IMPACT OF EU-FUNDED RESEARCH & INNOVATION ON ICT FOR ACTIVE & HEALTHY AGEING – THE TOP 25 MOST INFLUENTIAL PROJECTS
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INTRODUCTION

Aging poses one of the biggest economic and social challenges for this century. It affects most EU countries and will have an impact on most policy areas. It is estimated that by 2025, more than 20% of Europeans will be 65 or over, with a strong increase in numbers of over-80s. By 2060, one in three Europeans will be aged 65 or over. Furthermore, the ratio of working people to the ‘inactive’ others will shift from 4 to 1 today to 2 to 1 by 2060.

The different healthcare requirements of older people will require a shift in health systems so that they will be able to provide adequate care whilst remaining financially sustainable. If these changes are not made, we will not have the money or the people to guarantee a good and healthy life for all. However, it is not all doom and gloom, active and healthy ageing also offers a great deal of opportunities for the future. At present, Europeans over the age of 65 have a spending capacity of over €3,000 billion. Healthy ageing also offers several benefits for people such as the ability to travel, to work for longer, to learn new things and to prepare homes for independent living in the future.

Active and healthy ageing offers many opportunities for Europe that include the development of the appropriately named “silver economy” offering new highly skilled tech jobs and also opportunities for lower qualified people to re-train and gain new skills. The development of new ICT products and a market for the creation of a multitude of new SMEs and start-ups are other opportunities that can be seen.

Europe has the capacity to benefit from these opportunities, but only if we are prepared to change our systems for health and social care and take advantage of digital innovation in the sector.

To respond to the potential challenges that ageing presents for the future and to ensure that the necessary framework is in place to help Europe take advantage of the opportunities that the sector can provide, the European Commission has invested a great deal of resources into research and innovation (R&i) projects in this field. In fact, active and healthy ageing (AHA) has enjoyed an increasing presence over recent years in the key R&i European initiatives.

The aim of this brochure is to present the results of the work carried out through the tender SMART 2016/ 0072 “Communicating Key results achieved from EU funded research and innovation on ICT for Active and Healthy Ageing under Framework Programme 7, the Competitiveness and Innovation Programme and Horizon 2020”.

The brochure will showcase the 25 most promising EU projects addressing ICT for Active and Healthy Ageing funded under FP7, the Competitiveness and Innovation Programme (CIP) and the Horizon 2020 Research and Innovation Programme, in terms of their impact with regards to the European Commission’s Triple Win Strategy:

1. Improved quality of life.
2. Increased efficiency of health and long-term care.
3. Market growth and expansion of the EU industry.

The selected projects have been categorised according to the following 6 thematic groups related to ICT for active and healthy ageing to better present the results, as identified in the publication "Research and Innovation in the field of ICT for Health, Wellbeing and Ageing: An Overview.

1. Better connected through integrated care
2. Fall prevention
3. Frailty, early detection and intervention
4. Innovating elderly care
5. Knowledge sharing and standardisation related to ageing well
6. Robotics for ageing well

For each of the top 25 most promising projects identified, a description of the project idea, along with the key results achieved will be included.

Project Coordinators of the most relevant EU funded Research and Innovation projects in terms of impact on ICT for Active and Healthy Ageing

327 PARTNERS across 29 countries
The information presented in this brochure is based on the study:

“Communicating Key results achieved from EU funded research and innovation on ICT for Active and Healthy Ageing under Framework Programme 7, the Competitiveness and Innovation Programme and Horizon 2020” (Contract number: 30-CE-0835601/00-30 / SMART number: 2016/0072)

The study was carried out by Outsight on behalf of the European Commission and can be accessed through the following link: www.bit.ly/ImpactStudyICTforAHA

The study consisted in the following steps:

1. Definition of initial Knowledge base for study:
   Identification of the EU funded research projects related to ICT for Active and Healthy Ageing under the Framework Programme 7, the Competitiveness and Innovation Programme and Horizon 2020. From the 421 projects initially identified, selection criteria were used to reduce this quantity to 58 projects.

2. Preliminary Analysis:
   The main objective of the Preliminary Analysis Phase is to identify those projects with sufficient potential (in terms of impact) to progress through to the IN-DEPTH analysis phase. The 58 projects were reduced down to 40 during this phase.

3. In-Depth Analysis:
   Building on the work carried out during the Preliminary Analysis, the in-depth analysis goes one step further analysing key documentation related to the projects in an attempt to select the Top 25 most relevant projects in terms of impact. The results of which are included in this brochure.

The brochure includes a brief description of the Top 25 most relevant EU funded research and innovation project in terms of impact on ICT for active and healthy ageing, including the main aims and objectives.

This publication also includes the Key Results from each of the projects, providing an insight into the impact that the project has had in Europe and beyond.

Details of the exact criteria that has been used can be found in the Final Study Report.

Interaction between the KOMPAÏ -2 robot and an elderly user, MARIO Project (H2020 Programme).

Source: Photo courtesy of KOMPAÏ Robotics.
"Integrated care models can be introduced with different goals in mind: increasing effectiveness of the system, reducing costs and improving patient safety."

IMPROVED QUALITY OF LIFE
INCREASED EFFICIENCY OF HEALTH AND LONG-TERM CARE
MARKET GROWTH AND EXPANSION OF THE EU INDUSTRY

IMPACT OF EU-FUNDED RESEARCH & INNOVATION ON ICT FOR ACTIVE & HEALTHY AGEING – THE TOP 25 MOST INFLUENTIAL PROJECTS

References:

- Beyond Silos Project Website: www.beyondsilos.eu
- CORDIS Project Information Page: www.cordis.europa.eu/project/rcn/191775_en.html

BEYOND SILOS
LEARNING FROM INTEGRATED ECARE PRACTICE AND PROMOTING DEPLOYMENT IN EUROPEAN REGIONS
2014 – 2017 - CIP Programme

www.beyondsilos.eu

The wide range of health, social care and housing services, and their benefits and procedures can be confusing, particularly for people who are older and live with one or more chronic condition. Beyond Silos enables the delivery of integrated care to older Europeans based on short-term and long-term care, helping them to live independently within the community. This is achieved by providing replicable and sustainable services, supported by the ICT tools needed to integrate care pathways across organisations and locations, with a focus on social and health service providers. A key area of integration is providing cross-sectoral teams with joint access to client data, including information coming from home platforms that monitor physiological and environmental parameters and provide tools for improving self-care.

The ICT platform helps to develop regionally customised integrated care models and care pathways. Both pathways are supported by tools which activate the most appropriate resources across the entire spectrum of services available for older people, including informal care; thus increasing support for older people to manage both acute and long-term situations, including chronic conditions and increasing frailty. The integrated services were implemented and piloted in the regions of Northern Ireland (United Kingdom), Sofia (Bulgaria), Badalona and Valencia (Spain), Campania (Italy), Amadora (Portugal), and the Kinzigtal (Germany).

Key results

- Improved quality of care provided through the use of the new ICT supported services.
- Successful demonstration that ICT solutions facilitate and improve access to, and sharing of, highly relevant data for better care, real-time communication between all care actors and care recipients and the provision of support for a more safe and comfortable life at home.
- Pioneer project in making home care services a priority for the new organisation of innovative valuable care settings for long-term conditions.

CAREWELL
MULTI-LEVEL INTEGRATION FOR PATIENTS WITH COMPLEX NEEDS
2014 – 2017 - CIP Programme

www.carewell-project.eu

CareWell enables the delivery of integrated healthcare to frail older patients through multidisciplinary integrated care programmes which use ICTs to promote coordination and communication between healthcare professionals and to support patient-centred care delivery at home. These two care pathways cut across organisational boundaries and ensure that healthcare resources are more efficiently and effectively used. The project focuses on the provision of care and support to older people who have complex health needs, are at high risk of hospital or care home admission and require a range of high-level interventions due to their frailty and multiple chronic diseases.

The use of ICT platforms and communication channels avoids the duplication of effort when dealing with the diagnostic, therapeutic, rehabilitation, or monitoring and support needs of the patients. Furthermore, these ICT-based platforms can improve treatment compliance, enhance self-care and self-management and increase patient and carer awareness of their health status, leading to improved clinical outcomes and enabling people to live more fulfilled lives. The project has also worked on supporting informal caregivers through technologies that highlight when respite care or additional professional assistance is required. CareWell supports the integration of care in six European Regions including Powys, Wales (United Kingdom), Basque Country (Spain), Lower Silesia (Poland), Veneto Region (Italy), Zagreb (Croatia) and Apulia (Italy).

Key results

- Increased quality of life for the older people included in the study. A significant impact from an overall European perspective from a social and economic point of view.
- Substantial increase in the knowledge on sustainable integrated health and social care and the generation of a model that is well-suited to be transferred to other European regions and cohorts of the population with other health and social care needs.
- Provision of an evidence base for the cost-benefit evaluations needed to convince regional and national policy-makers about the benefits of ICT-supported integrative care.
- Optimisation of the efficiency and effectiveness of the healthcare services delivered to complex multi-morbid patients aged 65+ through the use of integrated care programmes.

References:

- CareWell Project Website: www.carewell-project.eu
INCA
INCLUSIVE INTRODUCTION OF INTEGRATED CARE (IN3CA)
2014 – 2016 - CIP Programme

www.in3ca.eu
The INCA project aimed to improve outcomes for patients by creating access to better integrated socio-sanitary care services outside of hospitals through the ICT tool named AdaM+. This will reduce unnecessary hospital admissions and enable professionals to effectively work across provider boundaries (also called silos). The project has launched a model, based on ICT services and applications, that matches patient needs and professional aspirations whilst reducing costs, improving the patient experience and making health delivery systems more efficient.

The inclusive approach of INCA can help to remove technological barriers for the engagement of patients and to leverage integrated care programmes in Member States. This will lead to the operational deployment of novel organisational models and care pathways for integrated care. INCA will be deployed using cloud computing approaches, allowing the project to reach its objectives in a highly ambitious yet affordable way using clear quantitative indicators. This will ensure the best value for money using INCA in place of conventional Public or Private silos of eHealth service deployments.

Key results:
• Strong contribution to the current state-of-the-art in Chronic Disease Management, helping to facilitate the integration of social programmes beyond the clinical vision of the care chain provision.
• INCA will be deployed using cloud computing approaches, allowing the project to reach its objectives in a highly ambitious yet affordable way using clear quantitative indicators. This will ensure the best value for money using INCA in place of conventional Public or Private silos of eHealth service deployments.
• Impressive reduction of re-hospitalisations after INCA deployment and operation.
• Exploitation of the potential of ICT and a reduction of the gap between different services, organisations and parts of care provision.

INCA carried out pilot testing in Valencia and Murcia (Spain), Corfu (Greece), Besançon (France) and Kutaisi (Georgia). In total 4 Member States were involved with around 125,000 impacted users and 1,550 active users participating. The project has contributed to the first-time introduction of integrated care programmes, aiming to coach other “early adopter” regions within Member States in the future.

References:
- INCA Project Website: www.in3ca.eu

inCASA
INTEGRATED NETWORK FOR COMPLETELY ASSISTED SENIOR CITIZENS' AUTONOMY
2010 – 2013 - CIP Programme

www.incasa-project.eu
The inCASA project focused on citizen-centric technologies and a network of public/private services to help and protect independent elderly people, prolonging the time they can live in their own home by increasing their autonomy and self-confidence. This was achieved through the integration of solutions and services that monitor health and environmental factors. The information collected was analysed to profile user behaviour and to implement customised intelligent multilevel alerts and communication services. The Care Services had access to this data through a Smart Personal Platform with an embedded Behaviour Analysis Application. This included features such as day to day activity and therapy planning, coordination of local public social and health care services and assistance in the deployment of specialist community-based services.

The aim of inCASA was to validate and launch this inclusive, multi-channel and patient-focused communication care network that integrates the entire range of eServices provided throughout the personalised care chain. These services were based on cloud computing approaches and involved public and private stakeholders including organisations from the voluntary sector.

inCASA carried out pilot testing in Turin (Italy), Attica (Greece), La Rioja (Spain), Paris (France) and Hertfordshire (United Kingdom). These pilots aimed to demonstrate how the use of ICT helps provide better quality healthcare throughout the existing or upcoming local experiences, at a stable or lower cost, and to reduce waiting times and errors.

Key results:
• Clearer understanding of the potential benefits of integrated service delivery for service provider organisations and a concrete starting point for the future development of more closely integrated healthcare and social care systems across Europe.
• Quality of life of patients who are frail and vulnerable can be improved through the integration of services. Clinical outcomes can be improved and care can be targeted more effectively and safely through the reorganisation of existing pathways and the delivery of care closer to home.
• Advanced integration on a functional and technological level, including patient clinical data regarding the patient’s health at a local, regional and national level.

References:
- inCASA Project Website: www.incasa-project.eu
FALL PREVENTION

“New high tech solutions to detect falls and prevent injuries will enable health providers to more efficiently and cost effectively monitor patients, and equip potential fallers with the most appropriate devices.”

The FARSEEING project has made independent living a realistic option even for high risk subjects and offers a 360-degree perspective on how to prevent, detect and manage falls in various environments. FARSEEING has built the world’s largest fall repository to better understand the risk factors associated with falls. The database has, for the first time, enabled researchers to study the nature of a fall based on objectively measured data and has provided an information base for research and therapy development for fall prediction, prevention and support. This database facilitates the collection, analysis and processing of behavioural and physiological data related to falls, daily activity and physiological factors.

The project also aims to support older adults through a focus on ICT devices and the unique opportunities they provide to support them in their own environment. For example, the project app helps to monitor activity and provide real-time information on the detection of falls. Other devices developed within the project include a wearable sensing unit for long-term activity monitoring and fall detections, and a fall risk assessment tool. In addition, FARSEEING researchers have studied how to encourage older adults to take-up and maintain use of keep fit technologies. Together, these devices have collected data from nearly 2,000 individuals, including both high functioning community-dwelling elders and high-risk groups of fallers, between January 2012 and December 2015. They have recorded over 300 real-world fall events, making the database the largest collection of real-world fall data at this time.

Key results:

- FARSEEING Fall Repository represents a major breakthrough in scientific and clinical knowledge in the area and sets new standards for the future development and evaluation of fall-related interventions.
- Commercialisation of FARSEEING’s technology into marketable medical devices available to the mass market through the spin-off company from the University of Bologna, mHealth (www.mhealthtechnologies.it). The company offers a range of wearable and mobile solutions for monitoring, assessment and rehabilitating the motor functions of an ageing population.
- Substantial ICT-related improvements in the areas of fall prevention and fall detection through the design and validation of new algorithms, and subsequently intervention strategies and service models.

References:

- FARSEEING Project Website: www.farseeingresearch.eu
The I-DON’T-FALL project provided an integrated platform to help guarantee the physical safety of older people. The main aim of I-DONT-FALL was to deploy, pilot and evaluate a range of innovative ICT solutions for fall detection and prevention management. The project also focused on tailoring technological solutions related to fall detection to the specific needs, causes, risk factors and cultural factors associated with fall incidents.

The project developed and evaluated a platform, which enables the prevention and detection of falls. The platform was flexible, allowing it to be configured according to the needs of specific target groups and risk factors associated with fall incidents. It also offered medical experts and health professionals a wide range of tools, enabling them to customise fall solutions to the needs of the end-users, helping to save lives and reduce healthcare costs. Some of the key innovations that could be seen during the project included a cognitive rehabilitation platform, a robotic rollerbot, the “iWalker” to support patients in physical rehabilitation, a wearable inertial sensor and a cognitive rehabilitation game which could be integrated into the daily activities of older people within their own home environments.

Project outcomes and developments are being continued and used in the H2020 project my-AHA (www.activeageing.unito.it/). Four international partners from IStopFalls are collaborating in this project.

www.istoppfalls.eu

The main aim of the IStopFalls project was to develop and evaluate innovative home-based technologies to assist in preventing falls, and thus to improve the quality of life of older adults living at home. The project has developed a non-invasive ICT monitoring system and exercise programme for the elderly which helps to predict and prevent falls and that can be integrated into the daily activities of older people within their own home environments.

The project used a dual approach to preventing falls. Firstly, an “exergame” was developed for a home-video game console (PC/MS Kinect based) which aimed to strengthen lower limbs and improve balance. Users can interact with the game using body gestures and spoken commands, providing real-time feedback and continuous result monitoring. The second involves extensive monitoring of the user through a discrete device that can be worn as a necklace. The Senior Mobility Monitor (SMM) continuously monitors the mobility of the users, providing quantitative information on frequency, duration and type of mobility activities. It also provides qualitative information on balance function and muscle power.

An eHealth platform and a knowledge-based system for fall prediction and prevention correlates the mobility analysis information coming from the SMM and Exergame. In turn, it will provide sufficient data to carry out a trend analysis providing valid evidence for fall prediction and sustainable fall prevention. The system is completed by a home-video application which provides all the necessary information to the users at home for individualised fall prediction and prevention, along with other related components such as an e-inclusion model.

Key results:

• The ISTOPFALLS final report estimates that if 3% of older adults at risk of falling used the system, the risk of falling could be reduced by 35%. This could save up to EUR 27.7 million a year in fall-related health care costs in Germany alone (2012 data).

• A reduction in the overall fall risk of those studied by 34%, rising to 54% for participants who used the system a lot. The results showed that participants with the highest risk of falling benefitted the most and that there was a reduction in the overall physiological fall risk in comparison to the control group.

• Project outcomes and developments are continued and used in the H2020 project my-AHA (www.activeageing.unito.it/). Four international partners from IStopFalls are collaborating in this project.

References:

– IStopFalls Project Website: www.istoppfalls.eu
– European Commission (2016). IStopFalls – Results in Brief
FRAILTY, EARLY DETECTION AND INTERVENTION CARE

“The number of older adults is going to increase in a relevant way until 2060, along with the disability rate which will almost double from 27 to 50%. The number of years added to the lifespan of women will increase by six and for men it will increase by 7.1, posing a huge burden on European health and social systems”

PERSSILAA
PERSONALISED ICT SUPPORTED SERVICE FOR INDEPENDENT LIVING AND ACTIVE AGEING
2013 – 2016 – FP7 Programme

www.perssilaa.com

The main objective of PERSSILAA was to develop and validate a new service model for detecting pre-frail older adults and providing them with training services to improve their health and prevent frailty. Considering that the most evident causes of frailty are usually insufficient mental stimulation and physical activity, as well as nutritional insufficiencies, PERSSILAA supports the user to maintain or improve on these factors through three modules: healthy nutrition, physical exercise and cognitive function.

PERSSILAA innovates the way our care services are organised. From fragmented, reactive disease management into preventive, personalised services that are offered through local community services and telemedicine technology. To implement the service model, PERSSILAA has developed an integrated software platform for elderly people that consists of modules for screening, monitoring, and training on healthy nutrition, physical exercise and cognitive function. The platform also provides intelligent decision support and gamification.

The core idea in the project is therefore to offer on-line services for elderly people who have been detected as pre-frail and encourage them to use the PERSSILAA services to improve their health condition. The PERSSILAA service concept has been tested and validated in two countries, in the Enschede region (The Netherlands) and the Campania region (Italy).

Key results
- Direct impact on health and quality of life of elderly persons where an early detection of the problems and prevention is essential.
- Successful integration of a screening system that can distinguish pre-frail, frail and robust elderly people and the technical solutions for screening, monitoring and training services.
- Extensive scaling-up actions in the Netherlands where the service has been offered to around 10,000 users in 4 municipalities*. In Enschede, most of the exploitation results come from the Dutch spin-off project Langgezond.nl.

References:
- PERSSILAA Project Website: www.perssilaa.com
- Situation as of November 2016.

DEMi@CARE Tablet Application for Clinicians, DEMi@CARE Project (FP7 Programme).
Source: Photo courtesy of the Centre for Research and Technology - Information Technologies Institute, Thessaloniki
“In line with the hike in average life expectancy across the globe, there has been a parallel increase in the incidence of dementia. Whilst waiting for a sustainable cure for all of its forms, it has become paramount to develop personal health support systems for the integrated monitoring of behaviour with medical data that enables effective care for patients with this condition.”

European Commission (2016). DEM@CARE – RESULTS IN BRIEF
www.carerplus.eu

Care workers and carers a can be considered as the missing link between digital tools and elderly people. The Carer+ project focused on training and enhancing the digital skills and competences of care workers and carers across Europe with the aim of improving the home care service they deliver. It has also had an impact on the professionalisation of these roles and helped create job opportunities. The project identified the ICT competences of care workers and informal carers and developed these by designing and implementing a set of learning paths and educational resources for mobile and work-based learning. These activities aimed to overcome existing challenges and barriers to their professionalisation of carers and care workers including isolation, access to technology, flexibility of study modes, lack of support and motivation, formal accreditation, recognition of prior experience, and scalability.

The project deployed a specifically designed technological environment for self and professional development, supported by a blended-learning approach with peer-to-peer and intergenerational learning methodology. Training and testing activities included the creation of a micro-certification process based on a certification and motivational badge process based on a certification and motivational badge system, the use of Internet tablets as user-friendly devices and the active inclusion of care recipients during the process. This learning environment and training programme was piloted in 13 sites across 5 countries including France, Italy, Latvia, Romania and Spain, involving a total of 500 users.

Key results
- Creation of the CARER+ Digital Competence Framework, an instrument that defines the knowledge, skills and competences of a digitally competent care worker.
- Development of a certification process of digital competences for carers in response to the need for their recognition and professionalisation across the EU.
- CARER+ Training programme and learning resources.
- Toolkit for developing ICT competences “How to Deliver Smart Homecare”. This Toolkit provides Guidelines, procedures and practice examples to support the successful implementation of the Carer+ programme in the wider care sector.

References:
- CARER+ Project Website: www.carerplus.eu/
- CARER+ Training programme and learning resources: www.carerplus.eu/content/carer-training-programme-and-resources-available-on-request
- Toolkit for developing ICT competences “How to Deliver Smart Homecare”: www.carerplus.eu/content/toolkit-developing-ict-competences-how-deliver-smart-homecare

www.demcare.eu

Dem@Care aims to contribute to the timely diagnosis, assessment and maintenance of people with dementia, helping them to remain independent by better understanding how the disease affects their behaviour and everyday lives. The main objective of Dem@Care is the development of a system that provides personal health services to people with dementia, as well as medical professionals and caregivers. The project has developed a closed-loop management solution that provides feedback to the person with dementia, whilst at the same time including clinicians into the remote follow-up, enabling them to maintain a comprehensive view of the health status and progress of the affected person. The system uses multi-sensor data analysis, combined with intelligent decision-making mechanisms, which provides an accurate representation of the person’s current status and generates appropriate feedback, both to the person and the associated caregivers, enhancing the standard clinical workflow.

The solution integrates an array of new technologies. The multi-sensor ambient monitoring system records sleep, utility usage and profiles behaviour and lifestyle by composing daily living routines. Specially developed visual sensing technology, algorithms for visual perception, multi-sensor ambient monitoring system records sleep, utility usage and profiles behaviour and lifestyle by composing daily living routines. Specially developed visual sensing technology, algorithms for visual perception, emotion recognition accuracy from emotional representation of the person’s current status and generates appropriate feedback, both to the person and the associated caregivers, enhancing the standard clinical workflow.

The solution integrates an array of new technologies. The multi-sensor ambient monitoring system records sleep, utility usage and profiles behaviour and lifestyle by composing daily living routines. Specially developed visual sensing technology, algorithms for visual perception, emotion recognition accuracy from emotional representation of the person’s current status and generates appropriate feedback, both to the person and the associated caregivers, enhancing the standard clinical workflow.

Key results
- Significant scientific and technological impact beyond state of the art, particularly in the realm of wearable and environmental sensor technology, algorithms for visual perception, emotion recognition accuracy from emotional representation of the person’s current status and generates appropriate feedback, both to the person and the associated caregivers, enhancing the standard clinical workflow.
- @Lab scenario has had substantial impact in the diagnosis and monitoring early stages of dementia, facilitating differentiation between healthy, MCI and AD participants with relatively high accuracy rates (approx. 82%).
- Foundation of three spin-offs to exploit the work carried out in the project: Memorizin AB, Carealia and EKINNOX, along with the development of joint exploitation initiatives between partners.

References:
- DEM@CARE Project Website: www-demcare.eu
- European Commission (2016). Dem@Care – Results in Brief
The eWALL solution can be easily mounted onto an existing wall and provides a variety of different services to make life easier for the user considering factors such as cardiovascular conditions, muscle functions, declines in neuromuscular control of movements which cause higher risks of fall, declines in memory, the ability to orientate and cope with complex situations. It is composed of two main subsystems: 1) the eWALL Sensing Environment, responsible for explicit and implicit interaction with the primary user; 2) the eWALL Cloud, a central processing and data storage subsystem. The solution includes a large number of features such as My Daily Life, My Sleep, My Activity, storage subsystem. The solution includes a large number of features such as My Daily Life, My Sleep, My Activity, etc., and the algorithm for activity coaching (methodology for personalisation of goals in activity coaching, that is automatic and self-learning).

Key results

- Successful delivery of more than 50 installations in dwellings – COPD*/MCI** patients and seniors with frailty conditions. The subject provided feedback following a validation framework applied in the project and indicated the technical efficiency of eWALL, as well as the increase in their Quality of Life.
- Significant scientific/technological contribution in some modules such as the face tracking algorithm (identifying faces in an image, even with multiple persons present and landmarks in each face) and the algorithm for activity coaching (methodology for personalisation of goals in activity coaching, that is automatic and self-learning).
- Creation of a start-up “Innovation Solution Sprl”, to further develop and commercialise the platform in collaboration with some of the key researchers in the consortium. CloudCare2U is a result of this progress.

References:

- eWALL Project Website: www.ewallproject.eu
- *Chronic Obstructive Pulmonary Disease
- **Mild Cognitive Impairment

IMPROVED QUALITY OF LIFE
INCREASED EFFICIENCY OF HEALTH AND LONG-TERM CARE
MARKET GROWTH AND EXPANSION OF THE EU INDUSTRY

INDEPENDENT LIVING SUPPORT FUNCTIONS FOR THE ELDERLY
2015 – 2018 – H2020 Programme

IMPROVED QUALITY OF LIFE
INCREASED EFFICIENCY OF HEALTH AND LONG-TERM CARE
MARKET GROWTH AND EXPANSION OF THE EU INDUSTRY

IN LIFE aims to prolong and support independent living for the elderly with cognitive impairments through ICT services that support home activities communication, health and maintenance, travel and mobility, and socialisation, with novel, scalable and viable business models, based on feedback from large-scale, multi-country pilots. These ICT services will be interoperable, open, personalised and seamless and will build on existing knowledge and tested technology, helping to transform existing research efforts into a reality for people across Europe.

The project will offer 19 different services which will be further improved and tailored to the specific needs of different elderly groups including mild cognitive impairment (MCI), early dementia and cognitive impairment with co morbidity conditions, plus formal and informal caregivers. The main innovation can be found in the integration of these services into an open, cloud-based, reference architecture which will be tested in 6 pilots across Europe in Greece, Netherlands, Slovenia, Spain, Sweden, and UK. The pilots will involve over 1,200 elderly people with cognitive impairments, 600 formal and informal caregivers, and 60 other stakeholders.

Key results

- Provision of a wide range of services that may help an independent living of elderly people including medical/health services, home & quality of living services, and autonomous mobility services.
- Innovative observed cloud-based reference architecture used to integrate services for elderly with cognitive impairment.
- Strong impact expected on SMEs in the commercialisation of project results both for the 6 SMEs in the project consortium and further afield as the project will give them the opportunity to offer their new tools.
- Large scale pilot testing across Europe.

References:

- IN LIFE Project Website: www.inlife-project.eu
Long Lasting Memories
A UNIFIED SOLUTION FOR COGNITIVE PHYSICAL HEALTH AND AUTONOMOUS LIVING FOR SENIOR CITIZENS.
2009 – 2012 – CIP Programme

www.longlastingmemories.eu

Long Lasting Memories (LLM) has developed 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. By doing this, LLM works actively against age-related cognitive decline, improving the quality of life of the elderly and substantially prolonging the time they can live independently. The service can be installed in homes, day care centres and more formal medical centres, helping to promote personalised and monitored physical and cognitive training of the users. The service is also supported by an independent living solution which compensates for the disabilities of users with cognitive problems or mild dementia during their daily activities.

The LLM service was piloted in real life situations through five rounds of testing in five EU Member countries including Austria, France, Greece, Spain and Cyprus, involving 1,846 users. The local impact of the project, through dissemination activities and indirect involvement (particularly inside care centres) was estimated to have reached over 80,000 people. 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.

Key results

- Combined physical exercise and Cognitive Training (entire LLM service), leads to significant improvements in both episodic memory (capacity to learn and retain new information) and working memory (capacity to hold and cognitively manipulate new information).
- Interviews directly with carers involved in the pilots indicated an improvement in their quality of life, helping them to better manage the daily exercise and training of the elderly.
- In 2014 the LLM platform, under the new brand name “LLM Care”, passed from pilot implementation to market implementation, as a service provided to local stakeholders, public and private elderly care homes, health care professionals, individuals, as well as elderly citizens in need.

Key results

www.cognitivetraining.eu

SOCIABLE developed a radically new approach towards ICT assisted cognitive training and social activation, targeting senior citizens and helping them to stay mentally fit. Three main groups of users were targeted: cognitive intact elderly; older adults with Mild Cognitive Impairment; patients suffering from mild Alzheimer’s disease. The project integrated, deployed and operated an innovative ICT-enabled online service for assessing and reinforcing the mental state of the elderly through gaming activities for cognitive training.

The main elements of the SOCIABLE solution include a set of Cognitive Training Activities covering all the cognitive skills that are performed in a care centres with the support of a medical expert or a specialised care centre employee, or at homes of the elderly with the support of a formal (or informal) carer. SOCIABLE also helped boost the social networking capacity of the elderly and encouraged more day to day interactions with other people through “profiling” and “matching” capabilities. Support tools are also available for Medical Experts to monitor the progress of their patients, design the training programmes and to personalise the cognitive training activities according to the specific needs of each user.

The applications supported a novel approach combining the conventional human care factor with an ICT computing platform (a tablet or a digital table (a table with a touch-screen)). The services were successfully deployed across seven pilot sites (including hospitals, care/leisure and day centres) in four European countries (Greece, Italy, Norway, Spain). In total, over 300 users from participated in the pilot operations.

Key results

References:

- LONG LASTING MEMORIES Project Website: www.longlastingmemories.eu

References:

- SOCIABLE Project Website: www.cognitivetraining.eu
- SOCIABLE Project Results, Fact Up www.jaimipex.europa.eu/document/sociable-project-sociable
- * Notably the Microsoft Surface Table was used.
STOP + GO
SUSTAINABLE TECHNOLOGY FOR OLDER PEOPLE – GET ORGANISED
2014 – 2017 – CIP Programme

www.stopandgoproject.eu/

There is no doubt that a wider scale uptake of innovative telehealth and telecare technological solutions by the public sector would relieve pressure on the increasingly scarce health and social care resources and improve the lives of older citizens. One of the approaches that can be used to respond to this challenge is the Public Procurement of Innovative Solutions (PPI). The overarching strategy of STOPandGO has been to pilot a PPI process and produce a validated standard “European Specification Template”. The main aim is to demonstrate the benefits that PPI can have for industry and the municipalities that carry them out in addition to illustrating real improvements in aspects such as quality of life, care and carer programmes and hospital in-patient stay.

Relevant services and suppliers were invited to an open tender. The approach focused on the development of telehealth and telecare technological solutions with an emphasis on the importance of producing outcome-based service specifications with clear built in key performance indicators. A set of local tenders was published by the procurers in close cooperation with the advisors, in each of the following six coordinated pilot areas: Liverpool City Region (UK), North Brabant Province (The Netherlands), Aragon and Catalonia (Spain), Calabria, Campania and Tuscany (Italy). These specifications followed EU regulations and were coordinated at a local level by the Executive Board.

Suppliers were requested to deliver the desired outcomes for a sample population of over 5,000 beneficiaries.

Key results

- Demonstration that an innovative procurement process based on a service delivery approach prioritised clearly defined clinical and social outcomes.
- Successful pilot experience in Sant Pau hospital in Spain, where the tender specifications defined a new model of collaboration between the hospital and the service provider, with the supplier participating in all stages of the healthcare delivery process and sharing the risks with the hospital.
- Release of the European Specification Template and Reference Business Case, a flexible procurement template which can be used across Europe to promote cost-effective commissioning of innovative services to benefit EU citizens at scale.

References:

- STOP AND GO Project Website: www.stopandgoproject.eu/
- European Specification Template and Reference Business Case: www.stopandgoproject.eu/est/
As the European population ages, more support is needed with fewer hands to cater for their needs. There is a huge market potential for Ambient Assisted Living (AAL) solutions, but adoption is limited because they require significant resources for implementation. Open platforms and a standardised approach are needed to make it technically and economically viable to develop AAL solutions.”

universAAL
UNIVERSAL OPEN PLATFORM AND REFERENCE SPECIFICATION FOR AMBIENT ASSISTED LIVING
2010 – 2014 – FP7 Programme

www.universaal.sintef9013.com

UniversAAL developed an open platform that provides a standardised approach making it technically feasible and economically viable to develop AAL solutions. The platform was produced by a mixture of new development and consolidation of state-of-the-art results from existing initiatives. This not only posed technical challenges but also raised issues of adoption and uptake. Therefore, work on establishing and running a sustainable community achieved attention right from the start, with the promotion of existing results gradually evolving into the promotion of the universAAL platform, as it developed into one consolidated, validated and standardised European open AAL platform.

The main goal of the universAAL project was to make it easier for the ICT industry in Europe to develop and successfully deploy AAL solutions. To achieve this, the project developed an open standardized platform/specification on which the AAL service providers can quickly and cheaply build AAL services. The project also assisted the developers by providing development tools to further decrease the development costs. Moreover, universAAL helped to further expand the AAL market by providing an application store, called uStore, through which developers, service providers and end users can offer and obtain AAL applications.

Key results

- Development of the universAAL platform offering support in three main areas: a runtime, for developers and support for the emergence of an AAL community and marketplace.
- Design and launch of the uStore, a digital market platform concept inspired by Apple’s “App Store”. The uStore is a one-stop-shop for universAAL end-user services.
- Creation of the universAAL developer depot. This contains all of the resources needed by developers: all parts of the platform itself, tools, basic services for incorporation in new end-user services, adapter components for interoperability with non-universAAL systems, libraries of “drivers” supporting use of different sensors available on the open market.
- Further development of the work carried out in universAAL within the reAAL project (AAL programme) to ensure efforts to generate impact continue beyond the universAAL project. According to the Coordinator of the universal project, work also continued beyond the reAAL project.

References:
- UNIVERSAAL Project Website: www.universaal.sintef9013.com
- European Specification Template and Reference Business Case: www.stopandgoproject.eu/est/
“Providing adequate care to the elderly is essential to ensuring Europe’s senior citizens are able to spend their later years living a healthy, happy and independent life. But without support, many face loneliness, a lack of mobility and exercise, and forgetfulness on a daily basis. However, with the use of modern technology and particularly the development of robotic solutions, Europe’s elderly population can feel young again and lead a much safer and richer life.”

ACCOMPANY
ACCOMPANY provided a robotic companion as part of an intelligent environment. The system provided services to elderly users in a motivating and socially acceptable manner to facilitate independent living at home. The ACCOMPANY system provided physical, cognitive and social assistance in everyday home tasks, and contributed to the enablement of the user, for example, helping the user to carry out certain tasks on their own.

With Care-O-bot® 3, a state of the art service robot platform, user requirements and user acceptance of the robot were assessed. User study results were fed back to make the technology better suit user demands and preferences. The envisaged relationship of the user with the robot is that of a co-learner – robot and user providing mutual assistance. The user was not therefore dominated by the technology, but was empowered physically, cognitively and socially.

Pilot testing was carried out in three different European countries (UK, the Netherlands and France). The project also specified and benchmarked design and ethical guidelines for service robotics and the industry itself. The project consortium was multidisciplinary in order to tackle the technological, human-centred and ethical challenges of the project.

Key results
- Good progress in raising the technological readiness level of personal care robots.
- Clarification of a number of technological and social challenges that need to be met in order to improve the quality of life of ageing EU citizens with personal care robots.
- A strong impact in science and technology, such as the development of memory architecture for learning and adaptation, new forms of socially aware human robot interaction, empathetic interaction, and demonstration of viable activity monitoring.
- Integration of the personal robot into a smart home environment, providing easy to use tools to construct and personalise complex robot behaviours in a robot independent manner for potential re-use in future projects.
- Commercialisation of the CARE-O-BOT robot in the market as a state of the art useful device to help improve the quality of life of ageing citizens in Europe.

References:
- ACCOMPANY Project Website: www.rehabilitationrobotics.net

GIRAFFPLUS
GIRAFFPLUS COMBING SOCIAL INTERACTION AND LONG TERM MONITORING FOR PROMOTING INDEPENDENT LIVING
2012 – 2015 – FP7 Programme

www.giraffplus.eu
Early detection and adaptive support to changing individual needs related to ageing, is an important challenge in todays society. The Giraff+ project aimed to develop a system that addresses such a challenge. The system consists of a network of home sensors that measure things such as blood pressure and temperature, or detect activities such as when somebody occupies a chair, falls down or moves inside a room. The data from these sensors are interpreted by an intelligent system in terms of activities (e.g. the person is going to bed) and health and wellbeing (e.g. the person is tired or well rested). Alarms or reminders can be sent to the persons or their caregivers, and the generated data can be analysed over time by a health professional. Part of the system is a telepresence robot, Giraff, which can be moved around in the home remotely via the internet by the caregiver for example. The Giraff is effectively a mobile communication platform, with video camera, display, microphone and speakers, which helps the user to maintain their social contacts.

Special emphasis has been given to the evaluations and input from the users so that the system can have an empathetic user interaction and address the real needs and capabilities of the users. The Giraff+ system was installed and evaluated in at least 15 homes of elderly people in Sweden, Italy and Spain.

Key results
- Strong impact on the European social care system through the support given to the creation of the next-generation integrated solutions for remote supervision.
- Use of the robot platform has been good for the social elements of elderly care as it facilitated direct communication and social engagement.
- Work on the use of context recognition to analyse the sensory output of the system has delivered some of the best scientific progress in the project.
- A version of the system has been released for desktops and a final mobile android version has been released for mobile devices on Google Play.

References:
- GIRAFF+ Project Website: www.giraffplus.eu

IMPROVED QUALITY OF LIFE
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www.growmeup.eu/

GrowMeUp will provide an affordable service robotic system that is able to learn the needs and habits of older people over time and increase its capabilities in accordance to the older person’s decline in terms of abilities. The system provides support and encouragement for older people to remain active, independent and socially involved for longer, whilst enabling them to continue with their daily life at home. The main aim of the project was to increase the number of years that an elderly person can live independently and actively. It also aims to improve the quality of life of older people (65+) who have light physical or mental health problems and who live on their own.

The GrowMeUp system will incorporate state of the art cloud computing technologies and machine learning mechanisms which will allow the service robot to expand in knowledge continuously over time whilst potentially being able to share this knowledge with other multiple robots through the cloud. Other robots can then make use of the cloud and increase their own capabilities whilst at the same time reducing the effort needed to learn.

The system was tested in two real-world environments at Zuyderland (Netherlands) and Caritas (Portugal). Both pilots involve the careful selection of use cases and older people who fulfill the GrowMeUp target group requirements, helping to provide validation of developments both on the hardware and software side of things.

Key results
• Increase the years of independence, active living and the quality of life of older people with light physical or mental health problems who live alone at home.
• Development of a more efficient care system, benefiting from smart networking with other systems, users and care givers, making the solution more flexible, cheaper, affordable and smarter in comparison to previously implemented approaches.
• Main innovations include Cloud Technologies, Behaviour and Emotional Understanding, Intelligent Dialouging and personalised care.

References:
− GrowMeUp Project Website: www.growmeup.eu/

www.i-support-project.eu/

The I-SUPPORT project aims to develop an intelligent robotic shower system which enables people to shower independently at home and in care homes. It does this through the development and integration of an innovative, modular, ICT-supported service robotics system that supports and enhances the motion and force abilities of elderly adults, helping them to complete the entire sequence of bathing tasks (e.g. washing their back, upper body parts, lower limbs, buttocks and groin).

The robotic bathing system will be able to adapt to the capabilities of the frail elderly population and will interact in a master-slave mode, thus performing bathing activities in an intuitive and safe way. This is achieved through the seamless integration of advanced modules of cognition, sensing, context awareness and actuation into the service robotics system. Meanwhile, the adaptation and integration of state of the art, cost-effective, soft-robotic manipulators will provide the hardware constituents, which together with advanced human-robot force/compliance control will form the basis for a safe physical human-robot interaction that complies with the most up-to-date safety standards.

Key results
• A major contribution to the quality of life, autonomy and independent living of the ageing population by enabling them to take care of themselves and thus, reducing the amount of personal nursing/care services required and significantly supporting the prolongation of the time spent living in one’s own home.
• Strengthened competitiveness and growth of SMEs, offering new service and product opportunities not only in the area of service robotics for bathing but also in other areas where the advanced research and development objectives of the project could find an application.
• Progress in scientific and technological developments including user-centred specification of user and safety requirements and the definition of I-Support service robotic functional specifications and system architecture for tracking human posture, movements and actions in shower environment.

References:
− I-SUPPORT Project Website: www.i-support-project.eu/
− CORDIS Project Information Page: www.cordis.europa.eu/project/rcn/194088_en.html
MARIO
MANAGING ACTIVE AND HEALTHY AGEING WITH USE OF CARING SERVICE ROBOTS
2015 – 2018 – H2020 Programme

www.mario-project.eu/portal/

MARIO addresses the difficult challenges of loneliness, isolation and dementia in older people through innovative and multi-faceted inventions delivered by service robots, building on the success of the DOMEO project that was funded under the Active Assisted Living programme (AAL JP). It is the first ever project to introduce assistant robots into real homes with real people for more than a year. The project brings together the well-known Kompaï robot, the commercial footprint of ROBOSOFT, the control expertise of RURobots, advances from the computer laboratory at CNR and an innovative robot application development platform by Ortello.

This unique combination of expertise has helped the project to make clear advances in the use of semantic data analytics, personal interaction, and unique applications tailored to better connect older persons to their care providers, community, own social circle of friends and also to their personal interests. Each objective is developed with a focus on loneliness, isolation and dementia. A clear path has also been developed on how to bring MARIO solutions to the end users through market deployment. Pilot testing of the MARIO robot was carried out by end users, including people with dementia and caregivers, at three sites in Ireland, the UK and Italy for a period of over 12 months.

Key results

- Strong progress towards EU scientific and market leadership in service robots and user driven solutions for this major societal challenge.
- Incorporation of recent progress in state of the art technologies, in particular with regards to the semantic technologies and methods for CGA/MIPI calculation.
- Development of simple applications to promote autonomy and empower people with dementia, reducing loneliness and isolation.
- Reduction of the burden for caregivers, giving them more time to spend on other meaningful tasks and interacting with people with dementia.

References:
- MARIO Project Website: www.mario-project.eu/portal/

RADIO
ROBOTS IN ASSISTED LIVING ENVIRONMENTS: UNOBTRUSIVE, EFFICIENT, RELIABLE AND MODULAR SOLUTIONS FOR INDEPENDENT AGEING
2015 – 2018 – H2020 Programme

www.radio-project.eu

RADIO will develop an integrated smart home/assistant robot system. The project aims to pursue a novel approach where sensing equipment is not discrete but an obvious and accepted part of the user’s daily life. By using the system as the sensing equipment for health monitoring, the user’s attention is diverted from the functionality of the sensors rather than from the sensors themselves. By doing this, sensors no longer need to be discrete or difficult to install. They are perceived as a natural component of the smart home/assistant robot functionalities.

RADIO is working on four main areas. 1) User acceptance; 2) Integrated and power-aware data collection – transmission – processing; 3) User interfaces; 4) Architecture. Work in these dimensions will help to pave the way for a more extensive deployment of technological solutions in active and healthy ageing, for the integration of robots and smart home sensors in the Internet of things and for a larger penetration of technology-based solutions. Through a deployment of the RADIO system, different societal needs and health problems will be addressed by different configurations of the key enabling technologies. The system will be tested initially at two demonstrators that have been set up.

Key results

- Improved quality of life of the elderly, particularly the primary users.
- Strong impact in assistive technologies in particular with regards to the approach on innovative technical development based on the integration of a robot in a smart assisted home environment.
- Significant progress in user acceptance and unobtrusiveness through the development of a system that respects individual preferences and promotes dignity, bridging the gap between medical requirements and obtrusiveness and helping citizens to carry out independent lives for longer.
- Improved competitiveness of the EU industry with a particular focus on SMEs, benefitting those working and developing innovative solution in technology and infrastructure development for assistive technologies for the elderly, as well as related technologies including robotics.

References:
- RADIO Project Website: www.radio-project.eu/
**IMPROVED QUALITY OF LIFE**

**INCREASED EFFICIENCY OF HEALTH AND LONG-TERM CARE**

**MARKET GROWTH AND EXPANSION OF THE EU INDUSTRY**

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### ROBOT-ERA

**IMPLEMENTATION AND INTEGRATION OF ADVANCED ROBOTIC SYSTEMS AND INTELLIGENT ENVIRONMENTS IN REAL SCENARIOS FOR THE AGING POPULATION**

*2012 – 2015 – FP7 Programme*

The ROBOT-ERA project aimed to provide elderly people with services conceived to extend their autonomy, independence, improve their quality of life and preserve their health. The project has designed, developed, and implemented robotic services for elderly people over 65 years old, with moderate health problems and motor cognitive deficits who are living alone or with relatives but without devoted caregivers. It has demonstrated the general feasibility, scientific/technical effectiveness and social/legal plausibility and acceptability of complete advanced robotic services, integrated in intelligent environments.

The main objective of the ROBOT-ERA project was to significantly enhance the performance and acceptability of the current services, reaching a high level of quality. Different existing commercial robotic systems will be adapted and integrated to cooperate and operate in real domestic, condominium and outdoor environments. The level of robotic services will be enhanced thanks to the inclusion of cooperative robots that will be able to perform in indoor and outdoor environments, and of the AmI infrastructure, fully integrated in domestic and urban contexts. The ROBOT-ERA services were tested at two pilot sites in Peccioli (Italy) and Örebro (Sweden). Over 155 senior citizens used and tested the Robot-Era system in realistic indoor and outdoor environments.

### Key results

- A showcase project for sophisticated multi-robotic systems embedded in ambient intelligent environments. The outcomes of the project are expected to have a lasting significant impact providing valuable lessons learned.
- Development and evaluation of personal services based on these prototype robots and infrastructure has contributed to making progress in the state of the art in personal robotics for ageing and has helped to clarify how such technologies can be used to assist caregivers providing services for the elderly.
- Generation of a stable and flexible middleware that will be available to other research teams as an open software system.

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### SILVER

**SUPPORTING INDEPENDENT LIVING FOR THE ELDERLY THROUGH ROBOTICS**

*2012 – 2016 – FP7 Programme*

The SILVER project searched for new technologies to assist elderly people in their everyday lives. Using robotics or other related technologies, the elderly can continue to live independently at home even if they have physical or cognitive disabilities. The unique aspect of SILVER is that it used a Pre-Commercial Procurement (PCP) process to identify and select the new technologies and solutions. A PCP is a method for procuring R&D services with the purpose of developing a new product or solution. The process typically consists of three phases: concept/solution design, prototype development and pilot phase. One of the main aims of the project is to show the effectiveness of the PCP approach to address the needs of society and the public sector.

The SILVER project had two concrete primary objectives. The first was to establish and validate a Pre-Commercial Procurement (PCP) process in the participating countries. The second was to use that process to identify new technologies and services to address the challenge of Supporting the Independent living of the Elderly through Robotics. Robot Care Systems’ Lean Elderly Assistant (LEA) was awarded a contract to test the prototype. The LEA robot was designed to enable the elderly to live independently in their own homes, helping them to carry out their daily routines and housekeeping. It also stimulated the elderly to stay active and therefore can be used in rehabilitation. The robot was tested with end users in five countries: City of Eindhoven (Netherlands), City of Odense (Denmark), City of Oulu (Finland), City of Stockport (UK), City of Vantaa (Finland), City of Västerås (Sweden) and Region of Southern Denmark (Denmark).

### Key results

- Support the uptake of new technologies and broaden the knowledge in the area of care robotics. It has also created a highly professional network within the field of public procurement that will open up new opportunities in both national and international contexts.
- A pioneer example of a PCP process at EU scale, producing guidelines and templates developed for the PCP process itself, as well as supporting information for contractors, providing assistance throughout the entire process.
- Development of the LEA Robot, a game changer in its field. From helping with daily routines and housekeeping to serving as a personal trainer or even dance partner, the robotic stroller/walker system is having a significant impact on those with mobility or cognitive disabilities.

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### References:

- ROBOT-ERA Project Website: www.robot-era.eu/robotera/
- SILVER Project Website: www.silverpcp.eu/
Publications

− European Commission (2016). Dem@Care – Results in Brief.

Project Websites

− ACCOMPANY Project Website: www.rehabilitationrobotics.net
− Beyond Silos Project Website: www.beyondsilos.eu
− CARER+ Project Website: www.carerplus.eu/
− DEM@CARE Project Website: www.demcare.eu
− EWALL Project Website: www.ewallproject.eu
− FARSEEING Project Website: www.farseeingresearch.eu
− FATE Project Website: www.project-fate.eu
− GIRAFF Project Website: www.giraffplus.eu
− GIRAFF+ Project Website: www.giraffplus.eu
− GrowMeUp Project Website: www.growmeup.org/
− I-DON’T-HELL Project Website: www.i-don’t-hell.com
− ICASA Project Website: www.icasa.eu
− INCA Project Website: www.inca-project.eu
− I-SUPPORT Project Website: www.i-support-project.eu/
− PERSILAA Project Website: www.persilaa.com
− SILVER Project Website: www.silverpcp.eu/
− STOP AND GO Project Website: www.stopandgoproject.eu/
− UNIVERSAAL Project Website: www.universaal.sintef9013.com

Other websites:

− Beyond Silos CORDIS Project Information Page: www.cordis.europa.eu/project/rcn/191775_en.html
− CARER+ CORDIS Project Information Page: www.cordis.europa.eu/project/rcn/191783_en.html
− CARER+ Training programme and learning resources: www.carerplus.eu/content/care-training-programmes-and-resources-available-open-request
− CARER+ Toolkit for developing ICT competences: “How to Deliver Smart Homecare” www.carerplus.eu/content/toolkit-developing-ict-competences-how-deliver-smart-homecare
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IMPACT OF EU-FUNDED RESEARCH & INNOVATION ON ICT FOR ACTIVE & HEALTHY AGEING – THE TOP 25 MOST INFLUENTIAL PROJECTS