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*P. WINTLEV-JENSEN (Convener). Key European research and innovation initiatives: Addressing new technologies and services for ageing well. Gerontechnology 2010;9(2):180; doi:10.4017/gt.2010.09.02.162.00* **Participants:** P. WINTLEV-JENSEN (BELGIUM), L. PUJOL (SPAIN), S. OLSSON (BELGIUM), B. KNAPP (UK), and J. GORMAN (NORWAY). **ISSUE** The European Commission and 23 European countries have launched a major initiative to explore the potential of information and communication technologies for ageing well. This involves longer term research and development of highly advanced solutions building on ambient intelligence and service robotics, innovation projects with high market relevance to large scale pilot projects to measure the impact. It is combined with policy development to remove market barriers and stimulation of market uptake. More than 1 Billion Euro will be invested in this area between 2008-2013 in Europe. **CONTENT** The symposium will provide the opportunity to get an overview of the key EU initiatives and their main orientation and results. In addition, there will be presentations of key projects funded on open platforms, strategic research agendas and international cooperation and it will be possible to interact with the presenters. **STRUCTURE** Peter Wintlev-Jensen will provide an overview of the implementation of the action plan for ageing well of the European Commission, including the EU policy, market analysis, large scale European pilot projects for generating socio-economic evidence of impact and the research and development orientations ahead. Silas Olsson will present the 600 M€ Ambient Assisted Living Joint Program involving 23 European countries, which is focused on research and innovation projects related to ICT for ageing well solutions. This will include an overview of projects launched so far and outlook for the future. The AALIANCE project, involving 35 major stakeholders, has developed a detailed European roadmap and strategic research agenda related to ICT for ageing well which will be presented and explained. The BRAID project is developing a roadmap for international cooperation on research and development in ICT for ageing well and the preliminary findings and recommendations will be presented. The UNIVERSAAL project is consolidating the work on open software platforms for building integrated and interoperable ageing well solutions and the plans and outlooks will be presented. **CONCLUSIONS** The discussion and conclusions will focus on recommendations for international cooperation, and possible participation in activities, as well as coordination with, similar efforts around the world.

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*P. Wintlev-Jensen. Overview of EU strategy in technologies for ageing well. Gerontechnology 2010;9(2):180-181; doi:10.4017/gt.2010.09.02.163.00* **Purpose** The EU has launched a major action plan to help address the ageing population challenge by development of relevant products and services based on Information & Communication Technologies (ICT), in order to promote a real uptake<sup>1-3</sup>. In the past, many research efforts have developed promising results, but very little has made it into real usage in society. The EU actions therefore address not only research and development, but also innovation and demonstration actions to demonstrate impact, combined with policy coordination to address the market barriers and create the conditions for market development and large scale deployment. This presentation will provide an overview of this action plan and status of implementation. **Method** The EU Action Plan on Ageing Well comprises a political vision document and four lines of action, (i) increased awareness of existing solutions and good practice, (ii) identifying and overcoming market bar-

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riers, (iii) accelerating deployment of ICT solutions for ageing well, (iv) boosting research and innovation. A portal for presenting best practice cases has been established with online community tools to facilitate interaction; ministerial and dissemination events are being promoted as well as European award schemes. Several studies are underway to map out the market barriers and conditions across Europe and the world, and good policy examples are promoted. A number of large scale pilot projects have been launched with involvement of more than 10,000 users and 40 European Regions, to validate functional specifications and provide consolidated socio-economic evidence of impact from investments in ICT solutions. An investment forum is also being established to bring together market analysis and risk capital to promote increased investments. Finally, research and innovation is being boosted with long-term research on highly intelligent environments and robotics, open platforms for system integration and interoperability, roadmapping and strategic research agenda development combined with international cooperation and analysis of ethics. A new innovation funding program has been established between 23 European countries and supported by the EU which is focused on innovation projects developing ageing well solutions with 2-3 years to market. Together these efforts will involve more than 1 Billion Euro being spent between 2008 and 2013 in Europe.

**Results & Discussion** This presentation is intended to provide the basic information to allow for exploring possible international collaboration with the activities underway, for instance, on open platforms, interoperability standards, socio-economic impact assessment and indicators.

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3. [www.epractice.eu](http://www.epractice.eu); retrieved March 11, 2010

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*F. CAVALLO, L. PUJOL, A. GARCIA, P. DARIO. The AALIANCE research agenda on ICT for ageing well. Gerontechnology 2010;9(2):181-182; doi:10.4017/igt.2010.09.02.164.00* **Purpose** The societal trends<sup>1</sup> of the increasing ageing population in Europe will lead to dramatic challenges for the healthcare and care systems, state pensions schemes and employers alike, but at the same time they will offer innovation and business opportunities for technology providers in the field of innovative ICT-enabled assisted living or 'Ambient Assisted Living' (AAL). **Method** AAL refers to intelligent systems of assistance for a better, healthier and safer life in the preferred living environment and covers concepts, products and services that interlink and improve new technologies and the social environment. In this context, the European Ambient Assisted Living Innovation Alliance (AALIANCE), a European FP7 project, has the scope to create a common vision of AAL that provides and defines the necessary future research and development steps and projects on the way to AAL. It aims at developing such a roadmap and strategic guidance for short-, mid- and long-term research and development approaches in the context of AAL. In this abstract the roadmap document is presented, addressing the main trends towards AAL in a technological point of view. Starting with the identification of the needs of elderly people to live independently in different contexts and of the necessary technological support the field of AAL is grouped in three principal application domains: AAL4persons (consisting of AAL@home and AAL on-the-move), AAL@community and AAL@work. **Results & Discussion** AAL has firstly to be distinguished from more traditional forms of (ICT enabled) assistive technologies by emphasizing the important concept of pervasive computing and ubiquitous robotics in AAL technologies. These technologies have to be embedded (non invasive or invisible devices, distributed throughout the environment or directly integrated into appliances or furniture), personalized (tailored to the users' needs), adaptive (responsive to the user and the user's environment), anticipatory (anticipating users' desires as far as possible without conscious mediation) and dependable. The enabling technologies for AAL are defined as: (i) Sensing: sensors in anything and anywhere, in-body or on-body, in-appliance or on-appliance or in the environment (home, outdoor, vehicles, public spaces, etc.); (ii) Reasoning: aggregating, processing and analyzing data, transforming it into knowledge within different and often cross-connected spaces (body, home, vehicle, public spaces); (iii) Acting: sensor-motors (for instance, cognitive

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robots) and actuators that, based on their perception of the environment, on behalf of their users and on information gathered by some other device and/or background knowledge, could perform concrete actions; (iv) Interaction: intelligent interaction with systems and services to cope with the abilities of users; and (v) Communication: sensors and actuators connected to one or more reasoning systems that in turn might be connected (even dynamically, for instance, a person moving from home to a vehicle and then to some public space) to other reasoning systems, possibly with their own sensors and actuators. In AAL, products and services, provided by a heterogeneous set of disciplines, have to be based on selected standards which allow the interoperability of applications and are designed in a user-centred way.

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**Keywords:** ambient assisted living, roadmap, enabling technologies

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S. OLSSON. *Ambient Assisted Living Joint Program: A European wide initiative. Gerontechnology 2010;9(2):182*; doi:10.4017/gt.2010.09.02.165.00 **Purpose** The Ambient Assisted Living Joint Program (AALJP)<sup>1</sup> is a research and development program with the aim to fund ICT-based projects to develop services, tools and systems to support older people for better health, independent living and better quality of life. **Method** The AALJP was started up in 2008 and is supported by 23 European countries and the European Commission. The research and development budget is in the order of 55-60 million Euro annually and, together with contributions from project partners, the total budget is approximately 100 million Euro per year. One specification of the program is that at least one user organization must be part of the project consortium as well as one partner representing a small or medium sized enterprise. As a minimum requirement, three partners from three program member countries can constitute a project consortium. Further, the program is a close-to-the-market program, with envisaged 2-3 year time-to-market after the end of the project. **Results & Discussion** So far, the program has held two calls for proposals, the first focused on 'ICT based solutions for Prevention and Management of Chronic Conditions of Elderly People'. The second call focused on 'ICT based solutions for Advancement of Social Interaction of Elderly People'. In total, about 55 projects are planned from these two calls. A third call for proposals is under preparation. To interact with researchers, industry, users and different stakeholders, the AALJP organizes a major event annually, the 'AAL Forum', this year in Odense, Denmark, in September.

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information they need quickly and to understand ICT solutions for supporting independent living within the many and various heterogeneous communities. From feedback on the wiki and meetings with stakeholder groups in the US, EU, and Japan, key gaps in technology and policy are being revealed and incorporated back into these documents. **Results & Discussion** Given the output from the Consortia's research, input from several hundred 'hits' a day on the CAPSIL wiki, and feedback from the international stakeholder meetings it has become evident that a holistic systems integration approach that includes sensors, signal processing, inference engines, and communication to all of the stakeholders is needed. These integrated solutions are clearly dependent on individual, environmental, and societal issues. Thus these solutions have to be adaptable not just to the changing needs of the individuals but to the specific conditions in which they are deployed. These deployments must work in concert with the specific environment and carer structure. A need for joint efforts to create these integrated solutions and for a common validation structure for heterogeneous environments is showing to be one of the critical gaps in ICT development. This talk will outline some of the key issues identified by the CAPSIL roadmap in areas such as home and mobile monitoring, interventions systems, and software. The talk will specifically focus on some of the unique intercultural commonalities (such as the aforementioned holistic approach) and differences (such as choice of carers - including AAL, robotic, or personal) in current ICT solutions and proposed future scenarios and will outline the importance of these on establishing governmental policy and corporate strategic agendas. Additionally, the CAPSIL wiki and the 'CAPSILs of knowledge' will be discussed with an eye toward creating a truly international repository of knowledge for the field of ICT and ageing.

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*J. GORMAN, M. MIKALSEN, E. STAV, S. WALDERHAUG. universAAL – European Commission collaborative research and development to develop an open architecture and platform for Ambient Assisted Living (AAL). *Gerontechnology* 2010;9(2):183-184; doi:10.4017/gt.2010.09.02.167.00*

**Purpose**

The use of computer, sensor and communications technologies in AAL is today recognized as an area with great potential – but with limited uptake so far. The lack of a standardized approach for developing solutions customized to the specific needs of particular groups of users, difficulties with integrating different devices, and complexities of deployment and installa-

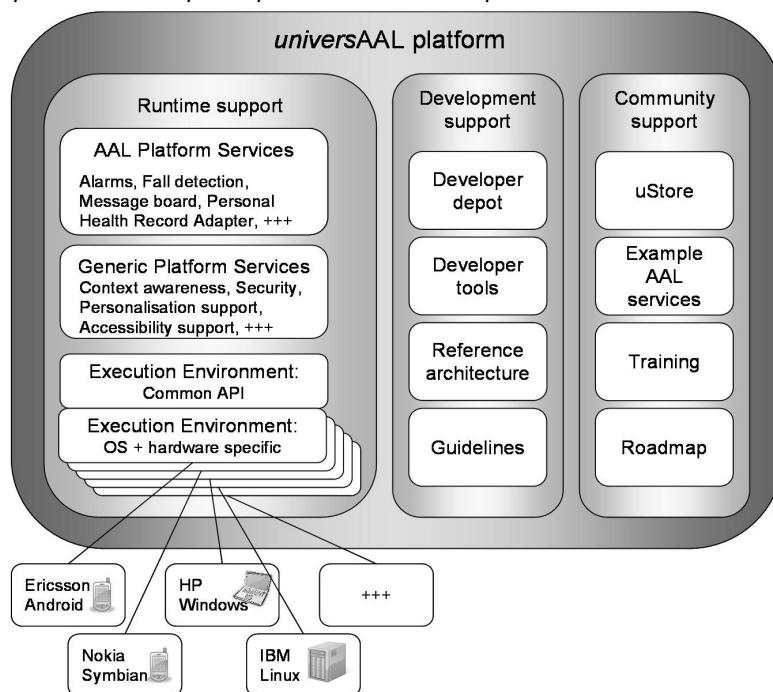


Figure 1. Overview of universAAL platform and project results

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tion, all hinder uptake<sup>1</sup>. Useful results have been developed for specific problem areas<sup>2-5</sup>, but no unified approach exists. The purpose of our work is to develop such an approach and promote its widespread adoption – so making it technically possible and economically viable to develop AAL solutions that will be adopted by large numbers of people. **Method** At the organizational level: establish a consortium of research and commercial organizations with required expertise (for instance, on existing solutions); work together to unify and extend existing approaches; create a 'community' of developers who will promote the approach beyond the lifetime of the project. At the technical level: Develop an open platform providing support in three areas: (i) Runtime support – provision of reusable service components and adapters to different execution environments and types of sensors etc.; (ii) Development support – a standardized approach and toolset to be used by developers when creating AAL solutions; (iii) Community Support – resources to make it easy to use the universAAL approach, including development of 'uStore', a simple way to access and install AAL services. **Results & Discussion** At the organizational level: The consortium of 17 organizations from all over Europe was established in early 2009 and successfully took part in a competitive call for proposals in the EU 7<sup>th</sup> Framework Programme<sup>6</sup>. Work started in February 2010. Establishment of a developer community will evolve as technical solutions emerge. At the technical level: The project has analyzed existing solutions and produced in its first months the first version of the universAAL reference architecture<sup>6</sup>, providing a view of the main functional blocks to be included in the universAAL platform and outlining what components can be integrated from existing initiatives.

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**Keywords:** open platform, architecture, open source, standards

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