Deliverable reference number: **D3.7**	Date: 22/01/2014
Deliverable title: **Good Practices Handbook**	
Project Title: **Network for the Market uptake of ICT for Ageing Well**	Responsible partner: **INOVA+**
Project Acronym: **Ageing*Well***	Editors: Ana Solange Leal (INOVA+), Andrea Bogi (INOVA+)
Grant Agreement no. 297298	Validated by: All partners
Project co-funded by the European Commission within the ICT Policy Support Programme	Dissemination Level: Public

Abstract:

This handbook compiles 40 good practices presenting success stories about ICT SME developing ICT solutions for Ageing or/and AAL projects whose products proven to be efficient and had positive impact among the target-group/market. These good practices consist in convincing arguments to push ICT SMEs to develop ICT solutions for Ageing and raise interest to potential end user in their adoption.

The good practices identification had the collaboration of the **Ageing*Well*** Network members, and took into consideration the societal challenges, their relevance and added-value towards ICT4Ageing market, and the impact on the stakeholder's community. All the forty good practices were assessed by the network members according to a set of criteria defined by the founding members, including uniqueness, relevance, user satisfaction, replication, among others.

This compilation of practices intend to mirror the great potential of ICT4Ageing solutions for improving quality of life and active ageing of elders and for improving care services for the ageing population.

Revision History:

Revision	Date	Author	Organisation	Description
V.01	22/01/2014	Ana Solange Leal Andrea Bogi	INOVA+	First draft of the Deliverable

Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1 Introduction

1.1 Background

The aim of the **Ageing***Well* Network is to build and animate a European network focused on improving the quality of life of older persons by promoting the market uptake of ICT solutions for Ageing well.

To achieve its aim, five main objectives were established for the **Ageing***Well* project, namely:

- **To develop** guidelines for deployment and sharing of best practice between key competence centres;
- **To build** an ICT for Ageing Knowledge Centre to share the results with the Ageing Well Community;
- **To develop** an ICT for Ageing Society Strategic Agenda for providing a study on options for future structure and implementation of EU innovation funding;
- **To promote** the European innovation reinforcement between innovative ICT industries & Ageing (in particular SMEs) and Venture Capital firms, Business Angels and other;
- **To raise awareness** within the European community of ICT & Ageing stakeholders through a web-based communication, and the organization of 3 international events and 11 national events.

1.2 Summary

This handbook compiles 40 good practices presenting success stories about ICT SME developing ICT solutions for Ageing or/and AAL projects whose products proven to be efficient and had positive impact among the target-group/market. These good practices consist in convincing arguments to push ICT SMEs to develop ICT solutions for Ageing and raise interest to potential end user in their adoption.

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1.3 Acknowledgements

The **Ageing***Well* Network wishes to acknowledge all the Members who have identified and shared good practices, as well as for their participation in the evaluation process of those good practices. Their collaboration in this activity was a valuable contribution for producing this handbook.

2 Good Practices Identification and Evaluation Processes

One of the objectives of the **Ageing***Well* Network is to share good practices on successful initiatives within ICT for Ageing fields among their members and interested stakeholders. In this sense, the network members gathered a set of good practices addressing various challenges concerning the demographic change such as healthy ageing; employment of older workers and active ageing; quality care services for the elderly and prevent elder abuse; adoption of new technologies to promote independent living, among others.

This section describes the identification process followed by the network members to collect the successful cases and also the evaluation procedure implemented to assess those cases.

2.1 Identification Process

With this activity, the members of the **Ageing***Well* Network aimed at identifying good practices on a success story about an ICT SME developing ICT solutions for Ageing or/and AAL projects whose products have proved to be efficient and had positive impact among the target-group/market. By sharing these good practices, the network members would be presenting convincing arguments to push ICT SMEs to develop ICT solutions for Ageing and raise interest to potential end user in their adoption.

In order to facilitate the process of identification and presentation of the good practices, the network has prepared a template to be used by those members willing to contribute with successful cases. As it is expected the collected practices to be also be published on www.epractice.eu; the network has prepared a specific a template having into consideration the mandatory fields requested in this portal. This template (annex 1) was used by all members to gather the information on good practices.

The identification of good practices benefitted from member's professional and networking activities. Also the organization and participation in events related to ICT for Ageing contribute to receive information on existing cases that could be seen as good practices, which lead to the collection of further information about them.

Initial search for successful cases started to be carried out by the founding member of the **Ageing***Well* Network. In July 2013, the network associate members and supporters received an invitation email to contribute with any good practice they were aware and interested in sharing. Also, the web-portal and the social media platforms used by the network were used to publish and disseminate this activity among other stakeholders that could be willing to share their own cases.

2.2 Evaluation Process

Following the identification of all relevant good practices of ICT SME developing ICT solutions for Ageing or/and AAL projects, both founding and associate members of the **Ageing***Well* Network were invited to evaluate them. To facilitate the evaluation process, the good practices have been divided in three categories: eHealth Services; eHealth Technological Applications; and Education and Training for Active Ageing.

An email was sent to all members requesting their participation in the evaluation process. Each member was asked to assess up to 4 good practices, which were selected, whenever possible,

according to the nature of the activities performed by each member. For instance, end-users organisations were invited to assess the good practices concerning eHealth services, and ICT solutions providers were asked to evaluate good practices related to eHealth technological applications. Moreover, the members contributing with good practices were not asked to assess their own practices or those provided by them.

The participating members were provided with an Evaluation Form (annex 2) that once filled in it should be send to the coordinator of the network: INOVA+. This form intended to collect the opinion of members of the network regarding the good practice, based on six criteria, each to be assessed on a scale from 1 to 5, plus an additional criterion focusing on the national/international recognition of the case. The criteria, included in the evaluation form, are the presented in Table 1.

Table 1. Good Practices Evaluation Criteria

Criteria	Description	Evaluation Grade
Uniqueness	The practice should show innovative characteristics when compared to other schemes within the same theme regarding its methodology, organisation, function and/or results. It should distinguish itself in the general overview of practices.	1 – Not at all unique 2 – Slightly unique 3 – Neutral 4 – Moderately unique 5 – Extremely unique
Relevance	The practice should be relevant in addressing a EU/national problem/need/specific situation.	1 – Very irrelevant 2 – Irrelevant 3 – Neutral 4 – Relevant 5 – Very relevant
Effectiveness	The practice should have a measurable impact and effect. The impact should be measured through qualitative and quantitative indicators.	1 – Not at all effective 2 – Ineffective 3 – Neutral 4 – Effective 5 – Extremely effective
User satisfaction	The practice should have positive feedback from users (e.g. SMEs) and other stakeholders (e.g. authorities and agencies, politicians and decision makers, funders).	1 – Very dissatisfied 2 – Dissatisfied 3 – Neutral 4 – Satisfied 5 – Very satisfied
Time and cost sustainability	The practice should have the potential for long-term sustainability. It should keep its attractiveness to the target group over time, and also have the financial ability to run over a longer time period, for instance through a successively increasing private funding.	1 – Not at all sustainable 2 – Unsustainable 3 – Neutral 4 – Sustainable 5 – Extremely sustainable
Replication	The practice should have the potential to be adapted and replicated in other regions.	1 – Not at all replicable 2 – Non-replicable 3 – Neutral 4 – Replicable 5 – Very replicable
Recognition	The practice has been recognized by, for instance, national or international agencies, European projects etc, on a basis that is coherent with the criteria cited here will be a favourable factor.	1 - Yes 2 - No

As soon as, the evaluation forms were collected, the coordinator proceeded with the data treatment, the analysis of results and the production of the handbook.

3 Good Practices on eHealth Services

The good practices included in the category of eHealth Services present cases in which the main focus is on health and care services delivered or enhanced through the adoption of new technologies and ICT solutions. Twelve good practices were included in this category, as listed in Table 2. In the following sections, each good practice will be briefly presented, as well as the evaluation received from the members.

Table 2. Good Practices on eHealth Services

Good Practice	Location
ACTION - Assisting Carers using Telematics Interventions to meet Older People's Needs	Sweden
Ana Aslan International Foundation	Romania
Antiparkinson Association	Romania
CommonWell – Common Platform Services for Ageing Well in Europe	United Kingdom, Germany, The Netherlands and Spain
EvAAL Competition	Europe
Fit as a Fiddle – ICT for digital later life well being	United Kingdom
Internet Home Care Service "Security Button"	Latvia
Just Checking	United Kingdom
Long Lasting Memories	Greece, Austria, Spain, France, United Kingdom, Cyprus and Germany
OneCare Service	Portugal
Ristomed – New e-Services for a Dietary Approach to the Elderly	Italy, Germany, France and Portugal
Sleepio	

3.1 ACTION - Assisting Carers using Telematics Interventions to meet Older People's Needs

ACTION™ is an innovative example of an ICT-based support service that is currently running in Sweden to help empower older people with chronic conditions and their family carers in their daily lives. The initiative stemmed from an EU-funded project (1997–2000) and consists in a support service designed together with older people with long-standing chronic conditions living at home and their family carers to help empower them in their daily lives. It is currently running as a mainstream service in the Borås municipality in western Sweden, and additional twenty municipalities across Sweden are going to deploy it.

ACTION is a self-care and family care support service which promotes 'ageing in place' as older people with chronic illnesses and their family carers are able to access relevant and accessible information, education and support when needed from the comfort of their own home. Furthermore, the ICT based service helps to promote social inclusion within the current digital information society for those older citizens who are at risk of being excluded from the benefits afforded by modern technology.

The ACTION service encompasses four different core components which complement each other:

1. Dedicated multimedia information and training programme addresses a range of themes that - according to experience - have relevance for many older people in need of support such as personal transference, incontinence, food and beverages, stroke, dementia, wound treatment and palliative caring during life's terminal stages. The package also contains a "training & relaxation" module and a further module providing information on the types of support generally available through the welfare system, including supportive devices. Furthermore, information is provided on how family cares in particular can better cope with their situation, including experiences gained by others who were in a comparable situation.

2. A local call centre is operated in all municipalities utilising the ACTION service. The centre is staffed with qualified nurses and aid consultants. Together, they provide on-demand support to family members and introduce the service to professional care staff as well.

3. A dedicated equipment package is placed at the end user's home, the so called 'ACTION station' comprising a desk top computer with screen, keyboard, mouse, a video camera and a microphone. Direct video contacts can be established with the service centre and other ACTION service users. The available software also enables web browsing and email exchange. A broadband connection is required.

4. Specific training as well as continuous supervision is provided to the staff at the local ACTION centres and to dedicated contact persons at the municipal level. End users do also receive specific training, e.g. on how to use the equipment to be placed in the home, on how to access and utilise individual information / training modules that are available online and how to use the home equipment more generally. Also, support is available when it comes to installing the required equipment in the user's home. Statistics on actual usage of the service are provided on a continuous basis.

Of the approximately 400 users involve in ACTION projects, the huge majority expressed a high satisfaction with the service and considered it to have helped improve their everyday quality of life enhancing their social inclusion. On the other hand, ACTION call centre practitioners highlighted that

they experienced improved job satisfaction as a result of working in partnership with families to help empower them in their situation.

Even more, at the municipality level a small cost descriptive study involving five ACTION families revealed reduced care costs with an average saving of €10,300 per family per year as a result of reduced use of home help services and delayed entry to nursing home, in front of the significant improvement of the quality of carers and in the quality of life of those who are cared for.

For more information about this good practice, please visit: http://www.actioncaring.se

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,5	**4**	**4**	**5**	**3,5**	**4**
Note: ACTION was evaluated by two network members that pointed out that the use of ICT tools should never replace face-to-face contact and care, while the required ICT skills to handle the amount of tools included in the practice (training, web cam, etc.) make so that the potential of replication only exists if these conditions are met. Recognition: No.					

3.2 Ana Aslan International Foundation

Ana Aslan International Foundation (AAIF) is a non-profit, high-profile medical care and postgraduate education organization, and it is a member of the European Alzheimer's Disease Consortium (EADC) and the Romanian Representative of European Association for Predictive, Preventive and Personalised Medicine (EPMA).

AAIF owns methodological guidance adapted according to the European standards and was approved by the Romanian Ministry as a Training and Certification Organization elaborating the Curricula and Syllabus on training and supporting caregivers, families and care organizations working with old people at home or at centres of specialty as well as health professionals. It provides expertise in assisting old people with physical and especially cognitive special needs, in the broad areas of Active Aging with focus on Brain Aging and Cognitive Pathology. Moreover, since 2009, AAIF has become the only Romanian accredited body for CME in Brain Aging Integrative Education and Research Expertise, coordinating a unique national Strategic Networking Program for Academic Geriatric Education – the BrainAging project – in which 3000 specialists in 7 different medical specialties were already trained across Romania based on the first Integrative Syllabus and Curricula in Brain Aging medicine created in this project. The activities performed in the field of aging and brain-aging include clinical assistance, fundamental and applicative research, long-term care of frail and cognitively impaired elderly persons, academic and post-academic education, organization of top scientific events, consultancy for health care politics for seniors and editorial activities. Moreover, thanks to its research potential AAIF can fulfil tasks with regard to: research protocols elaboration in the clinical, bio-medical, medical care and smart assistive technologies fields; identification of research methodologies, recruitment of participants (patients, voluntary end-users, researchers);, transfer of knowledge into clinical practice; dissemination of project / study results as contribution to the outlining of a European standard sustained by ICT in the field of medical assistance for all citizens of an enlarged Europe, as well as to the development of new guides in the care of patients using special medical equipment and personalised ITC devices.

AAIF structure comprises Ana Aslan International Academy of Aging (R&D department), the Center of Memory Impairment Diseases, the University Clinical Department of Old Age Psychiatry and one Clinical Ambulatory with a data base of 780 patients and a well-skilled multidisciplinary staff. Five of the 9 EU funded just accomplished or still running research projects (EADC, ICTUS, DESCRIPA, K4CARE, SHARE-it, BrainAging, MobilSage, Confidence, Mobile.Old, AgeingWell, LiveWell, E-No Falls, etc.) were in the Assistive Artificial Intelligence, CIP-ICT-PSP and AAL area. Due to a vast experience as medical partner and pilot for prototype assessment and validation with Romanian end-users, AAIF was acknowledged by the Romanian NCP on AAL projects, as the only Romanian research, end user organisation and national field trials pilot conducting significant milestones such as: target group definition(end-user profiling and specifications, inclusion-exclusion criteria), specification of user requirements and preferences, medical aspects of smart apps technical and functional specifications, field trials with end-users (assessment of end-users' compliance to smart technology apps, prototypes trials and validation), ethical issues related to end-users involvement and human-machine interaction.

AAIF has brought important contributions to the healthcare system at national level, by creating and developing two medical centers in the field of Memory Impairment and Longevity and Brain Aging Prevention, and also as a significant high education and research unit for national medical staff working in the field of Neuro-Geronto-Psychiatry, through its R&D department – Ana Aslan Intl.

Academy of Aging. At international level, AAIF has attained valued skills, knowhow and a vast experience due to her numerous partnerships in important consortia (Alzheimer's Europe, European Alzheimer's Disease Consortium, European Association for Predicitive, Preventive and Personalized Medicine, etc) and within European projects (EADC, ICTUS, DESCRIPA, K4CARE, SHARE-it, BrainAging, MobilSage, Confidence, Mobile.Old, AgeingWell, LiveWell, E-No Falls, etc). In this regard, the foundation developed good opportunities in continuing medical education activity, in creating a network of partnership institutions and bodies working in the same medical field, as well as in related domains (ICT in Health, AAI, AAL, Medical Tourism, Social Assistance, etc). Through its medical centres and with a data base of 4000 patients, AAIF is aiming to implement the personalized medicine, with modern methodologies and customized tools of individual health status assessment, that may enable the design of the specific preventive or treatment strategies, also as a major objectives for unrolling European Programs.

For more information about this good practice, please visit: http://www.brainaging.ro

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,7	**4,7**	**4**	**4**	**3,7**	**3,7**
Note: AAIF was evaluated by three network members. Recognition: No.					

3.3 Antiparkinson Association

Antiparkinson is the only non-governmental, non-profit, apolitical Association accredited in Romania to defend the interests of the 72 000 patients with Parkinson's disease. Established in 2006, in Deva, Hunedoara County, it has over 550 members, 350 of whom are affected by this illness/disease, 20 volunteers and one employee.

The aim of the Association is to built and maintain a network dedicated to improving the life of elder people who have Parkinson disease and support a market for ICT solutions dedicated to them. In particular, Antiparkinson association identifies the real needs of people with Parkinson's in order to improve their health through the principle of equality-for-all to access to information, medications and treatments in the country and abroad. At the same time it facilitates the establishment of fixed or mobile recovery centres and/or contribute to the development of existing neurological recovery centres. Furthermore, the Association initiates and maintains contact with associations in other countries and associations in Romania and organizes seminars and events for information about new developments in the treatment of disease / Parkinson disease and edit informative.

Among its activities, the Antiparkinson association is particularly dedicated to

- identify social needs of individual, family and group of people affected by Parkinson's disease;
- inform patients of Parkinson's rights and obligations;
- take care of the community and raising awareness and reducing the effects of stress that occur in patients with Parkinson's life;
- publish books and pamphlets with information about the disease, treatments, and not least how to live and accept to live with the disease
- ''fight'' to obtain the support of the community and especially the authority to maintain the community of patients, their psychological counseling and initiate measures aimed at preventing and / or limiting / reducing the difficulty and vulnerability situations that can lead to marginalization and social exclusion of those affected by Parkinson's

For its efforts in tackling Parkinson-s disease, in the five years since its establishment the Association has been recognized with numerous diplomas, such as the 2009 Special Award "Carol Davila", the Award "most active association of patients" from the College of Medicine of Romania in 2010, and the 2011 Award for outstanding individual contribution.

The Association is also affiliated to national and international bodies. It is a full member of the Association of Rare Disease Romania, European Parkinson's disease, Parkinson 's disease Foundation-USA, Michel J Fox-USA , Parkinson Association of the Rockies.

For more information about this good practice, please visit: http://www.asociatia-antiparkinson.ro

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2	**3**	**4**	**5**	**4**	**5**
Note: Antiparkinson was evaluated by two network members. Recognition: No.					

3.4 CommonWell – Common Platform Services for Ageing Well in Europe

CommonWell started as a CIP-PSP project of 10 partners in 2008, ended in early 2012, supported financially by the European Commission. CommonWell supports high quality independent living and wellbeing for older people across Europe by integrating ICT-based services across provider organisations on open platforms. Furthermore, CommonWell developed and implemented integrated services supporting effective management of chronic diseases, and to address issues which affect independence, in order to improve the quality of life for older people and their families.

In particular, CommonWell aim is the integration of social care and health care services for older people provided in a joint-up manner as much as possible, under the heading of integrated eCare. For instance, "eCare" encompasses devices that are placed in your home to provide safety and security, to support you in daily living or to help you living with a chronic disease. A common example for this kind of devices is a so-called social alarm where you can push a button to get help in an emergency. Other examples for eCare technology are used by service providers, e.g. to manage and exchange data about their clients.

CommonWell services for integrated eCare were developed and piloted at four sites in Europe involving hundreds of service users including older people, family members with care responsibilities, and social and health care professionals. The pilot sites are in United Kingdom, Germany, The Netherland and Spain. At each site, an integrated service with a distinct profile was implemented, showing how flexible integration can serve different needs and target groups within the population 65+.

The four services implemented are:

- Better emergency care through telecare integration in Andalucia, Spain
- Managed hospital admission for care clients in Bielefeld, Germany
- Early Intervention and Telehealth for COPD Patients in Milton Keynes, England
- Integrated support for heart failure patients in Veldhoven, Netherlands

The evaluation of the CommonWell pilots showed that integrated eCare service can bring about tangible benefits to all involved. Foremost, there are positive impacts on older people, including those with chronic conditions, and their relations with caring responsibility. But also social and health care professionals as well as service providers can benefit from integrated services.

For more information about this good practice, please visit:
http://commonwell.eu/norm/commonwell-home

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**4,5**	**3,5**	**3,5**	**2,5**	**3,5**
Note: CommonWell was evaluated by two network members that remarked that CommonWell showed that integrated eCare services can be made a reality to the benefit of older people receiving care, their family members and the people providing social and health care services. Recognition: No.					

3.5 EvAAL Competition

EvAAL: Evaluating AAL Systems through competitive benchmarking is a periodical international contest aimed at raising interest of the research and developer communities in the multidisciplinary research fields enabling Ambient Assisted Living (AAL), and at creating benchmarks for the evaluation and comparison of AAL systems. The EvAAL competition is developed as a project under the AALOA association.

The main objective of the competitions organized by EvAAL is to enable the comparison of different AAL solutions, by establishing suitable benchmarks and evaluation metrics that will be progressively refined and improved in the years. In particular, EvAAL will focus not only on comparison of algorithms, but also of cost, deployment effort, time and costs, etc.

EvAAL's objective relies on offering to researchers an arena where to try, test and experiment not only AAL solutions but also benchmarks and evaluation methods. To this purpose, EvAAL is open to all issues related to the test environment (living laboratories vs. into the wild), to the benchmarking (automatic vs. based on users' evaluations), to the tools supporting the competition etc. The outcome would be a toolkit of techniques from which system builders can draw. Making these techniques open, available, and easy to use will enable comparative evaluation between similar components across systems and, in the end, of whole AAL systems.

The core system functionalities that we will initially consider are:

1. Sensing: covers the aspects of collecting any kind of information from any relevant place (in-/on-body, in-/on-appliance, etc.) or environment (home, outdoor, vehicles, public spaces, etc.). Information may be a simple piece of data (for example the temperature in a room), or data aggregate (for example the position of a user).
   2. Reasoning: focuses on aggregating, processing and analyzing data in order to either infer new data or deduce actions to be performed within different and possibly cross-connected spaces (body, home, vehicle, public spaces)
2. Acting: concerns the automatic control of the environment through actuators affecting the physical world or by means of other services whose effects might be limited to the virtual realm. Control can be local or remote, in real time or off-line.
3. Communicating: covers the communications issues of data flows among sensors, reasoning systems, and actuators, where all these components can be connected dynamically, in mobility and in arbitrary spaces.
4. Interacting: involves the explicit interaction between human users and systems and services embedded in intelligent spaces by means of personalized multi-modal interfaces, possibly across multiple spaces.

Ultimately, the EvAAL competition goal is to contribute to the AAL disciplines in the same way as other competitions have contributed to their respective areas. In this respect, EvAAL takes inspirations from successful competitions such as the Trading Agent Competition3 (TAC) and DARPA Grand Challenge4, helping creating a scientific community around methods for evaluating AAL systems and methods, and fostering the dialogue between the competitors and therefore the "growing" of the AAL ecosystem.

For more information about this good practice, please visit: http://evaal.aaloa.org

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,5	**3,5**	**3,5**	**4**	**4**	**4,5**
Note: EvAAL was evaluated by two network members that pointed out that this case is suitable for being undertaken and used in various contexts even if practical examples of comparisons of different AAL solutions have not been provided. Recognition: Yes. This case is considered one of the most relevant competitions with the AAL sector due to its objective of creating benchmarks for the evaluation and comparison of AAL systems.					

3.6 Fit as a Fiddle – ICT for digital later life well being (AgeUK)

Age UK is a charity organization working to improve later life for everyone by providing life-enhancing services and vital support. Age UK offers information and advice, campaigns, products, training and research.

In the framework of its activities, Age UK is promoting digital inclusion of older persons national wide at the UK, by promoting a set of projects aimed at supporting people to enjoy a better later life. Digital inclusion also helps to support independence, reduce social isolation, and encourage lifelong learning as a natural part of active ageing.

This initiative includes a comprehensive digital inclusion campaign, involving i) Itea and Biscuits Week, ii) Myfriends Online week, iii) Internet Champion of the Year competition and iv) IT Volunteering, among other initiatives.

Age UK also develops a set of learning resources supporting older persons to make the most of the internet. These useful and free resources covers different subjects, such as: Our A-Z of computing; How to set up an email account; Make cheap calls over the internet with Skype; Join facebook; Join twitter; Share your photos with flickr, etc.

Additionally, information about computer training courses offered by the UK online centers to older people is provided across the country. Avoiding jargon and explaining things clearly in plain English, these courses offer easy-to-follow training with the aim that as many of participants as possible ultimately enjoy the advantages of computers and the Internet

By supporting the utilization of technology and the Internet by older persons the Age UK initiatives are highly contributing to foster social inclusion of elderly persons by offering them resources and tools to keep them engaged and more active. New ICT-based technologies and the Internet have a tremendous potential to enable older people to live independent, engaged and connected lives.

At the same time, older people are the fastest growing sector of Internet users and this trend is likely to continue. Recent data shows that the percentage of individuals using the Internet continues to grow worldwide and by end 2011 2.3 billion people were online1. In fact, the number of Internet users in the developing countries doubled between 2007 and 2011 and in EU-27, 40% of users with more than 64 years are using internet.

The Age UK initiatives intents to engage older people in the “digital world” allowing them to not only stay in a communication mode, but also to be able to use the large number of government and commercial services that are now available online.

Using ICT and the Internet will also contribute to keep elderly people on the ball – mentally sharp and sociable. In fact, with their engagement in the digital era it’s expected to have more motivated persons by reacquiring the sense of independence and self-esteem. Besides it can stimulate the preservation of cognitive skills such as attention skills, memory, logic and reasoning, auditory and visual processing, processing speed, etc.

These initiatives are having a greater impact in the British society. As example, the Itea and Biscuits Week 2011 reached around 7,000 people in later life that were introduced to the benefits of digital technologies during hands-on taster and information sessions. Besides, over 13,000 copies of Age UK information and advice booklets on how to make the most of the internet and internet security were

distributed and 92% of people were interested in learning more about technology after attending events during the week.

The Myfriends Online Week launched in 2009 has already directly helped more than 7,500 older people to enjoy the social benefits of being online.

For more information about this good practice, please visit: http://www.ageuk.org.uk

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,8	**4,5**	**4**	**4**	**3,8**	**4,8**
Note: Fit as a Fiddle was evaluated by four network members that considered the case to be addressing of later life with interesting initiatives, informal share, awards, online empowerment, elderly volunteers. Recognition: No.					

3.7 Internet Home Care Service "Security Button"

Internet home care service "Security Button" is offering remote care of elderly and physically less able people, providing the care and reassurance needed to allow them to remain living in their own homes in Latvia. The service is implemented and maintained by the Samaritan Association of Latvia (LSA).

Security Button is specifically different from telemedicine. It refers to the idea of enabling people to remain independent in their own homes by providing person-centered technologies to support the individual and their carers.

Security Button service uses fixed telephone with a connection to a monitoring centre through which the user can raise an alarm, as well there can be provided also other services such as reminders about medicine, etc. There are available also technologically more advanced services by using of sensors, whereby a range of potential risks can be monitored. These include falls, as well as environmental changes in the home such as floods, fire and gas leaks. Carers of people with dementia may be alerted if the person leaves the house or other defined area. When a sensor is activated it sends a radio signal to a central unit in the user's home, which then automatically calls a 24-hour monitoring centre where trained operators can take appropriate action, whether it be contacting a local key holder, doctor or the emergency services.

By improving the effectiveness of the services provision, increasing available services (security buttons, transmitters),as well as the ability to program the device for individual needs and the development of particular services, the safety button enables a person to live in their homes safely and properly.

Security Button is available not only in the largest city of Latvia – Riga, but also in other cities, such as Ventspils, Daugavpils, Jelgava, Ikskile, Kuldiga, Smiltene, Sigulda, etc.

For more information about this good practice, please visit:
http://www.samariesi.lv/en/pakalpojumi/dro%C5%A1%C4%ABbas-poga/dro%C5%A1%C4%ABbas-poga

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,5	**4**	**4**	**4**	**4,5**	**4**
Note: Security Button was evaluated by two network members that stressed that given the mobile infrastructure and with agreements with local fire or care services the system could be easily replicated to other regions. Recognition: Yes. This service is being adopted in more than six cities in Latvia.					

3.8 Just Checking

Just Checking is a telecare system developed in the UK with the support of UK government R&D grants. Telecare consists on delivering health and social care (HSC) to individuals within the home or wider community, with the support of devices enabled by information and communication technologies1. The use of safety equipment in telecare is a particular growth area because it has the potential to reduce the need for supervision, which is labour intensive and high costly.

This system allows performing an electronic monitoring of a person requiring no input from him/her. Just Checking monitors the movements of a person in their home and provides a online chart reporting activity to caregivers' professionals or familiars. Thus, the system also helps the person monitored to live independently at home with no physic presence of another person. One can't be independent if not leaving at his/her own premises managing their daily activities.

Maintaining independence despite cognitive impairment is a high priority, not only for the individuals and families affected, but also for statutory providers of HSC. In fact, HSC policy is moving to the principle of maintain individuals in their own homes as far as possible, to avoid a costly and disruptive move into residential or nursing care.

Caregivers' professionals use the system for assessment and planning care to provide. Just Checking highlights what a person is able to do for themselves in the familiarity of their own home, and the effect of care services. It allows to monitor progresses along time and to adjust the care support provided as well as to readapt the intervention planned. It's used for people with dementia or memory problems, and adults with learning disabilities. Families use it to 'just check' that a family member is following their usual pattern of life, without intruding or undermining their independence. It provides a real insight, so that you understand how best to offer support, and when to make social rather than 'checking' visits. Currently 150 of the 206 UK local authorities are using use Just Checking for assessment and care planning, and thousands of professionals and family users log on each day.

In an evaluation conducted by Justine Schneider2, it was concluded that the impact of this system on the work of the staff interviewed was overwhelmingly positive, in various respects. Most felt better informed and able to make more relevant decisions about appropriate services with the system than without it. The staff interviewed felt that the value of Just Checking lay in the quality of the information it provided to support all the other information brought to bear on the assessment and care planning process.

The main outcomes and advantages of using this system as the possibility of:

i) Adjust care packages;
ii) Reassure people;
iii) Understand patterns of behaviour;
iv) Keep persons more comfortable and independently at their homes;
v) Reduce costs and work load associated to the supervision of adults.

In short, Just Checking is an ICT cost effective solution providing an answer to a very modern-day and growing problem: support adequately vulnerable persons, without taking over their lives and with at reduces costs.

For more information about this good practice, please visit: http://www.justchecking.co.uk

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	**4,3**	**3,3**	**3,7**	**4**	**4,3**
Note: Just Checking was evaluated by three network members. Recognition: Yes. Over one hundred local authorities in the UK are using this practice for assessment and care planning.					

3.9 Long Lasting Memories

The Long Lasting Memories - LLM service was designed for use by elderly people living at home, visiting day care centres in their community, or in a rehabilitation clinic or hospital, providing simple, user-friendly operation and measurable physical and cognitive benefits. Though these three types of environments differ significantly, they can all utilize the LLM platform. Case examples are described in the respective sections:

- Independent Living at Home
- Elderly Day Care Centres
- Clinics for the Elderly

In specific, Long Lasting Memories (LLM) implemented an integrated ICT platform which combines state-of-the-art cognitive exercises with physical activity in the framework of an advanced ambient assisted living environment, while respecting ethical and legal boundaries. By combining cognitive exercises and physical activity LLM delivered an effective countermeasure against age-related cognitive decline, as well as and cognitive impairment seen in the early stages of degenerative brain diseases, thus actively improving the quality of life of the elderly and significantly prolonging the time they can remain independent at home

The LLM project run from June 2009 to March 2012. During the project, the LLM service was tested in real life situations in order to consolidate requirements and validate functionality of the solution. To achieve consistency of requirements and specifications across the whole value chain, the consortium contained a multidisciplinary team of partners encompassing a broad spectrum, from technology development to service providers, and including public authorities from each country that have responsibilities in the relevant area of care or supply of services.

Four consecutive rounds of testing took place in 5 EU Member countries (Austria, France, Greece, Spain, and the Cyprus) for a period of 15 months, thus aiming for a wide impact on the entire Union. Effective cooperation of public authorities and private institutions will be pursued through extensive dissemination activities as an effort to promote a business model based on public-private-partnership.

Testing focused upon elderly volunteers who were screened and monitored throughout the course of the trials to provide high quality data quantifying the results of the LLM solution. In addition, the testing participants provided feedback to help improve the solution. Testing was conducted in accordance with relevant regulations for the protection of the participants; all test protocols will utilise good ethical practices and comply with European and national legislation. Testing participants, as well as end users of the service after testing was completed, included:

- People living at their houses, utilising the LLM monitoring environment and training services (“At Home” installation).
- People visiting day care centres, utilising a centralised monitoring environment and using the training components as well (“Day care centre” installations).
- People being hospitalised in clinical centres and hospitals, utilising a centralised monitoring environment, while following the cognitive training and using the physical training component as complementary to their physiotherapy sessions (“Hospital” installations).

Training with the LLM program made 94% of the participants feel mostly positive (they felt it was fun, they liked it, they felt cheerful after training with it, they felt refreshed and calm). 95% of participants believed that exercising through LLM was beneficial for them, most felt LLM was amusing and they enjoyed their sessions with it and LLM met their expectations. The majority of participants felt quite satisfied with LLM.

For more information about this good practice, please visit: http://www.longlastingmemories.eu

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4,3	**4**	**4**	**4**	**4**	**4,3**
Note: Long Lasting Memories was evaluated by three network members. Recognition: No.					

3.10 OneCare Service

OneCare is an Optimus innovative service released on February 2013 that allows the detection of risk situations and the location and distance monitoring of people with special needs, in particular, elderly. Specially designed for tracking and monitoring of seniors, particularly when they live alone, OneCare has a wide range of applicability, particularly for professionals in the course of work in isolated areas, or practicing sports in the open countryside, such as hunting, climbing, trekking or mountain biking.

This solution is equipped with a sensor for falls detection, a panic button to request aid and GPS location. It lets you communicate by voice and messaging. OneCare -Safe is based on the regular use of a small device, which through the Optimus mobile network to generate alarms with information about his location.

The service provides rapid relief to the user (if you suffer a fall, for example) by family members and health professionals, it allows continuous monitoring of the welfare of the user and ensures greater confidence and calm even when the user is living alone or away from home. Also, it allows the user to remain in its own home with comfort, autonomy and independence in daily tasks and provides higher quality of life for the user and respective families

This solution allows monitoring for fire departments, nursing homes, clinics, other health professionals or family members of persons in need of monitoring.

Since July 2013, the OneCare service is already in operation in two Portuguese fire brigades, allowing remote assistance to more than 200 seniors.

For more information about this good practice, please visit:
http://www.optimus.pt/empresas/corporate/solucoes-empresariais/maquinas/idosos

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	5	4	4	4	5
Note: OneCare Service was evaluated by two network members that stressed that given the mobile infrastructure and with agreements with local fire or care services the system could be easily replicated to other regions. Recognition: Yes. This solution is being used by two Portuguese fire brigades, allowing remote assistance to more than two hundred seniors.					

3.11 Ristomed – New e-Services for a Dietary Approach to the Elderly

Ristomed (New e-Services for a dietary approach to the elderly) wants to improve living conditions for the ageing population by combining healthy eating habits, new technologies and nutraceutical (food products that provide medical or health benefits). Thus, the goal of Ristomed is to develop a new e-Health service for Elderly People that will enable the production of an innovative diet model and Biotech nutraceuticals specifically designed and efficaciously delivered, encouraging a healthier way of life and introducing a successful ageing, managing the healthy food intake of elderly people in order to increase quality of life and to prevent diseases related to the ageing process.

Ristomed e-Health Dietary Services approach is based on the management of the (healthy) food intake as a crucial step to control and balance nutrients (including nutraceutical compounds) and environmental stress in order to increase the quality of life and prevent diseases related to the ageing process.

The interaction between researchers (Universities) and industrial partners (SMEs, biotech companies) was a crucial aspect of Ristomed, taking into account the collaboration efforts required from ICT experts, nutritionists, immunologists, gastroenterologists, geriatric clinicians and experts in marketing and cosmetics. The synergic approach, which brought all stakeholders together in delivering creative and novel solutions for the prevention of three age-related disease (inflammation, oxidative stress and gut microbiota) was one of the project's innovation.

The research consortium carried out studies and clinical trials to define the requirements of a proper diet and its impact on the areas influencing the ageing process. On the strength of the research outcome, Ristomed aimed to improve the diet of elderly people by attempting to control and balance nutrients and nutraceutical compounds (the majority of nutraceutical SMEs have limited access to the information required to identify the nutritional impact of their product; what is more, nutraceuticals are difficult to customize to the needs of a specific market user such as an elderly people, and it is a slow growth and fragmented market.

To meet these challenges, Voxnet developed an e-Health service in the form of a web software platform that integrates nutraceuticals – purposely designed and supplied to ageing and elderly people – into biotech/ICT strategies for coping with the complexity of specific nutritional requirements. The platform is key to both the project and three actors it tailors to: doctors or nutritionists, healthcare organizations and the elderly which are its end users. The online solution delivers recipes and procedures containing nutraceuticals and probiotics specifically catered to elderly people and the organisations that work with them.

The key added value of Ristomed is the e-Health service which enables the SMEs participants to penetrate the market with the production of innovative and personalized diet model. The competitiveness of the SMEs participants is expected to increase by bringing nutraceuticals to the market as well as by introducing the integrated web solution to better manage the dietary and nutritional needs of elderly people with the intention of preventing the age-related diseases.

For more information about this good practice, please visit: http://www.ristomed.eu

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4,3	**4**	**4**	**3,3**	**3,7**	**4**
Note: RISTOMED was evaluated by three network members who highlighted the practice's good achievements and impact, such as: Knowledge about nutraceutical compounds able to prevent oxidative stress, inflammation status and gut microbiota alteration in European Elderly People (Age 65 – 85). Other noticeable aspects of Ristomed remarked in the evaluation were: identification of Elderly People (Responder – Non Responder) to the personalised diet; improvement of the synergy among SMEs and industry; ensuring a win/win situation for the European Commission, for industry and for the ageing citizens of Europe. Recognition: No.					

3.12 Sleepio

Created by Professor Colin Espie, Sleepio is an online sleep improvement programme in six steps, clinically-proven to help overcome even long term poor sleep – without pills or potions! The Sleepio course is an immersive online sleep improvement programme based on proven Cognitive Behavioural Therapy techniques which has been developed and evaluated to the highest scientific standards.

Cognitive Behavioural Therapy trains people to use techniques that address the mental (or cognitive) factors associated with insomnia, such as the 'racing mind', and to overcome the worry and other negative emotions that accompany the experience of being unable to sleep. CBT is what we call an 'evidence-based therapy', meaning that it has been shown to be effective in controlled scientific clinical studies. The earliest research in fact goes back more than 30 years, so several decades of evidence has accumulated to show that CBT can teach people how to fall asleep faster, stay asleep and feel better during the day.

'Randomised Controlled Trials' (or RCTs) are the gold standard method for evaluating whether a treatment is effective. Participants are randomly allocated to receive the treatment in question, no treatment or, in some cases, a placebo (ie. false but convincing) treatment. By comparing differences between groups we can confidently assess whether the real treatment truly works, and confirm that any improvements are not down to chance, some other external factor such as changes in the weather, or to people just believing they will get better. CBT for insomnia has been assessed in over 100 RCTs, and the results show that on average 70% of people with even very long term poor sleep obtain lasting benefit from the treatment.

Results show that the Sleepio course helped around 75% of people with persistent sleep problems to improve their sleep to healthy levels, compared with the placebo and no treatment conditions which had relatively little impact. In research trials it is usual to report average scores, and these averages of course include those who benefitted least as well as those who saw great improvements. Nonetheless, an average within the Sleepio group it has been registered a reduction in time taken to fall asleep of 50% and in time spent awake during the night of 60%. Also, people using Sleepio rated their quality of sleep as having more than doubled (a 115% increase) and their energy and daytime wellbeing levels increased by 58% during the daytime. Importantly, these improvements with Sleepio were found to be lasting because effects were maintained at our two month follow up point.

For more information about this good practice, please visit: https://www.sleepio.com

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,3	**3,3**	**3,7**	**3,7**	**3**	**3,7**
Note: Sleepio was evaluated by two network members that pointed out that this case seems rather innovative when compared with the present market and R&D projects. Recognition: No.					

4 Good Practices on eHealth Technological Applications

The good practices included in the category of eHealth Technological Applications present cases in which the main focus are ICT-based tools, devices and platforms to support healthcare and ageing activities. Twenty-two good practices were included in this category, as listed in Table 3. In the following sections, each good practice will be briefly presented, as well as the evaluation received from the members.

Table 3. Good Practices on eHealth Technological Applications

Good Practice	Location
AFDPHE – Neonatal Screening	France
Ankira	Portugal
CANTABmobile	United Kingdom
Datapen System – the Digital Pen	Italy
DITIS - Network for Medical Collaboration	Cyprus
EDAO Service	France
Elder Spaces	Greece, Hungary, Germany and Italy
ELDERGAMES	Spain, Norway, United Kingdom, Finland, Austria and Italy
Entrena tu Mente	Spain
GIRAFF	Europe
iCardea - An Intelligent Platform for Personalized Remote Monitoring of the Cardiac Patients with Electronic Implant Devices	Turkey, Germany, Austria, Greece, and Spain
InCASA – Integrated Network for Completely Assisted Senior Citizen's Autonomy	Italy, United Kingdom, Sweden, Switzerland, France, Greece, Germany and Spain
Internet Buttons	United Kingdom, Ireland, The Netherlands and Poland
MobileSage - Situated Adaptive Guidance for the Mobile Elderly	Norway, Romania and Spain
onAll	Portugal
OsteoLink	Switzerland, Europe
Parkinson Treatment Rehabilitation Platform	Spain and Portugal,
PARKINSONNET	Spain
Retmarker	Portugal
Speaky PC Facile	Italy
SweetAge	Italy
WaveGuard EEG cap	The Netherlands

4.1 AFDPHE – Neonatal Screening

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Newborn screening is a blood test that can detect five rare diseases through a levy on the newborn to 3 days of life. This screening can quickly set up treatment and care for a child with a disease

The AFDPHE is in charge of neonatal screening for five rare and serious diseases without external clinical signs present at birth. Its mission is to organize, in France, screening for these diseases in all newborns and ensure effective therapeutic management of patients identified.

AFDPHE interventions contribute to ensuring the quality of the screening program. They include:

- completeness of screening all newborns;
- validation of the methodology for each assay;
- verification of the quality of care of children screened and quality monitoring;
- organization of information for families and health professionals;
- ethical reflection and scientific monitoring of all issues related to newborn screening;
- coordinating the network of professionals in charge of screening;
- monitoring at national level and compilation of statistics;
- relations with the government.

Since 1972, nearly 30 million infants received one or more screens. Among them, by 31 December 2011, 16470 newborns were recognized with a five screened and treated diseases.

For more information about this good practice, please visit: http://www.afdphe.org

Evaluation by the* Ageing*Well Network Members:

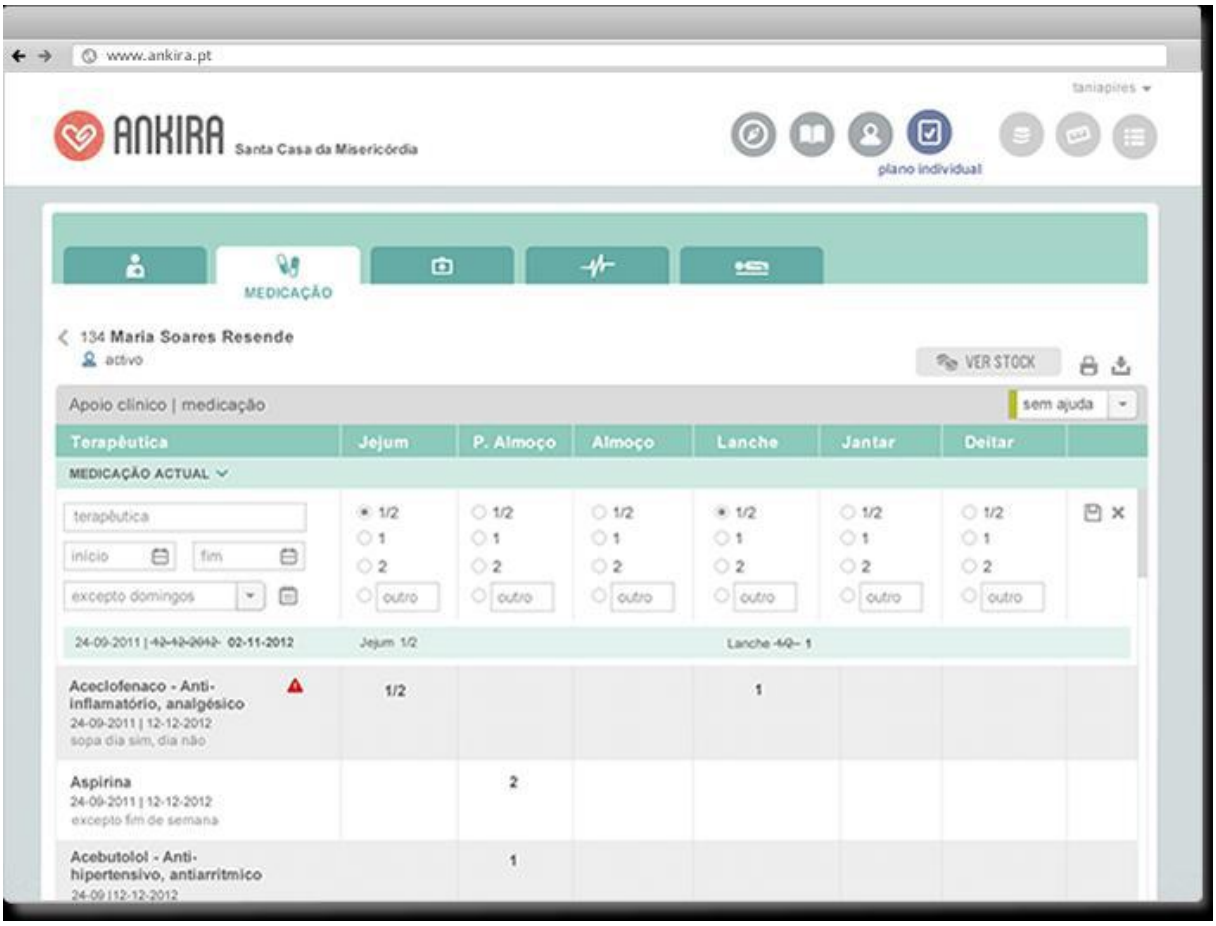
Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	**4,5**	**4**	**3,5**	**4,5**	**4,5**
Note: AFDPHE was evaluated by two network members that highlighted as positive the fact of the case addressing specific challenges (rare neonatal diseases) and its extensive network of test centers and labs across the region/country. Recognition: Yes. This technological application has been used to undertake screens in over thirty million newborn.					

4.2 Ankira

Ankira® is an innovative platform developed by Metatheke Software to help optimize the planning, control and optimization of care in nursing homes, day care centers and other senior facilities.

Easy to use and with a simple and intuitive interface, the platform is customizable and adaptable to the needs of each institution. Some of the main features of Ankira® are:

- Calendars, alerts and other tools to help plan activities of daily living;
- Automatic generation of service orders;
- Statistics and management indicators;
- Configuration of staff access permissions;
- Accessible from any location with no software to install.



The solution is completely web based and provided as a cloud service, thus freeing these institutions from IT administration tasks. In June 2013, the Ankira® service was successfully configured for three senior facilities with distinct characteristics and needs.

For more information about this good practice, please visit: http://ankira.pt/en

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
1,7	**3,7**	**3**	**3**	**3,3**	**4,7**
Note: Ankira was evaluated by three network members that pointed out that this case is relevant and reportedly effective for the needs of senior health and care-providing institutions; although the platform is similar to other already in the market either developed in EU funded projects. Recognition: No.					

4.3 CANTABmobile

Declining memory may be part of normal aging, an early sign of dementia, or caused by other, potentially reversible medical conditions. CANTABmobile is a new medical software for iPad providing a rapid and sensitive assessment that can help in detecting the early signs of memory impairment. The service is completed by a short depression screen and an assessment of activities of daily living for those whose memory does appear to be a problem. CANTABmobile offers an easy to use test, running on an iPad and lasting 10 minutes, which gives the doctor a quick accurate assessment of a patient's memory and whether it is within normal range, in several different languages. It instantly compares performance to expected level, adjusting for education, age, and gender. A report is automatically generated which clearly indicates how to proceed: investigate, monitor, or reassure.

Certified as a Class II medical device, CANTABmobile is based on the scientifically validated PAL test of episodic memory described in over 100 published clinical papers. The test takes ten minutes for most patients, and the results are instantly compared to a large normative database, with a clear traffic-light output for the clinician to consider when deciding next steps. It's a culturally neutral pictorial test, with voice-over instructions in 20 languages that can confidently be administered by clinic staffwithout the need for specialised training.

Cambridge Cognition launched CANTABmobile™ in May 2012 and currently has 166 licensed users across 16 customers including 6 CCGs, as well as private healthcare groups, a pharmacy chain and a customer in Germany, the Company's first sale outside of the UK. Several trials with CCGs are expected to convert into license sales in the coming months.

For more information about this good practice, please visit: http://www.cantabmobile.com

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	**4,5**	**4**	**4**	**4,5**	**4,5**
Note: CANTABmobile was evaluated by two network members and considered as a practice able to respond to an actual identified need using a friendly interface. Recognition: Yes. This solution has over one hundred and sixty licensed users in the United Kingdom, and has also been "exported" to Germany.					

4.4 Datapen System – the Digital Pen

Datapen was founded as a result of a partnership agreement between Pragma Systems and Anoto AB to integrate "Anoto Pen & Paper" technology into their applications. It is the ideal system for those who do not want to completely convert to a digital world and who, at the same time, aspire to a more efficient technology. It is the solution that allows you to process handwritten information and transmit it in real time in a database, having immediate access to the digitization of complete text and images.

The prototype for this innovation is an "intelligent pen," equipped with an infrared camera that allows you to fill out the modules and record all the handwritten information. Thanks to a USB port you can transmit data to the PC. In addition, the software can keep record of all digitized information and store it in the database. Furthermore, as an additional feature, the phone's Bluetooth connection can send the handwritten information in real-time, without even being in the office!

This is not simply a market-changing trend—it is a permanent digital solution. The pen's greatest strength is its flexibility; you can adapt it to several electronic form factors. Particularly suitable in the circumstances of urgency and mobility, Datapen has already found great success in the health sector. Already adopted for use in medical emergencies, hospitals, and house treatments, it is now ready to be released in other markets.

Datapen is cost-effective and efficient. This new technology eliminates the cost of scanners, time-consuming manual data entry, the storage of physical documents, and the time it takes to upload documents. In addition, a hard copy is maintained with original signatures, allowing the documents to retain important legal value. All changes and approvals are tracked using digital signatures, allowing information and files to be traced to a specific pen or user. Savings, efficiency, safety, simplicity—all this thanks to an "almost" normal pen and very clever software.

Thanks to its versatility and simplicity, Datapen can be easily adopted in any number of areas, from Urgent health care (118) to Emergency medical service, Medical case history, Domiciliary care attendant, Contracts management and automation and many others.

In regards to Active Ageing, Datapen can be used for Elder people home health evaluation by social assistants/doctors/healthcare assistants, Grocery shopping personalised, and Health elder people self-evaluation.

For more information about this good practice, please visit: http://www.datapen.eu/en

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**3,3**	**3,3**	**3**	**4**	**4**
Note: Datapen was evaluated by three network members. Recognition: No.					

4.5 DITIS - Network for Medical Collaboration

DITIS is a system that supports the dynamic creation, management and co-ordination of virtual collaborative medical teams, for the continuous treatment of patients with chronic diseases at home, and specialist healthcare centres. Hospital based treatments for chronic patients are limited, often demand-based for short periods of time and mainly for acute incidents. As it is not possible for the health care team to be physically present next to the patient at all times, or at any time physically together, whilst the patient is undergoing treatment at home or work, a principal aim is to overcome the difficulty of coordination and communication, through DITIS (ΔΙΤΗΣ stands for: Network for Medical Collaboration).

DITIS is an Internet (web) based Group Collaboration system with secure fixed and mobile connectivity. It includes software for collaborative work, an intelligent interface for uniform access to a common database and a Group Collaboration tool for both fixed and mobile computing units. The collaboration platform is based on identified roles and scenarios of collaboration, analysed using UML.

The DITIS Framework is a collection of health care services that supports the collaborative patient management via multi-modal interface. DITIS uses a five-layered architecture.

The patient record (PMS, EHR) is the foundation of the DITIS Framework. As it can be seen in figure that follows, it is composed of various modules that support the recording and processing of different information concerning the patient. This information includes the patient's demographics, medication, exams, diaries and more.

The main services that access directly the patient record layer are the Collaboration, the Messaging and Alert Service. The Collaboration Service is responsible for the Virtual Healthcare Team management, and implementation of organization specific requirements and policies. In order to achieve this, the Collaboration Service maintains a collaboration engine which conserves the rules and policies implemented in the system. The Alert Service is responsible for alerting both health care professionals and patients about future appointments, medication alerts, and other. Both the collaboration and alert service are linked to the messaging service as they require messages in order to inform the user or the system about the status and actions that may be required for certain events. The Messaging Service is responsible for delivering messages to the users of DITIS. Messages are structured data stored in the system. In some cases SMS notifications are used in conjunction with messages routed by the system DITIS to increase the chance of alerting the user to specific events or actions, dependant on the importance of the event or action.

In concrete, this system provides:

I. Better Quality of Life for both the patient by giving him/her the opportunity to stay at home in the warmth of their own friendly environment, feeling safe and secure and his/her family by allowing them to be virtually with the patient to support them.

II. Better Quality of Life for the healthcare professionals by allowing them a more flexible work load and continues care provision (24/7 access to patient information and tools for decision making) since in case of need for hospitalization better planning can be achieved as well as better manage scarce resources, by coordinating the admission and discharge with the cooperation of the home-care team. This results in the provision of better care and a reduction of number of visits to health professionals.

III. Substantial home care economic savings since with the homecare services provided the expensive costs estimates for Hospitalization, Hospice care, Outpatient treatment, Palliative Care Nurse visits to the hospital, visits to specialists, travelling and time costs for patient and family, etc., can be avoided.

Moreover, DITIS provides rich functionality, highly adaptable user interface, secure communication, open and highly interoperable system and enables increased efficiencies that can translate in high quality service and lower costs

The system was initiated in 1999 and it is currently supporting the activities of the Cyprus Association of Cancer Patients and Friends (PASYKAF) who offer homecare services for cancer patients in Cyprus. Twenty health-care professionals were trained to use the system, caring for over 1000 patients per year. DITIS is being extended to collaborate with other cancer health care entities, as e.g., the Bank of Cyprus Oncology Centre.

For more information about this good practice, please visit: http://www.ditis.ucy.ac.cy

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,8	**4**	**3,5**	**3,5**	**4**	**4**
Note: DITIS was evaluated by four network members that pointed out that this case seems rather innovative when compared with the present market and R&D projects. Recognition: Yes. This solution is being used by the Cyprus Association of Cancer Patients and Friends (PASYKAF) allowing the provision of care services to over one thousand patient per year.					

4.6 EDAO Service

France is home to over 860 000 people with Alzheimer's and 35.6 million people in the world are affected by the disease. All these people have families who are looking for solutions to support their loved ones in the best possible conditions, whether they are still living at home or receiving care in a specialized facility.

EDAO is the first video vigilance service that watches over elderly and dependant people. This unique system is based on behavioural analysis software associated with a video link system. Should EDAO detect an unusual situation, like a fall or a dangerous situation, the EDAO team will alert the person's family or the emergency services in an average of less than 3 minutes.

EDAO may be installed at home or in institutions, nursing homes, hospitals and senior citizen homes. Many families and nearly 30 institutions across France have chosen to rely on EDAO to provide better care for the elderly. Today, more than 1,200 rooms are equipped with the EDAO system, which accounts for 450,000 hours of vigilance each month. EDAO enables natural caregivers to enjoy a few hours of respite each day – a precious time for whoever takes care of a loved one with such a serious pathology.

EDAO is the only system suited for people with Alzheimer's disease because, in order for it to work, the latter are not required to take any particular action, like remembering to wear their bracelets, asking for help, pressing a button, etc. The family caregiver can switch the system on whenever the situation calls for it, typically when the dependent person is alone in the house. When it's on, the person's behaviour is analyzed by the computer server. The images are encrypted and can only be seen in the event of an alarm. To respect the patient's privacy, it is only at this point that the video connection is established in order to ensure that a referent person or the emergency services are alerted.

While financial resources are often limited and the requirements of families and regulators are made increasingly formal, EDAO enables institutions to meet these new challenges by:

- ensuring ongoing safety of residents by detecting risk situations
- alerting staff immediately in case of problems in order to ensure support
- freeing up time for the health care team so that they can better target interventions and be more available for patient care

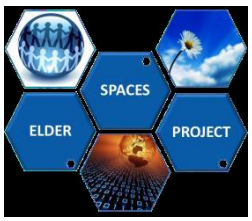
Moreover, EDAO can easily be adapted to any kind of facilities and provides secure rooms – such as common areas -, many institutions have chosen to install the device. In France, 1,200 rooms in residential care facilities for seniors are now equipped with EDAO.

For more information about this good practice, please visit: http://www.edao.com

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4,5	**4,5**	**4**	**4**	**4**	**5**
Note: EDAO was evaluated by two network members who highlighted that evaluation was made based on the available written information, as they did not had the opportunity to test the system. Recognition: Yes. Over one thousand French residential care facilities for senior are equipped with this solution.					

4.7 Elder Spaces



The main goal of the Elder-Spaces project is to introduce a radical shift on the way social networking is delivered to and used by older adults (typically healthy individuals aged 55+), with a view to stimulate seniors to join social networks and accordingly benefit in terms of their social activation, active living and overall quality of life.

Elder-Spaces will develop and deliver a novel social networking platform, which will be customized to the needs and preferences of older adults. On top of this networking platform the project will develop a number of applications for building elderly communities, boosting social activation (including motivating face-to-face activities), intergeneration activities, as well as management and maintenance of social relationships and graphs. Elder-Spaces will build upon the success of popular networking tools such as Facebook.com and myspace.com. In practice Elder-Spaces will be built over the iWiW social network, which is operated by partner ORIGO. Also, selected applications will be built in the form of Web2.0 applications over existing social networks such as Facebook. Given that the Elder-Spaces platform will capitalize on the capabilities of other social networks, in order to benefit from their wealth of information, knowledge and millions of user profiles. Note however that the term Elder-Spaces platform, refers to the enhanced social networking infrastructure, which will be built over the iWiW social network.

Overall, Elder-Spaces will make sure that the platform appeals to people who are not familiar with technology without making users technophobes; on the contrary Elder-Spaces will be proposed as a means to optimizing quality of life (e.g., more recreation opportunities, improved healthcare and better mobility).

In specific, Elder-Spaces will provide a range of applications (over the project's social networking platform) tailored to the needs of older user groups based on: appropriate/customized:

- Appropriate data sets, semantics and information that is pertinent and of interest to the older people (i.e. data for older individuals).
- Customized social networking functionalities (based on the above datasets), such as groups, games and training programmes that will be designed especially for user groups of older people.
- Appropriate older people friendly user interfaces (e.g., large default fonts and buttons, large audio volumes, use of multimedia), such as ergonomic devices and interaction modalities (such as multi-touch screens and interactive surfaces.

All applications are delivered in a human-centric manner. Face-to-face contacts remain important and Elder-Spaces acts as a facilitator to such contacts. Also, working life is of primary importance, since it is a decisive factor affecting older people's social life and Elder-Spaces acts as a facilitator and promoter of the "older worker" concept. Elderly users participate in the evolution of the platform.

For more information about this good practice, please visit: http://www.elderspaces.eu

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,8	**3,8**	**3,3**	**3,7**	**3,5**	**4,5**
Note: Elder Spaces was evaluated by three network members. Recognition: No.					

4.8 ELDERGAMES

In order for the ElderGames' applications to have the highest therapeutic value, an in-depth study and selection of the key variables which impact the quality of life, with particular attention to cognitive skills for the elderly user was carried out in the first phase of the work plan. Furthermore, an in-depth analysis of different approaches to assessing the impact of the ElderGames technology on the quality of life was carried out and the best monitoring method chosen. The key "generic" objective of project ElderGames is to develop IST-based games using advanced visualisation and interaction interfaces with high preventive, therapeutic value that will allow elderly people to enjoy new ways of leisure and entertainment while improving cognitive, functional and social skills. The main goals of the project are to:

a) Promote the e-inclusion of elderly people by means of play activity,

b) Contribute to an overall improvement of the abilities impacting Quality of Life through play, with particular emphasis on cognitive skills.

c) Support communication between elderly citizens and their families across Europe by means of play proposals which will allow them to share their experiences by means of an alternative and augmentative communication system capable of overcoming linguistic barriers and,

d) Provide experts specialising in elderly care and supervision with an innovative play application able to monitor variables related to quality of life, especially cognitive skills.

In order to overcome the linguistic barriers which could exist between users due to different native languages, the project was explored the integration of an alternative, augmentative communication system which allows on-line games and the sharing of life experiences between users from different European countries throughout the activity. The centres, situated in the Norway, UK and Spain, will provide incites as to possible cultural differences from different European regions. This snapshot of European diversity in elderly population helped in the development of the ElderGames application as a flexible cross-cultural play-therapy application Moreover, ElderGames looked closely at the improvement of the system for monitoring the variables related to quality of life, with particular emphasis on cognitive skills, in order to further ensure that ElderGames is an application combining a preventative therapeutic playing application and an augmentative communication system. The most highly-valued aspects of the platform's first version reinforced: its promotion of e-inclusion, its potential as a tool for improving social networks, and its usefulness as a supporting instrument for monitoring cognitive performance. The table's look and the online game functionalities have been very positively assessed. Furthermore, the intergenerational game sessions that have been set up with players of different ages have allowed new and interesting applications of the tool to be demonstrated. The preventative therapy experts involved in the project have had access to the version of the monitoring software has caused much satisfaction among the research team.

The main innovation-related activities to be undertaken in the ElderGames project will be:

- Research on the specific needs of elderly people in creating a motivating environment through an entertainment offer using advanced technologies that will improve and for the first time monitor variables related to the quality of life, with particular emphasis on cognitive skills in old age.

- Research on the adequacy of play in old age regarding the improving of the physical, physic and social and affective health.
- Research on the adaptation of the Information and Communication Technologies for play-related therapeutic intervention among elderly people.
- Research on the use of Mixed Reality technologies by the elderly people and how related applications can be used as innovative play-related-therapeutic tools.

For more information about this good practice, please visit: http://www.eldergames.org

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4,7	**4,7**	**3,7**	**3,7**	**3,3**	**4,3**
Note: ElderGames was evaluated by three network members that pointed out that replication might be possible given that alternative communication system for overcoming the linguistic barriers was developed within the project. Recognition: No.					

4.9 Entrena tu Mente

As a continuation of its commitment to the society and bring forward the elderly means that promote active aging, Caja Duero Foundation has developed the platform “Train your mind” (Entrena tu mente). Train your mind is an innovative tool of great technological and social value that not only facilitates assessment and early detection of cognitive decline in aging but also preventing it by controlled cognitive stimulation.

The aim of this platform is the mental health care of older people, through a series of exercises and activities presented by taking advantage of new technologies such as Digital Terrestrial Television (DTT) and computer. The main activities included in the project are:

- Early detection of mental deterioration.
- Exercises stimulation and training in order to prolong the healthy mental abilities and prevent deterioration.
- Tools of mass communication and information.

Older people from the centers associated to the project, will use the platform Train your mind, with the supervision of professional specialists of the center. To this end, in order to facilitate the use and understanding of the platform, the main services and content can be grouped into two main groups:

- **EVALUATION PLATFORM**: consists of a series of self-tests and analysis tests of mental status of participant based on their results to recommend a series of exercises in different disciplines such as memory, attention and concentration or language.
- **MY COMMUNITY**: complements the front and provides support and support for system users. It consists of information and communication tools such as blogs, forums, consultations, podcast, news, ...

All these services are then grouped in two environments:

- Public environment, accessible to all visitors of the portal.
- Environment private area reserved for users who previously recorded, it is accessible via login / password or smart card use.

The main beneficiaries of "Train your mind" are:

- Elder people who want to maintain their mental activity and prevent a possible deterioration.

- Professionals on aging-related issues, for a better care of elder people in the fields of treatment, investigation and studies

At the moment, “Train your mind” is available in Spanish, in other languages or multilingual if required. Our present challenge it is to have a world-wide promotion and try to find partners working in scientific, old people´s home or welfare fields in order to achieve a vast and solid use of the tool.

For more information about this good practice, please visit:
http://www.fundacioncajaduero.es/tecnologia/teleasistencia_home.aspx

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,3	**3,5**	**2,8**	**3**	**3,3**	**3,8**
Note: Entrena Tu Mente was evaluated by four network members. Recognition: No.					

4.10 GIRAFF

Giraff is a robot on wheels, about the height of an average man, with a tall steel pole for a body and a large video monitor for a head. The Giraff is a mobile telepresence solution that extends the presence of caregivers in elderly persons' homes. It allows caregivers to virtually enter a home over the Internet and conduct a natural visit, moving freely around the home just as if they were physically present. Therefore, Giraff contributes for helping people living at home to stay connected to their world. The Giraff goes to a charging station when not in use and "sleeps" while waiting for the next visit, ensuring the elder privacy and integrity.

At a time when expenses are being squeezed tighter than ever, Giraff can help pensioners live more independently while saving money at the same time. A growing knowledge base of research and economic models show that Giraff can increase the effectiveness of care and reduce costs. It is not often you find such a "win win" in today's tough economic times. And when elderly finally do require full-time care, their transition to a staffed facility often reduces their access to family and friends, thus increasing their isolation and even contributing to the deterioration of their physical health. Placing Giraffs at both transition and permanent care facilities allows family and friends to continue visiting their loved ones as often as they like.

Currently, Giraff is the focal point of two major EU grants:

- "ExCITE" is an AAL project that studies the interaction of elderly and their caregivers via the Giraff in three countries, to gain insight into exactly how it can enrich the quality of life for elderly and help them to live at home longer.
- "Giraff+" is an FP7 project that explores how the Giraff can be part of a larger home system that provides increased levels of care for elderly as their care needs grow over time.

Both projects are heavily focused on trialling this technology not in the lab but in real homes with real elderly and their caregivers. Both projects are producing independent research validating the value of Giraff in elderly care. And as part of the ExCITE project, Giraff is proud to be named the "Most Promising Innovation" of 2011 by the AAL organization at its annual conference in Lecce, Italy. But as proud as the company is of this achievement, it is even more proud to be a part of people's lives, helping them to live independently and with a good quality of life.

For more information about this good practice, please visit: http://www.giraff.org

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
5	4	4	3	4	4
Note: Giraff was evaluated by two network members. Recognition: Yes. Giraff was considered the "Most Promising Innovation" at the AAL annual conference in 2011.					

4.11 iCardea - An Intelligent Platform for Personalized Remote Monitoring of the Cardiac Patients with Electronic Implant Devices

Using the platform developed by the iCARDEA Project, it is now possible to semi-automate the follow-up of CIED patients with context-aware, adaptable computer interpretable clinical guideline models by exposing CIED data through standard interfaces. The computer interpretable guideline models are designed from re-usable building blocks to facilitate personalization of the patient care and follow-up workflow. The CIED data is exposed through standard interfaces based on the HL7, ISO/IEEE 11073 standards and the IHE IDCO Profile. EHR interoperability is achieved by exposing legacy EHR systems through standard HL7 CDA interfaces so that information about patients' medical history such as the non-cardiac conditions denoting contraindications to the proposed therapies can be obtained from the patient EHR data and used in the clinical follow-up workflow. The clinical guidelines semi-automate the care process and hence support medical professionals by automatically assessing the situations of the patients. The patients are also empowered with Personal Health Records (PHR) to enable informed and responsible participation in the process and for their education. Additionally, iCARDEA platform provides comprehensive security and privacy mechanisms and these are all validated in a hospital in Austria (SALK) with CIEDs from two major CIED vendors, namely St. Jude and Medtronic.

The following overall objectives are achieved as a result of iCARDEA R&D Project:

- **Remote monitoring for implantable cardiac devices**: The iCARDEA Project has developed an intelligent platform to semi-automate the follow-up of the CIED patients with adaptable computer interpretable clinical guideline models which access data in EHR data resources, CIED data and PHRs using standard interfaces. In order to create computer interpretable guideline models, firstly clinical guideline definitions are specified with the medical partners as flowchart definitions. Then, these definitions are converted into the machine processable format by using Adaptive Care Planner component from re-usable building blocks. Then these guideline models have been ready to be used as executable clinical workflows which perform the follow-up activities and semi-automate the care process and hence support medical professionals by automatically assessing the situations of the cardiac patients.
- **Integrating remote cardiac monitoring with EHR Systems**: The iCARDEA project has enabled the integration of EHR system with CIED Module to assess patient status better in remote monitoring process. The integration is provided via EHR Interoperability Framework component implementing standard profiles to retrieve patient EHR data from the hospital data sources in an interoperable way.
- **Leveraging the potential of CIEDs as widespread, ambient intelligent devices**: Due to CIEDs' limited processing capabilities restricted by their size, they need to be supported with software running on the servers. Currently, the server side processing is standalone with their custom software and proprietary interfaces. By using international standards provided by CIED Interoperability module, iCARDEA has exposed this information to be used to semi-automate the care and follow-up processes based on computer interpretable clinical guidelines. Furthermore, by using standard interfaces and interoperability utilities provided by iCARDEA CIED module, CIEDs from different manufacturers have become interoperable.

- **Addressing the under-utilization of clinical guidelines because of lack of integration into EHR Systems**: Clinical guidelines can automate the healthcare processes, which need to be achieved as routine follow-ups or remote monitoring of patients with CIEDs. Despite the potential benefits of the clinical guidelines, at the moment they are underutilized in clinical practice due to interoperability problems of healthcare data sources to retrieve data seamlessly from the EHR data sources. The iCARDEA platform has provided EHR interoperability so that information about patients' medical history such as history of non-cardiac conditions; more detailed information about severity of each condition (e.g., record of prior hospitalizations or specifics of therapy for the condition); the medications being taken at the time of spontaneous arrhythmia occurrence or the non-cardiac conditions denoting contraindications to the proposed therapies can be obtained from the patient EHR data in an interoperable way and used in the clinical workflow. There were two major challenges to address related with EHR interoperability: the legacy EHR systems and the interoperability of the code systems used (semantic interoperability). For the EHR legacy system interoperability, iCARDEA has exposed these systems through standard interfaces using HL7 Clinical Document Architecture (CDA). To be able to map different code systems, HL7 Common Terminology Services (CTS) has been developed.
- **Integration of data analysis for the quality of service in health care**: The iCARDEA Data Analysis components support healthcare professionals at hospitals. This aim is addressed by making it easier to access the patient data in a structured and harmonized way (Patient Parameter Monitor-PPM component) and by using long-time-harmonized data acquired over longer periods to generate patient-specific warnings and suggestions based on statistically valid patterns extracted using state-of-the-art data analysis techniques applied to long-time reference case knowledge bases (Data Analysis and Correlation Tool-DACT component).
- **Patient specific adaptive care**: Personal Health Record (PHR) component is built for patients to report observations of daily living, medications, life style and edit their profile. PHR also provides feedback and education to patients. Through the PHR interoperability provided with the IHE Care Management (CM) Profile, patient data can be shared between the iCARDEA components for the patient specific adaptive care in an interoperable way.
- **Validation for effectiveness, privacy, trust and security**: The iCARDEA platform is validated through a pilot validation study in Austria at SALK by demonstrating the cost and time effectiveness, clinical validity and safety with statistical analysis. Comprehensive identity management, trust and privacy mechanisms have been provided through the iCARDEA platform.

For more information about this good practice, please visit: http://www.srdc.com.tr/projects/icardea

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,7	**4,3**	**4**	**4**	**4**	**4**
Note: iCardea was evaluated by three network members that considered this a very valuable case. Recognition: Yes. iCARDEA platform comprehensive security and privacy mechanisms were validated in a hospital in Austria (SALK) with CIEDs from two major CIED vendors, namely St. Jude and Medtronic.					

4.12 InCASA - Integrated Network for Completely Assisted Senior Citizen's Autonomy

The inCASA project was a 39-months project funded by the European Commission with the aim to create and demonstrate citizen-centric technologies and a services network that can help and protect frail elderly people and prolong the time they can live well in their own homes. The goal was achieved by a series of pilots across Europe that integrate solutions and services for health and environment monitoring in order to profile user behaviour. Data was made available to professional care service providers including privacy protection; day-by-day activity planning; co-ordination of Public Social and Health Care Services; and deployment of specialist community based services.

Moreover, inCASA further investigated the issues of designing ideal specialist services to support activities that are community based – one type will not fit all. By considering the European and different health sector dimensions, it identified common service delivery paradigms (business models), exploring how these are delivered in the scenarios to determine optimum clinical models.

Target users of inCASA project were (for Pilots) European citizens, over 65 years old, living at home alone and with a sufficient level of autonomy and self-care ability. They may have a need to improve self-confidence and ability to cope with day-to-day life, in order to and increase independence and prolong the time they stay in their own home. The final Commercial solution focused on various fields, for example chronic disease.

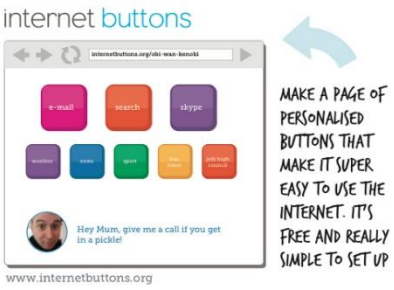
inCASA provided useful tools for professional users; e.g. elderly people's profiles were used by healthcare professionals to set therapies and to plan social and therapeutic activities.

For more information about this good practice, please visit: http://www.incasa-project.eu/news.php

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**4**	**4**	**4**	**4**	**4**
Note: inCASA was evaluated by two network members. Recognition: No.					

4.13 Internet Buttons



Internet Buttons is a free web-tool that allows comfortable access to Internet and possibility of creation of simplified, personalised experience of the web for those people who are new to the Internet or find it confusing (statistics show these are usually the elderly). Using Internet Buttons people can set up a page of Buttons, which link to sites and services the person finds useful or enjoyable. It removes all the complicated bits of the Internet and makes it easy to keep going back to the places they like. These Buttons are saved on their own personalised URL (e.g. internetbuttons.org/joanmiller), so they can be accessed from any computer and can be made their homepage. Moreover, the supporting person can also add a photo and message to the page, reminding the person they are helping to call them if they get stuck. As well as better access to personal support, there is also lots of help on the site via a permanently-available helper bar and guides to using Buttons. As their experience and confidence grows, new Buttons can easily be added, either remotely by the original creator or by the new user.

The application was created by non-profit organisation We Are What We Do, as part of their work to get people from different generations talking more, sharing more and spending more time together. The application is available in the United Kingdom, Ireland, the Netherlands and Poland in relevant national language versions. The solution was implemented by Liberty Global (in Ireland, the Netherlands and Poland UPC).

For more information about this good practice, please visit: http://internetbuttons.org

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,7	**3,7**	**3,3**	**3,3**	**3,7**	**4,7**
Note: Internet Buttons was evaluated by three network members. Recognition: No.					

4.14 MobileSage - Situated Adaptive Guidance for the Mobile Elderly

MobileSage provides to elderly people with context-sensitive, personalized and location-sensitive tools which allow them to carry out and solve everyday tasks and problems in the self-serve society when and where they occur, "just-in-time".

Modern elderly live longer, are healthier, more active, mobile, independent and more demanding customers than ever before. They will increasingly look for useful, user-friendly and personalized ICT services that add value to their active and mobile life and that can help them to stay active despite various impairments. Here MobileSage provides a timely approach and solution.

The means is instantiated by a personal agent on the smartphone, which provides a help-on-demand service. This service offers relevant, accessible, and usable content upon request, in the form of multimodal and personalized instruction and guidance, enabling people to help themselves. The main target group of the MobileSage service is elderly persons with or without disabilities (motor, perception, cognition), MobileSage also enables and promotes the users' own generation of such help providing accessible and usable content.

Concretely, the MobileSage platform allows the users to retrieve helpful content by scanning a NFC tag or a QR code, or by simply querying with text. The service allows the user to search for points of interest on a map and also get directions from one location (or current position) to another. The adaptation and personalization is based on the usage patterns of the service as well as the user profile (the application stores information regarding: optional languages chosen for the content, media types for content (audio, video, text, images), font size, data connection preferred (WiFi, 3G, etc.).

The pilot programs were rolled out in three European countries: Norway, Romania and Spain. Each country had a designated partner from the consortium that coordinated the pilot programs. In each country there were 12-15 seniors +65, mixed gender, from urban environments.

In order to make sure that end-users are not simply put in the role of passive objects of research but are active participants, they are kept informed of outcomes, and all relevant interfaces, features and documents will be translated into the three languages. For the user trials the partners coordinating each pilot uploaded test video and audio files, images and text files on the CMS(Content Management Service) component of MobileSage. The content is accessible through the mobile service (Help on Demand) by querying (using text) or scanning NFC tags or QR codes.

For more information about this good practice, please visit: http://www.mobilesage.eu

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,8	**4,0**	**3,5**	**3,7**	**3,3**	**4,3**
Note: Mobilesage was evaluated by four network members. Recognition: No.					

4.15 onAll

onAll is a wearable easy-to-use sensor system that automatically delivers information about the senior location, condition and risky events allowing the care givers to rapidly assist the person whenever and wherever needed. It is aimed at seniors with mobility risks living at assisted residencies, persons at nursing facilities or palliative care within hospitals, and persons with cognitive impairments such as Alzheimer living at long term-care facilities.

onAll is the result of more than 2 years of R&D within the Critical Group, a European software company internationally regarded by the top quality of its software engineering services.

Seniors appreciate fully automated functionalities. A person who falls cannot even push the mobile emergency call button in the device. That's why onAll devices send automatic messages indicating place and moment of the event, and the person involved to the nearest caregiver. At the same time, the risk of falls during the night (when the person is at his/her room) can be totally avoided with onAll.

onAll easy-to-use approach helps Seniors to feel protected, provides peace of mind to families of the Senior, and allows the care-giving team to significantly improve service quality enabling them to focus on patient care instead of waste with technicalities. Even more, senior's family appreciate the possibility of receiving the reports generated by the system, informing about the events occurred and the way they were solved.

The solution is being enthusiastically adopted by public and private institutions in Portugal, and is starting its internationalization process in the Netherlands and the UK.

For more information about this good practice, please visit: http://www.oncaring.com/index.php

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	**4**	**4**	**3,5**	**4,5**	**4,5**
Note: onAll was evaluated by two network members. Recognition: Yes. The solution has been adopted by public and private institutions in Portugal.					

4.16 OsteoLink

In 2009 a multinational survey of more than 1,600 women with osteoporosis and physicians identified significant gaps in osteoporosis communications. To help address these communication gaps, the International Osteoporosis Foundation (IOF), in partnership with the University of Geneva, has developed OsteoLink, a social network dedicated to improving osteoporosis communications globally and locally. OsteoLink provides an easy way for people who care about osteoporosis to connect with each other, share stories and benefit from each other's experiences. In this network, members can search for OsteoLink individual members or organisations with a wide range of interests and activities who have stories and advice to share. Once a member found another member profiles that interest him/her, he/she can request to be a friend, read their blogs, join their forums, correspond with them directly, join them in Groups, or even meet them in person.

The creation of an online and in-person community initiative is supported by data showing that people over 50 were the fastest growing users of the Internet – particularly in Europe. More people at this age are using social networking websites to stay in touch, and to find assistance on medical matters. The OsteoLink project demonstrates that, contrary to popular opinion, an increasing proportion of people over 50 use the Internet on a daily basis to research their health problems and discuss them online. OsteoLink makes it easier for people to share their experience, find credible, up-to-date information about osteoporosis and learn from one another. At the country level, it is implemented by taskforces made up of IOF member organisations that represent the needs and interests of patients and physicians locally.
The results indicate a need for easy-to-understand information for patients, helping them to have better conversations with their health providers.

OsteoLink's global media launch in March 2011 drew attendance from nearly 200 Osteoporosis Societies and 27 journalists either in person or by webcast.

For more information about this good practice, please visit: http://www.osteolink.org

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,7	**3,3**	**2,3**	**4**	**2,7**	**3,3**
Note: OsteoLink was evaluated by four network members. The case was seen as probably a very relevant and targeted medium but is very time intensive and not really an innovative IT solution. As long as funding comes from the foundation, it can stay afloat but this type of platform often requires proactive content management, which is time intensive. Recognition: No.					

4.17 Parkinson Treatment Rehabilitation Platform

Parkinson Treatment is a therapy and rehabilitation platform with the objective of improving patient care and treatment by means of a software web tool that enables the patient to do several tests and exercises online or onsite for psychological, physical and speech therapies in order to maintain or improve patient condition. This tests and exercises will be monitored by the professional (psychologist, physiotherapist and/or speech therapist) in order to control the patient evolution with a professional guidance.

The platform includes exercises from different categories highly related with Parkinson treatment such as psychology, physiotherapy and speech therapy. These exercises are specifically design for Parkinson patients to ensure quality treatment, including different levels of difficulty and will be monitored by the therapists in order to control the patient evolution. The system enables the customization of exercises in order to adapt them to each patient situation and needs either automatically or by professional guidance. The system also includes motivation techniques to promote the patient to continue regularly with their therapy or rehabilitation.

An important feature of the system is the inclusion of technologies that make therapies easier and fun in order to promote treatment adherence of patients which directly has effect on the quality of treatment and results of the therapy:

- **Writing tests for hand and wrist rehabilitation** are done using a digital pen that captures precisely the exercise and compares it with a template. Digital pen enable to do the exercise as if we use a normal pen but measures all the pen writing and movements getting objective parameters to evaluate results and evolution of patients. This technology helps professionals in giving a better quality and personalization treatment.
- **Kinect technology** which enables the capture of patient movement while doing the exercises is a fun way of doing physiotherapy exercises. The technology also fosters professional analysis of exercises with objective data of the movements done during each exercise.

The system includes social networking tools to promote a common network for Parkinson treatment. Social integration is of great importance in the process of chronic diseases treatment and the inclusion of social tools for professionals, care givers, family and patients will be an important feature to improve patient quality of treatment and motivation. The social functionality includes motivation modules that are enriched when patients do their treatment and that could be shared among friends in the social network.

The system was designed and developed by a multidisciplinary team formed by technical companies with expertise in the creation of solutions for the health sector and patient associations with the experience of treatment of Parkinson disease and with a clear view of patient needs.

For more information about this good practice, please visit: http://www.parkinsontreatment.eu

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,5	**4,5**	**3,5**	**3**	**3,5**	**4,5**
Note: Parkinson Treatment was evaluated by two network members. It was stressed to be unique in approaching the different aspects (psychological, physiotherapist and speech therapist) of Parkinson treatment and rehabilitation. Recognition: No.					

4.18 PARKINSONNET

Parkinson Net is a digital network of national area which allows to provide an application to all the associations federated in the Spanish territory. Parkinson Net approaches the needs of the associations to offer personalized functionality to the non-profit associations and especially to Parkinson's Associations:

- **Administrative functionality**: Management of patients and relatives, turnover and control of schedules of therapies and patients' reservations.
- **Therapeutic functionality**: Management of the therapeutic information of every patient and his evolution in different therapeutic areas: physiotherapy, speech therapy, psychology, music therapy, etc.
- **Social Functionality**: Management of the social interventions, voluntary work, occupational therapy, etc. Allowing the follow-up of cases and the analysis of social problems which need of concrete actions.
- **Functionality of Communication**: Promoting the collaboration among associations and among the professionals.
- **Statistical Functionality**: Parkinson Net offers a module of statistics to obtain personalized statistics that allows to extract information about the evolution of the disease.

The application offers a guide to the therapists and professionals to work as well as helping them to evaluate the patients affected by Parkinson's disease and being able to analyze the results. By this application they are able to manage his agendas and to organize better the information that they handle. It is a question of saving time in management to dedicate it to the direct attention. Evidently, all that will redound to a better attention to the patients. Across this Network associations and professionals are able to share knowledge and information in a simple and effective way. With PARKINSONNET Professionals save time and resources in labors that are necessary to assure the good functioning of the organization and this saving of resources are destined to the direct attention. In addition, because of having more sophisticated systems, better quality services and administrative attention are offered to the patients. In this way, the associations are able to offer services to the patients and their families which would not be possible to accede without the new technologies. For example, through this application they can send text messages being able to remind appointments or send urgent information (publication of subsidies for the elderly, residences, day centers, etc.). In this area, the tele-consultation for those patients who cannot move and who, across this system, will be able to realize their real time consultations to the professionals of the associations is another advantage.

The project was led by Parkinson's Spanish Federation. The Parkinson's Association of Madrid collaborated together with other Parkinson's associations of the national area, for their experience in the application of technologies to their daily processes. Arctic Telemedicina collaborated in the technical part with the technological support necessary for the analysis, development and implantation.

The project was rewarded in 2007 by the First Prize of "Plan Avanza" in the category of "Inclusion in the Society of the Information: the elderly and the disabled".

For more information about this good practice, please visit: https://www.parkinsonnet.es/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,5	**4**	**3**	**4**	**3,5**	**3**
Note: PARKINSONNET was evaluated by two network members. Recognition: Yes. The project was rewarded in 2007 by the First Prize of “Plan Avanza” in the category of "Inclusion in the Society of the Information: the elderly and the disabled".					

4.19 Retmarker

Retmarker is CRITICAL HEALTH´s solution to monitor the progression of retinal diseases - the leading cause of blindness in the Western World (Diabetic Retinopathy, Age-Related Macular Degeneration and Glaucoma) - using non-invasive imaging (colour fundus photograph).

Available in several versions, RetmarkerC is a solution that automatically detects the progression of Retinal Changes over time. It uses image processing technology (namely an advanced, proprietary, co-registration algorithm which automatically overlaps retinographies) and the latest medical research to deliver a product that automatically detects such changes accurately, effectively and effortlessly. RetmarkerDR is a biomarker for Diabetic Retinopathy progression. It uses the same advanced proprietary co-registration algorithm and complements it with a state-of-the-art Microaneurysm (MA) detector to calculate important ratios regarding MA Turnover (Formation and Disappearance Rates). Latest research on Microaneurysm Turnover points it as the newest and most reliable biomarker for Diabetic Retinopathy progression in a mild non-proliferative stage to Clinically Significant Macular Edema (CSME), a sight-threatening stage.

As to RetmarkerAMD, it is a new solution in development that computer-assisted grading of digital images from patients with Age-related Macular Degeneration (AMD), the main cause of blindness in persons over 50, in developed countries. This solution, developed for an AMD Epidemiological Study won in London, in 2010, the European IT Excellence Award.

Retmarker was developed under the scope of the project Ver+Saúde. The project aimed at the development of technologies and tools, in the field of healthcare, which could significantly improve medical procedures in a variety of specialties. The project gathered Critical Health (promoter), a Critical Software spin-off and a holding of Critical SGPS, dedicated to the development of groundbreaking technological solutions in the field of loss of Vision and Mobility prevention, and AIBILI - Association for Innovation and Biomedical Research on Light and Image, a Research Technology Organisation in the health area dedicated to the development and testing of new products for diagnostic imaging and medical therapy.

For more information about this good practice, please visit: http://www.retmarker.com/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4,3	**4,3**	**3,3**	**3,0**	**3,7**	**3,0**
Note: Retmarker was evaluated by three network members who assessed the case as an interesting solution that could provide clear value in plotting deterioration and preventing blindness. Recognition: No.					

4.20 Speaky PC Facile

Speaky PC Facile is a special portable Personal Computer, reliable and easy to use by voice. The PC is dedicated and designed for voice services for the blind and visually impaired. Speaky PC Facile is a notebook accessible by voice through a special remote control through which the user, holding down a button on the remote control easily recognizable to the touch, can give voice commands and listen to the PC that responds and delivers services and content. The product was developed by Mediavoice in collaboration with the UIC (Italian Union of the Blind and Visually Impaired) and HP Italy.

Speaky is dedicated to a user who is blind or partially sighted that today does not use the PC because it is still too complex and not accessible to people with vision problems and lack of computer skills.

The particularity of Speaky is that the notebook is equipped with a special new generation remote control and a microphone that allows the user to control the PC by simply speaking to it, without the need to interact with the normal data entry system. The first examples was presented to Innovabilia 2012, a trade fair specializing in news for people with disabilities.

In addition to voice commands Speaky PC Facile is equipped with a range of voice services, such as Speaky Internet to surf the Internet dictating the web addresses, Speaky Audiobook to try and get to read a book of those in the catalog of the service center, Speaky TV to call by voice channels and programs, listen to them and possibly even save them on your hard disk. Dictionary Speaky to ask the meaning of the terms included in the Italian dictionary, Speaky Translation to translates contents, and finally Speaky Magnifier that enlarges a portion of the screen: extremely useful for visually impaired users .

Many other voice services will be added in the future. The free ones will be updated automatically on the computer using the supplied software for automatic update. For paid voice services, will instead be required a license released by Mediavoice. In fact, just think of the older relatives to understand how the mouse or keyboard can be seen as objects too adverse for those who have a physical disability but it is not accustomed to the use of tools. I often touch interfaces, which are particularly intuitive , have done wonders in bringing people to the technology , but who has vision problems remains cut off not only from the experience of use of the computer, but also from a range of services useful.

For more information about this good practice, please visit: http://www.mediavoice.it/default.asp

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,7	**3,3**	**3,7**	**3**	**4**	**4**
Note: Speaky PC Facile was evaluated by three network members. Recognition: No.					

4.21 SweetAge1

SWEETAGE1 is a pilot project of experimental research and development collaboration between universities and companies made with public funds of the Lazio Region in the field of Bioscience Technology District DTB - FI.LA.S.2. The project had the objective to identify the changes that precede exacerbations of chronic obstructive pulmonary disease (COPD) through the electronic transmission of biometrics. The COPD is a disease that affects the respiratory tract with airway obstruction often associated with a state of chronic inflammation of the lung tissue. The long-term consequence is a real remodelling of the bronchus, which causes a substantial reduction of respiratory capacity and the oxygen content in the blood. Recent studies have estimated for Italy, an annual average of 3000 euros per patient, which may be up to 7000 euros a year in more severe stages.

The 'high frequency of COPD exacerbations requires a system of remote monitoring to ensure continuity of supervision and timeliness of interventions as needed, this would allow a reduction of the costs for hospital admissions and improved quality of life. The kit "SweetAge 1" consists of an integrated system of sensors and related software can remotely monitor specific biomedical parameters, manage information and maintain a smooth connection between the old man and his caregiver for the continuous telemonitoring and teleconsultation. The measured parameters are sent to "Presidio health control" and managed through a software component called "System Monitor".

This platform is able to collect, a series of information regarding each patient the subject of experimentation, through communication channels common, easy to use and low cost. The information collected is made accessible and updatable at any time there is a need on the part of the health care team involved in the care and prevention of the patient.

From the research findings have emerged a number of advantages for both patients and doctors who worked. For the patient attended the advantages are:

- The early identification of acute exacerbation of COPD
- Costant monitoring the effectiveness of theraphy
- The verification of behaviour and lifestyle information
- The appropriate use of the ER, avoiding cases in which the cl.inical conditions allow to remain at home with any modifications therapeutic
- The programming of hospitalization elective, in the case where the conditions are instead particulary serious.
- The usability, both inside and outside at home – in fact, the data are transmitted via mobile phone – with biometric continuous monitoring

The service developed in the pilot project "SweetAge 1", has enabled the development of the software platform PHEBO expanding the service remote monitoring for chronic conditions such as heart failure and diabetes.

This allows elderly patients suffering from chronic diseases to benefit from a new health and social services through the use of information and communication technologies applied medical sphere, increasing the effectiveness and type of health services that can be delivered to the homes of elderly

and chronically ill, with a view to reduce costs and, above all, to improve the quality and "quantity" of life not only of the assisted, but also of his family and "caregiver" (caregivers) in general.

For more information about this good practice, please visit: http://www.progettosweetage1.it

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**4**	**3,8**	**3,5**	**3,8**	**4**
Note: Sweetage was evaluated by four network members. Recognition: No.					

4.22 WaveGuard EEG cap

The WaveGuard EEG caps are the most advanced caps available at this moment. All WaveGuard caps are very light-weight through the use of very thin electrode wires, and the flexible, breathing cap fabric enables comfortable recordings even over a longer period of time. The comfortable and easy fitting caps make high quality data easily accessible for clinicians and researchers. They are a valued asset of professionals, such as psychologists, neurophysiologists, neurologists and neuroscientists, and are ideally suited for daily routine studies to discriminate between psychiatric and neurological diseases as well as for studies about emotion, learning, attention, perception and other cognitive processes.

WaveGuard caps are the result of well-defined production processes, managed to tackle even the highest requirements in brain research and diagnostics. They benefit from the finest materials of the latest technology for optimal ease of use and the very best signal quality. Due to the small silver (sintered Ag/AgCl powder pellets) electrode elements, the caps deliver high-quality EEG signals with low drift and minimal intrinsic noise at all times. The very thin electrode wires and flexible breathing fabric are key components for comfortable recordings. The extremely durable and flexible fabric is very gentle on the patients' skin, providing the optimal recording experience

Due to the special design of the electrodes, the fitting cut of the caps and the superb quality of the sintered Ag/AgCl electrode material, application time of the cap is significantly faster and easier compared to single leads in conventional caps.

The option to use shielded wires strongly contributes to the superb signal quality of ANT's WaveGuard caps. Shielding makes the cap less susceptible to outside noise and greatly reduces the need to record data in shielded rooms (Faraday cage). Shielded WaveGuard caps are compatible with the active shielding technology of asalab and eegosports. Using asalab and eegosport high quality EEG data can be recorded even with high electrode impedances, allowing short preparation times.
Waveguard caps are equipped with special connectors to make it quick and easy when connecting and disconnecting to EEG headboxes. Adapters are available for all major manufacturers' headboxes and can be purchased separately.
The cap is fastened by using either the included chin-band or optional chin-strap. All neonatal caps are delivered with an extended fabric ribbon to allow gentle fastening for the smallest babies.

The caps, made of sturdy electrode sensors, durable fabric and other carefully chosen parts and materials, have been designed to provide you with high-quality recordings for more than 500 recording sessions and cleanings.

The easy-to-apply EEG caps are available in different configurations (standard EEG as well as TMS, MEG and fMRI compatible) and layouts, ranging from a clinical montage (e.g., for routine EEG) to specialized high-density electrode configurations. Features and benefits:

- High quality EEG signals
- Comfortable fit
- Few cap sizes to cover a large variety of head circumferences
- Quick application
- Easy to clean
- Up to 256 electrodes
- Available in 10-20 and equidistant layouts

- Optimized shape of electrodes minimizes induction type artifacts (e.g.fMRI,TMS)
- All caps are compatible with TMS
- Connects to any EEG system
- Active shielding option
- Custom layouts are available upon request

For more information about this good practice, please visit:
http://www.ant-neuro.com/products/WaveGuard

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,8	**3,5**	**4**	**4**	**3,8**	**3,8**
Note: WaveGuard was evaluated by four network members. It has been considered a very successful product that has applications in different research areas like neuroscience, neurophysiology, neurology, psychology, cognitive science, as well as in health care for the diagnosis of different psychiatric and neurological diseases. It seems to be the best EEG cap currently available in the market. Besides, it is well accepted by the researchers and practitioners. Recognition: No.					

5 Good Practices on Education and Training for Active Ageing

The good practices included in the category of Education and Training for Active Ageing present cases in which the main focus is to promote an active ageing through learning activities and initiatives of the elders. Six good practices were included in this category, as listed in Table 4. In the following sections, each good practice will be briefly presented, as well as the evaluation received from the members.

Table 4. Good Practices on Education and Training for Active Ageing

Good Practice	Location
Connect Latvia	Latvia
Digital Poland of Equal Opportunities	Poland
LEAGE – Learning games for older Europeans	Greece, The Netherlands, Spain and Slovenia
LiveWell	Portugal, United Kingdom, Austria, Spain, Romania, Iceland and Slovenia
Silver	Italy, Spain, Romania and Belgium
The Knowledge Volunteers	Italy, Spain, Greece, Czech Republic and Romania

5.1 Connect Latvia

"Connect Latvia", a project of free computer education for seniors, is being conducted for the fourth consecutive year by Lattelecom Ltd., the largest electronic services provider in Latvia. Yet, in 2013, the project has had an even greater impact – it plans to teach 7000 seniors aged 50 and older by November 2013.

The goal of the socially significant project „Connect, Latvia is to promote computer and Internet accessibility for seniors, in this way lessening the digital divide and social exclusion. The project "Connect, Latvia!" involves the planning and coordination of classes, teacher preparation, and the development of the study materials. The classes help the elderly to gain basic computer and Internet use skills such as switching on a PC, searching for information on the web, using e-mail and, and using Skype. The computer literacy classes are adapted specifically to the senior audience – the course lasts three days and is held in small groups.

81% of seniors who mastered basic computer skills, use of the internet and who have started using those skills in their daily life, has confirm that their quality of life has improved and they feel like a more integrated part of the modern society. Even seniors as old as 91 and 93 mastered computer literacy in Latvia proving that old age is no obstacle to acquiring new knowledge.

Since 2011 more than 10 000 people has acquired digital skills. In total, with Lattelecom initiative 99 IT teachers in 62 regions and 128 training centers have been involved.

During the GOW 2013 campaign, opening of registration for courses was announced and in this year more than 115 computers will be given to Social care centers all around Latvia to minimize digital divide and to help seniors acquire information and communication technologies. 90% of trained seniors after the training are continuing to use computers and Internet and are interested to get additional training in more advances programs.

For more information about this good practice, please visit: http://www.piesledzieslatvija.lv

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	4	5	5	4	4
Note: Connect Latvia was evaluated by two network members. Recognition: Yes. This initiative is running for four year and it has engaged 99 IT teachers in 62 regions and 128 training centers.					

5.2 Digital Poland of equal Opportunities

Digital Poland of Equal Opportunities (PCRS programme) realized in partnership between the Ministry of Administration and Digitization and the "Cities on Internet" Association is an initiative which is to encourage the people from the 50 + generation to make this first step into the digital world. The novel approach represented by PCRS rests on locality, as adults are willing to participate in events in familiar surroundings: community centers, local fire station social spaces and even private homes. For that reason, PCRS requires involvement of local digital champions - trusted by the community, creative, skilled in mobilizing support for local actions.

There are many certified computer courses on offer, by they all suffer from the original sin of being formalized, and being conducted by specialists – IT experts who focus on ability to use the hardware and software. PCRS departs from that model, demystifying preconceptions about drawbacks and challenges of using the Internet. Key element of pointing to personal benefits from the use of Internet is the identification of individual motivations and needs, only then followed by an effective training of technical abilities. The ultimate goal of the project is to introduce 60 000 people from the 50 + generation into the digital world.

The PCRS project is being realized with the involvement of 2600 Lighthouse Keepers – Polish local digital champions: trusted, creative local community leaders/animators tasked with introducing 50 + adults from their own communities into the digital world. In the course of the project, each digital champion, upon receiving certified training goes on to create a concept of his/her own initiative, realized in cooperation with NGOs and local authorities, to encourage adults to enter the digital world in their own community. All digital champions participate in PCRS on voluntary basis, however important contribution to the programme is made by partners supporting their actions, i.e. local governments and NGOs.

October 2012 marked conclusion of the first stage of PCRS. As a result, 2 600 digital champions were recruited and trained throughout Poland (in total, more than 3 600 have volunteered, making it the largest ever education volunteering endeavor in Poland). Now, Lighthouse Keepers face their biggest challenge yet: convincing the 50 + generation to see for themselves how the Internet and digital world can improve their lives. Research contracted by the „Cities on Internet" Association (Generation 50+: first steps into the digital world) shows that the main cause for digital exclusion is not the lack of access, but reluctance to go online and low awareness of benefits associated with the Internet.

To help in their efforts, currently 200 Lighthouse Keepers are being awarded 200 grants to launch their ideas which they described in Local Digital Education Plans. In addition, the best 200 educational projects realized by lighthouse keepers in local communities are eligible for 18 – month grants.

Activities of all Lighthouse Keepers complement into a nation – wide digital competence raising programme targeting digitally excluded, which at the same time will stimulate the demand for broadband access to the Internet.

Work by Lighthouse Keepers is supported by the National Competence Centre / Social portal devoted to digital training of adults, equipped with corresponding technical infrastructure and a research team and experts providing lighthouse keepers with support in their daily work with the digitally excluded.

"Cities on Internet" Association, while coordinating actions of Lighthouse Keepers and maintaining the National Competence Centre, is also running an awareness raising campaign, addressed to 50+ generation, demonstrating advantages Internet brings at work and in private life.

PCRS won the support of many senior figures representing the world of science, politics and culture, including former president Lech Walesa, former prime minister Włodzimierz Cimoszewicz, Commissioner Danuta Hübner, EU Commission vice-President Neelie Kroes. The current Minister of Administration and Digitization, Michał Boni volunteered to participate in the project as a lighthouse keeper. As a recognition of the value of the project, during the 2012 World Summit of Information Society, the PCRS project was awarded the WSIS Prize.

For more information about this good practice, please visit: https://latarnicy.pl

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**4**	**3**	**3**	**4**	**5**
Note: Digital Poland was evaluated by two network members. Recognition: Yes. The Ministry of Administration and Digitalization supports this initiative. Also at the 2012 World Summit of Information Society, the PCRS project was awarded the WSIS Prize.					

5.3 LEAGE – Learning games for older Europeans

LEAGE was a research project within the LifeLong Learning Program GRUNDTVIG of the European Commission.

Research shows that while people continue to develop and learn throughout their lives, when they age it is important that they focus on approaches which offer opportunities for educational activities, interactive games and communication supporting social interaction. Existing learning opportunities mostly address younger social groups. The graphics, the subjects, the speed mainly presuppose previous experience with new technologies and good physical state (good eye vision, fast adaptability to new images etc), both forming a barrier for elders to attend. Moreover elders usually lack motivation to learn, as topics of existing games are of no interest to them or are inappropriate for their age group.

The goal of LEAGE was to motivate older people in Europe to participate in lifelong learning activities by transforming those activities into games, focusing on their attractiveness and accessibility. For this purpose, LEAGE has chosen two popular mediums, digital TV and the Kinect for XBOX 360 console, in an effort to combine learning and socialising with friends and family members (grandchildren).

Within the project users from Greece, Netherlands and Spain were involved, both for designing and evaluating the games and the overall experimental educational approach. The consortium established partnerships with organisations that have direct contact with end users, and involved those partners in both the design and the evaluation phases of the project. Due to these partnerships, 119 older people (end users) participated in the project.

The project's major outcomes include the LEAGE game, available in two versions, one for the Kinect sensor, and one for digital TV. The game aimed to help older people improve their competences by practicing and widening their knowledge on topics such as geography, history, health issues (first aid), nutrition and by motivating exercise and memory training. The "LEAGE of European Travellers" is a road trip along several European countries, namely Netherlands, Spain, and Greece. The goal of the game is to visit all countries and collect souvenirs (tokens). Each country is represented by three (3) major cities, each with an important landmark or something distinctive (e.g. a famous recipe, person, dance, etc.) that makes the city worth visiting. Each city comprises of a narration (teaching) part and several challenges, each with a different educational goal. In more detail:

> **Sightseeing**: The player views a video presenting a major landmark of the city and some historic facts. Then the player is requested to answer five trivia questions based on the sightseeing narration.
>
> **Recipe**: The player views a video presenting a local recipe. Then the player must select the proper ingredients from a list and make the proper actions to cook the recipe him/herself.
>
> **First aid /Emergency**: The player is presented with an emergency situation. Then he/she is given several options to choose from. The player must find the correct one by trial and error. In each case, the proper course of action is presented.
>
> **Dance / Exercise**: The player has to follow the movements of a local person on the screen to either dance or perform some kind of exercise

LEAGE game's main features include:

- Two available platforms (digital TV and the Kinect sensor for PC)
- Multilingual user interface and content

- Multimedia content and graphics designed especially for older users
- Single VS Multiplayer option (travel VS competition mode)
- User selects his/her own avatar
- Support for brain training and physical exercise
- User motivation via the “Top Players” feature
- User training game levels (preparing for the trip)

LEAGE provided elders with educational and social networking games that are expected to help them improve their competences by practicing and widening basic skills on topics such as health, travel, foreign languages, technology. Hence, senior citizens were able to acquire new skills, maintain their clarity and be active in society, thus strengthening their confidence and satisfaction.

For more information about this good practice, please visit: http://leage.exodussa.com/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
2,5	**3**	**3**	**3**	**3**	**3,5**
Note: LEAGE was evaluated by two network members. Recognition: No.					

5.4 LiveWell

While European´s demographic structure is changing rapidly, the individual pattern of social interaction has also been changing dramatically in recent years. Advances in ICT have stimulated the emergence of new concepts that represent non-physical environments in which people are connected to share ideas, concepts and resources in order to better respond to emerging challenges/opportunities. These social networks more than entertaining connect people, forming a multifaceted network of relationships, which in turn enables and facilitates collaboration and companionship.

Recent data show that one of the major barriers to successful care in Diseased Seniors with Parkinson is the lack of information and the inability to easily socialize with others peers. To overcome this obstacle is important to connect Parkinson Patients with their friends, family, peers and even doctors and build communities. Most importantly, this social network also serve as powerful motivators so that users take responsibility for their own health as they can be designed for increasing awareness, prevention, diagnosis, health management, acute care, rehabilitation. Parkinson population needs to be integrated within our society and it's important to take advantage of the technological advances to create solutions that help them improve their overall well-being.

The LiveWell project aims to develop an innovative Web-based Training and Social Networking System which targets Parkinson patients, to self-manage their condition, reduce the burden on their caregivers and promoting their well-being and inclusion; Caregivers with access to information, training and greater support community; Health and Medical Professionals enabling them to remotely and continuously monitor the patient´s participation in the activities helping to improve their effective rehabilitation.

The project goal is to have a comprehensive and holistic approach for both Caregivers and Health Professionals to cope positively with Parkinson patients. Specifically, the LiveWell Project is aimed at:

- **Parkinson patients**, enabling them to self-manage their condition, reducing the burden on their Caregivers and promoting their well-being and inclusion, through the Social Communities;
- **Caregivers** (families, friends and colleagues) of the Parkinson patients enabling them to reduce their burden, as well as to have access to more information, training and a greater support community, through Social Communities;
- **Health and Medical Professionals** enabling them to remotely and continuously monitor the patients participation in the training activities and interactions through chats and videoconferences helping to improve the patient´s therapy and effective rehabilitation.

Also Parkinson Associations, Policy Makers, Hospitals, medics, and other health-related organizations can benefit from the project results.

Work has already carried out to find and analyze relevant examples of best practices in the sector. In this regard, a requirement capture analysis has already been done to understand the most important needs of the collectives the project addresses. Additionally, education and training materials about different aspect of the disease are being developed by expert clinicians. These will be made available in HTML5, thus ensuring the platform and device neutrality of the content, in the project website.

For more information about this good practice, please visit: http://www.livewell-community.eu/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3	**3**	**3**	**4**	**3**	**4**
Note: LiveWell was evaluated by two network members. Recognition: No.					

5.5 Silver

Project Silver addresses both of these situations by implementing a systemic approach, which identifies an innovative didactic ingredient, a trans/inter-disciplinary and generational element, and aims to solve this new form of illiteracy to contrast the risk of a social and communicative caesura between the young and the elderly.

In the context of the Community Action Programme for Continuous Learning, Italy, Spain, Romania and Belgium are experimenting with a continuous learning programme for adults addressing no less than 100 elderly, 500 student tutors and 50 teachers. Moreover, aimed communication and diffusion activities will be implemented to reach an increasing number of beneficiaries in every country.

A strategic role for the diffusion of this initiative and the involvement of the population off over-sixties has been given to the European Federation of Pensioners and Elderly People (Ferpa).

In concrete the project aims to provide:

- elderly citizens with competences and resources necessary to benefit from ICT;
- school students and teachers with didactic experiences fostering the learning of skills critical for the 21st century (communication skills, social responsibility, inter-generational understanding, etc.);
- local-government policy makers with a practical process and tools to tackle elders' e-inclusion of through a multi-stakeholder approach including schools, elderly people centres and other organizations working with the elderly.

Methodologically, the project develops, customizes, translates, implements and evaluates a digital literacy didactical kit made up of handbooks, guides and evaluation tools at three levels: (1) basic ICT skills, (2) social networking and (3) e-government services. Pilot/testing programmes are implemented in 4 countries to validate and improve the methodological/didactical kit. In parallel, 3 in-depth case studies of the innovative methodological and didactical aspects of the project are conducted, in order to deepen knowledge codification and strengthen the educational foundations of the programme.

The project's dissemination and exploitation activities make use of the multilingual didactic kit and dissemination materials (website, brochure, video, newsletter) and aim to enlarge the project's impact stakeholder network. This process is reinforced by the organization of 5 international meetings and the development of a knowledge-based community-building environment acting as an open innovation system to create communities of elders, students, teachers and other stakeholders using/improving the methodology and sharing knowledge (experiences/solutions).

For more information about this good practice, please visit: http://www.silver.mondodigitale.org/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
3,7	**4,3**	**4**	**3,3**	**4**	**4,7**
Note: Silver was evaluated by three network members. Recognition: No.					

5.6 The Knowledge Volunteers

The knowledge volunteers" (TKV) project involves older and young people in an educational and training plan based on voluntary activities and an inter-generational, peer-to-peer learning model. It aims to promote the acquisition of digital competences among elders at risk of exclusion and intergenerational relations that also benefit the education of young people.

The objectives of the project include: (a) promoting digital competence among elders at risk of exclusion through intergenerational, peer-to-peer exchanges and relations with young people and among older people themselves; (b) encouraging the active participation of elders (and youngsters) in society through knowledge volunteer activities, thus enhancing self-esteem, identity and social relations; (c) improving the production, testing, and dissemination of innovative 21st century curricula, methodologies and modules for adult learners (and youngsters); (d) creating a network of "Knowledge Volunteers" of all ages to share experiences and competences; (e) contributing to the creation of a more volunteer-friendly environment with more people participating in volunteering activities throughout Europe, whilst also facilitating international mobility amongst older volunteers; and (f) developing alternative learning approaches based on a knowledge-based, community-building, Phyrtual Environment (integrating virtual and physical activities) leading to the creation of a social network and dynamic repository of interacting good practices in the field of formal, non-formal and informal adult education.

To this end, the project developed an innovative didactical inter-generational exchange model based on the active interaction between youths and elderly during the courses. The role of young students, who act as individual teachers or tutors of the elders during peer to peer lessons, allow the communication between generation, adding a key value to the digital literacy skills the courses provide to elderly. The involvement of young volunteers during the courses organisation, lessons preparations, and materials productions, strengthen the opportunity to adapt continuously the courses curricula and materials to the needs and constraints of elderly.

The project also carried out work of knowledge management codifying the processes involved. The result is a programme curricula, tested and customised continuously based on the needs of elderly learners, young volunteering tutors and school teachers organising the courses. If applied to the entire curricula training programme implementation, the knowledge codification system, allows to create a training toolkit that is suitable to be used as models of governance to replicate the project activities in different contests and involving different target groups. The special didactical toolkit (Handbook for elders, Guidelines for teachers/tutors/elders, Evaluation) developed during The Knowledge Volunteers project can be used as a supporting tool to organise the training, develop the lessons subjects and can be also used as a self-learning handbook. It is available free of charge under the provisions of Creative Commons Licence, laying the foundations for a systematic transfer process.

The Knowledge Volunteers project's European and international dimension can continue to grow on the basis of further knowledge codification and the process of knowledge-based community building strategy developed during the project and stimulated through the Phyrtual social innovation environment (phyrtual.org). The project demonstrated that a community building environment is a key aspect in order to break the time and space barriers in the continuous development of social innovation movements. If applied to a volunteer-based inter-generational model of intervention, the peer-to-peer movement that it can generate, is able to promote an active involvement as well as an

healthy ageing. This tool can support the project long-term perspective, allowing it to make a significant contribution to a global challenge, continue facilitating the involvement and motivation of stakeholders beyond the project. In the case of The Knowledge Volunteer project (http://phyrtual.org/it/project/the-knowledge-volunteersnetwork) this happened targeting knowledge codification, social networking and volunteerism. Thanks to the community environment, youths, students and schools can continue playing a central role in the experience, integrating the project results into their educational activities, internalizing it as an instrument for 21st century education and community involvement, fostering the creation of a process whereby volunteers develop other volunteers. The same capitalization process applies to elderly centres, voluntary associations, public bodies, companies and policy makers that legitimately perceive and adopt the project activities though participating in the knowledge bases environment as part of their roles in the challenge of active and healthy ageing in Europe.

For more information about this good practice, please visit: http://www.tkv.mondodigitale.org/

Evaluation by the* Ageing*Well Network Members:

Uniqueness	Relevance	Effectiveness	User satisfaction	Time and cost sustainability	Replication
4	**4**	**4**	**4**	**4**	**5**
Note: TKV was evaluated by two network members. Recognition: No.					

Annex 1 – Good Practice Description Template

Please provide a name for your case here * (Max. 65 characters / 10 words)	Insert the case logo: (Maximum File size: 120 KB / Allowed Extensions: .jpg .gif .png)
Case Presentation URL * (To set your custom URL, it must contain 3-20 alphanumeric characters. Please do not use spaces, symbols or special characters. Ideally, you should use your project acronym.) http://www.epractice.eu/cases/	
Please provide the website relevant to your case. If you do not yet have a website, please provide the best possible alternative, or the website of the mother institution *	

Type of initiative * (Multiple choices are allowed)

Project or service	Network	Strategic initiative	Award scheme	Promotion/awareness campaign	Other
☐	☐	☐	☐	☐	☐

Please identify the country of origin of your case. * You can indicate more than one country.

Please provide the start and end date of your case*
From: MM/YYYY
To: MM/YYYY

Please provide a brief abstract of the case* (Max. 4,000 characters)

Case Domain (select only one):

eGovernment	eInclusion	eHealth
☐	☐	☐

Please identify your case topic related to the domain selected above (multiple choices are allowed):

eGovernment		eInclusion		eHealth	
Efficiency & Effectiveness, Benchmarking	☐	(public) e-services for disadvantaged people	☐	Computer assisted surgery	☐
Inclusive eGovernment	☐	Broadband	☐	Continuity of care	☐
eIdentity and eSecurity	☐	Digital literacy and competences	☐	Decision support systems	☐
eParticipation, eDemocracy and eVoting	☐	eAccessibility	☐	e-referral	☐
eProcurement	☐	Geographical eInclusion	☐	Electronic health records	☐
Services for Businesses	☐	ICT and Aging	☐	ePrescribing	☐
Services for Citizens	☐	ICT and community development	☐	Health portals	☐
High Impact Services with Pan-European Scope	☐	ICT and Cultural diversity	☐	Health risk management	☐
Infrastructure	☐	ICT and Marginalised youth	☐	Homecare & Telecare Services	☐
Interoperability	☐	Other	☐	Hospital information systems	☐
Legal Aspects	☐			ICT and lifestyle management	☐
Multi-channel Delivery	☐			ICT for disease prevention and health promotion	☐
Open Source	☐			ICT for patient safety	☐
Policy	☐			Medical Imaging	☐

Regional and Local	☐	Patient summary	☐
User-centric Services	☐	Personal Health Systems	☐
Other	☐	Policy	☐
		Regional/national Health Information Networks	☐
		Telemedicine services	☐
		Wearable/Portable Systems for Health monitoring	☐
		Other	☐

Please give three tags (keywords) to your case*

Please identify the sector within which the case operates * (Multiple choices are allowed)

Communication (infrastructure)	☐	Electricity/Gas	☐	Internal market	☐	Tax	☐
Crime, Justice and Law	☐	Employment	☐	Local/Regional Community Development	☐	Travel, Transports and Motoring	☐
Culture and Media	☐	Environment	☐	Procurement	☐	Water	☐
Customs	☐	Fire Services	☐	Social Security	☐	Other Social Services	☐
Education, Science and Research	☐	Healthcare	☐	Social Services	☐	Other	☐

Please indicate the types of users the case addresses.* (Multiple choices are allowed)

Add patients	General Public	Health authorities	Health professionals
☐	☐	☐	☐

Scope * (Multiple choices are allowed)

Cross-border	☐	International	☐	Local (city or municipality)	☐
National	☐	Pan-European	☐	Regional (sub-national)	☐

Please indicate the original language of the case (Multiple languages are allowed)

Please select the type of service of your project*

- None -	☐	Training and education	☐	Participation	☐
Not applicable/not available	☐	Content provision	☐	Inclusive services of general interest	☐
Awareness-raising information	☐	IT infrastructures and products	☐	Other	☐

Overall implementation approach * (Partnerships between administrations and/or private sector and/or non-profit sector)

- None -	☐	Private sector	☐	Partnerships between administration and/or private sector and/or non-profit sector	☐
Public administration	☐	Non-profit sector	☐		

Technology choice * (In most e-transformation projects, you make technical choices concerning the importance of interoperability and accessibility. Multiple choices are allowed.)

Proprietary technology	☐	Mainly (or only) open standards	☐	Open source software	☐
Standards-based technology	☐	Accessibility-compliant (minimum WAI AA)	☐	Not applicable/not available	☐

Lessons learnt * (Describe the THREE main lessons learnt from your case. Min. 100 characters; max. 4,000 characters.)

Annex 2 – Good Practice Evaluation Form

GOOD PRACTICE EVALUATION FORM		
Name of the Good Practice:		
Criteria	**Scale**	**Score**
Uniqueness *The practice should show innovative characteristics when compared to other schemes within the same theme regarding its methodology, organisation, function and/or results. It should distinguish itself in the general overview of practices*.	1 – Not at all unique 2 – Slightly unique 3 – Neutral 4 – Moderately unique 5 – Extremely unique	
Relevance *The practice should be relevant in addressing a EU/national problem/need/specific situation*.	1 – Very irrelevant 2 – Irrelevant 3 – Neutral 4 – Relevant 5 – Very relevant	
Effectiveness *The practice should have a measurable impact and effect. The impact should be measured through qualitative and quantitative indicators*.	1 – Not at all effective 2 – Ineffective 3 – Neutral 4 – Effective 5 – Extremely effective	
User satisfaction *The practice should have positive feedback from users (e.g. SMEs) and other stakeholders (e.g. authorities and agencies, politicians and decision makers, funders)*.	1 – Very dissatisfied 2 – Dissatisfied 3 – Neutral 4 – Satisfied 5 – Very satisfied	
Time and cost sustainability *The practice should have the potential for long-term sustainability. It should keep its attractiveness to the target group over time, and also have the financial ability to run over a longer time period, for instance through a successively increasing private funding*.	1 – Not at all sustainable 2 – Unsustainable 3 – Neutral 4 – Sustainable 5 – Extremely sustainable	
Replication *The practice should have the potential to be adapted and replicated in other regions*.	1 – Not at all replicable 2 – Non-replicable 3 – Neutral 4 – Replicable 5 – Very replicable	
Recognition *The practice has been recognized by, for instance, national or international agencies, European projects etc on a basis that is coherent with the criteria cited here will be a favourable factor*.	1 - Yes 2 - No	
	Total Score	
Comments:		
Evaluator (name / organisation):		