Social Innovation on active and healthy ageing for sustainable economic growth

Deliverable 8.1
KM UNIT 5. Services and technologies for better aging at home

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Acronyms & abbreviations

Item	Description
AHA	Active & Healthy Ageing
BMI	Body Mass Index
GP	Good Practice
GPr	General Practitioner
ICT	Information & Communication Technologies
KmU	Knowledge Management Unit
PPP	Public Private Partnerships
USP	Unique Selling Point
WP	Work Package

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1. Introduction

This report is a joint effort by SIforAGE KmU5 coordinator, INGEMA (from now on Matia Institute), & WP 8 leader, InvestorNet, to spread the findings of the first year work in the project and present joint tools that have been created in order to combine the academic knowledge of Gerontology and the pragmatic observations of Business Model building[1].

KmU5 is named "Services and technologies for better aging at home". The KmU objective is to analyse the relevant services and technologies provided at the older people's homes, currently available for older people, with the aim of identifying success areas that must be reinforced and soft areas that must be overcome in the future. Secondly, the aim is to create guidelines with recommendations which help the policymakers and the professionals working with older people to design and implement care services and technologies in order to keep older persons in their homes as long as possible maintaining a good quality of life.

The name of the workpackage 8 is "Innovative services and business models for better lives". This requires an approach where small pragmatic acts of innovation are tested and where commercialization is a force of dissemination. The ultimate goal of this workpackage is to transfer solutions across borders, and to do this SIforAGE must make the export offer appear as an analysable model that can be calculated in terms of risk and necessary resources.

2. Objective of the reports and Definitions

Deliverable D8.1 has been divided in two different reports with different objectives.

The report D8.1.1 will present the tool "Archtypes" and the concepts and supporting rationals that lead to the use of it, as a way to identify and involvement stakeholders and Senior Care in different systems, and why it (Cost structuring model mentioned in background) can also be used when building a Solutions Business Case (Impact) and Business Model (price setting and strategy for dissemination).

The main outcome of the report D8.1.2, due to month 32, is to present an analysis of the barriers and drivers of introduction into of innovative products and service solutions for Active & Healthy Ageing[2]. And how to address the Business Case constraints created by PPP (Public Private Partnerships) in the potential adoption of the services in real life.

Before continue reading this report it is important to clarify some of the concepts the reader can find throughout the document:

A "Solution" can be it a Good Practice (GP) by innovative Social Organization or Technological Innovation or a combination of the two in introducing a technology in a new way, e.g. ensuring implementation of technological solution in a context where it has not been implemented before.

[1] To see the questions that the Business Model has been built on please see Annex I

[2] World Health Organization (2002). Active Ageing. A Policy Framework
http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf

An "Archtype" is a narrative of how a typical ageing challenge often debilitating of health would be treated in the indicated national context. It is a way to illustrate differences and similarities in Senior Care systems. It is a fictitious person's story, but its probability of events and sequence has been confirmed by experts in the Gerontological field.

A "Case" is a summary of the implementation story of a Solution, which can be a technology, new form of organization or a combination the two. It will deal with a real case. It is not intended as a Good Practice.

A "Solution Provider" is a large or small organization that is promoting the use of solution outside its own organization. It will un-less stated otherwise be a for-profit company.

A "Business Case" is a way for Public mangers to evaluate a project.

"Active & Healthy Ageing" (AHA) applies to both individuals and population groups. It allows people to realize their potential for physical, social, and mental wellbeing throughout the life course and to participate in society according to their needs, desires and capacities, while providing them with adequate protection, security and care when they require assistance.

3. Background

KMU5 of SIforAGE first findings identified the following problems to be addressed:

- The current initiatives in the field of technology directed towards Senior Care are fragmented; more focused on the provision of concrete services and not on the application of a holistic approach. In this report context "holistic approach" takes into account the totality of the needs and characteristics of the older person and tries to give an integrated answer to them instead of trying to solve a concrete problem through the provision of concrete services but without giving importance to the other needs of the person.
- In some countries (e.g. Spain), most of the services than are provided at the older's home are focused on the pathology (e.g. on controlling and monitoring chronic illnesses such as diabetes mellitus) instead of trying to promote Active and Healthy Ageing.
- Security and privacy issues are not always well addressed.

To create Holistic Solutions as opposed to mere technological innovation, one has to incorporate social aspects such as how will the technology be tested, introduced and supported, after being identified as a "help" in the seniors life.

3.1 The Business Case for Society

The Business Case must improve efficiency and help move Solutions beyond the disability device – and toward a "encouraging of active living". It should show "benefits of prevention" through correct alimentation, physical activity and mental activity. That way it can be illustrated what/ who has a saving caused by the solution, and whether these resources can be transferred between stakeholders.

When evaluating technology we thus have to introduce five more parameters:

- Is the debility caused by Event or Process?
- To what extent is it a "stand-alone" product and what ongoing system support is required when in use?
- How "personal" is the solution? Is it something that interacts with the body (the good is consumed), the home (can potentially be reused) or transport/interactive (can be shared)?
- Is the cost size of solution such that the senior person cannot be expected to cover it by herself?
- And does the improvement in life quality, super seed the cost of the solution?

Ultimately these parameters can be used to build a Cost model for the solution. The Cost Model can then be juxta pointed with the societal benefits of an Active & Healthy Ageing.

3.2 To implement and prolific the specific Solution, commercialization can help.

WP8 interaction with a number of commercial networks, public entities, professional caregivers and Small Companies identified two main barriers to commercialization and proliferation of technology intended for the senior user:

> The market main barriers are distribution of the solution, and ensuring relevance to the individual Senior User.

The distribution of Eldercare is impeded by sales often having to go through large organizational buyers and "judgers of relevance" before being presented to the Senior person who will use the Solution.

4. Methodology

4.1 Archetypes to help map SeniorCare systems and stakeholders

"The Archetype" model was developed as a way to identify potential improvement in life quality and stakeholders. The "debilities" (Obesity, Participation after retirement, Depression Dementia and Hip Fracture) were chosen for the impact active & healthy lifestyle change would improve life-quality.

In mapping the current process surrounding an Archetype, Private and Public can review the technologies Business Case – and after analysing this choose the correct Business Model to prolific the solutions.

With the Identification and Involvement of Stakeholders, the Public gate keepers can be identified and the barriers and drivers to put a given Solution into the market can be asked from for-Profit perspective. And the potential adoption of the services in real life can be helped by modifying the Business Model.

4.1.1 Using Cases and Archetypes

The use of both archetypes and concrete case descriptions of technology implementation as a solution, illustrates the "Barriers to new Technology". The challenge is of course to balance the generality vs the specific so that it is useful in comparing different Eldercare systems.

Several of SIforAGEs Partner organizations (e.g. Santa Casa de Misericordia de Lisboa) were also adamant that we in SIforAGE's activities did not limit or selves to academic state-of-the-art but also look at economic impact of solutions, e.g. the cost and or Business Case. Since this partner represents the eldercare givers reality, its opinions and concerns, are an important corrective to the "Private sector business development" outlook. High tech expensive solutions definitively have a market, but they may not have as broad an impact.

4.2 Business Model to involve other Stakeholders than the Senior

Mapping Senior Care systems help advice companies on which market are best fits for their product and strategic goals, and develop strategies, go-to markets and roll-out plans in the chosen markets.

From a commercial point of view the mapping through an Archetypes can help

- Estimating market size in specific countries or regions
- Market fit with product/service
- Entry/sales channels for Eldercare solutions, in the countries with a SIforAGE Partner.

For the Public Archetypes can help build the Solution USP[3] by creating Business cases tailored to PPP

- Matching through partnerships
- Cost vs Savings in Active & Healthy Ageing
- Implementation

Also there is a great size differences amongst the solution providers and amongst the buyers. Solution Providers vary from large ones that have been interacting with Public Sector buyers in other fields such as insurance companies, ICT supporters of Public administration and medical device moving towards the "eldercare" segment. And the other hand small, often research-based providers are oriented towards their technical field, where the senior segments and Public are a new and unintentional market.

The two commercial Solution Provider groups have in common that it is often a technology originally developed for a different market that gets reframed towards the elderly, requiring building a new support system and distribution.

Many of the larger investments in solution development and testing come from Hospital, Public entities & Handicap care organizations, or from smaller university-research based robotics and ICT companies.

The larger solution providers are changing from large Public procurement, to a multitude of Buyers that include public-purchasers but also charities, families, and the elder themselves.

[3] Unique Selling Point

The Small often research-based providers are oriented towards their technical-field and are criticized by the public-purchasers for not offering their product as an integrated part of a full value-chain.

If a buyer or provider of a Solution knows a technology that can be implemented in a new, most often cheaper and / or more effective, way it can seriously alter the Impact of the Solution.

4.3 A Case of analysing technology implementation: RobotWashing success dependent on stakeholder mapping.

InvestorNet analysed the evaluation of Danish Case study of After Toilet Washing-Robots in the Senior persons private home in four municipalities[4], and found that the greatest difference in how successful was the Impact, was that the fourth Municipality had learnt from the implementation challenges of the first three municipalities.

As a consequence the Eldercare director in the fourth municipality used some extra resources on pre-selecting the seniors to have the Robot offered prior to the senior citizen being told that they would be offered the robot. A key thing was to ensure that the existing home toilets physical surrounding, since most Danish toilets are in the same room as the bathing facilities and the electrical element of the Washing-robot had often due to the proximity between the robot and bath, been in violation with the Danish building safety rules.

The director also instructed the professional care provider (SOSU-assistants) in how to present the Technology as a helper and advantage to the senior persons, supporting the robots use as a way to regain privacy in the very intimate situation of a toilet and washing of oneself.

When the fourth municipality, on top of the pre check of physical surrounding, could select the senior persons with toilet-washing as the main need for personal assistance in the home, the robot “earned” its purchase price back in less than 4 weeks.[5]

This highlights as a business case where all stakeholders “win”, it is important that the Impact is not merely seen as saved “personnel minutes” but also as a part of promoting a “happier” and more independent ageing at home.

If a Value chain analysis had been made of the Implementation process, a stakeholder such as the fire department / building regulators (demanding a certain distance between the toilet Washing-Robot electrical and the Bathing facilities of a bathroom) may have been identified earlier on, and had also helped in creating initial success story for the professional care provider (SOSU-assistants) when promoting the robot to the Senior person.

[4] “Demonstration Project Elderly and disabled friendly toilets” report in Danish from Rambøll & Velfærdsteknologi fonden http://www.ffvt.dk/da/Resultater-og-overblik/Afsluttede-projekter/AEldre/~/media/Dokumenter%20og%20PDFer/Afsluttede%20projekter/Vasketoilet%20g%C3%B8r%20%C3%A6ldre%20og%20handicappede%20selvhjulpne/Evalueringsrapport_aeldre_og_handicapvenlige_toiletter_juni_2012.ashx

[5] IBID

5. Archetypes

The archetype model has been created to highlight who the stakeholders in a Senior persons "rehabilitation" are. With an "Impact/ implementation" focused view we can explain the need for cross-sectional analysis of the suggested Solution.

By mapping Implementation, we can see places where efficiencies could be made over the course of the time, the "aid toward Active & Healthy Ageing" is need and leading to reframing the Business Case as a "cheaper" solution, which leads a larger Impact.

The Archtype-process also serves in identifying benefits, savings, costs and ultimately who the "Buyers" of a Solution could be. By mapping the Stakeholders in Implementation and how the process of an archtype "Event" differs in the several countries we can help Solution Providers (private or public) adapt their distribution and implementation suggestions to new context than the one where the solution originated.

Each archetype is an illustration of a situation where a Senior Citizens usual health deteriorates due to Ageing. It describes the typical process of dealing with this specific health problem in the designated country.

We have chosen the following five Archtypes to show different ailments where the four do not have a specific event date (such as a fall that breaks the bone) where the ailment can be diagnosed, to try to go in-depth with building the Business Case for **Preventive** Solutions for Active &Healthy Ageing.

Developing the Business Case for **Preventive** Solutions for Active &Healthy Ageing as a Social Innovation could truly have a positive impact on the challenge that Europe faces the next decades due to demographic change.

Hip-fracture

There are a number of changes in the body with aging that affect the bones and muscles.
Bone loss – osteoporosis - seems to be a universal and inevitable consequence of aging. The age of onset and rate of bone loss depends on gender and type of bone. Once peak bone mass is reached between by the age of 30, you can work to maintain what you have but you can't build any more. Around middle age, bone mass begins to gradually decline as aging disrupts the balance between the cells that produce bone and the cells that absorb bone. As the growth of bone slows it begins to thin and become more porous. Women have a more rapid rate of bone loss than men, with the most rapid losses occurring in the 5 years following menopause.

In the year 2000 there were an estimated 9 million osteoporotic fractures of which 1.6 million were at the hip, 1.7 million at the forearm and 1.4 million were clinical vertebral fractures. Worldwide, osteoporotic fractures accounted for 0.83% of the global burden of non-communicable disease and 1.75% in Europe. In Europe, osteoporotic fractures accounted for more disability adjusted life years (DALYs) than many other chronic non communicable diseases (Kanis, Johnell, Oden, Borgstrom, Zethraeus, De Laet et al., 2004). Although 15% of patients who sustain a hip fracture are able to return to unassisted ambulation after 6months,

24% of patients with hip fractures die within 1 year (Reginster, Burlet, 2006). Hip fracture is particularly disabling and is associated with a substantial risk of mortality (Kanes, 2002).

Osteoporosis can be identified by medical screening. Falls can be avoid by simpler means such as relatives or professional caregivers going through the checklists created to ensure a minimum of obstacles, loose carpets, wires etc, are present in the home[6]. The other preventive measure is that call-for-help and monitoring solutions can improve the senior person's sense of security and independence, while also helping relatives to worry that distance may impede them from checking up on the senior person. This works as a pre-emptive to the "fear of laying helplessly in ones' home for days undetected".

Obesity

Obesity is a condition in which excess body fat may compromise patient health. Clinical definitions of obesity include the *degree of excess body fat* that places an individual at increased health risk, ie, increased body fat corresponds to increased health risks.

Obesity is linked with some of the most prevalent and costly medical problems seen in daily practice. Obesity alone is a risk factor for Type 2 diabetes, hypertension, coronary artery disease, gallbladder disease, osteoarthritis, cancer, and high morbidity and mortality ratios. In combination with the metabolic syndrome, it further increases the risk of cardiovascular disease. In sum, obesity affects at least nine organ systems of the body (Kushner & Weinsier, 2000).

It must be highlighted that obesity is an important problem in older people because aging is associated with considerable changes in body composition. For example, body weight and BMI gradually increase during most of adult life (Hedley, Ogden, Johnson, Carroll, Curtin & Flegal, 2004).

Different healthy habits, such us, dietary management and regular physical exercise can prevent the obesity.

[6] See published checklist by http://ageing.oxfordjournals.org/content/26/3/195.full.pdf
http://www.who.int/ageing/publications/Falls_prevention7March.pdf

Table 1. Obesity-related Risk Factors and Conditions

Cardiovascular

- Hypertension
- Congestive heart failure
- Cor pulmonale
- Varicose veins
- Pulmonary embolism
- Coronary artery disease

Endocrine

- The metabolic syndrome
- Type 2 diabetes
- Dyslipidemia
- Polycystic ovarian syndrome/angrogenicity

Gastrointestinal

- Gastroesophageal reflux desease (GERD)
- Non-alcoholic fatty liver disease (NAFLD)
- Cholelithiasis
- Hernias
- Colon cancer

Genitourinary

- Urinary stress incontinence
- Obesity-related glomerulopathy
- Hypogonadism (male)
- Breast and uterine cancer

Integument

- Striae distensae (strech marks)
- Status pigmentation of legs
- Lymphedema
- Cellulitis
- Intertrigo, carbuncles
- Acanthosis nigricans/skin tags

Musculoskeletal

- Hyperuricemia and gout
- Immobility
- Osteoarthritis (knees, hips)
- Low back pain

Neurologic

- Stroke
- Idiopathic intracranial hypertension
- Meralgia paresthetica

Psychological

- Depression/low self steem
- Body image disturbance
- Social stigmatization

Respiratory

- Dyspnia
- Obstructive apnea
- Hypoventilation syndrome
- Pickwickian syndrome
- Asthma

Participation after retirement

Participation in social, physical, and intellectual activities in old age have important positive consequences in cognition, compress the cognitive morbidity associated with AD by slowing cognitive decline before dementia onset (Wilson et al, 2010), subjective wellbeing, reduced mortality and comorbidity.

Calero et al, (2007) found that a high level of activity protects against cognitive decline and is related to cognitive plasticity in old age. Bielak et al, (2007) have also found that a higher frequency of participation in cognitively complex activities was related to better cognitive performance. Singh-Manoux's findings (Singh-Manoux, Richards & Marmot, 2003) were in the

same direction, and also added that those leisure activities activity entailing social interaction were associated with better cognitive ability. The reason of these results can be, as explained by the authors, that continued work involvement or volunteerism provides opportunities for social interaction and engagement and may be associated with enhanced mental well-being

But the participation in activities not only positively affects cognition but also psychological wellbeing. Schwingel, Niti, Tnag & Pin Ng (2009) found that those volunteering retirees and working seniors showed fewer depressive symptoms, and better mental well-being and life satisfaction than non-volunteering retirees. Menec (2003) found that social and productive activities may afford physical benefits, as reflected in better function and greater longevity, more solitary activities, such as reading, may have more psychological benefits by providing a sense of engagement with life.

Social participation, defined as socially oriented sharing of individual resources, is often regarded as an important criterion of quality of life in old age (Bukov, Maas, Lampert, 2002).

However, there are some social determinants of this participation, such us socioeconomic status, geographical area or health status. In the light that the participation in activities has multiple benefits to the older citizens, policy recommendations should try to ensure that every older citizen has the same rights and same possibilities to access to this kind of activities.

Depression

Depression is a really common mental health problem among older people. In a comparison made between the results found in three longitudinal studies they found the prevalence of depression as it can be seen in figure 1.

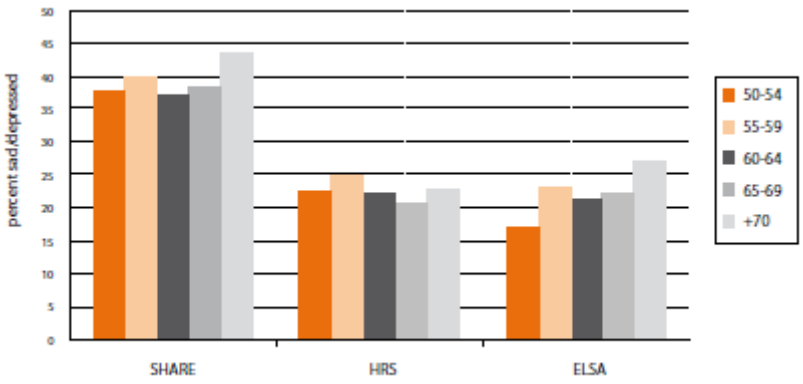

Figure 1. Percentage people depressed by age (2006).

Source: Zamarro, Meijer &Fernandes*, 2008*

Depression symptoms in older people can arise from loss of self-esteem, loss of meaningful roles, declining social contacts, etc. The factors most consistently associated with poor outcomes included functional/physical disability, the presence of chronic illnesses, sensory

handicaps, stress, being female, personality characteristics such as neuroticism, and biological markers of inflammation. Protective factors most consistently reported included higher education, higher socio-economic status, good health, better cognitive function, and good emotional support systems. Inconsistent findings were reported for race and increasing age.

Depression in the old age and, in general, low levels of psychological wellbeing can have negative consequences such as: worse cognitive function (Llewellyn, Lang, Langa & Huppert, 2008) and faster cognitive decline which can accelerate the diagnosis of dementia, anxiety and low life satisfaction (Reppermund, Brodaty, Crawford, Kochan, Slavin, Trollor et al, 2011)., poorer performance of the activities of daily living (Patrick, Johnson, Goins & Brown, 2004) and hence risk of having lower functional independence, adverse health outcomes in late (Meeks Vahia, Lavretsky, Kulkarni & Jeste, 2010).

Dementia

Dementia is a syndrome of loss or decline in the cognitive abilities, behavioural changes and the ability to perform everyday activities. Alzheimer's disease is the most common type of dementia but there are other types including vascular dementia, dementia with Lewy bodies and frontotemporal dementia. Each type of dementia has associated different symptoms and different brain abnormalities.

Dementia mainly affects older people, although there is a growing awareness of cases that start before the age of 65. After age 65, the likelihood of developing dementia roughly doubles every five years.

In last year's World Alzheimer Report, Alzheimer's disease International estimated that there are 35.6 million people living with dementia worldwide in 2010, increasing to 65.7 million by 2030 and 115.4 million by 2050. Nearly two-thirds live in low and middle income countries, where the sharpest increases in numbers are set to occur. In the same report, the authors stated that the total estimated worldwide costs of dementia are US$604 billion in 2010.

In order to develop the archtypes the first step was to list the different questions that must be reflected, for instance the role of the different agents. The list of questions developed before writing the archtypes can be found in Annex II. As the archtypes have been written thanks to the collaboration of different socio-sanitary experts in the field of Gerontology, this list of question was also useful to remember to ask all the important information to them.
The archtypes described below correspond to the reality in Spain, but it is also important to take into account that there are some important differences in the Health and Social Services between different Spanish regions. The idea is to develop archtypes for other countries in Europe and outside Europe with the aim of comparing them and having a more real idea and representative idea. It is planned to ask for the help of other SIforAGE partners in the consortium to do this task. The ideal would be to have archtypes which represent the reality in different areas of the world, with special emphasis in Europe:

- Northern Europe

- Southern Europe, for instance, Spain.

- Eastern Europe

- One country outside Europe

5.1 Narrative of the Archtype Hip-fracture

Maria is an 82 years old woman who lives in San Sebastián with her husband Pedro (83 years old). They have got three children: Arantxa (56 years old), Mónica (54 years old) and Luis (51 years old). Arantxa and Luis live in San Sebastian but Mónica lives in Madrid. All of them are marriage and have children.

One day, suddenly, María fell down in the living room of her house[7]. At that moment she was alone and she could not move, so she had to wait for Pedro. When Pedro arrived home (one hour after Maria fell down), he tried to help Maria to get up but it was impossible. Maria, as most of the older people in Spain, does not have a health private insurance so they called to the national emergency telephone (112) and they sent an ambulance to María's house. The ambulance took Maria and Pedro to the emergency service of the Public Hospital of San Sebastián. After waiting about 1.5 hours, Maria was explored by the doctor. The doctor realized that Maria fell down because her hip was broken. The doctor said that Maria's hip needs a surgical operation. Maria was hospitalized and was operated 2 days after. Fortunately the surgical operation was successful and 15 days[8] after the operation she left the hospital.

Two days before the discharge, the social worker and the doctor were talking to María and Pedro. At this moment, the professionals need to decide if María will go back to her home after the discharge or if she has to go to a Medium-Long Stay Hospital[9]. At this point the doctor needs to obtain information about other illnesses and about the medical status of Maria. The social worker needs information about the infrastructure at home (e.g. lift vs. stairs; bath or shower, etc…). This information is important because it helps the professionals to take the right decision. Finally, the decisions of the professionals was to send María to a Medium-Long Stay 10 because: (1) she is very old and her husband is very old as well; (2) their sons cannot take care of her because they are working and they have also children to care of; (3) María's house has not any lift, so she has to go up and down the stairs; and (4) María has diabetes mellitus so she needs more care.

[7] The ratio of hip fractures in older people in the Basque country is 1000 hip fractures per year per 100000 inhabitants.

[8] This is the average stay in the hospital in the case of hip fracture

[9] This hospital focuses its work on caring for chronic pathologies and rehabilitation programmes for neurological and trauma pathologies and it also works and support the family of the patient. Specific targets are: (a) Having passed the acute stage of the illness, provide them with the services they need to get as much functional recovery as possible; (b) Return them, with the maximum quality of life possible, to their family environment or to the most suitable social / healthcare resource, guaranteeing the continuity of the care they require at all times; (c) Educate the patient and their family on how to handle any residual disability.

The day of the discharge, an ambulance takes María directly to the Medium-Long Stay Hospital. María and Pedro are happy to have the opportunity of going there until María feels better. Besides, the stay in this Medium-Long Stay Hospital is free (it is completely paid by the National Health Services), so they do not have to pay. In fact, most of the people (approx. 99.9%) hospitalized in this Hospital are in the same conditions: they do not have to pay because they have been referred to this Hospital by the National Health Services.

In the Medium-Long Stay Hospital María starts her rehabilitation process at the rehabilitation centre located in that Hospital. After 30 days the doctors consider that María has already recovered a lot from her hip fracture and she can go back home.

In the Hospital they also receive information about the different helps they can receive. In this case, the doctor recommends installing the tele-alarm service, to avoid the situation of María falling down again and waiting in the floor because she is alone, and a type of a crutch. María and Pedro contacted with the Basque Government services and they install the telealarm at their home. María has to wear something like a collar and, in the case of an emergency, she can press the button on her collar to contact with the call centre and tell them what she needs. In order to get the crutch, María went to the General Practitioner (GPr) surgery with the report made by the hospital doctors. The GPr made another report and with that report María can go to the orthopaedic surgeon. María has to pay part of the crutch (the amount of this payment is the same for all the patients independently of their outcome level), and the other part (the biggest part) is paid by the National Health Services.

Two days after the discharge of the Medium-Long Stay Hospital, María has to go to the traumatology surgery. The traumatology doctor belongs to the public health services so María has not to pay for this medical consultation. The traumatology doctor recommends María to continue with the physical rehabilitation that she has already started at the Medium-Long Stay Hospital. María continues living at her home but she will go every morning to the rehabilitation centre located in the public hospital. However, due to the long waiting lists in the public rehabilitation services, María has to wait one week between the traumatology consultation and the first rehabilitation session at the public hospital. After 50 rehabilitation sessions María goes back to the traumatology surgery and the doctor says her that it is enough, so she has not to come back to the rehabilitation sessions.

In general, María and her family are happy with the process because they did not have to pay (just a little bit for the crutch) and they did not have to wait a lot (just some days for the surgical operation and for starting the rehabilitation process at the Public Hospital).

5.2 Narrative of the Archtype Obesity

Esther is a 70 years old woman. She has been overweight all her life and actually her Body Mass Index (BMI) is 30, which is considered as mild obesity. Two years ago she broke her leg and for that reason her live is more sedentary. Her relatives have noticed that since that moment she has gained weight and they have insisted in the necessity of starting a diet. One day their children saw in the newspaper an announcement about a talk given by two prestigious doctors specialized in endocrinology and cardiology about the cardiovascular risks of being overweighed. The talk was organized by the Hospital in collaboration with the Socio Sanitary Department of the regional government and it was free. They decided to attend and

the “force” Esther to attend as well. The talk was really informative and useful because not only gave information about the potential risks of being overweight but also provided some diet and physical exercise recommendations and, as it was directed by the general public, it was very easy to understand what the doctors said. However, Esther really enjoys eating and she does not want to hear anything about diets.

In one of the routine medical controls, the doctor says to Esther that her cholesterol and her blood pressure were really high. Both symptoms are risk factors for heart disease so she has to take care herself. The doctor recommends her to try to do physical exercise, like walks, and to try to reduce the intake of some food, such us red meat, and increase the intake of vegetables and fruits. Esther has had the same primary care physician since 15 years ago and he has not been worried about Esther’s overweigh until now, so he has not given her any recommendation before. The doctor says Esther that he wants to see her again in 6 months. Esther, with the help of her family, tries to follow the doctor’s recommendation and goes back to the surgery six months after. The doctor checks the blood analysis results and see that the cholesterol is still high and also her blood pressure. Esther assures that she has been eating less meat and more vegetables and also giving walks whenever she does not feel pain in her leg. However, she has only loses one kilogram so her BMI continues very high. The doctor thinks that these measures are not enough and he decides to derive Esther to the endocrinology surgery. Esther has to go to the endocrinologist (also covered by the National Social Security) in two months because it is a doctor with a lot of work and it is not easy to schedule the visit before.

When Esther goes to the endocrinologist, this doctor, after studying her case, gives her a monthly plan including the diet and also physical exercises and gives her another new appointment in six months.

After this six months in which Esther has more or less consciously followed the monthly plan personalized to her needs and characteristics, she has loses more kilograms. In fact her BMI is now 26.5, which means that she is a little bit overweight but not as she was in the past. Her cholesterol and blood pressure results have also improved a little bit. The endocrinologist is happy with these results and he just encouraged Esther to continue in the same way with the diet and the exercise and he considers that, as Esther is better, she has not to come again to his surgery.

So, from now Esther is the only responsible, together with her family, of keeping her optimal and healthy weigh following the advices given by the doctors. Nevertheless, Esther has to make a big effort to follow the recommendations. She has thought that if she needs help in the future, as the doctor says that she has not to go to the surgery again, she can go to a private expert in nutrition.

5.3 Narrative of the Archtype Participation after retirement

Luisa is a 66 years old woman. She has been working as a baker since she was 20 years old and she has recently retired. She lives with her husband (Andres, 70 years old and also retired since 5 years ago) and one of their sons, Azuzena show has 35 years old and is unemployed.

But she started getting bored after six months at home without working. Usually she gets up at 8:00, take the breakfast and do the homework and in the afternoon sometimes she goes out with her friends or with her husband. But she feels that she has a lot of free time. Luisa has had different hobbies in her life like photography and cinema and she decides that now is a good time to spend time in her hobbies. She looks for a course on photography and she enrols at it. However, the course long is 3 months and the frequency is just once a month so she continues thinking that she has a lot of free time that she needs to do more things, but what?

In order to be updated about the activities in the city she usually read the newspaper and she mostly obtains information about new films, the films billboard and not much more. However, some activities are not announced in the newspaper. For this reason, Luisa decides to go to some of the Non-Governmental Associations located at her city to obtain information about volunteering programs. She goes to the Food Bank, to an Association focused on children with Autism and to a company with several facilities for people with dementia. After visiting these three places she decided to enrol at the Autism Association because she loves children and she wants to help those children with autism.

At this moment, Luisa is happy because she has time for her family and friends, but she also has time for her hobbies and for helping others.

After two years, Luisa's situation changes a lot. Her son got married so he went out home, and unfortunately, her husband died. At this moment Luisa feels very lonely and even with more free time so she decides that it is time to start looking for new activities. What she looks for this time is activities that allow her maintain social relationships (since she lives alone and she needs more contact with people) and activities that provide her a sense of utility in the community.

Once she starts looking for these activities she has two different feelings:

- It is not easy to look for activities. There are several sources where you can get information but you have to do something like an "investigation job" to get the knowledge of the activities and nobody gives you advice about what there are. She misses a person who gives her all the information about the different activities in the city and which activities are more suitable for her needs, preferences, timetable, etc.
- Some of the activities are expense. Luisa has a survival pension but she has a lot of expenditures as well, so she cannot enrol of the activities she wants even these activities are cheaper for retired people.

Finally, after some time going from one place to another (town council, centres for retired people,…) and talking with other old people she met in the activities she carries out, she decides to enrol at the morning walks for people over 55 years old organized by the town council. In this way she can cover two different objectives: to be in touch with others and to do physical exercise good for her physical fitness but also for her cognition! Also this activity is free so it is perfect for her.

However Luisa is not completely happy because she is not able to look for an activity where she can feel useful for others. Sometimes Luisa thinks that she has been working for a long

time as a baker and she has acquired a lot of knowledge and now she can transmit this knowledge to the young people who want to learn the job. However she does not know how to do this. There is not a way to do it. Besides Luisa was born in the years just after the Civil War in Spain so she perfectly knows what actually means economic crisis. She would like to transfer her knowledge to the coming generations about how to survive to this situation. But she feels that the society has not put the necessary mechanisms to hear the testimony of the old people and to try to learn from their experience. Sometimes she feels that nobody besides her family and friends want to hear her lessons learn in her long and interested life.

5.4 Narrative of the Archtype Depression

Rebeca is a 68 years old women living in a small city. She has got two children: Andrés and Lorena. Andrés is living in another city and Lorena lives in the same area of Rebeca. She was widowed when her children were 10 and 12 years old. Rebeca has worked very hard during her life to meet her children needs. Now she is relax because her two children have good jobs and their own families and Rebeca has finished paying for her house. So she does not have economic problems. Since she finished working she started to feel emptiness in her life. For the first time in her life she doesn't have obligations and she does not have a schedule she should stick. She has decided to take the advantage of the free time she has for doing her hobbies: going to the swimming pool and read. She usually meets some of her friends on the weekends because some of them are still working and Lorena and her family visits her twice or three times a week.

In the last year Rebeca has noticed that something is changing. On one hand she is aware that this is one of the best moments of her life, she has not economic problems, her health is good, her family is also very well, she has 3 wonderful grandchildren, she has time to have a rest and also to do their favourites activities and meet her friend. However she is not happy even worse, sometimes she feels very sad and hopeless. She has been analysing this situation because she does not find any reason to be sad. Sometimes she thinks that she has a lot of time to think about everything and she would desire to live with more people.

This feeling has continued even it has been growing in the last year. Even Lorena sometimes has asked her mother what happen because she has noticed that sometimes she does not attend to their favourite activities or she does not want to meet her family. After a talk between Lorena and Rebeca they decided to go to the primary care physician.

The doctor does not give a lot of importance to the symptoms and the history told by Rebeca. Every day he sees people with the same complaints in his surgery. Anyway he asks some routine health test (e.g. blood analysis), since sometimes the reason of these mood problems can be due to a hormonal dysregulation. In two weeks Rebeca goes to the surgery again and the doctor says that everything is ok. As everything is ok the doctor decides to see her again in six months.

In these six months the situation is getting worse. Sometimes Rebeca cries without any reason or because of very little contradictions have happened in her life. She thinks that she has lived very difficult times in her life (e.g. her husband death) but she has been stronger than now so

she cannot understand. In this time she has also experience some forgetfulness and a lack of concentration.

After six months she goes to the doctor again and tells him that the situation is worse. Then, the doctor decides to derive her to the psychiatrist. Unfortunately in the national Social Security there are very few psychiatrist and they have to assist a lot of people so Rebeca has to wait 3 months to be seen by a psychiatrist. When she goes to his surgery she summarizes what happens and the doctor prescribes a mild antidepressant to her and gives her another appointment in six months. When Rebeca goes back home talks to Lorena by telephone and Lorena is not happy with the idea of her mother taking anti-depressants. Anyway, they think that if this is the doctor's recommendation they have to follow it.

After six months, Rebeca goes back to the psychiatrist. During this time, she has been emotionally better. But she and her family are worried for the side effect of the medication. So she asks the psychiatrist other options because she does not want to continue with the medication for the rest of her life. Unfortunately the doctor does not give her another alternative because her case is very common and it is not as severe as the major depression diagnosis. However the doctor wants to see her once a year in order to control the dose and the side effects of the medication.

After talking to her family, Rebeca takes a decision: goes to a psychologist to receive therapy. After visiting several private professionals they finally choose the one who seems to be the better one. Each session cost 60 € and the professional says that the number of sessions estimated for this kind of cases are 10 (once every week during 10 weeks), and maybe in the future one session each 5 or 6 months. As the cost is expensive and it is not covered by the Social Security Rebeca has to think very well what to do. Finally she decides to try the therapy and the results are very successful.

When Rebeca goes back to the psychiatrist she tells him that she is also going to the psychologist and the psychiatrist is happy with that idea because she can verify that Rebeca is much better. The psychiatrist reduces the dose of the medication, because Rebeca has an extra help of the psychologist.

Rebeca continues with the small dose of the medication and also with the psychological therapy and visiting the psychiatrist. She feels much better now and her family also notices an improvement in her emotional state.

5.5 Narrative of the Archtype Dementia

Esther is a 76 years old woman. She lives alone since her husband died 4 years ago. Three years ago, Esther started having some mild forgetfulness in her daily live. The problem is that this situation has got worse in the last year. Esther gets a son: Juan, who takes care of her. Just one month ago, Juan decided that this situation is not normal so they went to the doctor.

The general practitioner checked Esther's health state and he was aware about the memory problem. For this reason, he decided to derive Esther to the neurologist. The first date available for the appointment was in 1 month.

The neurologist administered several neuropsychological tests to Esther and he also asked some specific clinical tests such us magnetic resonance. The neurologist asked Esther and Juan to come back to his surgery in a couple of months. In this next visit the neurologist can have all the results of the tests and he can give a diagnosis. As expected, in that visit, the neurologist confirmed that Esther has Alzheimer's disease in a moderate stage. The doctor prescribed some medication in order to avoid a rapid progression of the disease and gave them another appointment in 6 months to see the progression. Though Juan imagined this situation, the confirmation of the diagnosis was a terrible new for him. This situation is completely new for him and he really did not know what to do.

Juan has started seeing that her mother has some difficulties to carry out the activity of daily living (e.g. take the buses to go to the city centre, as she usually did, prepare the meal, select the appropriate clothes according to the weather and the situation, etc). That is the reason why Juan decided to hire a lady who can help her mother with the homework and also supervised her during the day. However, the mood of her mother has completely changed and she had a lot of arguments with this lady. Juan does not know what to do. He sees in the newspaper that there is an Alzheimer's disease Association in his city. He goes there to ask for more information. The president of the Association receives Juan and gives him information about: (1) the Alzheimer's disease, the aims, the procedures and the cost of the association, the activities they organize (e.g. help to the caregivers, mutual supporting groups, cognitive stimulation for the patients, etc). Juan is so happy with the idea of having support from professionals and from other relatives that he decides to becomes a member in that same moment.

After time in the Association, when Juan is in the weekly group of caregivers and he is telling the others the current situation of her mother, the others suggested him to consider the idea to move her mother to a day centre. There, Esther can have access to the services she needs and Juan can work on peace because he knows that her mother is being cared for professionals.

Juan can perceive a gradual and progressive deterioration in her mother. In fact, he has moved her mother to his own house, because he did not want to leave her alone at night. Meantime, in the six-monthly revision by the neurologist, he has derived her to the surgery of the geriatrician. As this professional has a more deeply knowledge about older people can give her more advises in order to continue with the best quality as long as possible. In one of the visits to the to the geriatrician, Juan tells him the current situation of her mother (she has started to be really aggressive, eager and aggressive, she is not able to maintain a conversation with others, her health status is getting worse…), and the doctor recommends him to move her mother to live to a gerontology centre. Of course, this is a difficult decision for Juan because he knows that this will be the last house of her mother and he feels that he is leaving her mother. However, in the Alzheimer's Association, the other relatives and professionals convince Juan that this is the best solution for all. In the Alzheimer's Association they also give advice about the required steps in order to move her to the gerontology centre. He has to go to the social worker of his neighbourhood. The social worker will send an evaluator of the dependency to his house to assess whether Esther is really dependent. The outcome of this evaluation is a score which indicates the level of dependency and, depending this level, the different facilities

Esther can have access to. As expected, the result of the evaluation is that Esther is really dependent so she can access to a public (with places managed by the District Council of the city) gerontology centre. But Esther is in the waiting list with another 20 people before her what means that more or less in 3-4 months she will enter in the gerontology centre. Juan cannot continue with her mother at home. The situation is really difficult now, he has to go out to work, and he has not found any lady able to take care of her mother in this advanced stage of the dementia. So he decides to move her mother to a private gerontology centre. The monthly rate of this centre is 2500 euros, so it is really expensive but Juan has some savings and he decides to use them to pay the private centre. After three months the social services phones Juan and tell him that there is a free place in a public gerontology centre.

6. KmU-5 – Summary

As described in D8.1.1, KmU5 objectives are:

1) To achieve a better understanding of the specificities of innovation in care services at home combining different points of view: user, stakeholder, ICT developers, gerontologist, etc.
2) To take into account that innovation in care services using ICTs is more than the mere use of a technological innovation. Technologies must be integrated in the home-based care model.
3) To identify the key to success when developing services and technologies seeking to keep older people in their homes.
4) Analysis of the constraints in the potential adaptation of care services in actual settings. These constraints are due to financial/budget constrains under the current economic situation in the European Union.

7. KmU5 - Collection of Good Practices

From June 2013 until now 42 stakeholders from different kind of institutions (e.g. Public and private sectors, Profit companies, Universities, Public administrations, Elderly people associations…) have been invited. From them 28 have agreed to participate in the KmU and the other have agreed to receive the newsletter of the project. Up to know 12 stakeholders have sent their Good Practice examples. The Good Practice examples were required at the beginning to the different stakeholders who agreed to participate in KmU-5. An example of a Good Practice template filled in can be found in Annex III.

Considering that one stakeholder has sent 2 different GP, a total of 13 Good Practices have been collected. A summary of these GP can be found in table 2.

As stated in D8.1.1, the second part of the participation required to the stakeholders is to participate in working groups aiming to get a better understanding of the Good Practices as

well as to discuss about some topics in line with the KmU theme. The main objectives are to validate with the stakeholders the results found and to work with them in the future scenario (how the services and technologies and home must be in the future). The work methodology will be as follows: The archtypes described in this report will be presented to the stakeholders. Each stakeholders should identify in which step the Good Practice sent by them can fit. Also there will be a discussion about other potential Good Practices not previously identified that can fit in each archtype and about the gaps still not covered. Also they will review the technologies Business Case and after analysing this choose the correct Business model to prolific the solutions. In these working groups stakeholders coming from the public and the private institutions will work together to analyse the barriers of the market. We think that it can be useful and the discussions and results can be more fruitful if the different actors work together and try to honestly and with respect express their ideas, difficulties, etc.

Table 2. Good Practices examples collected up to now.

STAKEHOLDER	NAME OF THE GOOD PRACTICE	SUMMARY
Osakidetza - Kronikgune	United for Health	Deployment of an integrated intervention of telemonitoring for people with cardiac failure living at their homes.
Volkshochschule im Landkreis Cham e.V.	*Notfallmappe* – Emergency Portfolio	A document containing all important information for seniors, so in the case of an emergency personnel or relatives can find crucial information about the senior.
University of Geneva - ORBIS Medical Centre	Innovative services for independent living (AAL Co-Living project)	Facilities and arrangements that guarantee independent living for seniors.
Donostia Council (Lahar Elkargoa is the winning company)	Leisure Program for people over 55 years old	Program developed by San Sebastián Council in order to promote the social participation and the active ageing.
ACEDE – Euskadi Home Cluster	H-ENEA = Home Experience Node Empowered for Action	This is a living lab which tries to get the real participation of the final users in the projects and actions aiming at the development of solutions at the older person‘s home in the field of Health, Wellbeing and Security.
Department of the Public Health of Guipuzcoa	Workshop on prevention of falls in elderly people	Different contents related with the ageing process and with the falls risks in both indoor and outdoor, how to prevent the falls, and promotion of the physical health are addressed in this workshop from a theoretical and practical point of view.
Osakidetza (Public Health Service in the Basque Country), Department of the Public Health of Guipuzcoa, Hondarribia and Oñati Councils	Promotion of the Physical Activity on Frailty Older People	It is a programme of community intervention which aims to promote the physical activity on frailty older people at the same time it favours the social relationships-

IK4-IKERLAN	D-LIVE Project	This initiative provides a range of services that enable older people with a disease or chronic condition to control their implied risks and improve their health condition. The initial pilot is focused on older adults with type 2 diabetes mellitus and cardiovascular risk factors. There are two services involved: (1) healthy lifestyle management; (2) health monitoring at home
APTES – Donostia Hospital	Personalized and Multidisciplinary Care Programme for the frailty patient	This programme consists on follow-up interventions when the patient is discharged.
Fomento de San Sebastián	Cluster: "Support solutions for the Quality of Life"	To improve the competitiveness of the companies and stakeholders working on the field of the support solution to improve the quality of life. The second objective of this cluster is to increase the social awareness about the benefits of this kind of products and services.
Matia Instituto Gerontológico (funded by the Basque Government)	Etxean Ondo Project	This project aims to design and apply a comprehensive and person centred care model (AICP) to people that because of their fragility, disability or dependence situation, require support, professional care or help from others to live at their own home and to develop their own live project
TECNALIA (together with Integrated Social Services)	MIDER – Remote intervention model	Development of three pilot experiences to carry out technological innovation in the home care. The three experiences are: (1) remote psychosocial support; (2) remote cognitive stimulation; (3) remote accompaniment
GAIA - Cluster of ICT technologies for ageing of the Basque country	e-LIFE Project	To use the ICT to improve the quality of life and the independence of people with intellectual disability at home

8. KmU Next steps (link with D8.1.2)

As previously commented, in the future we will continue with the stakeholders, and once the rest of the stakeholders sent their GP the working groups with them will be organized. One of the aims of these working groups will be to work together with them in the future scenario – how the services and technologies and home must be in the future. Also we will analyse the barriers and drivers to put these services into the market and the analysis of the constraints in the potential adoption of the services in real life.

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Annex I. Questions that the Business Model has been built on

InvestorNet Business Model analysis presented at the General Assembly Lisboa November 19 – 20 2013 by Uffe Bundgaard-Jorgensen and Louise Pierrel Mikkelsen

Customers & Customer segments

- Which customer segments are served by the product/business concept, and who are the competitors?

Value proposition

- Which customer problems are solved and what is the value to the customer?

”Customers” versus ”end-users”

- If the ”customers” are different from the ”end-user” what is the value created for the end-user, and how is this value converted into value proposition to ”customer” = the one making the purchase decision?

Sales channels

- How are the products/services delivered to the customer or to the end-users? (e.g. via direct sales, agents, distributors, license or ….)

Customer relation

- How are customer relationships established and maintained?

Decision makers

- Which are the typical priorities and concerns of the decision makers?

Revenues

Revenue streams

- How is customer value created converted to revenue streams?

Key Activities

- Which key activities are needed in order to achieve business objectives?

Key Partnerships

- Which partners and partnerships are required to achieve business objectives?

Cost & partners

Key resources

- Which resources need to be brought into play in order to secure sales?

Cost structure

- What is the total cost of planned operation?

Key Activities

- Which key activities are needed in order to achieve business objectives?

Key Partnerships

- Which partners and partnerships are required to achieve business objectives?

Funding

- How much funding is required to ”make it happen”?

Investors

- Can a credible investment case be created?

Ownership

- Are you willing to share ownership with investors – and how much?

Annex II – Archtypes script

1) Is there any difference in the recovery process depending on these variables?
    a. Purchasing power
    b. Rural vs. Urban areas
2) Role of the following agents:
    a. Relatives
    b. Informal support network (neighbours, voluntary workers, NGO…)
        i. When do they start to intervene?
        ii. Type of support they can offer
    c. Formal support (General Practioner, Municipality…)
        i. When do they start to intervene?
        ii. Type of support they can offer
3) Which type of care does the older person receive?
    a. Medical
    b. Social
    c. Psychological
    d. Activities of Daily Living (Basic and Instrumental)
        i. Home Care
        ii. Transport and Purchasing
        iii. Social interaction
    e. Mix
4) Who provides the care and where?
    a. Relatives
        i. Medical
        ii. Social
        iii. Psychological
        iv. Activities of Daily Living (Basic and Instrumental)
            1. Home Care
            2. Transport and Purchasing
            3. Social interaction
    b. Informal support network (neighbours, voluntary workers, NGO…)
        i. Medical
        ii. Social
        iii. Psychological
        iv. Activities of Daily Living (Basic and Instrumental)
            1. Home Care
            2. Transport and Purchasing
            3. Social interaction
    c. Formal support (General Practioner, Municipality…)
        i. Medical
        ii. Social
        iii. Psychological
        iv. Activities of Daily Living (Basic and Instrumental)
            1. Home Care
            2. Transport and Purchasing

3. Social interaction

5) Do the technological solutions play a role in the solution of the situation?
6) Is a private, a public or a mix care? Does the kind of funding depend on the person's incomes?
7) Who coordinates or who is the final responsible of the care plan?
8) Does the person have the possibility to access to economical aids (e.g. for adapting the house in order to make it more accessible)?
9) Average of the time needed for going back to the "normal" situation
10) Perception of each agent (old person, relative, etc…) involved in the process about:
    a. Result
    b. Process
    c. Satisfaction
    d. Gaps
    e. Quality of Life
11) Holistic versus segmented approach to the situation (ELABORATE?)
12) Age average when the problem usually appears (if applicable)
13) When the person goes back to the previous situation (of citizen after rehab) is there any kind of follow up?
14) In the general community, are there actions in order to create awareness?

Annex III Good Practice Example

Good Practice	
Name of Good Practice example	Innovative services for independent living (AAL Co-Living project)
Institution / Organisation	ORBIS medical centre
Country	Netherlands
Contact person / name / function / e-mail	Proxy: Christiana Tsiourti, University of Geneva, ISS, Christiana.Tsiourti@unige.ch
Description of the Good Practice	There are facilities and arrangements that guarantee independent living for seniors.
Main- target group / who is impacted by this Good Practice (e.g. senior citizens, professionals, relatives, informal caregivers, other…)	Senior citizens who live independently at home or in a care home environment. Formal caregivers (i.e. occupational therapist) working in an elderly care centre.
Implementation level (international, national or local)	National
Has the Good Practice been transferred to another city, region or country?	After a successful pilot in one setup the organization is considering to transfer to other care setups across the country.
Start and end date	N/A
Results (please indicate if the results are final or preliminary)	The system has been tested and evaluated in a 6-month trial with real end-users and their formal caregivers and final evaluation results have been collected and are currently under analysis.
Barriers found in the implementation (e.g. cost, user acceptance, implementation, organizational…)	The solution is designed to minimize the cost and increase user acceptance. Organisational process has to be arranged to introduce the new service concept to the care centre.
Why is this Good Practice innovative?	User-centric design Cost effective solution based on widely available tablet devices Higher quality of service Creates basis for future R&D in the environment of elderly care setups
What is the beneficiaries'	Formal care givers (occupational therapists) save time on a daily basis. i.e. The organization of events is now digitalized and the system motivates and

perception?	reminds elderly to join the activities.
Do you know the type of cost of this Good Practice? (e.g. investment, operating cost, regularly cost per usage?	Instrumentation: tablet devices for elderly users and devices with access to the web for formal caregivers (i.e. laptop, personal workstation, tablet, ect). Costs related to the maintenance and support. Usage costs might apply for the end user (elderly)
Is this Good Practice something that can be used alone or it needs integration with another system or service?	The services can be offered to the end-users as an independent solution.
In the case that it is needed to pay, who pays and how much? (e.g. the end user, public funding, private insurance…)	Different possibilities exist:, the end user (elderly) or their relatives can pay to use the services (i.e. monthly fee to the care centre) or a private insurance can cover the expenses.
Other comments	

Publications and weblinks related with the Good Practice	*N/A yet*