e. levels of perceived loneliness, self-actualization and meaningfulness of users, most of them from the participating countries reported that the POSITIVE platform is of great help to handle loneliness in people that live by themselves. With regard to this, although some users stated that they live a meaningful life, they see the platform as an instrument for enriching themselves and a stimulus to socialization.

### Pilot Operations Phase I - Conclusions

The preceding sections describe in detail the tools adopted to evaluate the effectiveness of POSITIVE platform. Results regarding platform usability are reported first as they are to understand the objective difficulties reported by PEUs in using the system. With the aim to promote a better user experience, we collected feedback from users and improved the most problematic functionalities of the system as described in section 3. In particular, as some users reported difficulties in using POSITIVE, a set of tooltips have been integrated for providing more detailed information about icons and graphic elements. Moreover, the introduction of a new dedicated section (“The POSITIVE Guide”) will provide users with step-by-step instructions on how to execute specific actions on the Platform. Capitalizing on users’ positive feed-backs collected during the Pilot Testing in relation to the Course section, the POSITIVE e-Learning Module will be enriched with webinars promoted by end-user organizations and specifically structured on topics of interest for this age group.

Then, the impact of POSITIVE on individual functioning of PEUs was evaluated through the administration of a multidimensional battery of questionnaires. The main aim was to assess whether POSITIVE contributed to reduce perceived loneliness and increase measures of wellbeing in the elderlies. As our users expressed the necessity of testing POSITIVE for a longer period of time, we expect more consistent effects on these measures during the Pilot Operation Phase II. Nevertheless, we observed a meaningful impact of POSITIVE on the majority of measures evaluating individual functioning. Specifically, both loneliness and physical health consistently improved, while a slight impact on psychological status and environment domain was detected. Only the social relationships domain scores seem to drop in the post-test measurement. However, considering that the pilot was conducted during the COVID-19 second wave, a minor reduction in perceived sociality is reasonable.

Overall, the present report allowed us to gather important feedback from POSITIVE users that will help us in the organisation and monitoring of the second field trial test. Their advices and the problematic issues encountered during the POSITIVE system usage led us to improve the graphical interface of the platform in order to make its use as easy and intuitive as possible. Moreover, psychological and physical improvements reported by some users during platform usage suggest that users will benefit from a future commercialization of the POSITIVE system.

To conclude, beyond the objective difficulties produced by the worldwide pandemic situation, pilot testing was an important opportunity to test usability of the POSITIVE system and its potential to fight social isolation phenomenon.

## 6. Field trial execution – Pilot Operations Phase II

### 6.1 User involvement

Demographic characteristics (age, gender, living status, educational level) and technology usage levels (prior experience with platforms and social networks and comfort with online platforms) of the involved 91 PEUs are described below. A brief description of the 15 tertiary end users involved will follow.

### 6.1.1 Primary end users

Each end user organisation recruited PEUs according to their specific predefined approach, as described below (section 6.2). Inclusion criteria for the volunteers were:

- age between 55 to 75 years old;
- healthy independent seniors with minor health issues/ disabilities.

In total, **91 primary end users** were recruited in four countries as follows:

COUNTRY	ORGANIZATION	PEUs
Romania	AAIF	27
Italy	FSL	28
Spain	ESKT	27
Poland	REALL	9

Table 10 Number of PEUs involved in Pilot Operation Phase II for each country.

Training of PEUs was performed prior to the pilot testing in February 2021 (M22). AAIF organized 10 face-to-face and 3 online training sessions for PEUs from Romania. In Italy, training sessions took place at FSL for new PEUs, while for the 17 PEUs who already took part in Pilot Operations Phase I individual phone calls were arranged. ESKILARA performed the training online using Microsoft Teams, whereas in Poland training sessions were organized online through the Webinar software available on the POSITIVE platform. All COVID-19 safety measures were taken.

### 6.1.2 Tertiary end users

15 Tertiary end users (hereafter called TEUs) were identified and recruited as follows:

COUNTRY	ORGANIZATION	TEUs
Romania	AAIF	3
Italy	FSL	6
Spain	ESKT	4
Poland	REALL	2

Table 11 Number of TEUs involved in Pilot Operation Phase II for each country.

In Romania, 3 online training sessions were conducted for TEUs. In Italy, 6 face-to-face training sessions were provided to each TEU. In Spain, just one of the TEUs participated in a physical

meeting at ESKILARA's location while for the other 2 TEUS the training session was performed online. In Poland, only one face-to-face meeting was organized. All COVID- 2019 safety measures were taken.

## 6.2 PEUs description

### Romania (AAIF)

27 PEUs tested the second prototype of POSITIVE during Pilot Operations Phase II in Romania. 16 of them were new to the project while 11 of the PEUs had already taken part in Pilot Operation Phase I and wanted to continue their participation in the second pilot testing. Recruitment of PEUs was done through announcement on AAIF's Facebook community page. Seniors who were interested in the POSITIVE project signed up and were contacted by researchers. Older adults from AAIF's database were invited to take part in the second pilot testing too. AAIF's researchers made significant efforts in diversifying the project participants for the Pilot Operation Phase II in terms of their education background and socio-economic status. Two senior clubs from Sector 3 and Sector 5 in Bucharest were contacted and some new volunteers were attracted from them too. AAIF also ensured that all seniors who wanted to test POSITIVE were given the chance to do it. Thus, 17 tablets with a SIM card with Internet access were given to 17 project participants who did not have neither a device nor Internet at home.

24 PEUs were female and 3 were male. Their average age was 66 years. As for their educational level, 14 PEUs were highly educated (8 attended university, 6 had post-university studies), 12 PEUs finished high school or a vocational school, and only 1 participant attended primary school (to 8<sup>th</sup> grade). 50% of the Romanian PEUs have monthly income higher than 2000 RON (this amount is equivalent to higher than 404 Euros). 30.8% of the recruited PEUs receive pension between 1200 – 2000 RON (between 242 – 404 Euros), and 15.4% of the PEUs have a pension between 800 and 1200 RON (between 161 and 242 Euros). Amongst all, 3 PEUs still work. The majority of Romanian PEUs reported that they live alone (61.5%), 15.4% live with other members of their family, 11.5% live with spouse only, and 11.5% live with spouse and other family members. As for their prior experience with online platforms, 31.8% of the Romanian participants had no prior experience, 13.6% rarely use them, and only 18.2% always use such platforms. As for social networks such as Facebook, Twitter and Instagram, 44% of the Romanian participants use them on a regular basis (Always and Usually), while 16 % have never used social media prior to their participation in POSITIVE (Annex 9).

### Spain (ESKT)

27 PEUs tested the second prototype of POSITIVE during Pilot Operations Phase II in Spain. 20 of them were new to the project while 7 of the PEUs had already taken part in Pilot Operation Phase I and wanted to continue their participation in the second pilot testing. Recruitment of PEUs was done through collaboration with Grupo Torrezuri, who internally disseminated the possibility to participate in the Pilot Phase. Seniors who were interested in the POSITIVE project signed up and were contacted by researchers. ESK's researchers made significant efforts in diversifying the project participants for the Pilot Operation Phase II in terms of their education background and socio-economic status, reason why ESK collaborated with Grupo Torrezuri, who counts on with a big base of older adults.



15 PEUs were female and 8 were male. Their average age was 60 years old. As for their educational level, 19 PEUs were highly educated (13 attended university, 6 had post-university studies) and 8 PEUs finished high school or a vocational school. 12 of the Spanish PEUs have monthly income higher than 2000 EUR. 14 of the recruited PEUs receive pension between 1000 – 2000 EUR, and 1 of the PEUs has a pension lower than 500 EUR. Amongst all, 18 PEUs still work. The majority of Spanish PEUs reported that they live with spouse only (51.9%), 25.9% live with spouse and other members of their family, 14.8% live with other family members, and 7.4% live alone.

As for their prior experience with online platforms, 29.6% of the Spanish participants had no prior experience, 14.8% of them never use them, the same percentage of participants rarely make use of the platforms, whereas 33.3% of participants often use them and just 7.4% of them sometimes do.

As for social networks such as Facebook, Twitter and Instagram, 51.9% of the Spanish participants don't have social networks, whereas 14.8% of them usually use social media, 11.1% always do and 7.4% of participants either use them often, rarely or never (Annex 10).

### **Italy (FSL)**

In Italy 28 PEUs were involved in Pilot Operations Phase II, all of them were recruited from a database of healthy subjects and by word of mouth. In order to diversify the sample, FSL put considerable effort to attract seniors with different gender, living status, educational level and prior experience with platforms. 14 PEUs were females and 14 were males, with an average age of 67 years. Regarding educational level, 7 PEUs performed high school while 9 subjects have a professional school diploma; 9 PEUs are highly educated, specifically 7 subjects attended university and 2 persons performed post-university studies; lastly 3 PEUs had other level of education. 39 % of them receive a monthly income higher than € 2000, 50 % of them between € 1000 and € 2000, 7 % of them between € 500 and € 1000 and one PEU has a monthly income below € 500. Amongst all, 4 PEUs are still in the work force. The majority of PEUs (86 %) live with someone else e.g. spouse and/or other family member, while 11 % of the included sample live alone. As for their prior experience with online platforms, 25 % of participants have little or no prior experience. As for social networks such as Facebook, Twitter and Instagram, 54 % of the Italian volunteers use them on a regular basis (Always and Usually), while 25 % have never used social media prior to their participation in POSITIVE (Annex 11).

### **Poland (REALL)**

All 6 Polish PEUs that were recruited for Pilot Operations Phase I remained partially or fully involved in the POSITIVE project during the second pilot testing. Additional 3 PEUs had been recruited from different backgrounds in an effort to diversify the sample. The 3 new PEUs were different mainly in terms of: place of residence (small town), income, level of education and age. They were recruited through the links between the senior organisations in Warsaw and smaller organisations in smaller cities in Poland by simply choosing the most suitable potential candidates and asking them to participate. Recruiting people from a different city posed a logistical challenge that required us to organise two separate meetings instead of one. Average PEU age was 67, 6 PEUs were female, the remaining 3 were male. 6 PEUs graduated from university, one had technical education, one finished professional school and one graduated from post-university studies. 4 PEUs live with spouse only, 3 live alone and 2 live with other member of the family. 6 of

them represented high income, above € 500, one medium € 200-500 and one low € 150-200 per month. Most of the PEUs (6) were active on the labour market, two did not work.

### 6.2.1 PEUs characteristics

Three Spanish PEUs dropped out after signing the Informed Consent form, hence a total of 91 users were considered in the subsequent analysis.

Considering the whole sample of 91 primary end users, 65 % of PEUs were female. The whole consortium put considerable effort in order to include seniors balanced in terms of gender.

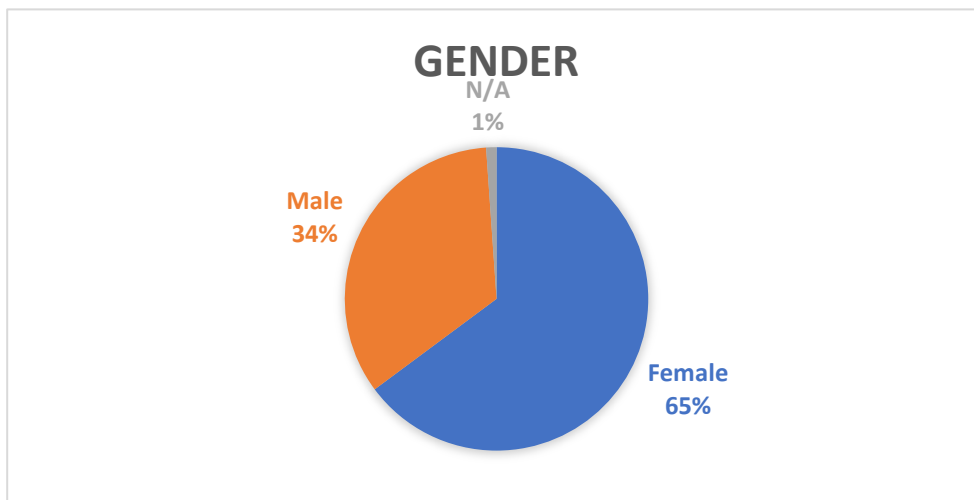


Figure 18 Gender of PEUs

The mean age for the whole sample of PEUs is 65, equally distributed in four main age groups (see Figure 19 ).

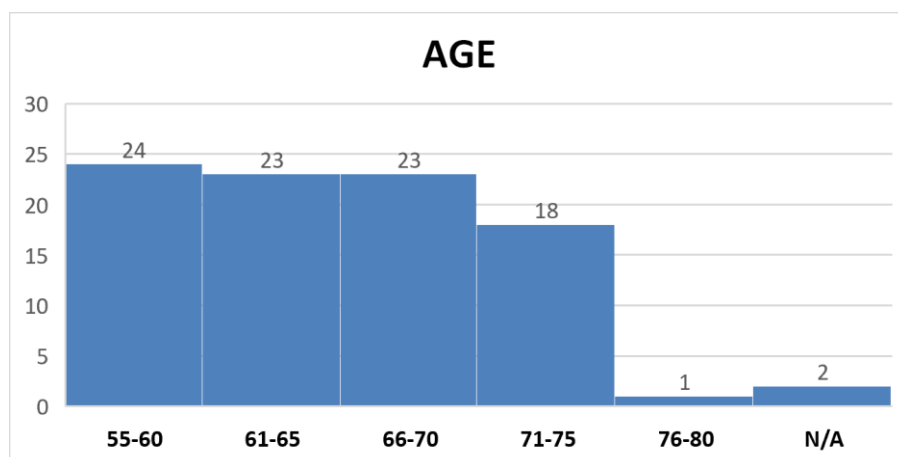


Figure 19 Age of PEUs

Regarding the level of education, 52 % of participants were highly educated (university and post-university studies); hence, the whole sample shows equally distributed levels of education.

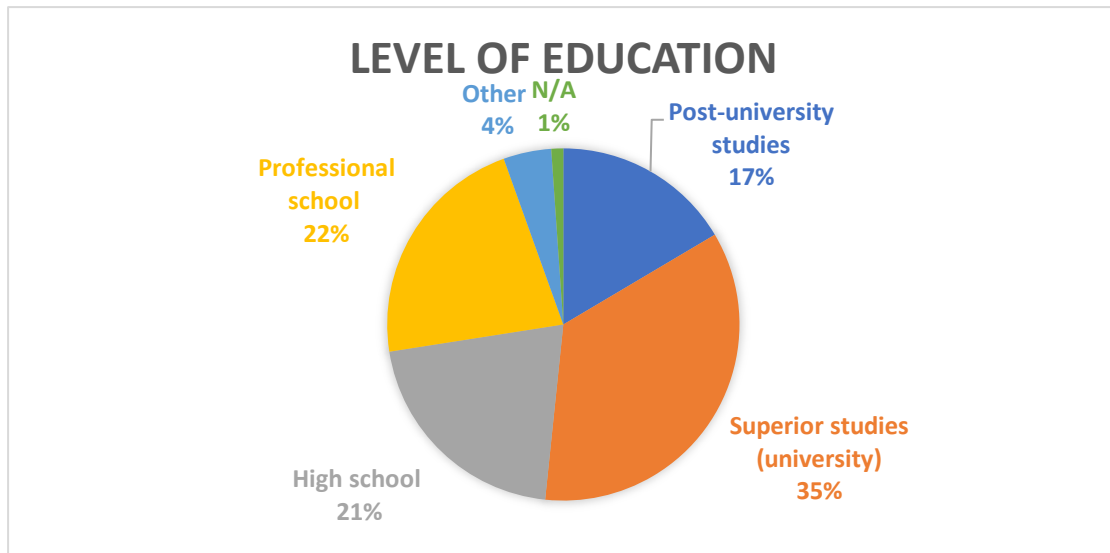


Figure 20 Level of education of PEUs

As for their prior experience with online platforms, 13 % of the whole sample replied that they had no prior experience, and another 13 % have used them rarely.

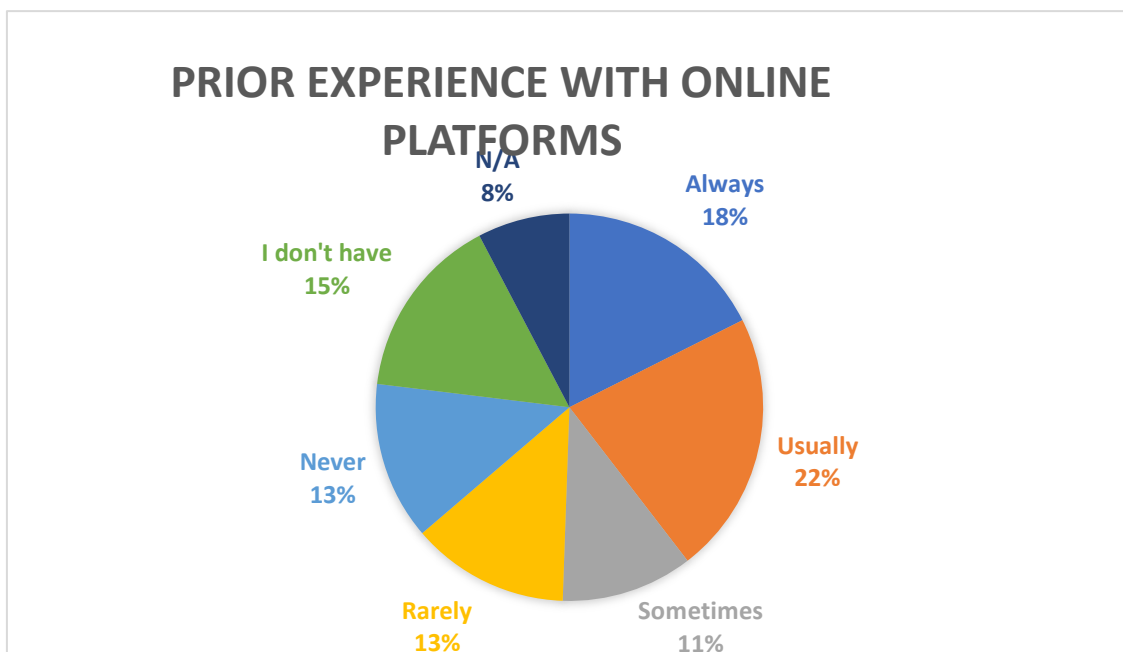


Figure 21 PEUs' prior experience with online platforms.

### 6.3 Tertiary end users' description

#### Romania (AAIF)

**Association Magic Seniors:** The association is an NGO that was established in early 2019 out of the desire to promote the concept of active seniors in Romania. It aims both to create and implement a solid bridge between generations, and to develop a system through which young people and seniors can learn from each other and build together. Currently, the association works on several initiatives aimed at Romanian older adults and improving their well-being.

**Seniorul.ro:** The Citizenship Education and Action Group (GEAC) is an active and independent NGO. It was established in 2011. *The dreams of the elderly* was their first project followed by *Seniorul Magazine*, *Senior Karaoke*, *Seniors active on the labour market*, *the Community of skilled seniors*. This was how Seniorul.ro was born and grows.

**Association Habilitas:** Asociatia Habilitas – CRFP is a non-governmental organization which has as mission the projects and programs development in the field of aging and lifelong learning, the development of services for older people in Romania and activities in the social economy, and improving public policy in social area. Everything we do is characterized by values like professionalism, development, innovation, cooperation, quality, trust, continuous training. Asociatia Habilitas – CRFP collaborates with other NGOs at national and European level, with associations representing the elderly rights, with central and local public authorities and aims to become a real factor of change and innovation in the field of aging and improving the quality of seniors' life in Romania. Currently, Habilitas is accredited by the National Authority for Qualifications (ANC) as provider of training programs in the occupation "Home caregiver for elderly", and at the end of the course the trainees receive a qualification certificate recognized at European level.

#### Spain (ESKT)

**RESIDENCIA TORREZURI:** Small socio-sanitary centre dedicated to the care of dependent elderly people, also dedicated to home care as well as advice on how to care for each person, either in the centre or at home in the most appropriate way.

**FUNDACION CUIDADOS DIGNOS:** Organisation that carries out training and consultancy work in social and health care centres throughout Spain in order to implement more advanced care models, more in line with what is carried out in Northern European countries.

**GERNIKA-LUMO CITY COUNCIL:** The council of Gernika-Lumo represents the administrative body of the noble town of Gernika-Lumo. It is a municipality of Biscay belonging to Busturialdea's district, framed in the natural area of Urdaibai. It has 16,797 inhabitants (INE2014), an area of 8.47 square kilometers and a density of 1,909 inhabitants / km<sup>2</sup>. The Gernika-Lumo's council is committed to the field of new technologies as a vector for social cohesion and integration and developing opportunities for advancement for all who have something to contribute to the culture, economy or coexistence.

**TORREZURI GEROVIDA CONSULTING:** Socio-Health Consulting Company belonging to the Torrezuri Group dedicated to Researching the Quality of Life and the Needs of the people cared

for, as well as their families and the people "who care" (professionals and formal and informal caregivers) (Annex 14).

### Italy (FSL)

**Giulia Natali:** She is an expert yoga teacher, an educator and also a speech therapist. She uses her breathing techniques as a guide in her lessons. The most important thing of this activity is that it acts deeply on the body and soul. She also organizes workshops, group and individual yoga lessons both face-to-face and in the online modalities.

**Officina delle arti antiche:** This is an organization established in 2012 that offers art courses and workshops of various types such as fresco painting, mosaic, panel painting, miniature and ceramic decoration strictly respecting original materials and traditional methods. Moreover, they organize guided tours in the main historical sites of Rome.

**Parco Regionale dell'Appia Antica:** The Appia Antica Regional Park was established in 1988 and is a public institution. In the city of Rome, this park represents the most important place for its biodiversity, such as the presence of various vegetation and fauna. They organize numerous activities in the Park like workshops, walking tours, and guided visits.

**Scuola del Verde:** This is an organization established in 2015 of itinerant gardeners. They collaborate with the Botanical Garden of Rome. They organize various types of lessons and workshops in the Garden and guided visits in major green areas of Rome. One of the objectives of this organization is to stimulate people to rediscover the innate link with nature, reconsidering the role of the house and its outdoor spaces according to the identity of those who live there. The guiding principle of this school is that nature can give serenity and well-being to those who understand its benefits.

**Asd Guateque:** First Caribbean dance school founded in Rome in 1992 by Franco Restuccia. The Director, as well as instructor and choreographer Ilaria Restuccia continues the family tradition surrounded by a staff of excellence that ranges from Caribbean dances, holistic activities, dance classes and many other initiatives.

**Lucio Sebastiani:** Teacher of Laughter Yoga (Hasya Yoga). It is a practice that allows you to laugh for no reason, combining yogic breathing techniques (basic pranayama) with stimulated and unconditional laughter exercises. The goal is the rediscovery of an atavistic and ancestral playfulness that leads to the achievement of the joy of living through the relaxation of muscular and emotional tensions (Annex 15).

### Poland (REALL)

**SWPS University of Social Sciences and Humanities:** Leading higher education institution in Poland, excelling in Psychology, Law, Language Studies, Literature and Culture Studies, Media and Communication Studies, Management, and Design. The University was established in 1996 by three eminent professors of Psychology and now, after more than twenty years of a dynamic growth, they are proud to be a strong community of over 300 permanent faculty of researchers and experienced academics, who teach over 17,000 students enrolled in 35 undergraduate, graduate and doctoral programs, across five campuses located in major cities in Poland. Their

broad education offer includes 15 programs taught entirely in English to over 1,300 international students from more than 60 countries.

**Seniorwizacja:** Foundation dealing with innovative modelling approach to activities of teaching improvisation to seniors. Additionally performs other kinds of cultural activities (Annex 16).

## 7. Usability

### 7.1 User Experience Evaluation

In order to assess perceived usability of the POSITIVE platform, the same tools used in Pilot Operations Phase I were administered (see section 3.1).

### 7.2 Results

Scores from the SUS questionnaire collected before and after the end of the second pilot testing were analysed using paired sample *t*-tests allowing to compare mean differences between the two sets of observations. Post-test data for two Italian PEUs are not available as these volunteers dropped out. Moreover, 9 Spanish PEUs refused to perform the SUS questionnaire during the pilot training, thus the final analysed sample for this measure consisted of 80 PEUs from the four end user organizations.

In order to better characterize users' experience, pre and post-test scores were further stratified by nationality.

#### 7.2.1 System usability scale

A total mean value score of 62,3 was assigned to the POSITIVE platform in the pre-test session and a mean value of 61,7 in the post-test. No statistically significant difference was evident between the pre and post-test scores [ $t_{(79)} = 1,075$ ;  $p = 0,285$ ].

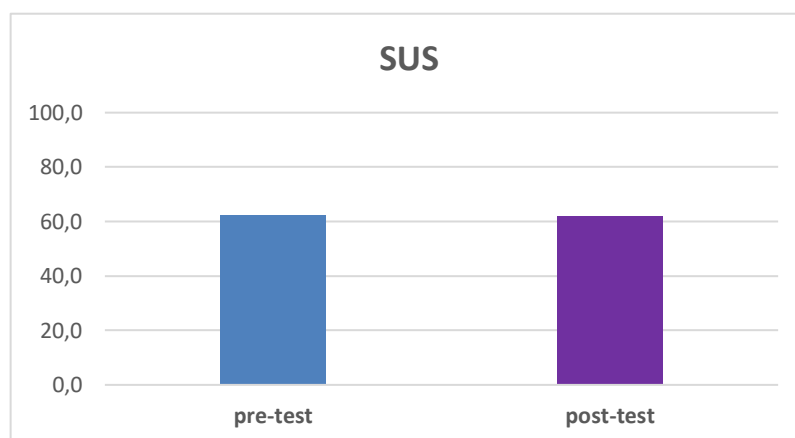


Figure 22 System usability scale results

When pre and post-test measures stratified by nationality were considered, results show main drops in perceived usability for Romanian users and particular improvements in usability for Polish users.

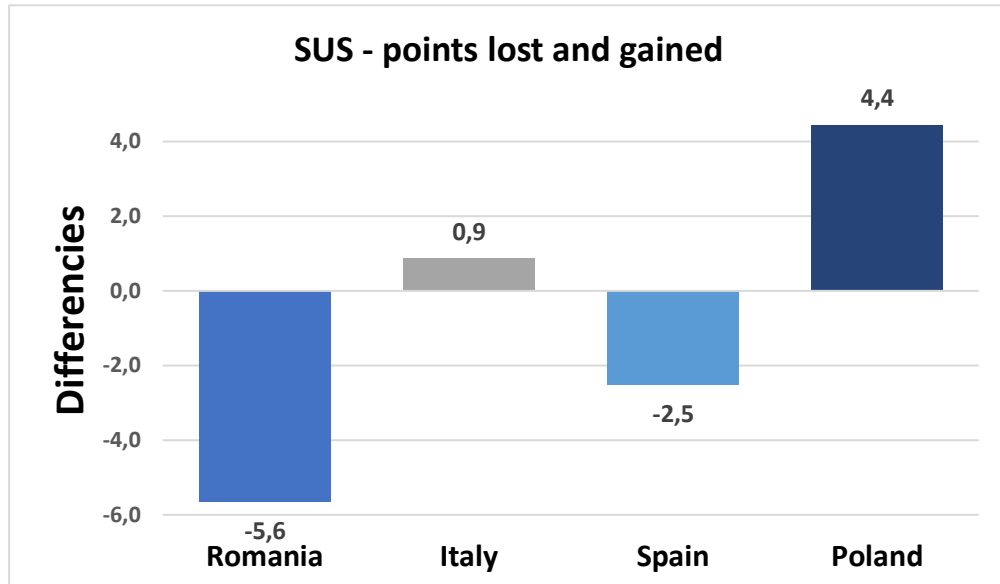


Figure 23 System usability scale results stratified by state.

### 7.2.2 After scenario questionnaire

Regarding which functionality of the system was perceived as more problematic by the users and which one was the easiest for them, 6 different tasks were performed at the end of the training session as follows **Task 1 Registration + creation of an account**: Task 1 was performed by 21 PEUs. These PEUs were randomly selected from the sample of recruited PEUs across the four end user organizations. 3 PEUs evaluated this task as *Very Easy*, 12 as *Easy* and 6 as *Difficult*. 19 out of 21 PEUs were satisfied with their task-completion time and the support information given to them during the task, while the others were not.

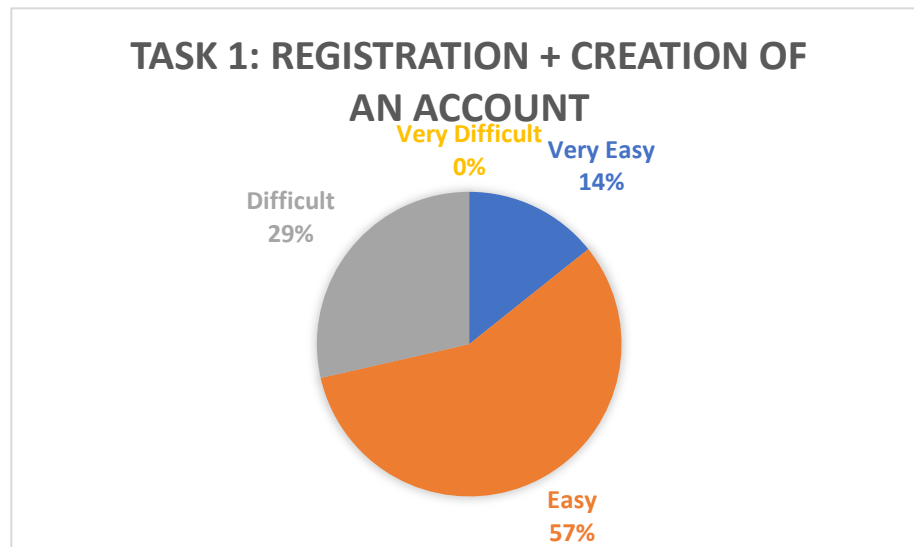


Figure 24 ASQ Task 1 results

- **Task 2 Login + New events:** Task 2 was performed by 21 PEUs. 5 of them assessed this task as *Very Easy*, 11 as *Easy* and 5 as *Difficult*. 16 out of 21 PEUs were satisfied with their task-completion time and all of them were satisfied with the support information given to them during the task.

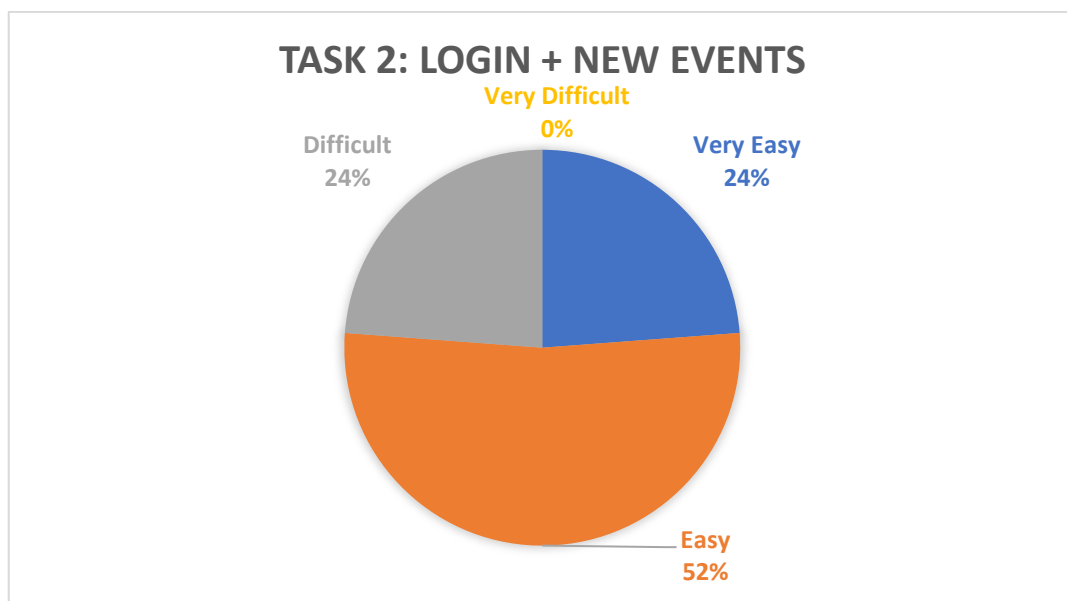


Figure 25 ASQ Task 2 results

- **Task 3 Online courses:** Task 3 was performed by 22 PEUs. 3 of them assessed this task as *Very Easy* and 19 as *Easy*. 19 out of 22 PEUs were satisfied with their task-completion time and with the support information given to them during the task.



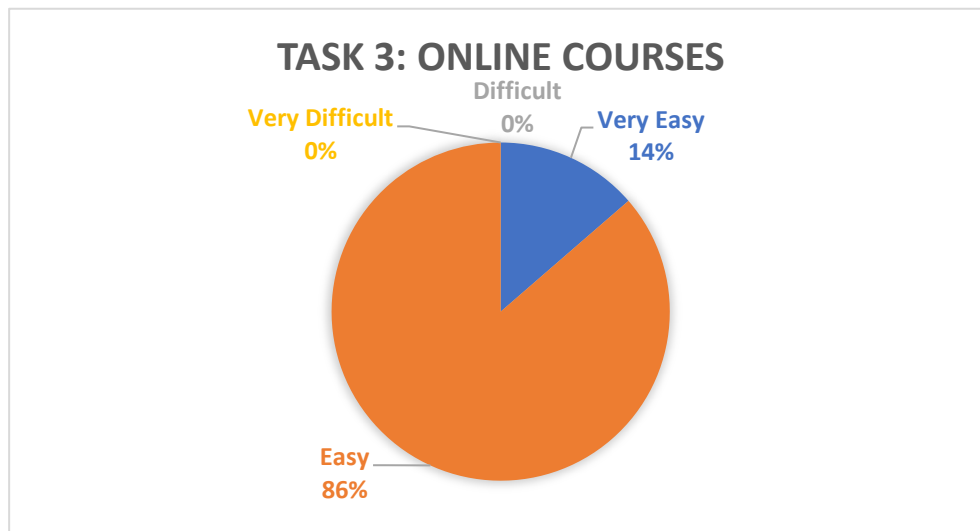
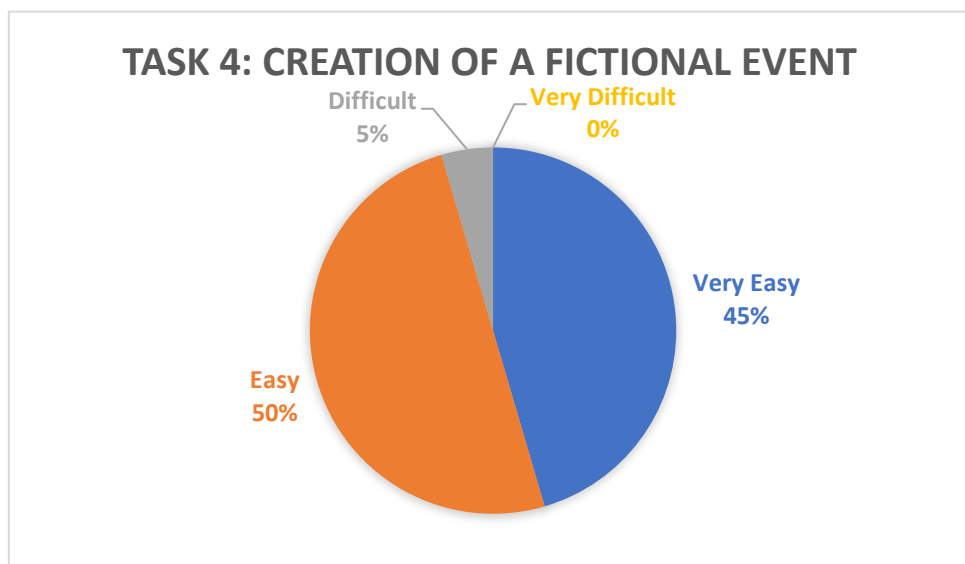


Figure 26 ASQ Task 3 results

- **Task 4 Creation of a fictional event:** Task 4 was performed by 22 PEUs. 10 of them assessed this task as *Very Easy*, 11 as *Easy* and 1 as *Difficult*. 17 out of 24 were satisfied with their task-completion time and with the support information given to them during the task.



- **Task 5 Games section:** Task 5 was performed by 21 PEUs. 10 of them assessed this task as *Very Easy* and 11 as *Easy*. 19 out of 21 PEUs were satisfied with their task-completion time and with the support

Figure 27 ASQ Task 4 results

information given to them during the task.

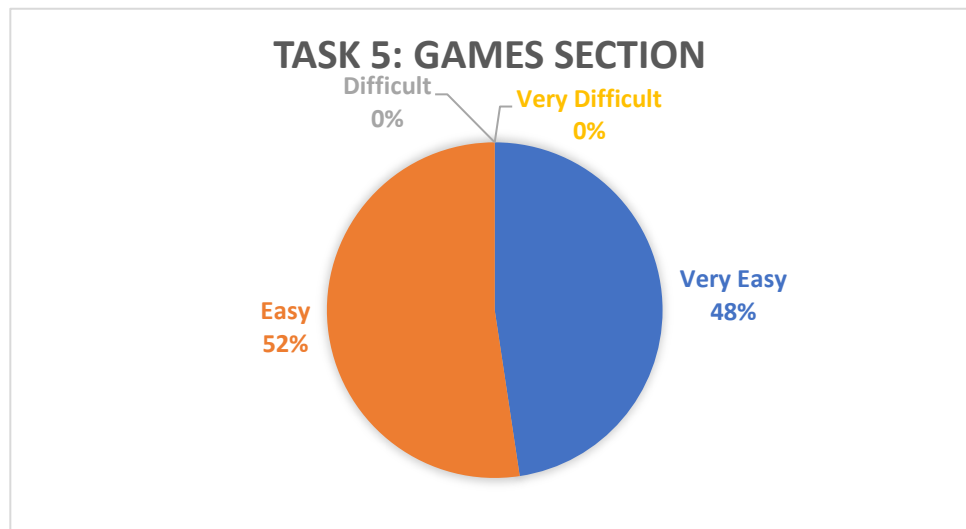


Figure 28 ASQ Task 5 results

- **Task 6 Creation of a fictional Forum thread (topic):** Task 6 was performed by 21 PEUs. 8 of them assessed this task as *Very Easy*, 11 as *Easy* and 2 as *Difficult*. 19 out of 23 PEUs were satisfied with their task-completion time, while the others were not. 18 out of 21 PEUs were satisfied with their task-completion time and with the support information given to them during the task.

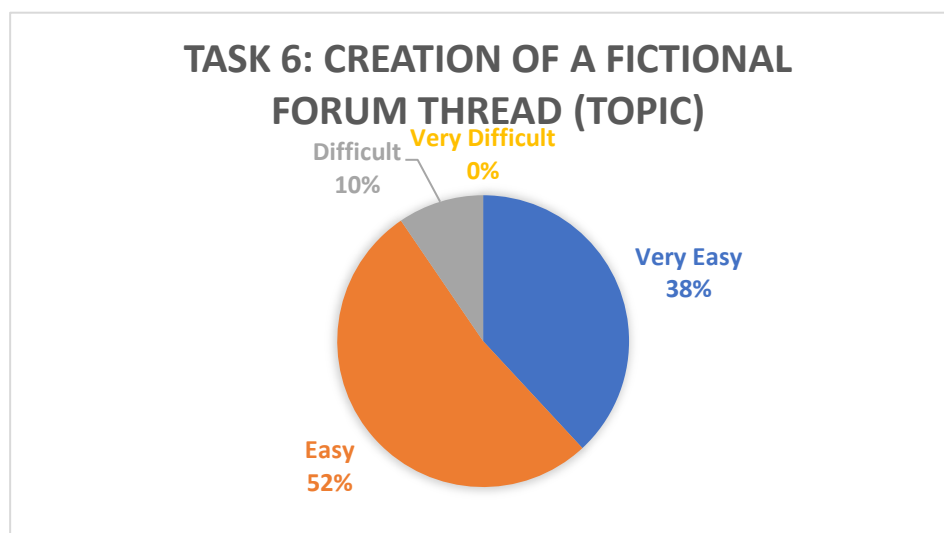


Figure 29 ASQ Task 6 results

### 7.3 Technical problems and solutions

The second phase of Pilot Operations Phase II did not show any particular technical problems on the platform. As can be seen from the results presented in the previous paragraph, most of the users did not show significant difficulties in carrying out specific activities during the tests. The

most problematic activities were identified during Pilot Operations Phase I they were improved previously, as described in paragraph 3.3.

Development therefore focused on the design and usability of the POSITIVE platform, identified as the most critical problem for target users. As stressed several times, particular attention must be paid to target users, characterized by a low level of digital literacy and often not very accustomed to the use of digital platforms. Careful work has been done on UX / UI design in order to maximize ease of use. The following table (Table 12) shows the actions that were taken into consideration during the second pilot testing phase. For a more detailed description about the work that has been done on this, please refer to *D3.5-Integrated POSITIVE System*.

<b>Modules design alignments</b>	Same look and feel around the whole platform.
<b>Improved navigation fluidity</b>	Layout consistency by keeping the same way of navigation through the platform modules.
<b>Interface simplification</b>	Simplification of the user interface by making it cleaner and easier to use. Too many graphic elements might confuse seniors and make the navigation harder to understand.
<b>Help in using the platform</b>	Improvement of the POSITIVE guide and addition of more tooltips.
<b>Further UI refinements</b>	Size adaptation on important visual elements (bigger icons, fonts, etc.) to fit specific needs of seniors
<b>Attractive and friendly design</b>	Seniors usually tend not to trust what they don't know; hence technology/internet and we want to graphically communicate that this is a safe place for them)

Table 11 Technical problems and solutions Pilot Operations Phase II

### General considerations

Results from the sample of PEUs who performed the ASQ questionnaires showed that no functionality of the system was perceived as particularly problematic, with the majority of tasks evaluated as *easy* or *very easy*, indicating a good level of usability. Specifically, the less problematic task for the majority of PEUs was *Task 5* (Games section), while the more problematic was *Task 1* (Registration + creation of an account).

Regarding the overall usability of the system evaluated by the whole sample of PEUs through the SUS questionnaire, no significant differences after 6 months of usage of the platform were observed. Although usability was initially perceived as sub-optimal (score below 68), repeated exposure to the system evidenced different patterns of learnability depending on users' nationality, with major improvement of the system for Polish users and main loss in perceived usability after pilot testing for Romanian users. Possible explanations for this trend might be related to seniors' previous experience with online platforms reflecting digital literacy level. Indeed, less practice and exposure to online platforms evidenced for Romanian as well as for

Spanish users, compared to users from the two other nations, potentially affected the perceived usability of the POSITIVE platform.

## 8. Impact on individual functioning

The same analytic procedure described above was applied for assessing the impact of the second POSITIVE prototype usage on individual functioning. Post-test data for two Italian PEUs are not available because these volunteers dropped out during the first part of testing, thus the final analysed sample consisted of 89 PEUs from the four end user organizations.

### 8.1 Outcome measures

In order to assess the impact of the POSITIVE platform on individual functioning, the same tools applied to Pilot Operations Phase I were administered (see section 4.1). Additionally, Key Performance Indicators (KPIs) such as self-perception of personal well-being, meaningfulness, satisfaction, and happiness were measured through 4 questions administered before and after pilot testing (see D4.1).

## 8.2 Results

### 8.2.1 UCLA Loneliness scale

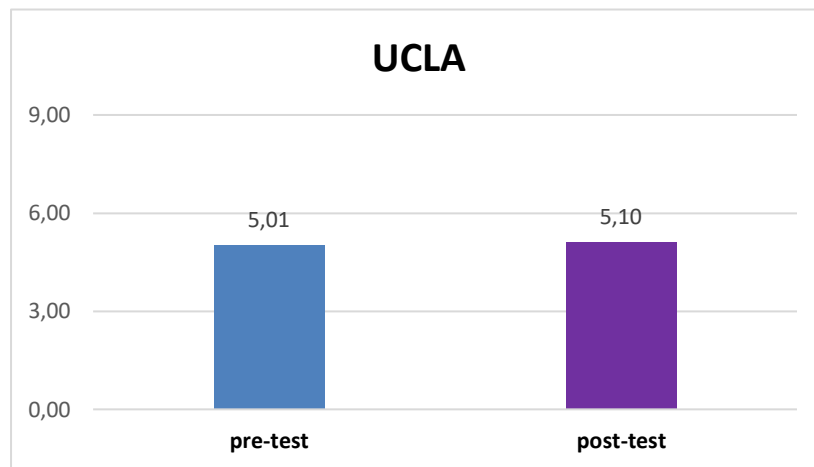


Figure 30 UCLA Loneliness Scale results.

Only 3 items of the UCLA questionnaire were administered. Scores have a range from 3 (low loneliness level) to 9 (high loneliness level). Users showed an above average score in the pre-test (5) and no main differences in the post-test measure (5,1) [ $t_{(88)} = -0,38$ ;  $p = 0,705$ ].

### 8.2.2 WHOQOL-BREF

Only raw score per domain were used to statistically describe WHOQOL-BREF results.

**Physical domain** scores have a range from 7 to 35. Our results show a mean value of 14,2 in the pre-test and 13,6 in the post-test. After six months of usage of the POSITIVE platform, no significant changes in perceived physical health were detected [ $t_{(88)} = 1,739$ ;  $p = 0,085$ ].

When pre and post-test measures stratified by PEUs nationality were analysed, major differences were evidenced for Spanish users whose scores sensitively dropped after 6 months.

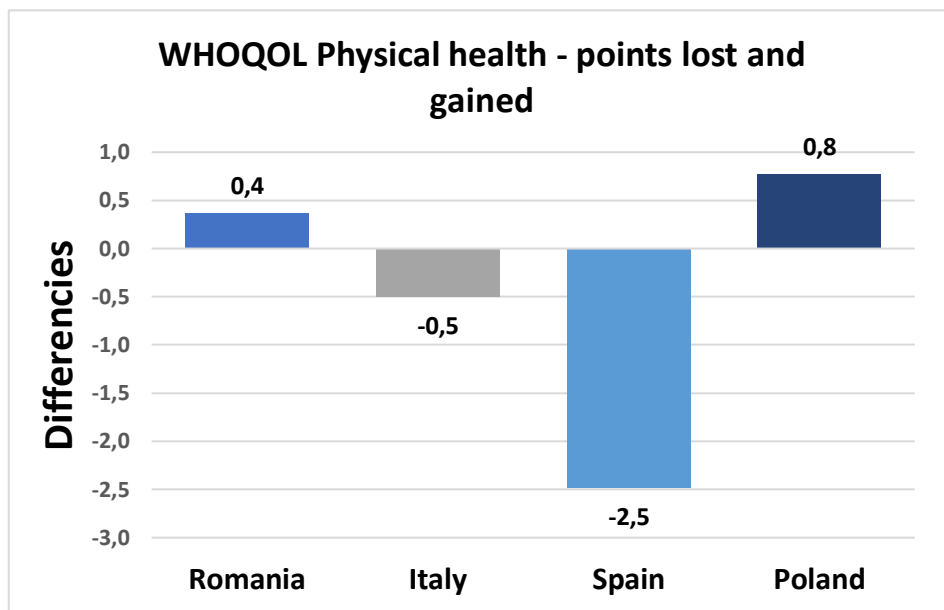


Figure 31 WHOQOL-BREF's physical domain stratified by state

**Psychological domain** scores have a range from 6 to 30. Our results show a mean value of 16 in the pre-test and 14,7 in the post-test indicating significant lower scores after testing [ $t_{(88)} = 3,174$ ;  $p = 0,002$ ]. Main drop in psychological domain scores was observed for Spanish users, while Polish ones showed a slight improvement.

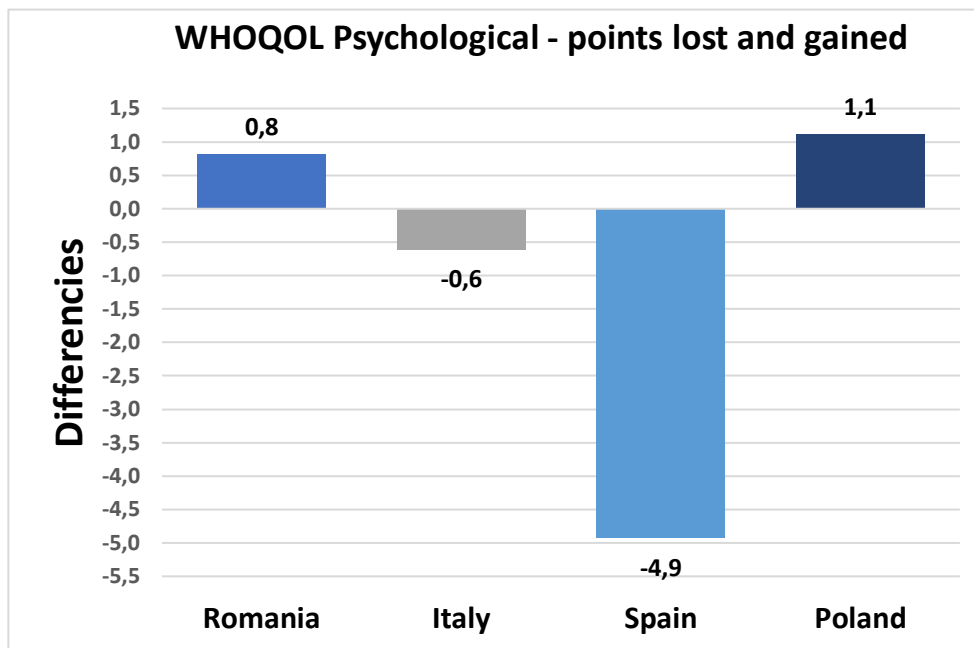


Figure 32 WHOQOL-BREF's psychological domain stratified by state

**Social relationships** scores have a range from 3 to 15. Our results show a mean value of 9,5 in the pre-test and 9,6 in the post-test with no significant changes between the two measurements [ $t_{(88)} = -0,495$ ;  $p = 0,621$ ]. However, according to nationality stratification, Spanish users show a slight improvement in this domain compared to other users who does not express main variation after 6 months of testing.

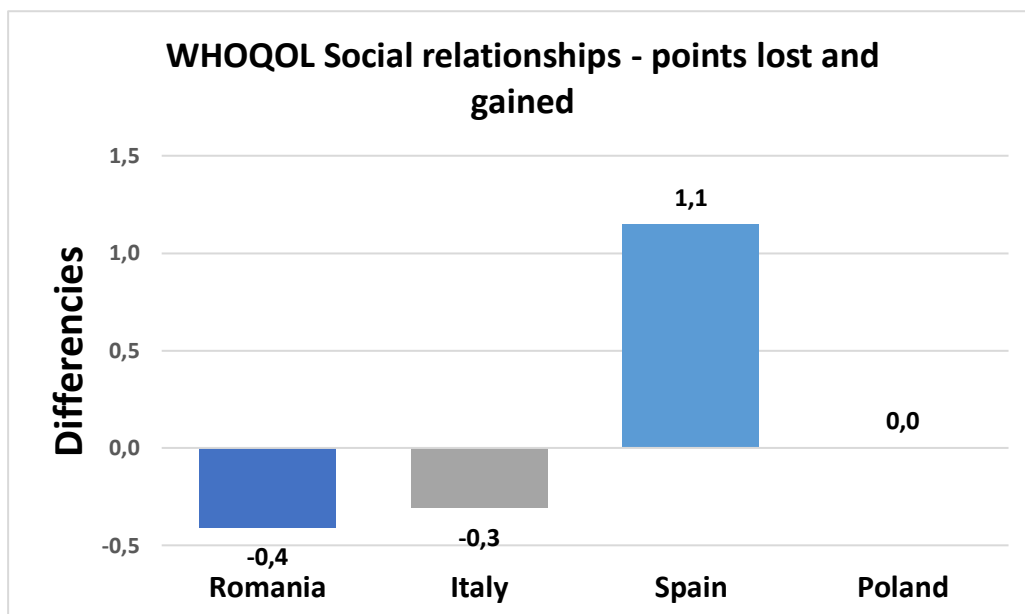


Figure 33 WHOQOL-BREF's social relationships domain stratified by state

**Environment domain** scores have a range from 8 to 40. Our results show a mean value of 28,7 in the pre-test and 29,8 in the post-test. Significant improvement in the environment domain of our PEUs was detected after pilot testing [ $t_{(88)} = -2,132$ ;  $p = 0,035$ ]. Such improvement was detectable for the totality of PEUs regardless of nationality, but particularly evident for Italian users.

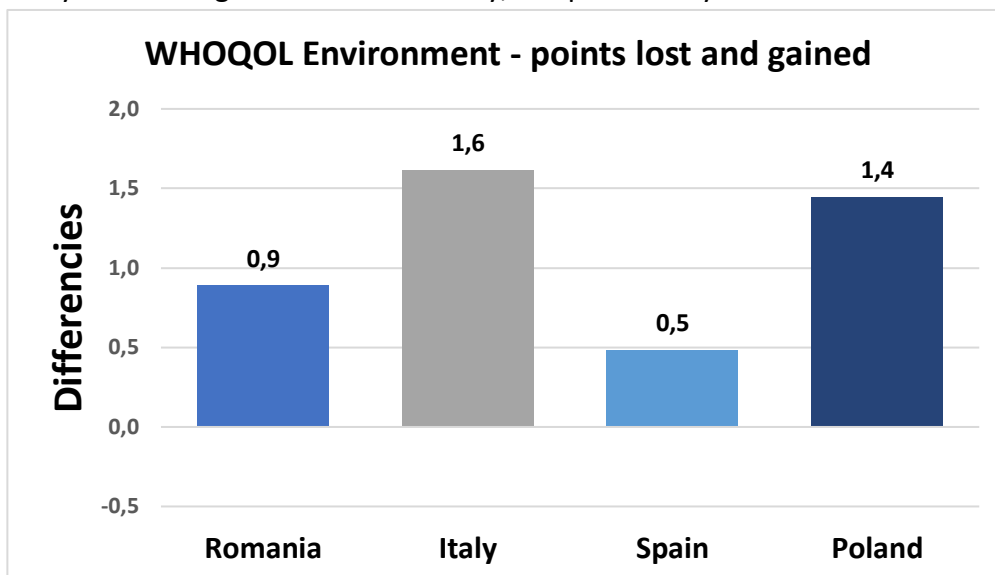


Figure 34 WHOQOL-BREF's environment domain stratified by state

Figure 35 depicts an overall view of WHOQOL-BREF results, as to better highlight differences in pre-post test scores for each domain.

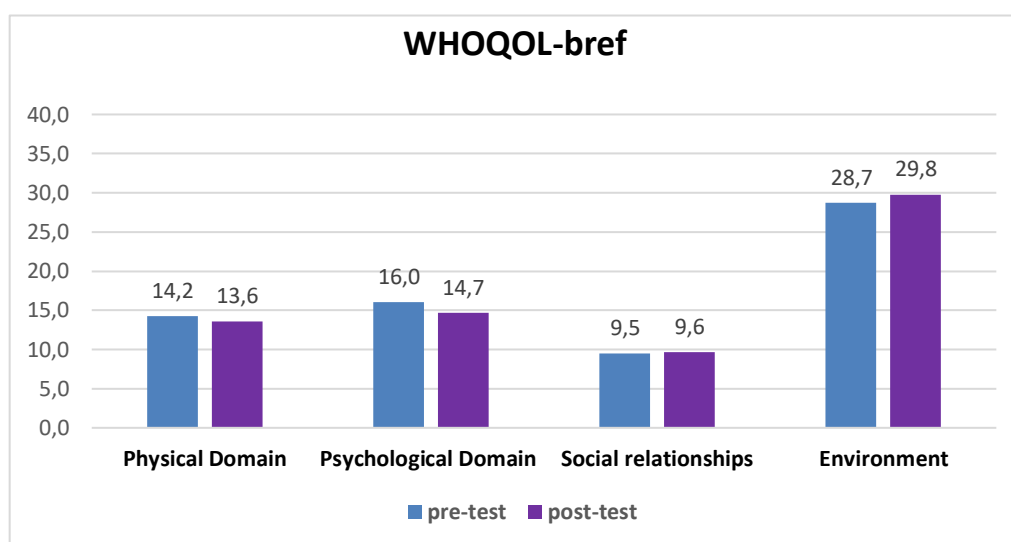
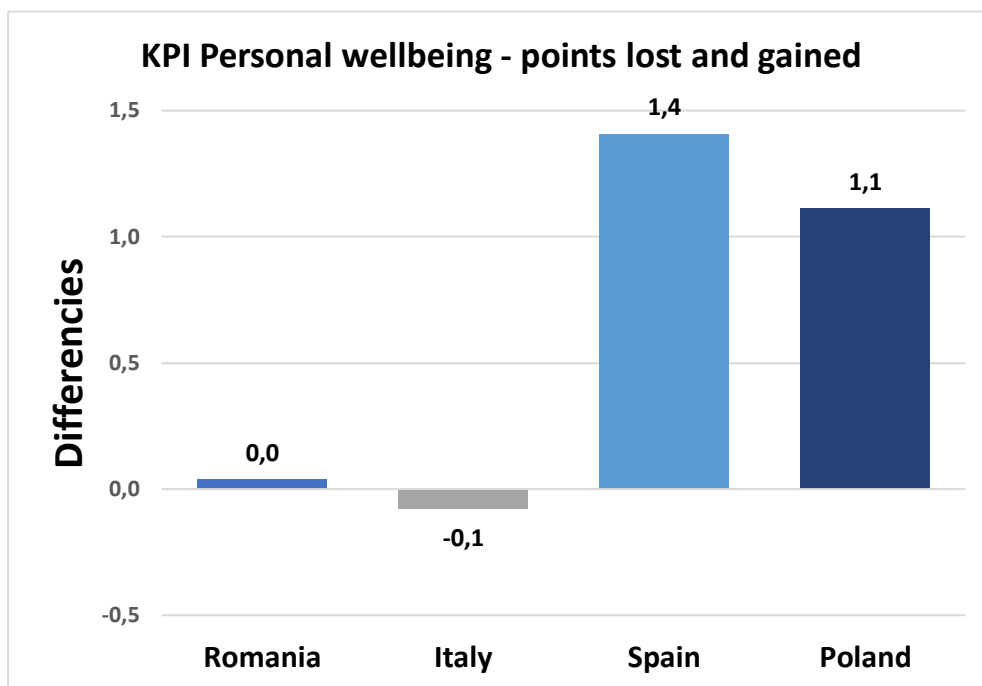


Figure 35 WHOQOL-BREF four domains' results

## 8.2.3 KPIs

**Personal wellbeing** measure shows significant improvements, more evident for Spanish and Polish users, after six months of POSITIVE [ $t_{(88)} = -3,164$ ;  $p = 0,002$ ].



**Satisfaction with my life** measure also shows significant

Figure 35 KPI – Personal wellbeing stratified by state

improvements after six months of POSITIVE usage [ $t_{(88)} = -1,918$ ;  $p = 0,058$ ], with only Italian users showing a slight drop in this score.

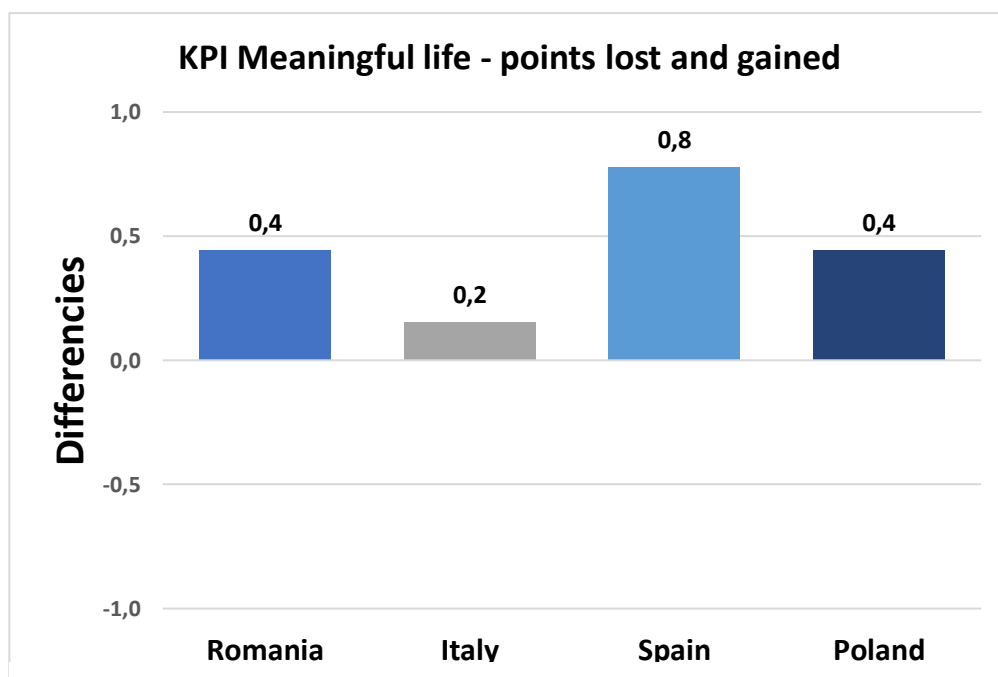


Figure 36 KPI – Satisfaction with my life stratified by state



**Meaningful life** measure evidenced a significant improvement after pilot testing for all PEUs regardless of nationality [ $t_{(88)} = -2,394$ ;  $p = 0,018$ ].

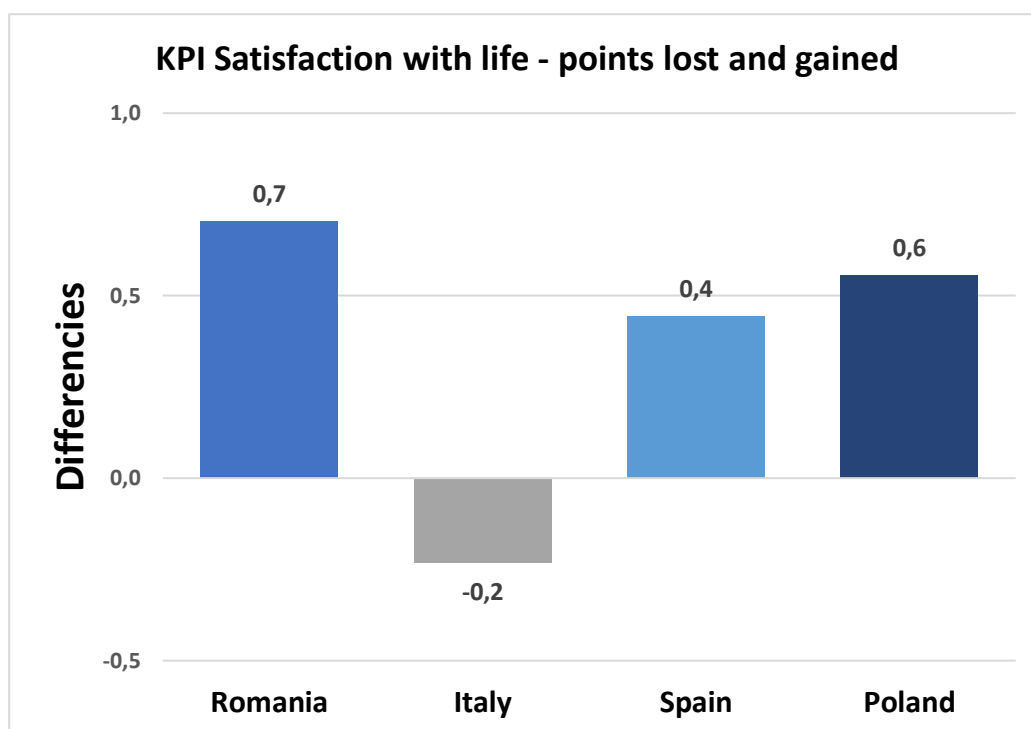


Figure 37 KPI – Meaningful life stratified by state

**Happiness** measure also show significant improvement after pilot testing for the totality of PEUs [ $t_{(88)} = -3,735$ ;  $p = 0,0003$ ]

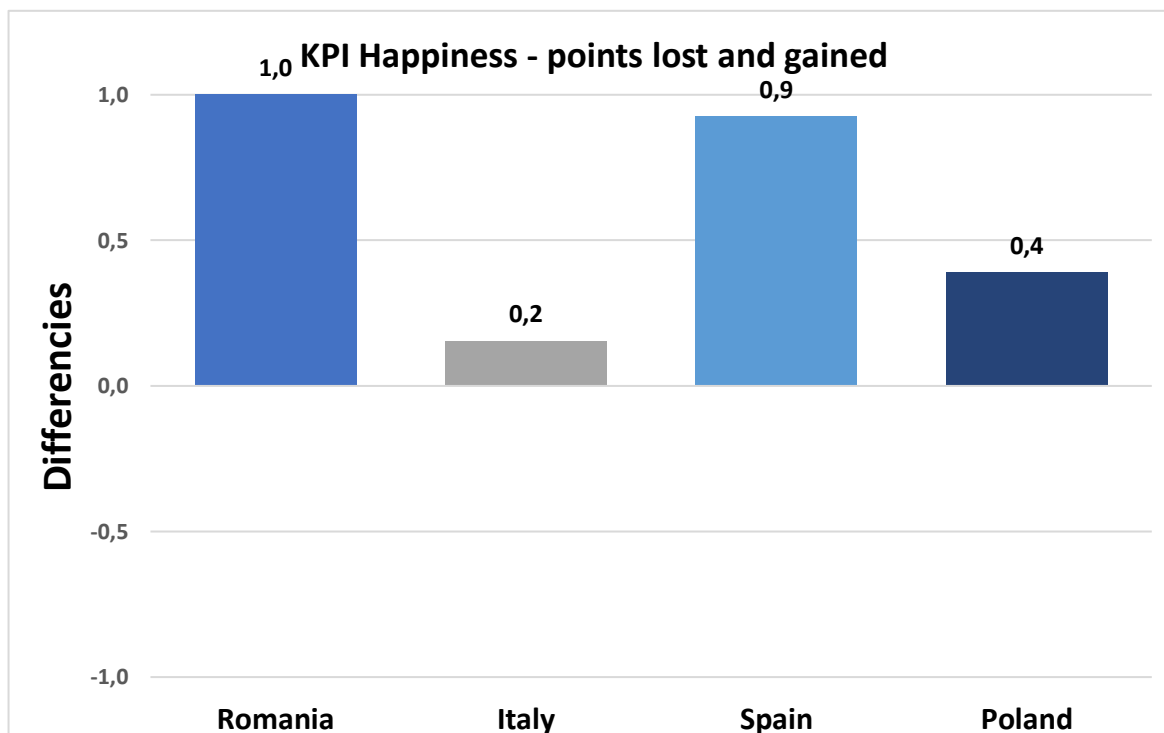


Figure 38 KPI – Happiness stratified by state

Figure 39 depicts an overall view of KPIs results, as to better highlight differences in pre-post test scores for each measure.

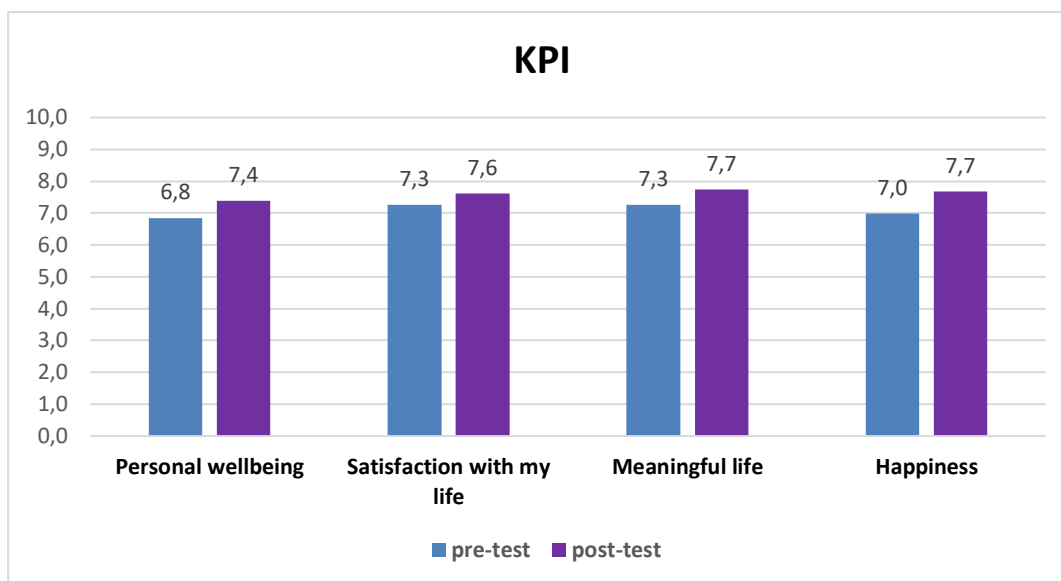


Figure 39 KPIs – four measures results

Additionally, as a further post-test measure after six months of platform usage, the totality of PEUs were asked the following question: *“Considering your complete experience with POSITIVE, would you recommend us to a friend or colleague?”*.

The majority of PEUs (79 %) answered “Yes” to this question, regardless of their nationality.

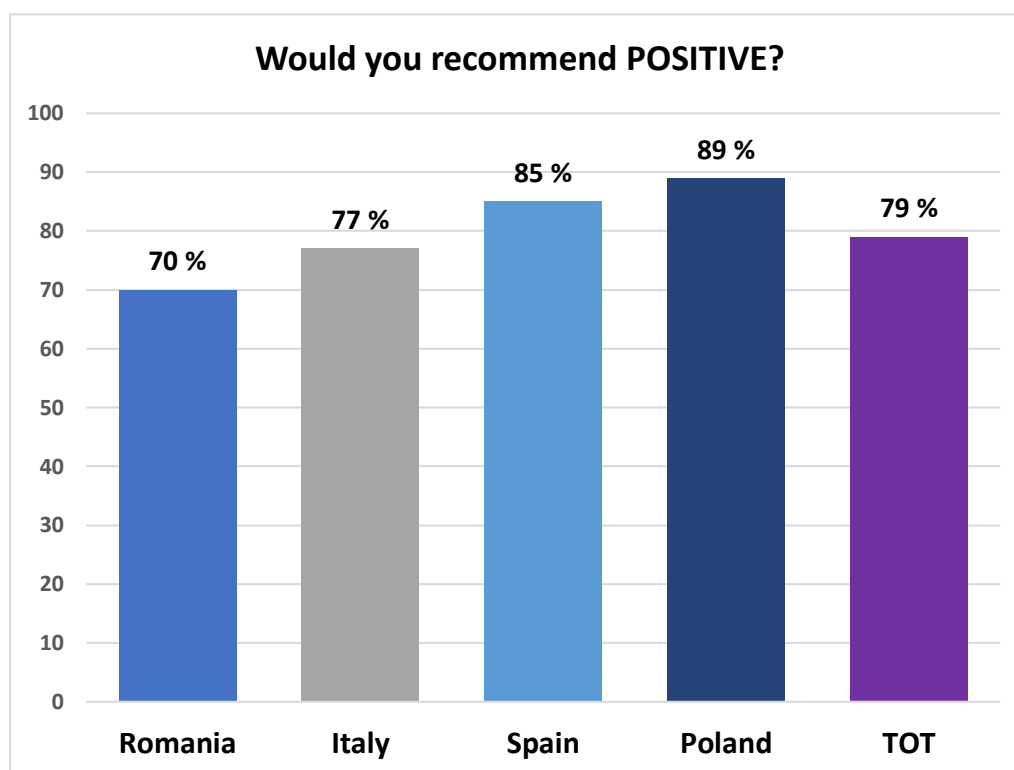


Figure 40 Level of appreciation for POSITIVE after testing

## General considerations

When the whole sample of PEUs from the four end user organizations was considered, we observed a significant impact of POSITIVE system usage on the four KPIs evaluating personal wellbeing, perceived satisfaction, meaningful life and happiness for the totality of our PEUs. However, this positive result cannot be attributed only to the platform usage as many intervening variables potentially occurred during the six months of pilot testing (e.g. COVID-19 pandemic, major life events, etc.). In parallel, considerable effects of platform usage were detected also for the environment domain of the WHOQOL - BREF, while scores for the other measures evaluating individual functioning notably change depending on users' nationality and associated factors, such as digital literacy level. This also might be affected by the different contingency plans applied in each end-user organizations state for the COVID-19 pandemic scenario, beyond individual differences of PEUs and their reaction to national-specific restrictions. Nevertheless, a clear majority of PEUs would recommend POSITIVE to their acquaintances, indicating a high level of appreciation for the platform.

## 9. Focus Group Meetings

In order to fully comply with COVID-19 regulations, the focus group after the end of Pilot Operations Phase II has been carried out as follows: Romania (AAIF) conducted face-to-face individual interviews with PEUs and online interviews with TEUs; Italy (FSL) organized individual phone calls with PEUs and TEUs; Spain (ESKT) performed individual interviews with PEUs and TEUs by phone call and WhatsApp and one physical meeting with a TEU; and Poland (REALL) organized individual interviews both face-to-face and by phone calls.

In total, **20 PEUs** and **11 TEUs** were involved in four countries as follows:

COUNTRY	ORGANIZATION	PEUs	TEUs
Romania	AAIF	8	3
Italy	FSL	8	3
Spain	ESKT	8	4
Poland	REALL	2	1

Table 12 Number of PEUs and TEUs involved in the Individual Interviews for each country

The goal of the interviews was to investigate two main themes: the users' experience when interacting with POSITIVE platform and levels of loneliness, self-actualization and meaningfulness of the users. After the first pilot testing, project partners reviewed the questions and applied some modifications. For further details about the semi-structured interviews check *deliverable D4.1*.

## Results

A summary of the themes extracted from interviews transcripts of the Italian, Romanian, Spanish and Polish primary and tertiary end users is reported below.

### Italy (FSL)

All PEUs enjoyed POSITIVE functionalities, especially Courses (4 PEUs), Games (2 PEUs), Community (1 PEU) and Webinars (1 PEU) sections. No particular critical issues have been reported. 1 PEU disliked the home page because of the posts in other languages, 3 PEUs did not like Games because they found them too simple and 1 PEU did not find interesting topics in the Forum section. 3 out of 8 PEUs stated that POSITIVE enriched their life because it gave them the hope to don't have to being isolated and to be understood by peers who have the same problems and interests. All PEUs except 1 would recommend POSITIVE platform to a friend or colleague. For Italian PEUs the characteristics that bring most value to the platform were Courses (5 PEUs), Webinar (2 PEUs) Games (2 PEUs) and Community (1 PEU). More than half of them could pay a small amount (1 or 2 Euros per month) for the use of the platform. Three of them reported that the platform helped them to cope with loneliness because when they were alone at home they felt more comfortable entering the platform. Almost all of them didn't establish meaningful connections with other users but they found like-minded people in the platform, only 1 PEU reported that other PEUs didn't have their same interests.

All TEUs reported that it is usually difficult for them to reach out to seniors. Their preferred tools to communicate with them are emails, flyers, and Facebook and they are partially satisfied with them because, like 1 TEU said, it requires a lot of time and resources. 2 TEUs think that POSITIVE is useful for reaching this target age and 1 TEU couldn't answer this question because for him there were not enough PEUs to establish that. 2 out of 3 could pay a small amount for the platform.

PEUs	<ul style="list-style-type: none"> <li>All PEUs enjoyed POSITIVE functionalities</li> <li>3 out of 8 PEUs stated that POSITIVE enriched their life</li> <li>5 out of 8 PEUs would pay for the use of the platform</li> </ul>
<ul style="list-style-type: none"> <li><b>Would you recommend POSITIVE (average)? 7,8</b></li> </ul>	
TEUs	<ul style="list-style-type: none"> <li>2 out of 3 TEUs would pay for POSITIVE</li> </ul>

Table 13 Italy (FSL) individual interviews results.

### Romania (AAIF)

5 out of 8 PEUs stated that POSITIVE enriched their life because it helped them to escape from routine and boredom. Almost all PEUs enjoyed POSITIVE functionalities, especially for the opportunity to socialize and communicate with other PEUs (3 PEUs) and to privately chat with them (1 PEU). 2 PEUs mostly like Courses, 1 PEU Games section and 1 PEU Events section. None of POSITIVE features was disliked from the PEUs. With regard to a possible payment fee, half of the PEUs expressed the willingness to pay but only for a small amount. All PEUs would recommend POSITIVE platform to a friend or colleague. For Romanian PEUs the characteristics that bring most value to the platform were Courses (4 PEUs), Community (5 PEUs) Newsfeed (4 PEUs) and Games (1 PEU). Three of them reported that the platform helps them to cope with loneliness through communication and socialising with other POSITIVE users. None of them established meaningful connections with other users except for 1 PEU who found like-minded people who had the same vision and ideas as her.

All TEUs reported that it is not usually difficult for them to reach this age group, only one said that in this period she had some issues because some Romanian seniors socialise less than usual for they are scared of getting infected with COVID – 19. Their preferred tools to communicate with seniors are phone calls and through their database or with the help of their partner organisations. However, one TEU mentioned that it takes a lot of time to organise events for seniors with existing solutions, like phone calls, and that the whole process is very time consuming (around 6-12 hours). They don't use that much social networks because not many Romanian seniors have, for example, Facebook accounts. 1 TEU thinks that POSITIVE is useful for reaching this target group and 1 TEU said that the platform has to be improved to be useful. None of them would pay for the use of the platform.

<b>PEUs</b>	<ul style="list-style-type: none"> <li>• 5 out of 8 PEUs confirm a change in their life since the use of POSITIVE</li> <li>• Almost all of AAIF participants expressed a specific preference for the opportunity to socialize and communicate with other PEUs</li> <li>• Half of PEUs would pay a small amount for the use of the platform</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Would you recommend POSITIVE (average)? 8,5</b></li> </ul>	
<b>TEUs</b>	<ul style="list-style-type: none"> <li>• None of TEUs would pay for POSITIVE</li> </ul>

Table 14 Romania (AAIF) individual interviews results.

### Spain (ESK)

All Spanish PEUs except for 1 reported that POSITIVE enriched their life in the way that they were more active on social network and they learnt different things.

Almost all PEUs enjoyed POSITIVE functionalities, especially for the Games section (5 PEUs) Courses section (6 PEUs), Events section (3 PEUs), Webinars (2 PEUs) and the opportunity to socialize and communicate with other PEUs (1 PEU). No particular critical issues have been reported. 2 PEUs didn't like being exposed in the net and 1 PEU reported that some courses can be a bit hard for some people to understand.

All PEUs except 1 would recommend POSITIVE platform to a friend or colleague and half of them would pay a small amount for the platform usage. For Spanish PEUs the characteristics that brings most values to the platform were Games (6 PEUs), Courses (5 PEUs), Webinars (3 PEUs), Community (2 PEUs) Newsfeed (2 PEUs), Well-being tracker (1 PEU) and Events (1 PEU).

Two of them reported that the platform helps them to cope with loneliness through communication and socialising with other POSITIVE users. All of them found like-minded people in the POSITIVE community.

All TEUs reported not particular difficulties in reaching seniors with existing solutions, except for 1 TEU who expressed some difficulties in reaching seniors located outside the municipality. Their preferred tools to communicate with seniors are social networks, phone calls, webpage, emails, ICT tools and information points. TEUs stated that they are partly satisfied with these tools, however they are not suitable to reach out all seniors and most of them are not interactive. All TEUs think that POSITIVE could solve these problems and they would all pay for the use of the platform.

PEUs	<ul style="list-style-type: none"> <li>● Favourite sections were Games followed by Courses</li> <li>● All of PEUs except for 1 reported that POSITIVE enriched their life</li> <li>● 4 out of 8 PEUs would pay for POSITIVE</li> </ul>
● <b>Would you recommend POSITIVE (average)?</b> 6,5	
TEUs	<ul style="list-style-type: none"> <li>● All TEUs would pay for POSITIVE</li> </ul>

Table 15 Spain (ESKT) individual interviews results.

### Poland (REALL)

All PEUs stated that they could not judge if POSITIVE enriched their life. All PEUs enjoyed POSITIVE functionalities, especially the Webinars, and 1 of them didn't like the Games section. All PEUs (2 persons) would recommend the platform to a friend or colleague and 1 out of 2 would pay to use the platform. For Polish PEUs the characteristics that bring most value to the platform were Webinars and Courses (2 PEUs), Games, Newsfeed and Community (1 PEU). One of them reported that the platform helps him to cope with loneliness and all of them found like-minded people in the POSITIVE community.

The Polish TEU reported that they are used to use word of mouth in order to reach out seniors and some platform like wawa4free, warsztat warszawski and pokoleniais. TEU reported that they have some issues with these tools because you need to pay in order to use it. Instead of that if there will be a large audience they would pay a small amount to use POSITIVE platform.

PEUs	<ul style="list-style-type: none"> <li>● PEUs couldn't judge if POSITIVE enriched their lives</li> <li>● Favourite sections were Webinars and Courses</li> <li>● 1 out of 2 PEU would pay for the platform</li> </ul>
● <b>Would you recommend POSITIVE (average)?</b> 9	
TEUs	<ul style="list-style-type: none"> <li>● The TEU would pay for POSITIVE</li> </ul>

Table 16 Poland (REALL) individual interviews results.

In relation to the first theme on the response in the use of the POSITIVE platform, sections such as Courses, Games and Community were the most appreciated by the majority of PEUs for the opportunity to socialize and communicate with other PEUs, followed by the Webinar and Newsfeed sections. No particular critical issues have been reported.

As for the second theme i.e. levels of perceived loneliness, self-actualization and meaningfulness of users, the majority of users reported that the POSITIVE platform enriched their life and helped them cope with loneliness, especially during the global COVID-19 pandemic. In parallel, a considerable number of PEUs would pay for POSITIVE usage. The tables below report the feedback collected from PEUs on which section of the platform brings most value and the percentage of users willing to pay for POSITIVE.

What in POSITIVE brings you most value?	Total number of PEUs
Webinars	7
Courses	16
Games	10
Wellbeing tracker	1

Newsfeed	7
Community	9

Table 17 POSITIVE sections that bring most value for PEUs

Willing to pay for POSITIVE?	%
<b>PEUs</b>	54 %
<b>TEUs</b>	64 %

Table 18 percentage of PEUs and TEUs willing to pay for POSITIVE

In order to measure the likelihood of users promoting the platform, we applied the *Net Promoter Score survey* with the following question: “*Considering your complete experience with POSITIVE, how likely would you be to recommend us to a friend or colleague?*” Replies from 0 (Very Unlikely) to 10 (Very Likely). Overall, PEUs expressed a high level of appreciation for the platform such that they would recommend POSITIVE to their acquaintances. The Table 20 below reports the percentage of *promoters, detractors* and *passive responders*.

	Scores
<b>Promoters</b>	31 %
<b>Detractors</b>	23 %
<b>Passive</b>	46 %
<b>NPS (promoters – detractors)</b>	8

Table 19 Net Promoter Score (NPS)

## Pilot Operations Phase II – Conclusions

The preceding sections described in detail the tools adopted to evaluate the effectiveness of POSITIVE platform along with the results gained in Pilot Operations Phase II.

Results regarding platform usability are reported first as they are to understand the objective difficulties reported by PEUs in using the system in the light of the several modifications integrated in the platform after Pilot I. With the aim to promote a better user experience, we collected feedback from primary end users and further improved the most problematic functionalities of the system as described in section 7.3. In particular, users reported no particular difficulties in using the platform during this phase, hence most of the ameliorations regarded UX / UI design in order to maximize ease of use. Different patterns of platform usability were identified according to individual characteristics, mainly pertaining the level of digital literacy, such as less practice and exposure to online platforms evidenced for some users potentially affected the perceived usability of the POSITIVE platform.

In parallel, the impact of POSITIVE on individual functioning of our users was evaluated through the administration of a multidimensional battery of questionnaires. The main aim was to assess whether POSITIVE contributed to reduce perceived loneliness and increase measures of wellbeing in the elderlies. After six months of platform usage, we observed a meaningful impact of POSITIVE on the totality of KPIs evaluating personal wellbeing, perceived satisfaction, meaningful life and happiness. Positive effects were further detected on the environment domain of the WHOQOL –

BREF including measures of safety and security, home, physical environment satisfaction and finance. However, these effects cannot be attributed only to the platform usage as many intervening variables should be taken into consideration, such as different contingency plans applied in each state for the COVID-19 pandemic scenario and individual differences of PEUs related to digital literacy level. Moreover, an intrinsic bias in using self-reported tools consists in people's tendency to choose socially acceptable answers or politically correct responses rather than reply truthfully (i.e. Social Desirability Bias). This trend, as well as the limited sample size, should be considered in assessing the effects of POSITIVE on individual functioning.

Lastly, as to further explore users' experience with the platform, focus groups and individual interviews were performed in Italy, Poland, Romania and Spain, and users' feedback concurrently collected. Our users expressed particular preferences on Courses, Games and Community sections, confirming that POSITIVE enriched their life and helped them cope with loneliness, especially during the global COVID-19 pandemic. A considerable number of elderlies would pay for POSITIVE in the future and would recommend the platform to their acquaintances, indicating a high level of appreciation. All above considered, results from the second pilot confirm the evidence of the previous testing phase and indicate that POSITIVE has a huge potential to fight social isolation phenomenon in the ageing population.



## Appendix

### Annex 1

**Socio-demographic characteristics and prior experience with online platforms of Romanian PEUs involved in Pilot Operation Phase I.**

Participant No:	Age	Gender	Educational level	Prior experience with online platforms
Ro - PEU - 01	69	Female	Superior studies (university)	Rarely
Ro - PEU - 02	68	Female	High school	Always
Ro - PEU - 03	74	Female	Superior studies (university)	Rarely
Ro - PEU - 04	74	Female	Superior studies (university)	-
Ro - PEU - 05	64	Female	Professional school	Usually
Ro - PEU - 06	73	Female	High school	I don't have
Ro - PEU - 08	74	Female	Superior studies (university)	I don't have
Ro - PEU - 09	67	Female	High school	I don't have
Ro - PEU - 10	66	Female	High school	Always
Ro - PEU - 11	64	Female	Post-university studies	Never
Ro - PEU - 13	58	Male	Superior studies (university)	Sometimes
Ro - PEU - 16	79	Female	High school	I don't have
Ro - PEU - 19	78	Female	Superior studies (university)	Usually
Ro - PEU - 20	76	Female	Post-university studies	-
Ro - PEU - 21	59	Female	Post-university studies	Usually
Ro - PEU - 22	-	Female	Superior studies (university)	-
Ro - PEU - 23	68	Female	Post-university studies	I don't have
Ro - PEU - 24	70	Female	Superior studies (university)	I don't have

### Annex 2

**Sociodemographic characteristics and prior experience with online platforms of Spanish PEUs involved in Pilot Operation Phase I.**

Participant No:	Age	Gender	Educational level	Prior experience with online platforms
ES - PEU - 01	75	Female	Other (Compulsory training)	Rarely
ES - PEU - 02	64	Male	Post-university studies	Rarely
ES - PEU - 03	65	Female	Superior studies (university)	I don't have
ES - PEU - 04	55	Female	Superior studies (university)	Sometimes
ES - PEU - 05	63	Male	High school	Sometimes

ES- PEU - 06	60	Female	Post-university studies	Always
ES- PEU - 07	68	Female	High school	Rarely
ES - PEU - 08	69	Male	Superior studies (university)	I don't have
ES - PEU - 09	70	Female	Other (basic education)	I don't have
ES - PEU - 10	60	Female	Post-university studies	I don't have
ES - PEU - 11	59	Female	Post-university studies	Always
ES- PEU - 12	55	Male	Superior studies (university)	Always
ES - PEU - 13	55	Female	Post-university studies	Sometimes
ES- PEU - 14	63	Female	Superior studies (university)	Rarely
ES - PEU - 15	62	Female	High school	Usually
ES - PEU - 16	71	Female	High school	Never
ES - PEU - 17	55	Female	Superior studies (university)	Usually
ES - PEU - 18	60	Female	High school	Always

### Annex 3

**Sociodemographic characteristics and prior experience with online platforms of Italian PEUs involved in Pilot Operation Phase I.**

PEUs No:	Age	Gender	Educational level	Prior experience with online platforms
It - PEU - 01	73	Male	High school	Always
It - PEU - 02	68	Female	Professional school	Sometimes
It - PEU - 03	67	Female	High school	Usually
It - PEU - 04	67	Male	Superior studies (university)	Rarely
It - PEU - 05	62	Female	Superior studies (university)	Always
It - PEU - 06	61	Male	High school	Sometimes
It - PEU - 07	74	Female	Superior studies (university)	Never
It - PEU - 08	66	Female	Superior studies (university)	Sometimes
It - PEU - 09	70	Female	Post-university studies	Sometimes
It - PEU - 10	74	Male	Post-university studies	Usually
It - PEU - 11	72	Female	Professional school	Always
It - PEU - 12	69	Male	Professional school	Usually
It - PEU - 13	65	Female	Superior studies (university)	Always
It - PEU - 14	72	Male	Professional school	Always
It - PEU - 15	67	Male	Post-university studies	Always
It - PEU - 16	60	Female	Other	Always
It - PEU - 17	63	Male	High school	Sometimes
It - PEU - 18	72	Female	Superior studies (university)	Always

#### Annex 4

**Sociodemographic characteristics and prior experience with online platforms of Polish PEUs involved in Pilot Operation Phase I.**

PEUs No:	Age	Gender	Educational level	Prior experience with online platforms
PL - PEU - 01	63	Female	Post-university studies	Rarely
PL - PEU - 02	67	Female	Superior studies (university)	Always
PL - PEU - 03	67	Male	Professional school	Rarely
PL - PEU - 04	74	Male	Superior studies (university)	-
PL - PEU - 05	67	Female	Superior studies (university)	Usually
PL - PEU - 06	74	Female	Superior studies (university)	I don't have

#### Annex 5

**Description of Romanian TEUs involved in Pilot Operation Phase I.**

TEUs No:	Name	Description
RO - TEU - 01	Association "Magic Seniors"	NGO working with seniors
RO - TEU - 02	The Citizenship, Education and Action Group (GEAC)	NGOs working with seniors
RO - TEU - 03	Association Habilitas	NGO working with seniors

#### Annex 6

**Description of Spanish TEUs involved in Pilot Operation Phase I.**

TEUs No:	Name	Description
ES - TEU - 01	Gernika-Lumo city council	Local administration
ES - TEU - 02	Torrezuri gernika residence	Elderlies' residence
ES - TEU - 03	Torrezuri gerovida consulting	Socio-health consulting company

#### Annex 7

**Description of Italian TEUs involved in Pilot Operation Phase I.**

TEUs No:	Name	Description
It - TEU - 01	GIULIA NATALI	Yoga teacher
It - TEU - 02	Officina delle arti antiche	Organization that offers art courses and workshops

<b>It - TEU - 03</b>	SCUOLA DEL VERDE	Organization of itinerant gardeners
<b>It - TEU - 04</b>	Parco appia antica	Public institution that organized activities in the park such as walking tours

## Annex 8

### Description of Polish TEUs involved in Pilot Operation Phase I.

TEUs No:	Name	Description
<b>PL- TEU - 01</b>	Dr. Edyta Bonk	Psychologist from Third Age University

## Annex 9

### Socio-demographic characteristics and prior experience with online platforms of Romanian PEUs involved in Pilot Operation Phase II.

Participant No:	Age	Gender	Educational level	Prior experience with online platforms
<b>Ro - PEU - 03</b>	74	Female	Superior studies (university)	Rarely
<b>Ro - PEU - 06</b>	73	Female	High school	I don't have
<b>Ro - PEU - 07</b>	73	Female	High school	Sometimes
<b>Ro - PEU - 08</b>	74	Female	Superior studies (university)	I don't have
<b>Ro - PEU - 09</b>	67	Female	High school	I don't have
<b>Ro - PEU - 10</b>	66	Female	High school	Always
<b>Ro - PEU - 11</b>	64	Female	Post-university studies	Never
<b>Ro - PEU - 13</b>	58	Male	Superior studies (university)	Sometimes
<b>Ro - PEU - 15</b>	60	Female	High school	I don't have
<b>Ro - PEU - 20</b>	76	Female	Post-university studies	-
<b>Ro - PEU - 21</b>	59	Female	Post-university studies	Often
<b>Ro - PEU - 22</b>	-	Female	Superior studies (university)	-
<b>Ro - PEU - 25</b>	65	Male	Professional school	Always
<b>Ro - PEU - 26</b>	61	Female	Superior studies (university)	Always
<b>Ro - PEU - 27</b>	67	Male	Post-university studies	Often

<b>Ro - PEU - 28</b>	70	Female	Post-university studies	-
<b>Ro - PEU - 29</b>	66	Female	Superior studies (university)	Often
<b>Ro - PEU - 30</b>	52	Female	Post-university studies	Rarely
<b>Ro - PEU - 31</b>	65	Female	Professional school	Rarely
<b>Ro - PEU - 32</b>	69	Female	Professional school	-
<b>Ro - PEU - 34</b>	63	Female	Other: Primary school (8th grades)	-
<b>Ro - PEU - 35</b>	72	Female	High school	Often
<b>Ro - PEU - 36</b>	70	Female	High school	Often
<b>Ro - PEU - 37</b>	64	Female	Superior studies (university)	Always
<b>Ro - PEU - 38</b>	64	Female	Professional school	Never
<b>Ro - PEU - 39</b>	72	Female	Professional school	I don't have
<b>Ro - PEU - 42</b>	72	Female	Superior studies (university)	Often

## Annex 10

**Socio-demographic characteristics and prior experience with online platforms of Spanish PEUs involved in Pilot Operation Phase II.**

<b>Participant No:</b>	<b>Age</b>	<b>Gender</b>	<b>Educational level</b>	<b>Prior experience with online platforms</b>
<b>ES-PEU-01</b>	55	Female	Professional school	Rarely
<b>ES-PEU-02</b>	63	Male	Post-university studies	Often
<b>ES-PEU-03</b>	61	Female	Professional school	I don't have
<b>ES-PEU-04</b>	59	Female	High school	Never
<b>ES-PEU-05</b>	60	Female	High School	Often
<b>ES-PEU-06</b>	57	Male	Professional school	I don't have
<b>ES-PEU-07</b>	56	Male	High School	Never
<b>ES-PEU-08</b>	56	Female	Superior studies (university)	I don't have
<b>ES-PEU-09</b>	62	Male	Superior studies (university)	I don't have
<b>ES-PEU-10</b>	57	Male	Superior studies (university)	Sometimes
<b>ES-PEU-11</b>	55	Female	Superior studies (university)	Often

ES-PEU-12	70	Female	High School	Sometimes
ES-PEU-13	57	Male	Superior studies (university)	Often
ES-PEU-14	61	Male	Superior studies (university)	Rarely
ES-PEU-15	60	Female	Professional school	Never
ES-PEU-16	57	Male	Superior studies (university)	Often
ES-PEU-17	55	Female	Post-university studies	Rarely
ES-PEU-18	58	Female	Superior studies (university)	Rarely
ES-PEU-19	58	Female	Superior studies (university)	Often
ES-PEU-20	59	Female	Post-university studies	Often
ES-PEU-21	65	Male	Superior studies (university)	I don't have
ES-PEU-22	65	Female	Superior studies (university)	I don't have
ES-PEU-23	70	Male	Superior studies (university)	I don't have
ES-PEU-24	70	Female	High School	I don't have
ES-PEU-25	64	Male	Post-university studies	Often
ES-PEU-26	63	Male	Post-university studies	Never
ES-PEU-27	60	Female	Post-university studies	Often

## Annex 11

**Socio-demographic characteristics and prior experience with online platforms of Italian PEUs involved in Pilot Operation Phase II.**

Participant No:	Age	Gender	Educational level	Prior experience with online platforms
It - PEU - 01	73	Male	High school	Always
It - PEU - 02	68	Female	Professional school	Sometimes
It - PEU - 03	67	Female	High school	Usually
It - PEU - 04	67	Male	Superior studies (university)	Rarely
It - PEU - 05	62	Female	Superior studies (university)	Always
It - PEU - 06	61	Male	High school	Sometimes
It - PEU - 07	74	Female	Superior studies (university)	Never
It - PEU - 08	66	Female	Superior studies (university)	Sometimes
It - PEU - 10	74	Male	Post-university studies	Usually
It - PEU - 11	72	Female	Professional school	Always
It - PEU - 12	69	Male	Professional school	Usually
It - PEU - 13	65	Female	Superior studies (university)	Always
It - PEU - 14	72	Male	Professional school	Always
It - PEU - 15	67	Male	Post-university studies	Always
It - PEU - 16	60	Female	Other	Always
It - PEU - 17	63	Male	High school	Sometimes

<b>It - PEU - 18</b>	72	Female	Superior studies (university)	Always
<b>It - PEU - 19</b>	70	Female	Other	Never
<b>It - PEU - 20</b>	71	Female	Other	Never
<b>It - PEU - 21</b>	56	Male	High school	Usually
<b>It - PEU - 22</b>	61	Female	Superior studies (university)	Always
<b>It - PEU - 23</b>	66	Female	Professional school	Never
<b>It - PEU - 24</b>	67	Male	Professional school	Never
<b>It - PEU - 25</b>	73	Male	Professional school	Sometimes
<b>It - PEU - 26</b>	64	Male	Professional school	Sometimes
<b>It - PEU - 27</b>	57	Male	High school	Always
<b>It - PEU - 28</b>	74	Female	High school	Never
<b>It - PEU - 29</b>	66	Male	Professional school	Always

## Annex 12

**Socio-demographic characteristics and prior experience with online platforms of Polish PEUs involved in Pilot Operation Phase II.**

<b>Participant No:</b>	<b>Age</b>	<b>Gender</b>	<b>Educational level</b>	<b>Prior experience with online platforms</b>
<b>PL - PEU - 01</b>	63	Female	Post-university studies	Usually
<b>PL - PEU - 02</b>	67	Female	Superior studies (university)	Usually
<b>PL - PEU - 03</b>	67	Male	Technical	Sometimes
<b>PL - PEU - 04</b>	74	Male	Superior studies (university)	Never
<b>PL - PEU - 05</b>	67	Female	Superior studies (university)	Usually
<b>PL - PEU - 06</b>	74	Female	Superior studies (university)	Always
<b>PL - PEU - 07</b>	60	Female	Superior studies (university)	Sometimes
<b>PL - PEU - 08</b>	-	Male	Superior studies (university)	-
<b>PL - PEU - 09</b>	61	Female	Professional school	Sometimes

## Annex 13

**Description of Romanian TEUs involved in Pilot Operation Phase II.**

<b>TEUs No:</b>	<b>Name</b>	<b>Description</b>
<b>RO - TEU - 01</b>	Association "Magic Seniors"	NGO working with seniors
<b>RO - TEU - 02</b>	The Citizenship, Education and Action Group (GEAC)	NGOs working with seniors
<b>RO - TEU - 03</b>	Association Habilitas	NGO working with seniors

## Annex 14

### Description of Spanish TEUs involved in Pilot Operation Phase II.

TEUs No:	Name	Description
ES - TEU - 01	Gernika-Lumo city council	Local administration
ES - TEU - 02	Torrezuri gernika residence	Elderlies' residence
ES - TEU - 03	Torrezuri gerovida consulting	Socio-health consulting company
ES - TEU - 04		

## Annex 15

### Description of Italian TEUs involved in Pilot Operation Phase II.

TEUs No:	Name	Description
It - TEU - 01	GIULIA NATALI	Yoga teacher
It - TEU - 02	Officina delle arti antiche	Organization that offers art courses and workshops
It - TEU - 03	SCUOLA DEL VERDE	Organization of itinerant gardeners
It - TEU - 04	Parco appia antica	Public institution that organized activities in the park such as walking tours
It - TEU - 05	Asd Guateque	Dance school
It - TEU - 06	Lucio Sebastiani	Hasya Yoga teacher (laughter yoga)

## Annex 16

### Description of Polish TEUs involved in Pilot Operation Phase II.

TEUs No:	Name	Description
PL- TEU - 01	Dr. Edyta Bonk	Psychologist from Third Age University
PL- TEU - 02	Seniorwizacja	Foundation with innovative modelling approach for seniors



---

## References

- [1] Brooke, J. (1996). Sus: a “quick and dirty” usability. *Usability evaluation in industry*, 189.
- [2] Lewis, J. R. (1991). Psychometric evaluation of an after-scenario questionnaire for computer usability studies: the ASQ. *ACM Sigchi Bulletin*, 23(1), 78-81.
- [3] Lewis, J. R., & Sauro, J. (2018). Item benchmarks for the system usability scale. *Journal of Usability Studies*, 13(3).
- [4] Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. *Journal of personality and social psychology*, 39(3), 472.
- [5] Whoqol Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological medicine*, 28(3), 551-558.
- [6] World Health Organization. (1996). *WHOQOL-BREF: introduction, administration, scoring and generic version of the assessment: field trial version, December 1996* (No. WHOQOL-BREF). World Health Organization.