



# Needs assessment and specification

Transnational Report – Needs Assessment Correlation & Recommendations



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# Feeling Safe to Transact Online In the Third Age

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## Introduction

The use of information technologies is nowadays an important condition for the inclusion of all citizens, allowing older individuals to better adapt to technological changes and, in this way, to have greater chances of personal development, autonomy and integration in today's societies<sup>1</sup>. However, the majority of the older adults consider online transactions with suspicion and prefer to stick to the traditional ways, thus gradually becoming digitally excluded and financially “obsolete”.

This implies the need to act proactively and take the necessary measures so as to raise the awareness of older citizens about the need to familiarise with online (financial) transaction management systems, while feeling safe and confident about their ability to navigate such (digital) environments.

The present *Transnational Report - Needs Assessment Correlation & Recommendations* was elaborated within the context of the project *FAITH - Feeling SAfe to Transact Online In the Third Age* and, in particular, under the scope of Work Package 2: Needs assessment and specification.

The purpose of the FAITH project is to prevent the digital marginalisation and improve the quality of life of older adults 55+ in Cyprus, Greece, Italy and Portugal, and by extension in EU, by developing their ICT (Information and communications technology) skills and building their confidence so as to increase the use of digital technologies to execute online transactions.

To address these objectives, the project will develop a Digital Literacy Learning Programme for older adults 55+ and a Peer-to-Peer Mentoring Programme, counting with the support of peers, community volunteers, family and caregivers, as well as a network of local businesses and services sector professionals trained in age-friendly techniques and environments.

In order to obtain the necessary data to design and implement a fourteen-month pilot a Research Protocol was developed to guide each partner in the conduction of a primary and secondary research at national level, which thereby served to elaborate the 4 National Reports. The insights gathered in these reports were subsequently collated in this Transnational Report, which will serve as a guiding document on how to best build older adults' capacity on Digital Financial Literacy through peer mentoring.

The **secondary research**, or desktop research involved a comprehensive, up-to-date, overview aimed to provide the current State of the Art of Digital Financial Literacy on older adults 55+ among the four countries, framing it in the European context.

Additionally, to establish a common understanding on the two most critical definitions to be addressed through the project, namely Digital Financial Literacy and Peer-Mentoring, a definitions' elicitation project was leveraged on the literature review.

The **primary research** conducted afterwards aimed to provide an assessment and understanding of the opportunities that older adults have to use ICT for online transactions, their abilities, and the barriers they face, including their attitudes, fears and perceptions, as well as about the support they receive, and how these vary among the partner countries.

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<sup>1</sup> Dias, I. (2012) O uso das tecnologias digitais entre os seniores: motivações e interesses. *Sociologia, Problemas e Práticas*, no.68: 51-77

The data collected corroborated the literature review and supported the development of the specifications for the Digital Literacy Learning Programme.

In sum, 11 main challenges were identified, along with the key barriers and constraints, as well as possible enablers, serving as the groundwork to formulate and elicit the Functional and Non-Functional Requirements. Between all the partners 80 Requirements were elicited, 36 of which were Functional Requirements and the remaining 44 Non-functional Requirements. These requirements were compiled into a list and prioritized by all the partners. Along with the barriers and enablers identified, they will constitute the main drivers of the design and elaboration of contents for the Peer-to-Peer Mentoring Programme and the Digital Literacy Learning Programme.

### Main findings

Through the validation of the primary and secondary research data, it emerged that older adults 55+ tend to have low ICT skills and their internet usage is not very frequent. This decrease in ICT use with age is relatively consensual in the literature, and indicates that age continues to be a determining factor in ICT accessibility<sup>2</sup>. This may be due to several factors, such as the cost of equipment<sup>3</sup>, the lack of access to computer courses, the fact that this population was already out of Labor and Educational contexts when these technologies started to be popularised, but also, and especially, to the lack of digital competences and inadequate system designs for the needs and specificities of this population<sup>4</sup>. The technological devices available, along with the apps and websites, aren't personalized to their needs, with interfaces that are insufficiently intuitive, as well as features that aren't age-friendly (e.g., small font size and icons; non-contrasting colours; terminology that is unfamiliar to older adults), and older adults don't have enough knowledge on the functionalities made available through those same devices to truly measure its' usefulness and adopt them in their everyday life (e.g. services and products available in the local community that can be acquired through an online transaction).

At European level, it has also been found that ICT use is also dependent on the level of education and the area of residence of individuals, being more widespread among those with higher education levels and in more populated areas, which is also in line with the study by Selwyn, Gorard, Furlong, and Madden (2003), who observed that ICT use is highly structured according to socio-demographic factors, such as age, gender, marital status and level of education<sup>5</sup>.

Training programs for older adults targeting digital financial literacy are complex to implement, and even more so when operating in contexts that relate low levels of economic and financial knowledge to equally low levels of ICT knowledge. Many times, these are amplified by a certain vulnerability and insecurity towards ICTs applied in the financial context, that is manifested as distrust. The perceived difficulty and unsafety are the main barriers to online transactions' general acceptance and usage. Furthermore, the awareness of existing frauds but the lack of knowledge on how to identify them, is a dissuasive factor.

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<sup>2</sup> Selwyn, N., Gorard, S., Furlong, J. & Madden, L. (2003). Older adults' use of information and communications technology in everyday life. *Ageing & Society*, 23: 561–582.

<sup>3</sup> White, J. and Weatherall, A. (2000). A grounded theory analysis of older adults and information technology. *Educational Gerontology*, 26 (4): 371-86.

<sup>4</sup> Keates, S., Clarkson, J. (2003). Design Exclusion. In Clarkson, J., Coleman, R., Keates, S., Lebbon, C. (Eds.). *Inclusive Design: Design for the Whole Population*. Springer: London, pp 88-102.

<sup>5</sup> Torres, A. (2010). TIC e Idosos: a relação surpresa. *VIDEOJOGOS 2010*: p. 61-70.

Concerning the preferred training format to be carried out in the pilot, the most relevant topics were: having a blended format, with both face to face and online features; keeping the sessions short; avoiding overly technical language and an excess of theoretical information; keeping it simple and clear; providing practical examples and approaching one topic at a time in order to not overburden the mentees.

Lastly, family can play a decisive role in older adults' ICT usage, especially children and grandchildren, since they usually provide older adults with most support. Although this role may also be extended to friends, acquaintances and work colleagues, since they rarely rely on professional help, it is safe to say older adults obtain their knowledge and support about technologies in mostly informal settings.

## 1. FAITH's Research Scope

### 1.1. Desktop research and state of the art

#### 1.1.1. Approach, Process and Tools

The **secondary research** or desktop research is comprised of a literature review on the concepts of Digital Financial Literacy and Peer-to-peer Mentoring, as well as a comprehensive, up-to-date, overview of the current State of The Art on older adults' digital financial literacy at national level.

The data consulted originated mainly from sources such as national statistical offices, the competent Ministries and the local and regional authorities dealing with health, active ageing, education, training and lifelong learning, etc., as well as from reliable nongovernmental sources (foundations, NGOs, think tanks, etc.) and from outputs and results of formerly implemented projects and initiatives at national and/or transnational level (including projects implemented by the partners), which served as the forerunner of the primary research work that took place in the four countries, all of these together feeding into the development of the national reports and the present Transnational/ comparative report. Analysis and elicitation of the most critical definitions in the project, namely Digital Financial Literacy and Peer-mentoring, were also performed through the collection and elicitation of the most appropriate definitions to be used throughout the project, using the Literature Review and Classification Template (Annex 5.1).

This literature review aimed at validating and complementing the information collected in the primary research, in the interviews, Focus Groups and online surveys across the 4 countries: Cyprus, Greece, Italy and Portugal.

#### *Comparative and aggregated desktop research on the State of the Art*

The digital exclusion of older adults implies unequal access and incapacity to use ICT and the internet that, nowadays, are both considered essential in order to fully participate in the society, as an increasing number of services gradually become more digitalized and often even exist only online. Older adults across Europe are thus now expected to use ICT-based services in order to access health, social care, education, finance and others, but also in order to perform everyday tasks much easier and quicker such as shopping, banking, traveling, etc; yet, a great number of them in Europe have very low or no capacity to use such technologies, which is not surprising given that many older adults have never used a computer or the internet during their working life.

Research evidence reveals that the rate of Internet use declines significantly with age in the EU, especially in southern European countries showcasing the low levels of digital inclusion of the older generations. A study conducted to investigate the digital divide at European level analysed the habits, attitudes and social status of users, dividing them according to the frequency of technology use into the following categories: non-users, sporadic users,



instrumental users, entertainment users and advanced users<sup>6</sup>. Of these users, 44% identified themselves as non-users or sporadic users, with a high percentage of the population from southern Europe, namely Greece, Italy and Portugal, falling into this group<sup>7</sup>.

According to Eurostat data from 2013, the European average of individuals from 55 to 74 years old who had used a search engine rounded 47%. From the 4 pilot countries, Greece had the lowest average, standing at 22%, closely followed by Cyprus, with 24%. In Portugal the percentage of population stood at 29%, with Italy representing the highest average, at 33%.

It should be noted, however, that, despite being lower than the average in Europe, all 4 countries presented a significant increase in comparison to the 2005 data.

TIME	2005	2006	2007	2010	2011	2013
<b>GEO (Labels)</b>						
<b>European Union - 27 countries (from 2020)</b>	:	:	25	38	40	47
<b>Greece</b>	5	6	5	11	13	22
<b>Italy</b>	9	11	13	24	26	33
<b>Cyprus</b>	5	7	9	14	17	24
<b>Portugal</b>	7	9	12	20	22	29

Table 1. Individuals who have used a search engine to find information<sup>8</sup>

For the general population, the main barriers to the use of online transactions are considered to be credit card security, the risk of a consumer's personal data disclosure to third parties, consumer suspicion about retail Internet businesses, the complex and lengthy procedures of making a new order and the lack of users' familiarity with online purchasing systems and the interface with the online store<sup>9</sup>. Relevant literature reveals that the perceived risk of online transactions plays a key role in the actual usage of online purchasing systems. This is particularly important for older adults compared to the younger individuals as it is believed that perceived risk is higher among the older generations and especially those who have equally low data as to the use/access to the Internet, e-commerce, e-business and other such indicators.

Eurostat data from 2019, regarding individuals from 55 to 74 years old who, in the last 12 months, hadn't bought / ordered goods or services over the internet due to payment security concerns, showed a reality that differed slightly throughout the 4 countries with Portugal being a clear outlier with a percentage of 22% versus an European average of 9% however, though increasingly since 2009; Cyprus stood halfway with 15%; Greece was the closest to Europe's average, standing at 8%; while Italy had the lowest percentage, with only 4% of individuals presenting these concerns.

<sup>6</sup> Karahasanović, A., Brandtzæg, P. B., Heim, J., Lüders, M., Vermeir, L., Pierson, J. , Lievens, B. , Vanattenhoven, J. and Jans, G. (2009). Co-creation and user-generated content elderly people's user requirements. Computational Human Behaviour, 25(3) p. 655-678.

<sup>7</sup> Brandtzæg, P. B., Heim, J. and Karahasanović, A. (2011) Understanding the new digital divide. A typology of Internet users in Europe, International Journal of Human-Computer Studies, Volume 69(3)

<sup>8</sup> [https://ec.europa.eu/eurostat/databrowser/view/ISOC\\_SK\\_ISKL\\_I\\_\\_custom\\_1022457/default/table](https://ec.europa.eu/eurostat/databrowser/view/ISOC_SK_ISKL_I__custom_1022457/default/table)

<sup>9</sup> Geranis, C. et al. (2015) Accommodative and Dissuasive Factors that Affect the Intention to Transact through the Internet in Greece. Procedia Economics and Finance, Volume 33, 2015, Pages 552-561

TIME	2009	2015	2017	2019
<b>GEO (Labels)</b>				
<b>European Union - 27 countries (from 2020)</b>	9	10	10	9
<b>Greece</b>	2	6	6	8
<b>Italy</b>	4	6	5	4
<b>Cyprus</b>	7	8	12	15
<b>Portugal</b>	8	21	26	22

Table 2. Individuals who, in the last 12 months, haven't bought / ordered goods or services over the internet for their own private use, because: Payment security concerns<sup>10</sup>

Concerns related to payment security aren't the only barrier though. According to Eurostat, the lack of necessary skills is a common constraint, as well. In 2019, the European average of individuals who, in the last 12 months, hadn't ordered goods or services over the internet because they lacked the necessary skills, stood at 9%. Greece's overview was the same, with an equal 9%; Italy, once again, presented the lowest average, at 6%; in Portugal, this value rose up to 18%; Cyprus' average was the highest, with a 30% percentage.

TIME	2009	2015	2017	2019
<b>GEO (Labels)</b>				
<b>European Union - 27 countries (from 2020)</b>	6	8	9	9
<b>Greece</b>	1	6	9	9
<b>Italy</b>	2	4	6	6
<b>Cyprus</b>	1	14	19	30
<b>Portugal</b>	4	17	20	18

Table 3. Individuals who, in the last 12 months, haven't ordered goods or services over the internet, because they lack the necessary skills<sup>11</sup>

The intention of older adults to use the internet and make online transactions is closely related to the individual's personal capacity and confidence in the internet usage and in the execution of online transactions. The lower the capacity and exposure to ICT, the lower the confidence and thus the behavioural intention of seniors to transact online. In fact, literature suggests that when older adults perceive ICT as useful and have support from their family environment and/or peers, they will usually use and adopt ICT. This implies the need to introduce motivational learning processes designed to meet the needs of the older population within a bottom-up personalized and cooperative approach that blends formal and informal learning along with peer, family and community support.

Combined with the lack of digital competences, difficulties in knowing basic economic concepts should also be pointed out, making it less likely for the older adults to implement good economic practices, such as drawing up a family budget. Financial literacy is particularly low among the least educated, the older people and women.<sup>12</sup>

<sup>10</sup> [https://ec.europa.eu/eurostat/databrowser/view/ISOC\\_EC\\_INB\\_\\_custom\\_1022537/default/table](https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_INB__custom_1022537/default/table)

<sup>11</sup> [https://ec.europa.eu/eurostat/databrowser/view/ISOC\\_EC\\_INB\\_\\_custom\\_1022537/default/table](https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_INB__custom_1022537/default/table)

<sup>12</sup> Antonietta di Salvatore et al. (2018) Measuring the financial literacy of the adult population: the experience of Banca d'Italia

If we look at 2020 Eurostat data on individuals from 55 to 74 years old, who had made online purchases in the last 3 months, it is noticeable that the partner countries remain way behind the European average of 34%.

INDIC_IS (Labels)	Last online purchase: in the last 3 months	Frequency of online purchases in the last 3 months: 1 or 2 times	Frequency of online purchases in the last 3 months: 3 to 5 times	Frequency of online purchases in the last 3 months: 6 to 10 times	Frequency of online purchases in the last 3 months: more than 10 times
<b>GEO (Labels)</b>					
European Union - 27 countries (from 2020)	34	14	12	4	3
Greece	13	6	4	2	1
Italy	17	8	5	1	1
Cyprus	11	3	5	2	1
Portugal	12	5	4	2	1

Table 4. Internet purchases by individuals (2020 onwards)<sup>13</sup>

Looking at the dataset regarding those who had, in the last 3 months, carried out at least one of the following financial activities/online purchases: “insurance policies, including travel insurance, also as a package together with e.g. a plane ticket”, “took a loan, mortgage or arranged credit from banks or other financial providers”, “bought or sold shares, bonds, units in funds or other financial assets”, although low, most of the countries didn’t present such a different percentage from the European average of 8%: Italy was the closest, with 7%, followed by Portugal at 5%, Greece at 3% and Cyprus at 1%.

INDIC_IS (Labels)	Online purchases (3 months): insurance policies, including travel insurance, also as a package together with e.g. a plane ticket	Online purchases (3 months): took a loan, mortgage or arranged credit from banks or other financial providers	Online purchases (3 months): bought or sold shares, bonds, units in funds or other financial assets	Online purchases (3 months): at least one of the financial activities
<b>GEO (Labels)</b>				
European Union - 27 countries (from 2020)	5	1	3	8
Greece	2	0	0	3
Italy	5	1	2	7
Cyprus	1	0	:	1
Portugal	4	1	1	5

Table 5. Financial activities over the internet (2020 onwards)<sup>14</sup>

<sup>13</sup> [https://ec.europa.eu/eurostat/databrowser/view/ISOC\\_EC\\_IB20\\_\\_custom\\_1022576/default/table](https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_IB20__custom_1022576/default/table)

<sup>14</sup> [https://ec.europa.eu/eurostat/databrowser/view/ISOC\\_EC\\_IFI20\\_\\_custom\\_1022502/default/table](https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_IFI20__custom_1022502/default/table)

Across all 4 countries there is a clear lack of structured training proposals, in general, dedicated directly to older adults 55+, and even more so when regarding training in digital financial literacy. There are digital literacy-only courses and there are financially oriented courses, however, it is difficult to find courses that combine the two dimensions, and it is even more difficult to find those courses dedicated specifically to older adults.

As such, we can conclude that existing practices on promoting digital literacy to older adults are extremely limited and are failing to provide the target group with the adequate skills and competencies to upgrade their level of digital financial literacy.

Besides training, policies and initiatives at national level were also inadequate in what concerns older adults and their digital inclusion. Therefore, it is necessary to challenge deep-rooted prejudices and the conviction of already knowing enough, while dealing with an extremely diverse audience of people in terms of training needs and preferences<sup>15</sup>.

In Cyprus, for example, there is currently no policy on digital literacy, nor notable policies or practices at national or local level focusing on the digital economic literacy of people who belong to the age group from 55 above. By extension, research into digital financial literacy of people in the age groups concerned is extremely limited, and most of the initiatives on their digital literacy in Cyprus come from various EU-funded projects.

Lastly, it could be observed that a proper consensus on the definition of Digital Financial Literacy doesn't exist, with different authors providing different, if complementary, concepts. As such, it was necessary to find a common understanding that fit the scope of the FAITH project. Thus, 33 definitions were elicited and subsequently scored by the partners for both Digital Financial Literacy and Peer-Mentoring.

### 1.1.2. Outputs and outcomes

Outputs:

	Digital Financial Literacy	Peer-Mentoring
Cyprus	3	3
Greece	3	5
Italy	5	3
Portugal	5	6
<b>Total #</b>	<b>16</b>	<b>17</b>
	<b>33</b>	

Table 6. Number of elicited definitions for Digital Financial Literacy and Peer-Mentoring

<sup>15</sup> Comitato per la programmazione e il coordinamento delle attività di educazione finanziaria, Governo Italiano, 2020, Linee guida per la realizzazione di programmi di educazione finanziaria per gli adulti.

n	Title	Definition of Digital Financial Literacy and Peer-Mentoring	PT_SCORE	IT_SCORE	GR_SCORE	CY_SCORE	Aggregated Score per
19	Peer Mentoring and Action Learning	Peer mentoring is more of a two-way process than traditional mentoring; often absent from the equation are differences in levels of experience and the power of the traditional mentor. These differences can produce additional benefits. The lack of a hierarchical relationship may make communication, mutual support, and collaboration easier, as well as produce personal benefits such as mutual learning, exposure to different perspectives, and friendship. The type of interaction allowed in peer mentoring provides more of an opportunity for the relationship to become transformative.	1	1	1	1	1
6	Peer Mentoring as an Avenue to Explore in Kidney Transplantation: Kidney Transplant Recipients' Perspectives on Peer Mentoring	"Peer mentoring involves pairing mentees with individuals who have had similar experiences to provide training, information, and emotional support."	1	1	2	1	1,25
11	Peer mentoring as a reception strategy and support for adaptation to the PBL method for students	"In peer mentoring, the mentor is a student more advanced in the degree who accompanies beginners or mentees through periodic meetings. In this format, there is less power disparity, which allows the sharing of opinions, daily problems and personal and social support."	2	1,00	1	1	1,25
26	Financial literacy and its influence on internet banking behaviour.	...Digital financial literacy as a nexus of competencies spanning elements of financial literacy and digital proficiency, that enable individuals to maintain their financial wellbeing by confidently making effective and responsible use of digital financial products and services. Digital financial literacy can therefore be visualised as a multidimensional concept referring to individuals' breadth and depth of financial knowledge and skills, enhanced by their aptitude in using products and services offered in a digital fashion. Conversely, within the context of our study, digital financial illiteracy is perceived as a lack of such knowledge, skills and aptitude, with negative consequences on individuals making use of financial products and services offered through digital platforms, such as i-banking."	1	2	1	1	1,25
3	A methodological overview to defining and measuring "digital" financial literacy	"(...) five core dimensions that are common to all three literacy concepts and outlines the specific areas of competency under each. These dimensions include: (1) basic knowledge and skills; (2) awareness (knowing about available financial and digital products and services); (3) practical know-how (knowing how to practically access and use them); (4) decision making (including financial attitudes and behaviors); and (5) self-protection (including consumer protection and data privacy)."	2	1	2	2	1,75
8	Why peer mentoring is an effective approach for promoting college student success	"Unlike hierarchical mentoring, peer mentoring matches mentors and mentees who are roughly equal in age and power for task and psychosocial support (Angelique, Kyle, & Taylor, 2002; Terrior & Leonard, 2007)."	1	2	2	2	1,75
12	Linee guida per la realizzazione di programmi di educazione finanziaria per gli adulti	Digital financial literacy is a tool for active citizenship that takes the form of a continuous learning process. This process may involve an initial awareness-raising phase, where not only knowledge and skills but also motivation are very low. It also implies the acquisition not only of theoretical notions, but also of the ability to translate these notions into concrete actions in everyday life, such as, for example, drawing up a budget to forecast and monitor one's income and expenditure, or using tricks to avoid fraud and manipulation.	3	1	2	1	1,75
21	Trends in peer learning	Peer learning can be defined as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing. Mentoring can be defined as an encouraging and supportive one-to-one relationship with a more experienced worker (who is not a line manager) in a joint area of interest. It is characterised by positive role modelling, promotion of raised aspirations, positive reinforcement, open-ended counselling, and joint problem-solving. It is often cross-age, always fixed-role, quite often cross-institution, and often targeted to disadvantaged groups.	2	2	1	2	1,75
22	Situating academic development in professional work: Using peer learning	With peer learning it is suggested a two-way, reciprocal learning experience. Peer learning involves participants learning from and with each other in both formal and informal ways. It includes mutual benefits and a sharing of knowledge, ideas and experience among participants. The emphasis is on learning rather than teaching, and on the support and encouragement learners offer to each other, as much as the learning task. In peer learning the roles of teacher and learner may either not be defined, be blurred and may shift during the course of the learning experience, unlike other learning events in which roles are fixed. Peer learning takes place spontaneously and informally in many circumstances, but it can be desirable to prompt it when there is the possibility that some members of a group may be excluded or ignored, or when other circumstances may inhibit it.	2	1	2	2	1,75

7	Peer Mentoring Works! - How Peer Mentoring Enhances Student Success in Higher Education	"One formal definition of peer tutoring is proposed by Topping who argues that peer tutoring is 'the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing'"	2	2	2	2	2
17	Peer Mentoring for Health Behavior Change: A Systematic Review	Peer mentoring is a process where peer mentors can help mentees develop decision-making and problem-solving skills that facilitate success in behavioral change efforts, while creating links and friendship.	3	1	2	2	2
18	Social Support and Adjustment After Spinal Cord Injury: Influence of Past Peer-Mentoring Experiences and Current Live-In Partner	The peer-mentor is a person who has faced the same significant challenges of the mentee. The benefit comes from sharing and exchange similar experiences, with an approach based on trust.	2	2	2	2	2
20	Digital Financial Literacy	The AFI network defines Digital Financial Literacy as acquiring the knowledge, skills, confidence and competencies to safely use digitally delivered financial products and services, to make informed financial decisions and act in one's best financial interest per individual's economic and social circumstance.	1	2	3	2	2
23	Τα οφέλη των ηηπιαγωγών από την συμμετοχή τους σε πρόγραμμα peer e-mentoring με στόχο την διδασκαλία αγγλικών στο ηηπιαγωγείο. / The benefits of the kindergarten teachers from participating in a peer e-mentoring program aimed at teaching English at the kindergarten.	Mentoring between peers is a supportive relationship in which two persons of the same age, experience and/or power, cooperate to help each other in regards to their individual development and psychological support. Peer mentoring can be performed either in the context of one-to-one relationships or in a group. In the latter occasion interaction can take place between group members along with the interaction with the mentor. In peer mentoring all members can act as mentors of the others by supporting them, giving them advice, reviewing opinions, offering solutions, or simply by listening. In this way, mentoring is approached as a spiral, not as a linear experience, since everyone participates equally in the process.	2	2	2	2	2
5	A Multidimensional Approach to Defining and Measuring Financial Literacy in the Digital Age	"Basic financial and digital knowledge. Awareness of available <i>Digital Financial Services</i> (digital payment tools such as mobile money and digital wallets, online banking, peer-to-peer lending, and remittance services) and awareness of positive financial attitudes and behaviors. Ability to make digital financial transactions (know how to use mobile money applications – navigate menus, make and cancel transactions, correct transaction errors, access peer-to-peer lending, use online banking, etc.). Ability to make appropriate financial decisions, reflective of attitudes and behaviors, using DFS (decide to put money aside and choose reliable DFS, use DFS to send remittances safely, rely on peer-to-peer lending, etc.). Ability to detect and avoid online scams and frauds associated with DFS"	2	3	2	2	2,25
15	Digital Financial Inclusion: Implications for Customers, Regulators, Supervisors, and Standard-Setting Bodies	"Digital financial inclusion" can be defined as digital access to and use of formal financial services by excluded and underserved populations. Such services should be suited to the customers' needs and delivered responsibly, at a cost both affordable to customers and sustainable for providers.	3	1	3	2	2,25
4	Digital Financial Literacy in Rural India: A Study of Aligarh District	"Digital financial literacy is having the knowledge, awareness, acquired skills, and developing necessary habits to use digital devices for financial transactions effectively."	1	3	3	3	2,5
9	Investigating the Value of a Peer-To-Peer Mentoring Experience	"P2P mentoring is defined as the type of mentorship which normally takes place between a person who has lived through a specific experience (the peer mentor) and a person who is new to such experience (the peer protégé/mentee) (Hall and Jaugietis, 2011)."	2	3	3	2	2,5
28	Multiple Mentor Model: A Conceptual Framework.	Peer learning can be defined as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing."	2	2	3	3	2,5
1	The Need to Promote Digital Financial Literacy for the Digital Age	"(...) digital financial literacy is a multi-dimensional concept. (...) We propose four dimensions of digital financial literacy, including knowledge of digital financial products and services, awareness of digital financial risks, knowledge of digital financial risk control, and knowledge of consumer rights and redress procedures."	1	2	5	3	2,75
10	Peer mentoring in engineering: (un)shared experience of undergraduate peer mentors and mentees	The three overarching components of peer mentoring include mentoring relationships that focus on growth and accomplishment, offer broad forms of support, and are personal and reciprocal (Crisp & Cruz, 2009)."	3	3	3	3	3
25	Peer mentoring: the challenges and opportunities	Peer mentoring is where two, three or more individuals agree to have a development relationship with one another which may involve occasional or regular meetings, phone calls, exchanges of information and specific forms of support which go beyond networking. Peer mentors need not be friends, though often an agreement to enter into a peer mentoring relationship often leads to a friendship being formed. This is primarily a development relationship with the clear purpose of supporting the individuals within it to achieve their job objectives.	3	3	3	3	3

10	Peer mentoring in engineering: (un)shared experience of undergraduate peer mentors and mentees	"The three overarching components of peer mentoring include mentoring relationships that focus on growth and accomplishment, offer broad forms of support, and are personal and reciprocal (Crisp & Cruz, 2009)."	3	3	3	3	3
25	Peer mentoring: the challenges and opportunities	Peer mentoring is where two, three or more individuals agree to have a development relationship with one another which may involve occasional or regular meetings, phone calls, exchanges of information and specific forms of support which go beyond networking. Peer mentors need not be friends, though often an agreement to enter into a peer mentoring relationship often leads to a friendship being formed. This is primarily a development relationship with the clear purpose of supporting the individuals within it to achieve their job objectives.	3	3	3	3	3
2	Digital Financial Literacy: A Study of Households of Udaipur	"Digital financial literacy is directly link or knowledge of online purchasing, online payment through different modes, and online banking system."	3	3	4	3	3,25
24	Who Is a Mentor? A Review of Evolving Definitions	Although the mentoring literature has defined mentoring in various ways, a single precise and comprehensive definition of a mentor or mentoring is not advisable at this point. However, it is important that researchers should be able to come to agreement on the fundamental attributes of a mentoring relationship. Three are core attributes that distinguish mentoring from other kinds of work-related relationships. First, a reciprocal relationship, involving mutuality of social exchange as opposed to a one-way relationship. Second, a mentoring relationship produces developmental benefits linked to the protégé's work and/or career. Third, mentoring involves regular/consistent interaction between the mentor and the protégé over some period of time.	3	4	3	3	3,25
27	Making the move to peer learning.	"Peer learning should be mutually beneficial and involve the sharing of knowledge, ideas and experience between the participants. It can be described as a way of moving beyond independent to interdependent or mutual learning". "We define peer learning in its broadest sense, then, as 'students learning from and with each other in both formal and informal ways'".	4	3	2	4	3,25
13	Measuring the financial literacy of the adult population: the experience of Banca d'Italia	Financial literacy is the result of three components: knowledge of the basic issues involved in making financial choices (inflation, interest rate, diversification, compound interest); behaviour, which relates to the management of one's financial resources in the short and long term; the individual's attitude towards saving.	4	3	4	3	3,5
14	G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy	Financial literacy is defined as a combination of financial awareness, knowledge, skills, attitude and behaviours necessary to make sound financial decisions and ultimately achieve individual financial wellbeing	4	3	4	4	3,75
16	Entrepreneurial spirits in women and men. The role of financial literacy and digital skills	Financial literacy has been widely regarded as an important component of an individual's background that contributes to make sound informed financial decisions	4	4	4	4	4
29	Multiple Mentor Model: A Conceptual Framework.	"A mentor is anyone who provides guidance, support, knowledge, and opportunities for whatever period the mentor and protégé deem this help to be necessary"	4	5	4	4	4,25

#### Outcomes:

- Acknowledgement of the final and consensual definitions for Digital Financial Literacy and Peer-Mentoring to be used throughout the project:

#### Digital Financial Literacy

Andreou and Anyfantaki define "digital financial literacy as a nexus of competencies spanning elements of financial literacy and digital proficiency, that enable individuals to maintain their financial wellbeing by confidently making effective and responsible use of digital financial products and services. Digital financial literacy can therefore be visualised as a multidimensional concept referring to individuals' breadth and depth of financial knowledge and skills, enhanced by their aptitude in using products and services offered in a digital fashion. Conversely, within the context of our study, digital financial illiteracy is perceived as a lack of such knowledge, skills and aptitude, with negative consequences on individuals making use of financial products and services offered through digital platforms, such as i-banking."<sup>16</sup>

#### Peer-Mentoring

Regarding Peer-Mentoring, O'Neil and Marsick consider it as "more of a two-way process than traditional mentoring; often absent from the equation are differences in levels of experience and the power of the traditional mentor. These differences can produce additional benefits. The lack of a hierarchical relationship may make communication, mutual support, and collaboration easier, as well as produce personal benefits such as mutual learning, exposure to different perspectives, and friendship. The type of interaction allowed in peer mentoring provides more of an opportunity for the relationship to become transformative."<sup>17</sup>

<sup>16</sup>Andreou, P. & Anyfantaki, S. (2019) Financial literacy and its influence on internet banking behaviour.

<sup>17</sup> O'Neil, J. and Marsick, V. (2009), Peer Mentoring and Action Learning



## 2. Identification and validation of challenges

### 2.1. Approach, Process and Tools followed and used by the four countries

The primary research question in addressing the aims of FAITH's project was the following:

*Does the involvement of older adults in a Digital Literacy Learning Programme and a Peer-to-Peer Mentoring approach contribute to ICT skills development and confidence building so as to increase older adults' use of digital technologies to execute online transactions as an easier and quicker access to a range of online services and products, thus increasing their quality of life?*

In line with the research question above, the primary research aimed to provide the specifications of:

- The older adults 55+ profile focused on ICT skills and internet usage;
- The main barriers and enablers in relation to ICT and internet usage for online transactions among older adults 55+;
- The current involvement of family members and caregivers in the integration of digital technologies in the older adult's everyday life;
- The current availability of age-friendly products and services in local communities;
- The training needs, preferences, expectations and limits of the secondary target groups;
- The requirements of the Peer-to-Peer mentoring programme to address the primary target-group's digital skills learning needs, preferences, expectations and limits.

As such, the Primary research was focused on the assessment and understanding of the opportunities that older adults have to use ICT for online transactions, their abilities, and the barriers they face, including their attitudes, fears and perceptions, as well as the support they receive within both their home environment and the community.

Three main assessment methodologies were used:

- Individual interviews with older adults 55+ with low digital competences, as well as with formal and informal caregivers or family members and qualified professionals, both from the social sector and ICT based companies;
- Focus groups with older adults 55+ with digital competences;
- Online survey to measure the general public's perception regarding older adults' ICT usage, with emphasis placed on online transactions.

At each of the pilot sites, the participants' screening, recruitment and engagement was conducted as follows:

- 1) Screening of potential primary and secondary beneficiaries according to the profile criteria



- 2) Contacting potential participants to check their willingness and availability to participate
- 3) Informing the potential participants about all the steps that should be taken
- 4) Matchmaking between the participants and the profile criteria fulfilment. In the case of the older adults 55+, this involved the appliance of the MDPQ-28, translated in the native language, in order to assess their level of digital competences and allocate them to the adequate group (skilled in ICT or with low ICT skills); preceded by the signature of the informed consent form.

The participants could be either internal to the Partners' Organisations, such as end users, health and social and care professionals, and IT departments; or external, such as older adults living in the Community, formal and informal caregivers or family members, professionals from the network of the project's Partners and ICT companies.

The profiles taken into consideration were the following:

#### Older Adults 55+ with low Digital competence

- Aged 55+
- Low level of ICT skills determined through the Mobile Device Proficiency Questionnaire (MDPQ-28)<sup>18</sup>
- Community dweller
- No more than mild cognitive disability
- Willing to participate

#### Older adults 55+ with Digital competence

- Aged 55+
- Competence on the use of ICT, determined through the Mobile Device Proficiency Questionnaire (MDPQ-28)
- Community dweller
- Willing to participate

#### Formal and Informal caregivers or family members

- Aged 18+
- Providing care or with a supportive relation to an older person
- Good communication skills
- Willing to participate

#### Qualified Professionals from social and care and from ICT industry

- Aged 18+
- Professional relation with the older adults 55+
- Good communication skills
- Willing to participate

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<sup>18</sup> <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8871193>

Data collection process:

In the case of the primary research and what related to the primary beneficiaries in Cyprus, Greece, Italy and Portugal, the research aimed at collecting information about:

- The digital literacy level (existing ICT-related skillset, level of familiarity and prior experience with ICT use and online transactions) of older adults compared to the general population and their peers.
- Their attitudes toward ICT use and technology enabled transactions (perceived usefulness, perceived risk, ease of use and self-efficacy).

In the case of formal and informal caregivers in the four countries, the research focused on:

- Their knowledge regarding type and frequency of ICT interaction that the supported older adult(s) have, including familiarisation with online transactions.
- The type of support they provide to older adults interacting with technology.
- Effective ways to support an older adult to feel more confident and safer when interacting with technology and making online transactions within the domestic environment.

In the case of the qualified professionals working with and/or serving older adults in the community (e.g., from day care centres, companies, service providers) the research aimed at shedding light on the following key issues:

- Their knowledge and understanding of age-friendly products and services.
- The nature, characteristics and prevalence of ICT use among the population of older adults 55+ that they support/ work with.
- The factors (limitations and barriers) that prevent older adults from using ICT, especially for online transactions, including the opportunities they have to interact with technology and learn how to use it in formal and/or informal settings.
- Effective ways to support older adults in using ICT technologies for their everyday transactions, including ways to build their confidence and reduce their perceived risk in online transactions.

Apart from the interviews, a structured group discussion (Focus Group) took place in each country, with a maximum of 10 participants, composed of ICT competent older adults. In this case, the goal was to investigate their motives for using ICT, the factors that have contributed to their good familiarisation and frequent use of ICT for everyday transactions, the reasons for feeling safe when transacting online, the dynamics of peer-to-peer interaction in terms of ICT use, and other such key issues of concern that would allow useful comparisons as to the factors that trigger more frequent use of ICT among the older generation, thus shedding light into effective ways to increase the utilisation of technology for online transactions by older adults. The focus groups also investigated the intention of digitally literate older adults 55+ to volunteer so as to promote increased ICT use among their peers, their level of participation in community initiatives, activities and events, leadership and self-motivation.

The final task of primary research was an online survey that measured the general public's perception about the ability of older adults to use ICT, the push and pull factors, the role of the family and the community and other such issues that will guide the development of the envisaged Peer-to-Peer Mentoring Programme.

All the participants' data collected by the partners was anonymized, and the participants confidentiality was protected at all times. Data Collection templates, made available in the Research Protocol, served as a basis for the analysis of the information collected in the primary research.

The three filled-in templates constituted the foundation for the National Reports and the present Transnational Report, which was built upon the correlation of the information collected in the National Reports. The aim of this report was to provide a prioritization of the most important Challenges, Functional and Non-Functional Requirements, thus finding a consensus on the final set among all the partners.

The primary research in **Cyprus** took place from July until mid-August 2021. Due to the fact that participants had no easy access to the internet, individual interviews were conducted in a face-to-face form, as well as in the Focus Group but, due to covid restrictions, the procedure took place in two phases, with 2 and 5 participants respectively. The primary research's participants were recruited according to the criteria established in the project's research protocol mentioned above, whereupon, the responses were transferred to an online survey on Google Forms so as to statistically analyse them.

The primary research in **Greece** took place from May until July 2021 with the participation of 115 individuals living mainly in Athens. The recruitment of participants was made through the networks of 50plus and Symplexis, the two Greek partners, with the target groups. Apart from direct communication with the members of the organizations, an open call was published through social networks and the webpages of the organizations. After the selection of the participants, the interviews took place online due to the ongoing restrictions resulting from the Covid-19 pandemic. The platforms used were Zoom and Skype. When a participant did not have access to the Internet, or could not use a relevant platform, the interview took place through phone call. The focus group took place on Zoom and the online survey was conducted via Google Forms.

The primary research in **Italy** was conducted between May and June 2021, involving an overall of 102 respondents. Stakeholders were recruited according to the criteria established in the research protocol and based on a convenience sample. Interviews were conducted in the form of an online survey, developed on Google Forms according to the templates provided in the research plan. The focus group was conducted online, via Zoom platform. Data from interviews were collected through online forms, upon consent to data collection and management. Focus group discussion was recorded and transcribed in its main contents, anonymising the comments. Data from the focus group were coded and analysed.

The primary research in **Portugal** took place between June and July 2021 involving an overall of 120 respondents. Santa Casa da Misericórdia da Amadora (SCMA) recruited in its premises (Nursing Homes, Day Centers and Home Care) those who fit the defined profile criteria, inviting them to participate in this study. A mixed format was adopted, with the Focus Group taking place online, via Zoom, and the individual interviews being conducted in a face-to-face format. The Online Survey was developed on Google Forms and shared through SCMA's social networks. In order to facilitate the data collection, the Focus Group was recorded and transcribed afterwards with all personal information being anonymized and with the participants' permission.

## 2.2. Outputs and outcomes

Outputs:

	Focus Group	Interviews			Online Survey
	Older adults 55+ skilled in ICT	Older adults 55+ with low ICT skills	Caregivers	Qualified Professionals	General Public
<b>Italy</b>	1 (Participants: 7)	12	11	11	1 (Participants: 61)
<b>Cyprus</b>	1 (Participants: 7)	10	10	5	1 (Participants: 50)
<b>Greece</b>	1 (Participants: 7)	10	10	5	1 (Participants: 83)
<b>Portugal</b>	1 (Participants: 8)	10	10	6	1 (Participants: 86)
<b>Total #</b>	<b>4 (Participants: 29)</b>	<b>42</b>	<b>41</b>	<b>27</b>	<b>4 (Participants: 280)</b>

All Interview Questionnaires, as well as the Online Survey, were translated at each pilot into Greek, Italian and Portuguese, respectively, making a total of 4 translated files on each of the 4 partners.

### Data collection and content analysis

The following data was collected through the project's primary research, conducted in Cyprus, Greece, Italy and Portugal, and involving a total of 419 respondents. Four types of stakeholders were involved: older adults 55+ with low ICT skills, older adults 55+ skilled in ICT, caregivers or family members and the general public.

The data was collected through interview questionnaires, a Focus Group and an Online Survey.

### Digital Competences

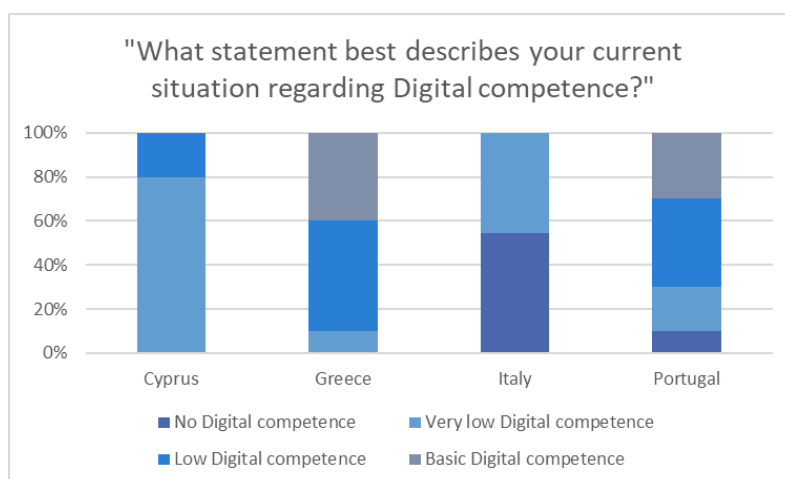


Figure 1. Digital competences of older adults: older adults' interview questionnaire

- In average, 10% of the older adults 55+ in the research assessed having “No Digital Competence”, 27,5% have “Low Digital Competence”, 40% have “Very Low Digital Competences” and 17,5% have “Basic Digital Competence”;
- Greek respondents had the highest self-assessed digital competences, with 40% classifying themselves as having “Basic Digital Competence”. On the other hand, Italy presented the lowest self-assessment, with 50% of the older adults 55+ considering they have “No Digital Competence”.

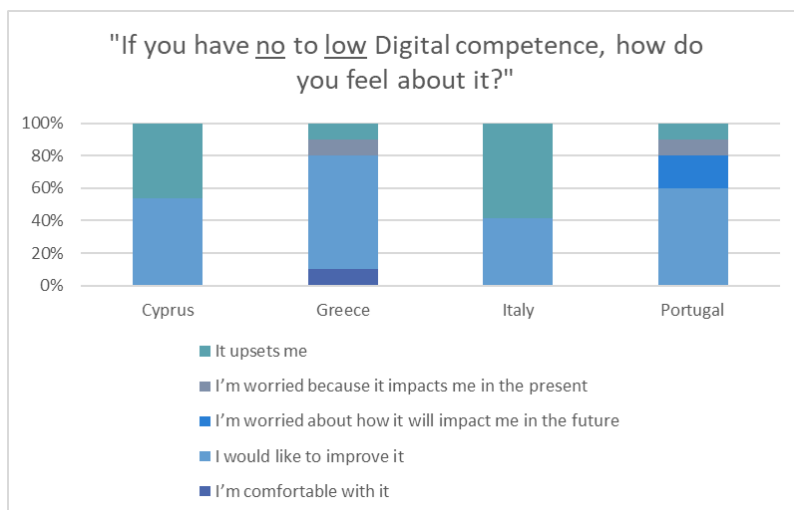


Figure 2. Impact of low digital competence: older adults' interview questionnaire

- An average of 55% of the total respondents would like to improve their digital competences;
- 32,5% said this lack of digital competences "upsets" them (this percentage reaches 60% in Italy, versus the lowest at 10% in both Greece and Portugal) and another 10% show concern about the future and present impacts this lack of competences has in their lives;
- Only 2,5% of the total respondents answered they are "comfortable with it".

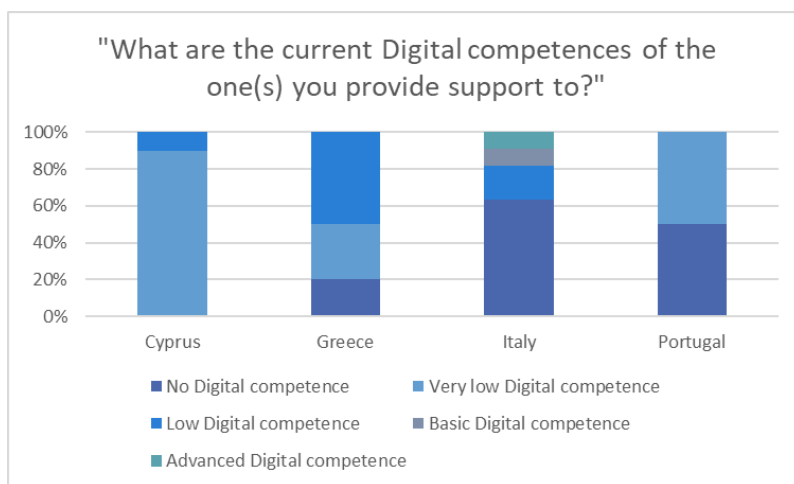


Figure 3. Digital competences of older adults: caregivers' interview questionnaire

- Of the caregivers interviewed, 32,5% consider older adults 55+ have "No Digital competences", 42,5% consider their competences "Very Low", 20% "Low", 2,5% "Basic" and another 2,5% "Advanced";
- Caregivers believe older adults would be interested in improving their competences.

## Internet usage

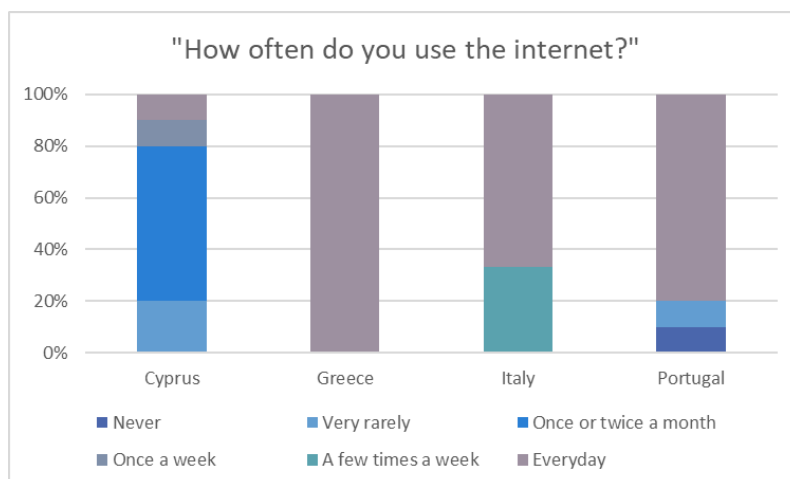


Figure 4. Frequency of internet usage: older adults' interview questionnaire

- ▶ Regarding the frequency of use, all the Greek respondents said they use the internet every day, along with 80% of the Portuguese and 70% of the Italian;
- ▶ In Cyprus, however, only 10% use the internet every day, with another 10% of the respondents saying they use it "Once a week";
- ▶ 65% of the total respondents use the internet every day; 7,5% "A few times a week"; 2,5% use it "Once a week"; 15% "Once or twice a month" and 7,5% "Very rarely";
- ▶ Only 2,5% of the total respondents answered they "Never" use the internet.

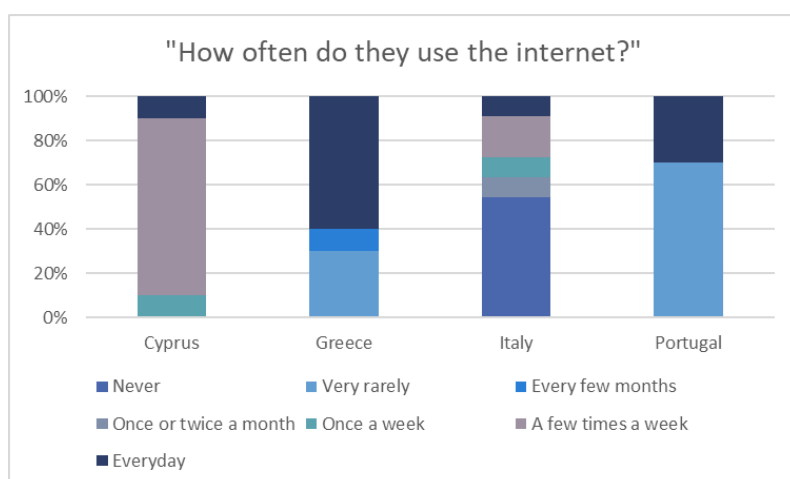


Figure 5. Frequency of internet usage: caregivers' interview questionnaire

- ▶ On average, regarding the frequency of use, 27,5% of the caregivers considered older adults 55+ use the internet every day, 25% answering "A few times a week" and other 25% "Very rarely";
- ▶ 12,5% of the total caregivers consider older adults "Never" use the internet;

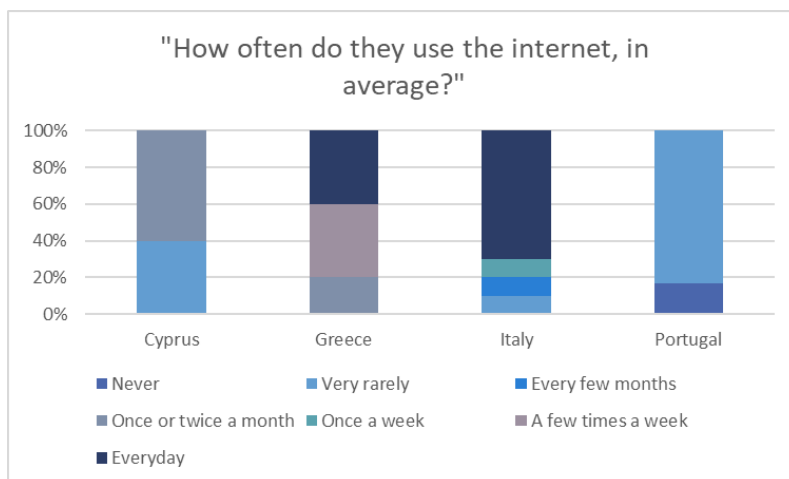


Figure 6. Frequency of internet usage: qualified professionals' interview questionnaire

- ▶ Of the qualified professional, and similarly to the caregivers, 27,5% responded that older adults use the internet every day;
- ▶ 20% consider the frequency of usage is “a few times a week” and 33,8% “very rarely”;
- ▶ Only 3,75% responded that older adults “never” use the internet.

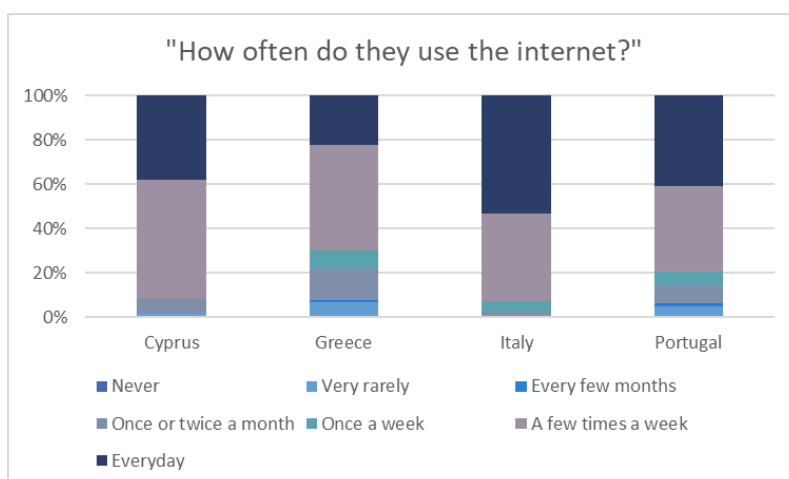


Figure 7. Frequency of internet usage: general public's online survey

- ▶ Comparatively to the interview questionnaires' results, the Online Survey shows much more homogeneous responses across the countries:
  - ▶ 37,5% consider older adults use the internet every day;
  - ▶ 46,3% answered “A few times a week”;
  - ▶ The remaining 16,2% chose either “once a week”, “once or twice a month”, “every few months” or “very rarely”.

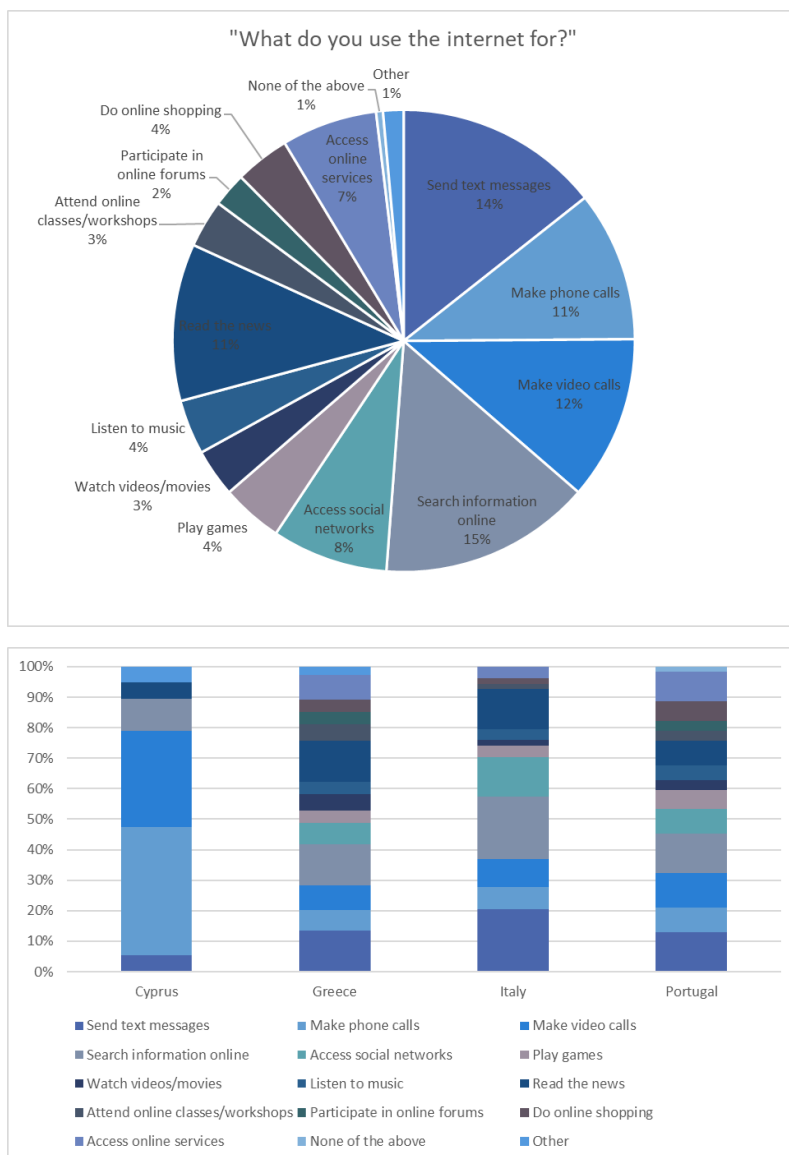


Figure 8. Activities carried out by older adults in the internet: older adults' interview questionnaire

- From the data provided above we can assess that the most common activity throughout the 4 countries is "Send text messages (e.g., Facebook Messenger, WhatsApp, email)", at 14%, closely followed by "Make video calls (e.g., Facebook Messenger, Skype, Zoom, WhatsApp)" and "Make phone calls (e.g., Facebook Messenger, Skype, Zoom, WhatsApp)", at 12% and 11%, respectively;
- Greece, Italy and Portugal presented a more heterogeneous sample, with the older adults in Cyprus using the internet for only 6 of the 15 activities presented, namely: "Make phone calls", "Make video calls", "Search information online", "Send text messages", "Read the news" and "Other: 'I watch the news'";
- Of these activities, "online shopping" and "access online services" presented a lower percentage, as expected, respectively at 4% and 7%.
- Most of the activities are for communication and social interaction purposes;
- Not all older adults have integrated leisure and entertainment activities into their daily routines.



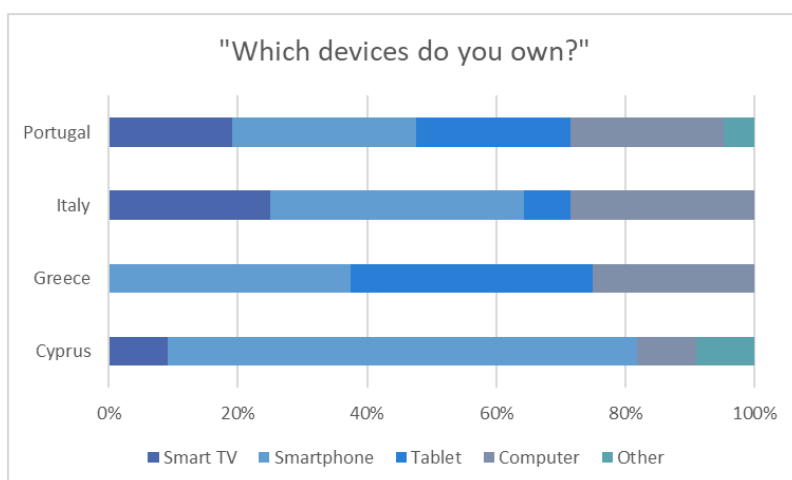


Figure 9. Devices owned by older adults: older adults' interview questionnaire

- ▶ An average of 45% of the total respondents own a Smartphone;
- ▶ 16,3% own a Tablet;
- ▶ 13,3% own a Smart TV;
- ▶ Two very interesting answers were given in the "Other" option, namely:
  - ▶ 1 respondent still has a mobile phone without internet access;
  - ▶ 1 respondent doesn't own any devices, but he borrows them from other people.

## Need for Support

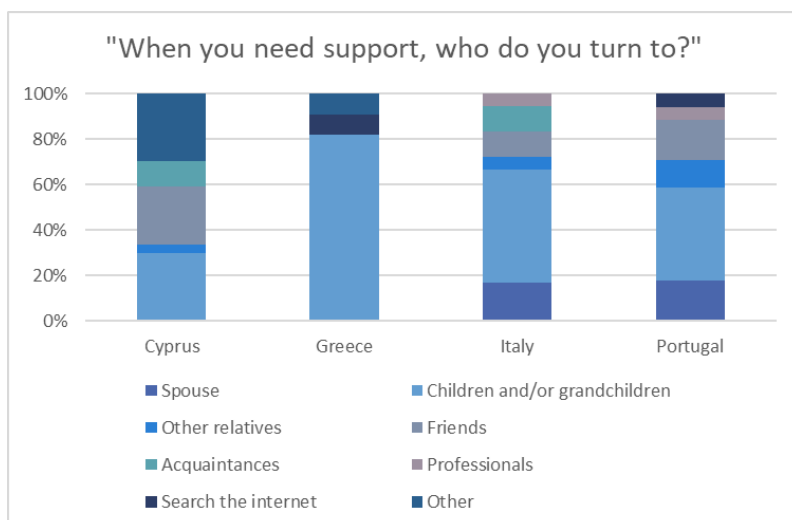


Figure 10. Need for support: Older adults' interview questionnaire

- ▶ When in need of support, most older adults reach out to their family;
- ▶ 51,3% of the total respondents answered "children and/or grandchildren", the most common denominator, followed by "Friends", with 13,8% and "Spouses" with 10%;
  - ▶ Greece stood out with 80% of the national respondents choosing "children and/or grandchildren";
- ▶ On occasion, they request support from acquaintances, or even by autonomously searching the internet, both options representing 5% and 3,8% of respondents, respectively;

- ▶ Of those that answered “Other” (7,5%), mostly all pointed out their caregiver as the main support, as well as work colleagues, in a lower degree;
- ▶ In respect to frequency, the older adults who claim to “never need support” represent 8,3% in Italy, and 40% both in Portugal and in Greece;
- ▶ Those who “always need support” represent 70% of the respondents in Cyprus and 10% in Portugal;
- ▶ From a general overview, the older adults 55+ in Cyprus show the most dependency in regard to ICT usage, while the Greek show the most autonomy;
- ▶ 90% of the caregivers / family members interviewed in Cyprus answered older adults “often need support” and the other 10% consider they “always need support”;
- ▶ In Italy, of the respondents, 9 out of 11 said older adults “often” or “always” need support, which only one of the respondents admitted not having the knowledge to provide;
- ▶ In Portugal, 50% of the caregivers consider older adults always need support, the remaining 50% answering either “Very rarely, they can mostly do it by themselves” or “Never, they can do it by themselves”;
- ▶ Similarly, in Greece, 60% of caregivers consider older adults “often” or “always need support” and the remaining “Very rarely, they can mostly do it by themselves”.

## Online transactions

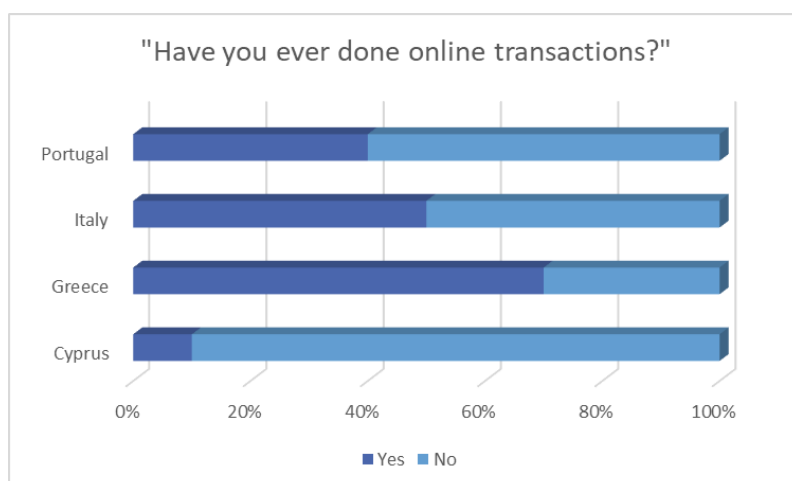


Figure 11. Online transactions usage: older adults' interview questionnaire

- ▶ Of the older adults 55+ interviewed across the 4 countries, 57,5% have never done online transactions;
- ▶ Greece stood out as the country with the most affirmative answers, with 70% of the respondents claiming they do online transactions;
- ▶ Cyprus showed the lowest online transactions acceptance, with 90% of respondents saying they never did online transactions;
- ▶ Of the 50% of respondents that have done online transactions in Italy, all of them consider it safe “To some extent”, as they are afraid of data being stolen or to make mistakes in the procedure; 84% of them consider it easy to do;
- ▶ In Portugal, 75% of those who do online transactions consider them easy, 50% consider online transactions as not safe, and 20% consider it “totally” safe;
- ▶ When questioned whether they consider online transactions easy, half of Greece's respondents answered “to some extent”, the other half saying it is easy; safety-wise,
- ▶ 60% believe transactions are partially safe, 10% consider them totally safe, and 20% don't find transactions safe “at all”.

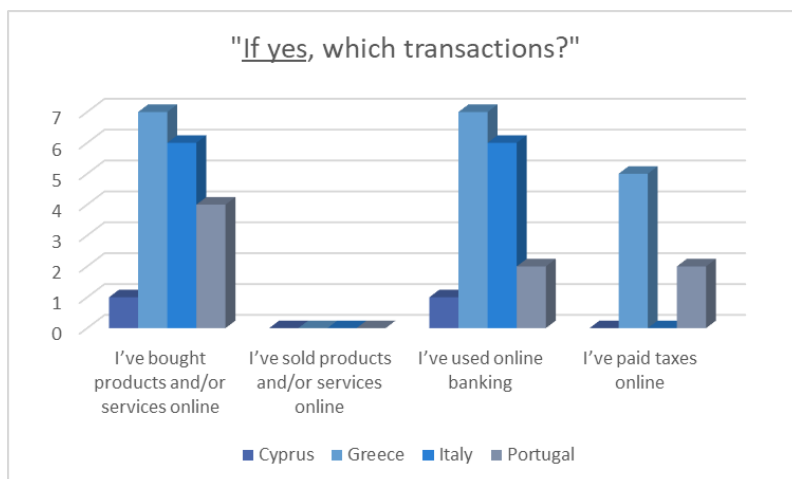


Figure 12. Types of online transactions carried out: older adults' interview questionnaire

- ▶ The most common online transaction to be conducted by older adults is online shopping, closely followed by online banking;
- ▶ Greek older adults use online transactions the most, with 70% claiming to have both "bought products and/or services online" and "used online banking", and 50% "paid taxes online";
- ▶ It can be concluded that older adults in general don't seek to do online selling, and few pay their taxes online;
- ▶ Cyprus has the lowest online transactions usage, with only 10% of respondents claiming to do online shopping and online banking.

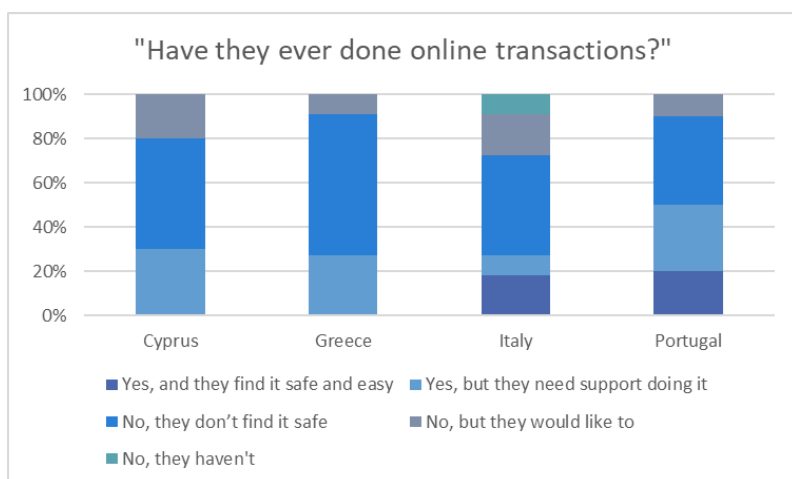


Figure 13. Online transactions usage: caregivers' interview questionnaire

- ▶ Concerning online transactions, 63% of the caregivers in Italy said older adults do not consider Internet a safe place, 72% pointing this out as the reason why older adults don't perform online transactions;
- ▶ Safety-wise, 70% of Greek older adults consider the internet to be safe "to some extent", while 30% don't consider it safe "at all". As such, 70% have never done online transactions because "they don't find it safe";
- ▶ In Portugal, 20% said "Yes, and they find it safe and easy", but 40% said they don't do it because "they don't find it safe";

- ▶ Half of the respondents in Cyprus answered that older adults don't do online transactions because "they don't find it safe"; 20% said they don't but "they would like to" and the remaining 30% do online transactions with support;
- ▶ "No, they don't find it safe" is the most common answer, representing 47,5% of the total responses and confirming the impact of confidence in regard to online transactions;
- ▶ An average of 25% do online transactions with support.
  - ▶ We can conclude confidence has a big impact in regard to the use of online transactions by older adults;
  - ▶ Lack of competence also has a big impact, with older adults frequently reaching out for support.

### Peer-mentoring

- ▶ In regard to the format, 50% of the respondents in Italy would prefer face-to-face training, 33% would prefer it to be blended, and the remaining 17% would prefer it to be exclusively online. All of the respondents acknowledge the value of a Peer-to-Peer Mentoring methodology;
- ▶ In Portugal, 80% would prefer face-to-face training, with the remaining 20% preferring a blended format. 50% of the respondents believe the Peer-to-Peer Mentoring methodology would be useful, with the other half disagreeing;
- ▶ In Greece, 80% would prefer Blended training rather than Face-to-face training (20%);
- ▶ In Cyprus, all respondents would prefer Face-to-face training, and they all find it would be helpful to have a Peer-mentor, even if only "to some extent" (90%);
- ▶ None of the respondents chose an exclusively online format.

All 4 countries present a significant need for improvement in the digital financial literacy of older adults 55+, as well as in the process of adapting services and products, namely in regard to the training and the devices available. A recurring topic throughout the primary research was the lack of adaptation and personalisation to older adults' needs and preferences, such as insufficiently intuitive interfaces and features that aren't age-friendly (e.g., small font size and icons, non-contrasting colours; terminology that is unfamiliar to older adults).

The general overview, in what concerns training and education on digital financial literacy, made it clear that most of the ICT knowledge comes from informal settings, such as family household (children and grandchildren provide the main support, as well as spouses and other relatives), workplace and community (both work colleagues, friends and acquaintances were also referred). Most older adults have low competences but would be open to improving their knowledge.

Regarding the training, the Peer-mentoring approach appears to be a particularly appropriate method to implement with the older adults 55+, even if a percentage of the older adults aren't aware or can't quantify the benefits yet.

It was observed that the lockdown has stimulated and made more frequent the use of some technologies, although on access to public services and home banking services many

difficulties remain, be it due to external factors, such as the platform or interface itself, or the continuous change of the websites.

According to the validation of the primary and secondary research data it was possible to identify 11 main Challenges that need to be addressed:

- Lack of experience in mentoring
- Lack of knowledge on internet risks and mistrust towards online transactions
- Resistance towards online training
- Difficulty in understanding ICT concepts
- Lack of access to ICT equipment and internet
- Limited use of the different functionalities
- Lack of awareness on peer-mentoring benefits
- Lack of age-friendly products/services
- Highly demanding personalised support
- Lack of awareness of age-friendly products/services
- Lack of ICT knowledge/digital competences

While key barriers and constraints identified by the respondents were:

- Technical jargon;
- Overly theoretical information;
- Information in English;
- Small screens and fonts;
- Symbols / icons;
- Using and managing passwords;
- Fear of making mistakes;
- Fear of losing money;
- Fear of sharing personal details;
- Perceived complexity of the procedures (e.g., accessing, navigating, transacting) and difficulty in remembering them;
- Focusing on completing the predefined lessons / objectives without taking into account the pace of each participant;
- Navigating through different interfaces that can be confusing for the participants;
- Following the curriculum, although it is obvious that the participants can't follow;
- Showing only the steps of the process without listening to the concerns / doubts of the participants;
- Moving to the next subject when the participants are unable to keep up;
- Having a fixed curriculum;
- Predefined educational content without taking into account the level of the participants;
- Non-personalised approach (to make the same curriculum for people 55+ and for people 75+);
- Overwhelming excess of information
- Focusing on creating a lot of online material and not focusing enough on the lessons;
- Non-user-friendly equipment;
- Distance learning;
- Fast learning procedures.

As possible enablers to the Learning Programme, it was suggested the use of:

- Native language;
- Clear and simple language;
- Bigger screens and fonts;
- Strategies for creating, organizing and remembering passwords;
- Interactive and practical lessons;
- In-person component;
- Step-by-step instructions, starting from the basic concepts;
- Repeat instructions and steps several times;
- The steps of the processes should be in a written form so the participants can have access at any time;
- Compilation of the most common software symbols and functions;
- Well trained peer-mentors;
- Use practical everyday life examples, based on the participants' experience, that are useful. Demonstrate the problems that may arise;
- Training program divided into modules;
- Clear educational goals and simple objectives for each lesson;
- Focus on one subject at a time;
- Create training material with illustrative examples and instructions (e.g., images, screenshots, video tutorials);
- Adjusting goals in a proportional and realistic way, to avoid overwhelming and discouraging the participants;
- Advising on how to minimize the possibility of something going wrong when transacting online (e.g., checking comments and ratings; choosing trustworthy companies / websites);
- Inform older adults and their family and friends about age-friendly products and services and where to find them;
- Promote discussion of themes, do role playing exercises;
- Give time throughout the lessons for the participants to practice and experiment;
- Have patience;
- Practice on popular web pages and Apps (focus on the ones that older adults 55+ use the most);
- Practice creating accounts, filling in data and using bank cards;
- Raise awareness on fake news and frauds and how to avoid them. Importance of checking the source of information;
- Cultivate a pleasant learning environment based on mutual understanding, patience and respect;
- Focus on the quality of knowledge over quantity;
- Keep the curriculum dynamic so it can be adjusted to the participants' needs;
- User-friendly equipment;
- Focus on mobile devices, due to the lower cost of acquiring a smartphone over a computer;
- Personalised approach according to the competences and needs of each participant.

## Outcomes:

This report summarizes the results of the primary research conducted between May and August 2021 in Cyprus, Greece, Italy and Portugal, involving an overall of 419 respondents.

Of these 419 total respondents involved across the 4 partner countries, 7% (29) were older adults 55+ skilled in ICT, 10% (42) were older adults 55+ with low ICT skills, 10% (41) were formal/informal caregivers or family members, 6% (27) were qualified professionals, and the remaining 67% (280) were part of the General Public.

Their detailed profiles can be found below, divided by country:

		Total #	Age	#	Gender	#	Education	#
Focus Group	Older adults 55+ skilled in ICT	7 Pax	55-64	5	F	3	Primary Education	3
			65-74	2	M	3	Higher Education	4
					Other	1		
Interviews	Older adults 55+ with low ICT skills	10 Pax	55-64	2	F	6	Primary Education	4
			65-74	7	M	4	Secondary Education	5
			75+	1			Higher Education	1
	Caregivers	10 Pax	25-34	1	F	9	Primary Education	3
			35-44	3	M	1	Secondary Education	2
			55-64	6			Further Education	1
	Qualified Professionals	5 Pax					Higher Education	4
			35-44	3	F	5	Higher Education	5
			55-64	2				
Online Survey	General Public	50 Pax	25-34	9	F	26	Secondary Education	7
			35-44	15	M	23	Further Education	7
			45-54	13	Other	1	Higher Education	36
			55-64	13				
Total		82 Pax	25-34	10 (12,2%)	F M Other	49 (59,8%) 31 (37,8%) 2 (2,4%)	Primary Education	10 (12,2%)
			35-44	21 (25,6%)			Secondary Education	14 (17,1%)
			45-54	13 (15,9%)			Further Education	8 (9,7%)
			55-64	28 (34,1%)			Higher Education	50 (61%)
			65-74	9 (11%)				
			75+	1 (1,2%)				

Table 7. Number and Profile of the stakeholders involved - Cyprus

		Total #	Age	#	Gender	#	Education	#
Focus Group	Older adults 55+ skilled in ICT	7 Pax	55-64	4	F	5	Secondary Education	3
			65-74	3	M	2	Further Education	1
							Higher Education	3
Interviews	Older adults 55+ with low ICT skills	10 Pax	55-64	2	F	8	Primary Education	1
			65-74	5	M	2	Secondary Education	1
			75+	3			Further Education	3
	Caregivers	10 Pax	25-34	4	F	6	Higher Education	5
			35-44	4	M	4	Secondary Education	1
			55-64	2			Higher Education	9
	Qualified Professionals	5 Pax	25-34	1	F	4	Further Education	1
			35-44	2	M	1	Higher Education	4
			45-54	1				
Online Survey	General Public	83 Pax	65-74	1				
			75+	10				
			18-24	1	F	59	Secondary Education	11
			25-34	8	M	24	Further Education	14
			35-44	7			Higher Education	58
			45-54	12				
			55-64	27				
Total		115 Pax	65-74	18				
			75+	10				
			18-24	1 (0,9%)	F	82 (71,3%)	Primary Education	1 (0,9%)
			25-34	13 (11,3%)	M	33 (28,7%)	Secondary Education	16 (13,9%)
			35-44	13 (11,3%)			Further Education	19 (16,5%)
			45-54	13 (11,3%)			Higher Education	79 (68,7%)
			55-64	35 (30,4%)				
			65-74	27 (23,5%)				

Table 8. Number and Profile of the stakeholders involved - Greece

		Total #	Age	#	Gender	#	Education	#	
Focus Group	Older adults 55+ skilled in ICT	7 Pax	65-74	7	F	2	Higher Education	7	
					M	5			
Interviews	Older adults 55+ with low ICT skills	12 Pax	55-64	4	F	8	Primary Education	2	
			65-74	6	F	8	Elementary Education	2	
			75+	2	M	4	Secondary Education	5	
							Further Education	2	
							Higher Education	1	
	Caregivers	11 Pax	35-44	1			Elementary Education	2	
			45-54	3	F	10	Secondary Education	5	
			55-64	4	M	1	Further Education	2	
			65-74	2			Higher Education	2	
			75+	1					
	Qualified Professionals	11 Pax	25-34	4					
			35-44	4	F	11	Higher Education	11	
			45-54	3					
Online Survey	General Public	61 Pax	18-24	4					
			25-34	16			Elementary Education	4	
			35-44	9	F	42	Secondary Education	11	
			45-54	12	M	19	Further Education	4	
			55-64	10			Higher Education	42	
			65-74	8					
			75+	2					
Total		102 Pax	18-24	4 (3,9%)			Primary Education	2 (2%)	
			25-34	20 (19,6%)			Elementary Education	8 (7,8%)	
			35-44	14 (13,7%)	F	73 (71,6%)	Secondary Education	21 (20,6%)	
			45-54	18 (17,7%)	M	29 (28,4%)	Further Education	8 (7,8%)	
			55-64	18 (17,7%)			Higher Education	63 (61,8%)	
			65-74	23 (22,5%)					
			75+	5 (4,9%)					

Table 9. Number and Profile of the stakeholders involved - Italy

		Total #	Age	#	Gender	#	Education	#
Focus Group	Older adults 55+ skilled in ICT	8 Pax	55-64	8	F	4	Secondary Education	1
					M	4	Higher Education	7
Interviews	Older adults 55+ with low ICT skills	10 Pax	55-64	8	F	9	Primary Education	4
			75+	2	M	1	Secondary Education	5
	Caregivers	10 Pax	25-34	2	F	10	Primary Education	1
			35-44	6			Secondary Education	7
			45-54	2			Further Education	1
							Higher Education	1
	Qualified Professionals	6 Pax	18-24	1	F	6	Higher Education	6
			25-34	1				
			35-44	2				
			45-54	2				
Online Survey	General Public	86 Pax	18-24	4	F	50	Elementary Education	3
			25-34	4			Secondary Education	11
			35-44	23			Further Education	6
			45-54	22			Higher Education	66
			55-64	29				
Total		120 Pax	18-24	5 (4,2%)	F	79 (66%)	Primary Education	5 (4,2%)
			25-34	7 (5,8%)			Elementary Education	3 (2,5%)
			35-44	31 (25,8%)			Secondary Education	24 (20%)
			45-54	26 (21,7%)			Further Education	8 (6,7%)
			55-64	45 (37,5%)			Higher Education	80 (66,7%)
			65-74	4 (3,3%)				
			75+	2 (1,7%)				

Table 10. Number and Profile of the stakeholders involved – Portugal



## 3. Requirements' elicitation

### 3.1. Approach, Process and Tools

The 11 identified Challenges served as the groundwork to elicit the Functional and Non-Functional Requirements and further describe the barriers and enablers previously identified, that will constitute the main drivers to the design and elaboration of contents for the Peer-to-Peer Mentoring Programme on Digital Literacy.

The requirements elicited aimed to respond directly to the following questions:

- **How** can the envisaged Programme address each specific challenge?
- **What** should be the topics and contents of the Programme?

Lastly, a prioritization of the most critical functional and non-functional requirements was promoted using the Functional and Non-functional Requirements Prioritization Template (Annex 5.2), thus finding a consensus on the final set among all the partners.

These requirements document the best attempt of the partners to co-define the topics, contents and features of a user-centric Learning Programme and aim to provide significant innovation beyond the state of the art in the management of digital financial illiteracy among older adults 55+.

### 3.2. Outputs and outcomes

#### Outputs:

Between all the partners 80 Requirements were elicited: 36 of which were Functional Requirements and the remaining 44 Non-functional Requirements.

These requirements were compiled into a list and prioritized by all the partners, using the Functional and Non-functional Requirements Prioritization Template, as presented below.

#### Outcomes:

Acknowledgement of the final and consensual list of Prioritized solution's requirements:

CHALLENGES	FUNCTIONAL REQUIREMENTS	NON-FUNCTIONAL REQUIREMENTS	PT	IT	GR	CY	TOTAL
Lack of experience in mentoring	Train the Trainers		1	1	1	1	1,00
Lack of experience in mentoring	Design the curriculum according to older people's needs		1	1	1	1	1,00
Lack of knowledge on internet risks and mistrust towards online transactions	Active practicing / practical examples, in order to gain confidence		1	1	1	1	1,00
Resistance towards online training	Deliver the lessons with the help of peer-mentors		1	1	1	1	1,00
Difficulty in understanding ICT concepts	Avoid addressing too many topics at once		1	1	1	1	1,00
Difficulty in understanding ICT concepts		Focus on improving internet understanding and usage	1	1	1	1	1,00
Difficulty in understanding ICT concepts	The programme should break each process in simple steps, keep a slow pace and repeat them throughout the duration of it in a spiral way		1	1	1	1	1,00
Difficulty in understanding ICT concepts	In the curriculum there should be repetition of knowledge of previous classes		1	1	1	1	1,00
Difficulty in understanding ICT concepts	Keep a slow pace, adjusted to the needs of the participants during each lesson and throughout the curriculum		1	1	1	1	1,00
Difficulty in understanding ICT concepts	Explain - theoretically and through use - different types of interfaces and the common symbols and functions they have		1	1	1	1	1,00
Difficulty in understanding ICT concepts	Begin with simple tasks so they can feel more confidence		1	1	1	1	1,00
Difficulty in understanding ICT concepts		Clear and concise information	1	1	1	1	1,00
Difficulty in understanding ICT concepts		Local language	1	1	1	1	1,00
Difficulty in understanding ICT concepts		Accessible and user-friendly training tools	1	1	1	1	1,00
Lack of access to ICT equipment and internet		As inclusion criteria, all mentees in the training programme must have access to the internet and the necessary technological equipment	1	1	1	1	1,00
Limited use of the different functionalities		Training on how to do an efficient online search	1	1	1	1	1,00
Limited use of the different functionalities		Login & using e-learning platforms and mentoring tools	1	1	1	1	1,00
Limited use of the different functionalities		Training on transacting online, including email and phone verification for online transaction	1	1	1	1	1,00
Limited use of the different functionalities		Training on e-commerce	1	1	1	1	1,00
Lack of age-friendly products/services	Assure the mentees are allocated to mentors who can adequately support them		1	1	1	1	1,00
Lack of age-friendly products/services		User-friendly devices with intuitive interfaces	1	1	1	1	1,00
Highly demanding personalised support	Peer-to-peer mentoring (autonomy-supportive mentoring, community-based mentoring)		1	1	1	1	1,00
Highly demanding personalised support		Promotion of socialization and bonds with family, community and other older adults.	1	1	1	1	1,00
Lack of awareness of age-friendly products/services	Age-friendly training for businesses and services		1	1	1	1	1,00
Lack of awareness of age-friendly products/services		Inform older adults about available resources (products and services) at local, regional and national level	1	1	1	1	1,00
Lack of experience in mentoring		Mentoring Techniques according to the principles of older peoples learning needs and to create a nice atmosphere for the lessons	2	1	1	1	1,25
Lack of knowledge on internet risks and mistrust towards online transactions	Concrete information on risks (e.g. brochures, videos)		2	1	1	1	1,25
Lack of knowledge on internet risks and mistrust towards online transactions		Training on identifying and avoiding fake news and online frauds; Learn how recognize a legit source vs an ad-hoc domain created to mislead	1	2	1	1	1,25
Difficulty in understanding ICT concepts	Clear and comprehensive step-by-step instructions		2	1	1	1	1,25
Difficulty in understanding ICT concepts	Short sessions in order to not overburden - Max 1h		2	1	1	1	1,25
Difficulty in understanding ICT concepts		Training on basic English words that are often used in the internet and in apps	1	1	2	1	1,25
Difficulty in understanding ICT concepts		Training on navigation, providing a list of do's and don'ts when searching the internet	1	1	1	2	1,25
Limited use of the different functionalities		Training on ways of getting informed	1	2	1	1	1,25
Highly demanding personalised support	Provide supportive educational tools; Printed training materials with many pictures and detailed description of the operational phases		2	1	1	1	1,25

Highly demanding personalised support	Involving the family and the community in the learning process		2	1	1	1	1,25
Lack of awareness of age-friendly products/services	Raise awareness of local businesses and services network		2	1	1	1	1,25
Lack of experience in mentoring		Training on Emotional Education (Empathy, Active Listening, Patience) to better address participants needs	1	2	1	2	1,50
Lack of experience in mentoring	Helpdesk: each of the sites should provide an helpdesk to support the mentors so they can solve problems outside of the lesson time		2	2	1	1	1,50
Resistance towards online training	Kick-off Session/Activity for mentors and mentees to bond (build trust)		1	2	1	2	1,50
Resistance towards online training	The main part of the educational programme should be in person		2	2	1	1	1,50
Difficulty in understanding ICT concepts	Introduce opportunities for active practicing between the theory.		2	2	1	1	1,50
Limited use of the different functionalities		Training on signing in a new webpage/online service	2	2	1	1	1,50
Limited use of the different functionalities		Training on typing and simple use	3	1	1	1	1,50
Limited use of the different functionalities	Build a curriculum starting from the basic and essential for participants daily life and then proceed to more advanced elements with the possibility for participants to stop at the level deemed congruent with their personal needs, including optional contents		1	3	1	1	1,50
Highly demanding personalised support	Create an effective community of practice		2	1	2	1	1,50
Lack of ICT knowledge/digital competences of caregivers/family members		Digital financial literacy training for caregivers and family members	2	1	1	2	1,50
Lack of experience in mentoring	E-learning portal: Choose a platform, to deposit training materials, with a simple and user-friendly interface		2	1	2	2	1,75
Lack of knowledge on internet risks and mistrust towards online transactions		Training and tips on Online Behaviour and Safety, to become aware of the risks and learn ways to be safe online	1	2	2	2	1,75
Resistance towards online training	Introduce them to ICT through blended format (gradual transition)		2	1	2	2	1,75
Difficulty in understanding ICT concepts	Glossary with ICT-related words and expressions		2	2	1	2	1,75
Limited use of the different functionalities		Comprehensive information on mobile devices	2	2	2	1	1,75
Limited use of the different functionalities		Inform older adults of the different functionalities available.	1	2	2	2	1,75
Limited use of the different functionalities		Training on dealing with advertisements and pop-up windows	1	3	1	2	1,75
Lack of awareness on peer-mentoring benefits	Introductory session with testimonials		2	1	2	2	1,75
Lack of age-friendly products/services		Provide examples of Accessibility features and how to use them: bigger tools, audio description	2	3	1	1	1,75
Lack of age-friendly products/services		Throughout the learning programme, adjust goals, along with the mentor	2	2	1	2	1,75
Highly demanding personalised support		Satisfaction of self-competence, autonomy and relatedness	2	2	1	2	1,75
Lack of awareness of age-friendly products/services	Up-to-date feedback from older adults on the products / services provided		2	1	2	2	1,75
Lack of experience in mentoring		Consolidation of the technical knowledge	2	2	2	2	2,00
Resistance towards online training	Create a pleasant environment		3	2	1	2	2,00
Lack of awareness on peer-mentoring benefits		Good practices on peer mentoring	2	2	2	2	2,00
Highly demanding personalised support	Counseling (Emotional/social support)		2	2	2	2	2,00
Difficulty in understanding ICT concepts	Interactive help or a "?" where instructions to manage problems/ difficulties are easily accessible		2	2	2	3	2,25
Limited use of the different functionalities		Inform about Password Manager Apps; biometric and patern login; Provide training on creating, organizing and remembering passwords	3	3	2	1	2,25

Limited use of the different functionalities		Training on communication platforms (e.g ZOOM, Whatsapp, etc)	1	3	2	3	2,25
Limited use of the different functionalities		Training on using social networks and its risks	1	3	2	3	2,25
Lack of age-friendly products/services	Personalised training Materials		2	3	3	1	2,25
Lack of age-friendly products/services		Engaging training material (different types of media)	2	3	2	2	2,25
Lack of awareness of age-friendly products/services		Raise awareness of family members and professionals' contribution in building age-friendly environments	2	3	2	2	2,25
Limited use of the different functionalities		Training on using internet about health issues	3	2	2	3	2,50
Resistance towards online training		Inform Participants on how other people of their age use technology	4	2	1	4	2,75
Difficulty in understanding ICT concepts	Use engaging and interactive training media		2	3	3	3	2,75
Lack of access to ICT equipment and internet		Focus on smartphones	2	4	3	2	2,75
Limited use of the different functionalities		Training on using a new app	3	3	2	3	2,75
Limited use of the different functionalities		Training on consumer rights	3	3	2	3	2,75
Lack of awareness of age-friendly products/services	Validation of older adults' profile, needs and preferences		3	2	3	3	2,75
Difficulty in understanding ICT concepts		Remote access	2	3	3	4	3,00
Limited use of the different functionalities		Training on different digital environments	3	4	2	4	3,25
Lack of awareness of age-friendly products/services		Train Participants on giving feedback on various platforms	4	3	2	4	3,25
Difficulty in understanding ICT concepts		Training on the best practices when using internet and the new technologies (e.g Setting limits in order to avoid using internet many hours a day and losing other important things in life)	3	4	3	4	3,50

## 4. Conclusions

A top priority for any Digital Financial Literacy strategy should be to empower citizens, especially vulnerable groups, with knowledge about data privacy, account security, and self-protection. Indeed, in the digital environment, raising users' awareness about scams and frauds is a powerful "indirect" consumer protection measure, which is a shared responsibility of all stakeholders<sup>19</sup>.

Based on the data obtained, we could verify that older adults 55+ claim to be aware of the existence of these risks, but admit to having difficulties in identifying them in practice. It is, therefore, urgent to empower them for such purposes, in order for them to navigate the digital environment with safety and confidence.

The results of several studies suggest the importance of encouraging the use of and a positive view about ICT in older adults so as to prevent or mitigate feelings of loneliness characteristic of this age group. Thus, it becomes pertinent to provide access and training for digital technologies that promote independent living, as it is one of the critical aspects of the present times and, potentially, a facilitator towards ageing in place<sup>20</sup>.

Training needs to be more comprehensive in the different dimensions of Digital Financial Literacy and adapted to older adults' needs and preferences, with personalised content, respecting different learning rhythms and capacities, while promoting technological tools that meet older adults' needs, interests and skills, ensuring easy use.<sup>21</sup> In the same way, service providers and product suppliers need to be aware of these same needs to effectively integrate them in the development of appropriate age-friendly responses.

This is especially evident as, when questioned as to which behavioural characteristics a mentor should have, respondents gave major emphasis on being patient when interacting with older adults. Furthermore, the importance of communicating and transmitting the knowledge in clear and simple language, especially among this target group that has less contact with technologies and is less prone to have knowledge of English.

In regard to the creation of responses to older adults' needs at a local level, Fonseca, in his *Ageing in Place* report, recommends:

- Increasing the opportunity for social participation of the older population and engaging them in the definition and promotion of activity plans that concern them;
- Developing skills and tools that promote the conditions for maintaining autonomy, such as literacy activities in local associations;
- Stimulation of organized volunteer networks;
- Promoting digital literacy and inclusion programmes through lifelong learning;

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<sup>19</sup> Lyons, A. C., & Kass-Hanna, J. (2021). A multidimensional approach to defining and measuring financial literacy in the digital age.

<sup>20</sup> Fonseca, A. (2021) *Ageing in Place*. Envelhecimento em Casa e na Comunidade. Modelos e estratégias centrados na autonomia, participação social e promoção do bem-estar das pessoas idosas.

<sup>21</sup> Omotayo, F. (2015). Adoption and Use of Information and Communication Technologies by Educated Elderly People in Ibadan Metropolis, Nigeria. *Indian Journal of Information Sources and Services*, 5(1), 34-45

- Improving access to telecommunication networks and digital tools to bridge the inequalities in access to digital equipment and services.

In regard to the limitations affecting the ability of this report to conclude or provide an answer to the original research problem, it should be noted that a solid theoretical and practical basis to build upon was lacking. This was mostly due to the scarcity of information related to the use of the Internet and ICTs by older adults, with a continued preponderance of this information related to students and professionally active adults, or the population as a whole without due focus on this particular age group.

Most of the existing studies may already be outdated, since very few have been conducted in the last decade, moreover the data presented was limited and the samples insufficient or not representative of the global or national situation.

Another gap identified is that none of the partner countries have any long term studies at national level quantifying the impact that the Covid-19 pandemic had on internet use, especially amongst the older generations.

Despite this, it was possible to finalize a preliminary investigation on each countries' state of the art with regards to older adults' digital financial literacy, which served as a starting point for the field analysis conducted through interviews and focus groups.

With regard to the assessment of skills, difficulties were encountered in finding a tool to measure digital skills. However, the "Mobile Device Proficiency Questionnaire" (MDPQ-28) proved to be quite useful and effective for the purposes of this study, allowing for a good assessment of the competences and facilitating the recruitment process.

The concept of Digital Financial Literacy is very recent and still being developed, which presents an additional barrier as the vast majority of information available in literature refers to the definitions of Digital Literacy or Financial Literacy as distinct concepts. The same occurs in the initiatives and training provided, which generally focus on only one aspect. However, the relevance of the concept of Digital Financial Literacy urges a more comprehensive intervention, because more than empowering adults over 55 years to use ICTs the project seeks to encourage them to integrate financial transactions into their everyday lives. Still, partners managed to find a common understanding, reaching consensual definitions on which all partners agreed.

Throughout the 4 countries, there is a generalized lack of available training courses regarding the digital financial literacy of adults 55+. Equally there exists a shortage of literature on the subject, as well as empirical evidence. We aim, through the production and dissemination of the national and transnational research reports, to contribute to the construction of theoretical and practical foundations regarding the theme, in order to advance toward creating communities and environments that are more age-friendly and inclusive.

## 5. Annexes

### 5.1. Literature Review and Classification Template

n	Title	Definition of Digital Financial Literacy and Peer-Mentoring	Rationale of choice	Partner 1_SCORE	Partner n_SCORE	Aggregated Score per Paper

### 5.2. Functional and Non-functional Requirements' Prioritization Template

CHALLENGES	FUNCTIONAL REQUIREMENTS	NON-FUNCTIONAL REQUIREMENTS	PRIORITIZATION PARTNER 1	PRIORITIZATION PARTNER 2	PRIORITIZATION PARTNER 3	PRIORITIZATION PARTNER 4	TOTAL
			2	4	1	2	2.25
			4	5	4	3	4.00
			4	4	5	5	4.50
							0.00
							0.00
							0.00
							0.00



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