



Interim Evaluation of the Active & Assisted Living Programme

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Panel Chair: Petri Uusikylä

Panel Members: Carmen Ceinos Kohn

Agnieszka Ciesla

Anton Geyer

Heidrun Mollenkopf

Panel Rapporteur: Michael Sharpe

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Directorate-General for Communications Networks, Content and Technology
Directorate H: Digital Society, Trust and Cybersecurity
Unit H3: eHealth, Well-Being and Ageing

Contact: Peter Wintlev-Jensen

Email: Peter.Wintlev-Jensen@ec.europa.eu

*European Commission
B-1049 Brussels*

Interim Evaluation of the Active & Assisted Living Programme

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EXECUTIVE SUMMARY

Scope of the Evaluation

The Interim Evaluation of the Active and Assisted Living Programme (AAL Programme) was undertaken by an Expert Panel appointed by the European Commission, DG Communications Networks, Content and Technology under the chairmanship of Mr Petri Uusikylä.

The Interim Evaluation addresses the first three years of the Programme, from 2014-2016. In line with the Panel's mandate, it assesses the Programme in terms of five key aspects:

- continued relevance and appropriateness as an Article 185 initiative;
- added value at European and national level;
- effectiveness in meeting its objectives;
- efficiency of implementation; and
- coherence with other EU initiatives and policies.

In addition, specific consideration has been given to: the situation regarding national funding commitments; the boundary conditions for continuing European involvement in the Programme; and future options and models for European activity in this area post-2020.

The Panel used as inputs: reports and statistical information about the AAL Programme; background documents, publicity material and case studies on active ageing and ICT; plus over 40 interviews with a variety of stakeholders both within the programme and outside. The Panel also took note of the Final Evaluation report of the predecessor programme ('AAL1') chaired by former European Commissioner Philippe Busquin.¹

Main Findings of the Interim Evaluation

1. **The AAL Programme has made a solid start and is making good progress towards its objectives.** Building on the achievements of its predecessor, during its first three years the Programme has successfully navigated the transition, striking an appropriate balance between continuity and change. The objectives are appropriate and well targeted and the Programme has the right strategy for achieving them. However, the pace of change remains too slow in view of market developments: greater speed is required.
2. **The AAL Programme continues to occupy a unique position within the European landscape and remains highly relevant.** Given the growing importance of demographic ageing, which is a shared and urgent challenge across Europe, the AAL Programme is very well justified and needed more than ever. In forging new forms of collaboration among various stakeholders and stimulating the creation of new markets, it continues to occupy a unique position in the policy landscape and well matches the specificities of the European situation. With European activities in this domain expanding, the Programme must continue to assert the uniqueness of its offer.
3. **The AAL Programme operates as a coherent framework that delivers clear added value for Europe.** In acting as a bridge between research and implementation, the Programme shows strong complementarity with other initiatives and programmes, both EU and national. The fact that certain Member States have agreed to launch this follow-on programme, whilst being fully aware of the considerable challenges of the Article 185 approach, is strong evidence of their commitment and interest.

¹ *Final Evaluation of the Ambient Assisted Living Joint Programme, Report of Expert Panel chaired by Philippe Busquin.* European Commission, October 2013.

4. **A critical mass of research, development and innovation activity is being maintained but its sustainability cannot be guaranteed.** The Programme inherited from its predecessor a wealth of networks and communities that together significantly enhance the prospects for European players in taking AAL innovations to market. This critical mass of activity is being maintained for the time being but recently declining national participation, decreasing funding commitments and underspend of available budgets have put it at risk. Although still viable at present, the sustainability of the initiative cannot be guaranteed and there is **a risk of cyclical and potentially terminal decline**. Urgent action is required by the AALA to safeguard the initiative for the remainder of its term.
5. **Activities aimed at improving conditions for industrial exploitation have expanded significantly but need to be broadened further.** Under the current Programme support for industrial exploitation has been strengthened, in particular through business coaching and mentoring. However, evidence from stakeholders across the Programme as well as other data show that projects are still too far from the market by the time they are completed and that for the Programme as a whole there is a lack of marketable results. More intensive support for exploitation is required across the project lifecycle so as to equip consortia with all the necessary skills and expertise to successfully bring their results to market. Motivated secondary and tertiary users also need to be more actively engaged so as to ensure that projects accurately reflect market demands.
6. **The Programme is well managed but strategic leadership needs to be strengthened.** Although still being managed effectively, reduced national participation has created severe financial and resource constraints that threaten the Programme's management and governance. Strategic leadership within the AALA needs to be improved urgently in order to meet this challenge. The AAL Programme is a programme of the Participating States: they must take greater ownership.
7. **The market environment for AAL solutions is developing and the Programme must adapt accordingly:** The AAL market is no longer the greenfield it once was: faster innovation cycles, lower barriers to entry, and increasing interest among large players are all signs that the market environment is developing rapidly. The Programme's traditional emphasis on SMEs and primary users (older people) as the main foci of attention is no longer sufficient to guarantee its success. The AAL Programme must move closer to the market and engage more comprehensively with the issues shaping market development. This calls for a stronger focus on: integration and implementation; better engagement along the value chain including with large enterprises, secondary and tertiary users (stakeholders) and regions; and incentivising (and providing support for) companies to go to market. For the longer term, the increasing maturity of the AAL market may be a sign that the limits of the Article 185 approach – which relies on collaboration between national (research) programmes – are being reached.

Recommendations for the Remainder of the AAL Programme

The Panel considers that the strategic and operational challenges facing the Programme through to its completion in 2020 are best addressed through a series of well-targeted and deliverable actions. **Our Recommendations are set out in full in Section 7** and summarised below:

- **Recommendation 1: Enhance the strategic leadership of the AALA.** The strategic leadership capacity within the AALA should be strengthened through appropriate appointments to the Executive Board and/or the CMU. An enhanced strategic capacity is a pre-requisite for all of the other recommendations and requires urgent attention. **Responsible:** AALA through the GA.

- **Recommendation 2: Provide focused support on key framework conditions shaping the development of the AAL market.** Potential focus areas for further central support actions and measures include: IPR, ethics, certification and standards. These actions should be financed through the European Commission if not possible under national rules. **Responsible:** AALA through the CMU.
- **Recommendation 3: Further intensify support for business planning and market research.** The support available to projects in relation to business planning and commercialisation should be expanded and intensified. Actions may include: making engagement with business support actions obligatory for projects; giving greater weight to exploitation in proposal evaluation; a greater emphasis on business planning within reviews; and specifying project-defined milestones. **Responsible:** AALA through the CMU; EC.
- **Recommendation 4: Build engagement beyond the current AAL community** through dedicated efforts focusing on entrepreneurs, developers, SMEs, mainstream industry and a broad range of users. Measures may include: continuing and better publicising the AAL Challenge Prize; revamping the AAL Forum; launching open calls for experimental new ideas in AAL with their own ring-fenced budgets; and Challenge Projects seeking innovative solutions to identified challenges within the AAL field. **Responsible:** AALA through the CMU.
- **Recommendation 5: Support integration and implementation of AAL solutions.** In the context of challenge-led calls, as well as innovation the AALA should ensure specific provision for actions focusing on integration and implementation of existing solutions (including AAL project results). Specific measures should be taken to embed secondary and tertiary end-users – municipalities, healthcare agencies, insurers, etc. – as key actors within these activities. **Responsible:** AALA through the CMU; NFAs.
- **Recommendation 6: Experiment with large-scale testbeds.** Despite the operational constraints, the AAL Programme should attempt to facilitate **within the existing framework** large-scale demonstrations and pilots operating under real-world conditions. Pilots and testbeds should be motivated by – and where possible led by – competent demand-side organisations. **Responsible:** NFAs; AALA through the CMU.
- **Recommendation 7: Ramp up communication and outreach.** The AALA must remain an active voice for the AAL Programme and its achievements. Communication and outreach activities should be stepped up at all levels, with targeted messages for key audiences highlighting the new, more market-oriented approach; as well as the synergies with and value to national and regional funding agencies, other EU policies and initiatives, and international partners. **Responsible:** AALA through the CMU.
- **Recommendation 8: Secure the sustainability of the Programme for the remainder of its term** through measures such as: recruiting new partners and/or inviting lapsed partners to return; improving operational efficiency through changes in management and procedures; and/or seeking multi-annual pledges from existing NFAs regarding their support for the Programme through to 2020. **Responsible:** AALA through the GA and NFAs.

Whilst the AAL Programme has delivered considerable value-added on national and EU level, in view of the developments over recent years the Panel recommends that the European Commission should keep its participation under review. It should consider withdrawing from the Programme in the event that the number of Participating States² actively contributing to calls reduces to half of the number existing when the Programme

² Although the Panel is highly supportive of greater regional involvement (as in our Recommendations above), under the Co-Decision the participating entities are nation states (EU and non-EU). Regions participate only by exception, where mandated to do so by their national governments.

was launched in 2014; i.e. around 10-11 active participants. In that case any further collaboration should be continued under an ERA-NET Cofund.

Future Perspectives: Options and Models post-2020

Looking beyond 2020, there are a number of policy options available in shaping future European support for digital innovation in active and healthy ageing. These options range from: do nothing (i.e. no coordinated European initiative in this field), through various forms of national coordination (JPI, ERA-NET, Art.185), to industry-led coordination in the form of public-private partnerships (PPP).

These options are not mutually exclusive and at this stage it would be premature to recommend one over the other. A new Art.185 initiative might be appropriate, provided sufficient countries commit to fund such a programme for the total duration of the next Framework Programme **and** agree major changes to strengthen its leadership and coordination abilities. If this could not be achieved, then an ERA-NET Co-fund is considered the fall-back option, offering similar benefits within a less burdensome administrative structure. A JPI or a PPP would be a more radical departure but may be appropriate to the evolving policy requirements, especially if used in conjunction (e.g. a JPI for policy coordination and a PPP for industrial coordination).

In the Panel's view, it is important that in whatever form of programme is adopted **the uniqueness in addressing the needs of older people in relation to digital innovation** – developed over the last nine years within two consecutive AAL Programmes – is maintained. Specifically, this includes a strong emphasis on users and on SMEs.

1. INTRODUCTION

1.1. Purpose of the evaluation

The Decision of the European Parliament and the Council on the Union's participation in the Article 185 initiative Active and Assisted Living Programme (AAL Programme) under Horizon 2020 foresaw that the European Commission shall carry out an interim evaluation of no later than 2017.³ This report accordingly presents the findings of the Interim Evaluation of the AAL Programme prepared by an Expert Panel appointed by the European Commission, DG Communications Networks, Content and Technology and chaired by Mr Petri Uusikyla.

The main purpose of the Expert Panel was to:

- 1) Assess the progress towards the objectives of the Art. 185 initiative Active and Assisted Living Programme (AAL Programme);
- 2) Assess the efficiency (including aspects such as implementation, governance and supervision) of the Art. 185 initiative AAL Programme;
- 3) Assess the continued relevance and appropriateness of the instrument in line with the related EU Council and EP Decision;
- 4) Assess the coherence with other initiatives and actions specific to Art. 185 initiative AAL Programme that are aimed at supporting programme level collaboration among Member States and between Member States and the EU such as the European Innovation Partnership on Active and Healthy Ageing, and European Institute of Innovation & Technology - Knowledge and Innovation Communities on Healthy Living and Active Ageing;
- 5) Assess the effectiveness of Art. 185 initiative AAL Programme and its contribution to the general policy objectives of the Union, in particular Horizon 2020 objectives;
- 6) Assess the impact of the Art. 185 initiative AAL Programme in terms of the value added:
 - a. at European level
 - b. at National level;
- 7) Provide short and longer term recommendations for the future of the initiative.

The AAL Programme evaluation is one of a series of interim evaluations being undertaken of existing Art. 185 initiatives under Horizon 2020 (H2020). It will feed into a wider 'meta-analysis' of Art. 185 initiatives in order to take stock of the experiences in their preparation and implementation, identify critical issues that need to be addressed and propose if necessary adjustments, and assess how the Art. 185 instrument can best contribute to policy developments.

1.2. Scope of the evaluation

The AAL Programme runs for seven years, from 2014-2020. This Interim Evaluation covers its operation over the first three years, 2014-2016. Whilst the focus is primarily on the AAL Programme under Horizon 2020 (referred to for convenience as 'AAL2'), it is also necessary to take into account data and results from the predecessor programme where more recent data is not yet available. This predecessor was the Ambient Assisted Living Joint Programme (AAL JP, referred to for convenience as 'AAL1') which operated

³ Decision No 554/2014/EU of the European Parliament and of the Council of 15 May 2014 on the participation of the Union in the Active and Assisted Living Research and Development Programme jointly undertaken by several Member States.

from 2008-2013 under Framework Programme 7.⁴ Particular attention is paid to issues relating to the transition between the two programmes.

'Article 185 initiatives' are joint programmes established by Member States or/and Associated Countries ('Participating States') with the financial participation of the European Union. Their establishment refers to Art. 185 of the Treaty on the Functioning of the European Union (TFEU). They are designed to meet particular challenges in the research area and to complement Horizon 2020, to leverage national with EU funding, and to create economies of scales and synergies between national and EU research programmes and investments. This Interim Evaluation addresses primarily the EU's participation in and benefits from the AAL Programme rather than the performance of the programme overall. Aspects such as European added value are critical.

The evaluation is timely as it comes when the European Commission is proposing new ways to address the demographic ageing challenge through innovation, notably through the European Blueprint for Digital Innovation in Health and Care,⁵ as well as starting to discuss the future of the AAL Programme beyond Horizon 2020. As such, the report will feed into the wider debate on how to maximise the benefits of ICT solutions for active and healthy ageing through research and deployment coordination, and cooperation with public health and e-health initiatives.

2. BACKGROUND TO THE INITIATIVE

2.1. Description of the initiative and its objectives

Responding to the demographic challenges and opportunities

The Active and Assisted Living Programme is a response to the demographic challenges of an ageing population. In Europe, average life expectancy has increased from 55 in 1920 to over 80 today. As the baby boom generation reaches retirement, the number of people aged from 65 to 80 will rise by nearly 40% between 2010 and 2030.

This demographic change poses significant challenges to Europe's society and economy, affecting public as well as private finances. In the EU, total government spending on pensions, healthcare, long-term care, unemployment benefits and education is projected to increase by almost 20% between 2010 and 2060. Over this period the expenditures for long-term care (including nursing, social care and medical components, adding up to 1.8% of GDP in 2010) are estimated to almost double.

Yet rapid demographic ageing is also a major opportunity for new jobs and growth. The so-called 'Silver Economy' will create new markets related to the ageing population and drive more sustainable public expenditures linked to ageing. By 2020 the private spending power of the over-50s will reach \$15 trillion globally.⁶ The EU already has more than 85 million consumers aged over 65 and over the last two decades consumer spending among this group has risen over 50% faster compared to those aged under 30.⁷ In the public market, the EU spends over €1 trillion per year in health and social care (8% of GDP).

European policy in this area was set out in a background paper entitled *Growing the European Silver Economy* and was taken forward at the first European Summit on Innovation for Active and Healthy Ageing held in Brussels in March 2015. A follow-up

⁴ Decision No. 742/2008/European Commission of the European Parliament and the Council of 9 July 2008

⁵ European Blueprint for Digital Innovation in Health and Care,
<http://ec.europa.eu/research/conferences/2016/aha-summit>

⁶ *Growing the Silver Economy in Europe*, Background Paper, European Commission, 23 February 2015

⁷ Eurostat, quoted in *Growing the Silver Economy in Europe*.

event was held in December 2016.⁸ Stakeholders have committed to actions around three key pillars:

- **Scaling up innovation across the EU:** through EU co-financing of public procurement of innovation (PPI); rapid transfer of innovation across regions; and mobilising new public investments.
- **Advancing the Silver Economy Strategy:** the EU will launch Joint Initiatives on Age-Friendly Homes, Integrated/Connected Care at Home, and Silver Tourism. An EU action on accelerating adoption of standards and promoting interoperability is proposed; and a new EU study on the potential of the Silver Economy will be undertaken.
- **Boosting investment and access to capital:** actions are foreseen to: ease access to growth capital by innovative start-ups; develop joint public-private investment strategies for innovative projects (H2020, AAL Programme); and optimise EU support tools (such as PPI).

These actions will involve building on the achievements of existing stakeholder platforms. In addition to the AAL Programme, these include: the European Innovation Partnership on Active & Healthy Ageing (EIP-AHA)⁹; "More Years, Better Lives"¹⁰, a Joint Programming initiative (JPI) which enhances coordination and collaboration between European and national research programmes related to demographic change; the Knowledge and Innovation Community on Health & Ageing (KIC)¹¹ supported by the European Institute of Innovation & Technology (EIT); and Public-Private Partnerships supported under Horizon 2020 (including on Internet of Things, Robotics, 5G, Big Data), and the Blueprint for Digital Innovation in Health and Care.

Objectives of the Active & Assisted Living Programme

The Active and Assisted Living Programme is an applied research funding programme aiming to support projects developing ICT solutions for ageing well with a 2-3 years to market time horizon. It has a total budget of around €600m, including up to €150m from the European Commission, and runs from 2014-2020 under Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020). The Programme is undertaken jointly by around 17 EU Member States¹², three countries associated to Horizon 2020 (Israel, Norway and Switzerland), and Canada (not being an associated country) (see Annex 5).

The AAL Programme has three specific objectives:

- **Improve the quality of life for the elderly and their carers** (and by doing so also benefit other people, in particular those with disabilities) and help increase the sustainability of care systems, by enhancing the availability of ICT based products and services for active and healthy ageing;
- **Create a critical mass of trans-European research and innovation for ICT-based products and services addressing active and healthy ageing**, including the establishment of a favourable environment for participation by small and medium-sized enterprises (SMEs);
- **Leverage private investments and improve industrial growth potential** by providing a framework for developing European approaches and solutions that meet varying national and regional social preferences and regulatory aspects.

Target outcomes are expected in terms of benefits for:

- **European citizens:** by fostering the emergence of innovative ICT-based products, services and systems at home, in the community and at work, thus

⁸ <http://ec.europa.eu/research/conferences/2016/aha-summit/index.cfm>

⁹ https://ec.europa.eu/eip/ageing/home_en

¹⁰ <http://www.jp-demographic.eu/>

¹¹ <https://eithealth.eu/>

¹² The number of Participating States may vary from year to year; this issue is discussed later in the report.

increasing the quality of life, autonomy, participation in social life, skills and employability of elderly people, and reducing the costs of health and social care.

- **The European innovation system:** by ensuring the presence of actors of sufficient number, quality, and innovation capacity to ensure the long-term sustainability of health and long-term care regimes.
- **The European economy:** by promoting growth and jobs, and improving conditions for market exploitation within a new and emerging field with relatively few industrial players.

The AAL Programme is a joint research and innovation programme that pools national resources, leverages EU funding, and allows stakeholders (including SMEs and end-users) to participate according to national rules. This combination of features is not replicated in any other initiative and hence **the AAL Programme continues to occupy a unique position within the European landscape for active and healthy ageing.**

2.2. **Baseline**

The AAL2 largely continues and builds on structures and activities begun under the previous Ambient Assisted Living Joint Programme (2008-2013). As such, the baseline for this evaluation is essentially the situation pertaining at the end of AAL1 as set out in the Final Evaluation report for AAL1 published in October 2013¹³ and the Ex Ante Impact Assessment for AAL2 undertaken by the European Commission.¹⁴

Overall, the Final Evaluation concluded that the AAL1 had performed very well. The Programme was very well justified and had made good progress towards its objectives. It was operating as a coherent framework that delivered clear added value for Europe and the associated research, development and innovation activity was reaching critical mass. Activities aimed at improving conditions for industrial exploitation had expanded significantly. The Programme was well managed and had well-functioning governance arrangements.

The Final Evaluation Panel made a series of recommendations in relation to the Programme Strategy in order to better address the strategic challenges. In summary, these were that:

- The AAL JP must **aim for scale** by implementing demonstrations and pilots operating under realistic, real-world conditions, including under differing national conditions. Operational mechanisms should be found to reflect this stronger value chain focus.
- The Programme should **further enrich the ecosystem** surrounding the AAL community in Europe through initiatives and actions that promote networking and stimulate uptake. Emphasis should be on novel measures that have not been tried up to now.
- The Programme should **continue to strengthen cross-programme linkages** by engaging and building strong relationships with other EU, national and regional level programmes and initiatives within and around its field of interest.
- The Programme should **benchmark its activities against relevant international initiatives** in relation to ICT for active and healthy ageing so as to facilitate knowledge sharing, disseminate European best practices, and improve market access for European innovations.

¹³ *Final Evaluation of the Ambient Assisted Living Joint Programme, Report of Expert Panel chaired by Philippe Busquin.* European Commission, October 2013.

¹⁴ *Compliance Assessment of Ambient Assisted Living Association, Final Report 22 October 2014* by Ernst & Young Réviseurs d'Entreprises scrl.

In addition, a series of specific recommendations were made in relation to the Programme's operational excellence. These recommendations, and the extent to which progress has been made, are discussed in Annex 1.

The situation regarding national participation has changed significantly since AAL1 (for reasons that are discussed in more detail below). For this Interim Evaluation, therefore, the Panel has given special consideration to:

- 1) The situation regarding national funding commitments;
- 2) The continuing added value of the AAL Programme, not only from a national, but also from a European perspective; and
- 3) The boundary conditions for improving national participation in the future.

Active and assisted living is no longer a 'green field'. Both markets and policy initiatives have developed considerably over the three years since the current Programme was initiated, and even more so over the eight years since the predecessor AAL1 was first launched. With the successor to Horizon 2020 now under discussion, the Panel therefore sees this Interim Evaluation as an important opportunity to reflect on the options for European initiatives in this area going forward.

3. EVALUATION QUESTIONS

In accordance with the Panel's Terms of Reference, the Evaluation focused on five key aspects: relevance, EU added value, effectiveness, efficiency and coherence. The evaluation brief is summarised below and reproduced in Annex 3.

- **Assess the relevance and appropriateness of the initiative AAL Programme:**
 1. To what extent are the original objectives of the Art. 185 initiative AAL Programme still relevant?
 2. To what extent is the Art. 185 initiative appropriate to support the realisation of the EU policy objectives especially?
 3. Is the Art. 185 initiative relevant with respect to the demands/needs of the involved thematic directorates and of the beneficiaries (ministries, research funding organizations, research performing organisations)? How relevant is the EU intervention to EU citizens?
- **Assess the EU-added value of the Art. 185 initiative AAL Programme:**
 - What is the additional value resulting from the implementation of the Art. 185 initiative, compared to what would have been achieved by Member States at national and/or regional levels?
 - To what extent were the Art. 185 initiatives able to identify and exploit synergies with other EU policies, i.e. cohesion policy and sectoral policies?
- **Assess the effectiveness of the Art. 185 initiative AAL Programme and its contribution to EU policy objectives:**
 - To what extent did the initiative contribute to the overall objectives of Horizon 2020, such as knowledge-based society, R&D targets (3% target), ERA, EU 2020 strategy, excellent science, industrial leadership and societal challenges?
 - To what extent has the programme created conditions for the competitiveness of the Union's industry, aimed at a better exploitation of the industrial potential of policies of innovation, research and technological development (H2020), in particular with regard to ICT based products and services for active and healthy ageing?
 - To what extent did different factors influence the achievements observed?
- **Assess the efficiency of Art. 185 initiative AAL Programme** across the following three dimensions:

- Efficiency with respect to the specific and operational objectives of the initiative as laid down in its basic act 554/2014/EU and the corresponding Impact Assessment (IA).
- Efficiency with respect to the governance structure of the initiative.
- Efficiency with respect to the Art. 185 initiative AAL Programme as an instrument to foster activities of a transnational nature within Europe.
- **Assess the coherence of the Art. 185 initiative AAL Programme with other EU policy instruments:**
 - To what extent is the Art. 185 initiative coherent with other initiatives, actions and/or policies which have related objectives (H2020, EIT-KICs, EIPs, ERA-NET Cofund, Joint Programming, EFSI, Structural funds, etc.)?
 - What are the relations (complementarity, synergies, overlapping, etc.) with other interventions which have similar objectives?
 - To what extent has the AAL Programme established synergies with similar European programmes addressing societal challenges, in particular health, demographic change and wellbeing (H2020)?

4. METHOD/PROCESS FOLLOWED

4.1. Process/Methodology

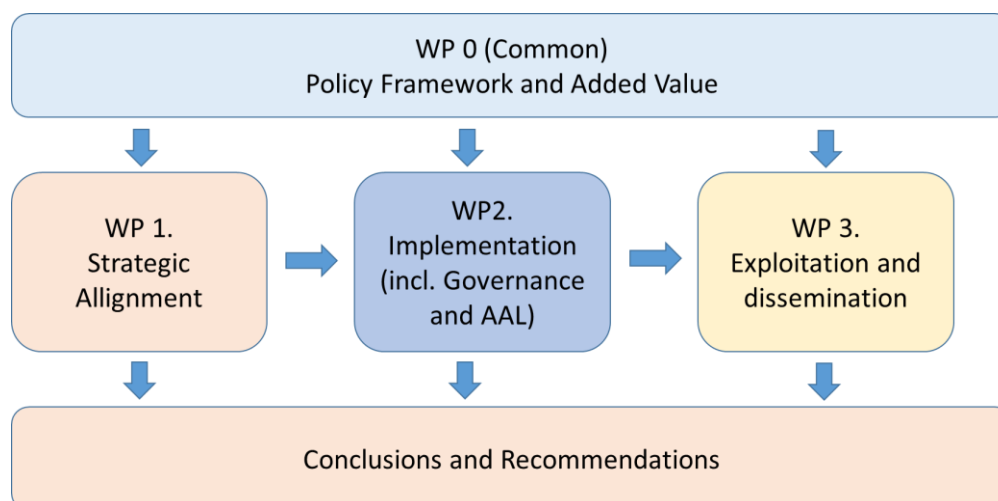
The Interim Evaluation Panel comprised five independent experts chosen for their experience in AAL and in research evaluation and a rapporteur. The CVs of Panel Members are presented in Annex 6.

The evaluation process comprised:

- Review of background documents provided by the European Commission and the AAL Association. These included texts regarding the Programme's legal basis; policy documents; presentations; and annual reports and other information relating to programme implementation.
- Participation at the AAL Forum in St Gallen, Switzerland, including a substantive series of interviews with stakeholders.
- Additional interviews with stakeholders in Brussels and other locations, including staff of the European Commission (face-to-face and telephone).
- Three Panel Meetings in Brussels to discuss findings and draft the report.

The full list of interviewees/consultees is included in Annex 4.

The evaluation framework comprised four work packages (WPs) each of which was the responsibility of a Panel Member as 'lead investigator' (see diagram). Panel Members prepared written notes of all interviews which were synthesized by the lead investigators into WP Summary Reports. These, in turn, were analysed by the Rapporteur, together with the background documents and other information, in formulating this report.

Figure 1: Evaluation Framework

The results of this Interim Evaluation will be supplemented by a public consultation organised separately by the European Commission for which the Panel has provided advice.

4.2. Limitations and robustness

Statistical data has been provided by the Central Management Unit of the AAL Association, the organisation charged with managing and implementing the Programme. This is a highly professional organisation with very comprehensive processes and procedures and the available datasets are considered highly reliable.

Data on implementation covers the annual calls for 2014, 2015 and 2016, with occasional reference also to AAL Call-2013-6 (the final call under AAL1) as a benchmark. Certain data for Call 2016 is still subject to confirmation.

It has not been possible to assess the impact of the Programme in full because projects under AAL2 were launched only recently. Nevertheless it has been possible to assess the innovation environment and support for project exploitation based on the interviews and the data available. Preliminary findings from an impact assessment of AAL1 results and outcomes were also considered for drafting this report.

The interviews covered a broad cross-section of stakeholders. Interviewees came from many different backgrounds and approached the Programme from diverse perspectives. Even though the interviews followed semi-structured interview guidelines, the discussions largely followed the priorities of the interviewees, also providing much anecdotal evidence that goes well beyond quantitative data regarding the implementation of the Programme. All interviewees were highly experienced professional consultees who, in the main, were very familiar with the Programme. As such the evidence base accumulated is considered to reliably reflect the views and opinions of the AAL community.

5. IMPLEMENTATION STATE OF PLAY

Programme Strategy

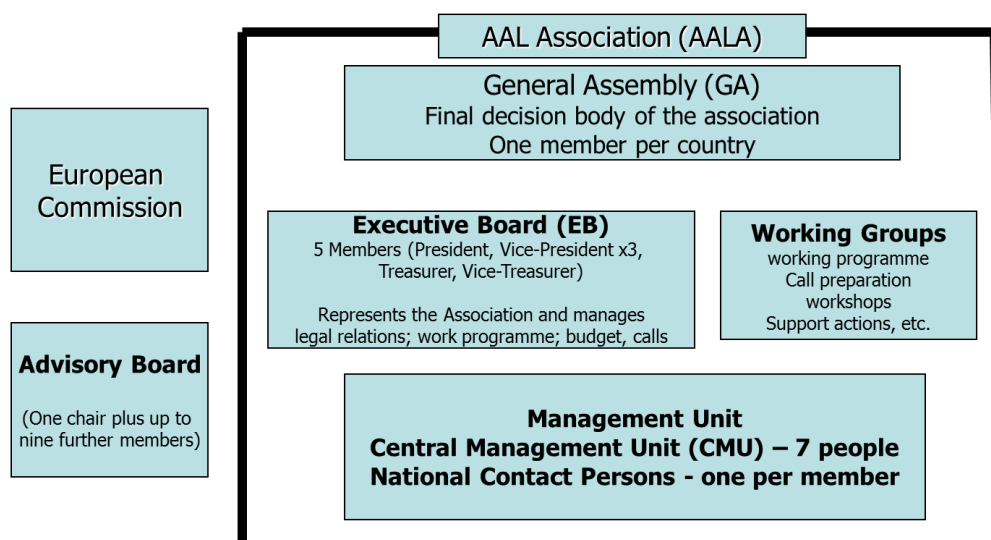
Under AAL2, the AALA has introduced a new and updated strategy that reflects both the new policy environment (operation within Horizon 2020) and changing market conditions. The strategy also takes into account, at least in part, the recommendations made in the AAL1 Final Evaluation Report.

The AAL Programme strategy aims in three main directions:

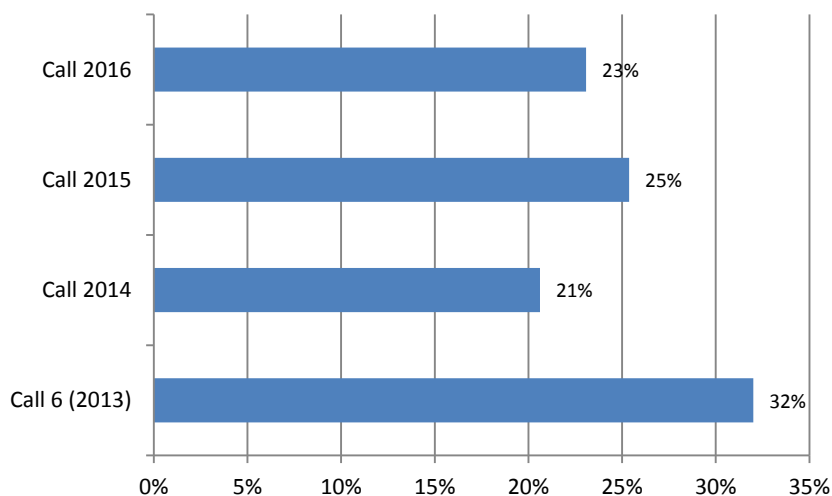
1. **Strengthening the Programme:** in order to promote the Programme more activities in networking, dissemination and exchange of AAL-related actions have to be introduced. These should:
 - Inquire and develop relations in new Partner States/Regions in view of new memberships and/or partnerships.
 - Make clear what has come out of AAL in terms of solutions in the market and other results.
 - Keep or increase the level funding budget.
 - Focus on disseminating national AAL activities among the AAL partner bodies.
 - Find relevant topics in other EU and joint initiatives and map them with technology and market opportunities in the AAL domain.
2. **Going to the Market:** by increasing and improving the Programme's outputs so as to extend its leverage and market reach. Actions should:
 - Ensure a go-to-market strategy for each proposal.
 - Reinforce the role of local authorities and regions as part of the go-to-market strategy and tertiary end-users to be targeted.
 - Promote incubators and/or accelerators already existing on national level to AAL project partners.
 - Reorganise the AAL website with respect to already developed devices from previous calls.
 - Inform and channel the projects to EU instruments like access to finance instruments and SME instruments.
3. **Improvement of the Programme:** so as to achieve better project results. Actions should:
 - Ensure a strong focus on business already at the submission phase, so as to ensure a better outcome at the end of the project.
 - Introduce new, more flexible AAL instruments.
 - Involve more primary, secondary and tertiary users.
 - Involve SMEs with a go-to-market orientation.

Governance and Implementation

The AAL Programme is executed by the Partner States through the AAL Association (AALA) which has set up a Central Management Unit (CMU) for daily programme operations. This is supported by the AAL General Assembly (GA) comprising representatives from all Participating States, which in turn elects an AAL Executive Board (EB).

Figure 2: Governance Structure of the AAL Programme

To fulfil its objectives and reflecting its market orientation, over the period 2014-2016 the Programme issued three calls for proposals. These have resulted in 52 projects being funded with a total public funding commitment of €90.2 million, of which €49.7 million (55.2%) was financed by the Participating States.¹⁵ The success rate under AAL2 has averaged 23%.

Figure 3: Success Rate from AAL Calls

In addition, the AAL Programme has put in place a series of support actions designed to help the Programme achieve its objectives and multiply its overall socio-economic impact. These support actions have addressed specific challenges – some of which were identified in previous evaluations – such as access to finance, commercialisation and deployment of AAL solutions, market barriers, and user-centred design. New, more flexible instruments have been introduced, notably: a Challenge Prize which has sought ideas both within and outside the AAL community; and hackathons, which have opened up the programme to app developers and entrepreneurs.

An impact assessment, aimed at monitoring the economic and social impacts of completed projects from AAL1, has also been launched.

¹⁵ These figures are provisional at December 2016 and may be subject to change as a result of negotiations relating to Calls 2015 and 2016. The data exclude the contributions of Switzerland and Canada which do not participate on a co-funded basis.

Further detail on the Programme's governance, operational and support activities, and project portfolio is presented in Annex 2.

6. RESPONSES TO THE EVALUATION QUESTIONS

6.1. *Relevance*

Relevance of the objectives and appropriateness to the needs of stakeholders

The AAL Programme is a policy response to the demographic challenges of an ageing population. Europe has unique characteristics in this respect: its approach to ageing is vested in a patchwork of national cultures, legislation and programmes, where solutions are best sought from the bottom up. Europe as a whole places a high priority on the sustainability of health and social care, where again the circumstances vary considerably between countries. Furthermore, Europe's strong investment in the information society – growth of broadband, advanced position in mobile and in embedded systems and software – mean it is well positioned to make use of advanced ICT tools and services in addressing the ageing challenge.

The AAL Programme continues to occupy a unique position within this landscape, spanning from research to innovation, from the technological to the societal, and from national to EU perspectives. Its positioning close to the market, pan-European approach and focus on the challenges of an ageing population are highly appreciated by stakeholders. AAL2 remains a unique offer. [↪ referred in **Main Finding 2**]

The Programme is making a particular contribution in helping to address market barriers. Demographic change and financial austerity are placing increasing strain on healthcare and social care systems. Despite the ever-growing pace of technological change and the promises of the Silver Economy, solutions for active and healthy ageing have yet to reach the mainstream. The market remains fragmented and standardised solutions have yet to emerge. The cost of existing products and services remains high. The AAL Programme is helping to break down market barriers through building communities and networks involving stakeholders (including SMEs and different kinds of users); promoting integration, testing and deployment; and championing 'soft' although important issues such as standardisation and interoperability. While such barriers persist and limits to use remain, the rationale for the AAL Programme remains strong.

This situation is changing, however. Innovation cycles are becoming faster and more dynamic, while products such as smartphones and smart watches – which did not exist when the original AAL Programme was launched – provide powerful, versatile platforms for AAL-type solutions. Barriers to entry are decreasing, offerings are becoming more mature and AAL can no longer be considered the 'greenfield' it once was. To remain relevant the **AAL Programme must move closer to the market** – an issue that is elaborated in further detail below. [↪ referred in **Main Finding 7**]

6.2. *EU Added Value*

As an Article 185 initiative, the AAL Programme leverages national efforts for the European good in a way that delivers added value for Europe as a whole. A consolidated view on the results and impact of the current AAL Programme is premature, as the first projects have yet to complete and calls are still being launched.

Taking a wider view across AAL1 and AAL2 as a whole, progress under the Programme has been encouraging. The main outcomes are tacit and difficult to measure but tangible nevertheless: a shared vision and commitment within a new, rapidly evolving field, one of great strategic relevance, economic potential and societal importance.

The added value for Europe from the AAL Programme takes many forms. These include:

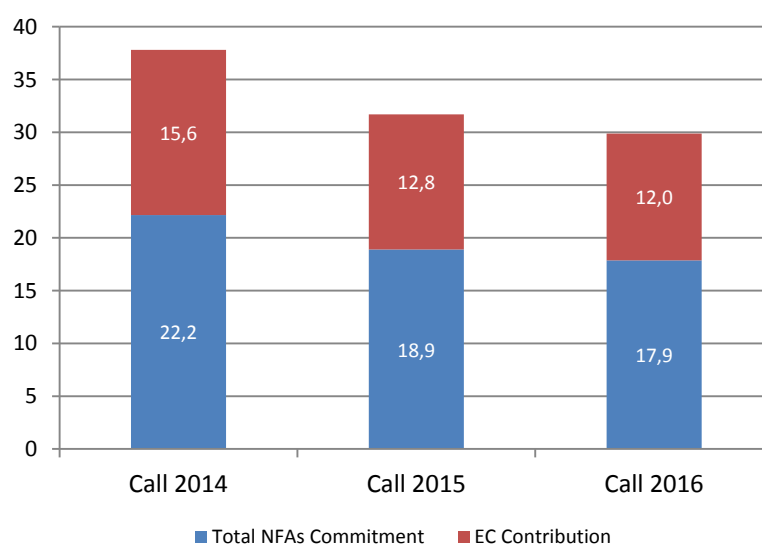
1. The creation of a **transnational pool of research, development and innovation activity** in AAL systems and services at European level;
2. **Strong network effects and the seeding of communities** which bring the AAL field closer to the market.
3. The **high participation of SMEs** attracted by the opportunity to work within familiar national rules and procedures.
4. The **strong involvement of user organisations**, despite variations in eligibility for funding.
5. The **catalytic effect** on national initiatives and activity.
6. The **leveraging of national funding** and the continuous commitment shown by many Participating States.

Both the national funding agencies (NFAs) and individual project participants see clear beneficial effects from cooperating in the AAL Programme. [↻ referred in **Main Finding 3**].

Participating States' motivations for involvement vary. Some are largely political whereas others are motivated by operational considerations. In some countries national programmes are closely aligned with the AAL Programme and in other cases less so. The Programme is especially useful for smaller countries and newer EU Member States in helping them to keep up with AAL developments. Where delegated by national authorities, some regions also now participate as funding agencies.

For project participants, in particular SMEs, the Programme enables them to engage with multi-stakeholder ecosystems for AAL innovations that span the whole value chain, including large enterprises, user organisations and investors. Transnational projects are also important in helping them to understand the 'framework conditions' within national markets. For example, the involvement with user groups from other countries enables them to learn how local factors and conditions (such as the family, the state, reimbursement rules) influence service provision. [↻ referred in **Main Finding 3**]

Figure 4: National Funding Commitments by Call (€ millions)



Whilst these benefits are real and tangible, they are tempered by major concerns in relation to the current and prospective situation regarding participation:

- The number of Participating States has decreased from an average of 23 in AAL1 to 21 in AAL2 (as at June 2016). In addition, some countries that have signed participation agreements are no longer active in calls. Only 16 countries contributed to Call 2016; several of these had no projects within the ranked proposals and therefore were unable to utilise their budget. Those leaving and/or

becoming dormant have included both the largest EU Member States which in the past provided a substantial share of the overall call budgets (France, Germany, Spain and UK), and those with high reputations for innovation (Denmark, Finland, Sweden). Countries' reasons for leaving or for reducing their contributions vary and have sometimes been due, at least in part, to the public finance crisis in the EU.

- National funding commitments have decreased significantly, partly as a result of fewer countries being involved and partly due to decreasing contributions from those that remain. Consequently, call budgets have decreased from over €40m in Call 6 under AAL1, to around €30-33m under AAL2.¹⁶ There is also a significant knock-on effect in terms of central management and administration (see below). Overall, the financial contributions by Participating States are approaching subcritical levels to ensure essential European impact.
- Utilisation of the budgets that are available has also decreased. Up until Call 2014 virtually all available NFA budget commitments were taken up across funded projects. In the last two calls, however, there has been significant underspend due to limitations in the budget optimisation process: the lower the number of contributing NFAs and the smaller the total available budget, then the more difficult it becomes to allocate the budget effectively across project partners. In Call 2016, provisional indications suggest that up to 44% of the available public contribution may be left unallocated to projects invited for negotiation and that five of the 19 NFAs that committed to the call will not have any partners in funded projects; several others had a shortfall. The situation is illustrated by the table below and is discussed further in Section 6.4.¹⁷

	Call 2015	Call 2016
Total Available Public Contribution (€ millions)	26.9	25.5
Total Requested Public Contribution (€ millions)	18.2	14.2
Unspent budget (€ millions)	8.7 (32%)	11.3 (44%)
No. of NFAs without any partners in ranked proposals	6 of 19	5 of 19

- Management costs are set at 6% of the total budget, but as national commitments have reduced this fund has decreased to the point where it no longer covers the overheads. Currently the AAL Association foresees 30-35% more costs than income and important decisions need to be taken to ensure the organisation is sustainable.
- Attendance at the AAL Forum, the Programme's flagship event, has been consistently declining (see Annex 2). Attendance at St Gallen in 2016 was less than half that of Eindhoven in 2012: 500 vs 1229 attendees. The number of match-making sessions was only a third of those in Ghent the previous year (39 vs 122). These trends suggest that the event – and by implication the AAL Programme as a whole – is being seen as less relevant and less attractive even within the AAL community.

The added value of the AAL Programme comes, in large part, from its pan-European approach. Diminishing participation decreases the relevance and added value from the European point of view. Without the largest and most innovative Member States the extent to which the Programme is able to continue to mobilise a critical mass of research and development is questionable. Similarly, the catalytic effect on national initiatives and

¹⁶ The total available public contributions under the respective calls were: Call AAL-2013-6 - €42.3m; Call AAL-2014 - €37.8m; Call AAL-2015 - €33.5m; Call AAL-2016 - €30.7m.

¹⁷ 'Total requested public contribution' relates to proposals invited to negotiation. The data are provisional pending the conclusion of negotiations on Calls 2015 and 2016, and exclude the contributions of Switzerland and Canada which do not participate on a co-fund basis.

activity and ability to leverage national funding become weaker. **The risk of cyclical and potentially terminal decline is real: without urgent action the viability of the initiative even through to 2020 seems in doubt.** [↗ referred in **Main Findings 4 and 7**]

6.3. Effectiveness

The effectiveness of the Programme is assessed in terms of progress towards the three strategic objectives described above.

Objective 1: Improve the quality of life for the elderly and their carers

Many industrial actors, service providers and user organisations have come together under the Programme's umbrella to develop innovative ICT-based solutions. The focus is on adapting simple and existing technology, like the TV, smartphones, tablets and digital cameras, as well as standard PCs, to the needs of elderly people, carers and intermediaries. Technologies such as Internet of Things, big data, cloud and robotics are also increasingly important elements in AAL solutions. Often this requires adaptation in terms of reliability, versatility and price to take account of the setting in which the technology is to be used.

The Programme continues to address a variety of themes and issues relating to AAL and to develop an innovative and interesting portfolio of projects focused on AAL solutions and services. Projects generally have a 2-3 years to market time horizon (two years as from Call 2016). Whilst the vision in this respect is clear, it has not evolved significantly since AAL1 and not to the extent that the previous evaluation report recommended. For example, under its Recommendation 1: Stretch the Value Chain the Final Evaluation Panel noted:¹⁸

A stronger market focus requires a widening of demand side participation in the Programme. This expansion should aim for both breadth (allowing users to be funded across all Participating Countries) and depth (improving the quality of users' involvements and drawing new actors into the value chain).

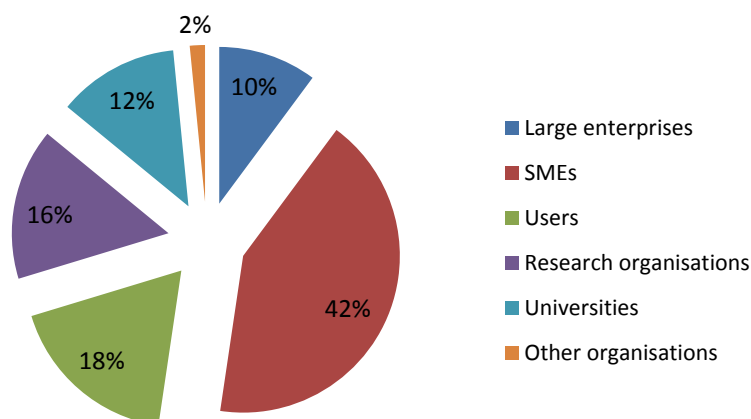
The AAL1 Panel also emphasized the importance of ensuring that users make an active contribution that is measured, assessed and made visible. This broader and more visible demand side participation and related aspects, such as demonstrations and pilots operating under real-world conditions, has yet to become fully embedded.

User involvement and profile

Understanding of users' contributions has improved across the research community and the general benefit of involving users in AAL projects is now widely accepted. A majority of projects integrate users in some form, most commonly in the requirements and testing phases. As in AAL1, users are eligible for funding in some countries and not in others and their participation continues to reflect the national situation and rules.

Users currently account for an average of 18% of project participants, a figure that is unchanged since the previous programme. This category covers three specific classifications of users – primary, secondary and tertiary – although the three classes are not broken down (see Annex 2 for definitions).

¹⁸ *Final Evaluation of the Ambient Assisted Living Programme*, p.iv

Figure 5: Organisation Types in Funded Projects, AAL Call 2015

Although users are well represented, their engagement is still deficient in terms of both:

- 1) Breadth – too few stakeholders that are not necessarily representative of the AAL community; and
- 2) Depth – projects are not truly demand-led and involvement is often through proxy users (e.g. associations, charities).

The 'right' end-users are those that are highly motivated and prepared to become fully engaged within projects, actively contributing rather than being passive recipients. Regional actors, such as hospitals, housing associations, and municipal authorities with large social care departments, are typical of the sort of users with the necessary competences and resources.

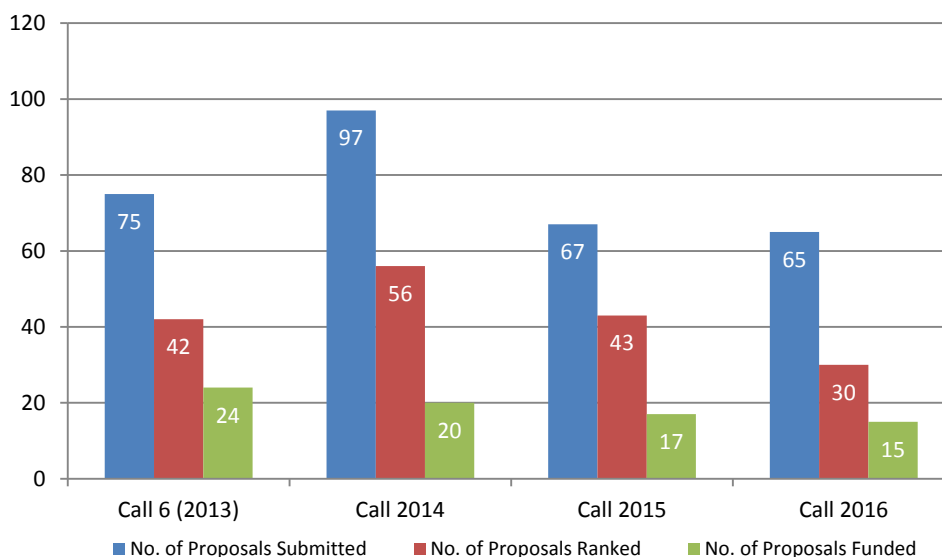
Large-scale testbeds could be a means of strengthening the user dimension. Moreover, the experiences made with the users should be made more explicit and shared with the community. [↪ referred in **Main Finding 5** and **Recommendations 5 and 6**]

Objective 2: Create a critical mass of trans-European research and innovation for ICT based products and services

The Programme inherited, from AAL1, a pan-European community of practice in AAL systems and services. This included multi-stakeholder ecosystems for AAL innovations that span the whole value chain and continue to be especially attractive for SMEs. The participation of large enterprises (approximately 10%) is comparable to H2020 and that for SMEs (45%) is significantly better. Other value chain actors, such as large enterprises, user organisations, and investors, are also being brought into the loop although not to the extent required.

Interest in the Programme, as measured for example by the number of proposals submitted, remains high.¹⁹ Over-subscription ensures that quality continues to be maintained.

¹⁹ The number of proposals submitted under the last four calls was: 75 for AAL-2013-6, 96 for AAL Call-2014, 66 for AAL Call-2015 and 65 for AAL Call-2016.

Figure 6: Number of Proposals Submitted and Selected, 2013-2016²⁰

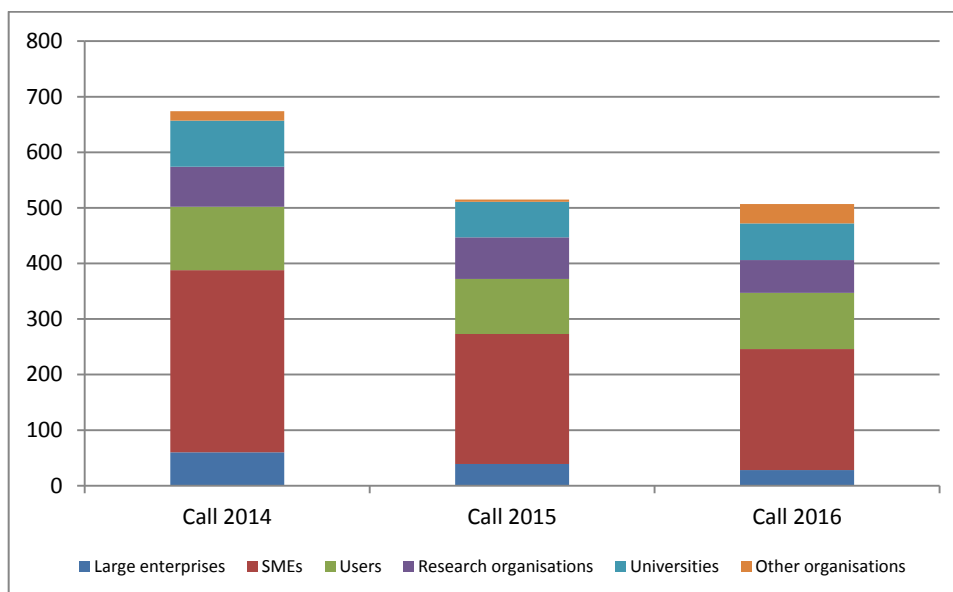
The previous evaluation Panel noted a critical mass of R&D and innovation to mean *"the presence of a sufficient number of actors, sufficient cooperation, and sufficient total R&D and innovation activity to initiate a self-sustaining, productive and viable research environment."* The current Panel concurs with this definition. The focus, therefore, is on actors, cooperation, and amount of activity in the AAL Programme.

The present situation gives cause for concern in this respect as indicators for these elements are mostly moving in an undesirable direction. Compared to the final phases of AAL1, in AAL2:

- The number of countries actively participating in calls decreased from over 20 to around 15 today, although some participate through more than one NFA.
- National commitments have decreased by around one-third, from over €30m per call to around €16m per call.²¹ Some countries provide only minimal commitments (€300k or less).
- Budget utilisation has decreased, with around 30-40% of the available budget not being spent in the latest calls.
- The number of organisations participating in calls has decreased from an average of around 600 to around 500 (see figure below). The number of proposals submitted has also decreased.
- Number of projects funded has decreased from around 20-25 per call to around 15-20 per call.

²⁰ Figures from AAL Call-6 (2013) are shown for comparison.

²¹ Includes Switzerland and Canada.

Figure 7: Number of Participants in Submitted Proposals, 2014-2016

The ecosystem has not deteriorated under AAL2 but it has, at best, stood still. Whereas the research and innovation activity associated with the Programme at the end of AAL1 was highly encouraging, on present indicators the critical mass of the Programme seems to be in doubt. As noted above, both large countries and key innovators have been lost from the Programme; further decline in funding risks activity falling to unsustainable levels. [↪ referred in **Main Finding 4** and **Recommendation 4**]

The sustainability of projects remains an issue. The observation of the previous evaluation that: *"Too few projects start from validated user insights or have identified customers for the solutions proposed"* remains valid and was confirmed by stakeholders. Change has become even more urgent in view of developments in the market in the meantime. [↪ referred in **Main Finding 7** and **Recommendation 5**]

Objective 3: Leverage private investments and improve industrial growth potential

The market for active & healthy ageing solutions is increasingly mature and is attracting large industrial players from sectors such as telecoms, consumer electronics, healthcare, and even pharmaceuticals. This marks a significant change from the situation even five years ago when the AAL Programme was seen as having a role not just in growing the market but in creating it.

The reliance on SMEs has been – and continues to be – a key strength of the AAL Programme, allowing it to capitalise on the agility and innovative capacity of small companies. However, as the previous evaluation pointed out, there are weaknesses inherent in this approach. In a market as complicated as AAL, small companies face major hurdles in bringing innovations to market by themselves: they prosper through being part of a market ecosystem. But engagement with large industry, who are able to build the necessary relationships and networks with SMEs, has remained static across AAL1 and AAL2. This mainly reflects a structural factor since as a joint funding initiative the Programme is not intended to support large companies over SMEs. [↪ referred in **Main Finding 7**]

In interviews, stakeholders from across the Programme stressed that although many projects have been successful – in the sense that they have created working prototypes – they have not translated into impact within the marketplace: there is still a lack of marketable results. This is partly because the projects funded are too far from the

market; partly because there is insufficient business planning within projects; and partly because the Programme as a whole lacks an integration framework for the individual project results. [➡ referred in **Main Findings 5 and 7**]

As the market matures it will eventually settle around standardised, consumer-type solutions. If those solutions are to be European, then it is essential that the results are well integrated and are truly scalable. The supply base is too narrow and urgently needs to be broadened so as to deliver this scalability and integration. The issue was already emphasized in the previous evaluation, which highlighted scalability and integration as *"strategic issues needing to be more systematically addressed"* and was reiterated by many respondents here. Under AAL2 this recommendation has yet to meet an effective response. [➡ referred in **Main Finding 7**]

Impact assessment

An Impact Assessment of AAL projects was launched in December 2015 in order to follow-up on the implementation of AAL Programme projects and assess the corresponding successes and challenges. The results are preliminary but show that of the projects surveyed, which were all drawn from Calls 1-4 within AAL1:

- Around 50% had collaborated with end-users (primary, secondary and/or tertiary) since completion.
- Around 45% had collaborated with enterprises and/or research organisations since completion.
- 20% were involved in new value chain partnerships and 15% in existing value chains.
- 52% were involved in commercialisation of solutions and components; and around 30% had generated and/or expected to generate revenues from AAL solutions and components.
- 29% had secured follow-up investment from public third parties; and 22% from private third parties.
- 17% had protected IPR and 12% had created new companies.

The results are encouraging and show that AAL results have market potential. Nevertheless some of these projects were completed up to five years ago – an age in innovation terms. These findings underline the need for the Programme to be more agile and provide more dedicated support for exploitation.

6.4. Efficiency

Governance structure and approach

The governance structure of the AAL Programme has been inherited from the previous Programme with no substantive changes in roles or responsibilities. Overall this structure – comprising the General Assembly, Executive Board, Advisory Board, Central Management Unit and ad hoc Working Groups – remains appropriate. The Programme is managed in an effective manner. The management overhead of 6% is standard and the available supportive resources are used efficiently. The Programme's governance structure is transparent and inclusive and – until recently – appeared to allow the execution of the Programme in line with its overall goals and objectives. Recent developments in relation to supervision of the CMU, however, are of concern (addressed further below). [➡ referred in **Main Finding 6**]

Points made in previous evaluations regarding strengths and weaknesses of the Programme as an Article 185 initiative remain valid. On the one hand, the devolved structure – implemented through a network of national contact points (NCPs) – has ensured strong links to national authorities and close contact with (potential) participants and other stakeholders, so avoiding duplicate or redundant applications. National

accessibility has also stimulated the inclusion of new players, especially SMEs, and facilitated the emergence of new communities. On the other hand, the Programme's national orientation can be a weakness. Implementation continues to be hampered at times by diverging national interests, loose central controls and burdensome bureaucratic procedures. For example, although widely acknowledged by partners as a key obstacle, still in AAL2 differing national rules regarding contracts and payments continue to lead to long delays in projects being launched.²² Variations in participation rules whereby users are eligible for funding in some countries but not in others limit the nature and distribution of users and significantly skew the user involvement profile.²³

The financial model underlying the AAL Programme as an Article 185 initiative can be problematic. As a 'virtual common pot'²⁴ each country funds its own participants from within its committed contribution (plus the proportional European Commission contribution). Once a country's committed contribution to a particular call has been exhausted a complicated 'budget optimisation and reconfiguration' process is applied across the remaining proposals in order to minimise sub-optimal spend while preserving the excellence criterion.²⁵ Neither European Commission nor national commitments end up being fully spent. As each country has its own financing model and reimbursement rate which is matched by the Commission without qualification, there can be major differences in how EU match funding is applied between countries. Also, price differentials influence what can be funded in different countries.

As a joint programme, Participating Countries have a strong say in strategy and implementation. There is little scope for free riders and those that invest most into the AAL Programme get the most out of it. But the Programme is also very vulnerable to national circumstances beyond its control, as decisions regarding participation and budget commitments have shown. To some extent these issues can be thought of as 'boundary conditions' that are inherent to the Article 185 instrument. Nevertheless, the Panel is disappointed by the apparent lack of willingness of the Participating States to work together to find innovative solutions within the given framework.

Future options and models in relation to financing are discussed in Section 8.

Transition from the previous programme

Although in operational terms a continuation of AAL1, the AAL2 was a new programme with a separate legal basis and required new bilateral agreements between the AALA and the Participating States, which included new conditions regarding financial guarantees and related liabilities. The need for new bilateral agreements under H2020 rules has been attributed by some as a reason for certain countries deciding to withdraw from the programme.

The dynamics of the transition from AAL1 to AAL2 are not completely clear. Some Participating States found the Article 185 process frustrating, requiring national authorities to identify what could be different without knowing *a priori* what H2020 would require. According to this view, the discussions around H2020 did not take sufficient account of other initiatives during the negotiation process, although AAL2 had certain

²² By way of example, the negotiation process for Call 2015 was due to finish by mid-2016 but was still ongoing in December 2016. This was partly due to legal/procedural aspects at national level, as well as issues faced by participants in finding replacement partners and delays in responding to NCPs.

²³ In Call 2015, of 64 users in ranked proposals, 34 were from the Netherlands and 10 were from Switzerland; six countries had no user participation. Similarly, in Call 2016 of 43 users in ranked proposals, 12 were from Canada, 15 were from the Netherlands, and seven countries had no user participation.

²⁴ As opposed to a 'true common pot' model where each country commits to pool its funding and funds proposals in rank order irrespective of their national representation or composition. This model would also have the advantage of shorter time to contract since a common central contract (rather than national contracts) would be used.

²⁵ In effect, proposals without participation from the fully-committed country move up the ranking list. At some point multiple over commitments are encountered and proposals with significantly lower rankings may be funded in preference to higher ranked proposals for which one or more countries has no available budget. Some national budgets are likely to be underspent and there is no procedure for reallocating these commitments.

derogations. When the new bilateral agreements were circulated, the plurality of countries still felt that the risks associated with the financial guarantees were acceptable – and in practice not different to those under the previous programme – whereas others came to an opposing conclusion. Either there was miscommunication between the Commission and certain national authorities over exactly what was required under H2020. Or the issue of bilateral agreements was used by some as an excuse to discontinue participation that was already under pressure for other (national) reasons. Whatever the interpretation, the impact of falling participation on the Programme has been significant and threatens its sustainability.

Whilst it is not the Panel's role to attribute blame, it is clear that there are lessons to be learned in terms of being more open about what is required and communication with stakeholders. For example, if the issue arises again the Commission could organise workshops with prospective Participating States on the scope and implications of the foreseen bilateral agreements.

Performance and role of the CMU

The operational management capacity of the Central Management Unit improved significantly during AAL1 and the CMU has continued to perform well. Operational aspects of the Programme (organisation of calls, project reviews, contracts, etc.) are generally satisfactory.

What the CMU does it does well, but concerns highlighted in the AAL1 Final Evaluation regarding the lack of strategic management capacity within the AALA remain. As currently configured the AALA is not able to anticipate or manage change effectively. The observation in the previous report that *"the CMU's strategic role is limited which inhibits its ability to steer the programme and to react proactively to new developments"* is still valid. This situation pertains, apparently, because the Participating States have limited the CMU's role and refrain from divesting strategic responsibilities to it. In this case the Executive Board must either provide that strategic leadership itself or specify precisely where those strategic responsibilities should lie. But the Board is wholly reliant on in-kind contributions from partners and at present is composed of just four members. The leadership of the AALA needs to be strengthened for it to be effective in guiding/leading strategy development. [↪ referred in **Main Finding 6** and **Recommendation 1**]

During the course of this Interim Evaluation the Executive Board embarked on actions intended to address the financial shortfall facing the AALA as a result of decreased national funding. These actions focused on staff cutbacks within the CMU. The Panel appreciates that the financial situation facing the AALA is serious and that the Board has a responsibility to ensure that the Association remains solvent. However, the loss of key personnel puts the governance and quality of the Programme at risk at a time when the strategic capacity of the Association is already a cause for concern. The impacts on the CMU – and by implication the Programme as a whole – are likely to be substantial and long-lasting.

Organisation and content of calls

The organisation of calls and related application procedures are working very well. The at times chaotic situation experienced in the early days of AAL1 has long been rectified.

A major change under AAL2 has been the shift to a more challenge-driven approach to the contents of calls. Challenge-led calls are expected to embrace broader innovation concepts, meeting real end-user needs and priorities (see Annex 2 for data on the three AAL Programme calls to date). This shift reflects both recommendations in the previous evaluation and within Annual Reviews for a more multidisciplinary approach, including the close involvement of end-users at all stages of programme design and execution, and engagement with new stakeholder communities. User involvement in calls was discussed in section 6.3 above.

There are some signs of goal overload, as projects are expected to be both technically ambitious and, at the same time, close to the market. Overall, the proposal selection process still favours research-based projects that are too far from the market and not sufficiently ambitious in their commercialisation objectives. Potential market success and impact need to be given greater weight within the evaluation criteria. [↪ referred in **Main Finding 5** and **Recommendation 3**]

The Panel notes and welcomes changes in this direction under Call 2016 designed to improve the commercial orientation. These include:

- pilots must be organised in at least two countries;
- outline of the business plan and business model to be presented at proposal submission stage;
- changes in the Guide for Applicants and application form to emphasize the focus on presenting a clear route to market;
- a stronger emphasis on the wishes and desires of primary end-users, rather than on their needs;
- changes in the evaluation criteria, giving greater weight to potential impacts; and
- a requirement to present a realistic business plan with time-to-market perspective of maximum 2 years after end of the project.

It remains to be seen whether these actions will be sufficient in scale and scope to produce a more commercially-oriented portfolio, as intended.

Project implementation & monitoring

Projects funded are managed and supervised in cooperation between the CMU and NCPs. Project representatives report positive and supportive contact from the CMU. For some, the NCP is the more important contact, though.

As grant agreements are administered at national level, coordinators have little leverage over partners who under-perform. This is yet another area where implementation is constrained by the 'parallel tracks' approach. The CMU has an important role to ensure that partners deliver in cases where national funding agencies pay too little attention to the overall project dimension.

The tables below show the results of the mid-term and final reviews across AAL1 and AAL2 conducted until 30 June 2016.

Call for Proposals	No. of Funded Projects	No. of MTRs conducted	Mid-Term Reviews				
			Excellent	Very Good	Good	Just acceptable	Unsatisfactory
1	23	23	0	13	7	3	0
2	32	33*	2	10	8	13	0
3	22	24*	1	6	9	5	1
4	25	27*	0	12	11	3	1
5	29	32	2	15	10	5	0
6	24	23	2	6	12	3	0
2014	20	2	0	0	2	0	0
Total	175	129	7	62	59	32	2
The number of MTRs may be higher than the number of funded projects because in some specific cases an additional review is organised.							

Call for Proposals	No. of Funded Projects	No. of FTRs conducted	Final Reviews				
			Excellent	Very Good	Good	Just acceptable	Unsatisfactory
1	23	23	0	10	9	4	0

2	32	32	2	8	14	7	1
3	22	21	2	8	7	4	0
4	25	22	0	9	9	3	1
5	29	9	1	5	2	1	0
6	24	1	0	1	0	0	0
Total	155	73	5	41	41	19	2

The number of MTRs may be higher than the number of funded projects because in some specific cases an additional review is organised.

Overall, 34 of 129 mid-term reviews (26%) and 21 out of 73 final reviews (29%) were ranked as 'just acceptable' or 'unsatisfactory'. These figures are considered relatively high for a research and innovation programme based on the excellence criterion. However, in each case around two-thirds of the lowest rated reviews were from the early calls which are acknowledged to have had significant weaknesses. Performance since Call 4 has improved significantly and the Panel does not see any major causes for concern regarding the *quality* of the present portfolio. However, as noted above, the objectives are often not aligned sufficiently towards the market.

Strategy for future calls

Opinions regarding the direction of future calls are mixed. On the one hand, it can be argued that the Programme should continue to ensure that calls are open, so as to attract as wide a range of projects as possible. According to this view, at least a certain percentage of the available budget should be reserved to fund innovative ideas that do not meet a set agenda. On the other hand, there is value in being strategic, focusing on certain topics identified – on the basis of foresight – as meeting priority needs. Examples include: nutrition, co-morbidities, prevention, smart houses, and depression. More collaboration is also needed around working life and the impact of digitalisation.

The Panel believes this should not be a binary choice: there is room for both. Making calls too restrictive, such that the focus is only on doable things, limits innovation. Therefore, along with specified call topics, there should also be room for addressing new developments and challenges or for own specific ideas which could be tried out for a limited time. In case they are convincing and able to show their importance, they could receive further funding. [↪ referred in **Recommendation 4**]

Ethics is an important aspect that has been insufficiently addressed in the calls so far. The AAL field contains significant ethical issues (e.g. data protection, the use of service robotics in care, the sharing of data within the care value chain). Stronger emphasis is required across the Programme. [↪ referred in **Recommendation 2**]

Dissemination and outreach

Dissemination activities have comprised, principally: the production of printed brochures and other publications; maintenance of an online presence, including social media and upgrading of the AAL website; and event management and attendance. These largely follow conventional tracks and target mainly the existing AAL community. There is little evidence of communication and outreach activities penetrating – or indeed even targeting – mainstream consumer markets and systems.

The isolation of the AAL community is reflected very visibly in the decline of the AAL Forum. The Forum is the Programme's flagship annual event but is losing momentum at a rapid rate. Attendance has decreased consistently since 2012 in the face of insufficient outreach success and a format that has become rather stale (see table below). The Forum exemplifies the problems that the Programme as a whole is facing: lack of marketable results having an impact within a market that needs to be redefined. [↪ referred in **Main Finding 7** and **Recommendation 7**]

Figure 8: Participation at AAL Forum, 2013-2016

	2013, Norrköping	2014, Bucharest	2015, Ghent	2016, St Gallen
Participants	802	531	600	c.500
Exhibitors	46	25	28	39
Sessions	22	20	42	30
Side events	18	18		
Matchmaking			122	39

Exploitation and impact

One of the Programme's main aims is to build a sustainable innovation environment for AAL solutions and services. The emphasis on business models and market perspectives has improved in recent years and further reinforcement was recommended by the AAL1 Final Evaluation.²⁶

Under the present Programme, AAL2Business has been a core activity, offering business coaching and mentoring to projects as they approach their final stages. Consortia see this as very useful in helping them to strengthen the business focus in their projects. The AAL Challenge Prize has also been launched, as an alternative approach for stimulating usable and marketable AAL solutions. And the support action on Standards and Interoperability has collected around 350 use cases in order to raise awareness of existing standards in the field of AAL. All of these activities are seen as very successful and have been widely welcomed and accepted by stakeholders. The contract for AAL2Business expires in early 2017 and it is essential that this is renewed. Further, similar horizontal actions are needed, even though some Participating States do not appear to view such actions as a funding priority. [↗ referred in **Main Finding 5** and **Recommendations 2 and 3**]

Whilst the commercial orientation in projects has improved, it is still not strong enough. Indeed, some projects have a too limited and self-centred understanding of what 'market readiness' actually means. 'Readiness' should be measured by whether a solution is ready for an end-user to work with, not whether technologists or service providers believe it to be so. The emphasis on the business perspective is still too little, too late. The motivation to take the solution to market must be in projects from the beginning and further support and advice should be provided in enabling them to realise those ambitions. This could include:

- **Providing support to projects in defining their exploitation strategies.** The European view here is not necessary pertinent or correct. More should be done at national level, based in the specificities of the national/regional market.
- **Obligatory attendance at business modelling workshops** during the project's early stages.
- **Implementing mid-term reviews earlier** and placing greater emphasis on competent business planning within the review process.
- **More concerted monitoring of projects during execution** to ensure that the objectives are being achieved.
- **Strengthening project follow-up after completion**, including opportunities for post-project support for commercialisation.

Success stories show that consortium characteristics are a key factor in achieving exploitation of results. The requirement for consortia to be broadly balanced in terms of researchers, large industry, SMEs and (end-)users helps ensure the right approach to exploitation. But SMEs normally do not have the experience to drive projects and get weighed down by the administrative and managerial burden. Many SMEs consider a

²⁶ "Recommendation 8: Reinforce the market orientation across the Programme, ensuring market entry and commercial exploitation issues are addressed more explicitly and with greater weight in all aspects".

three-year project to be too long. Projects need strong leaders motivated and able to take results to market. Consortia should ensure either that other partners are able and willing to take the results to market and/or that SMEs are provided with extra help and support. However, some countries still see research as the most important goal and may even penalise projects with business objectives that are seen as too strong. This is yet another example of where national strategies are not sufficiently aligned. [↪ referred in **Main Finding 7** and **Recommendations 3 and 4**]

A project by project approach to exploitation will not be sufficient. The Programme as a whole is facing an integration gap. Efforts continue to be devoted to developing discrete, one-off solutions with very little attention to how they fit together and how they can be implemented. The scalability of results should be a key priority for the Programme going forward. This means, for example, a much greater emphasis on support for the integration and implementation of existing solutions so as to take them to the point where they are truly 'market ready'. [↪ referred in **Recommendation 5**]

A clearer strategy on intellectual property rights (IPRs) could also help ensure that promising results are better exploited. At present IPRs are subject to the terms of the grant agreement and (in some cases) by national rules as well. If not exploited they are not necessarily available to the wider community on open terms. Investors may also be unwilling to invest if they feel IPR arrangements are ambiguous. Forcing consortia to open their IPRs if not taken up by the partners would create a flow of promising, investable innovations within the AAL ecosystem.²⁷ [↪ referred in **Recommendations 2 and 3**]

Potential for new instruments and support measures

The AAL Programme has introduced two new instruments: the Challenge Prize and hackathons. These are modest but welcome innovations that further improve the Programme's flexibility and market reach. An AAL Market Observatory is also being launched, although its relevance and potential contribution are difficult to assess at present.

In view of the comments above, there is scope for further innovations in terms of instruments and support measures in order to improve take-up and exploitation of results. New instruments and measures should be considered focused on implementation and commercialisation. These could include: [↪ referred in **Recommendations 2, 4 and 5**]

- **Dedicated exploitation projects**, specifically funded to progress results of completed projects towards the market. H2020 Fast Track to Innovation could be a potential model.
- **Specific provision for implementation actions within challenge-driven calls**, with part of the budget being reserved for integration and deployment activities.
- **New funding models that reward performance**. For example a certain proportion of project funding could be retained pending successful market introduction.
- **Accelerators and/or incubators** to provide intensive business-focused support to consortia in bringing their results to market.
- **Additional support measures focused on key framework conditions**, such as ethics, IPR, certification, and standardisation.

Certain of these measures would not be feasible in the short term given the Programme's financial and operational constraints (e.g. national frameworks and rules). Their adoption should, however, be considered within the current programme with the most far-reaching reserved for the medium to long term (i.e. post-2020).

²⁷ The emphasis here is on 'open' IPR based on open standards and licences, rather than 'shared IPR' which may be a disincentive for investors.

6.5. Coherence

Relations and synergies with other EU initiatives, actions and policies

In acting as a bridge between research and innovation, the Programme shows strong complementarity with other initiatives and programmes, both EU and national. In particular, there is a clear differentiation with longer-term research under H2020. In addition, the Programme is helping to raise awareness of the potential for innovative solutions to ageing issues and to push the topic up EU and national agendas. [↗ referred in **Main Finding 3**]

One of the Programme's most visible impacts has been in building synergies with other European initiatives and programmes. Programme representatives continue to contribute actively to the EIP-AHA, ensuring that the AAL Programme is better known within the policy community and that its calls are broadly aligned with the EIP-AHA's strategic priorities. For example, the Programme is providing support to the EIP-AHA in relation to standards and interoperability.

Links with European Joint Programming Initiatives have been strengthened, in line with recommendations of the Final Evaluation of AAL1. This has included, for example:

- Collaboration with the JPI on Neurodegenerative Diseases (JPND)²⁸, with the AAL Call 2016 as one of the outcomes.
- Collaboration with the JPI on Healthy Diet for a Healthy Life²⁹, with an increase in the number of proposals on food and nutrition received for the AAL Call 2015.
- Collaboration with the JPI More Years Better Lives³⁰ so as to improve synergy between the two initiatives and communities; and support for a joint conference/workshop to be held in February 2017.

The Programme has also had contacts with the EIT KICs Health & Ageing and ICT in relation to business deployment.

Although the Programme has engaged with other EU initiatives, actions and policies, its strategic alignment has not changed significantly since AAL1. The European policy environment for active and healthy ageing has evolved in the meantime. Research in AAL continues to be funded in Horizon 2020 and with a stronger innovation focus. The JPIS now promote European cooperation between Member States, although without a specific focus on technology. And at strategic level, the European Blueprint for Digital Innovation in Health and Care is being proposed as a means of developing a shared vision on how innovation enabled by the Digital Single Market can transform Europe's ageing society in the 21st century and contribute to the European Silver Economy.³¹ It will connect existing initiatives concerned with digital innovation in health and social care reform at European, national and regional levels and mobilise investments.

There are several possibilities to further enhance cooperation within the policy space. The AAL Programme should continue to improve linkages with other EU programmes and initiatives without diluting its own strategic focus. [↗ referred in **Recommendation 7**]

Involvement of regions

Cities and regions are already involved in the AAL Programme and have the potential to play an even more important role in the future. Health care and especially social welfare care are often provided at the regional or local level. Regional actors are 'close to the

²⁸ <http://www.neurodegenerationresearch.eu/>

²⁹ <http://www.healthydietforhealthylife.eu/>

³⁰ <http://www.jp-demographic.eu/>

³¹ *Draft Blueprint Digital Transformation of Health and Care for the Ageing Society* (26/09/2016), European Commission

ground' and already participate in the Programme as primary or secondary users. As major providers of services, there are opportunities to involve regions much more actively, in particular in terms of integration and deployment.

Some progress has been made here. The Government of Biscay (representing the Biscay Province) now participates under delegation from the Spanish Government. Contact has been made with two "Länder" representatives in Germany and a series of information sessions are being held in Brussels with regional representatives, along with regional network events.

However, a regional approach poses major difficulties within the current Article 185 structure, which is driven by Member States at national level. Regions may participate as beneficiaries within the national framework but under the financial regulations are not able to be Participating Parties unless specifically mandated to do so by their national governments.³² The participation of regions (and municipalities) as partner agencies would require an alternative policy instrument. Complex legal and practical issues would need to be disentangled here. A balance has to be struck between improving the impact of the Programme within regions and avoiding further fragmentation in the way the Programme is administered.

International cooperation and strategy

Greater international cooperation in research and innovation for AAL has long been advocated and was among the recommendations of the AAL1 Final Evaluation.³³ These efforts came to fruition in early 2016 when Canada joined the Programme through the participation of the Canadian Institutes of Health Research (CIHR). It participated to AAL Call 2016, as a result of which certain changes were made to the Call text to reflect a more international approach. Discussions have also been held with Japan and Taiwan that have yet to materialise into formal collaboration.

On the one hand, the participation of non-European countries benefits the AAL Programme and is a clear sign of the relevance of the AAL thematic. It also provides a further incentive for European countries to join and extend their international collaborations. On the other hand, many of the framework conditions for successful deployment of AAL solutions (regulations, reimbursement rules) are determined at national and sub-national level and there is a risk that too great an emphasis on the international dimension would dilute the European focus. A simultaneous emphasis on internationalisation and regionalisation probably would be very difficult to handle effectively.

At present international cooperation is being handled on a case-by-case basis. The Programme needs a clear strategy on boundary spanning and international alliances based on demonstrable added value for Europe. [↪ referred in **Recommendation 7**]

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Key Issues

Half way through its current mandate the Active & Assisted Living Programme faces major challenges in terms of both its long-term future and its short term success. Based on our analysis, the Panel highlights the following key findings and issues:

³² For example, Belgium participates to the AAL JP on this basis, with regional agencies from Flanders, Wallonia and Brussels region each being contracting parties. The Government of Biscay's participation is also on this basis.

³³ Specifically, Recommendation 4: "Benchmark European AAL experiences against similar international initiatives".

- 1) **The transition from AAL1 to AAL2 has been largely successful.** The AAL Programme has made a promising start. Building on the achievements of AAL1, during its first three years the Programme has successfully navigated the transition from AAL1 to AAL2, striking an appropriate balance between continuity and change. Innovations such as new instruments, challenge-based calls and a greater emphasis on the commercial potential of projects have all strengthened the programme and made it more robust.
- 2) **The Programme has the right strategy but requires stronger leadership.** The Programme's strategy, based around the three aims of Strengthening the Programme, Going to the Market, and Improvement of the Programme, is appropriate and broadly addresses the strategic issues and challenges facing the AAL Programme at the current time. But the Programme should be faster and bolder in pursuing the many worthwhile actions identified. Progress in this respect is hampered primarily by a lack of strategic leadership within the AALA, i.e. the ability to enforce the strategy whilst reconciling competing national interests. As a collaborative effort between national agencies, the Participating States must take greater ownership of the Programme and be held accountable for its outcomes.
- 3) **Falling participation rates threaten the sustainability of the initiative and require urgent action.** The AAL Programme leverages national efforts so as to deliver clear added value for Europe as a whole. The main outcomes in terms of shared vision and commitment and mobilisation of resources are tangible and real. Both the national funding agencies and individual project participants see clear beneficial effects from cooperating in the AAL Programme. However, there are also signs that the Programme is losing momentum and several key indicators are negative. Over-subscription in calls ensures that for the time being excellence in funded projects is being maintained. But further falls in participation would erode both the critical mass within the research community and the financial viability of the AALA to unsustainable levels. A downward – and potentially terminal – spiral could ensue. The situation carries significant risks and requires urgent action to safeguard the sustainability of the AAL Programme.
- 4) **The historic focus on SMEs and users is no longer sufficient to guarantee the success of the Programme.** The combined focus on SMEs, on the one hand, and primary users (older people), on the other, is undoubtedly one of the Programme's most valued aspects. But as the AAL environment develops these factors alone are no guarantees for success. SMEs can only go so far by themselves: they prosper through being part of a market-based ecosystem through which they have access to large industry, specialist advice and support, and access to finance necessary for successful commercialisation. Similarly, different categories of users need not just to be 'involved' in projects but embedded within the programme and their contributions captured and fed back in a systematic way. All of this calls for greater attention to building value chains for AAL solutions that span large industry, SMEs, users and others.
- 5) **As the market environment matures the AAL Programme is approaching the limits of what an Article 185 initiative is able to achieve.** At operational level, the AAL Programme is performing well as an Article 185 initiative. As a research and innovation programme that embraces technological and non-technological aspects and spans from national to EU perspectives, the Programme continues to occupy a unique position within the European landscape for active and healthy ageing and is highly appreciated by stakeholders. However, there are also clear indications that – for the reasons highlighted in the previous paragraph – the limits of the current model are being reached. There is an increasingly visible gap between what the market in its current form requires and what the Programme is able to provide. The market environment for active and healthy ageing solutions has moved on and the Programme must keep pace to stay relevant.
- 6) **The Programme must move closer to the market and engage more comprehensively with the issues shaping market development.** Whilst there has been a much-needed shift towards innovation at project level, the

Programme as a whole has not engaged sufficiently with key issues underlying success in the rapidly developing market environment for active & healthy ageing solutions. Projects are still too far from implementation and lack a platform for 'business-grade' support and advice. This means, for instance, getting to grips with questions such as: how to scale AAL solutions effectively; how to integrate new and existing products and services into viable solutions; how to cultivate and learn from the large-scale experiences of users; and how to ensure that European companies have the skills and competences to capitalise on these opportunities. Moving closer to the market requires a more concerted focus on integration and implementation, on the framework conditions influencing take-up, and on means to incentivise actors and grow value chains.

These observations frame our recommendations in Section 7.3 below.

7.2 Operational risk assessment for the AAL Programme

At the present time the AAL Programme faces certain risks that could potentially impair its ability to meet its objectives and may jeopardise the EU's continued involvement and support.

The associated risks are of two forms: direct risks relating to the Programme's strategy and operations; and indirect risks arising from developments in the wider world (changes in policy, markets, society, etc.). Our assessment focuses primarily on those issues under the Programme's direct control (i.e. within the influence of the AALA and the Participating States). Wider risks, such as the pace of technological change and changing market conditions, are not included but are discussed in the main report. Such issues will be part of the landscape within which the Programme operates and will also influence future options and models for activity in this area post-2020 (Section 8).

Relevant issues are discussed throughout the report and summarised in the risk assessment table below. In our view the most critical risks are those relating to governance and management. The AAL Programme is facing a governance crisis: the number of States participating in the Programme has reduced and many of those that remain have reduced their commitments. Management budgets, which are a fixed share of national contributions, are insufficient to maintain the CMU in its current form. The Executive Board lacks effectiveness and struggles to execute the Programme in line with its overall goals and objectives. Without concerted action being taken immediately to strengthen both the Association's strategic and operational capacity there is a real risk that the Programme could collapse.

Risk ID	Risk description	Probability	Impact	Risk mitigation measures
1	Governance & Management Risks			
1.1	Existing Partners leave the Programme	Medium	High	Increase efforts to recruit new Partners; Rethink the Programme profile
1.2	Existing Partners reduce their financial commitments	High	High	Adapt management & operations to reflect available resources.
1.3	Existing Partners withdraw from Calls	Medium	High	Create incentives for existing Partners to remain by improving calls and giving evidence on results Introduce cost savings Rethink the Programme's modus operandi (i.e. roles & responsibilities of CMU)
1.4	Decreasing Partner commitments reduce management budgets below critical levels	High	High	

1.5	The Executive Board is not sufficiently resourced to fulfil its management role effectively	High	High	Partners commit to ensuring the EB remains an effective executive body.
1.6	Key personnel leave the CMU	Medium	Medium	Ensure that key personnel remain by improving leadership and giving incentives to staff Recruit new personnel of equivalent experience
1.7	CMU is unable to exercise effective control over projects	Low	Low	Rethink administrative procedures to achieve better balance between CMU and NFAs.
2	Strategic Risks			
2.1	AAL Programme fails to offer a distinctive voice within European policies and programmes relating to ageing	Medium	Medium	Enhance AAL Programme 's strategy and define clearly the interceptions with relevant policies and programmes
2.2	National interests & strategies of Partners do not converge sufficiently to create European added value	Low	High	Increase efforts within the AALA to align strategies for the European good
2.3	Programme activities do not sufficiently reflect evolving user requirements and market realities	Medium	High	Ensure involvement of market stakeholders (users, large industry, entrepreneurs, regions) with sufficient numbers, quality and diversity.
3.	Operational Risks			
3.1	Continuing variation in national rules and conditions for participation	High	Medium	Harmonise rules and conditions, try to find common minimum.
3.2	Requirements for projects become too broad and too demanding for SMEs	Medium	Medium	Ensure call guidelines remain focused and practical for SMEs.
3.3	Projects do not meet SMEs' expectations for shortening innovation cycles	Low	Low	Introduce new and/or parallel instruments that allow for shorter project durations.
3.4	Attendance at the AAL Forum continues to decrease	Medium	Low	Improve the visibility of the programme. Introduce more attractive themes.
3.5	Programme's outreach activities have low reach beyond the AAL community	Medium	Low	Create high and visible profile use new communication modes (benchmark: H2020 marketing)
3.6	Involvement of non-European partners dilutes the Programme's focus	Low	Low	Ensure European partners benefit from internationalisation efforts
3.7	IPR arrangements deter take-up of results	Low	Medium	Partners should communicate more clearly how the IPR arrangements should be done

The question then arises: at what point would the AAL Programme become unviable from the European point of view? In the Panel's view the guiding principle should be European added value. The lower the number of countries participating in calls, the greater the difficulties in optimising budget allocation, meaning that a larger share of both national and European Commission commitments go unused. The EU's withdrawal might then be justified on the basis that European added value had fallen below a critical level. The Panel considers that this condition would be met if the number of Participating States actively contributing to calls reduced to half of the number existing when the Programme

was launched in 2014; i.e. around 10-11 participants.³⁴ In that case any further collaboration could be continued under an ERA-NET Co-fund.³⁵

As an Article 185 initiative, the AAL Programme is not an EU programme but a programme of the Participating States to which the EU contributes under certain conditions. The only real leverage the Commission has is through the matched contributions. European added value has to be guaranteed and the Commission should not be afraid to 'pull the plug' if that can no longer be assured. In practice such action would be implemented by the Commission declining to approve or contribute to the annual work programme when it becomes due for renewal.

7.3 Recommendations

In developing our recommendations the Panel has recognised the difficulties and constraints in the current situation. Financial constraints and staff cutbacks put the AALA in a very difficult position. It must innovate and move forward at a time when it is under-resourced and lacks key personnel at both strategic and operational levels. The bilateral agreements also impose strict limits on what can be achieved within the Article 185 framework.

Accordingly, the Panel's recommendations for the current programme (through to 2020) focus around **a limited set of well targeted and deliverable actions** intended to refresh/rebrand the Programme and bring it into better alignment with on-going developments in solutions for active and healthy ageing, both within the market environment and within other EU policies and programmes.

The strategic challenges identified above should be addressed within the current programme as far as the rules and national priorities allow. This will be difficult without the resolve on the part of the Participating States to 'push the envelope' of what can be achieved within the current framework. If they truly value their collaboration then they will find a way: clear leadership and an entrepreneurial spirit will be required.

In the context of the current AAL Programme the Panel recommends:

- **Recommendation 1: Enhance the strategic leadership of the AALA.** The ability to anticipate and manage change is essential both in addressing the current operational challenges and ensuring that the Programme meets its strategic objectives. The General Assembly should strengthen the strategic leadership capacity within the AALA through appropriate appointments to the Executive Board and/or the CMU. An enhanced strategic management capacity is a pre-requisite for achieving all of the other actions and improvements recommended below and requires urgent attention by the AALA.
- **Recommendation 2: Provide focused support on key framework conditions shaping market development.** The AAL Programme should launch further central support actions and measures so as to improve stakeholders' knowledge and awareness of the framework conditions that shape the development of the AAL market. Potential focus areas include: IPR, ethics, certification and standards. These actions should be financed through the European Commission if not possible under national rules.
- **Recommendation 3: Intensify support for business planning and market research.** The support available to projects in relation to business planning and commercialisation should be expanded and intensified. Actions may include:

³⁴ For the year 2014-15, organisations from 21 countries had signed bilateral agreements.

³⁵ Under H2020 rules the minimum number required for an ERA-NET Co-fund is currently set at seven Participating States. Under the Co-Decision the participating entities are nation states (EU and non-EU). Regions participate only by exception, where mandated to do so by their national governments.

- a. Making engagement with the AAL2Business support action for coaching and mentoring obligatory from a project's earliest stages. The range and nature of support available through AAL2Business should be intensified.
- b. Modifying proposal evaluation criteria to give greater weight to exploitation potential and market readiness.
- c. Placing greater emphasis on competent business planning within mid-term reviews.
- d. Specifying project-defined milestones as an aid for on-going assessment and follow-up of results.
- e. Modifying the Guide for Applicants to reflect all of the above.
- **Recommendation 4: Build engagement beyond the current AAL community.** The Programme should make further dedicated efforts to build engagement with entrepreneurs, developers, SMEs, mainstream industry and a broad range of users beyond the current AAL community. This should include:
 - a. Continuing the AAL Challenge Prize and intensifying the publicity around it.
 - b. Revamping the AAL Forum by making it more relevant for industry and user oriented.
 - c. Launching open calls for experimental new ideas in AAL. These should run alongside the targeted calls identified in the work programme and should have their own ring-fenced budget.
 - d. Setting up one or more Challenge Projects seeking innovative solutions to identified challenges within the AAL field. These would be similar to the Challenge Prize and operate outside of the normal calls.
- **Recommendation 5: Support integration and implementation of AAL solutions.** In the context of challenge-led calls, as well as innovation the AALA should ensure specific provision for actions focusing on the integration and implementation of existing solutions (including AAL project results). Specific measures should be taken to embed secondary and tertiary end-users – municipalities, healthcare agencies, insurers, etc. – as key actors within these activities.
- **Recommendation 6: Experiment with large-scale testbeds.** Despite the operational constraints, the AAL Programme should attempt to facilitate **within the existing framework** large-scale demonstrations and pilots operating under real-world conditions. Such an approach would need to be reflected in the annual work programme and be supported by a majority of national authorities who would agree to adapt their own work programmes accordingly. Pilots and testbeds should be motivated by – and where possible led by – competent demand-side (health and social) organisations and could link to existing initiatives such as the EIP-AHA.
- **Recommendation 7: Ramp up communication and outreach.** The AALA needs to become a more active voice for the AAL Programme and its achievements. Communication and outreach activities should be stepped up at all levels, in particular with targeted messages for four key audiences:
 - a. Market actors (industry, SMEs, entrepreneurs, secondary and tertiary users) highlighting the new, more market-oriented approach encapsulated in Recommendations 2-6.
 - b. The policy community, highlighting the value of the AAL model, the synergies with other EU initiatives, and potential for future programmes.
 - c. National and regional funding agencies in Europe as prospective/returning partners. Again the message should stress the refreshed and more outward looking approach being adopted.

- d. International partners, so as to draw attention to the mutual benefits of participating in the Programme for them and for Europe.
- **Recommendation 8: Secure the sustainability of the Programme over the medium term.** The AALA should take all necessary measures to safeguard the viability of the AAL Programme for the remainder of its term. This could include: recruiting new partners and/or inviting lapsed partners to return; improvements in operational efficiency through changes in management and procedures; and/or seeking multi-annual pledges from existing NFAs regarding their support for the Programme through to 2020.

8. POST 2020: FUTURE OPTIONS AND MODELS

The Panel's terms of reference request specific advice on the lessons learned from the Article 185 initiative and the options for future European programmes in this area.

8.1 *Comparative funding models*

In light of recent developments concerning the participation of States and the experience gained with the implementation of the Programme, the issue arises whether the current model of EU participation in the AAL Programme is still the most effective and best suited one in order to meet the EU's goals and objectives. There are signals – some weak, others stronger – indicating that the policy dynamic is moving away from Art. 185 type actions towards initiatives that are either more industry-led or more oriented to policy coordination. If the ageing sector does not follow that logic then there is a risk it will get left behind and/or SMEs will get frozen out.

The European Commission has several policy instruments available to support the co-ordination of national policies and programmes. The choice of instrument in a given case should help maximise the European value-added of the EU's contributions under the specific framework conditions of national and co-operation activities among the participating States.

Adapting and modifying Article 185

Article 185 provides the Commission with reasonable flexibility in terms of structuring its participation and with regard to the rules and procedures for the provision of financial support to national R&D activities. The current AAL implementation model calculates the EU contribution based on the funds spent (costs incurred) by the project partners in the Participating States on a Call by Call basis. The Commission then transfers the EU contribution to the CMU which serves as the implementation structure for the AAL Programme. The CMU distributes the EU funds to the national funding bodies that manage the funding agreements with the national project partners involved in AAL projects. As discussed in the main report, in the past this financing model was prone to significant levels of underspending of planned EU contributions as some Participating States failed to commit sufficient resources to the Calls in order to fund all proposals selected whilst other States with budget commitments had no national applicants among the selected projects.

From a European perspective, an alternative model, where the Participating States agree to commit their funds to a 'common pot' (either real or virtual) would be more advantageous and is allowed for under the Article 185 instrument. 'Common pot' funding would avoid any underspending of national and EU contributions that are due to unbalanced financial commitments or differences in proposal success rates among the Participating States. It would make the AAL Programme less vulnerable due to the decreased level of dependency on the individual Member State funding schemes, and thus would be likely to increase the efficiency and effectiveness of project funding. However, it could be argued that the common pot approach would change the nature of the AAL Programme, creating essentially a European programme that no longer limits

itself to the co-ordination of national AAL efforts and research activities. Not least for this reason, it seems unlikely that the Participating States would be willing to pool their national contributions in order to allow for all selected proposals being funded, regardless of the nationality of the project partners involved.

There are other options available that strike a balance between the Participating States' desire to stay in the driving seat and the European Commission's responsibility to spend financial contributions in the most effective and efficient way. For example, the EU contributions could be used primarily to fund selected projects that lack sufficient national funding from one or several Participating States. This model implies that the respective national funding bodies receive different levels of EU support in a given Call. The model may run the risk of inviting 'free riding' behaviour by some Participating States. National funding bodies might aim to reduce their financial commitments as they count on European funds for financing their national project applicants. However, provisions in the agreements between the Participating States and the CMU (or between the Participating States and the Commission) could bar free riders from putting the Programme at risk. There could be an obligation for the national funding bodies, for example, to balance their national funding share over the whole Programme period.

There would also be the option to separate the allocation of EU contributions and national contributions at programme level. One part of the programme could support projects exclusively funded by EU contributions. The balance of funding could be provided through exclusively nationally funded projects by the Participating States in their respective AAL programmes. Also this model would avoid any underspending of planned EU funds for AAL projects. There might be an undesirable effect with regard to the co-ordination of national research activities, however. Separating the financial streams might lead to (even more) lack of strategic planning and integration of national AAL R&D activities. This model also raises the question of what role the CMU could play in the future as the Commission might consider channelling the EU contributions to projects through one of its own implementation structures.

Other policy instruments

The European Commission can support co-ordination activities of national research policies through other instruments than those based on Article 185. In 2008, the Commission launched the Joint Programming Initiative (JPI) to address grand societal challenges for Europe. JPIs aim to reduce fragmentation in the European Research Area by means of aligning policies (and funding) at national and EU levels that shall lead to the more efficient use of the national and EU resources available. JPIs follow a voluntary format and a partnership approach. Their activities are based on a shared common vision and a Strategic Research Agenda (SRA). The JPIs establish their own governance structures. The actions taken to implement the SRA can have a variable geometry of Participating States. The Commission's role in JPIs is that of an initiator, facilitator and moderator. It can provide financial support to the actions undertaken jointly by the Participating States and launch complementary measures in line with the SRA.

EU contributions to the funding of joint R&D calls can be made via the ERA-Net Co-Fund Action under Horizon 2020. The ERA-Net Co-Fund scheme provides top-up funding for transnational Calls that clearly demonstrate value added on European level taking into consideration the financial commitments (in cash or in kind) of the Participating States. One of the participating national funding bodies involved takes over the role of the co-ordinator and manages the implementation of the Call on behalf of the network members. There is no separate CMU needed to channel the EU top-up funding contributions. Under Horizon 2020 activities to prepare for an Article 185 initiative are within the focus of the ERA-Net Co-Fund Action. In the event that the AAL Programme is judged to have fallen below the critical mass necessary for an Article 185 (see Section 7 above), the ERA-Net scheme may prove a viable alternative funding instrument for any further transnational project funding activities.

JPIs, ERA-Nets and Article 185 programmes constitute *public-public partnerships* where the final decision-making about strategy and implementation of joint activities lies with the Participating States. The European Commission could also consider initiating a *private-public partnership* (PPP) and setting up a Joint Technology Initiative (JTI) for its implementation. JTIs establish Joint Undertakings (JU) under Article 187 to run their activities. The role of the European Commission in JTIs is much stronger and more active compared to the co-ordination instruments under Article 185. The Commission is a founding member of the JUs and is therefore directly involved in all strategic and operative decision-making processes. Up till now, JUs have been established only in key technology areas where European industry stakeholders are able to co-ordinate and communicate their interests in an effective manner. Furthermore, financial commitments of industry to R&D projects financed for the implementation of the SRAs are comparatively high in existing JTIs. Their total investments per case might be up to more than ten times those planned in the AAL Programme in the period 2014-2020. There is also the issue of the role of the Participating States in any future JU. Even though it seems difficult to envisage a JU-type model under the current framework conditions for the implementation of AAL activities, the experience gained with JTIs could provide valuable information to help design even more effective public-public and private-public partnership instruments for the period after the end of the current AAL programme.

8.2 Scoping future programmes in active and healthy ageing

The AAL Programme can be understood as a programme for **digital innovation in active and healthy ageing**. In framing future options it is necessary to dissect this descriptor and identify the key policy trends affecting each of its three elements:

- **Digital policy:** The Digital Single Market (DSM) policy sets out a comprehensive agenda for establishing a barrier-free space for digital services in Europe. Among its many policy actions, the Digitising European Industry initiative aims to mainstream digital innovation across all sectors of the economy and society.³⁶ Public-private partnerships (PPPs) will be promoted as a means of aligning RD&I initiatives on digital industrial technology platforms and large-scale integration. 'Smart health' and 'smart ageing' have been identified as use cases by several of these platforms for technologies such as IoT and Big Data.³⁷
- **Innovation policy:** Building on experiences within the EU and elsewhere, there is a clear trend toward a broad based European innovation policy. This includes, for example: an emphasis on open innovation; more agile mechanisms, such as competitions, challenges, prizes and hackathons (rather than fixed-term projects); dedicated support for SMEs and start-ups in accessing technology ecosystems (such as accelerators and incubators); and specific measures to engage with entrepreneurs, users and investors.
- **Active and healthy ageing policy:** The Blueprint for Digital Transformation of Health and Care aims to create a 'shared vision' across Europe on how innovation enabled by a DSM can transform Europe's ageing society in the 21st century and contribute to the European Silver Economy. Such a shared vision for the digital transformation of health and care is a pre-requisite to mobilise investment and guarantee the commitment of all actors in developing, investing in and deploying digital innovation for active and healthy ageing. The Blueprint will serve as a tool to raise awareness about the potential of better care coordination amongst the large community of relevant stakeholders, including users.

The challenge, essentially, is to identify how these three policy domains can best be aligned to meet the needs of Europe's older citizens.

³⁶ Digitising European Industry (DEI): Reaping the full benefits of a Digital Single Market. Communication (COM(2016)/180)

³⁷ See, for example, *Smart Living Environment for Ageing Well*, Report of AIOTI WG5, October 2015. www.aioti.org

At a practical level, the scope for action comes down to a handful of policy options each of which more or less maps to a specific programme model or policy instrument as described in the previous sub-section. These are summarised in the table below.

Policy Approach	Policy Definition and Associated Instrument	Implication
1) Do nothing	<p>No coordinated European initiative in the field of digital innovation for active & healthy ageing.</p> <p><i>Implemented through:</i> No dedicated European policy instrument is implemented</p>	<p>Established collaborations and networks are lost unless specific measures are taken to preserve them under other programmes (e.g. H2020).</p> <p>Loss of AAL as a 'flagship' initiative on digital innovation for ageing with a strong emphasis on integrating users.</p> <p>Loss of EU contributions to national funding programmes in this field.</p>
2) Continue the status quo: Programme-based national collaboration	<p>A successor programme to the current AAL Programme is established on the same/similar basis.</p> <p><i>Implemented through:</i> Article 185 initiative</p>	<p>'More of the same', potentially continuing both the positive and negative features of the current Programme.</p> <p>Overcoming negative aspects would require major changes in national rules & more strategic approaches so as to achieve common alignment. Goals could be: minimum national commitments; true common pot; common participation & funding rules; ability to stop underperforming projects.</p> <p>EU added value would be limited if participation continues at current levels.</p>
3) Policy-based national collaboration	<p>Member States work together to align their policies (and funding) with the EC providing 'glue financing' for the coordination.</p> <p><i>Implemented through:</i> a Joint Programming Initiative (JPI).</p>	<p>Collaboration continues in a less structured and more informal basis.</p> <p>The JPI is a flexible mechanism which allows participants to determine the nature and extent of the collaboration most appropriate. They allow variable geometries of participating states and establish their own governance arrangements.</p> <p>There could be an option for the JPI participants to fund projects jointly under ERA-NET arrangements.</p>
4) Co-funded national collaboration	<p>Member States work together in joint R&D actions funded on a call by call basis.</p> <p><i>Implemented through:</i> ERA-NET Co-Fund Action.</p>	<p>Probably lower overheads. Typically one of the participating national funding bodies acts as coordinator and manages implementation. Hence, there would be no role for the CMU.</p> <p>The participation of users & SMEs as a key requirement would have to be stipulated in</p>

		calls. The same restrictions on participation of regional funding agencies apply as for Art.185.
5) Industry-led collaboration	Industry, Member States and the EU collaborate to align strategies and fund innovation-based calls. <i>Implemented through: A public-private partnership (PPP)</i>	Complements current policy to establish shared vision for digital innovation for active & healthy ageing. Would allow alignment with other policy initiatives on digital industrial platforms. Specific measures would be required to ensure the involvement of key users (e.g. regions) and SMEs.

These options are not mutually exclusive and at this stage it would be premature to recommend one over the other. A new Article 185 might be appropriate, provided sufficient countries commit to fund such a programme over seven years (or however long the next Framework Programme will run) **and** agree major changes in funding and coordination (as listed in the table). If this could not be achieved, then an ERA-NET CoFund is considered the fall-back option, offering similar benefits within a less burdensome administrative structure. A JPI or a PPP would be a more radical departure but may be appropriate to the evolving requirements, especially if used in conjunction with a JPI for policy coordination and a PPP for industrial coordination).

What matters above all else is that **the uniqueness in addressing the needs of older people in relation to digital innovation** – developed over the last nine years within two consecutive AAL Programmes – **is maintained in any follow-on programme**. In the absence of the programme-based approach of an Article 185, where specific measures to facilitate the contributions of users and of SMEs have been implemented, such outcomes would have to be assured by other means. For example, dedicated accelerator and/or incubator-type facilities could be set up to provide intensive business-focused support to SMEs on innovations relating to active and healthy ageing and other aspects of the Silver Economy. Other measures could be implemented to guarantee the systematic involvement and contributions of users (primary, secondary and tertiary).

ANNEX 1: RECOMMENDATIONS OF THE PREVIOUS EVALUATION

As described in the Introduction, this Interim Evaluation has taken into account the Final Evaluation of the first AAL Programme undertaken by the Busquin Panel in 2013. The two are separate programmes with their own mandates and whilst not intending to repeat or duplicate that exercise, relevant issues and recommendations from the FE are referenced in this report.

Although not mentioned specifically within our Mandate, such an assessment of the AALA's response to the previous report is valuable in terms of understanding the transition from the previous programme and the appropriateness of the current strategy.

The Recommendations presented in 2013 were of two forms: Strategic Recommendations intended to address the strategic challenges facing the Programme at that time; and Operational Recommendations intended to maintain operational excellence. These are reproduced and commented on in the tables below

Strategic Recommendation	Comment
Recommendation 1: Stretch the AAL Value Chain: A stronger market focus requires a widening of demand side participation in the Programme. This expansion should aim for both breadth (allowing users to be funded across all Participating Countries) and depth (improving the quality of users' involvements and drawing new actors into the value chain). The must aim for scale by implementing demonstrations and pilots operating under realistic, real-world conditions, including under differing national conditions. Operational mechanisms should be found to reflect this stronger value chain focus, including a more specific exploitation of synergies with other initiatives and programmes. Improvements in standardisation and interoperability should be key aims.	<ul style="list-style-type: none"> - Addressed to a limited extent but many of the same issues remain: need to expand user participation; implementation of demonstrations and pilots; exploiting synergies with other initiatives. - Market focus is still assessed as an important issue in the current evaluation and is the subject of new Recommendations.
Recommendation 2: Enrich the AAL Ecosystem: The Programme should further enrich the ecosystem surrounding the AAL community in Europe through initiatives and actions that promote networking and stimulate uptake. Emphasis should be on novel measures that have not been tried up to now, such as: sub-programmes involving lead customers and owners; new models of co-creation and living lab solutions; further expansion of the AAL Forum; and greater post-project support on exploitation (e.g. through the marketplace with European Innovation Partnership on Active and Healthy Ageing (EIP-AHA) to facilitate bringing together demand and supply).	<ul style="list-style-type: none"> - Addressed to a very limited extent. Some new instruments have been introduced but these fall short of the novel measures recommended. The AAL Forum has actually declined rather than expanded. - The emphasis under the current report is on maintaining the critical mass of the ecosystem rather than expanding it.
Recommendation 3: Expand the AAL Policy Space: Under AAL JP2, the Programme should continue to strengthen cross-programme linkages by engaging and building strong relationships with other EU, national and regional level programmes and initiatives within and around its field of interest. As the industry has yet to find a coherent voice, the Programme still relies heavily on public agencies for its vision and strategy. Innovation requires active participation from both the demand side and the supply side. This, in turn, requires governments to take ownership of the AAL JP as a vehicle for effecting systemic change, while continuing to argue for ageing well within the political agenda.	<ul style="list-style-type: none"> - Partially addressed. Links to EU programmes have been maintained (although not necessarily strengthened) and new links established at regional level. Ownership of the initiative by governments is still lacking, however. - The industry voice in this field is now stronger.

Recommendation 4: Benchmark European AAL Experiences against similar International initiatives: The Programme should benchmark its activities against relevant international initiatives in relation to ICT for active and healthy ageing so as to facilitate knowledge sharing, disseminate European best practices, and improve market access for European innovations.	<ul style="list-style-type: none"> - Not addressed. International partners have been engaged, including as Participating States within the Programme, but there is no evidence of systematic benchmarking having been undertaken in the manner recommended.
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Operational Recommendation	Comment
Recommendation 5: Further enhance the Programme's operational performance through commitments to streamline governance and simplify procedures. In addition, the Participating Countries should continue to invest in the AAL JP so as to realise its catalytic effect.	<ul style="list-style-type: none"> - Addressed to a very limited extent. There have been no major changes in governance arrangements; and investments in the AAL JP are decreasing. - Strategic leadership and actions to safeguard the financial outlook are the subject of new Recommendations.
Recommendation 6: Strengthen implementation and monitoring of the Programme, by experimenting with new, more flexible instruments that are more responsive to market demands; and adopting a more dynamic approach to quality assurance, including a comprehensive system of performance metrics.	<ul style="list-style-type: none"> - Mostly addressed. New instruments have been introduced which are viewed as extremely successful and project reviews have been strengthened. Comprehensive performance metrics are still lacking. - Further improvements are addressed in new Recommendations.
Recommendation 7: Improve the knowledge base on project achievements and insights suitable for communication within and beyond the Programme.	<ul style="list-style-type: none"> - Partially addressed. Collection of use cases developed under the support action on Standards and Interoperability. However there is no evidence of the systematic approach envisaged in the recommendation.
Recommendation 8: Reinforce the market orientation across the Programme, ensuring market entry and commercial exploitation issues are addressed more explicitly and with greater weight in all aspects.	<ul style="list-style-type: none"> - Partially addressed. Business support activities have been strengthened but not to the extent recommended or required. - Intensifying business support and improving the business orientation of projects are the subject of new Recommendations.
Recommendation 9: Further enhance and extend the multidisciplinary approach, including the close involvement of end-users at all stages of programme design and execution, and engagement with new stakeholder communities, including European regions.	<ul style="list-style-type: none"> - Mostly addressed. Activities such as the AAL Challenge Prize have led to successful engagement with developers and entrepreneurs. - New Recommendations are made to reinforce engagement with new communities, including secondary and tertiary users and regions.
Recommendation 10: Strengthen the Outreach Programme, so as to involve the relevant stakeholders and clearly demonstrate the benefits and routes to market for AAL innovations and services.	<ul style="list-style-type: none"> - Partially addressed. Communication activities have largely continued along established tracks with little targeting of decision-makers. - Improving and expanding communication and outreach remains an issue and is the subject of new Recommendations.

In summary, it is apparent that the Operational Recommendations have been addressed more comprehensively than the Strategic Recommendations. This reflects the *modus operandi* of the Programme, whereby strategic coordination is constrained by the rules and regulations governing national programmes. Operational aspects, which are under the central control of the AALA, are easier to address but still require 'buy-in' from the Participating States. Nevertheless, elements of the Busquin Panel's recommendations are clearly evident in the current Programme's strategy, based around the three aims of Strengthening the Programme, Going to the Market, and Improvement of the Programme (see Section 5).

ANNEX 2: SET UP OF THE PROGRAMME

Legal basis

The Active and Assisted Living Programme (AAL Programme) was established under Article 185 of the Treaty on the Functioning of the European Union (TFEU), which enables the EU to participate in research programmes undertaken jointly by several Member States. The programme was formally adopted by Council and Parliament in May 2014 as part of Horizon 2020 and runs until 2020.³⁸

The AAL Programme aims to join together national research activities in the area of active and healthy ageing and complements EU-funded activities within Horizon 2020 and elsewhere. At present the Programme engages 17 EU Member States and 4 associated countries.³⁹ The Programme is financed by Participating States, the EU and organisations participating in AAL Programme projects (approximately 25%, 25% and 50% respectively). It has a total minimum budget of €600 million, of which a minimum of €300 million is public funds, including up to €150 million from H2020.

EU funding is only committed once Participating States have made clear political and financial commitments to the Programme, and EU payments are only made once Participating States have paid their contributions.

The AAL Programme addresses applied research and innovation in the areas of active and healthy ageing systems and applications with a short to medium term time horizon and a time-to-market of 2-3 years. The Programme is designed to complement longer-term research in ICT for Healthy and Active Ageing under H2020, which focuses on advanced research and innovation with a time-to-market of 5-10 years.

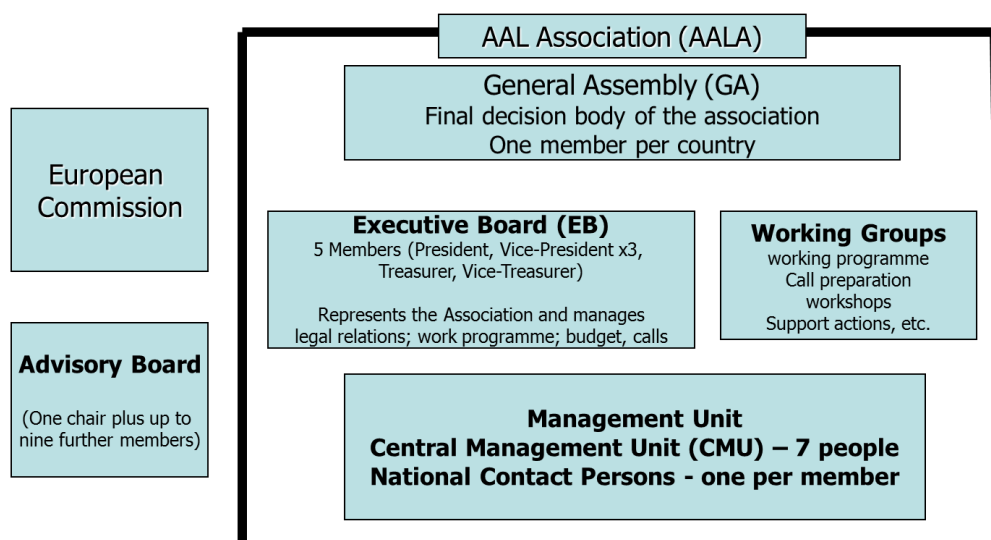
Governance

The Participating States have set up a dedicated implementation structure which is responsible for the administrative, financial and contractual management of the joint research programme. It consists of the AAL Association (AALA), with a Central Management Unit (CMU) for daily programme operations and a network of national contact points (see Figure 1). AALA is the legal entity based in Brussels and operating under Belgian law. The supreme decision-making body is the General Assembly, with representatives from all partner countries. It elects an Executive Board as the official legal representative of the Association, responsible for staffing, contracting and budget planning. Technical advice is provided by an Advisory Board of recognised experts from business, innovative technology, research and politics.

Each year the Participating States, together with the European Commission, agree a Joint Work Programme. This invites proposals for joint projects with participants from at least three partner countries, subject to a common evaluation procedure and co-funding from national budgets.

³⁸ The Co-decision of the European Parliament and Council (Decision No. 554/2014/EU)

³⁹ As of June 2016 the AAL JP consisted of 17 EU Member States: Austria, Belgium, Cyprus, Denmark, France, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden and the United Kingdom, three associated countries (Israel, Norway and Switzerland), plus Canada. Denmark, France, Sweden and UK are currently not taking part in the calls for proposals.



Way of Working

The AAL Programme supports two types of activities:

- Technological research, demonstration and dissemination activities, implemented via shared cost transnational projects. These involve transnational consortia from different Participating States. Projects should be targeted at market-oriented research, be of short to medium-term duration, and demonstrate the capability to exploit project results within a realistic time frame.
- Brokerage, programme promotion and networking activities. These are implemented through dedicated events or in combination with existing events.

To fulfil its objectives and reflecting its market orientation, over the period 2014-2016 the Programme issued three calls for proposals, as follows:

- **Call 2014: "Care For The Future:** An Ageing society faces an increasing need for care, how will ICT contribute to sustainable solutions" was launched in March 2014, based on the commitment of 23 national funding bodies from 19 AAL Partner States and the European Commission. In total, 97 proposals were submitted and 96 were evaluated.
- **Call 2015: "Living actively and independently at home:** Support older adults to live longer in their homes with the contribution of ICT based solutions" was launched in February 2015, based on the commitment of 20 national funding bodies from 17 AAL Partner States and the European Commission. In total, 67 proposals were submitted and 66 were evaluated.
- **Call 2016 "Living Well With Dementia:** Providing integrated solutions based on ICT to support the wellbeing of people living with dementia and their communities" was launched in February 2016 based on the commitment of 20 national funding bodies from 17 AAL Partner States and the European Commission. In total, 65 proposals were submitted and evaluated.

Compared to AAL Programme Phase 1, Calls in Phase 2 have been broader and based more on a challenge approach. In October 2016, a new challenge-led Call has been announced on "AAL Packages/Integrated solutions" for February 2017.

Overall, the three calls up to 2016 resulted in 52 projects being funded with a total public funding commitment of €90.2 million, of which €49.7 million (55.2%) was financed by the Participating Countries.⁴⁰

Public Sector Funding Commitments by Call

	Call 2014	Call 2015	Call 2016
Partner State commitment (€m)	22.2	14.1	13.5
% of public funding	58.6%	52.4%	52.9%
European Commission commitment (€m)	15.6	12.8	12.0
% of public funding	41.4%	47.6%	47.1%
Total public funding commitment (€m)	37.8	26.9	25.5
Excludes contributions of Switzerland and Canada			

Project portfolio

Projects are similar in size to small-sized Research & Innovation Actions (RIAs) under H2020.

Key characteristics for the three calls under AAL2 are:

1. Average partners per proposal: 7.5
2. Average total budget per proposal: €2.6m
3. Average funding request per proposal: €1.5m

Organisation types involved in funded AAL Projects

	Call 4	Call 5	Call 6	Call 2014	Call 2015	Average
Large enterprises	18	18	14	11	13	15
SMEs	92	109	76	92	54	85
Users	30	47	28	25	23	31
Research organisations	22	27	21	20	20	22
Universities	24	33	23	2	16	20
Other organisations	2	1	1	6	2	2
	188	235	163	156	128	174

The user category covers three specific classifications:

1. **Primary end-user** is the person who is actually using an AAL solution. He/she is considered as a single individual: "the Well-Being Person";
2. **Secondary end-users** are persons or organisations directly in contact with one or more primary end-user(s), such as relatives, friends, neighbours (informal carers), care organisations and their representatives (formal carers);
3. **Tertiary end-users** are private or public organisations that are not directly in contact with AAL solutions, but somehow contribute by organising, enabling or paying for them.

⁴⁰ These figures are provisional at December 2016 and may be subject to change as a result of negotiations relating to Calls 2015 and 2016. The data exclude the contributions of Switzerland and Canada which do not participate on a co-funded basis.

Further analysis of the composition of the calls, the participants and related funding, and the outputs and achievements is presented within the assessment in the main report.

Supporting activities

The AAL Programme has put in place a series of support actions designed to help the Programme achieve its objectives and multiply its overall socio-economic impact. These support actions have addressed specific challenges – some of which were identified in the Interim Evaluation – such as access to finance, commercialisation and deployment of AAL solutions, market barriers, and user-centred design.

Four main actions have been supported:

1. **Action 1: AAL2Business:** An initiative designed to assist in the commercialisation and market deployment of ICT-based products, systems and services. It offers support to AAL Programme projects in bringing their developed solutions to the market within 2 to 3 years after the end of the funding period. It provides:
 - a. consortia building, integrating all relevant value network actors;
 - b. individualised on-demand business coaching;
 - c. methodology workshops;
 - d. facilitation of access to finance by building a network of private investors dedicated to AAL;
 - e. exchange of experience among AAL Programme projects and a post-project marketplace to foster and ensure continued activity.
4. **Action 2: Collaboration With Regions:** An action aimed at facilitating the deployment of AAL solutions through a series of support measures: workshops with local and regional representatives to raise awareness of AAL Programme projects; and fostering exchange of experience between European regions.
5. **Action 3: Standards and Interoperability in AAL:** An action to raise awareness about interoperability issues of AAL solutions to facilitate market uptake. Activities include: making existing AAL standards more easily accessible based on use-cases linked to relevant standards; and raising awareness of existing standards in the developer community and the wider AAL community through workshops.
6. **Action 4: End-User Involvement:** An initiative to support AAL Programme projects in involving users in the most appropriate and effective way during research, development and roll-out. Activities include: survey and analysis of current user involvement; mapping and characterisation of user organisations; practical guidelines and toolkit to help improve user involvement; compilation of needs, wishes and requirements of older adults in general and with respect to ICT; development of a workshop concept and trial workshop to help AAL Programme projects to optimise user involvement.

In 2015-16, the **AAL Challenge Prize** scheme was developed as a way to leanly and rapidly funding a usable and marketable solution. Focused on the Internet of Things, the prize was launched in February 2016, the award being €50,000 to further develop the prototype and business. The competition sought innovations in IoT that will empower older adults to achieve the quality of life they aspire to, socially and independently, with a clear business opportunity and prototype. A total of 172 proposals were received and assessed by external assessors. Fifteen finalists were selected and invited to an academy event with coaching sessions to help them improve their ideas. The top five finalists presented at the AAL Forum in St Gallen where the winner was announced.

Hackathons have also been organised, as an agile means for the AAL Programme to open up for shorter projects where requirements necessitate. AAL is co-sponsoring around six hackathons in 2016, all close in scope to ICT, health and ageing. The winner is awarded with visibility at the AAL Forum and business coaching through AAL2Business.

Other activities have included:

- Information Days for AAL calls;
- Coordinators Days for AAL projects;
- Tendering for an AAL Market Observatory and a preliminary study on an AAL Information Portal;
- An Impact Assessment;
- Presence in European conferences; and
- Collaboration workshops with other initiatives such as the JPI on Neurodegenerative Diseases, JPI Healthy Diet for a Healthy Life and JPI More Years Better Lives.

The **AAL Forum** was launched under AAL1 as an annual meeting place for AAL Programme projects and other stakeholders, including end-users and industry. It provides a platform for the increasing European AAL community to meet and discuss topics related to improving the AAL Programme as well as the adoption of AAL solutions in the market. Attendance peaked in 2012 at around 1229 participants, since when there has been a steady decline in both exhibitors and participants. Around 500 participants attended the AAL Forum 2016, held in St Gallen, Switzerland from 27-28 September, including 39 exhibitors.

	2013, Norrköping	2014, Bucharest	2015, Ghent	2016, St Gallen
Participants	802	531	600	c.500
Exhibitors	46	25	28	39
Sessions	22	20	42	30
Side events	18	18		
Matchmaking			122	39

An **Impact Assessment** of AAL projects was launched in December 2015 in order to follow-up on the implementation of AAL Programme projects and assess the corresponding successes and challenges. This Innovation Impact Assessment aimed to monitor the economic and social impacts of projects according to a methodology developed by the CMU, NCPs and external contractors. It aimed to provide a new platform for past AAL Programme participants to highlight and promote their AAL solutions as well as feedbacks on their achievements and experiences. This involved contacting 64 projects from Calls 1-4 (under AAL1), of which 80% replied. Projects contacted should have been finished for at least two years. Key results are presented and assessed in the main report.

ANNEX 3: MANDATE OF THE INTERIM EVALUATION PANEL

Purpose and Objectives

The main purpose of the expert group is to:

1. Assess the progress towards the objectives of the Art. 185 initiative Active and Assisted Living Programme (AAL Programme)
 2. Assess the efficiency (including aspects such as implementation, governance and supervision) of the Art. 185 initiative AAL Programme;
 3. Assess the continued relevance and appropriateness of the instrument in line with the related EU Council and EP Decision;
 4. Assess the coherence with other initiatives and actions specific to Art. 185 initiative AAL Programme that are aimed at supporting programme level collaboration among Member States and between Member States and the EU such as European Innovation Partnership on Active and Healthy Ageing, European Institute of Innovation & Technology – Knowledge and Innovation Communities on Healthy Living and Active Ageing as well as The Active and Assisted Living Programme;
 5. Assess the effectiveness of Art. 185 initiative AAL Programme and its contribution to the general policy objectives of the Union, in particular Horizon 2020 objectives / FP7 objectives;
 6. Assess the impact of the Art. 185 initiative AAL Programme in terms of the value added:
 - at European level
 - at National level;
- Provide short and longer term recommendations for the future of the initiative.

Scope

In order to assess the Art. 185 initiative AAL Programme and their activities, the following non-exhaustive list of question will guide the experts during their work:

Assess the efficiency of Art. 185 initiative AAL Programme

The assessment of the efficiency of the Art. 185 initiative AAL Programme includes the following three dimensions and corresponding questions to be addressed:

- Efficiency with respect to the specific and operational objectives of the initiative as laid down in its basic act 554/2014/EU and the corresponding Impact Assessment (IA):
 - a) Has the initiative accelerated the emergence and take-up of relevant, affordable and integrated innovative ICT-based solutions for active and healthy ageing at home, in the community, or at work, thus improving the quality of life, autonomy, social inclusion, participation in social life, skills or employability of older adults and contributing to increasing the efficiency and effectiveness of health and social care provision?
 - b) Has the initiative supported the development of solutions that contribute to the independence and alleviation of a sense of social isolation of older adults, in such a way that the ICT component does not reduce human contact, but is complementary to it. ICT-based solutions supported under the AAL Programme should integrate non-ICT aspects by design?
 - c) Has the initiative maintained and further develop a critical mass of applied research, development and innovation at Union level in the areas of ICT-based products and services for active and healthy ageing?

d) Has the initiative developed solutions in line with Decision 554/2014/EU?

- Efficiency with respect to the governance structure of the initiative
 - Is the governance structure of the initiative working efficiently? Have the management aspects been properly addressed? Are effective monitoring and supervision arrangements in place to ensure adequate monitoring of the initiative?
 - Are the established governance structures, including monitoring and supervision structures ensuring an efficient implementation of activities of the Art. 185 initiative?
- Efficiency with respect to the Art. 185 initiative AAL Programme as an instrument to foster activities of a transnational nature within Europe, including
 - Is the initiative and its activities cost-effective? Were the costs involved justified, given the changes/effects which have been achieved?
 - To what extent are the costs involved (direct and indirect) proportionate to the benefits achieved?
 - Is the initiative and its activities implemented in an efficient way?
 - Has the initiative been implemented in accordance with the provisions of the adopted work plans, budgets and the delegation agreement? Are the reporting requirements, including audit provisions efficient?
 - What are the main shortcomings encountered in the implementation of the activities (joint calls and additional activities)?
 - What was the impact of the simplification measures introduced in the context of Horizon 2020 on the administrative efforts for participating actors, both end-users/ beneficiaries and the dedicated implementation structure (DIS)?

Assess the relevance and appropriateness of the initiative AAL Programme

1. 'To what extent are the original objectives of the Art. 185 initiative AAL Programme still relevant?
2. To what extent is the Art. 185 initiative appropriate to support the realisation of the EU policy objectives especially?
3. Is the Art. 185 initiative relevant with respect to the demands/needs of the involved thematic directorates and of the beneficiaries (ministries, research funding organizations, research performing organisations)? How relevant is the EU intervention to EU citizens?

Assess the coherence of the Art. 185 initiative AAL Programme with other EU policy instruments

- To what extent is the Art. 185 initiative coherent with other initiatives, actions and/or policies which have related objectives (H2020, EIT-KICs, EIPs, ERANET CoFund, Joint Programming, EFSI, Structural funds, etc.)
- What are the relations (complementarity, synergies, overlapping, etc.) with other interventions which have similar objectives?
- To what extent has the AAL Programme established synergies with similar European programmes addressing societal challenges, in particular health, demographic change and wellbeing (H2020)?

Assess the effectiveness of the Art. 185 initiative AAL Programme and its contribution to EU policy objectives,

General Objectives

- To what extent did the initiative contribute to the overall objectives of Horizon 2020, such as knowledge-based society, R&D targets (3% target), ERA, EU 2020 strategy, excellent science, industrial leadership and societal challenges?
- To what extent has the programme created conditions for the competitiveness of the Union's industry, aimed at a better exploitation of the industrial potential of policies of innovation, research and technological development (H2020), in particular with regards to ICT based products and services for active and healthy ageing?
- To what extent did different factors influence the achievements observed?

Specific objectives:

- To what extent has the programme contributed to the sustainability of health and long-term care systems by reducing the costs of care by improving the availability of the ICT based products and services for active and healthy ageing?
- To what extent contributed the initiative to the strengthening of public-public partnerships in the concerned field (see Art. 26 of H2020 regulation)?
- To what extent has the programme contributed to the implementation of the European Innovation Partnership on Active and Healthy Ageing (EIP AHA)?
- To what extent has the programme brought together all relevant actors across the innovation chain and facilitate their participation in the Programme, in particular by including more end-users and service providers in all stages of the projects?
- To what extent has the programme improved the quality of life for the elderly by supporting the development of innovative ICT based products and services for active and healthy ageing?
- To what extent has the programme contributed to a critical mass of research, development and innovation capacities at EU level to deliver ICT based products and services for active and healthy ageing?
- To what extent has the programme improved conditions for industrial exploitation by providing a coherent European framework for common approaches and solutions to varying social preferences?
- To what extent has the programme leveraged private and national co-financing and provide incentives for private investments?

Operational objectives

To what extent has the programme achieved operational excellence and accountability for the programme?

1. What levels of scientific, managerial and financial integration has been achieved? How does this compare to the predecessor initiative?
2. To what extent has the programme improved coherence of R&D and innovation in ICT for active and healthy ageing across Europe by removing the current fragmentation of efforts by developing common strategies and joint calls for proposals with critical mass?
3. To what extent has the programme reduced further time to market, by facilitating collaborative and industry-driven research?
4. To what extent has the programme enabled all relevant stakeholders including end-user organisations to be eligible for funding in all Member States?
5. To what extent has the programme developed interoperable standards for products and services for active and healthy ageing?
6. To what extent has the programme facilitated evidence sharing on the development and deployment of products and services for ageing well?
7. To what extent was the Art. 185 initiative able to coordinate and integrate national and regional R&D programmes from the participating States (PS)?

8. To what extent was the Art. 185 initiative able to contribute to capacity building in the new Member States?
9. To what extent was the Art. 185 initiative able to facilitate access to relevant R&D infrastructures both within and outside of the PS?
10. To what extent was the Art. 185 initiative able to mobilise human resource development and mobility?
11. To what extent was the Art. 185 initiative able to strengthen the European recognition in the concerned scientific fields on a global scale?
12. To what extent was the Art. 185 initiative able to mobilise a broader group of stakeholders in the achievement of their specific and operational objectives?
13. To what extent was the Art. 185 initiative able to integrate economic and regulatory needs/opportunities in their implementation?
14. To what extent was the Art. 185 initiative able to contribute to multi- and interdisciplinary research activities?
15. To what extent was the Art. 185 initiative able to create sustainable and durable cooperation?
16. To what extent does the Art. 185 initiative contribute to the realisation of ERA (trans-national cooperation, mobility of researchers, dissemination of results and knowledge transfer, gender equality, international cooperation)? What are the main activities other than joint calls that have been implemented? How do these activities contribute to the realisation of ERA?
17. Does the Art. 185 initiative reflect an equal participation of Member States?
18. To what extent was the Art. 185 initiative integrated in the strategic planning and implementation of Horizon 2020 within the concerned fields?

Assess the EU-added value of the Art. 185 initiative AAL Programme

1. What is the additional value resulting from the implementation of the Art. 185 initiative, compared to what would have been achieved by Member States at national and/or regional levels?
2. To what extent were the Art. 185 initiatives able to identify and exploit synergies with other EU policies, i.e. cohesion policy and sectoral policies?

Provide recommendations on Art. 185 initiative AAL Programme and its use

1. What lessons can be learnt from the implementation of the Art. 185 initiative AAL Programme with respect to its original objectives? Which recommendations can be derived for the remaining time of the initiative?
2. What lessons can be learnt with respect to the up-take and implementation of recommendations from previous evaluations?
3. What lessons can be learnt with respect to overall socio-economic impact of the initiative AAL Programme?
4. Which options should be considered for the future?

The Expert Group is asked to develop concrete conclusions and recommendations covering policy and operational aspects. The experts will make two types of recommendations: (i) recommendations to address policy and operational issues in the context of Horizon 2020 and on (ii) recommendations aiming at a potential successor initiative.

ANNEX 4: LIST OF STAKEHOLDERS INTERVIEWED

First name	Surname	Organisation	Programme Role/Affiliation
Serena	Angioli	Regioni Campania	
Keith	Baker	Philips Research Laboratories	Forum speaker
Roy	Beumers	Zuyderland	AAL Project participant
Marie	Blok		AAL Project participant
Johanne	Burger	Synyo GmbH	AAL Project coordinator
Simon	Butler		AAL Forum speaker
Marco	d'Angelantonio	HIM	AAL Project participant and AAL coaching expert
Rafael	de Andres Medina	National Institute of Health Carlos III, Spain	President, AAL Association
Claire	Dove		NCP, Switzerland
Daniel	Egloff	SERI	Vice-President, GA MemberSwitzerland
Maggie	Ellis	London School of Economics	Lead Academic and Co-ordinator EKTG
Tron	Espeli	Research Council of Norway	GA Member & NCP, Norway
Alain	Franco		
Javier	Ganzarain	Innjoy Ltd	
Marcus	Garschall	Austrian Institute of Technology	AAL Project coordinator
Gerda	Geyer	Austria Research Promotion Agency (FFG)	NCP, Austria
Yves	Joannette	Canadian Institute of Health Research	GA Member, Canada
Joe	Killen	Tunstall Televida	
Dawid	Konotey-Ahulu		
Oliver	Korn	Offenburg University	AAL Project participant
Michal	Kosiedowski	Supercomputing and Networking Centre, Poland	AAL Project participant
Stefan	Kroll	terzStiftung Foundation	AAL Project participant
Ilse	Kryspin-Exner	Prof. emerit., Vienna, Austria	Advisory Board Member
Geja	Langerveld	ZonMW	NCP, Netherlands
Silvia	Macis	University of Cagliari, Sardinia	AAL Project participant
Joanna	Makocka		NCP, Poland
Karina	Marcus	Director, AALA, Brussels	Director, AAL Central Management Unit
Sofia	Moreno-Peres		Reviewer of AAL project proposals
Joerg	Niehoff	European Commission	ERA Policy and Reform
Sibylle	Olbert-Bock	Institut IQB-FHS, FHS St. Gallen, Switzerland	Reviewer of AAL project proposals
Anne Sophie	Parent	AGE Platform Europe, Brussels	
Peter	Saraga	Formerly Director of Research, Philips, NL	Advisory Board Member
Roel	Smolders	CEO, Activ84Health	Winner of the Smart Ageing Challenge Prize 2016
Ian	Spero	Independent consultant	Forum participant
Robin	Tamblyn	Canadian Institute of Health Research	GA Member, Canada
Hilda	Tellioglu	Vienna University of Technology	AAL Project participant
Christakis	Theocharous	Research Promotion Foundation, Cyprus	AAL Project participant
Alain	Thielemans	Flanders Innovation Agency (formerly IWT)	GA Member, Flanders
Ad	van Berlo	Smart Homes Foundation, NL	Evaluator of AAL proposals and AAL Project participant
Jens Peter	Vittrup		GA Member, Denmark
Arto	Wallin	VTT	AAL Project participant and AAL coaching expert
Kerstin	Zimmermann	Bundesministerium für Verkehr, Innovation und Technologie	Vice-President, GA Member, Austria

ANNEX 5: LIST OF NATIONAL PUBLIC SOURCES FOR THE CO-FINANCING OF THE AAL PROGRAMME CALLS IN 2016

On the basis of and in accordance with the Co-Decisions establishing the AAL Programme, the AAL Association has signed bilateral agreements with each national funding body for their respective participations in each programme and membership to the AAL Association. On 30 June 2016, the status of memberships of the AAL Association was as follows:

	AAL Participating State	National Funding Agency (NFA)
1	Austria	Bundesministerium für Verkehr, Innovation und Technologie [BMVIT];
2A	Belgium	Flanders Innovation & Entrepreneurship / Agentschap Innoveren & Ondernemen [VLAIO];
2B	Belgium *	SPW-DGO6 Economie, Emploi et Recherche [Wallonia];
2C	Belgium	Brussels Region [INNOVIRIS];
3	Canada **	Canadian Institutes of Health Research [CIHR]
4	Cyprus	Research Promotion Foundation;
5	Denmark	Danish Innovation Fund;
6	France *	Agence Nationale de la Recherche [ANR];
7	Hungary	National Innovation Office [NIH];
8	Ireland	Enterprise Ireland;
9	Israel	Israel-Europe R&D Directorate for FP7 [ISERD];
10	Italy	Ministero dell' Università e della Ricerca [MIUR]; Ministry of Health [MoH]
11A	Luxembourg	Fonds National de la Recherche [FNR];
11B	Luxembourg	LUXINNOVATION;
12	Netherlands	Ministry of Health, Welfare and Sport;
13	Norway	Research Council of Norway;
14	Poland	Narodowe Centrum Badań i Rozwoju;
15	Portugal	Fundação para a Ciência e a Tecnologia [FCT];
16	Romania	Executive Agency for Higher Education, Research, Development and Innovation Funding [UEFISCDI];
17	Slovenia	Ministry of Higher Education, Science and Technology;
18	Spain	Ministerio de Industria, Energía y Turismo [MINETUR]; Instituto de Salud Carlos III del Ministerio de Sanidad y Consumo [ISCIII]; Government of Biscay
19	Sweden *	Verket för Innovationssystem – Swedish Governmental Agency for Innovation [VINNOVA];
20	Switzerland **	Federal Department of Economic Affairs, Education and Research [EAER] State Secretariat for Education, Research and Innovation [SERI] International Cooperation in Research and Innovation;**
21	UK *	Technology Strategy Board [TSB / Innovate UK].

* Denmark, France, Sweden and the UK have either cancelled their participation or are currently not participating in calls. Wallonia left the Programme in December 2016.

** As partly associated to Horizon 2020, Switzerland was not eligible to receive AAL co-funding from the EU until December 2016. The Swiss national funding body therefore augmented its national funding by the co-funding percentage granted to an AAL call by the European Commission. Canada also does not receive co-funding.

ANNEX 6: THE INTERIM EVALUATION PANEL

Petri Uusikylä (Chair, Finland). Co-founder and director at Frisky & Anjoy. He is based in Helsinki, Finland. He has over 20 years' experience in evaluating science, technology and innovation programmes in Europe, Asia and Africa. He has also written several books and articles on public policy evaluation and European policy-making.

Carmen Ceinos Kohn, (Spain). Director of Ecomit Consulting, a company specialized in promoting research strategies and facilitating the adoption of innovation in public sector, mainly health care. For the last 23 years Carmen has been heavily involved in the implementation and validation of these policies and pilots, mainly in healthcare and social sectors, helping to bridge the gap between research and exploitation of results. Her track record as expert participating in the evaluation of proposals, projects and programmes and peer reviews during last 25 years is deeply linked to the EC R&I programmes.

Agnieszka Ciesla, (Poland). Specialist in urban and demographic research with background as an architect and urban planner. Leader of an innovative practice-based programme aimed at creating integrated solutions for senior-friendly dwellings along the paradigms of "aging in place" and "active aging". She is a tutor at the Spatial Planning Faculty of Warsaw University of Technology, expert of the Polish Institute of Silver Economy and a member of Advisory Group to H2020 Programme, Challenge 1.

Anton Geyer, (Austria). Director at inspire research, a science, technology and innovation policy consultancy based in Vienna. He has worked for more than 15 years as evaluator and policy consultant in research policy, mainly focussing on collaborative (basic and applied) research and on public support schemes for improving science-industry relations. He has also a strong evaluation expertise in the area of public seed financing for innovative high-tech companies.

Heidrun Mollenkopf (Germany). A sociologist and gerontologist. She was Senior Researcher at the German Centre for Research on Ageing (DZFA) at the University of Heidelberg until she retired in December 2004. She has published widely in the fields of ageing and technology, mobility, senior friendly neighbourhoods and quality of life of older people. Since 2007, Heidrun has been a member of the German National Association of Senior Citizens' Organisations (BAGSO) Expert Council and Chair of the "Universal Access and Independent Living" Expert Group of AGE Platform Europe.

Michael Sharpe, Panel Rapporteur (UK). Director of MS Consulting & Research Ltd, a communications and strategy consultancy specialising in technology-based sectors. Michael has been involved with European research programmes since 1992, and over recent years has worked with the EU ICT Programme on policy, communication and evaluation assignments. He has participated in numerous policy studies, workshops, and strategy groups, as well as supporting the evaluation of proposals in various fields (under FP5-7 and Horizon 2020).