Ambient Assisted Living (AAL) Joint Programme

Call for Proposals 2008
AAL-2008-1

"ICT based solutions for Prevention and Management of Chronic Conditions of Elderly People"

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Contents:

AAL Joint Programme – Call for Proposals 2008

The AAL Joint Programme will launch one Call for Proposals during year 2008. The call topic is **"ICT based solutions for Prevention and Management of Chronic Conditions of Elderly People"**.

The core of AAL Joint Programme is to provide innovative Information and Communication Technologies (ICT)[1] based solutions to elderly persons, which means innovative products, systems or services addressing identified needs of the end users.

Projects funded under the AAL Joint Programme will be multinational, collaborative and cost-shared. Funding contracts of individual project partners will be concluded with the national funding authority (contact points listed in Annex).

Objectives of the Call

The Objective of the Call is to launch European collaborative projects providing **innovative ICT based solutions for elderly persons with identified risk factors and/or chronic conditions**. The Call promotes the creation of new solutions with a holistic approach to prevention, management, support services and the social and socio-economic environment related to chronic conditions. The AAL Joint Programme calls for proposals with a clear European dimension, with high relevance and with maximal impact on progress in the fields described in the topic definition.

Indicative guidelines for AAL collaborative project characteristics:

- Time-to-market perspective of 2 to 3 years after the project end
- Duration of the project: 12 – 36 months
- Project total budget: 1 - 7 M€
- Maximum funding from the AAL Joint Programme: 3 M€.

The AAL Joint Programme may, in exceptional cases, decide to deviate from these guidelines for a project proposal of very high quality and relevance.

Background

The increasing occurrence of chronic conditions among the ageing population is one of the major challenges for the European Society and its healthcare systems. Prevention, early detection and efficient management of chronic long term conditions contribute radically to the individual well-being and the economic sustainability of social and healthcare systems. Such conditions include for instance diabetes, cardiovascular disease, stroke, multiple sclerosis, Alzheimer's disease,

[1] ICT understood in the broad sense as in FP7

asthma, chronic obstructive pulmonary disease (COPD), Parkinson's disease and different disability situations at large. Co-existence of several chronic conditions (co-morbidity) is an increasingly common situation for the elderly in contrast to that of the younger age group. The foreseen paradigm shift in healthcare emphasizes personalized and person-centric care processes, the importance of ICT based solutions and the role of the 'home as care environment' as well as self care and self-management of chronic conditions. This also includes different ways of keeping the elderly able to perform his/her daily living activities and social relations within his/her day-to-day environment, including both informal and formal carers. The role of women is an important factor for the ageing societies in Europe, due both to their higher average life expectancy and their role as informal carers.

Education and self management
Many chronic conditions are linked to well-known health and lifestyle factors such as weight, blood pressure, smoking, alcohol abuse, poor eating habits, stress and low levels of physical activity. There are also conditions where the increased risk is age and/or gender dependent or inherited. The majority of risk factors can be routinely detected and research continuously provides more detailed information about the significance of each individual factor, their interrelations and mechanisms that can develop into diseases. The great challenge in prevention and management of chronic conditions is to turn the findings into action at the level of the individual to manage his/her situation and risk factor(s). This is especially important, since a large part of the prevention and care in chronic conditions management has to come directly from the individual (self-management). Practical technological assistance is an essential ingredient for education and self-management.

Care management, decision support and social interaction
The challenges of management of chronic conditions lie in the differences in each individual's condition and life situation. These factors include the type of risk factor/condition/disease, severity of the condition, frequent co-existence of several conditions (co-morbidity), general functionality status, family and living status. The dynamic nature of real-life situations and conditions (clinical changes, life situation and life environment changes) should be reflected in support of care management and the individual situation. Management of chronic conditions involves factors such as personal motivation, empowerment, acceptance and suitability in individual's everyday life as well as physiological measurements, specialist advice and medication. Furthermore supporting services, social contacts including peer group support and insurance / compensation schemes are relevant for care management. Besides, there is evidence that a better health status and increased individual satisfaction as well as reduction of cost of care can be achieved by self-management interventions, such as self-monitoring and decision making.

Technology aspects
The core of the AAL Joint Programme is to provide solutions to elderly persons based on innovative Information and Communication Technologies (ICT). This means developing innovative products, systems or services addressing the identified needs of the end users. Developing such solutions may require the scaling up of prototypes coming from academic institutions or industrial research labs to make them applicable to the wide variety of situations corresponding to the prevention and management of chronic conditions. In order to achieve this goal, the solutions may build on ICT developments in areas such as (list not exhaustive):

microsystems, MEMS (Micro-Electro-Mechanical Systems), embedded electronic systems, pervasive and context aware computing, learning and adaptive systems, wireless sensor networks, RFID, environmental and behavioral monitoring and analysis, image and scene analysis, wearable physiological data sensors, biomedical personal instrumentation, human multimodal interfaces, digital voice synthesis and analysis, smart home instrumentation, electronic textiles, telecommunication systems, wireless technologies, new generation networks (NGN),biometric identification systems, robotic artifacts, augmented and virtual reality, simulation tools, indoor and outdoor localization technologies, geographic information systems, Telehealth Information and Management Systems, Mobile Electronic Health Records, Web 2.0 applications, middleware and scalable service architectures, groupware and collaborative platforms.

Socio-economic aspects
Innovations in prevention and management of chronic conditions of the elderly can have significant impact not only on the individual level, but also on the care organizations and European societies. New innovative solutions can have a major effect on cost effectiveness thus easing the pressure of increasing costs in European social and healthcare systems. Operational efficiency and innovative processes will allow sustainable operation and business opportunities. Increased self-management and independence will also allow more effective use of limited resources and especially that of an increasingly scarce workforce.

Ethical issues
The nature of AAL projects will raise ethical concerns as the types of technology are likely to be new and not necessarily transparent to the end users. Issues of privacy, control of personal data and information, confidentiality, transparency, autonomy and dignity may be of concern to the intended end users.

Proposal Requirements

The topic area should be approached through a holistic view of the individual's physical, psychological and social wellbeing. In this context, it is important that the healthcare and service providers as well as the elderly persons and their families are provided with relevant and specific information concerning state-of-the-art equipment, systems and services. It is also important to have the possibility and means to exchange experiences with persons in similar situations.

- *Technology*
  The developed products, systems and services should be built on innovative enabling ICT technologies. Specific attention should be made to the adaptation of generic tools to the specific conditions of a given elderly person and his/her immediate environment including informal and formal carers. Co-morbidity situations also require the developing of integrated technological solutions addressing the multi-faceted nature of the elderly and the evolution of the solution with his/her evolving condition in a flexible and appropriate way. Developed systems should be unobtrusive, highly reliable and low power demanding. The project should

address all major issues associated with a market introduction 2-3 years after finalisation of the project.

- *Interoperability*
  Interoperability issues are critical in the deployment of operational solutions. Therefore, the projects should incorporate existing standards or, when standards are not available, should be flexible enough to allow for evolution to new standards as much as possible.

- *User involvement*
  Applying technologies to fulfil the needs of elderly persons and their carers requires specific attention to user acceptance, user interface and usability design in order to meet the expectations, cognitive capabilities and eSkills of the end users (whether primary or secondary end users). Also development and use of new ICT should not lead to exclusion and widening of the digital divide. To fulfil these requirements, involvement of end users in the whole process is essential and solutions should be validated in 'real end user' situations.

- *Ethical issues*
  It is also essential to explicitly consider such ethical issues in this application domain, where the necessary adherence to the letter of applicable European and national law does not ensure adequate respect for the individual end user's rights, such as self-determined private life, conscious (or consciously delegated) choices etc.

- *Cost-efficiency*
  In the coming decades, sustainability and affordability of care and services for the ageing population will be under increasing pressure. The economic situation both in European countries and in individual elderly people varies widely in Europe. Cost effectiveness and efficiency are essential to ensure a wide applicability and affordability of AAL-solutions Europe wide.

- *Socio economic impact*
  To ensure maximum effectiveness and impact, the solutions proposed within the AAL Joint Programme should include new innovative approaches to assessment and validation of the proposed solutions.

- *European dimension*
  The European dimension of the proposed work should address issues such as interoperable solutions that can be easily adapted to local care settings across Europe, the need for cross-border collaboration and European market perspectives.

The requirements for AAL projects described above are further elaborated in the evaluation criteria that are listed below.

Implementation of AAL Call: AAL-2008-1

- Date of publication: 25 April, 2008
- Closure date: 21 August, 2008, at 17:00, Central European Time (CET)
- Proposal selection: November 2008
- Indicative total funding[2]: 57.7 M€
    - This amount includes a contribution of up to 25 M€ by the European Communities. The funding is subject to a final adoption of the legal base for this contribution by the Council and the European Parliament and to the conclusion of the necessary agreements between the AAL Association, the Members of the AAL Association and the European Commission envisaged for June 2008.
- Topic called: "ICT based solutions for Prevention and Management of Chronic Conditions of Elderly People"
- Consortia submit one common project proposal, with one partner acting as coordinator
- Project proposals will be evaluated centrally by independent European experts
- Funding of individual project partners will be done according to the respective national rules, reference to the national rules can be found on www.aal-europe.eu/AAL-2008-1. *Please note that this information can change even before the call closure. Please check the website for changes.*

Eligibility criteria – collaborative projects

- Timely submission as specified in this specific Call for Proposals
- Submission of a complete proposal through the AAL electronic submission system (to be established on www.aal-europe.eu/AAL-2008-1)
- English as the language for the proposal
- Consortium composition of at least 3 independent organizations (legal entities) from at least 3 different AAL Partner States participating in this specific Call for Proposals[3]
- Consortium including at least one market oriented business partner
- Consortium including at least one SME partner (this can be the market oriented business partner)
- Consortium including at least one end user partner organization (see below for definition of end users in AAL Joint Programme)
- Compliance of the consortium members to the specific national eligibility rules found at www.aal-europe.eu/AAL-2008-1

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[2] *See the Annex for an overview of the AAL Partner States financial commitments.*

[3] *Eligible for funding are only organisations residing in AAL Partner States and explicitly included in the national eligibility criteria. The participation of organisations residing outside an AAL Partner State is restricted to organisations residing in a Member State of the European Union that currently does not participate in the AAL Joint Programme, i.e. Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Malta and Slovak Republic. These partners will participate without funding from the AAL Joint Programme and do not replace the requirement for having at least organisations from three AAL Partner States.*

Definition of end users in AAL Joint Programme

- Primary end user is the person who actually is using an AAL product or service, a single individual, "the well-being person". This group directly benefits from AAL by increased quality of life.
- Secondary end users are persons or organisations directly being in contact with a primary end user, such as formal and informal care persons, family members, friends, neighbours, care organisations and their representatives. This group benefits from AAL directly when using AAL products and services (at a primary end user's home or remote) and indirectly when the care needs of primary end users are reduced.
- Tertiary end users are such institutions and private or public organisations that are not directly in contact with AAL products and services, but who somehow contribute in organizing, paying or enabling them. This group includes the public sector service organizers, social security systems, insurance companies. Common to these is that their benefit from AAL comes from increased efficiency and effectiveness which result in saving expenses or by not having to increase expenses in the mid and long term.

Consortium Agreement

Projects which are recommended for funding must submit a signed consortium agreement before the contract with the national agencies is concluded. The Consortium Agreement should state a set of rules/procedures to ensure fair protection for the IPR[4] interests of the partners and partners' employees (e.g.: conditions/ limitations on the ability of individual consortium partners to freely publish or profit from project results directly covered by other partners' IPR). The consortium agreement should include conflict resolution procedures/ mechanisms, to be invoked if and when necessary.

Evaluation criteria – collaborative projects

The proposals for **AAL collaborative projects** will be evaluated against the following four criteria:

1. Relevance assesses that the proposed project is in line with the objectives of the Call.

The proposal is expected to be highly conformant with the specific objectives of the Call. The project is expected to apply Information and Communication Technologies (ICT) in new and innovative applications or service concepts. The results are products, systems or service concepts for Prevention and Management of Chronic Conditions of Elderly People that can be applied and deployed widely in Europe.

2. Scientific and technical quality assesses the overall quality of the project and the extent to which the proposed project methodology and consortium procedures will be able to deliver the planned final deliverables.

[4] *The AAL Joint Programme follows the IPR regime on the basis of Regulation No. 1906/2006, which establishes the rules for participation in the FP7 (Chapter III, articles 39 to 51, hereinafter "Rules for Participation").the general European FP7 IPR rules and general principles on IPR according to legal text): http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_391/l_391200612 30en00010018.pdf*

The proposal should lead to a novel and effective solution, based on a scientifically and technically sound concept that is likely to contribute to the knowledge in the field. The proposal should demonstrate a clear opportunity to progress beyond the state-of-the-art in integration of technologies and products that provide new innovative solutions to the defined end user needs. This results in new knowledge advancements, leveraging economic opportunities and solving societal challenges in a sustainable way.

The proposal is expected to include as part of planned activities / outcomes a realistic prototype or pilot application at project completion, where the expected impacts stated in the initial proposal may be demonstrated to the fullest feasible extent.

3. Quality of the consortium and efficiency of the implementation assesses the extent to which the consortium composition includes the critical mass and diversity of competencies and infrastructure required for the successful completion of the defined tasks, and the quality of the work plan.

Consortia are expected to produce evidence of having the necessary resources to deploy the scientific, technical and market expertise needed to achieve project goals. The consortium should include the essential actors of the value network and demonstrate an added value by international collaboration, with a fair balance of contribution between partners.

The proposals are expected to include proactive end user involvement throughout the project. The issues of accessibility, end user acceptance and usability are fundamental. The proposals are expected to target at creation of new and innovative solutions to specific end user needs that result in improvement in the quality of life of elderly persons. The approach to specific end user needs should be supported by an evidence base (building on testing in a realistic user environment).

The proposals are expected to be put forward by consortia where SMEs clearly play a proactive role.

Projects are expected to put forward a high quality work plan regarding the selected methodologies and organization of the planned activities, underpinned by a consortium embodying the necessary expertise.

The work plan should consider adequate quality assurance and control procedures regarding the development and release of external project deliverables, as appropriate to each specific type of deliverable (e.g.: management reports, research notes, market studies, application or service prototypes, etc.

The proposal should state a set of rules/procedures to ensure fair protection for the IPR interests of the partners and partners' employees (e.g.: conditions/ limitations on the ability of individual consortium partners to freely publish or profit from project results directly covered by other partners' IPR). The proposal should include conflict resolution procedures/ mechanisms, to be invoked if and when necessary.

A proposal should include a dissemination plan, ensuring that innovative project contributions are properly disseminated, subject to limitations imposed by the protection of partners' IPR over commercially-sensitive information, as stated at project start in the Consortium Agreement.

4. Potential impact assesses the extent to which the final deliverables of the proposed project may provide a direct benefit to the AAL target base (end users, businesses, and stakeholders).

The proposal should target at providing added value to the individual (e.g. quality of life) and the society (e.g. on cost effectiveness). The proposal is thus expected to provide evidence of having the capability, at project completion time, to foster ensuing market availability of products and systems as well as associated services having significant social and ethical impact, scientific and technical impact as well as economic impact.

The proposed activities should target in bringing new products, solutions or service concepts to the market within about 2 to 3 years after the project end.

The proposal should target an attractive and high potential market on EU level. The proposal should target at providing new and innovative solutions to specific end user needs that will result in improvement in the quality of life of elderly persons either directly or indirectly. This may be achieved e.g. through increased autonomy, more equal access to services, easier participation in communities of interest or increased ability to allow elderly people to be direct users of technologies still in their initial market deployment phase.

A market plan covering value chain and business analysis activities should be included to support the realization of identified economic opportunities. The approach to capitalizing the economic opportunities must not be contradictory to the needs of an individual and the sustainability of social and healthcare systems of European societies. The business model should build on open and interoperable solutions as far as possible.

The proposal should demonstrate an economic impact which may include

- capability of the consortium, particularly of its business partners, to derive benefit from the project results, proportionate to the investment.
- making existing or new products, systems and services significantly more affordable and acceptable to the end users
- improving the sustainability and lowering the delivery costs of publicly funded products, systems and services

The project should contribute to the creation of a European market through the development of open interfaces and interoperability, applying the relevant standards, norms and regulations in the European framework.

The proposal should demonstrate that the necessary actions are identified for taking into account relevant national and European rules and regulations concerning ethical issues. The proposed activities should ensure adequate respect for the individual end user's rights, such as self-determined private life, conscious (or consciously delegated) consent, dignity etc.

Annex – Evaluation criteria and scoring for collaborative projects

Scoring
Each criterion to be scored on a 4-point scale (only full points allowed):

4 (Very good)	Issues under assessment are fully covered.
3 (Good)	Issues under assessment are adequately covered, with minor suggestions being put forward to enhance the project chances of success.
2 (Defective)	Issues under assessment are sketchily covered and proper evidence of project chances for success on them is missing. Possibly amenable to success with significant major additions or changes.
1 (Failed)	The proposal does not adequately cover the issues under assessment, or does so in a way that is deemed not to meet the AAL Programme objectives.

1. Relevance threshold = 3, weight = 1

Alignment of the proposed project (objectives, activities and methodology) with the specific objectives of this AAL call. The project applies Information and Communication Technologies (ICT) in new and innovative applications or service concepts and will result in products, systems or services for Prevention and Management of Chronic Conditions of Elderly People that can be applied and deployed widely in Europe.

2. Scientific and technical quality threshold = 3, weight = 1

- novelty of the expected results beyond state of the art.
- soundness of the concept and methodology
- contribution to the knowledge in the field
- technology flexibility allowing for easily adapting common solutions to meet differing social and organisational needs across Europe

3. Quality of the consortium and efficiency of implementation threshold = 3, weight = 2

- quality of the partners, complementarity of expertise, end-users and SME involvement playing a proactive role in the consortium, balance of contribution between partners, added value of the international collaboration
- organization of the activities, structure of the work plan (tasks, sequencing, meetings, deliverables) appropriateness of the budget, risk analysis and contingency plan; mobilization of resources
- inclusion in the work plan of studies concerning accessibility, user acceptance and usability
- presence of a realistic prototype or pilot application as part of planned activities
- inclusion of the necessary resources to deploy the scientific, technical and market expertise needed to achieve project goals, mobilization of the resources
- management of the project, conflict resolution and IPR.

4. Potential impact threshold = 3, weight = 2

- improvement of the quality of life of elderly people either directly or indirectly, appropriateness to accessibility, user acceptance and usability, social relevance
- legal and ethical compliance, respect of the privacy and dignity of the elderly, taking into account relevant national and international guidelines
- economic relevance, value chain, business model exploitation plan, potential market, time distance to market
- contribution to open interfaces and interoperability, reference to standards, norms and regulation within EU
- dissemination plan and targets

Total score =

Annex – AAL Partner States funding commitments

to the AAL-2008-1 call for proposals

AAL Partner State	**Mio. €**
Austria	2.5
Belgium	1.0
Cyprus	0.5
Denmark	0.5
Finland	2.5
France	2.5
Germany	5.0
Greece	1.5
Hungary	2.5
Ireland	0.5
Israel	1.0
Italy	2.5
Luxembourg	
- FNR	0.3
- Luxinnovation	0.3
The Netherlands	1.9
Norway	1.0
Poland	0.5
Portugal	0.2
Romania	0.2
Slovenia*	0.2
Spain	
- ISCIII	2.0
- Mityc	2.0
Sweden	0.8
United Kingdom	1.1
Total AAL Partner States	*32.7*
*Expected EC contribution***	*25.0*
Expected total call budget	***57.7***

Indicated national funding is (mainly) reserved for project participants from the listed programme funding organisation. Switzerland may join the call (subject of announcement on the call webpage) after the accession to the AAL Association. The Swiss contribution to the call would be 2.0 Mio. €.

* Subject of accession to the AAL Association, expected for May 2008

** The contribution of up to 25 M€ by the European Communities is subject to adoption of the legal base for this contribution by the Council and the European Parliament and to the conclusion of the necessary agreements between the AAL Association and the European Commission.

Annex – AAL Partner States contact persons

for the AAL-2008-1 call for proposals

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Following country prepares for joining the AAL call. The joining and status will be announced on the call website.			
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