AMBIENT ASSISTED LIVING JOINT PROGRAMME (AAL-JP) AND THE FUTURE KNOWLEDGE INNOVATION CENTER (KIC) ON INNOVATION FOR HEALTHY LIVING AND ACTIVE AGEING

In the light of the discussions about the possibility of a follow-up of the current AAL JP and the proposal of the European Commission to launch a KIC on Innovation for healthy living and active ageing, in this document the AAL Association considers both initiatives and some ideas for possible collaboration in the future.

THE CHALLENGE

In the European Commission proposal for a Council Decision establishing the Specific Programme Implementing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020)\(^1\) health, demographic change and well-being is clearly identified as one of the Societal Challenges:

"An increasing disease and disability burden in the context of an aging population places further demands on health and care sectors. If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and treatment provision, to identify and support the dissemination of best practice in the healthcare sector, and to support integrated care and the uptake of technological, organisational and social innovations empowering older persons in particular to remain active and independent. Doing so will contribute to increasing, and lengthening the duration of their physical, social, and mental well-being."

The response to this challenge has been defined in Horizon 2020 as aiming “to provide better health, quality of life and general wellbeing for all by supporting research and innovation activities. These activities will focus on the maintenance and promotion of health throughout our lifetimes, and on disease prevention; on improving our ability to cure, treat and manage disease and disability; supporting active ageing; and on contributing to the achievement of a sustainable and efficient care sector.”

For the AAL JP this challenge is in fact an opportunity to go beyond solving problems and reach out to ideas, solutions and products that will help to achieve an even broader goal: to help older people live fully their lives where and how they wish, with the support of Information and communication technologies.

THE CURRENT AMBIENT ASSISTED LIVING JOINT PROGRAMME (AAL-JP)

The current AAL JP was created on 9\(^{th}\) July 2008, by decision number 742/2008/EC of the European Parliament and of the Council\(^2\). The European Union decided to match Partner State support with funding from the 7th Framework Programme for Research and Technological Development (FP7), based on Article 185 of the Treaty on the Functioning of the European Union (TFEU).

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1. COM(2011) 811 final
2. DOUE. L 201/49 of 30 July 2008
The current AAL JP is an applied research funding programme aiming to support projects developing ICT solutions for ageing well. It has a committed total budget of €600m, and runs from 2008-2013. The budget comprises commitments of €150m from the European Union (FP7); €150m from Partner States and a minimum of €300m matched funding provided by project partners in the public, private and third sector (e.g. charities etc.). It is undertaken jointly by 19 EU Member States and 3 associated countries.

Establishing the Ambient Assisted Living Association (AALA)¹ and developing the operations and procedures to support a Joint Programme across 22 countries has been a major success over the first period of the AAL JP.

Our vision is one where business innovation and the application of technology will enable people to live their lives to the fullest, where and how they want to. We see people first and not just the medical conditions or chronological age or disability or need. We see a society in which the application of technology and the brilliance of innovative new services and systems will create a level playing field for all in the future. We want to take action to ensure that Active and Healthy Ageing is widespread across Europe by 2020.

The ideal future scenario is one where we all have more independence. Information and Communication Technology (ICT) and other technology developments can help to support this but they are only part of a solution that needs to work in line with the way we live our everyday lives. Technology is already pervasive and we need to recognise that technology in itself is not a solution. Instead, we need to consider new ways to make ageing more delightful in the future and re-imagine the delivery of health and care services.

**ACHIEVEMENTS**

Always focussing in improving the quality of life of older adults, up to now the AAL JP has funded 23 projects in Call 1 - solutions for the prevention and management of chronic conditions; 32 in Call 2 - solutions for the advancement of social interaction; 21 in Call 3 - solutions for advancement of independence and participation in the “Self-Serve Society”; 26 in Call 4 - solutions for mobility and 29 in Call 5 - solutions for (self-) management of daily life activities at home.

One particularly important achievement so far has been the supply chains that have been built and consolidated across this emerging sector, connecting SMEs and other organisations with new suppliers and customers. The AALA is well positioned to drive opportunities for economic growth across Europe that the demographic shift represents and has had other significant achievements, including:

1. More than 100 projects launched to develop ICT based solutions for older adults and their carers concerning prevention and management of chronic conditions, advancement of social interaction, participation in the self-serve society, mobility and home care;
2. Over 40% of the organisations involved in project consortia are Small and Medium-size Enterprises (SMEs) – receiving 49% of the public sector funding available;
3. Systematic involvement of end-users across all phases and countries in AAL JP projects which has been found to improve the products and services and their market acceptability and, more importantly, lead to better quality of life; it is estimated that 3900 users are involved in AAL JP projects.
4. A recent survey of projects from AAL Call 1 and 2 showed that 25% of respondents have already secured financing to go to market;
5. National Funding Authorities have increased their financial commitment by more than 25% beyond the minimum required over the five calls to date – this creates a critical mass to deliver greater benefits than countries could achieve by acting alone;
6. Targeted support activities to build the community and help develop new economic and business models to help projects progress beyond the pilot stage – one example of the vibrant and growing

¹ The legal entity responsible for the implementation of the AAL JP, for more information see www.aal-europe.eu
community is that over 1,200 people attended the AAL JP Forum 2012\(^4\) in Eindhoven, The Netherlands.

**AAL JP FOLLOW-UP**

It is clear that the opportunities arising from the demographic shift will remain important for the foreseeable future. Now, more than ever, there is a need to find efficient and innovative solutions for supporting older adults and their carers. The AAL JP continues to be relevant for National Funding Authorities across Europe due to the need to address the "Valley of Death"\(^5\). This part of the innovation landscape is one where Europe is weak across many sectors and where SMEs in particular have a clear need for public support in order to bridge the gap from research to the market. This is very complementary to the upstream preparation of new scientific knowledge on ageing and innovation, development and validation of new ideas under Horizon 2020. It is also providing potential ICT solutions as the basis for downstream innovation actions and large scale pilots for market introduction and socio-economic evidence.

By joining forces at the European level, countries should work together to achieve critical mass and align national priorities to promote and accelerate the emergence of innovative ICT-based products and services for ageing well at scale. It is envisaged that the scope of the AAL follow-up programme will build from the work developed through the period 2008-2013 i.e. new ICT solutions supporting active and assisted ageing of older adults. From this strong base the AAL follow-up programme will also widen to embrace the scope of the EIP on Active and Healthy Ageing i.e. covering the full range of innovation in active and healthy ageing as identified in the EIP Strategic Implementation Plan.

The European Commission has also proposed a Decision on the Strategic Innovation Agenda of the European Institute of Innovation and Technology (EIT) for 2014-2020 identifying "Innovation for healthy living and active ageing" as one of the priority themes for the EIT Knowledge and Innovation Communities (KICs) wave in 2014-2015. The relationship between this KIC and the AAL JP should be explored as part of the Follow-up process.

**OBJECTIVES FOR 2014-2020**

We will promote business, technology and social innovation, especially using ICT, to ensure that products, systems and services are useful, desirable and affordable. On the basis of the analysis of the emerging impacts of the current AAL JP and in order to address future desires and opportunities of ICT based innovation for Ageing Well, the follow-up to the AAL Joint Programme should address the following main objectives:

1. Grow beyond the critical mass of research and innovation in Europe by bringing in more organisations from the public, private and third sector to support the high level EIP objective of an additional two healthy life years across Europe by 2020;
2. Build supply chains across the public, private and third sector, especially targeting the needs of SMEs so that at least 25% of projects result in new products, systems and services in the market by 2020;
3. Accelerate the availability and validation new cost-effective products, systems and services for ageing well at EU market level at scale, based on user requirements, by bringing together supply and demand to collaborate and innovate by 2020;

\(^4\) [www.aalforum.eu](http://www.aalforum.eu)

\(^5\) A phrase used in venture capital to refer to the period of time from when a start-up firm receives an initial capital contribution to when it begins generating revenues. During the "death valley curve", additional financing is usually scarce, leaving the firm vulnerable to cash flow requirements [source: Investopedia].
4. Ensure from 2014 onwards that end-users are involved from the start of all funded projects (e.g. through iterative design and development approaches) and that their needs and desires are embedded in the outputs of the project;

5. Promote a coherent European framework by 2020 to support development of common approaches so that project outputs can be customised to meet the varying social preferences and regulatory aspects at national or regional level across Europe.

**KIC ON INNOVATION FOR HEALTHY LIVING AND ACTIVE AGEING**

According to the EC proposal⁶:

“a KIC on innovation for Healthy Living and Active Ageing will help meeting Horizon 2020 priorities, namely those defined in the context of the societal challenge “Health, Demographic Change and Wellbeing”.

The challenges related to healthy living are valid across Europe. A KIC on this theme would have the added value of linking the activities of innovation and higher education with the already existing excellent research base. In doing so, it will put particular emphasis on higher education curricula, new skills development (needed e.g. for technology development but also for elderly care), strengthening entrepreneurial aspects in order to foster the development of a highly entrepreneurial workforce in the area, to support the development of new products and services, and to strengthen existing value chains or even create new ones. Examples of potential products and services that could be created through a KIC go beyond technology applications (such as applications that treat, code, standardise and interpret data in areas like cancer, cardiovascular diseases; or tools for risk assessment and early detection), and could trigger social innovation with new concepts improving for example lifestyle management and nutrition, fostering active and independent living in an age-friendly environment, or maintaining economically sustainable care systems.

Not least, the EU benefits from a world-class level of research and education in this area.

In many EU countries excellent research infrastructures and institutions do exist which provide an attractive basis for industry involvement in the planned activities of the EIT. The challenges related to healthy living are valid across Europe. The responses, which can be provided by a KIC, require the intense co-operation between excellent, multidisciplinary and multi-sector teams with participants from all sectors of the knowledge triangle (research, business and education). Focusing on the systemic aspects of European health and social care systems and support to active ageing, a KIC on this thematic field would also include a stronger co-operation between large and smaller, more specialised firms for greater knowledge circulation. In addition, a specific added value a KIC could provide in this area could be the creation of innovative partnerships at the local level which is of particular importance in the services sector.

Through its integrative approach to the knowledge triangle, a KIC on healthy living and active ageing would be therefore a key contributor to addressing the ‘European paradox’: adding value to the excellent EU’s position in scientific research, and transforming this asset into innovative products and services, and new business opportunities and markets.

The major risks associated to the success of a KIC under this theme are mainly related to the necessary accompanying innovation and policy regulatory framework conditions, which could require some adaptations KICs are not directly aiming at addressing. Therefore the need of KICs liaising with on-going EU and national innovation and policy activities on these matters (see next section).”

⁶ COM(2011) 822 final
SYNERGIES AND COMPLEMENTARITIES OF THE KIC WITH EXISTING INITIATIVES: THE EC POINT OF VIEW

As recommended by the European Commission⁷:

“For achieving sustainable growth in Europe, the contribution of public and private players must be optimised. This is essential for consolidating the European Research Area and for delivering on the Innovation Union, the Digital Agenda and other Europe 2020 flagship initiatives. Furthermore, responsible research and innovation requires that best solutions be derived from interactions between partners having various perspectives but common interests.”

As in the proposal by the European Commission⁸:

“a KIC on innovation for healthy living and active ageing will closely co-operate with the pilot European Innovation Partnership (EIP) on Active and Healthy Ageing. It will take into account the concrete actions presented in the EIP Strategic Innovation Plan and contribute to delivering its objectives. It will create complementarity in education and training key actors, but also in providing a unique structured network of practitioners well placed to identify framework conditions and best practise on policy, regulatory or standardisation issues having an impact in the sector. In the context of the EIP, a KIC in this area can also contribute to the Lead Market Initiative – eHealth which aims at stimulating the market for innovative eHealth solutions through its focus on policy instruments (standardisation, certification systems and public procurement).

A KIC will also strongly build on and capitalise the major research results of the Joint Technology Initiative on Innovative Medicines and of the numerous framework programme research projects addressing this thematic field (such as the health research programme or the ICT research activities on health and ageing) to boost technology transfer and commercialisation via entrepreneurial top talent. Likewise, it will coordinate with the work of the Ambient Assisted Living Joint Programme and the Competitiveness and Innovation Programme.

In conclusion, we believe a KIC in this area can be complementary to these activities since it would focus on transdisciplinary activities within the knowledge triangle with a strong focus on innovative products and services and entrepreneurial education.”

⁷ COM(2011) 811 final
⁸ COM(2011) 822 final
OPPORTUNITIES FOR THE AAL JP AND THE KIC TO COLLABORATE

Given the recommendations of the EC for the establishment of the KIC and in order to make the most from the achievements of the AAL JP, the AAL JP is open and willing to explain to all the possible candidates the current status and stakeholders for the follow-up in order to maximise the impact of the public funds invested in this area.

From the three main components of a KIC (research, business and education) the AAL JP can clearly see possible cooperation and synergies as follows:

- Those KIC participants with the appropriate expertise in research in the ageing and ICT areas will be potentially excellent partners in the AAL JP projects, bringing the latest advanced research results into solutions and services that can be concretely exploited in the market or by the public bodies responsible for the care and wellbeing of the European citizens.
- Also the KIC is expected to be a strong collaborator in activities linked to the current AAL JP support actions, as a potential platform for the dissemination of information about standards and interoperability, end-user involvement, market studies, etc.
- The AAL JP projects will benefit from in-depth discussions that will take place about priorities for the KIC and at the same time take advantage of the ecosystem created by the KIC to have better chances to enter the market.
- Also the KIC participants would be the ideal partners for upscaling AAL prototypes and making field tests or large trials.
- The KIC may encourage training and curricula in innovation and business innovation, help building a SME support programme in the ageing domain including business models, taking as input the gaps and needs found in the AAL JP projects.
- Finally, the AAL Forum, the main event of the AAL JP taking place in September every year since 2009, could certainly play a privileged role as a place for knowledge exchange and networking for the KIC and AAL JP community.

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