

D.T.2.2.2

REGIONAL REPORTS TO SUMMARIZE THE FINDINGS OF THE CO- CREATION BASED NEEDS ASSESSMENT PROCESS

REGIONE LIGURIA

07 October 2020





ACRONYM

T4	Task force
GP	General Practitioner
QH	Quadruple Helix
MCI	Mild Cognitive Impairment
LR	Liguria Region

1. Introduction

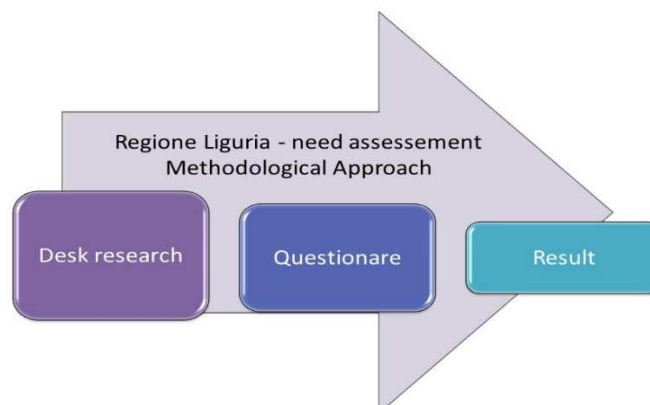
The purpose of this document is to present the results of the need analysis performed in Regione Liguria (LR) with the aims to:

- (1) identify the unmet needs of elderly in the field of health and social services/products, i.e. it provides the overview of the major elements supporting the need assessment.
- (2) identify the business model that better represents the approach of Ligurian's firms in co-creating solutions for elderly.

In the RoadMap (D.T2.2.1) the methodological approach has been represented. In this document we present the results of the desk research and of the primary data analysis for the target users of this assessment.

1.1. Common Methodological approach

To identify user needs, as presented in D.T.2.2.1, it has been decided to use a mixed approach, quantitative and qualitative, through the analysis of primary¹ and on secondary data¹ according to the following schema.



¹ Definition of primary and secondary data according to Hox J.J., Boeije H.R. "Data Collection Primary vs. Secondary", Enciclopedia of social Measurement, Vol.1 ©2005, Elsevier.



For each step of the approach, starting from desk research, research questions will be identified on the bases of the results of previous phases. In the section 2,3 and 4 the result of this approach applied to the need assessment of elderly is presented. In section 5, and 6 is presented the approach applied to local businesses.

2. SENIOR NEEDS ANALYSIS

2.1. DESK RESEARCH.

To gather secondary data, the members of the T4 made a review of information acquired at regional level for statistical purposes or research purposes. To retrieve information about elderly needs used to this purpose the Regional data collected by the national monitoring system SILVER STEPS, managed by ISS (Higher Institute of Health) and by the national information system on ELDERLY, managed by ISTAT (Italian Institute of Statistics).

Silver steps is the surveillance system dedicated to the elderly population, aged 65 and over, which completes the picture offered by the STEPS surveillance dedicated to adults. As the STEPS surveillance system, also SILVER STEPS is characterized as a surveillance in Public Health which collects information, from the general population residing in Italy, on health and behavioural risk factors related to the onset or complications of chronic non-communicable diseases.

SILVER STEPS also collects information on some peculiar conditions of the over 65 year old population aimed at describing the quality of life and the care and assistance needs of people of this age group, but with a new look at the phenomenon of aging, starting from the definition of "healthy and active aging" wanted by the WHO.

In the SILVER STEPS survey the target population is a study population made up of people aged 65 and over who own a telephone and who do not have serious psycho-physical problems. Those who at the time of the survey were resident or permanently domiciled elsewhere, hospitalized (including long stay), guests in a nursing home, in prison, subjects unable to sustain the interview due to poor knowledge of the Italian language, elderly people without a telephone or with a telephone that cannot be contacted, were considered not to be interviewable. In each participating region, a representative sample was extracted by simple random sampling, stratified by age and gender, or by cluster sampling. Sampling is carried out on the lists of the health registers of the participating ASLs. 6 layers are formed: for each of the two sexes, the age groups 65-74, 75-84 and 85 and over are considered. Representativeness is always guaranteed at the regional level, in some cases even at the company level. A standardized questionnaire was used to collect the data, divided into 6 sections where there are about 80 multiple choice questions. The questionnaire could be administered in two ways: VIII by telephone interview or face to face. In some cases, as required by the survey protocol, the interviews were carried out thanks to a family member or trusted person who supported and helped the person during the interview.

In Liguria, 1,100 people aged 65 and over were interviewed, identified with simple random sampling, stratified by sex and five-year age groups, with representation at regional and at local level for the municipality of Genoa.

The national information system on Aging, managed by ISTAT (Italian Institute of Statistics), collects and systematizes data on the structural and dynamic aspects of the aging of the Italian population and is proposed as an in-depth tool for policy makers, social workers, scholars and citizens.

The information are organized consistently and homogeneously with respect to the themes and sub-themes including Population and family, Education and work, Social economic condition, lifestyle and health, and Culture, media and new technologies. The system also allows territorial analyses down to the regional level. They will provide a strong base for the critical analysis.



They will provide a strong base for the critical analysis.

The aim of the research is the identification of the main needs or area of interest of elderly and businesses in terms of innovation and digital solutions.

Research questions supporting the desk research are:

- Which is the perceived quality of life of elderly?
- Which are the factors (aside economic ones) affective the perception of poor quality of life (e.g. health condition not treated, isolation, loneliness,...)?
- Which are the factors which reduced the ADLs that elderly can perform alone.?

2.2. Which is the perceived quality of life of elderly?

Starting from the results of the Silver Steps survey, we find that 81% of people aged 65 and over are satisfied with the life they lead (21% very much, 60% quite satisfied). The remaining 19% are not satisfied (14% not very satisfied, 5% not satisfied at all). 86% of people between the ages of 65 and 74 say they are very or fairly satisfied with the life they lead. Among people aged 75 and over this value decreases but almost 8 out of 10 (76%) people remain satisfied with their lives.

If we try, instead, to focus on the perceived state of health we find that 33% of people aged 65 and over judge their state of health positively (7% very well, 26% well), 51% fairly and the remaining 16 % in a negative way (13% bad, 3% very bad). Perception worsens with age: 20% of people aged 75 and over consider their health status negatively, but there are still more people who have a positive opinion about it (26%). In Liguria gender differences are observed only after the age of 74, an age in which women feel less healthy than men (very good / good 21% vs 35% of men).

44% of people in good health and at low risk of disease, 21% of people in good health but at risk of disease, 9% of those with signs of frailty, reported having good or very good health. 7% of people with disabilities

A negative perception of one's health affects only 6% of people in good conditions at low risk and almost half (47%) of those with disabilities. The negative perception of one's health rises considerably from 6 to 17% in people who, despite having good health, show signs of fragility: the subgroup "in good health but at risk" is confirmed as the privileged target of any health promotion action to positively influence the overall quality of life.

2.3. Which are the factors (aside economic ones) affective the perception of poor quality of life (e.g. health condition not treated, isolation, loneliness,...)?

Based on the data collected by the Silver Passes survey the percentage of people in Liguria who are not satisfied or not at all satisfied with the life they lead is higher among women (22% against 13%) and increases with increasing age in both sexes.

Scientific literature shows that the variable that correlates with low levels of quality of life include loneliness, bad health and economic condition. If we compare the Ligurian data with the national ones, we find that the elderly population in our region report a greater isolation of: 26.2% live alone. Despite isolation could lead to greater difficulty in leading an active life and a greater sense of dissatisfaction, Ligurians have a positive perception of their health and are satisfied in a higher percentage than the average of Italians.



This fact could also be linked to the better perceived economic conditions and a greater level of autonomy, both considering the instrumental activities of daily life (IADL) and the activities of daily life (ADL): in fact, the degree of disability of Ligurian population is lower than the Italian average (11.6% vs 16.1%).

People satisfied with their lives are:

- 89% in good health and at low risk of disease
- 78% in good health but at risk
- 57% of people with signs of disability
- Over half (55%) of people with disabilities.

Another aspect that have a strong impact on the perception of quality of life is the perceived state of health. We find that 33% of people aged 65 and over in Liguria judge their state of health positively (7% very well, 26% well), 51% fairly and the remaining 16 % in a negative way (13% bad, 3% very bad). Perception worsens with age: 20% of people aged 75 and over consider their health status negatively, but there are still more people who have a positive opinion about it (26%). In Liguria gender differences are observed only after the age of 74, an age in which women feel less healthy than men (very good / good 21% vs 35% of men).

2.4. Which are the factors which reduced the ADLs that elderly can perform alone.?

Considering the autonomy in the conduct of daily life, in Liguria among people aged 65 and over we find that:

- 2 out of 3 (66%) have no problems carrying out activities of daily living
- 22% have problems of autonomy in the IADL, but not in the ADL
- 12% are not autonomous in at least one ADL, regardless of the presence or absence of limitations in the IADL.

By focusing on the basic activities of daily life, people aged 65 and over in Liguria who are not autonomous in 1 or more ADL, or those with disabilities, are 12%. Among these people:

- 34% are not autonomous in 1 ADL
- 15% in 2 ADL
- 17% in 3 ADL
- 34% are not autonomous in 4 or more ADLs.

Among people with disabilities:

- more than 1 in 2 (60%) are not autonomous in going to the bathroom
- 45% in bathing or showering
- 69% have problems moving from one room to another
- 48% have incontinence problems
- 38% do not feed themselves
- 28% are totally addicted to dressing or undressing



Instead, shifting the focus to the instrumental activities of daily life, in Liguria about 2 out of 3 people aged 65 and over are autonomous in all IADLs, non-autonomous ones in 1 or more IADLs are 33%.

Among people who also have problems in ADL, i.e. among those with disabilities, this frequency distribution is very different: those who are autonomous in all IADLs are an exception (7%), those who have problems in 7-8 IADLs are more half (59%)

Non-autonomous people in 1 or more IADLs increase with age: they represent 14% between the ages of 65-74 and half (50%) aged 75 and over. Between 65 and 74 years they are 11% of men and 16% of women. After the age of 74 are instead 56% of women and 41% of men. By focusing only on those who have limitations in the IADL, the instrumental activities that most frequently have limitations are:

- take care of the house (78%)
- move away from home (74%)
- go shopping (74%)

The instrumental activity for which autonomy is most maintained is the use of the telephone: among people with autonomy problems in the IADL, less than 2 out of 10 people do not use it independently.

The most frequently compromised IADLs do not change between people at risk of disability and those with disabilities, but obviously their prevalence increases. Moving outside the home, taking care of the house and shopping are not done independently by 9 out of 10 people with disabilities and 8 out of 10 among those at risk of disability. The activity that is less limited confirms the use of the telephone: out of 100 people, those who do not use it independently are 5 among those at risk of disability and 42 among those with disabilities.

3. PRIMARY DATA ANALYSIS TO IDENTIFY ELDERLY NEEDS

This second phase of our mixed approach has been identified for gather primary data.

A first questionnaire has been designed to retrieve information about elderly's real needs and it has been decided to address the questions to their general practitioner.

The T4 members designed the questionnaire (ANNEX 1) and sent it to the different regional associations of family doctors.

The purpose of the survey is to identify the needs of the elderly population, in particular the health, social and economic needs of those with cognitive disorders. In addition, it was also wanted to investigate how often the General Physician identify a suspected cognitive impairment and how they deal with it.

To detect these needs, it was decided to involve to the General Physician who are the first contact for the population within the NHS. GPs within the Italian national health system play a central role. The GP is in fact the main point of contact for the citizen for any problem related to health, excluding emergencies. GPs have a privileged role, because they know the patient's clinical and personal history. They are an integral and essential part of the local health organization and work to ensure uniform levels of assistance to all citizens. The employment relationship with the NHS is regulated by national conventions. Every citizen has the right to choose his own GP. This choice is made by consulting the lists displayed in the administrative offices of choice and revocation of the health district of residence.

Tools and methodology

The questionnaire (ANNEX 1) was the result of the collaboration of the project Ligurian task force. In particular, the questionnaire is made up of 8 questions, 6 of which are multiple choice and 2 are open. It was decided to send the questionnaire by e-mail and its digital compilation through open source tools available online, to facilitate the compilation, submission and analysis of data. An accompanying written



note was prepared that explained the purposes of the survey and in short the aims of the I CARE SMART project. Alisa, a Ligurian health company, which in the Liguria Region carries out the planning and control function of health and social and health services, recruited the subjects who answered the questionnaire. ALISA sent the accompanying letter and the link to the questionnaire to the healthcare companies that have the email contacts of the contracted GPs and to the trade unions representing the GPs. They were given 20 days to complete the questionnaire.

Population and sample

The population to whom the questionnaire was addressed is made up of GPs operating in the Liguria Region. The sample of subjects who answered the questionnaire was 65 people. The questionnaire was made anonymous to avoid biases related to the desirability of the response and the collection of information and personal data.

Results

The first question investigates the amount of people who in the last 3 months have expressed the suspicion of suffering from cognitive disorders. More than 90% of doctors replied that they had received requests in this sense (Graph 1). Despite the high percentage of people who have expressed the suspicion of having ailments, only 21% of these have contacted their doctor for assistance. Of these subjects, the number of referrals to specialized centers in the last 3 months is approximately 3.5.



Figure 1 Question 1 Did any of them show the suspicion of suffering from cognitive disorders, even if they are mild or in the onset phase

Finally, we wanted to investigate the types of needs expressed to the GP by their assistants. The prevalence of doctors interviewed report that in most cases (between 50% and 100%) they have been able to identify the real needs of the patients (Graph 2). Investigating in detail what the needs expressed by the population were divided according to health, social or economic type, doctors report that on average 52% of these report health needs, 37% economic needs and 51% needs of a social / relational nature.

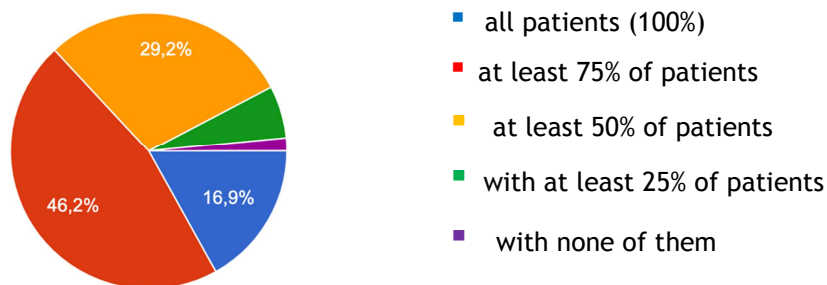


Figure 2 Question 4 How many times did you gain during the interaction to identify their real needs (health, social, etc.)?



4. ICT TECHNOLOGY IN HOME CARE FOR POLICY MAKERS

After investigating the needs perception of the end users (based on the desk research) and the ones of healthcare staff (based on the survey conducted involving the GP), we decided carry on another analysis involving the policy makers. We would like to investigate which are the more relevant functionalities that ICT technologies for older adults care should have. We started from a taxonomy of the ICT technologies functionalities adopted in health care done by Demiris (2010)² and that is reported in Table 1. The main functionalities identified by Demiris were divided in those ones that perform Active monitoring and management (requiring end-user involvement and participation) and those ones that operate through passive monitoring and management (for which IT implementation does not require training or operation by the end-user). The first ones include

- Telehealth applications for home-based disease management (that link patients and their families to their health care providers)
- Web-based communities for home care patients (that link patients and their families to health care providers, peers, and the community)
- Personal health records (that enable patients to create and store their personal health information)

The passive ones include:

- Robotic applications (standalone artificial intelligence applications that support home care needs)
- “Smart homes” (in which IT based on the use of sensors becomes part of the residential infrastructure)

Each ones of this categories includes several functionalities that have been listed in the table 1. Starting from this taxonomy we wanted to understand for the Policy makers, which are the ones that they considered more relevant and feasible to be applied in the healthcare services.

We decided to involve 2 policy makers of A.Li.Sa., the healthcare regional authority of Liguria region, and ask them to identify which are the most relevant functionalities that an ICT technologies should have in case they will be implemented in the Liguria Region healthcare services. We have selected for this exercise Isabella Roba, responsible for the Homecare sector, and Ernesto Palummeri, reference person for the older adult care services.

The experts identified the following functionalities as the most relevant ones to be implemented in the next ICT technologies for smart care:

- online diary and / or questionnaires to be filled in periodically by the patient and accessible to healthcare personnel
- -Videoconferencing and telemonitoring systems that allow the patient to communicate with the healthcare staff to monitor the state of health, request questions on the use of drugs or medical devices, update the treatment plan, etc. To this can be added peripheral monitoring devices that allow patients and healthcare personnel to interact.

² National Research Council. *The role of human factors in home health care: Workshop summary*. National Academies Press, 2010.



- Online messaging systems (private or group chats) and / or e-mails for communications between healthcare personnel and patients for the organization of group events and initiatives (walking group)
- Intelligent alert systems, for example reminders for taking medications or appointments
- robots / voice assistants who interact with the patient providing required information, intelligent alert systems and support in domestic activities
- Automatic monitoring of health parameters (temperature, sedentary lifestyle, walking speed, heart rate, sleep quality)

Macro cluster	Active monitoring and management (requiring end-user involvement and participation)			Passive monitoring and management (for which IT implementation does not require training or operation by the end-user)	
Cluster	Telehealth applications for home-based disease management (that link patients and their families to their health care providers)	Web based communities for homecare patients (that link home care patients to health care providers and enables the creation of networks between home care patients diagnosed with the same condition, families or other informal caregivers, communities, and the general public.)	Health records (having health information, increasing health understanding and helping transform patients into better-educated consumers of health care)	Robotic applications (standalone artificial intelligence applications that support home care needs)	" Smart homes " (where information technology based on the use of sensors becomes part of the residential infrastructure)
Technology	customized web pages (with videos and other content) to provide information to the patient on his pathology, his needs and indications for management	Online messaging systems (private or group chats) and / or e-mails for communications between patients or with relatives and family members for social support	Electronic health record that is controlled and managed by health care personnel. In which the healthcare personnel records and shares information on the patient's health.	Intelligent alert systems, for example reminders for taking medications or appointments	sensors to identify potential dangerous situations (gas leaks, etc.) or emergencies (falls)
	online diary and / or questionnaires to be filled in periodically by the patient and accessible to healthcare personnel	Online messaging systems (private or group chats) and / or e-mails for communications between healthcare personnel and patients for the organization of group events and initiatives (walking group)	Personal electronic register that is controlled and managed by the patient. In which the patient can record information about their lifestyle, their notes for visits, etc.	Video surveillance systems for patient monitoring in case of emergency	support for identifying objects (keys etc.)



	<p>Videoconferencing and telemonitoring systems that allow the patient to communicate with the healthcare staff to monitor the state of health, request questions on the use of drugs or medical devices, update the treatment plan, etc. To this can be added peripheral monitoring devices that allow patients and healthcare personnel to interact.</p>			<p>robots / voice assistants who interact with the patient providing required information, intelligent alert systems and support in domestic activities</p>	<p>Automatic monitoring of health parameters (temperature, sedentary lifestyle, walking speed, heart rate, sleep quality)</p>
	<p>systems capable of supporting disease management (see diabetes) that provides the patient with personalized goals, feedback, guidelines and support. Possible functions of data collection and monitoring, based on interaction with tools.</p>				

5. BUSINESS NEEDS ANALYSIS

5.1. DESK RESEARCH

THE CONTEXT

Business needs analysis, differently from the elderly, have not been analysed in terms of required support in co-creation.

On the other hand, Regione Liguria referring to national and international scenarios and its proper specificity identified as the social 'challenges' 2 main needs:

1. to prolong the well-being and quality of life of as many people as possible to answer to the needs of ageing and increasingly fragile population as long as possible; and
2. to improve the diagnostic/therapeutic offer and the health systems management with predictive, preventive, personalized and participatory medicine.

Crucial aspects to the quality of life of the elderly and fragile population are:

- the prevention by the promotion of 'healthy' lifestyles;
- screening and early diagnosis of fragile situations;
- Screening of pathologies at risk of becoming chronic;
- a way to manage chronic pathologies and degenerative - including rehabilitation and care - based on the centrality of the person, on accompaniment and continuity of care.

Situations of fragility do not concern only the elderly: there are more children with developmental disorders and needs special education, for which the problem of transition to adulthood arises. In the case of people with disabilities poses the problem of accompaniment towards paths of autonomy and the support for independence in everyday life.

In this context business are supporting with a periodical call for projects that required them to create partnerships with, at least, other companies and research organizations, to identify solutions to answer to the societal challenges.

THE SEGMENT

It is not easy to identify the type of business that can be involved in the identification of innovative solutions answering to the identified needs. This because the needs required different knowledge and heterogeneous competences, from human science to ICT, to be integrated and to put at common factor for successfully identify useful solutions, product or services.

Nowadays we can say that at least 135 business has expressed the interest in collaborating, co-creating solutions to the identified societal challenges and almost 70% of them are SME. This is the number of companies that have joined the Regional Hub of Life Science (Polo Ligure Scienze della vita) until July 2020.



5.2. BUSINESSES PRIMARY DATA ANALYSIS

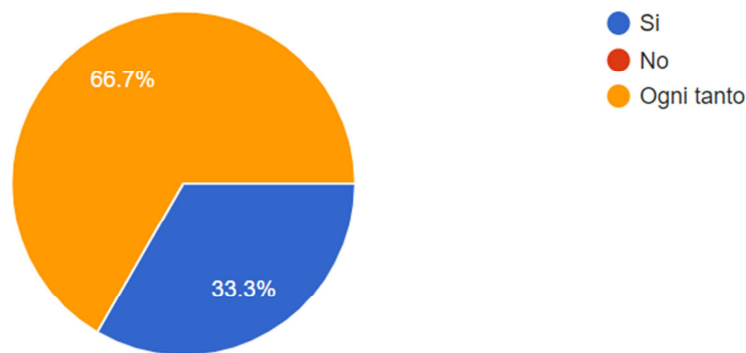
Starting from the needs presented in WPT1 Task 3 it has been designed a specific questionnaire (ANNEX2) to be sent to all the firms belonging to the Regional Hub of Life Science (i.e. Polo Ligure Scienze della Vita) so interested in innovation as explained in paragraph 5.1.

The purpose of the questionnaire is to clarify the firms' real needs in terms of specific competencies, support and tools (ANNEX 2).

5.2.1. IDENTIFIED NEEDS

- Co-Creation and co-creation instruments are not well known, even if some of the businesses co-create solutions, but not in a systematic and formalized way.
- Only 1/3 of the answering businesses, share their ideas with end-users or end-users representatives, due to:
 - o a lack of protection for ideas
 - o The lack of a dedicate and supported channel of communication with end-users, i.e. too complicated to discuss with elderly technical solutions directly

Q4. Discuti delle tue idee di nuovi servizi/prodotti con i clienti o rappresentanti dei clienti?



- The need of dedicated funds in particular:
 - o Research results are not applicable to products and required big investment with no guarantee on turnover. There is the need of special fund for commercialization.
 - o Project activities are funded but are too much complicated in terms of reporting, too long time for received the grant and does not follows/react to the real market needs.
- The need of time. The brainstorming phases required a lot of time. External experts could provide support and optimize the time.



6. CONCLUSION

Starting from the results of the activities conducted to identify the needs of the different stakeholders, we would like to sum up some conclusions and identify some ideas that could drive through and inform the definition of the pilot. Starting from the stakeholder's needs table we can compare the different point of view and identify some main challenges.

POLICY MAKERS	PRIMARY CARE PROFESSIONALS	END USERS	ENTERPRISES
online diary and/or questionnaires to be filled in periodically by the patient and accessible to healthcare personnel	doctors reported that 90% of patients suspecting of being affected by cognitive disorders	Perceived state of health we find that 33% of people aged 65 and over judge their state of health positively (7% very well, 26% well), 51% fairly and the remaining 16 % in a negative way (13% bad, 3% very bad).	Lack of protection for ideas
Automatic monitoring of health parameters (temperature, sedentary lifestyle, walking speed, heart rate, sleep quality)	only 21% of people suspecting being affected of cognitive diseases have contacted their doctor for assistance in the last 2 months	find that the elderly population in our region report a greater isolation of: 26.2% live alone	The lack of a dedicate and supported channel of communication with end-users
robots / voice assistants who interact with the patient providing required information, intelligent alert systems and support in domestic activities	52% suspecting being affected of cognitive diseases report health needs,	57% of people with signs of disability. Over half (55%) of people with disabilities.	External experts could provide support and optimize the time.
Intelligent alert systems, for example reminders for taking medications or appointments	37% suspecting being affected of cognitive diseases report economic needs	By focusing on the basic activities of daily life, people aged 65 and over in Liguria who are not autonomous in 1 or more ADL, or those with disabilities, are 12%. Among these people: 34% are not autonomous in 1 ADL; 15% in 2 ADL; 7% in 3 ADL; 34% are not autonomous in 4 or more ADLs.	
Online messaging systems (private or group chats) and / or e-mails for communications between healthcare personnel and patients for the organization of group events and initiatives (walking group)	51% suspecting being affected of cognitive diseases report needs of a social/relational nature	Among people with disabilities: more than 1 in 2 (60%) are not autonomous in going to the bathroom; 45% in bathing or showering; 69% have problems moving from one room to another; 48% have incontinence problems; 38% do not feed themselves; 28% are totally addicted to dressing or undressing	



<p>Videoconferencing and tele monitoring systems that allow the patient to communicate with the healthcare staff to monitor the state of health, request questions on the use of drugs or medical devices, update the treatment plan, etc. To this can be added peripheral monitoring devices that allow patients and healthcare personnel to interact.</p>		<p>The instrumental activity for which autonomy is most maintained is the use of the telephone</p>	
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Table 1 Stakeholder's needs

A high percentage of older adults population reports to suspect to have cognitive disorders to their GPs, but mostly of them are still autonomous (66% have no problems in ADL activities) and have a good perception of their state of health. In addition, policy makers found that supportive technologies for memory and cognitive functioning could be useful (*"Intelligent alert systems, for example reminders for taking medications or appointments"*)

Despite they perceive to have a general good state of health, their health needs are high (more than 52% of population reports health needs to their GPs).Both end users and GPs agree in considering isolation and social needs as a priority, since most of older adults and reported relational needs. Also policy makers consider a priority the development and implementation of technologies that can support the organisation of group and social activities (*"Online messaging systems (private or group chats) and / or e-mails for communications between healthcare personnel and patients for the organization of group events and initiatives (walking group)"*)

Despite having some issues in some ADLs especially related to mobility and movements, the older adults population seems autonomous in using technologies such as phone and communication tools. Policy makers agree in considering the use of communication technologies that can support in communication with healthcare staff (*"Online messaging systems (private or group chats) and / or e-mails for communications between healthcare personnel"*)



ANNEX 1

QUESTIONNAIRE FOR GENERAL PHYSICIANS

Dear doctor,

We invite you to answer some short questions concerning to the following group of interest:

"Patients older than 65 years assisted who have contacted you in person or by phone in the past three months"

1) Did any of them show the suspicion of suffering from cognitive disorders, even if they are mild or in the onset phase?

- a) YES
- b) NO
- c) I don't know / I don't remember

2) If so, how many of these clients have expressed these needs or concerns to you in the LAST 2 MONTHS?

3) Concerning the expression of their need or concern, can you tell us approximately how many times IN THE LAST 2 MONTHS you advised one of your clients (belonging to the aforementioned interest group) to contact a Center for Cognitive Disorders and Dementias (CDCD) for further information?

4) How many times did you gain during the interaction to identify their real needs (health, social, etc.)?

- a) all patients (100%)
- b) at least 75% of patients
- c) at least 50% of patients
- d) With at least 25% of patients
- e) With none of them



5) How many of these patients:

a) have expressed health needs%

b) have expressed economic needs%

c) have expressed "relational" needs (such as loneliness, a sense of abundance, isolation, etc.)%

6) Insert any comments here:



ANNEX 2

QUESTIONNAIRE FOR BUSINESS

Q1. Which is the dimension of your business?

<input type="checkbox"/> Micro	<input type="checkbox"/> Small	<input type="checkbox"/> Medium	<input type="checkbox"/> Big
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Q2. Do you have dedicated staff for Research and Innovation activities (full time/part-time) ? Yes /No

(If Yes) Q2.1. How many?

(If No) Q2.2. Why?

Q3. Do you discuss your idea with external researchers?

(If Yes) Q3.1. At which stage of development?

(If No) Q3.2. Why not?

Q4. Do you discuss your idea with customers' representatives or end-users?

(If Yes) Q4.1. At which stage of development?

(If No) Q4.2. Why not?

Q5. Which, for your firm, the main difficulty in involving end-users since the design of a new product?