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PROCAREFUL

D.1.2.2 Report presenting the co-design findings of the PROCAREFUL Model

WP1

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

GLOSSARY

A: Activity

D: Deliverable

ICT: Information and Communication Technologies

M: Month

WP: Work Package

LIST OF ACRONYMS – LIST OF PARTNERS

ISRAA: Istituto per Servizi di Ricovero e Assistenza agli Anziani

IAT: Anton Trstenjak Institute of Gerontology and Intergenerational Relations

OIC: Polish Foundation of the Opportunities Industrialization Centers "OIC Poland"

IFKA: IFKA Public Benefit Nonprofit Ltd.

CEI: Central European Initiative – Executive Secretariat

MI: Association Mi

WWBW: Wohlfahrtswerk für Baden-Württemberg

OLD: Municipality of Log-Dragomer

Britenet: Britenet Ltd.

EXECUTIVE SUMMARY

The deliverable 1.2.2 “Report presenting the co-design findings of the PROCAREFUL Model” contains the results and national reports from the two-step co-design process implemented by the 9 partners belonging to PROCAREFUL project Consortium. The co-design process occurred under Activity 1.2 “Design of the delivery and contextual adaptation of the hybrid care model” of WP1 “Advancing the uptake of digital innovation in home care by proactive hybrid home care model adoption” and took place between M7 (September 2023) and M12 (February 2024).

The main objective of this deliverable is to present co-design results from the main stakeholders that will be used to shape the PROCAREFUL hybrid home care model and develop the ICT platform that will be tested in the 5 pilot sites. This report will allow the development of a flexible approach that will help institutions, governments, and local authorities understand how to design, uptake, and scale up sustainable proactive care models to prevent cognitive, physical decline and social isolation, reducing the burden on care systems.

The deliverable is organized upon the following structure: **Chapter 1** “Purpose and objectives” presents the aim of co-design activities and ultimately, of this report. **Chapter 2** “Overview of target groups” shows the number of participants and target groups involved in the two-step co-design process by national working groups. **Chapter 3** “Methodology” presents the methodology used to collect and analyse results. **Chapter 4** “Results” focuses on the results obtained from the co-design process. In this chapter, a summary of the main results derived from each target group, as well as national reports from each country, is provided for both the first and the second step of co-design. **Chapter 5** “Conclusion and main input for PROCAREFUL model” provides the final considerations and main conclusions on the ICT solution and on the model. They will be used to shape the proactive hybrid home care model.

1. Purpose and objectives

PROCAREFUL project aims to address existing gaps in home care accessibility and timely delivery by upscaling existing social care services. The project focuses on preventing cognitive and physical decline, and social isolation among people aged 55 and over. An innovative hybrid home care model will be developed to help people in need of care to maintain or improve their cognitive and physical health and to reduce social isolation, taking advantage of digitalization.

To ensure the development of a sustainable model, co-design activities have been implemented. The report presents the main results of the two-step co-design process conducted between M7 (September 2023) and M12 (February 2024), following the co-design methodology described in Deliverable 1.2.1.

The deliverable mainly intends to gather ideas and opinions from the 5 target groups. These groups include people aged 55 and over, informal carers, formal carers, manager and policy makers, and the third sector. The engagement of key stakeholders at local and regional level has bridged the gap between innovators and citizens, ensuring that the PROCAREFUL hybrid home care model and the ICT platform meet the end-users' needs and that the solution is designed to be integrated into professionals' current workflow without increasing their workload.

The document emphasizes both the similarities and differences among different contexts in which the PROCAREFUL model will be tested. It considers specific features of implementing regions and local communities to create a flexible model adaptable to various contexts in the Central Europe area. These considerations will also serve as guidelines for policy briefs and recommendations aimed at addressing social challenges and service access inequalities in the Central Europe area.

Furthermore, the document contributes to the development of implementation guidelines (A.1.4) to be used by pilot sites for deploying the PROCAREFUL model. Feedback from participants will permit the creation of a sustainable care pathway supporting those at risk of cognitive, physical decline, and social isolation while reducing the burden on care systems.

In conclusion, the document provides valuable insights into end-users' needs for the development of the training program (A.1.3) for care staff, empowering proactive self-care management among users.

It is important to note that this document merely summarises the habits, opinions, ideas of participants involved in co-design activities. Their validity and veracity are not questioned or validated on the basis of literature or scientific evidence. This report consists of the personal testimonies, perceptions and feelings of participants involved.

2. Overview of target groups

From September 2023 to February 2024, five target groups participated in a two-step co-design process. In the first step of co-design, a total of 137 people participated. In the second step of co-design a total of 132 people were reached. Table 1 and Table 2 show target groups reached in the two-step co-design process.

Table 1

Number of participants involved in the first step of co-design

National Working Group	Organization (s)	Target group			
		People aged 55 and over	Informal carers	Formal carers	Managers and Policy makers
Croatia	MI	5	6	6	6
Germany	WWBW	5	5	7	1
Hungary	IFKA	23			6
Italy	ISRAA & CEI	5	6	6	5
Poland	OIC & Britenet	6	6	7	3
Slovenia	IAT & OLD	6	5	6	6
Total		50	28	32	27

Table 2

Number of participants involved in the second step of co-design

National Working Group	Organization (s)	Target group			
		People aged 55 and over	Informal carers	Formal carers	Other stakeholders
Croatia	MI	8	5	6	5
Germany	WWBW	5	5	5	3
Hungary	IFKA				22
Italy	ISRAA & CEI	5	6	6	5
Poland	OIC & Britenet	7	4	8	0
Slovenia	IAT & OLD	7	5	12	3
Total		32	25	37	38

3. Methodology

A two-step co-design methodology has been implemented to delineate key features of the hybrid home care model. The first step of co-design aimed to explore existing home care services in the 5 pilot sites, understand people's experiences with services, and obtain feedback on the first ICT mock-up. The second step of co-design aimed to co-generate a sustainable, innovative hybrid home care model, define its main features and requirements, and obtain feedback on the second ICT mock-up.

Six national working groups were established to enable project partners from the same country to cooperate in implementing the co-design process, facilitating an in-depth analysis of the needs and challenges experienced by key stakeholders.

Qualitative research methods were preferred to gather in-depth insights into experiences, problems, and concepts, enabling an understating of context dynamics. Focus groups were conducted with people aged 55 and over, informal carers, and formal carers. Questionnaires with a set of open questions were administered to managers and policy makers, and other stakeholders. The co-design methodology is described in Deliverable 1.2.1 "Document that presents the co-design methodology to set up the PROCAREFUL model mock-up" edited by ISRAA. The document contains guidelines provided to project partners for implementing co-design activities.

To collect results, project partners were asked to complete data gathering forms for each co-design activity. These reports include a summary of the main feedback provided for each addressed topic, pointing out the main needs and challenges that should be addressed, or the main input to improve the user interface and user experience of the platform. National working groups were also asked to provide their final comments or considerations about the activity.

ISRAA conducted a thematic analysis on the data provided by all national working groups to identify common themes, topics and patterns of meaning that emerged from diverse target groups. Differences among national contexts were also highlighted to spot divergences among countries.

4. Results

This chapter presents the results gathered from the two-step co-design process conducted with five target groups, in the period between September 2023 and February 2024.

Results from each step of the co-design are presented separately. For each step, target-specific analysis has been conducted and results have been reported in each sub-chapter. Sub-chapters follow a common structure: first the total number of participants reached is reported, then a summary of the main feedback gathered in relation to each topic addressed with each target group is presented. This overview emphasises similarities and differences among national contexts.

After presenting the results for each target group, national reports are provided. These national reports offer an overview of the feedback obtained by all participants coming from the same national context, outlining the various scenarios in which the model will be tested.

Participants' needs, ideas, opinions and feedback on the model and ICT solution have been reported to provide an overview of common perceptions about home care and social care services, as well as the ICT mock-up presented. However, this implies that some participants' needs may not be directly addressed through this hybrid model of care, and some suggestions for the ICT platform development might not necessarily be technically feasible. Additionally, the main barriers identified may not be representative of the entire target group or country.

4.1. Results from the first step of co-design

In this chapter results gathered from the first step of co-design activities are presented. Focus groups with people aged 55 and over, informal carers, and formal carers have been conducted in the period between October and November 2023. The deadline for collecting responses from managers and policy makers was postponed to January 2024, therefore results will be presented in Chapter 4.2.

The structure of each section reflects the main topics discussed with the target groups during the focus groups. The identified needs and challenges faced by diverse target groups in the context of care and home care services are also reported.

Finally, Chapter 4.1.4 reports the main findings from each country, providing a description of the target groups, outlining the various contexts in which the PROCAREFUL hybrid care model will be tested.

4.1.1. People aged 55+

The chapter offers an insight on the results emerged from the first focus group with people aged 55+. In November 2023, a total number of 50 people aged 55 years and older attended focus group in Croatia, Germany, Hungary, Italy, Poland, and Slovenia.

To take care of their **mental, physical, and social health**, all people mentioned some kind of activities. The most mentioned activities across countries were walking, gymnastic, cycling, swimming for taking care of their physical health; reading (books and newspaper), talking, participating to recreational activities for their mental health and everyday activities to maintain their autonomy. However, differences on the type, frequency, and location of the activities performed varied across countries, depending on whether participants attended senior's clubs or not. Indeed, people from Poland and Hungary mainly reported activities offered by the senior's club in a group of peers, while participants from other countries reported more solitary activities at home, or with their friends.

All participants reported the importance of **relationships**. People often talk about friends, relatives, and being part of a community as an important element for their health. When asked which social activities they were more likely to join, a range of activities were mentioned, including calling and being with family or friends, exercising in groups, participating in activities organised by the seniors' club. Attendance frequency varies across countries: participants from Croatia, Hungary, Poland, who attend senior clubs, reported daily frequency or more, while participants from other countries reported spending their time with other people once a week. Therefore, being a member of a senior club emerges as a crucial element in promoting social relations with peers. However, all participants share an awareness of the importance of social interactions, emphasizing that personal contact is irreplaceable.

Social services people benefit from varies across countries. People from Germany, except one participant, benefit from health insurance companies and care services to get support on household, and hygiene. People from Italy benefit from different kind of social services and transportation services and the main reference contact was the social worker. Participants from Slovenia do not have direct experiences with home care services, even if they all have relatives who need care. Also, people from Croatia do not have experience with home care services, even if they all attend social activities organized by MI association. Finally, participants from Hungary and Poland do not benefit from home care services, but they use formal support initiatives, such as the Senior Club, for older people. Individuals take different pathways to access and interact with services, including community networks, healthcare professionals, personal connections, online searches and referrals. On average, participants reported a preference for personal contacts and direct interactions (in person or over the phone) when seeking information or engaging with services. Building relationships, meeting staff are important factors before committing to a service.

Technology usage was also investigated. The majority of participants use smartphones for various purposes like communication, accessing information, and entertainment. They express a preference for smartphones due to convenience and accessibility over computers. However, some participants reveal their reluctance and concerns about technical language, reporting the need of guidance for using digital platforms, and inefficiency of online health systems. Others reported using telemedical consultations, primarily through voice chats. Other participants expressed a desire for more user-friendly platforms, especially for older people with minimal technological knowledge.

The main needs and challenges during the first session of focus groups with people aged 55+ can be grouped into:

- *Being mental and physically active*: this category encloses physical and mental health needs to be active beside age-related limitations. On average, people participating to focus groups were involved in different activities, as they stated the importance of being active and staying with other people. Some participants mentioned the need for recreational opportunities tailored to their health conditions, preferring activities that imply interpersonal contacts.

- *Accessibility and Mobility*: this category covers transportation accessibility, limitations in mobility, and the need for convenient access to facilities or services, especially for individuals with restricted mobility.
- *Reducing constraints and enhance care*: when discussing services, the importance of care was acknowledged and it emerged a desire for reduced bureaucracy in accessing services, and the need for more effective communication channels to access information regarding initiatives for ageing, especially for people living alone.
- *Social relationships*: it includes the need for social interaction, community engagement, staying connected with friends and family, and the importance of social support for mental well-being. The majority of participants reported having good social relationships, but it has been considered as key for one’s well-being.

Participants were presented with the first platform mock-up. **The main input for the PROCAREFUL model and ICT platform** can be summarised as follows:

- *Content personalization*: people expressed the desire to have access to different contents so that people with different interests can use the solution (e.g., articles on gardening, or other topics that could be interesting for them);
- *Module for local initiatives:* this module would allow people to be informed on local initiatives;
- *List of Services:* Home Carers, Volunteer Companions, food delivery providers, etc. to have access to clear information if necessary;
- *Communication*: the possibility to communicate through the platform was appreciated by participants.

4.1.2. Informal Carers

The chapter offers an insight on the results from the first focus group with informal carers. In November 2023, a total number of 28 people aged between 37 and 70 years attended focus groups in Croatia, Germany, Italy, Poland, and Slovenia. Out of 28 participants, 23 were women. All people were taking care of a person in need, and the majority of them were taking care of a family member.

The **main activities performed by informal carers in taking care of a person in need** are related to personal assistance (e.g., hygiene, meal preparation, shopping, etc.) and households. The management of health-related and financial issues was also mentioned. On average, less time was dedicated to companionship and leisure activities even if these are the type of activities that are more appreciated. Time dedicated to care varies among participants, from few hours per week to 24-hour a day, depending also on whether they live together with the person in need and whether they are supported by other family members. Participants from Germany, Italy, and Poland reported providing support in setting and using electronic devices, such as the smartphone or the TV.

Experiences with services reported by informal carers highlighted the multifaceted nature of home care services. The type of care people experienced depends on the needs of people they were taking care of, and it ranges from basic daily living assistance, meal delivery, specialized care for conditions like Alzheimer's disease, to medication administration, and physical therapy. Individuals reported accessing services through various channels, including social services, hospitals, internet searches, and local providers, and a lack of information about services were reported by people from Italy and Poland. On average, social workers and family doctors were the most mentioned professionals considered to play a crucial role in facilitating access to care, guiding individuals through the complexities of caregiving. However, the role of family is crucial to get access to services for people in need.

Participants also reported **positive and negative experiences with care**. Considering the main challenges, people from Italy, Germany, and Poland pointed out some issues with bureaucracy, and administrative barriers, with difficulties in accessing information about services, or contacting the right person. People from Croatia, Slovenia, and Germany mentioned the emotional challenges raised by caregiving, such as fear, fatigue, and pressure that impact caregiving experiences. People often face difficulties in balancing their life and work commitment and care. Among the positive aspects of caregiving, companionship, that is, spending time of quality with the care recipient, conversating, walking, sharing meals, was mentioned.

Technology usage was also investigated. The most mentioned digital device was the smartphone. The laptop was indicated by participants from Germany and Italy to deal with financial administration and internet search. Also, the smartwatch and bracelet with SOS button were mentioned. Some participants from Slovenia used devices to measure blood sugar and pressure. Two participants from Italy reported using the webcam to remotely check whether the person needs assistance in emergency situations. However, participants highlighted the challenges related to the use of digital devices, with care recipients being resistant to technology, and needing constant support to set up and use devices, which often falls on caregivers. Even when participants did not mention technological exclusion, they emphasized the importance of direct contact and relationship-building in caregiving.

The main needs and challenges arose during the first session of focus groups with informal carers can be grouped into:

- *Caregiving support and well-being*. Participants, especially when sharing their experiences as caregivers, outlined the enormous amount of time, effort, and fatigue involved in taking care of a person in need. This suggests that people require relief from the exhaustive demands of caregiving, allowing more time for self-care and rest. They are demanding for programs or support services specifically designed to provide caregivers with respite, emotional support, and assistance in managing continuous care.
- *Information accessibility, reduced bureaucracy and improved communication*. Participants reported facing challenges in accessing essential information about support programs for caregivers and services for people in need. They encountered difficulties navigating complex procedures to obtain necessary

care and assistance. People reported a lack of accessible information, especially in critical situations requiring immediate responses, and a lack of effective communication channels with service providers. Individuals expressed a desire for reduced bureaucracy and more diverse communication options beyond telephone-based interactions. They require accessible information, user-friendly communication methods to connect with and access necessary services.

Participants were presented with the first platform mock-up. The **main input for the PROCAREFUL model and ICT platform** can be summarised as follows:

- *Technology adoption and barriers*. Participants, particularly those from Germany, Italy, and Slovenia expressed concerns about the lack of digital skills and resistance to digitalization among older people. Indeed, individuals they care for often struggle with using digital devices, and they frequently turn to caregivers for assistance with every issue they encounter. The perceived risk is that the application may impose additional burdens on caregivers. "Technology that does not help adds to the stress" was stated by one participant during the focus group in Italy. Therefore, the platform must be useful, intuitive, and easy to navigate. It should provide clear navigation and guide users through the interface, ensuring that tasks can be carried out independently with minimal supervision.
- *Added value of the platform and service for informal caregivers*. Some participants expressed appreciation for specific features offered by the application for informal carers. In particular, viewing user activities or uploading documentation and sharing it with professionals were appreciated. However, others showed less interest in using the application. Participants provided some suggestions for additional functionalities that could be implemented to better meet their needs.
- *Suggested features to be included in the ICT platform*. Participants suggested some features to be implemented in the for *informal carers'* interface:
    - Information about services (Poland, Slovenia): participants reported the need to find information about services, programs offering support to either people in need or informal carers. They also expressed that having access to guidance on how to spend time and interact with people that are more demanding could be useful.
    - Well-being section (Italy, Poland): participants expressed the desire for a solution that offers suggestions for taking care of their health and well-being.
    - Shopping list (Germany): a shopping list with the option of sharing it with formal carers could help avoid duplication of work.
    - Chat (Croatia): having a chat feature would allow informal carers to communicate with others in the local community facing similar struggles and share experiences.
    - Marketplace module for commercial services related to long-term care (Poland)

    Participants also suggested features for *users' interface*:

    - Scheduling and diary option to write their thoughts (Croatia)

- Therapy lists (Croatia)
- Suggestions for cognitive exercises or stimulating activities such as sudoku, crosswords, articles, music, videos, mathematical problems, verbal exercises (Croatia)

4.1.3. Formal carers

The chapter provides an insight into the results from the first focus group with formal carers. In November 2023, a total of 32 professionals participated in focus groups held in Croatia, Germany, Italy, Poland, and Slovenia. Formal carers who participated in the focus groups work for home care services and services for older people, representing various professional roles, including social workers, primary health care assistants, psychologists, social carers, community nurses, managers of community centers and mobile services.

Participants were asked to provide an overview of the current care pathway for home care services. With regards to the first phase of the care pathway, many **entry points** were pointed out by participants: 8 by Italian participants; 10 by Slovenian participants; 6 by Polish participants; 6 by Croatian participants and 20 by German participants. Entry points can be grouped into:

- Social and health care entities: they refer to social and health care facilities that redirect the person to services. A lot of examples provided by participants belong to this category that mainly refers to municipality, long-term care providers and service providers for seniors, hospitals, and health professionals.
- Other entities: it refers mainly to associations from the third sector, private associations, insurance company, the family, friends, and neighbours that have huge impact on providing information and directing the person to services.
- Digital sources of information: few sources were mentioned, such as the Municipality WhatsApp channel (Italy), chatbots (Germany), E-delivery (Poland), internet (Germany, Poland) specialized web platform (Croatia), online care guide from the Ministry (Germany).

People can contact services directly or get referral by other services. The type of information provided depends on the entry point and it could be more impersonal and purely informative (e.g., internet) or involving direct relationship and trust (e.g., friends).

Taking charge is a structured, formalized process that is mainly aimed at analysing person’s needs and redirecting to services. Preventative health services were also mentioned (Croatia) and differences appear between free services and self-paid services. Municipalities and care providers play a central role in the activation of services. The taking charge process consists of different phases. Following a direct user request or a referral, there is an initial assessment phase. This involves collecting documentation and certifications, user’s assessment through home visit (Italy), interview at home or at the office (Slovenia), consultation in the neighbourhood (Croatia). Different key professionals were mentioned: Social workers, healthcare professionals such as nurses and family doctors, service coordinator and care workers.

Participants were also asked to provide an overview of **services provided in the home care settings or in the territory**. Services mentioned by participants can be grouped as following:

- Services for personal assistance. It includes services to offer support with personal hygiene and cleaning (Italy), home help (Germany), meal preparation and delivery (Italy, Germany, Poland), transportation and shopping (Italy, Germany), payment assistance (Italy, Slovenia), home photography (Slovenia), hairdressing (Slovenia), Not specified (Croatia).
- Medical assistance and health care. It includes nursing (Slovenia), occupational therapy (Slovenia, Germany for dementia groups), medical chiropodist (Slovenia), therapeutic activities (Poland), not specified (Croatia).
- Physical training and activities. It includes physiotherapy (Slovenia, Germany for dementia groups), and physical activities (Poland).
- Social support. It includes socialising activities in collaboration with local associations (Italy), entertainment, leisure activities (Poland, Germany), not specified (Croatia).

Focus groups discussions with participants regarding the home care pathway, enable the identification of primary obstacles to the access and provision of services. The first session of focus groups with formal carers revealed significant needs and challenges, which can be classified into the following categories:

- *Bureaucratic challenges*. Participants, especially from Italy, Poland, and Germany, mentioned the bureaucratic procedures and intricate systems as barrier for users and informal carers to access services. Indeed, complicated administrative steps and extensive paperwork can impede efficient access to services, creating delays, confusion, and administrative burden for both care providers and users.
- *Resource constraints*: participants from Croatia, Italy, and Slovenia pointed out inadequate human and economic resources, hindering the provision of timely support to individuals in need. Lack of funds, low wages, high turnover, and care burden that derives from limited resources, reduce service capacities to meet care demands and undermine work conditions.
- *Communication and awareness of services:* coherently with what informal carers reported during focus groups, also formal carers mentioned the difficulty for people to obtain and relay on effective information about existing services. People are often confused, finding difficult to understand the necessary steps to access services, and what to expect from them, especially when people find themselves in a critical situation and they need help quickly. Also, older people's low digital skills can obstacle the process, preventing them from accessing services, especially digital ones.

Participants were finally presented with the first platform mock-up. The **main input for the PROCAREFUL model and ICT platform** can be summarised as follows:

- *Information repository* (Italy, Slovenia, Polonia): participants mentioned that obtaining information on services is difficult. Therefore, they suggested including information on the main services provided, a registry of licensed care providers, and information on centers providing assistance.

- *Additional functionalities*: participants suggested some functionalities that could be included in the platform to help them and care recipients with their activities. Examples are the possibility of adding social and local events organized in the territory, the creation of reminders for users, entry of vital signs, and the creation of a to-do and shopping list. Participants pointed out the importance for users to be autonomous on the use of the app, by being automatically redirected to the menu after they complete an activity. Participants also stressed the importance of involving the neighbourhood and volunteers to keep participants motivation high, to help with the technology and to promote socialization. However, since a new service will be implemented, it is essential to avoid duplication and increase of work as it would not be sustainable for formal carers, considering the intensity of activities they are already performing.

Finally, it was suggested to include the list of entry points developed by each country into the business model, as it can be used to disseminate project objectives.

4.1.4. National reports on the first step of co-design

Croatia

People aged 55+ who participated in the focus group were women without physical impairments, who have a relatively active social life. None of them benefits from home care services, but socialization services and they could be potential candidates for the implementation of the pilot. People stressed the importance of relationships and services, as they face transportation issues. The hybrid care model could be useful for them in maintaining physical, cognitive and social well-being. Informal carers shared the fatigue experienced for caring activities, and their need for services that can support them. Indeed, they provided a lot of suggestions for the functionalities that could be implemented in the PROCAREFUL model and platform, and they all agreed that chat functionality could be useful to get support from peers. Among the main problems reported by formal carers, there was the lack of manpower and the high pressure on service providers that should manage people's high expectations on services. All participants saw the benefits of implementing a digital solution and they discussed several points in which the implementation of a digital solution would be possible and useful as a supplement to regular care. They also converse about the profile of users who could benefit more from the hybrid care model, as they could be people who receive some sort of monetary supplement from the state, that already use apps and have cognitive and social skills to use the solution and regularly contact the city.

Germany

People aged 55 and above who participated in focus group benefited from home care services. They reported engaging in cognitive and physical activities primarily at home, or with friends to take care of their health. When asked about their experience with services, they mentioned encountering difficulties due to bureaucratic procedures. Individuals aged 55+ rarely use care services in Germany. Target people are normally aged 70 or 75 and older, with different needs compared to those aged 55. For instance, many older people lack confidence with digital devices. Therefore, the developed platform should be very simple and self-explanatory, and offer adjustable font sizes. Informal carers reported supporting older people in different activities, from personal assistance to financial support. People noted that there are more home-related than body-related services, they face challenges with complex bureaucratic processes, and often have problems in getting in contact with reference people. Isolation was also mentioned, with an emphasis on the importance of in-person contacts. Regarding PROCAREFUL platform, relatives reported a lack of time, highlighting the need for low effort and high added value. Similarly, formal carers found it challenging to identify the added value of the solution, aside from the additional work required. They suggested functionalities that could make the platform more appealing, such as a to-do and shopping list, or entries for vital signs. The application should be tailored to specific countries.

Hungary

People aged 55 and above who participated in the focus group were people with and without any physical and mental conditions, attending the senior club. The local government reaches out to potential members and involves them in the club which offers several cultural, recreational, and physical activities. As a result, participants reported having good social connections and being engaged in different activities on a daily basis. However, widowhood was identified as one of the main reasons for social isolation. Participants expressed their interest in using the PROCAREFUL platform and suggested including games for learning new languages to be played together. They were willing to learn if needed. Only 10% of participants knew how to use a smartphone, but they all learned to use Facebook Messenger to communicate with their friends. This indicates that the lack of digital skills should be considered, but it can be overcome by adding training and learning modules. It was also suggested to develop and implement something that is not currently available on the market to surpass the numerous learning platforms available. Games to be played together could partially solve the problem of isolation.

Italy

People aged 55+ who participated in the focus group were beneficiaries of social services and/or transport services. However, differences emerged among them. Some participants reported doing a limited number of activities and being isolated, while others reported being more active as they were involved in voluntary associations or in the senior club. Transport was reported as a major barrier to participation, especially in Silea Municipality. This issue was also reported by formal carers. Motivation was also mentioned as one of the main barriers, as for health or personal reasons (i.e. grief) participants reported not being motivated to take care of their cognitive, or physical, or social health, although they all recognized the importance of relationships. Lack of digital skills should also be considered, as some participants were reluctant to use technology and this can impair the implementation of the hybrid care model. Informal caregivers highlighted how demanding the activities related to care are, and they need time to rest and take care of themselves. People reported different experiences with care services, although they all highlighted some challenges in finding information about services. Participants believed that the platform can be a valid help for people who live alone or with initial difficulties. However, doubts arose regarding the role of the caregiver and the risk of adding work to their already busy schedule. The formal caregivers who participated to focus group work on home care services. In addition to challenges related to bureaucracy and lack of resources, they also reported that people's stereotype and fear of stigma can impede their access to services, as people believe that social services are for poor ones, or for people with severe difficulties. Professionals' expectations on the platform are that it does not involve additional work that they cannot handle.

Poland

People aged 55 and above participating in the focus group were active women who do not use home care services but engage formal support initiatives for older people. Specifically, all participants attended a senior club offering cultural events, and daily classes. Consequently, they didn't feel isolated, but rather part of a community. Social interactions and in-person contacts were considered extremely important for them. All participants, except one, had a smartphone, which they preferred over computer. When presented with PROCAREFUL platform, they shown appreciation for the solution and its functionalities, especially the area of interaction, as it was expected to contribute to creating a community around the solution. The biggest problem faced by the ladies was the lack of an effective communication channel and access to information about specific initiatives on active ageing. Indeed, this lack of information was reported by all three target groups involved in the co-design process. Informal carers reported that taking care of a person in need is demanding, especially as they need to balance work with caregiving. They also reported difficulties in accessing information on forms of support for caregivers and for residents. The issue of the stigmatization of formal assistance was mentioned by both people aged 55+ and informal carers. The common belief that social assistance is intended for low-income people means that some people do not decide to use the help of these centers. Formal carers reported that the onboarding process for long-term social assistance services is quite complicated. The process, as presented by the employees, revealed that is not the lack of tools or methods, but the complicated process of acquiring a beneficiary, which PROCAREFUL may have no influence on. What is interesting for them is the possibility of extending social assistance services with remote services, which can be monitored thanks to the PROCAREFUL solution.

Slovenia

People aged 55 and above who participated in the focus group did not benefit from home care services, even though they recognized the importance of services for people in need. The participants were retired individuals, all relatively healthy and active. One of them said "people have problems imagining what they might need in the future", making it difficult for them to consider the services they might need. Participants reported engaging in diverse physical and cognitive activities at home or with friends to maintain their health. However, they mentioned isolation as a significant problem for older people. Even though this group was not isolated, they expressed a desire for more inter-generational contacts. Participants were relatively negative towards the use of the application. They highlighted the importance of community for people to stay connected, perceiving the app as one-person oriented. Informal carers who participated in focus group took care of people with physical or cognitive conditions that require time and resources. These participants expressed the need for rest, reliance on services and training on how to handle demanding older people. Finding aspects of the PROCAREFUL solution useful was challenging to them. Due to their lack of time, any solution would need to be very easy to use, perhaps something they could listen to. Formal carers who joined the focus group appreciated the idea of having three stakeholders connected via the app. However, they were already using various applications to help them with care and would be willing to adopt another application only if it offers more features, even though they preferred not to use multiple applications simultaneously. They all agreed the solution should be simple and useful.

4.2. Results from the second step of co-design

In this chapter results gathered from the second step of co-design are presented. The aim of the second step of co-design was to shape the PROCAREFUL hybrid care model with key stakeholders. Focus groups with three target groups were conducted and questionnaires were administered to two target groups in Croatia, Germany, Hungary, Italy, Slovenia, and Poland in January 2024. Results from the questionnaire for managers and policy makers were collected between October 2023 and January 2024.

Each section reports the main input on the PROCAREFUL platform and on the PROCAREFUL care model obtained from each target group. Sections on managers and policy makers, as well as on other stakeholders report the main topics discussed regarding the model's sustainability and the main challenges that could be faced in the implementation of the service.

Finally, Chapter 4.2.6 presents the main findings and input from each country.

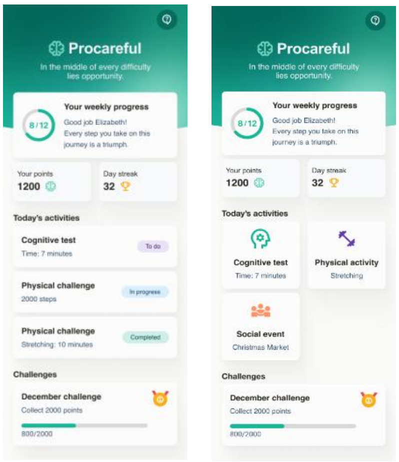
4.2.1. People aged 55+

The chapter offers an insight on the results emerged from the second round of focus groups with people aged 55 and over. In January 2024, a total number of 32 people aged between 60 and 92 attended focus groups in Croatia, Germany, Italy, Poland, and Slovenia. Participants from Croatia and Poland also participated in the first focus group session, while people from Germany, Italy, and Slovenia participated in the focus group for the first time.

Participants were presented with the **second mock-up of the platform for end-users**. The mock-up was found to be understandable by all people, except for Italian seniors. People from Poland and Germany suggested investing in game difficulty levels. Additionally, participants provided insights suggesting investment in graphic quality, explanatory captions, and user experience to enhance the platform-user interface. They were presented with the two options for the dashboard (Figure 1). People from Croatia, Polonia, and Slovenia encountered no major issues interfacing with the application dashboard. Instead, people from Italy and Germany, pointed out that more modifications are needed to make the tool more understandable. With the exception of Slovenian people, participants preferred the second dashboard option, as iconographic was considered more understandable and appealing.

Figure 1

Dashboard option 1 and option 2 for people aged 55 and over



When asked how to keep motivation high in doing cognitive and physical exercises, participants provided various insights. They all emphasized the need for explicit motivational messages, accompanied by social support from family members or formal caregivers. When presented with a list of functionalities to keep motivation high, the most popular one was the inclusion of feedback on the number of correct and wrong answers and the second most popular opinion concerns seeing progress over time. Instead, being periodically called by an expert to share progress was ranked at the bottom of the list. Participants were also asked about the section on physical activity that will be contained on the platform. Overall, there was a common emphasis on the need for simple and easily accessible training plans, accompanied by videos and images, that can also be customized based on the physical conditions of the individuals involved.

Participants also discussed **the hybrid care model**. In particular, **social participation** was considered. Only people from Germany and Italy did not appreciate the idea of having digital tools to support socialization, and expressed a preference for voice interface modalities such as calls or video calls. Other participants found this function useful for people who need it. When asked to rank a list of features to support socialization, people from Croatia, Italy, and Slovenia prioritized group-based activities, which were ranked as the second option by participants from Poland and Germany. Another prominent choice within the ranking is occupied by information on local events, that was ranked in the first positions. The option of forums and chat was the first option for Polish people, even though other people ranked it at the bottom of the list. During the first step of focus groups, obtaining information on local events was mentioned as a useful functionality that could be offered by PROCAREFUL solution. Participants from Croatia and Poland explicitly found this functionality useful. When asked who should be in charge of adding and sharing information, no specific reference figures were reported. However, people from Germany, Italy, and Slovenia would prefer to delegate this task to the municipalities or neighbourhood districts, while others would delegate it to associations or groups of admins. When asked to consider in-person social activities, all participants considered them quite important to promote socialization and to encourage social participation within local communities.

4.2.2. Informal carers

The chapter offers and insights on the results gathered from the second round of focus groups with informal carers from Croatia, Germany, Italy, Poland, and Slovenia. In January 2024, a total of 25 people participated to the focus groups, 22 out of 25 were women, age range was between 23 and 70 years of age. The majority of them were taking care of a family member. Participants from Poland also participated to the first focus group and were recruited through the same complex of support centers. The other participants did not participate to the first focus group. People from Germany and Italy were in contact with the organizations and people from Croatia and Slovenia were recruited through personal contact, social media, or informal groups.

Participants were presented with the **second platform mock-up for people aged 55 and over**. When presented with the two options for user's dashboard, most participants (21 out of 25) prefer the iconographic dashboard. The first option was preferred by two participants because it clearly shows which tasks have been completed or need to be completed. Comments on the layout and interface components were positive, however some participants, especially from Italy and Poland, reported that the design should be more appealing with more images to increase readability and to encourage individuals to use it over time. The possibility of visualizing progresses was considered important to motivate people to use the solution. Moreover, it was suggested to use concrete rewards, such as the 'success bank method' or external vouchers. Motivational messages were also considered. Information on local events were discussed, particularly who should be in charge of adding information. Some participants mentioned community centers such as clubs, associations, districts and other entities organizing the event, others mentioned the service providers for older people. People from Croatia and Italy reported to be available to add information on the app, while participants from Germany and Slovenia thought that they shouldn't manage this task because of time limits and distance from their relatives.

Participants were then presented with the **second platform mock-up for informal carers** and offered functionalities were discussed. The most appreciated functionality was the chat, that would allow to communicate with professional and other informal carers. However, participants from Slovenia gave more importance to the system of notification. Another featured mentioned was the 'well-being section' within the platform: informal carers need to get support for themselves. This was emphasised by Slovenian participants who suggested to create a psychological counselling to support them in caring activities. Almost all the participants reported that communication with other informal carers is important. They would be willing to share their experiences, especially if it could help others. For instance, Italian participants explained how hard it is for informal carers, particularly in the initial phases, to find information and support and having a virtual space where they can access information and share experiences could be useful. Polish participants suggested to create a "community platform" where to find support and solidarity among carers facing similar challenges. Therefore, it seems to be crucial to create opportunities for interactions and relationships among them and among beneficiaries.

Participants were asked about the **preferred device**. The most mentioned device was the smartphone, as they would use it to check the platform. The majority of them reported that they would use the platform one or two times per day when they have occasions. People from Poland considered a web-based platform to be an obstacle for accessing data, as they would prefer to have an app that would be easier and more comfortable.

To conclude, participants mentioned different **roles that informal carers could have within a hybrid model of care,** each addressing different needs but considered equally significant:

- *Supportive and coordinative role*. They provide support to the person in need of care, they are responsible for the care of their family member. They are the point of contact between formal carers and care recipients, using the PROCAREFUL platform to share information and documentation with formal carers, and to check up on their loved one, or to add reminders, medication intake, or personal information.
- *Direct user of the app*. They could utilize features tailored to their own needs, such as participating in a forum, or chat, where they can engage with a community sharing similar experiences and needs.
- *Motivating role in the use of the solution*. Informal carers could encourage family members to actually use the app, supporting them in the use, acting as a supervisor.

4.2.3. Formal carers

The chapter offers an insight on the results emerged from the second round of focus groups with formal carers. In January 2024, a total number of 37 professionals participated in focus groups held in Croatia, Germany, Italy, Poland, and Slovenia. Formal carers included were social workers, coordinators of home care services, psychologists and care workers.

Participants were presented with the **second platform mock-up for formal carers.** Participants from Germany and Italy reported that colours and charts of the dashboard were unclear. It was suggested to use the 'traffic light scheme' to make charts more intuitive. Participants from other countries did not comment the application design, focusing on functionalities. This could be interpreted positively, suggesting a natural adaptation of the presented content in line with the principle that *good design is silent, bad design screams*[1]. Platform functionalities were also considered. On average, functionalities, such as having a pre-defined training schedule was appreciated. However, differences emerged on the type of information and documentation that could be uploaded and shared with informal carers.

Another topic discussed was the promotion of **social participation**. Different factors that promote socialization and participation to social events were considered. For instance, the importance of obtaining

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[1] Norman, Donald A. (2013). The design of everyday things: Revised and expanded edition. Cambridge, MA London: The MIT Press.

information about the events and accessibility were mentioned. Indeed, participants reported that for some people it is difficult to reach the location where events are organized because of transportation problems, or because they do not want to leave their home. Therefore, it was suggested that events could be organized across different locations to mitigate this issue. Moreover, it was suggested considering the care worker or volunteer visiting the person at home, doing cognitive or physical exercises together. Formal carers acknowledged that the solution could provide people with information about local events, however, differences among who should be in charge of adding information emerged. Volunteers (Croatia), person of the municipality (Slovenia), individual users and external entities (Poland), professionals (Italy) were mentioned, and some reported to be unrealistic for formal carers to take care of this activity (Germany, Slovenia). In addition, differences emerged also in the organization of in-person activities. Some groups reported that activities were already organized on a daily basis (Poland), or monthly (Italy). Materials, guidelines to organize these activities would be appreciated (Italy). Others reported that it is not sustainable for formal carers to organize them (Croatia, Germany) or for users to participate due to physical limitations (Slovenia). Nonetheless, associations and volunteers could support professional in organizing events, sharing information and motivate people.

Finally, the **care intervention model** was discussed. Initial assessment, monitoring, and intervention were the three phases identified in which the professional should be involved. However, differences emerged. The group from Germany reported that for formal carers it is only sustainable to change the training programme, while other participants reported also phone calls, group activities, home visits. The majority of them highlighted that the digital solution should support a personalized intervention, on the basis of notifications that point out users' needs. It clearly emerged that the solution needs to be flexible enough to be used in different contexts and with different digital tools. Indeed, participants reported that they would use the solution at their office (Croatia, Germany, Italy, Slovenia), at user's home (Croatia, Italy), in the car after home visits (Slovenia), or in multiple senior centers (Poland). Different devices were mentioned such as the mobile phone, laptop or computer. Participants mentioned different activities that could be shaped with the hybrid model of care, ranging from care assistance to care management. For instance, personal care was mentioned. Also, it was stated that this model of care could foster the integration of services, promote communication among carers, digitalizing paper report and care documentation. According to participants, different professional roles should be involved in the hybrid care model. Nurses were the most mentioned (Croatia, Germany, Poland, Slovenia). Also, mental health experts, psychologists (Croatia, Italy, Poland), care workers, personal assistants (Germany, Italy, Slovenia) and physiotherapists (Germany, Poland, Slovenia) were considered. Then, social workers were taken into account (Germany, Italy). Geronto-housekeepers (Croatia), and occupational therapists (Poland) were included by some participants. This variety of professional considered may lead to the risk of experts that are not responsible or competent for prescribed activities.

4.2.4. Managers and Policy Makers

The chapter offers an insight on the results emerged from the questionnaire administered to managers and policy makers from Croatia, Germany, Hungary, Italy, Poland, and Slovenia. From November 2023 to January 2024, a total of 27 responses were collected.

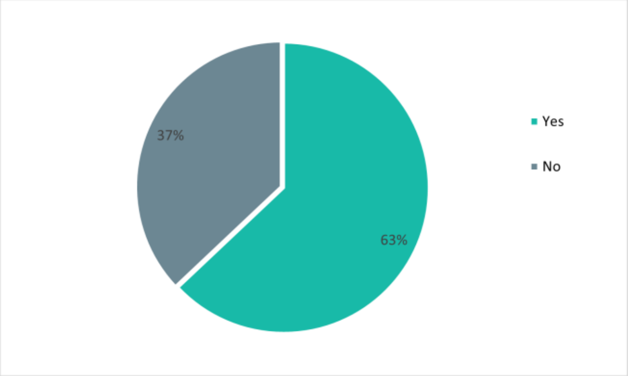
The first questions proposed were aimed at understanding whether respondents already have **experience with hybrid home care services** and their **attitudes** towards this type of services. The majority of respondents, except those from Slovenia, reported to use digital devices for care. On average, it emerged a clear interest in promoting people's health through the use of technology. Devices were mainly used for monitoring, emergency systems and telemedicine. In particular, participants emphasised using technology to improve healthcare services and cope specific health-related challenges. However, some challenges were mentioned, including the need to ensure internet access, addressing people's concerns about technology, managing limited nursing staff resources, promoting home care services through government support and stakeholder collaborations, and ensuring that technologies are user-friendly and suitable for the needs of users, particularly in intensive care contexts.

Participants reported some **conditions and factors** that make hybrid care sustainable. Several key themes emerged, such as technical issues (i.e., internet connectivity and hardware), digital literacy of both seniors and caregivers, and additional trainings on the use of digital tools. Additionally, establishing a supportive legal environment, providing adequate financing, and promoting professional skills were identified as crucial steps for a successful implementation of the hybrid care mode. Indeed, the need for financial capabilities to effectively transit towards a hybrid model, supported by adequate staff was mentioned. Participants also highlighted the value of remote care as a supplement to in-person visits, particularly for safety checks and social support. Furthermore, there was an emphasis on the benefits of telecare in enabling people to remain in their homes longer, addressing staff shortages, and reducing travel needs.

On average, **staff readiness** to use digital tools were positively rated, reporting home care staff to be willing to engage in the use of digital resources, although given the heterogeneity of the staff, additional training would be needed. Furthermore, participants from Germany, Italy, Poland and Slovenia advocated for staff to perceive the benefits of these tools, so they do not perceive it as burdensome or as extra work. Additionally, participants from Italy highlighted the need for adequate levels of cybersecurity. Participants' opinions on the feasibility of having full-time specialists working in home care services was considered. The majority of respondents considered it feasible (Figure 2), however differences appeared among countries. While participants from Germany, Italy, and Poland were in favour of dedicating full-time specialists for the service, participants from Croatia and Slovenia expressed negative stance.

Figure 2.

Managers and Policy Makers opinions on employability of full-time specialists in hybrid home care services



The role of **volunteers** was rated as crucial for the implementation of hybrid home care services, providing information about the real needs of the community, and promoting models of care that support interpersonal relationships, especially where resources may be lacking. Some participants highlighted the importance of delineating which tasks fall within their competence, distinguishing between professional and non-professional duties. Moreover, it emerged the need to have adequately trained and empowered volunteer staff for social care services.

Considering the **price** of hybrid home care service, participants proposed hypothetical monthly fees, ranging from symbolic amounts to a few hundreds euros, depending on the socio-economic status, and contexts. Indeed, participants highlighted the potential difficulties for families to afford it and the necessity of considering multiple factors to estimate price. Participants reported that socio-cultural factors should be considered to establish affordable prices and assess families' willingness to benefit from this kind of service. When considering the percentage of price increase for people that already benefit from home care services, the opinions collected were highly diversified. Some participants did not express an opinion, as different factors should be considered, others reported a percentage range starting from a minimum of 5% up to 50%, others would not expect an increase in costs as technology usage would imply a cost-saving benefit.

Participants expressed an overall positive attitude towards improvements on the quality-of-care systems, including hybrid solutions, acknowledging the importance of reducing social isolation and promoting active and healthy ageing. Different considerations about the project were reported. Key issues to consider include a careful assessment of model's prerequisites such as available infrastructure and personnel, volunteer involvement, pricing, and identification of entities responsible for its delivery. Moreover, the uniqueness of the solution and the added value for professional should be clear to promote its adoption. Integration with already existing services is desirable to make it sustainable.

4.2.5. Other stakeholders

The chapter provides insights into the results obtained from a questionnaire administered to stakeholders (i.e., voluntary associations, cooperative from the third sectors) in Croatia, Germany, Hungary, Italy, and Slovenia. Between January and February 2024, a total of 38 responses were collected.

In general, respondents had a positive attitude towards the **hybrid model of care,** viewing it as beneficial for people aged 55 and over in need of care. While respondents from Hungary expressed a high demand for hybrid care, others reported that remote care could support monitoring and supervision, facilitate faster intervention periods, ensure continuous care, and aid in patients' discharge. Hybrid care was perceived as complementary to traditional models of care implying direct interpersonal contacts. However, the model's utility was contingent on various factors, making it inaccessible to certain users and situations. For instance, the lack of digital skills among older people, especially among those aged 75+, was identified as a barrier to effective implementation. Most respondents reported that their organizations implemented initiatives to promote socialization and counteract cognitive and physical decline. These initiatives mainly involved in-person activities, such as intergenerational group meetings, digital literacy courses, card games, as well as physical trainings, often organized in recreational centres. Participants from Hungary mentioned cognitive health game applications and intelligent indoor camera systems to detect falls.

Disparities emerged in the **perceived readiness of organizations** to implement the hybrid model of care. Factors hampering readiness include the lack of digital skills among carers and users, inadequate technical infrastructure, and prevailing paradigms favouring in-person care. Despite this, nearly all respondents stated that their organization would arrange activities or events to promote socialization. Transportation issues and challenges in involving hard-to-reach people were highlighted for in-person activities, while online activities were seen as potential solutions, but then hybrid experiences should clearly demonstrate and added value.

Respondents expressed doubts regarding the **costs and feasibility** of hybrid home care services. While some believed their organization would invest in hybrid care services, differences among countries emerged, with Germany reporting a lack of investment. Factors influencing decisions include model acceptance among beneficiaries and care providers, the need to involve healthcare organizations, and the creation of added value for carers. Pricing concerns were raised, with some respondents reporting users' reluctance to pay for these services, as they often benefit of services for free. Others suggested low fees or fees based on beneficiaries' financial capacities. The complexity of estimating affordability due to various sociocultural factors was also acknowledged.

The prevailing concern that people, especially older ones, may not be ready to use digital platforms, indicate the importance of simple and intuitive interfaces. In addition, raising awareness about this new model of care was deemed crucial to highlight its potential added value for people.

4.2.6. National reports on the second step of co-design

Croatia

People aged 55 and over, who participated in the focus group, were quite active women. The group found platform interfaces clear and easy to understand. They were highly enthusiastic upon seeing the mock-up and suggested different functionalities that could be integrated. People underlined the importance of social engagement as considered the foremost factor influencing the quality of life and well-being. “Including seniors in forums or chats can help people feeling sad and obsolete cancel out that feeling. It can provide a feeling that you are not a burden to everyone and that you are needed” or “Group-based activities are great for socialization since it is the most important factor of senior’s well-being” are quotes from two participants that highlights the importance given to the social dimension, and how the PROCAREFUL solution could support it.

Informal carers who participated in the focus group were presented with the platform for the first time. They rated platform design as pleasant and easy to understand and consider it fitting its purpose. The most appreciated functionality offered by the solution to caregivers was the possibility to monitor user’s progress on cognitive performances over time. When questioned about the possible roles of the informal carers on the PROCAREFUL hybrid care model, they mentioned a supportive role for both people in need of care (being a contact for professional when needed), and other cares (sharing useful information and experiences).

Formal carers that participated in both focus groups, pointed out that literate and active people will be the users of the platform. The group reported that professional could intervene for the initial assessment and for monitoring through phone calls. The solution could be used in the office or at user’s home, but not during home visits. Group activities were appreciated, and volunteers and associations seemed to have a crucial role in informing people and organize events or home visits to promote socialization. Participants also suggested different formal carers to be included, such as visiting nurses, geronto-housekeepers, cognitive health experts, mental health experts.

Managers and policy makers expressed general positive attitude towards all improvements in the care system, and they were positive towards hybrid solutions as well. However, to make the model sustainable, issues such as the technical infrastructure, digital skills, and additional training should be considered. Indeed, personnel may lack adequate digital skills to implement such model of care. When asked about the possibility of employing full-time specialists in these services, 4 out of 6 reported that it is not an achievable goal. However, as reported by formal carers, also managers and policy makers reported volunteers to play a crucial role in implementing remote care services, compensating for the shortage of specialists in the sector. It was stated that “the civil sector is adept at implementing and embracing innovative service methods”, even though sole reliance on volunteers should be avoided, being active in areas that do not require specialized expertise. Financial capacity to swich to a hybrid model was also challenging. It was reported that families are rarely ready to allocate funds and different factors should be considered to estimate potential costs of the service.

Third sector stakeholders generally exhibited a positive attitude towards the hybrid care model. However, variations arose among respondents concerning their experiences with hybrid care, willingness to implement hybrid care solutions, and the organization of activities to promote socialization. Some respondents reported that their initiatives for socialization led to observed positive effects such as reducing loneliness and marginalization of seniors, while preserving their mental and physical health. This highlights the importance of considering the continuity of work and readiness of organizations involved in the implementation of PROCAREFUL model. Considering pricing, some participants believed that beneficiaries would be willing to pay extra for the service, but the price should not significantly exceed that of existing service. Others expressed scepticism, stating that users may not be willing to pay. It is clear that the price should be affordable to people. Keeping PROCAREFUL service free of charge and available would promote its adoption.

Germany

People aged 55 and over, who participated in the focus group, experienced limited mobility and flexibility. They provided some suggestions for the improvement of the platform mock-up. As for the dashboard, they expressed a preference for the interface with graphics and images, even though clarity should be improved. Suggestions included increasing the size of elements and providing clear instructions to make it easier to understand clickable items. Participants reported that receiving support from their families would make them feel safer and more motivated to use the platform, even though they believed the strongest drive is one own's willingness. Participants considered social participation important. However, they did not view the platform as a useful tool for increasing participation. Digital communication channels did not interest them, and information on local events was judged quite useless. They preferred in-person group activities, but mobility problems could obstacle participation.

Informal caregivers who took part to the focus group believed that they should have a supervisory role in the hybrid model of care. Indeed, monitoring progress in cognitive performance was identified as the most frequently mentioned functionality offered by the platform. However, participants were less keen to communicate and exchange information with others. Many reported living far away from their parents and not being informed about community events. Considering the distance between the person in need and the caregiver, the design of the hybrid care model would generate an added value by offering remote support. However, the local dimension in creating a community of caregivers is less relevant.

Formal carers who participated in the focus group suggested some improvement to the platform interface and additional functionalities that could be included to support them in their work. They stressed out the limited amount of time professional have that affect the number and type of activities they could perform in their daily work routine. As for the hybrid model of care, they saw themselves defining the care planning in their office. The solution could be used by retired carers without specific restrictions, or in a group in day care. Volunteers could support them by sharing information and organizing events to promote socialization. Different professional could be involved in the hybrid care model, such as the nursing staff, the nursing service management, physiotherapists, social services, care assistance.

The *manager* who responded to the questionnaire reported that digital solutions have already been used in households. Examples include the home emergency call system, GPS trackers, smart homes, telephone or video consultations. The main obstacles reported were an insufficient internet access and the feeling of being overwhelmed by technologies for seniors and staff. To make hybrid services successful, it would be essential that digital devices are accepted by seniors and care staff, respectively. Nursing staff already has experience with digital tools, and it would be possible to have full-time specialists involved in hybrid care services, but the added value of remote care should be clear. Volunteers could play a role in social care, but for health-related activities trained nursing staff is required. Volunteers could provide technical and social support, even though the time to coordinate them should be considered. The responder highlighted that additional payment from families should be avoided by integrating the hybrid care services with standard care. However, given its relevance in the social field, the added value of the model for nursing staff is currently low.

Third sector stakeholders emphasized the importance of personal contact, stating that regular care cannot be replaced. The hybrid care model is seen not as a replacement or supplement to care, but rather as a form of social care. It was reported that carers seem to be more prone to digitalization that is limited to care documentation. What could be digitalized, only refers to care documentation and carers are more willing to use such solutions. Moreover, users' digital skills should be considered, as hybrid care could be proposed only to tech-savvy people aged 55 and over, to meet their needs. Respondents did not perceive added value for carers, considering the target groups to be only relatives and senior citizens. They reported that their organisations are not ready to implement a hybrid model. Regarding social initiatives, intergenerational community initiatives that are aimed at stimulating networking among young and old people were mentioned. Respondents expressed willingness to host only in-person events, as often taking place in residential cafés or similar venues, even though it is difficult to reach isolated people. Respondents did not foresee a fee being charged for this service, as money is generally scarce in the care sector. To generate sustainable revenue with the solution, they suggested increasing the added value or financing the app via health insurance.

Hungary

Managers and policy makers who responded to the questionnaire, reported to have already implemented digital tools for care, such as medication reminders, environmental monitoring systems, emergency systems. However, many respondents expressed negative views on using digital technologies and smart tools in homecare services. According to the respondents, to make hybrid care sustainable it is essential to raise awareness among social and professional groups on the services, generating interest in the use of digital tools and establish a reassuring, long-term arrangement (also aimed at improvements) of the legal environment (competence, GDPR, financing, AI application, etc.) and real financing. Also, trainings should be promoted to create additional competences.

Five out of six participants considered personnel to be ready to use digital tools in their work routine, even though additional training would facilitate the process. However, a lack of statistical data concerning the provision of home care services was reported. It was stated that certain conditions, including the financial and professional motivation should change to have full-time specialists working in home care services for older people. Indeed, a reliable career path model should be introduced. Changing in legislation would lead to an increase in resources. In the majority of cases, long-term care is still carried out by informal carers, and only a small amount of care is provided by formal carers. Moreover, a need for better and more effective cooperation among health and social services was emphasized. The third sector could play a significant role in information and coordination, but it is essential to accurately demarcate professional and non-professional "tasks". Lack of the initiation of creating small communities that support each other and data collection of good practices presenting international small community developments and quality elderly care results in domestic small communities.

When asked about service payments, respondents reported that it would depend on different socio-economic factors of the families involved. Home care services could be promoted by providing support to government decision-makers, increasing information dissemination, enhancing training opportunities, and fostering project development for local organizations and institution managers. Additionally, facilitating connections between developers, service providers, and users through organizing conferences and workshops, as well as supporting research, development, and testing was highlighted as crucial. Furthermore, it was emphasized that financial arrangements should consider the actual costs and expenditures, along with the conditions necessary for profitable operation.

Third sector stakeholders highlighted a strong demand for hybrid care model, including municipalities, retirement homes, clubs, and older people with digital skills. Despite significant innovation potential, challenges arise from a lack of information and mixed feedback, placing home care service provides into a difficult position. Obtaining feedback on home care services is identified as a major challenge, and reaching the target group is hindered by a gap between market offering and the demands of older people. Also, stakeholders stressed the need for better-informed institutions to educate people on available services.

Regarding organizational readiness for hybrid home care services, responses varied, emphasizing the importance of creating a testing audience among older people and maintaining relationships with testers. Improvement areas include precise need assessment, relationship management, networking methods, and facility availabilities. While most organizations were willing to invest in hybrid home care services, challenges include mobilizing new target groups and limited services that put less pressure on innovation.

Effectives in addressing social isolation and cognitive and physical decline depends on the methods used, with games and fitness applications proving popular. Concerns over privacy issues were raised for the intelligent camera system monitoring falls. Despite positive responses regarding the willingness to organize social events for the 55+ age group, effective and cost-efficient services depend on networking, positive relationships, and feedback. Digital support has the potential to reduce perceived inequality, but estimating the value people would pay remains challenging and depends on financial levels and service demand.

Italy

People aged 55 and over, who participated in the focus group, periodically meet to play bingo in the senior center. They face problems with transportation, so volunteers brought them to the center. When presented with the platform, the women were quite sceptical and afraid of not being able to use it. Participants explained that they do not have a smartphone and, if they have one, they do not use apps and would need support. Some of them were willing to learn, while others weren't. This underlines the importance of focusing on UX design, providing a few, clear functionalities that are interesting for the users. At the same time, it should be noted that the majority of people who benefit from social, home care services do not use smartphones and have low digital skills, making it difficult for them to use the solution. On the other hand, people appreciated in-person group activities to promote socialization.

The identification of the target group was also discussed with *informal carers*. As the model is aimed at preventing cognitive, physical, social decline, they stressed the necessity to broaden the user base to reach citizens that are not in contact with social services but could benefit from hybrid care. When presented with the platform mock-up they were also sceptical about its design. They suggested including more images and icons to make it more intuitive and appealing, encouraging people to use it. During the focus group participants highlighted the importance of communication, giving more relevance to functionalities that allow to share experiences and information with other carers and facilitate communication with professionals.

Formal carers participating in the focus group suggested some improvements to the platform. They reported that the solution could promote the integration of services, fostering the communication among home care service providers and municipalities. Indeed, the solution could facilitate information exchange and allow the creation of a “social directory” in which user’s history is stored. However, also formal carers discussed the target group for this service. Participants reported that people benefiting from home care services often have low digital skills, making it challenging for them to accept and use the solution. Therefore, as the solution aims to prevent decline, it was suggested to include citizens who want to take care of themselves. Additionally, to prevent service users from being excluded, it was suggested to have care workers support individuals in performing activities at home. Group activities for home care service users are organized monthly, and some of participants reported that it could be useful to get material and guidelines to organize these activities. However, they considered volunteers and associations crucial to support the socialization and the organization of events. As for the hybrid model of care, formal carers could perform an initial assessment, and monitor the performance once a week, from the office or at users’ home. Professional involved should be social workers, psychologists, care workers, and care coordinators.

Many respondents among *managers and policy makers* provide home care services and aim to expand the range and scope of their offers. Some of the indicated offered solutions entail pilot initiatives aiming to support inclusive living and community housing. Reducing isolation, promoting active and healthy aging, fostering (digital) health literacy, as well as going beyond pilot initiatives, are some of the indicated priorities in this regard. That said, remote areas might need additional complementary action due to a potential lack of resources or limited coordination of healthcare services. Moreover, remote or rural areas often have broad-band coverage issues. Considering all these factors, it is important to carefully assess the model's prerequisites such as available infrastructure and personnel. In this regard, the (digital) health literacy of both citizens and health professionals plays a critical role, especially within a framework that is fully dependent on the citizens' trust. For this reason, the model should be perceived as fully secure, also in terms of privacy and data safety. Providing citizens with dedicated information, possibly supported by sensibilization campaigns, could foster the tools' adoption. At the same time, for the model to be effective, providers need to be supported with training and real-life practice.

The third sector was considered a crucial player in effectively developing a hybrid system. Moreover, it is particularly important to consider its role as a community linchpin between institutions and beneficiaries' households. In this regard, the third sector should provide essential knowledge of the needs and wants of the community. Furthermore, it is important to consider its role as support to end-users in using the offered services, while also potentially providing informal assistance in the integration and digitalization of the healthcare system, strengthening citizen's trust and filling the fractured relationship between beneficiaries and providers of care. Considering pricing, an insurance-based business model could be effective, possibly complemented by micropayments. Estimating a fair pricing strategy could be particularly difficult. However, ensuring a pleasurable gamified environment that can involve other users besides the main beneficiary might help to attract buyers and foster adoption, especially if complemented by improvement reports and personalized care.

Third sector stakeholders overall considered a hybrid model of care a valuable innovation in the care sector, fostering intervention periods, promoting continued care, and cognitive health. Nonetheless, major uncertainties in its societal acceptability have been raised, partly due to current paradigms favoring in-person care. Considered barriers all point toward contingent factors, such as family income, skills and education gaps, and lack of training. Furthermore, the successful implementation of the model is highly dependent on effective system coordination comprising all involved care services, as well as approval from management. In addition, low health literacy levels are considered a serious threat, particularly regarding detrimental effects caused by the erroneous use of digital solutions, especially for users aged 75+. To foster the adoption of a hybrid model, activities need to be carefully planned and contextualized within a long-term process. Ideally, services should be kept free of charge, accounting for the current mentality of the population. For this reason, it is crucial to extensively investigate the real opinions of the selected target groups. Moreover, awareness campaigns on the advantages of hybrid care need to be provided to foster the acceptance rate of care organizations, care providers, and beneficiaries.

Poland

People aged 55 and over who participated in the two focus groups were all active people that attended the senior’s club on a daily basis and engaged in different cultural and physical activities (e.g., Tai Chi, swimming, and gymnastics). Platform design was rated “neutral”, and it was suggested to include more icon-graphics to increase readability and clarity. However, they positively evaluated tools that promote their cognitive and physical health. The group was quite enthusiastic about learning new things, such as a new language and they underlined the importance of having different levels of difficulties for cognitive exercises. People valued social participation and considered it essential for their well-being, participating in group activities on a daily basis, as meetings among friends were the primary source of motivation for them. As they have regular contact with each other and their carers, they were not interested in digital functionalities that promote socialization, even though they acknowledged that for individuals who lack such an extensive network or awareness of initiatives, this type of communication tools could be beneficial. Participants expressed reluctance to share information about potential decline in their condition with formal and informal carers. Despite the participants' relatively advanced age, it was apparent that maintaining a sense of independence and self-determination was crucial to them. This aspect should be considered a critical factor in the implementation process, as failure to address it could hinder the adoption of the application by a key group of stakeholders.

Interestingly, *informal carers* who participated in the focus group, viewed themselves as the responsible for the care of their family member, and the coordinator and primary point of contact between formal carers and family member receiving care. However, the group expressed a desire for their own needs to be acknowledged and addressed. This sentiment was voiced both in the request for additional functionality aimed at supporting informal caregivers' well-being and in the interest in creating a community space for sharing similar needs. Accessing information about services was reported to be difficult. This aspect should be taken into consideration during the development of PROCAREFUL’s business model, as the platform will encounter a similar challenge.

Formal carers participating in the focus group referred to the senior centers in which they work, where group activities are organized on a daily basis. Barriers to participation could be due to transportation and they suggested to organize events across different locations to mitigate this issue. In addition, difficulties in obtaining information were mentioned by different target groups during focus groups. The possibility of receiving information about events was subject of extensive discussion. The need to differentiate between types of events, categorizing them as "open" (e.g., a concert) or "closed" to specific user groups (e.g., for a senior citizens' club) was emphasized, concluding that external events could be showcased in a publicly accessible "calendar" of events, and local, close events could be shared within the "Forum" module, allowing each platform user to contribute. The group also discussed the hybrid model of care, suggesting that paper report could be digitalized. They unanimously agreed that managing the beneficiaries’ database in the application should be integrated into their daily work routines. They identified different experts that could use the solution, such as employees of nursing homes and other centers for older people, occupational therapists, physiotherapists, psychologists, psychotherapists, and environmental health nurses. In the future, they suggested to include also medical personnel.

The majority of responders among *managers and policy makers* had experience with digital tools for care, implementing “life wristbands for seniors”. Among the factors that would make the model sustainable, it was highlighted the need to equipe seniors with necessary devices, training them on the use of the tools, providing remote care, as well as obtaining easily accessible financial support to the municipalities to allocate specific budget for senior remote care. Personnel involved in home care services, have different levels of digital skills and openness to learn. Therefore, additional training for the staff is crucial, even if it was mentioned that financial incentives would motivate carers to provide remote care services. In this regard, volunteers could have a diminished role, serving more as a supplement to primary services rather than as the primary providers. It was also observed that volunteers play a crucial role in fostering interpersonal relationships, and they would be a potential point of contact with seniors, engaging with them on senior activities. Considering pricing, it was not possible to estimate due to the diversity of families, needs, and severity of seniors’ conditions. If the service would be fee-based, it should be administered through official channels, such as municipal ones, with financial support.

Slovenia

People aged 55 and over who participated in the focus group were all young, retired people. When presented with the platform mock-up, they were the only ones preferring a dashboard with more text, as it offers more information on the progress status. Indeed, seeing information on progress, game levels, and mistakes was very important and would motivate them to do the exercises. In general, gamification and reward-based activities were appreciated. As for physical activities, they also suggested to have more options to tailor exercises to everyone’s needs. However, they mostly agreed that social participation was the most important part and having as many options as possible (i.e., events, chats, videos, etc.) would increase the possibilities to socialize.

Once presented with the platform mock-up for people in need of care, *informal carers* reported that the solution is not adequate for people they are taking care of. “This is appropriate for 55+ but not for 85+ like my mother” was stated by one participant. Indeed, the group considered the developed features more for the caregivers and not for the care receivers. Features that support communication among caregivers and people sharing similar situations were appreciated, along with reminders for events, medication intake and personal information. When asked to imagine the role that informal carers could have in this hybrid care model, they reported that they could be in charge of encouraging their family members to use the app and teach them to use it or at least tolerate it.

Formal carers who participated in the focus group, working in home care services, unanimously agreed that the solution was not compatible with the needs of their users, many of whom are either bed bound or with severe dementia. They emphasized that, as the solution is aimed at preventing decline, it should be targeted to a younger population, despite the possibility that they may not recognise the benefits. Due to the users' conditions, activities promoting social participation might not be sustainable, but online events could be organized. However, families paying for the service might be reluctant to the use of digital devices. One participant said that "families just want us to provide personal care and that's it". Therefore, professionals suggested to use the solution in the office or in the car. The group noted that volunteers often inform social carers when someone needs their assistance. They could play a role in motivating more capable care receivers to attend events, although trust issue may arise, posing barriers to entering users' home. Regarding the hybrid home care model, participants expressed doubts about who would prescribe activities, as they believe they lack the competence and responsibility to do so. In their opinion, community nurses, personal assistants, and physical therapists should be involved in the service.

Managers and policy makers involved did not have experience with hybrid care service, but they acknowledged the need for digital solutions to partly fill the void that lack of staff and funding had produced. The use of technology in care could lead to different potential benefits, including the promotion of the aging in place, supporting people that live alone to get in contact with others, as well as contribute to reduce carbon emissions. However, to effectively implement a hybrid care service, different elements should be considered. Examples are the staff's digital skills which are highly heterogeneous, with some carers being afraid of using technology. Changing the mentality about the use of technology in care services, focusing on the benefits people could get, instead of extra work, could foster the tools' adoption. It is a gradual process, as having full-time specialists working in these services was not considered a realistic goal by the majority of respondents. Volunteers could support carers in some care related activities, partly covering the area of receiving needs, and help with the use of digital solutions, but they all agreed that it would be not fair to have volunteers doing what should be paid work. Before introducing this kind of service, there is a need for awareness-raising. Indeed, families, particularly people being alone, find difficult to afford the amount of care they need. Moreover, especially in rural areas, people see less value in digital solutions. It is complex to estimate costs, and participants' opinions differ among those who considered to have a low percentage increase in the costs, and those who would not ask for a fee.

Third sector stakeholders acknowledged the benefits and necessity of digital solutions, viewing them as a supplementary option. Indeed, the hybrid care model was considered appropriate for users who are digitally literate and have needs that can be addressed remotely, that is non-personal care aspects. However, it may not serve to those with low digital skills, or those requiring personal care, as this solution may not meet their needs. Nevertheless, the model could target a different group, namely, younger, healthy, active people seeking to prevent decline and promote their healthy ageing. Respondents reported that their organizations implement several long-lasting programmes to support socialization, such as regular intergenerational group meetings, digital literacy courses, book clubs and physical exercising that prove to be effective and appreciated by people. However, transportation remains a common barrier to participation. Two out of three organisations expressed interest in implementing the hybrid care model, believing that users would be willing to pay. One respondent suggested that the cost should be equivalent to the size of a current government contribution.

5. Conclusion and main input for PROCAREFUL model

Co-design activities conducted with the main stakeholders in different countries permitted to obtain information on the needs of target groups involved, and existing services across diverse areas of Central Europe. Moreover, they allowed to collect important feedback for the development of the digital solution and the hybrid care model. The identified similarities and differences among the implementing regions or local communities will be used to develop a flexible model of care and the training programme for the upskilling of care staff. An overview of the most relevant findings for the platform and model development is presented below.

5.1. Main input for platform development

The co-design activities involving people aged 55 and over, informal carers, and formal carer, who are potential users of the PROCAREFUL solution, provided valuable insights into user interface, user experience and their use of digital devices.

It clearly emerged that the solution needs to be flexible and adaptable to various digital devices, given the participants' diverse device usage. Supporting our hypothesis, those aged 55 and over primarily utilized mobile devices. However, many informal carers favoured mobile usage, reporting its convenience for log-in into the platform at different times of the day. Among formal carers, differences emerged, with some using mobile devices, others using the laptop or the computer. It is evident that, considering the varied locations where the solution will be used (e.g., in the office, at people's home, etc.), the solution must promptly adapt to different conditions and necessities.

The main feedback on the user interfaces is presented in Table 3, while Tables 4, 5, and 6, report the main feedback on user experience for each target.

Table 3

Feedback from target groups on platform user interface

Variable	User Interface		
	People aged 55 and over	Informal carers	Formal carers
Design of the interfaces	More images, more appealing (2/5 groups)	More appealing (2/5 groups)	To change colours e.g., charts should follow the 'traffic light scheme' (2/5 groups)
Cognitive exercises	Visible progress on user's performance		
Accessibility	Different text sizes		

Table 4

Suggested improvements on functionalities for end-users interface

Variable	User Experience
	People aged 55 and over
Cognitive exercises	Different difficulty levels Clear instructions (images or videos) Rewarding system Automatic redirection to the menu
Physical activity	Exercises options tailored to users' needs Short explanation of positive effects Clear and concise instructions or videos Tips for nutrition and aliments
Social participation	Information on local events Additional communication channels, e.g., chat or forum

Table 5

Suggested improvements on functionalities for informal carers interface

Variable	User Experience
	Informal Carers
Monitoring	Monitoring user's performance in cognitive exercises
Communication	Channels to communicate with professional Virtual space (e.g., chat, forum) to communicate with other informal carers

Table 6

Suggested improvements on functionalities for formal carers interface

Variable	User Experience
	Formal carers
Notification center (dashboard)	To include a filtering system (5) Notification of drops or improvements in users' performances (3) Notification of inactivity (3) Notification of visits requests (1), Differentiating notifications about users and about system (e.g. updates about new games, attachments of new documents) (1) Customization of notifications (5) To have an intervention protocol (1)

Training schedule	To have customizable, pre-defined training programs (4)
	User's activity calendar planned for seven days (1).
	Users should have the possibility to express preferences about games (1)
	Users should provide feedback on cognitive games (liked / disliked) (1)
User profile	Adding information on residential address (1)
	Adding information about medical diagnoses, other conditions (e.g., hearing loss, visual impairment)
	Avoiding sensitive or medical data (1)
	Screening sleep disorders (1)
	Adding weight, height and BMI (Body-Mass-Index) (1)
Notes	Option to select viewers (e.g., informal carers, users, formal carers, private notes) (3)
	Option to receive notes from informal carers or users (1)
	Avoiding pre-defined categories (1)
	Provided examples of note categories: shopping list (1), notes on medication/incompatibilities (1), state of health (1)
Uploading documents	Option for both informal and users to upload documents (1)
	Option to select viewers (1)
	Risk of data protection issues and double documentation (1)
	Medical documentation cannot be uploaded due to regulation (1)
	No interest in such functionality (2)
	Examples of documents to be uploaded:
	Family doctor documents with relevant information (e.g., diagnosis, prescription) (1);
	Test acquired during monitoring visits (if any) (1)
	Activation of home care services (1)
	Minutes of staff meetings (1)

Note. Numbers in brackets refer to the number of groups that mentioned the functionality.

5.2. Main input for the care model

This chapter presents crucial aspects that emerged from each target group during co-design activities that need to be considered to develop the hybrid care model and to make it adaptable to different context in which it will be implemented.

People aged 55 and over

- *Heterogeneity of the target group*. The broad definition of the target group, i.e. people aged 55 and over in need of care, allows for inclusivity but necessitates addressing a diverse range of people with varying characteristics and needs. Indeed, during focus groups, differences emerged among participants in terms of physical limitations, social inclusion, digital skills, and utilized care services. For instance, some participants reported experiencing higher levels of loneliness, in contrast to others who attend senior clubs on a daily basis and were more integrated into the community. There were also variations among participants, with some being active and motivated, expressing enthusiasm for new experiences like language learning, while others showed little interest in preventive measures and expressed concerns about technology. Considerations regarding the target group were also reported by formal and informal caregivers. They highlighted that people accessing home care services often have lower socio-economic status, require personal care, experience more pronounced physical and social limitations, and are more reluctant to use digital devices. In addition, age was identified as a significant factor, emphasizing that people aged 75+ have different needs and lower digital skills compared to people aged 55+. In light of these findings, the development of the model of care should account for varying levels of assistance required. Moreover, training and support should be provided to those that are less familiar with technology.
- *Social participation*. All participants acknowledged the importance of socialization for their well-being. Barriers to participation, such as physical limitations or transportation, were highlighted. Nonetheless, participants reported that in-person activities are preferred and necessary to being part of a community. The role of volunteers should be considered in the development of the model as they were reported to be crucial to promote participation and strengthen relationships among people.

Informal carers

- *Informal carer's role in the hybrid care model*. Focus groups with informal carers allowed the identification of roles they believe they have within the model of care:
  - Supportive and coordinative role. Informal carers provide support to the person in need of care, and they are responsible for the care of their family member.
  - Motivating role in the use of the solution. Informal carers could encourage family members to actually use the app, supporting them in its use, and acting as supervisor.

  - Direct users of the app. They could utilize features tailored to their needs, such as participating in a forum, or chat, where they can engage with a community sharing similar experiences and needs.

- *Communication*. It clearly emerged that favouring communication with professionals and among informal carers is essential. People expressed the need to obtain more information about existing services, especially in critical situations. Having a virtual space to share similar experiences and support each other was positively evaluated.

Formal carers

- *Main phases of the care pathway*. Participants identified the main phases of the care pathway, which can be grouped into initial assessment, monitoring, intervention. Initial assessment aims to define training program, while monitoring is focused on checking users' performance. Differences emerged, with some participants reporting that they could periodically check the platform, while others considered also calling or visiting the person at home. Intervention refers to the need to modify the training program or organize in-person group activities to promote socialization. Again, differences were reported, with some participants not considering it feasible to organize activities and others expressing a willingness to cooperate with voluntary associations.
- *Professional roles in the hybrid care model*. The topic of professional roles was discussed during focus groups, with participants mentioning various roles to be involved in hybrid home care. Nurses were the most frequently mentioned, followed by mental health experts, psychologists, care workers, personal assistants, and physiotherapists. Two groups mentioned social workers. The inclusion of a network of professionals could favour multi-professional care. However, the lack of consensus among groups regarding the mentioned professions could result in the involvement of experts who are not responsible or competent for prescribed activities. This lack of clarity may have contributed to some participants reporting not seeing the added value of the service, or not clearly perceiving their role in the service.