# Synthesis report on the public consultation on the

# European Innovation Partnership on Active and Healthy Ageing

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## The contribution: Main findings and some possible ideas for action

The public consultation on the pilot European Innovation Partnership on Active and Healthy Ageing (EIP AHA) obtained a total of 524 contributions, thereby providing the European Commission with a very rich, diverse and unique feedback.

The analysis of the contributions is a challenge, as this evaluation strives to do justice to the wealth of all the ideas put forward. It should be noted that the following ideas for action are purely based on the suggestions put forward by the various stakeholders, and as such are neither exhaustive nor imply any judgement on their quality or appropriateness. Furthermore, they do not reflect the current policy priorities of the European Commission. It will be up to the Steering Group of the EIP to analyse the different ideas, assess their political feasibility and propose the priorities for the Partnership.

Despite analytical challenges, it is important to identify a few key trends and ideas in order to facilitate subsequent discussion. The shaping of the role of the Partnership will not only benefit from the content of the contributions, but also from the active involvement and participation of a wide array of stakeholders once the partnership becomes operational. It is worth noting that, already at this stage, several stakeholders have joined-up forces by submitting a collective response.

Overall, ideas for action reflect general trends in health and social care systems: the growing understanding of multi-factorial determinants of peoples' health; the inter-relationships of health and social care sectors, the rising importance of networks, these are all magnified with progressing globalisation and the spread of ICT to create a situation where current supporting structures for health and wellbeing, both private and institutional, no longer match needs. Countries and regions struggle to remain globally competitive and dynamic while being true to the local specificities; companies are constantly changing and rarely fit one business model; older people and patients recognise their new self-care duties but want to be more involved in shaping the rules of care provision.

The wealth of experiences and initiatives brought forward by the respondents reveal some key dimensions:
- Being active locally and regionally but fully benefiting from the richness of global knowledge and experiences;
- Focusing on implementation and bringing tangible results to the citizens through more coordinated actions;
- Thinking outside of the usual channels, structures and definitions.

These dimensions can be translated into more concrete suggestions. Respondents see the role of the Partnership relating to 1) **funding** 2) **evidence**, 3) **regulation** and framework conditions and 4) **building capacity/skills**.

In this regard, the respondents' proposals for action can be mapped onto the four main areas for European level EIP action:

- **Joining up efforts** by encouraging cooperation based on a shared vision and common targets, fostering synergies and avoiding overlaps, to achieve results that respond better to citizens' needs;

- **Bridging the gaps between public and private actions and instruments** by addressing the lack of support on innovation to considerably reduce the time-to-market of research and innovation breakthroughs;

- **Facilitating scaling up of results** by reducing complexity, overcoming fragmentation and enabling different approaches to converge;

- **Improving the framework conditions** by removing bottlenecks and anticipating common regulatory and other needs for all stages of the innovation chain to achieve critical mass.

## 1. Funding

Overall, according to the respondents, financial mechanisms are often fragmented and insufficiently coordinated. Innovative ideas cannot fully benefit from the variety of existing instruments as their focus is not always synchronised and is obstructed by national or sectorial borders. More specifically, respondents see the following aspects:

Respondents call for **streamlining and optimising of existing funding** mechanisms and resources. Overall, they expect the Partnership to:
- provide a detailed mapping of all available funding opportunities in the field of active and healthy ageing;
- help in examining the current use of existing financial instruments and in recommending ways in which these could be simplified/amended/supported to allow for a more focused and strategic approach with the aim of having a consistent funding strategy across
  a) different governance levels (regional, national, EU i.e. structural funds);
  b) all sectors involved (including social, health and research policies); and
  c) different types of innovation (including technological and social innovation).
- help in improving the information on funding programmes and rules; and
- encourage the use of more multi-disciplinary projects in order to encompass different funding bodies with different priorities.

Many stakeholders regret the **lack of funding for the implementation stage** of a novel solution. In their view, the Partnership should help in putting a stronger focus on implementation and wider deployment and scaling-up of innovative solutions. For instance, respondents suggest that the Partnership should promote market-oriented research, and help in providing more financial support for large-scale testing, first commercial (cross-border/replication) scaling up of production and innovative business models. The Partnership could also promote pre-commercial procurement.

In addition, the Partnership is expected to **promote the use of new financial mechanisms**, by, for instance, stimulating more cooperation between companies and the European Investment Bank (EIB) on private equity and venture capital and collaborative ventures; and/or modifying funding or loan criteria for SMEs in order to favour the ones with a social enterprise business model

## 2. Evidence

Many respondents point to the lack of evidence of sufficient quality and quantity for the benefit of innovative solutions or deplore the fact that existing evidence is scattered. Having access to such evidence should positively influence the uptake of innovative solutions by the relevant public and private stakeholders. In addition, given regional and national disparities, evidence is not always sufficiently generic.

Respondents call on the EIP to **gather, consolidate, analyse and disseminate the evidence** already available in Europe on the benefits of certain innovations. Some suggest setting up a repository/database at EU level. Others promote the idea of a European Institute of Ageing or a European Network of Experts, composed of academic and companies. Some respondents refer to the opportunities the EIP could offer to exchange experience on or develop new innovative policies and business models to implement more integrated care systems for older people.

The EIP could play an active role in coordinating future developments and thereby prevent redundancy in innovation support and allow regions to focus on certain aspects. It could identify and exchange good practices, thereby providing a reliable source of information and avoiding wasting resources on what has already been demonstrated (experimentation costs). It is seen as important that these practices need to be then transformed into practices which reflect local needs and conditions.

Respondents expect the Partnership to support large-scale deployment and validation (beyond pilot projects) of innovative solutions - such as assisted living solutions (e.g. tele-health, tele-care) – and multi-centre trials. It would help generate sound data with statistical significance in real life settings as well as on viable financing/business models and regulatory approaches. This would thereby provide real cases for further replication and European level uptake, by public and/or private sectors.

Respondents suggest that the Partnership **develop and disseminate common assessment methodologies** for innovative solutions. It could facilitate comparison and make deployment easier, for instance in the field of assistive technologies. Such assessments should go beyond clinical outcomes and take into account a wider range of impacts. With regard to HTA, the respondents underline the need to include and integrate elements such as quality of life, dignity, ability to self-management, independent living and integrated care. Furthermore, several respondents perceive the EIP as an opportunity to reinforce European cooperation on HTA methodology (e.g. EU guidelines on cost-effectiveness analysis).

## 3. Regulation and framework conditions

According to respondents, the right framework conditions should include coherent public policies as well as clear incentives for innovation. Usually improving framework conditions means adapting the current system to the new situation and needs, however, some stakeholders advocate a more profound overhaul of the existing system or the creation of parallel channels. Some argue that open innovation, especially in the fast-moving consumer goods sector, can be beneficial to all market participants. As far as current rules are concerned, the main ideas for actions are as follows:

Respondents argue for **a legal framework** which is harmonised and adapted to novel products and services. For example, respondents call on the EIP to provide information (e.g.

guidelines) and clarification in regard to the various regulatory rules that apply to their novel product or service, which could cut across different sectors, including guidance to enable (pre-commercial) public procurement.

Some suggest the EIP help identify specific regulatory barriers, **simplify the current EU framework** and increase its flexibility. For instance, some respondents demand the establishment of an appropriate legal framework for telemedicine (including issues such as health data privacy, licensing and reimbursement), personalised medicine or food. Also, the EIP could help build agreement on what could be done to harmonise some national procedures (e.g. procedures for validation, clinical trial start up, registration procedures).

Respondents stress the need for coherent **pricing and reimbursement policies** across the EU. The EIP should help address the lack of integrated reimbursement decision-making, align reimbursement criteria and increase transparency and clarity on what can be expected to be covered or not. In particular, respondents suggest a stronger coordination on HTA across Europe (whilst Member States develop national guidelines on cost-saving objectives) as well as the need to take into account the impacts on the entire care chain when making reimbursement decisions.

Several respondents recommend the adoption of **European technical standards** for better interoperability, quality and access in the field of active and healthy ageing to ensure proper (functional and semantic) interoperability of innovative solutions. Several initiatives in the field of e-health and health information (i.e. European Patients Smart Open Services (epSOS), Healthcare Enterprise Initiative (HEI), e-health governance initiative) are quoted as examples that could serve as a basis for future standardisation developments in the field of active and healthy ageing

Some respondents stress the importance of standards regarding the **quality of products** and services for older people. They call for the development of certification and labels in the field, in order to improve transparency and favour consumer acceptance.

In order to ensure the **accessibility** to novel solutions to older people, people with disabilities as well as the broader population, some advocate the mandatory implementation of the concept "design for all"**,** applied to ICT but also to other areas such as transport.

Several respondents call for a **single EU patent system** and unified patent litigation. According to respondents, the Partnership could serve as a platform for a multi-stakeholder discussion on how the EU patent (and intellectual property) framework can be consolidated in the EU and made more workable for health care SMEs. Moreover, some respondents suggest that the Partnership should use financial instruments such as patent pools to encourage research cooperation and public private partnerships. It could also give specific R&D incentives (e.g. patent extension) for research in specific patient populations, as done, for instance, for paediatric indications.

## 4. Building capacity

Even the best ideas cannot fully develop without an effective supporting system. Respondents see the importance of smaller actions that facilitate the use of main instruments and solutions.

The respondents identify the role of the Partnership in **matching real needs with existing knowledge and experience** across border and sectors. The demand and supply interaction can be more direct and adapted to local expectations. The needs go beyond the concrete evidence, and also include overall implementation experience, practicalities, or identification of key success factors. Moreover, some stakeholders see the importance of a wide virtual network. However, to guarantee implementation, it's important that this network is supported in practice. Examples of such exchanges are the European regions' network of doctors or patients' organisations and local business parks, where various stakeholders work together. Of course, both types can also be combined.

Several respondents recommend the adoption of common European cross-disciplinary **clinical guidelines** (screening, diagnosis and treatment protocols), which are regularly updated to take innovation in the field of active and healthy ageing on board. The EIP could, thereby, encourage the development of integrated care.

The EIP could play a role in developing a common approach to **professional training** by offering a platform to share knowledge on skill needs and training on various issues such as nutrition, chronic pain, health information management and practical implementation of integrated care. Furthermore, several respondents suggest that the EIP encourage the inclusion of training on ICT products related to active and healthy ageing and their possibilities as well as on the new sets of skills required to take care of the older people (e.g. chronic pain, health information management) into life-long learning policies, at national and European level.

In addition, respondents believe the Partnership could bring added value by developing a common approach to the supply of training/education for health care professionals, based on the exchange and recognition of good practices in the field. They insist on the need for taking a multidisciplinary approach with regard to the (financial) support, coordination of capacity-building and training initiatives (e.g. on new technologies) in view of the increasing importance of integrated care.

Respondents believe the EIP could add value by **informing patients and consumers** on available innovation and healthy lifestyles. It is noted that the health and IT literacy of patients is critical to ensure an appropriate adherence to treatment and the implementation of disease management tools for efficient self-management. Some respondents suggest developing the role of nurses in educating patients in the use of technologies. It is also highlighted that the specificity of the older patient should be taken into account in such programmes. Several initiatives already carried out at national, regional and local levels could serve as a basis for further developments.

# Analysis of the contribution

## **BACKGROUND**

In its Europe 2020 flagship initiative Innovation Union[1], the European Commission put forward the concept of European Innovation Partnerships (EIP) to promote breakthroughs to address societal challenges and gain competitive advantages. It proposed to test the concept by launching a **pilot partnership on active and healthy ageing** (the pilot partnership). In its conclusions of 26 November 2010 the Competitiveness Council welcomed the objectives of the proposed EIP and supported the development of a pilot partnership on active and healthy aging

The pilot innovation partnership on active and healthy ageing aims to increase the average healthy lifespan of Europeans by 2 years, by 2020. In achieving this target, the partnership will *pursue a triple win for Europe*: a better and healthier life for older persons (patients, consumers) with active ageing and independent living; sustainability and efficiency of social and health care systems; enhanced competitiveness of European industry through new markets and business expansion.

In line with this, DG SANCO and DG INFSO of the European Commission published an online public consultation seeking the views of all interested stakeholders on various aspects of this pilot partnership, including their views on the role of the partnership as well as their potential contribution to the partnership; their involvement in programmes, initiatives or projects relating to innovation for active and healthy ageing; innovation barriers encountered; and, ideas for future initiatives. The consultation ran from 26 November 2010 to 28 January 2011. The questionnaire was available in all official languages of the European Union and respondents could submit their contributions also in any of the official languages.

In addition to the online public consultation, DG SANCO and DG INFSO organised a conference on 26 November 2010 where 150 stakeholders exchanged views on the pilot partnership. A report of this event is available at: http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing&pg=stakeholder-event-2010.

This report summarises the main trends and opinions received by the various stakeholders. In addition to this report, in an effort to ensure full transparency, all contributions have been published on the AHA EIP website: http://ec.europa.eu/active-healthy-ageing.

First of all, section (i) of this report presents some general respondent information. Section (ii) summarises the contributions regarding innovation barriers according to the categories in the questionnaire. To give a glimpse of on-going projects and programmes on innovation in the area of active and healthy ageing across Europe in the different countries by the different stakeholders, some existing initiatives examples are summarised in section (iii), whereas some future initiatives are summarised in section (iv). Finally, section (v) mentions some possible ideas for actions mentioned by the various stakeholders.

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[1] COM(2010) 546 final

**(i) Respondent information**

A total of 524 contributions to the consultation were received. The contributions have been very diverse with many different types of stakeholders represented. The feedback has been unique in the sense that a number of stakeholders have pooled their efforts to provide a common extensive joint contribution, be it country level, European-level federations, national and regional authorities, or various research institutions and academic actors collaborating on a particular project.

Most contributions came from EU-level organisations followed by submissions from organisations from different EU Member States (
Figure *1*). The geographical coverage is not evenly distributed with high participation from Spain, Germany, United Kingdom, France, Italy, Netherlands, Belgium and Sweden. There were relatively few contributions from the EU-12, with the highest participation seen from the Czech Republic with 8 contributions, Hungary and Romania with 6 contributions. Contributions have also come from non-EU countries including Switzerland, Norway, Macedonia, Serbia, Israel, China and the United States. There have also been several contributions from international organisations (INT) such as world-wide industry associations and health care professionals' organisations.

*Figure 1: Total contributions received by geographical origin*
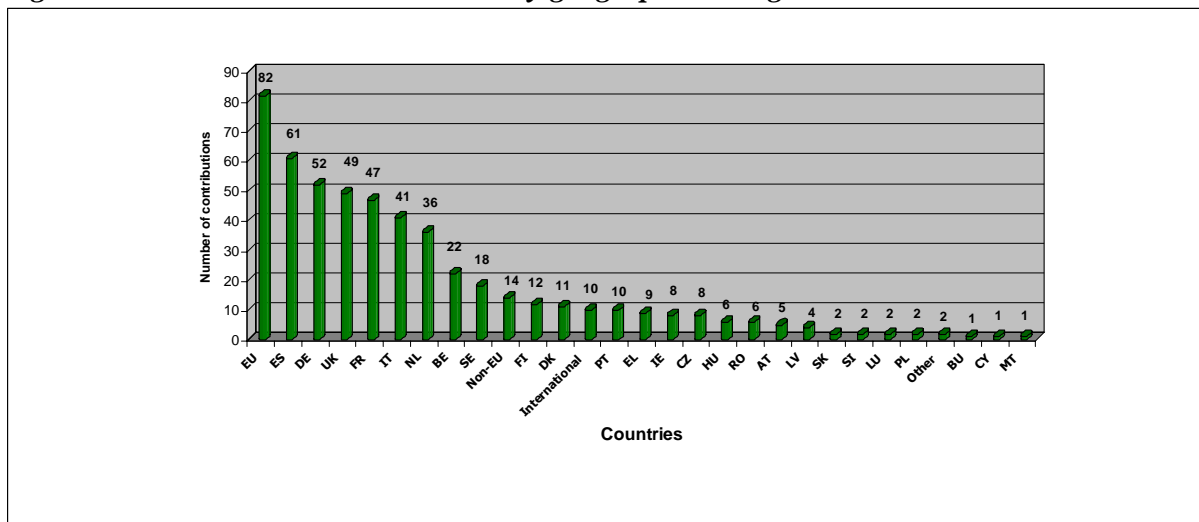


Stakeholders can be split into 3 main groups (
Figure *2*) with 50 % of contributions received (or 262 replies) from the **private sector**, 26% from **private individuals** (or 137 replies) and 24% (or 125 replies) from **public authorities** (36% national level; 36% regional level; 15% local level; 6% other; 4% international level, 3% EU-level).

*Figure 2: Stakeholders (%)*

Public authority
24%

Private individual
26%
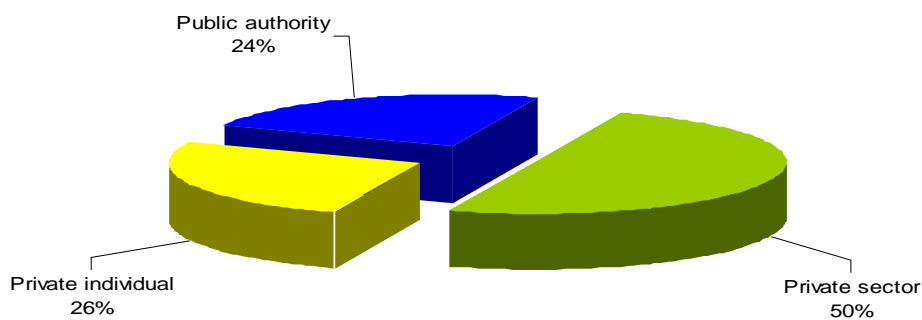
Private sector
50%

The **private sector** list (262 replies) includes a variety of stakeholders (Figure 3). The largest group within that list, the industry (73 replies), can be further split into categories with the biggest share belonging to the pharmaceutical sector.

*Figure 3: Type of stakeholders – private sector (%)*

Older people/patients'
organisation/NGO/
charity
20%

Research/academic
21%

Other
24%

Health/social care
provider
8%

Industry -
other
4%

Industry -
food
3%

Industry -
ICT/e-health
8%

Industry -
pharmaceutical/
medical devices
13%

*Industry - 28% (total)*
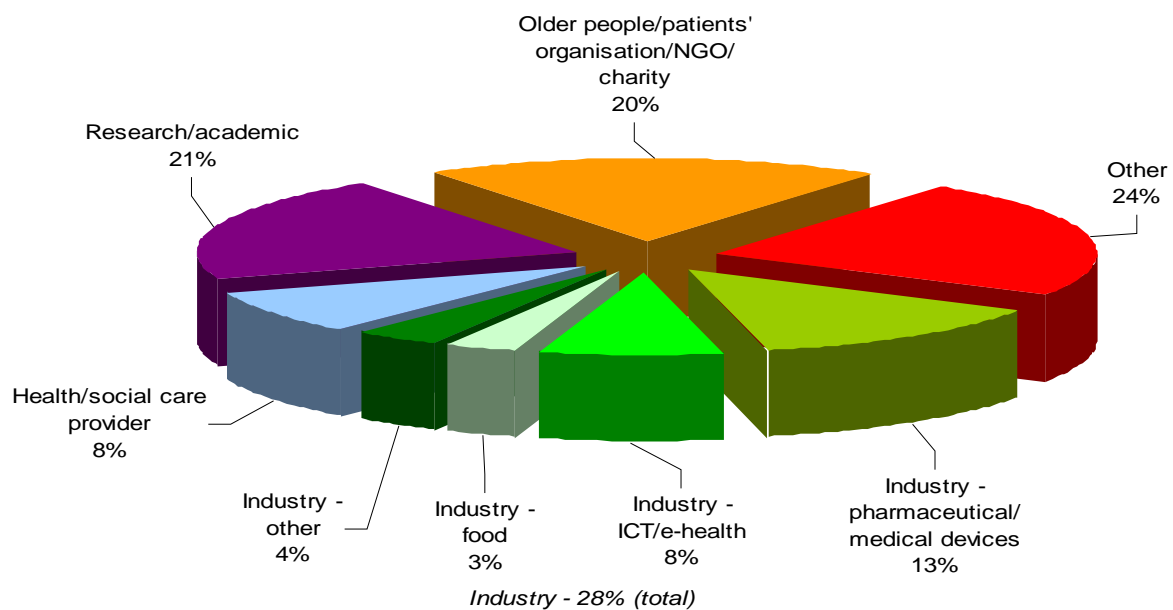
Contributions from **private individuals** (137 replies) include mainly private individuals (86 replies) and researchers and academics (32 replies) (

*Figure 4*).

***Figure 4: Type of stakeholders – private individuals (%)***
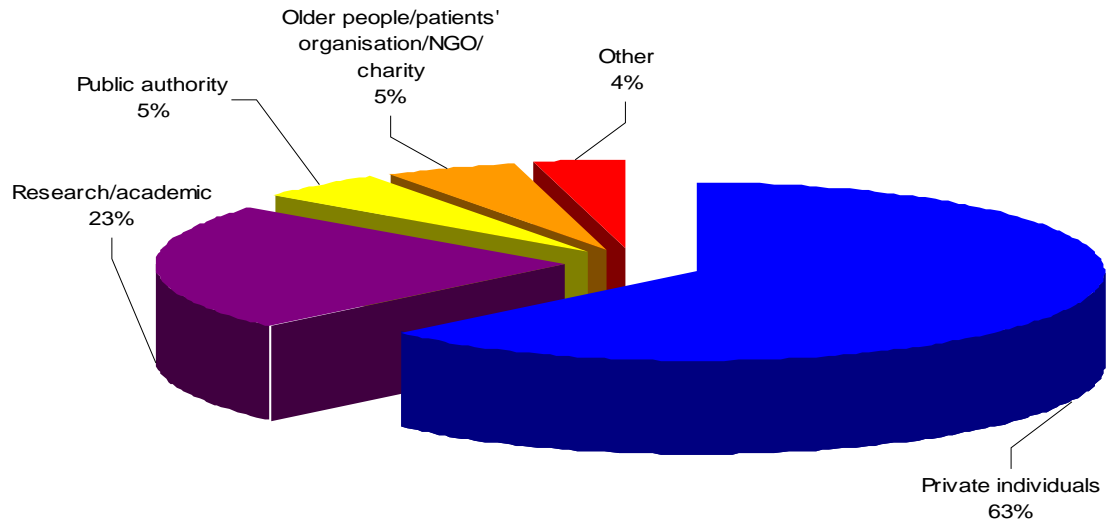


The contributions received from public sector representatives (125) are dominated by 58% of the replies coming from **public authorities** (73 replies) (Figure 5). Within the public authorities, the majority of contributions were sent by local authorities (43% or 54 replies), but there are also 19 submissions (15% or 19 replies) from (inter)national authorities. Replies in the public sector category also include research/academic (26%), health/social care providers (7%), older people/patients' organisations /NGO/charity (5%) and other (4%).

***Figure 5: Type of stakeholders – public sector (%)***

Older people/patients'
organisation/NGO/
charity
5%

Health/social care
provider
7%

Public authority -
national or int'l
15%

Other
4%

Public authority - local
43%

Research/academic
26%
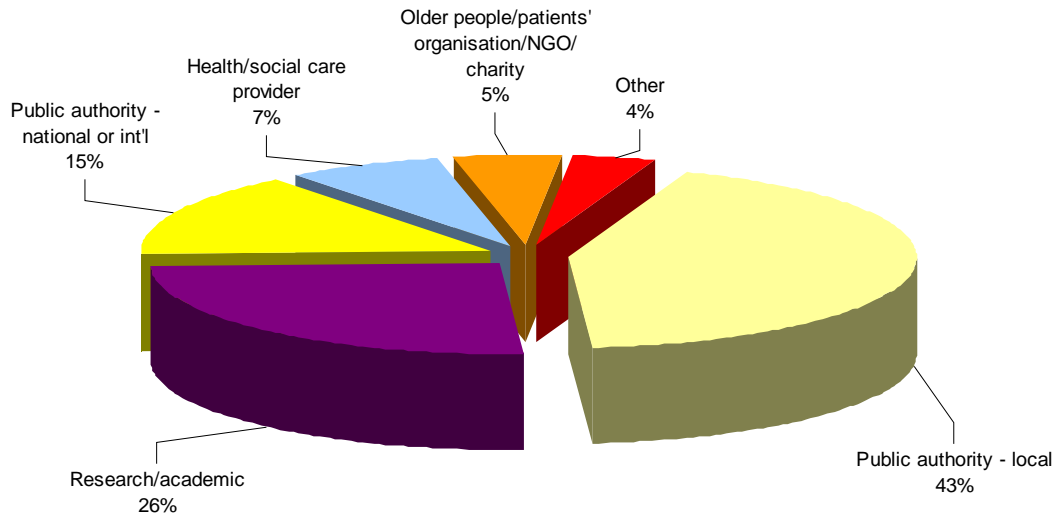
**(ii) Barriers to innovation**

*Each part on innovation barriers is derived from information provided by respondents in the section entitled "Please specify". However, not all barriers allowed for this possibility. Many respondents have therefore used other categories to further develop their ideas on Innovation barriers. This is what is included in the sections below.*

1. **Funding issues**
   - Different funding bodies have different priorities [barrier # 6]
   - Lack of funding [barrier # 2]
   - Funding only covers part of the innovation process [barrier # 4]

2. **Evidence issues**
   - Lack of evidence for the benefit of specific innovation [barrier # 8]
   - Evidence of the benefits of innovation is scattered and it is hard to get an overview [barrier # 5]

3. **Institutional framework conditions issues**
   - Patent environment [barrier # 13]
   - Complex or unclear regulations or lack of regulations [barrier # 7]
   - Lack of standards [barrier # 12]
   - Public authorities are not willing "enough" to buy novel solutions [barrier # 3]

4. **End-users' involvement issues**
   - Lack of training for end-users [barrier # 10]
   - End-users' resistance to new ideas [barrier # 11]
   - End-users (patients, older people, health care professionals) are not involved closely enough in the development and use of new innovative solutions [barrier # 1]

5. **Other, including health and social care systems** [barrier # 9]
   - Health and social care systems
   - Other

Figure 6 shows in decreasing order which innovation barriers were selected by the respondents as one of the top three innovation barriers. Overall, the top three barriers, regardless of the category (private, public and employer) are 1) the insufficient involvement of end-users in the development and use of new innovative solutions (278 replies), followed by 2) the lack of funding (176 replies) and 3) the unwillingness of public authorities to buy novel solutions (161 replies).

*Figure 6: Overall frequency of responses on barriers to innovation*
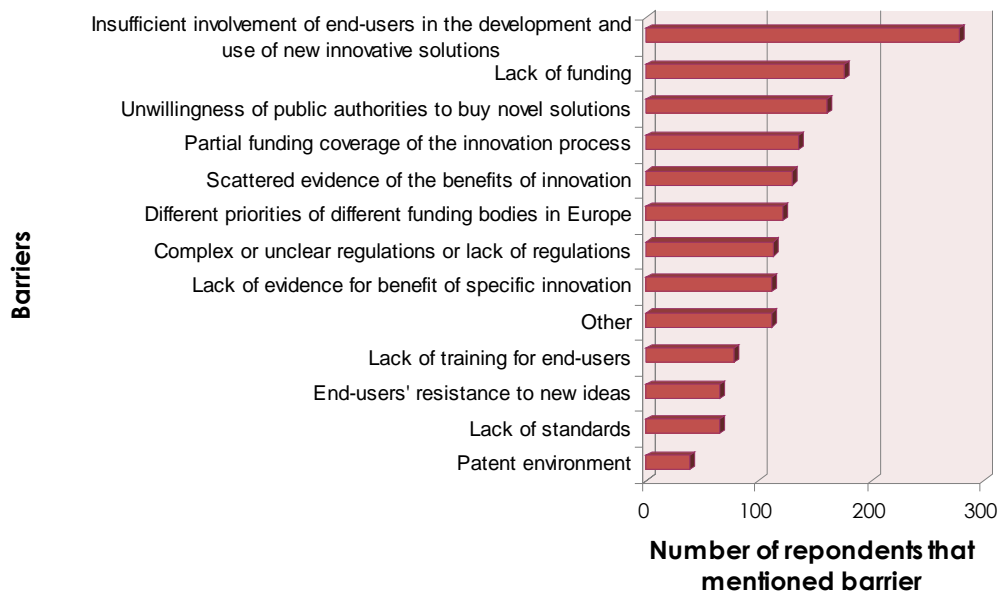


As for public authorities, some differences can be noted regarding the selection of barriers to innovation depending on whether the respondent is working in an international/EU, national, regional, local or other public authority. Figure 7 shows the top 3 barriers to innovation. In some cases, more than three barriers appear, as two or three of them received the same score.

*Figure 7: Top 3 barriers to innovation for public authorities*
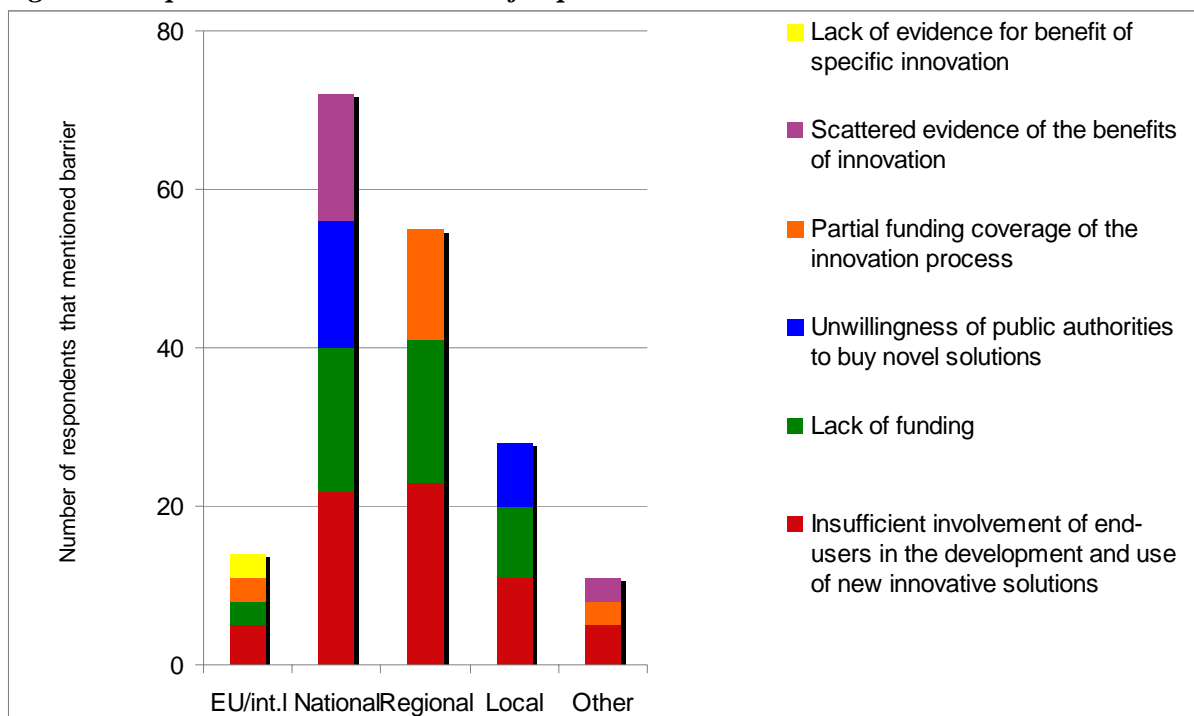


For employers, some differences can also be noted regarding the selection of barriers to innovation depending on whether the respondent is working in a large company, small and medium-sized company, health/social care provider, research/academic, older people/patients' organisations/other NGO or charity. Figure 8 shows the top 3 barriers to innovation. In some cases, more than three barriers appear, as two or three of them received the same score.

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*Figure 8: Top 3 barriers to innovation for the private sector (health /social care providers, large companies, SMEs, older patients/patients' organisations/NGO/charity)*
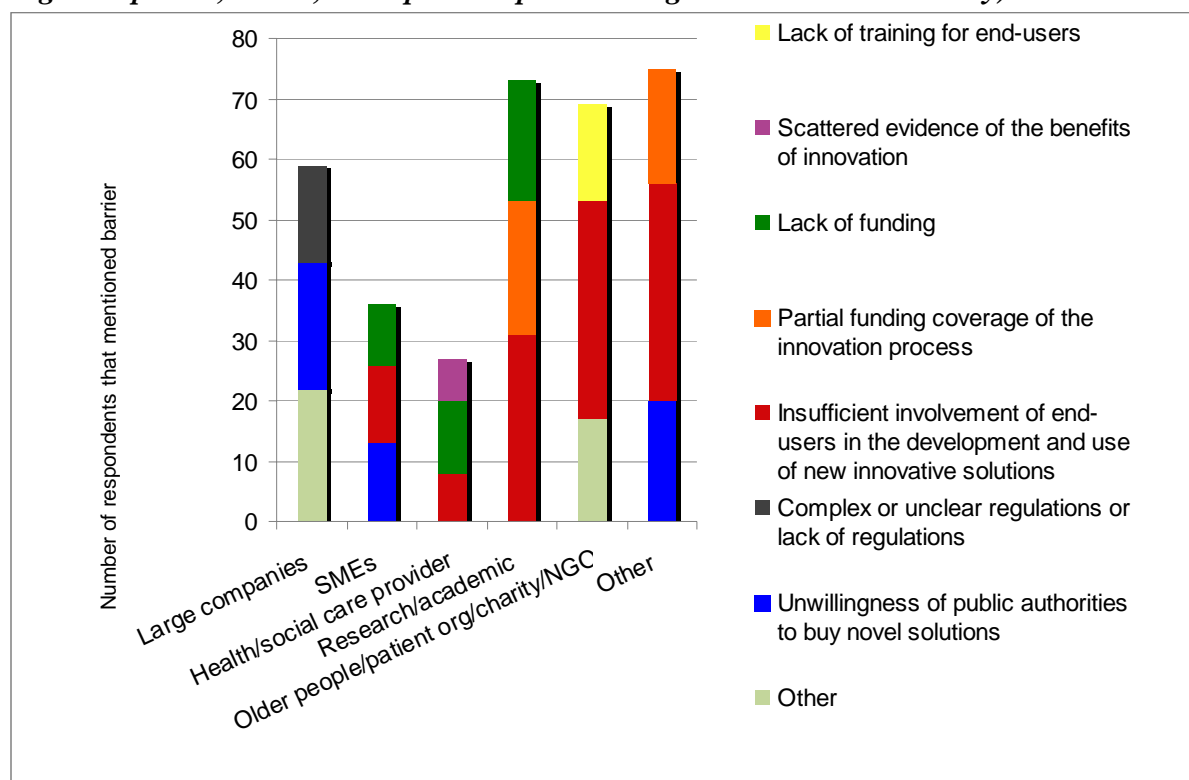


Each of these barriers is further analysed below. For each barrier, a graph demonstrates for each respondent category, which percentage of the respondent category has mentioned this innovation barrier. For instance 26% of the private individuals (36 of the 137) has mentioned the barrier 'different funding bodies have different priorities in Europe', while 19% of the public authority category (24 of the 125) has mentioned this barrier.

**Funding issues**

**Innovation barrier: Different funding bodies have different priorities [barrier # 6]**

*Figure 9: Different funding bodies have different priorities*
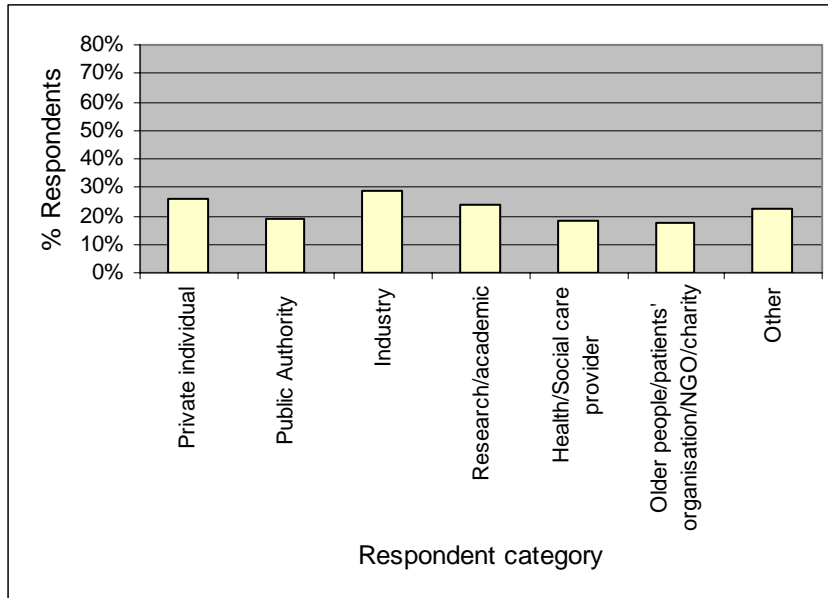


Overall, respondents stress that the priorities of funding instruments **lack consistency** across both policy areas and organisational levels. Respondents explain that several programmes at EU level but also at national, regional and local level provide for the financial support to research in the field of ageing. However, a few respondents point to the lack of consistency in their objectives.

More importantly, what is emphasised by many respondents is the insufficient consistency of funding across disciplines/policy areas. Here, they refer to the concept of "**silo budgeting**", which drives the various policy departments involved in the care continuum to not consider the benefits an investment in innovative solutions in one part of the care continuum could bring to another part. The administrative rigidity is also considered to prevent more comprehensive solutions (e.g. community/home care programmes, e/m-health) from being developed and implemented to the benefit of the end-user.

**Innovation barrier:** Lack of funding [barrier # 2]

*Figure 10: Lack of funding*
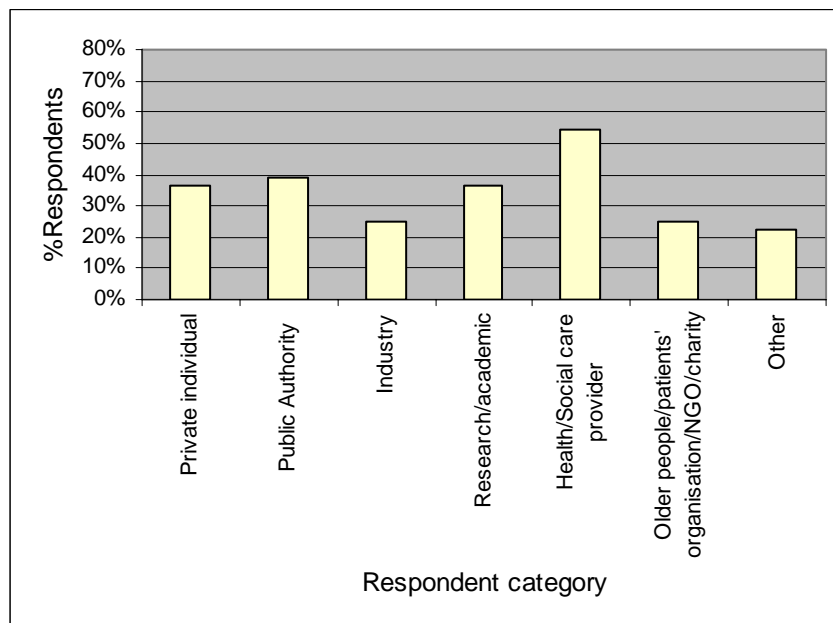


Several respondents insist on the specificity of innovation in the field of active and healthy ageing and the related necessity to promote **funding of social innovation** in addition to technological innovation. More social innovation and aligned new business models are deemed critical, in particular to integrate technological innovation within existing care systems. This is, for instance, the case of innovative ICT solutions in health care, welfare and housing, which require organisational/human innovation and new business models to be fully deployed.

The call for more funding of social innovation comes along with the need for **funding research across disciplines**. A few respondents stress that the nature of innovation in the field of ageing requires the collaboration of a wide range of experts from different backgrounds, including social experts who can play a strong part in assessing the relevance of the innovation to the end-users, be they patients or health care professionals.

The lack of funding is also understood as the **lack of reimbursement** for innovative solutions which, in several respondents' opinion, constitutes a strong disincentive to apply them. Some advocate resorting to "smart" reimbursement mechanisms that would ensure integrated interventions (including, e.g. medicine, companion devices, as well as prescribed physical activity) to be covered across the complete care-cycle.

Although some respondents recognise that some instruments do exist to fund innovation, their **complexity or restrictive use** (e.g. team composition, co-financing) seems to be an obstacle to their use. Other existing instruments are considered to be **insufficiently leveraged**.

**<u>Innovation barrier:</u> Funding only covers part of the innovation process [barrier #4]**

*Figure 11: Funding only covers part of the innovation process*
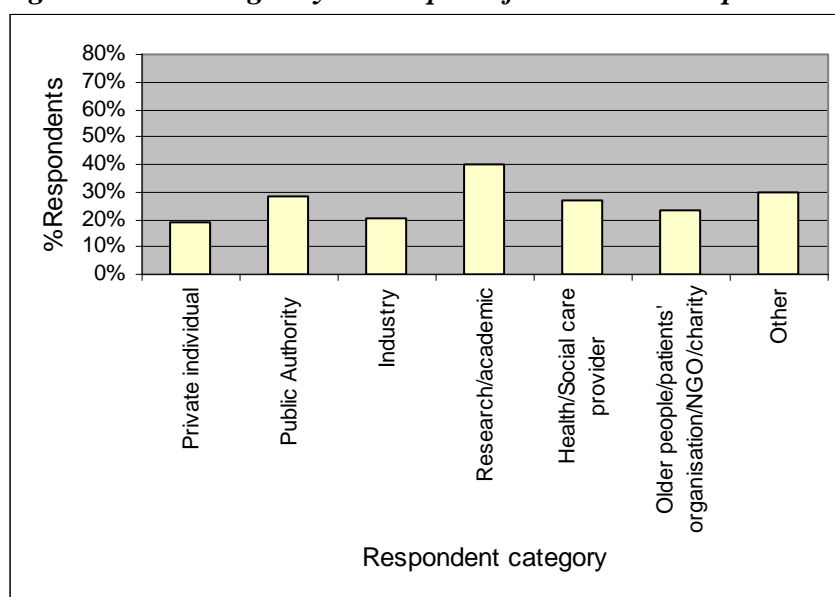


Although some respondents raise the challenge of getting funding for the very early stages of conception and scoping, many respondents consider that existing instruments already provide good support for **the research stage.**

In general, the **implementation stage** is considered not to be sufficiently covered, in particular in view of the high costs of real life experimentation. In fact, the latter is considered more capital-intensive in the field of active and healthy ageing than in other sectors (e.g. high degree of sophistication, complexity of e-health infrastructure, and disruptive type of innovation). More specifically, respondents highlight the lack of funding instruments that cover pre-commercial stages, large-scale testing (including clinical trials and experimental services), first commercial scaling up for production (cross-border), patenting, spin-off and start-up company building and innovation institutionalisation (through funding of necessary infrastructures and human resources).

Beyond the funding issue, some respondents also point out the **lack of entrepreneurial culture** and **lack of a sound innovation ecosystem.** There seems to be a lack of interaction (e.g. through spin offs) between venture capitalists, developers and university labs to favour the uptake of new ideas generated by researchers. In addition, some respondents mention that only a few private equity and venture capital funds are willing to fund technologies with perceived low to moderate return on investment (e.g. ageing).

**Evidence issues**

**Innovation barrier:** **Lack of evidence for the benefit of specific innovation [barrier # 8]**

*Figure 12: Lack of evidence for the benefit of specific innovation*
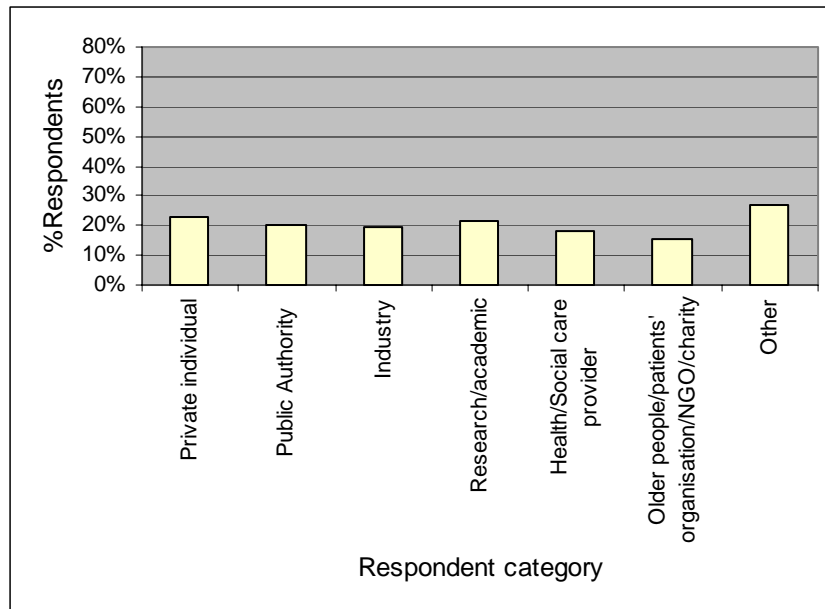


Respondents suggest a link between the availability of evidence and the uptake of innovative solutions, be it by policy-makers, public insurers, care organisations and professionals or patients/consumers. Overall, respondents highlight the lack of data and, as a consequence, a lack of evidence. In addition, if some data is available, it is scattered and, often, only with limited scope and time horizon.

An important trend relates to the recurrent **gap in clinical trials' data for people over 65**. Several respondents insist on the necessity to involve older people in clinical trials in order to take into account the specificity and complexity of the ageing process. Older patients often suffer from co-morbidity – leading them to take multiple drugs – and age-related physical changes that need to be considered in clinical trials. The current clinical trial methodology is deemed inadequate to the challenge of an ageing society.

Another gap mentioned across the board is linked to the **lack of or insufficient understanding of real life effects** of innovative solutions – within a set system and for the end-user (subjective dimension). Thus, respondents stress the need to experiment innovations beyond the clinical setting, for example by tele-monitoring patients at home. Furthermore, evaluation indicators are perceived too narrow, as not taking into consideration wider impacts on the quality of life, well-being, independence and activity level, social participation of older person as well as on social and health systems.

Respondents stress that **large scale experiments** are not common, as they are costly – time and money-wise, and therefore, requiring the involvement of several "sponsors". In addition, it is difficult to engage a sufficient number of research participants and to monitor them for long periods of time (years). Consequently, this makes it hard to effectively ascertain the benefits of medical/IC technologies and innovation as the ageing process evolves – in terms of patients' outcomes and cost-saving potential.

It is also explained that the **fragmentation of European health care systems** (or "markets") constitutes an obstacle to real large scale deployment, and, therefore, prevents statistically sound evaluation.

Also, the **effects of health promotion need to be evaluated in the long term.** This applies for instance in the field of assistive technologies, cognitive training, or working life extension.

**Innovation barrier: Evidence of the benefits of innovation is scattered and it is hard to get an overview [barrier # 5]**

*Figure 13: Evidence of the benefits of innovation is scattered*
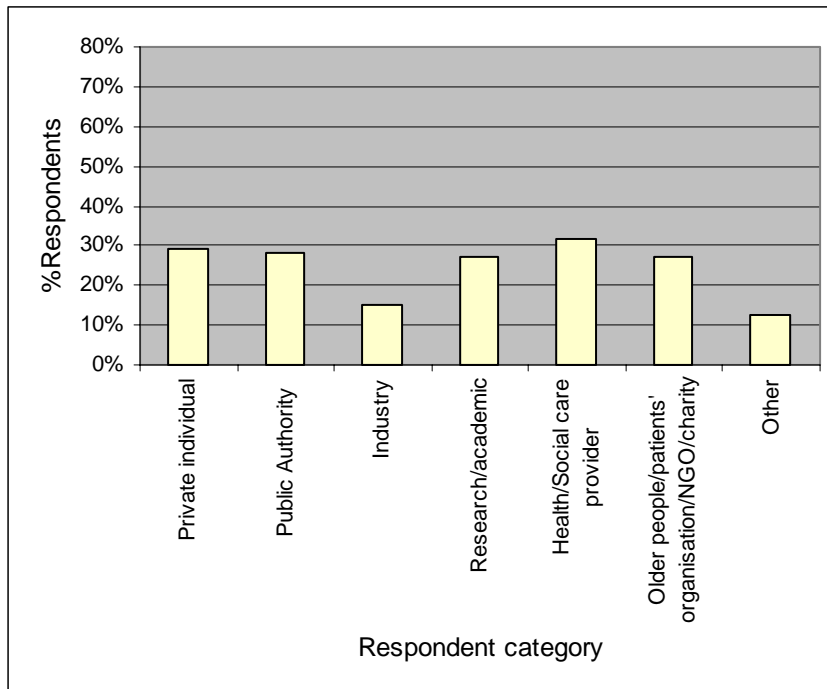


An important element raised by several respondents relates to the **missing standardised approach** to evaluation of innovative solutions so far, and to the necessity to generate unbiased evidence. This lack of common outcomes/measurements makes any comparison difficult, thus representing an obstacle to deployment. In particular, some point out the difficulties generated by a differentiated approach to cost-effectiveness analysis in Health Technologies Assessment (HTA). The examples of tele-medicine and tele-monitoring of patients are provided to illustrate the difficulty to draw any conclusion as to their effectiveness.

Respondents mention the **lack of aggregation and dissemination of the existing evidence at EU level.** Therefore, some respondents suggest a repository/mapping of the existing evidence.

**Institutional framework conditions issues**

**Innovation barrier: Patent environment [barrier # 13]**

*Figure 14: Patent environment*
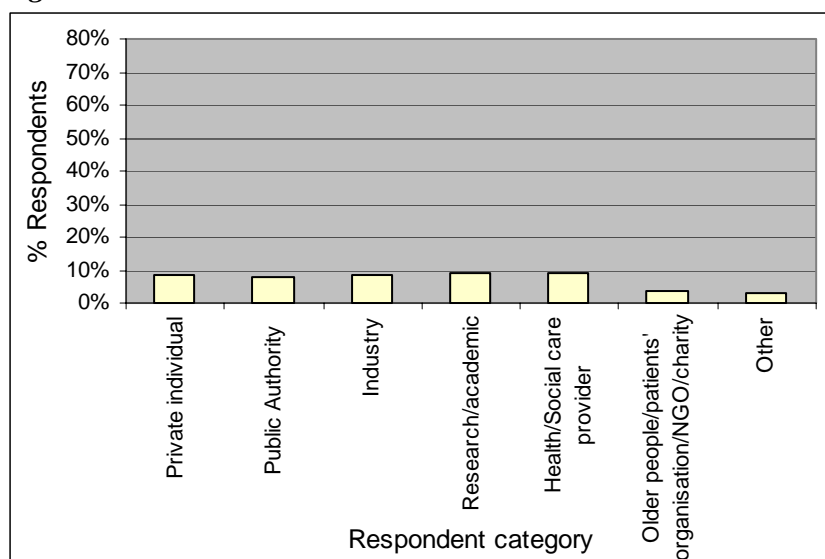


Respondents highlight that protecting intellectual property promotes innovation and strengthens the EU's competitiveness, and that patents have a central role to play in this context. Contributions to the consultation identified several key weaknesses, shortcomings and challenges of the European patent system.

Some respondents point at the **fragmented and increasingly complex regulatory environment.** The patent environment in Europe is fragmented due to the number of different EU and national regulations which would need to be aligned and applied more consistently. It was noted that the 'patchy' protection poses a problem especially for SMEs.

Others deplore the **high cost of patent protection**. Compared to other countries such as the United States, the current European patent system is very costly, mainly due to litigation costs (absence of a single jurisdiction) and the fact that the patent must be translated into the official languages of each country in which the patentee seeks protection.

Hence, several respondents call for a **single EU patent system** and unified patent litigation.

Moreover, some respondents underline that **balance needs to be struck** between 1) the need of patients to rapidly access life-saving medicines, 2) the need to manage limited resources in times of stretched public budgets and 3) the need of innovators to get a fair reward for innovation to promote further investments. In this context, respondents point out the need to appropriately reward incremental innovation.

**<u>Innovation barrier:</u> Complex or unclear regulations or lack of regulations [barrier # 7]**

*Figure 15: Complex or unclear regulations or lack of regulations*
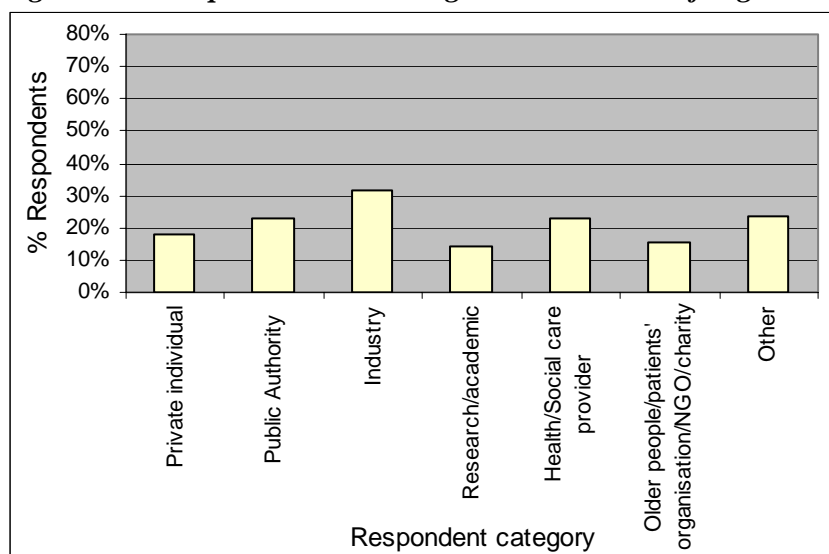


Respondents highlight **national divergences in legislation** regulating ageing-related sectors, which are partly caused by differences in national transposition of EU directives. The existence of different rules and procedures in each Member State (e.g. notification, registration) is deemed to increase the complexity and burden on companies, in particular SMEs (e.g. notification procedure for CE mark release of medical devices, clinical trials).

**Sectorial legislation** is also identified as a barrier to innovation. Some innovations, in particular in the field of tele-medicine and e-health (e.g. device for patients' monitoring) are described as being at the crossroads of pharmaceutical, medical devices, ICT and organisation flow. This leads to either cumulative application of legislation or uncertainty on which legislation takes precedence (borderline cases). In particular, several horizontal regulations (e.g. environment, safety of workers, radiation, RoHS[2] Directive) apply to some of these innovative solutions. The shift towards integrated care is considered to justify a new thinking also legislation-wise, to surpass the current silo approach. Added to which the speed of innovation can sometimes lead to current legislation being out of date or difficult to apply.

Also, respondents call for a **more sustainable, predictable and balanced use of pricing and reimbursement policies**, as opposed to what they sometimes describe as "arbitrary" short-term cost-containment measures. Reimbursement is often seen as a key incentive for the industry to invest into new products or services, as it determines the solvability of the demand. The structural differences between Member States are also described as an obstacle to larger deployment of innovative technologies, creating uneven access to such technologies across the EU.

Finally, whilst some point out "overzealous" **ethical constraints** limiting research (e.g. stem cells, genetic engineered products), others underline that such issues should not be addressed at EU-level.

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[2] Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment

**<u>Innovation barrier:</u> Lack of standards [barrier # 12]**

*Figure 16: Lack of standards*
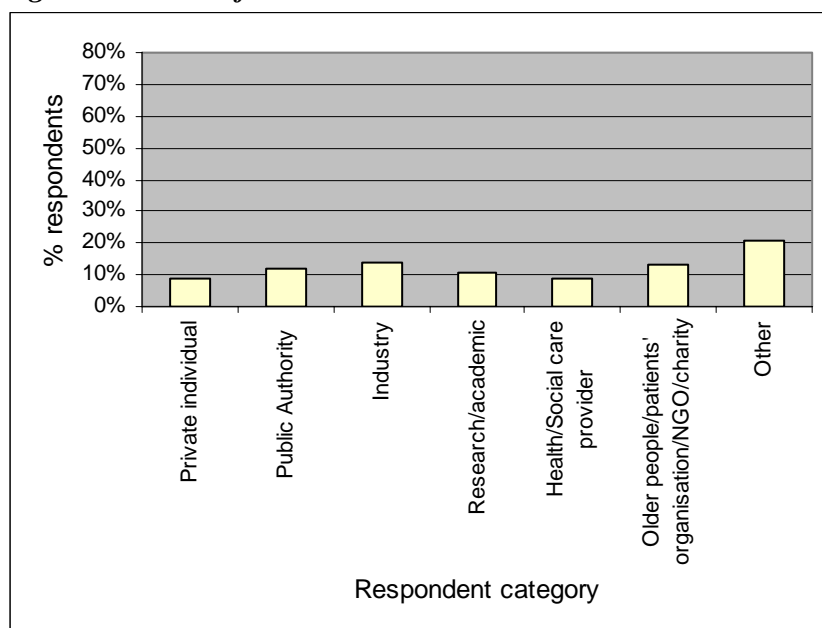


Respondents underline the **lack of technical standards** for better (semantic and functional) interoperability (i.e. health information management/sharing, Electronic/Patient Health Record). They judge it critical to the deployment of telemedicine, tele-care, and Ambient Assisted Living (AAL) tools, to ensure interoperability 1) between different Member States' health care systems; 2) across the care continuum (health and social care), in order to favour integrated care, and 3) between existing and future technologies, to allow convergence between devices and therefore prevent fear of obsolescence.

However, lack of standards is also understood as a **lack of care standards** (screening, diagnosis, treatment protocols), and/or an insufficient 'cross-disciplinarity' in these protocols. This need for more common standards also applies to the service delivery of technology-supported health and social care. Several respondents point out the strong relation between the existence of common care standards and the related professional training, which in turn would benefit from being standardised.

Also, the **lack of quality standards** for age-related products and services is described as an obstacle to innovation uptake. Some suggest the development of standards and labels/certification, which could provide for better transparency and understanding by potential users of technology and favour consumer acceptance. Some examples where this is thought to apply relate to AAL, the appearance of oral medication for better recognition by patients, or infrastructures' design (e.g. transport).

Some respondents also raise the issue of **evaluation methodology standards**, which could enable proper comparisons between products and services.

**Innovation barrier: Public authorities are not willing "enough" to buy novel solutions [barrier # 3]**

*Figure 17: Public authorities are not willing "enough" to buy novel solutions*
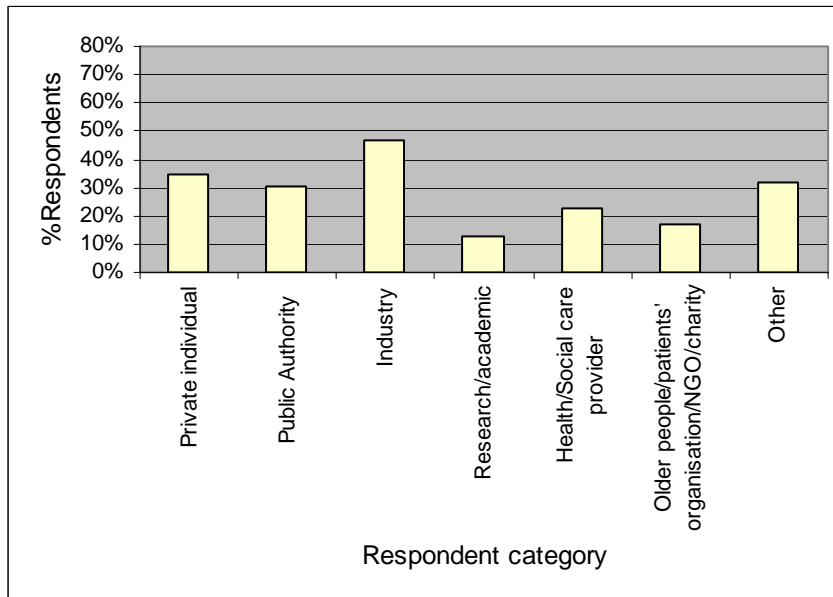


The willingness of public authorities to buy novel solutions is associated with their 1) **procurement** policies; 2) **reimbursement** policies or; 3) **accompanying** policies (e.g. market-based instruments, such as tax credit, bonus/malus).

There seems to be a number of factors that influence public authorities in their decision to buy – or not buy novel solutions: One problem relates to the **missing or scattered evidence on the benefit of the innovation**. Some respondents also raise questions on the value assessment system, which, in their opinion, does not fully take account of wider impacts beyond short-term cost savings. Also, given the multiplicity of actors involved and the fragmentation of funding, evidence may not be brought together to demonstrate the validity of the uptake of a novel solution, from the cost saving but also effectiveness and societal impacts viewpoint

Respondents mention the challenge of **raising awareness and training** public authorities on available innovations (e.g. e-health). Some respondents explain that procurers, IT managers or others (i.e. decision-makers) do not always have a good knowledge of these new technologies or models that are emerging, leading to poor quality tendering procedures or reimbursement refusal.

The fear of obsolescence of certain technologies due to the lack of standards – to ensure interoperability between existing and new products/devices – is also pointed out as an obstacle to the uptake of new solutions by public authorities.

**End-users' involvement issues**

**Innovation barrier: Lack of training for end-users [barrier # 10]**

*Figure 18: Lack of training for end-users*
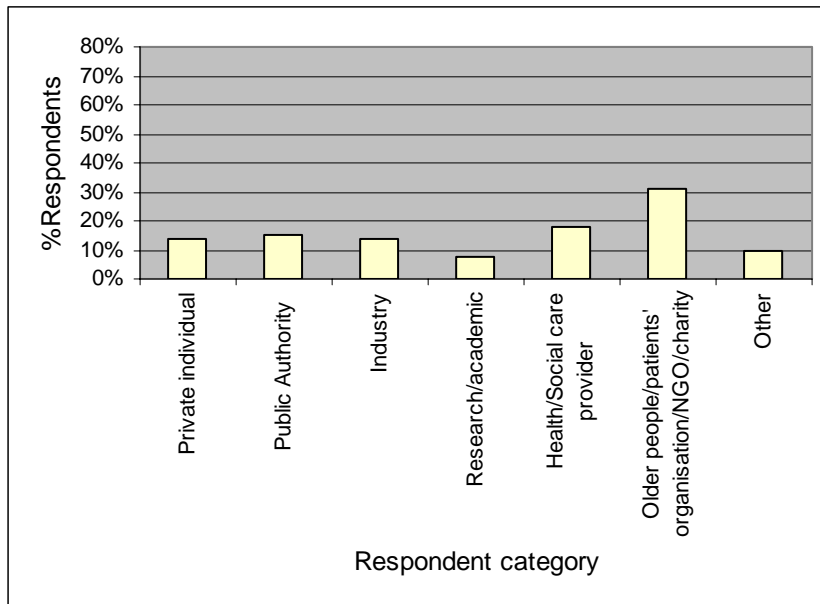


The notion of end-users in the framework of active and healthy ageing includes patients, informal carers, health and social care professionals and health managers. As far as health care professionals are concerned, many respondents point out the **lack of or insufficient training in age-related specific skills** or at least an inconsistency in education and qualification standards across Europe in the field. Several respondents explain that the particularities of older people care involve an approach adapted to their specific needs and situation (e.g. co-morbidity). Given the critical role that General Practitioners (GPs) and nurses can play in diagnosis and chronic diseases management, the necessity to develop more multi-disciplinary skills in order to deliver appropriate/adequate care to older people is emphasised. The management of health information is also considered a critical skill to enhance health care professionals' curriculum. For instance, it is highlighted that the acquisition of knowledge and skills in nutritional advice and chronic pain management needs to be consolidated.

Many respondents emphasise the need to improve **health and social care professionals' training** in the use of new technologies**.** Capacity building is critical to raise confidence and awareness of opportunities and uses of technologies (such as tele-health, tele-care technologies) as well as to ensure a proper integration of innovation in the functioning of the service, particularly given the disruptive dimension for the service of certain technological innovations. For the uptake of innovation, it is deemed critical that informal carers and patients/older people are able to use these technologies intended to help them manage their health/disease (e.g. web-based tools, self-activating sensors or alarms placed in the home). Here, several respondents underline the necessity to take into consideration the specific characteristic of the older patient in training, sometimes less inclined to be familiar with new technologies.

An important subject touched upon by many respondents is the need to **improve (older) patients' (e-)health literacy**. It impacts on their capacity to take responsibility for their own health. This applies, in respondents' opinion, to health promotion, treatment and treatment adherence. New technologies are considered to offer an opportunity to improve this health literacy and capacity to self-manage their health.

**Innovation barrier: End-users' resistance to new ideas [barrier # 11]**

*Figure 19: End-users' resistance to new ideas*
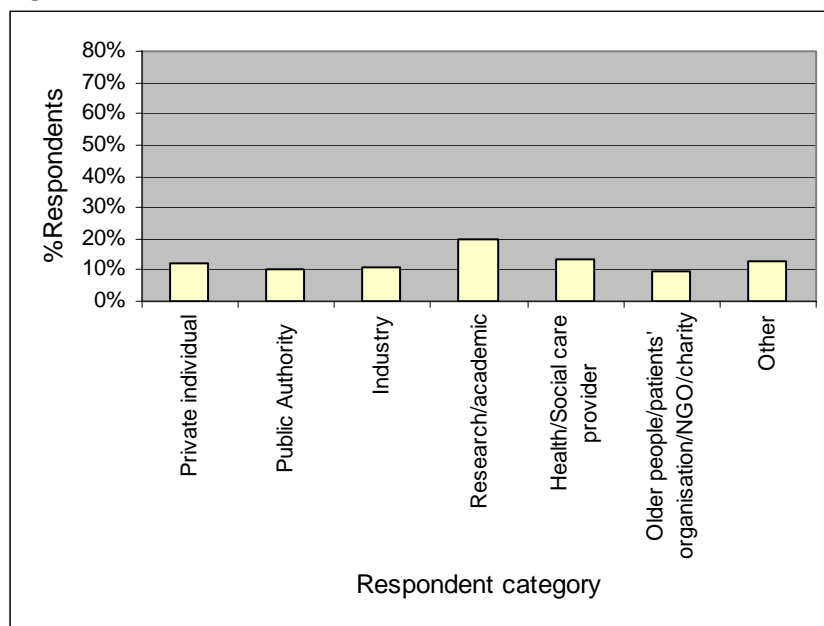


The end-users' resistance is not described as a "natural" lack of inclination for new technologies or a reluctance to change but is very much associated with the **lack of information and training** of end-users (patients, professionals) and the lack of (e-)health literacy of patients. The prejudice that older people would not be willing to learn about new technologies is actually not supported by respondents.

The **insufficient communication and support** proposed by the innovation providers to the sales channels and end-users are also considered as an obstacle to innovation uptake. Innovations such as tele-monitoring or chronic diseases management tools are by essence disruptive and call upon a deep refoundation of organisational principles of existing services. This justifies a truly educational approach towards the end-users and capacity-building.

The inadequacy of certain innovations to **meet the real needs of older people**, often linked to the low involvement of end-users in the design of innovative solutions, is perceived as one of the explanations behind end-users' resistance.

**Innovation barrier:** **End-users (patients, older people, health care professionals) are not involved closely enough in the development and use of new innovative solutions [barrier # 1]**

*Figure 20: End-users are not involved closely enough in the development and use of new innovative solutions*
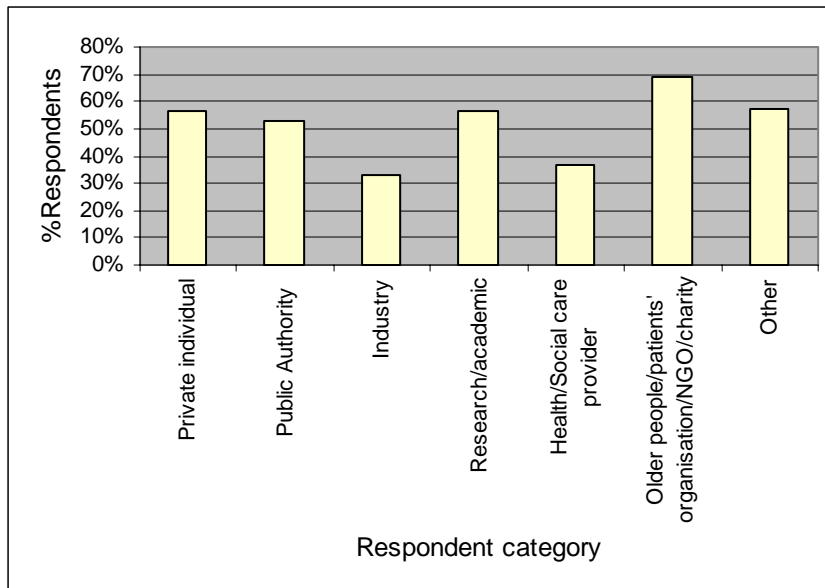


The lack of end-users' involvement in the development of innovative solutions is the main innovation barrier identified by respondents. More specifically, many explain that no matter how cost-saving for the health system an innovation might be, the uptake by older people will not occur if the innovation is considered unsuitable or unacceptable by the latter. This is the reason why several respondents advocate the close involvement of patients/consumers in the **pre-commercial testing of innovations** in order to optimise new products and/or concepts and take the real needs of patients and consumers into account.

Patients, including older patients, are considered to be **insufficiently involved in managing their own health** (self-management), leading to lower treatment adherence. Some at-home monitoring technologies/tools are reported to improve patients' ability to manage their health. (see also lack of training of end-users).

Current **technology assessment methodologies** (including HTA) are considered to overly focus on clinical effectiveness whilst considering too little the real "user experience", an approach that would require taking account of other elements such as quality of life.

**Innovation barrier: Other; including health and social care systems [barrier # 9]**

*Figure 21: Other barriers*
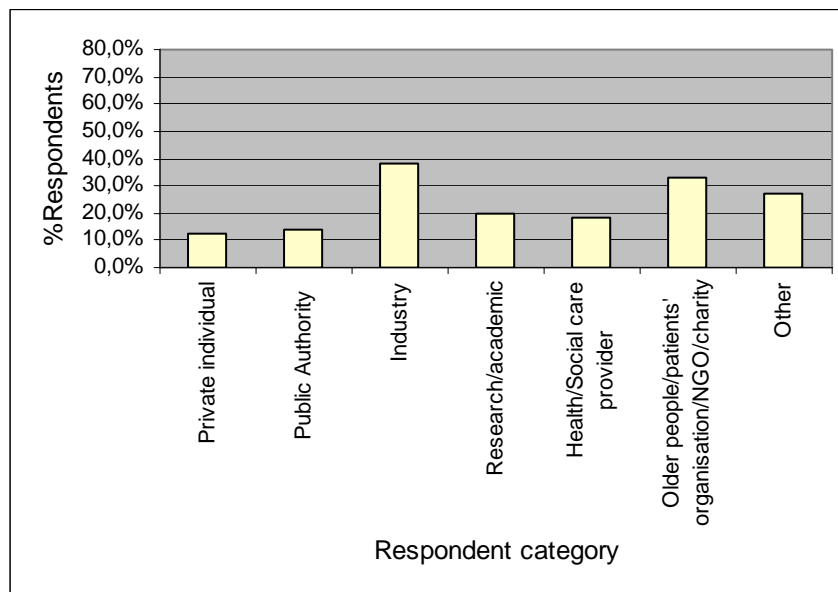


### *Health and social care systems*

A fragmented, so-called **"silo" approach** in the care system is indicated as being responsible for slowing down/preventing the uptake of innovation. The social and health care systems and issues are deemed insufficiently integrated. E-health is an example where silo budgeting explains part of the deployment difficulties, as some respondents pointed out that the authority or body investing in e-health solutions may not be the one reaping the benefits.

Other spheres (not budget) of the care system, such as planning and management, are also considered to suffer from **fragmented thinking**. For instance, information does not appear to flow easily from one system to another. Also, a number of projects often address only one segment of the whole system. The example of advanced building sensing and automation is illustrative, as it needs, in order for it to be of any use, to integrate a reliable rescue capacity in case a serious event is detected. Therefore, many respondents call for a more holistic approach by putting the patient at the centre of the reflection..

Care systems are described as structurally and culturally **difficult to adapt to disruptive innovation.** Some innovations related to ageing require a shift in the organisation of health and social care services, e.g. remote monitoring of chronic diseases, or e-health in general. Some behavioural, cultural (i.e. risk averse culture) and structural obstacles can make the transition longer and more difficult. "No change" is sometimes the easier option. Resistance from health care managers, health care professionals who could see their role/allocation of responsibilities change (e.g. increased role relating to health information, administrative tasks) needs to be properly managed, when engaging in transition. Some suggest developing a change management strategy at the service level (e.g. convince with evidence, training and capacity building).

Care systems are also perceived as being **too focused on acute care/treatment**, when a growing number of people, due to the ageing of society, suffer from chronic conditions. Several respondents emphasise that insufficient consideration is given to health promotion and chronic care management, whilst more and more tools are provided by science for early detection of the risks for the development of diseases and adaptation of prevention strategies.

*<u>Other</u>*

A series of other issues are raised by respondents in the section 'Other' of the consultation questionnaire.

Respondents explained that there is a **lack of recognition and/or awareness of certain ageing-related issues**, such as the role that nutrition in the functionality of an older adult and the challenge of sarcopenia. Some point at the lack of "sense of urgency on the societal and organisational effects of an ageing society".

The **negative stereotype/stigma about older people** is identified as a cause of discrimination. In the work environment, a few respondents advise to consider carefully how mandatory retirement age can impact on the ageing process, suggesting to make it voluntary and/or to adapt the working environment to ageing workers. Innovations in this framework will need to be found, including supporting the informal carers, mostly women, who are now working, e.g. work/life balance policies, tele-working, innovative care devices, tele-care.

**Infrastructures and end-users' homes** are described as insufficiently ready for the integration of innovation. The lack of communication (e.g. broadband) and electrical systems can lead to difficulties in applying new technologies, e.g. remote monitoring.

Finally, a few respondents explain that attention needs to be paid to the evolution of the **biopharmaceutical research and development model**, towards stratified medicines, and soon personalised medicines.

**(iii) Existing initiatives**

Out of the 524 replies received in this consultation, 71% (370 replies) of the respondents identified that they were currently involved in programmes, initiatives or projects relating to innovation for active and healthy ageing.

In total, 63% (332 replies) of the respondents identified ideas for future programmes, initiatives or projects relating to innovation for active and healthy ageing. A total of, 15% (80 replies) of the respondents mentioned a second idea for future programmes, initiatives or projects relating to innovation for active and healthy ageing.

Just a little less than 370 existing initiatives, 332 future initiatives and 80 second future initiatives were actually put forward since, in certain cases, different respondents mentioned the same initiative independently although they were all involved in the same initiative. Given the open character of the contributions, they are not always comparable; hence the statistical data needs to be interpreted as a rough indication rather than a scientifically viable result.

The majority of existing initiatives described in the contributions come from public authorities (25%), private individuals (20%), industry (16%), and research/academic (12%). The majority of future initiatives proposed are also from public authorities (27%), private individuals (20%) and industry (18%). In some cases, certain respondents sent in more than one contribution to the consultation as they were involved in more than one existing or future initiative (Figure 22).

*Figure 22: Existing and future initiatives by stakeholder type (%)*
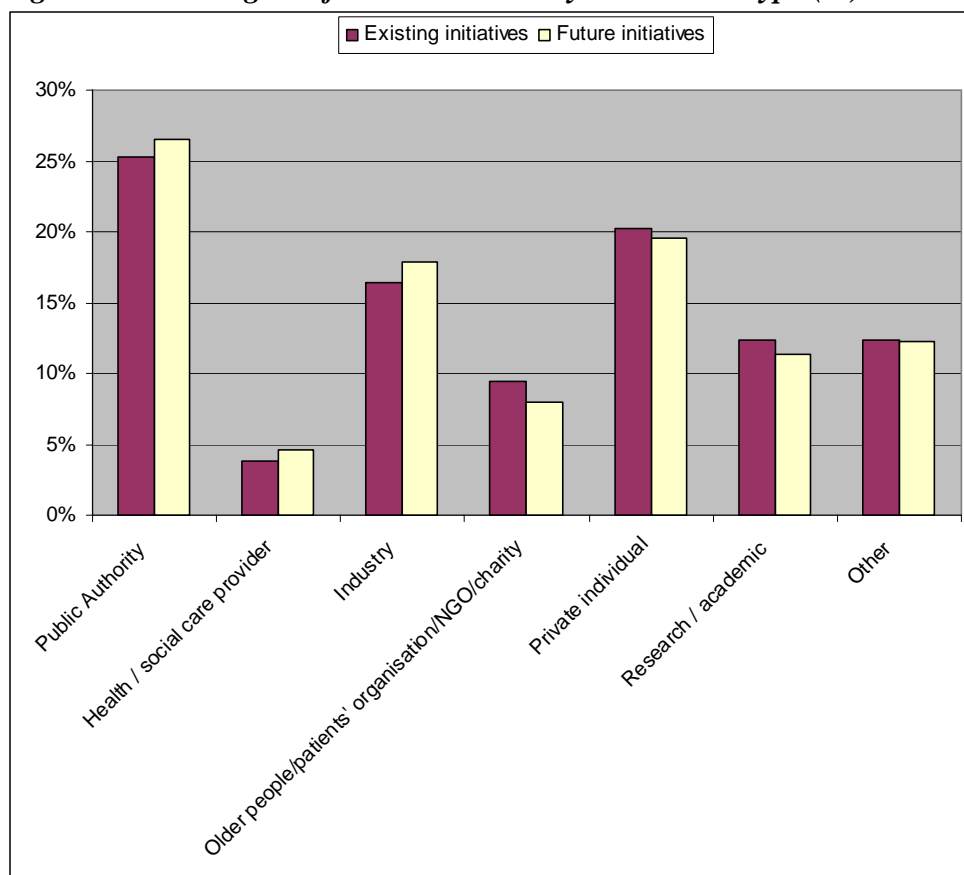
A number of similarities have been identified that make it possible to classify the initiatives according to a limited number of categories/subcategories, which are described below. It is not always straightforward to classify an initiative in one category rather than in another, in particular, because some projects have a horizontal character. However, although it does not always reflect the richness of the contribution, the examples are classified by underlining their most relevant aspects to facilitate the analysis (Figure 23). In order to give practical meaning to the (sub) categories, a number of examples are presented. This section (iii) contains examples of the existing initiatives and the next section (iv) of the future initiatives.

These examples only intend to give a glimpse of the diversity of on-going projects and programmes on innovation in the area of active and healthy ageing in the different countries and by the different stakeholders.

The fact that only a certain number of initiatives received during this consultation are summarised below does not imply any judgment on their level of quality nor of any other initiatives put forward in this consultation and not mentioned here. Without any doubt, there are many other good on-going projects.

*Figure 23: Existing and future initiatives by area of action*
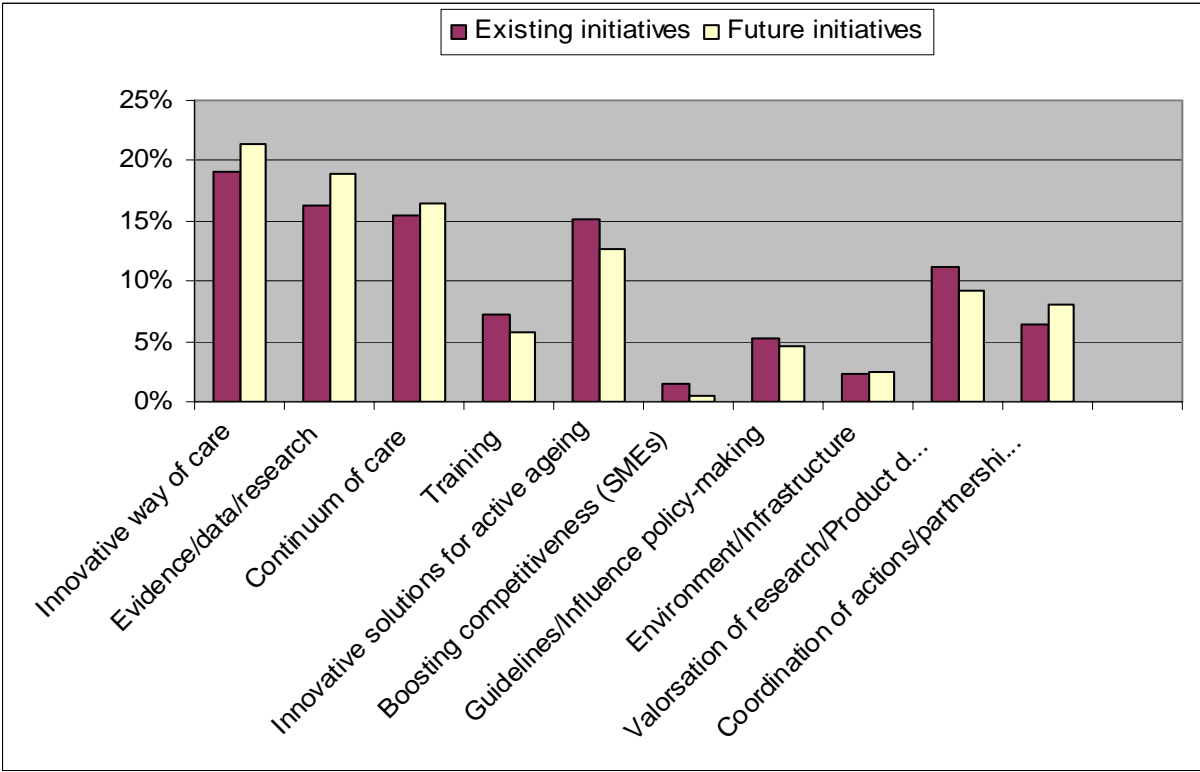
1.  <u>**Innovative way of care:**</u> **19% of existing initiatives**

*Innovative way of care is a very broad concept that covers innovative organisation of care such as modernisation and re-organisation of care structures as well as integration of care delivery (health and social, home and self care) as well as tele-care and tele-health. The new approaches to organisation of care, tele-care and tele-health are defined below and some examples of each category are given.*

***'Innovative organisation of care'*** *is defined as the transformation of care systems from reactive and episodic to integrated and proactive, based on continuum of care – from diagnosis through treatment to rehabilitation. In other words, vertical and horizontal integration of care based on ICT, case and disease management, and interaction of all actors involved in delivery of care (patients, care providers, insurers and payers, pharmacists, health professionals and other carers) in a more coordinated and collaborative way.*

*Some examples of ' innovative organisation of care' are:*

**New strategies to support maximum degree of autonomy**
A national public health authority has invited local players to propose new strategies aimed at innovative care to support a maximum degree of autonomy of older people to remain longer in their own home with the support of their caregivers. This national authority is working closely with communities and regions. A number of projects have already been selected as pilot projects, and once completed, the aim will be to finance these projects so that older people can stay home for a longer time while decreasing hospital admissions.

**Development and dissemination of health care system models**
An EU-level non-profit organisation, representing hospitals, is working together with research institutions (co-financed by the European FP7 Research Programme) to develop and disseminate theoretically rich but practical conceptual effective and efficient health care system models and a toolkit for the health care service provision system.

**Integrated care: a European comparison**
Integrated care is increasingly seen in many health systems as a core response to the challenges of providing better health and social services for older people within a tight financial envelope. The aim of this project is to compare integrated care across Europe and develop innovative resources for managers, policy makers and researchers to support the development of high quality integrated care. This project undertook a 3-year cross-national comparison of methods for integrated care, which included methods of assessment and service delivery, new methods of planning care provisions, monitoring, and management of care performance and methods of network co-ordination. In its work, this project closely examined the fragmentation, common to all the countries involved, which exist between care segments, i.e. acute care, long-term care, social care, housing and welfare.

**A review of the funding system for care and support needs**
An association of insurers has taken the initiative to review the funding system for care and support in their own country. Specifically, they have examined and provided deliverable recommendations on: how best to meet the costs of care and support as a partnership between individuals and the state; how people could choose to protect their assets, especially their homes, against the costs of care; how, both now and in the future, public funding for the care and support system can be best used to meet care and support needs; and how any option can

be delivered, including an indication of the timescale for implementation, and its impact on, if appropriate, financial regulation. Recommendations and advice on how to implement the best option to the Government is foreseen for July 2011.

**Network for Parkinson patients including professionals, family and carers**
An SME, in cooperation with patient organisations, is creating a social network for Parkinson patients where professionals, patients, family and carers could have contact with each other. The objective is to improve care information, to support informal carers, and social inclusion of Parkinson patients. Professionals have participated since the beginning by defining the concepts, structure and functionality to include in the system. Patients and professionals have tested the system and some adjustments have been made. This project has just ended with the installation of the network in a public server. The next step of this project is dissemination.

*There are many definitions of "**tele-care and tele-health**". By categorising, the following definition of tele-care is used, namely: **tele-care** is used to monitor the situation of people dependent on external help (i.e. older people or disabled people) in the home setting, by providing person-centred technologies, for instance social alert systems and social services.*

*Some examples of tele-care are:*

**Adoption of tele-care technologies in the community**
A national public authority is facilitating and providing funding for a tele-care development programme. The aim of this programme is to drive the adoption of tele-care technologies by local social and health care service providers; to support a shift in the balance of care from reactive to prevention and from institutional to community based settings; to improve the quality of life of health and care service users, and; to support unpaid carers and improve their quality of life. Until now, high savings have already been observed due to a decrease in unplanned hospital and nursing home admissions.

**Heart failure: personalised systems for monitoring patients in their home**
According to a large firm, cardiovascular disease kills around 1.9 million people every year in the EU, with the associated annual health costs estimated at €105 billion. Around half of these deaths have occurred to patients with coronary heart disease, the majority of whom required significant periods of hospitalisation to treat progressive heart failure. There are currently around 10 million patients with heart failure in the EU and it is one of the commonest medical reasons for hospitalisation in adults.

A large firm participates in a consortium consisting of public and private partners from research, academic, industrial and medical organisations from ten different European countries and China. The consortium's aim is to improve the quality of care for coronary heart disease and heart failure patients by using personalised systems for monitoring their condition at home (e.g. sensors embedded into vests or shirts, bed sheets and home appliances such as weight scales and blood pressure monitors) and involving them in the daily management of their disease. The system will contain a patient loop interacting directly with the patient to support the daily treatment. It will show the health development, including treatment adherence and effectiveness. Being motivated, compliance will increase, and health will improve. The system will also contain a professional loop involving medical professionals, e.g. alerting to revisit the care plan. The patient loop is connected with hospital information systems, to ensure optimal and personalised care.

**Monitoring hypertension patients at a distance**
A pharmaceutical company, in cooperation with an IT and health care provider, has taken the initiative to increase the efficiency of hypertension treatment through increased patients' compliance and the effectiveness of the health care system by using tele-medicine to monitor the patients' blood pressure levels. The aim is to diminish the rate of strokes and heart attack occurrences in patients with hypertension conditions by using motivational techniques and monitoring their blood pressure at a distance. While the programme is still ongoing, a predictive model of the reduction of hypertension as well as of the prevalence of strokes and heart attacks for the 1000 patients involved in the programme estimates the savings in terms of health care, informal and social costs to more than €750,000.

**Integrated monitoring platform of social alarms, tele-care and tele-health**
A small company has developed a platform in cooperation with suppliers of tele-care equipment and homecare organisations in 11 European countries. The initiative was based on the vision that the admission and stay of older people in hospitals, or care and nursing homes, will be reduced as a result of rising costs. Instead, older people will increasingly be stimulated and encouraged to live independently. Home care organisations will start to play an important role in this process. They will be offering a combination of direct bedside care, as well as remote professional care, with the help of modern care centres.

The aim of this initiative is the development of an open, universal tele-care platform for integrated monitoring of social alarms, tele-care and tele-health. This platform currently supplies over 80 tele-monitoring centres across 11 European countries, serving over 600.000 people by delivering social alarm, tele-care and tele-health domestic services. This approach has proved to be able to deal with national differences and to even benefit from differences by transferring solutions to other countries.

**Chronic diseases: coordination between various home service providers**
An SME is involved in a tele-monitoring project, financed by the national government. This project aims to provide help to those older people living at home, suffering from chronic diseases, handicaps, or with reduced mobility. The project allows coordination between the various home service providers due to a toolbox of ICT tools (e.g. smart living, tele-medicine chairs, a dynamic database, a video-call centre). The basic principle of this project is the provision of innovative solutions to existing services, but also includes the creation of new services.

*As stated earlier, there are many definitions of tele-health. Tele-health concerns clinical issues as well as non-clinical issues. By categorising, the following definition of tele-health is used, namely: **Clinical tele-health** is the use of telecommunication technologies to provide health care services and access to medical and surgical information like medical data, medical images or laboratory tests, health advice by telephone in emergency cases, and advice on prevention of diseases. Furthermore, **non-clinical tele-health** incorporates distance education, health care system integration and management.*

*Some examples of tele-health are:*

**European e-health interoperable framework**
An industry-led consortium has taken the initiative to support Member States to develop e-health in a coordinated way, by involving all stakeholders, especially health professionals and patients. The expected outcome is a European e-health interoperable framework.

**Alert system for late or missed home care visits**
An SME has developed a system for electronically verifying that home care visits are made in a timely manner. This system automatically alerts whenever a care visit is late or missed. This system has revolutionised how health care providers run their business by providing real-time information so that they could track all consumer visits as they happened; they have information on accurate visit durations (and costs); and, alerts for failed visits, which enable them to quickly react so that no customer is left without care.

**Linking multiple tele-health systems**
The aim of this initiative is to link multiple tele-health system providers into a single monitoring solution and enable GP to GP data integration. This will result in new use cases and in standard messages for submission as international standards. The idea is to have a consistent European/global integration approach and message definition. The main partners are primary care trusts and community services.

## 2. Evidence/data/research: 16% of existing initiatives

*This category is about all types of research activities (general, medical) and in particular data collection, and economic cost-benefit/effectiveness analysis. Therefore, the following subcategories are defined: medical research, collection of data, and other.*

*The category 'medical research' covers basic and applied research. Basic research is the understanding of the nature of diseases, processes and conditions, while applied research is scientific and societal research conducted to improve health and well-being, but without the practical application of the findings.*

*Some examples of basic and applied medical research are:*

**Neurodegenerative disorders: causes, mechanisms, diagnosis and therapy**
A research centre is collaborating with universities, hospitals, health care providers and health care insurance companies to address the causes, mechanisms, diagnosis and therapy of neurodegenerative disorders, including primarily age-related disorders such as Alzheimer's and Parkinson's disease, but also rare neurodegenerative disorders such as Prion and Huntington's disease. This centre also aims to understand the causes and risk factors that lead to a predisposition for neurodegeneration and to develop new therapeutic and health care strategies. Additional instruments to assess quality of life will be developed.

**Malnutrition: health and economic aspects**
According to an NGO, malnutrition in Europe is apparent in 10% of the population over 65 years of age causing 35-40% of all hospital admissions and up to 60% in care homes. 30 million Europeans are affected and they estimate costs €170 billion per year. Malnutrition increases the need for care in all care situations, the risk for infections and complications, risk of dying from diseases and need for treatments in hospitals. Therefore, this NGO has partnered with health care and social providers, academia, and the health insurance sector to determine the health and economic impact of malnutrition in the community, nursing homes and hospitals.

**Cancer patients' clinical trials: common language and age-related markers**
A research organisation has a taskforce that aims to develop, conduct, coordinate, and stimulate international and independent clinical research on older patients with cancer in

Europe. For this purpose, this taskforce designs older people specific clinical studies in cancer in collaboration with the disease oriented groups within this organisation. Several clinical trials and research projects in older cancer patients are at different stages of development. One goal is to provide a common language across the various disease oriented groups to evaluate older cancer patients enrolled in the trials of this organisation. The second goal is to establish age related prognostic and predictive markers for overall survival, functionality changes, subjective well-being, social situation changes, and toxicity.

**Respiratory viruses: immune response of older people**
Together with several other countries, the immune response of older patients against novel respiratory viruses has been analysed (FP6). A number of novel immune mechanisms that affect healthy ageing with respect to severe and life threatening respiratory infections have been identified.

**The impact of physical activity promotion**
Different departments of a university work together in a population-based, prospective, cohort study, which started in January 2004 with the purpose of evaluating the impact of a five-year period of physical activity promotion in an older population. This physical activity has included both individual and group activities, according to specific incremental programs of walking (outdoor or on a treadmill), jogging, swimming, cycling (outdoor or on a cycle ergometer) or dancing. At the end of the programme, important end-points such as quality of life, degree of autonomy, musculoskeletal pain, number of falls and fractures, as well as cardiovascular morbidity and mortality will be tested. Currently the longitudinal part of the study is in its concluding phase and the most relevant outcomes will be known in about a year.

**The impact of daily physical activity**
A national public authority is working on a research project exploring older people's daily physical activity and health status and the opportunities to improve physical performance and quality of life. The research is still in progress, but the first results show that senior citizens who participate in regular moderate-intensity physical activity for more than an hour per day have a better quality of life than those senior citizens who are less active.

**Immune system functionality of older people**
There is a national research plan, which is focusing on the study of different aspects of immune system functionality in older people, and also immune dysfunctionalities characteristics for this age. The research directions are oriented towards innovative therapies with a potential application to treat older people's immune diseases.

**Alzheimer: nutrition and cognitive function**
The food industry has European wide cooperation with research centres in carrying out research to complement the currently existing medical therapy of Alzheimer's disease with nutrition, especially at the very first stages of Alzheimer's disease. This particular initiative aims to develop dietary products that maintain and support the normal cognitive function in healthy aging and to help reduce cerebrovascular risks. In addition to dietary products, diet and life-style based health care advice for older people will also be developed.

***Collection of data*** *is about information and evidence. Therefore, it includes as well primary data for statistical analysis and econometric modelling data regarding implementation of an intervention, as reporting and monitoring factual information.*

*Some examples of 'collection of data' are:*

**Willingness to lead an active and independent life through the use of the Internet**
An NGO is collecting data on the willingness of senior citizens to lead a more active and independent life by exploiting the potential benefits of Internet based services. Due to the positive feedback received, an e-Tearoom has been created and its activities broadcast in a documentary across the country.

**Register for hip and knee arthroplasty**
An EU-level federation has a number of initiatives running to get more insight into hip fractures. One such initiative consists of a national register for hip and knee arthroplasty with the aim of improving the outcome of hip and knee arthroplasties, and therefore, the care of patients with hip or knee joint replacement. This registry collects routine data from the public health insurance sector concerning all hip and knee prostheses implanted and revised. They are combined with a newly established implant database provided by the manufacturers. The primary end point is survival of the prosthesis, adjusted to the type of implant, characteristics of the patient and surgical procedures. The use of routine data minimizes the additional need for data collection and supports high criterion validity.

**Monitoring active healthy years lived**
This project, in which the Member States of the EU, non-EU countries, WHO and the OECD participate, is aimed at monitoring the number of active healthy years lived, identifying gaps and changes over time, classifying these gaps and changes according to age groups, genders, mortality, disability, attributing gaps and changes to specific causes or risk factors/behaviours and providing information on where there is room for possible gains.

**Comparable data on quality of life in Europe**
This project, which is a collaboration of research centres, universities, regional public authorities and the WHO, will develop and validate measures of health and health-related outcomes for an ageing population. By means of these measures, comparable data become available on non-fatal physical and mental health outcomes, quality of life and well-being in an ageing population. This will lay the foundation for longitudinal studies on ageing in Europe. As a result, it will be possible to analyse objective and evidence-based prevalence trends, and to relate them to both quality of life and well-being outcomes as well as to the role of health determinants such as the built environment and social networks. The measures will be based on the WHO's International Classification of Functioning, Disability and Health.

**Cloud platform for neurosciences: neurodegenerative disease markers**
An SME participates in a European wide FP7 project in which universities and research institutes work together. The objective of this project is a new, user-friendly, Grid-based research e-Infrastructure enabling the European neuroscience community to carry out research required for the pressing study of degenerative brain diseases. In this project, the collection/archiving of large amounts of imaging data will be paired with computationally intensive data analyses. Neuroscientists will be able to identify neurodegenerative disease markers through the analysis of 3D magnetic resonance brain images via the provision of sets of distributed medical and Grid services. The proposed outcome is a cloud platform for neurosciences, extensible to other fields.

*The last subcategory 'other' is, among other things, about cost effectiveness (qualitative) and cost benefit (in monetary terms) analysis and studies. In other words, it deals with economic evaluations that examine and compare the costs of health interventions and strategies (any activity aiming to improve health) with the expected health outcomes/gains (reducing the risk of any health problems).*

*Some examples of this subcategory 'other' are:*

**Health Technology Assessment: improving the drug development process**
There is a public-private partnership to improve the drug development process through the development of better and safer medicines for patients. According to this partnership, there is a clear case for closer co-operation on Health Technology Assessment (HTA) systems, which need to be more receptive to new products or interventions more suitable for older people. Current models for value assessment of drugs and therapies for the ageing population insufficiently capture the impact of new medicines on disease management for older people, especially the impact on health care services, the care community and families.

**Health Technology Assessment: intensive care quality**
This FP7 initiative is a Health Technology Assessment (HTA) of intensive care quality outcome regarding patient safety and satisfaction, efficiency and organisation. Including this comprehensive spectrum of quality outcomes, a priority among alternative interventions for better clinical continuity might be derived from a comprehensive comparison of all included alternatives. For this purpose, cost-effectiveness-ratios should be more decisive for the priority of alternatives than either costs or outcomes.

**Health Technology Assessment: patients' involvement**
This programme aims at defining concrete consensus guidelines for patients' involvement in HTA which could contribute to the work of the European network for Health Technology Assessment and be further promoted to national agencies, the European Commission and other international organisations. This programme has produced recommendations which will form the basis of a full work programme in 2011 – 2012 inclusive.

**Estimation of the total market for assistive technologies in Europe**
A research/academic institution is focusing on the development of integrated solutions based on new technologies and services and establishing regional networks involving all stakeholders (companies, public entities, users). Results include an analytical estimating of the total market for assistive technologies in Germany and Europe as well as business models for innovative products and services.

3. <u>Continuum of care:</u> 15% of existing initiatives

*Continuum of care is about health promotion, disease and disability prevention and treatment to rehabilitation.*

*First of all, **health promotion** measures are aimed at raising awareness and to disseminate information about health and physical activity, nutrition, clinical tests et cetera.*

*Some examples of health promotion are:*

**Computer-based tool of health reminders and guidelines**

A health/social care provider has initiated a program, which is meant to increase positive health behaviours amongst 65-74 year olds, by using a computer-based tool of health reminders and guidelines. This is achieved through a combination of training, empowerment and information provided to the older people through meetings and groups and individual counselling, and computer-based tools to remind and assess outcomes. In addition, the programme has the objective of raising awareness and understanding of important health issues of older people by health providers (specifically community-based family physicians and nurses).

As a result of the programme, greater adherence and compliance of the target population to health promoting behaviours (e.g. vaccinations, other important diagnostic tests, proper nutrition and exercise) has been observed. Furthermore, there is greater involvement of primary-care physicians and nurses in the needs of the older people and health promotion activities.

**Osteoporosis 'village'**

A health care provider has taken the initiative to create an osteoporosis 'village' consisting of tents with the aim of informing people about the pathology of osteoporosis and giving them practical information on how to avoid osteoporosis. Visitors can visit a tent on physical activity, nutrition, supplements and so on. Participants receive a passport, which they can discuss with their general practitioner. Until now, this 'village of tents' has visited more than 20 villages and towns, whereby local general practitioners and pharmacists also organised activities in parallel. The main partners of this initiative include patient organisations, industry and pharmacies.

**Reliable information on clinical diagnostics**

This initiative is aimed at facilitating the access of patients and citizens to peer-reviewed and reliable information on clinical diagnostics. Its primary objective is to help citizens better understand the nature and the crucial importance of laboratory tests for diagnosing and treatment of diseases, including graphic explanations of procedures performed both in routine care settings and in the diagnosis and treatment of a broad range of conditions and diseases.

**Vaccination and public health strategy**

This vaccine manufacturer emphasises that vaccines are an underused public health strategy for healthy and active ageing. They mention that despite strong evidence for the efficacy of immunisation in reducing the burden of influenza, pneumococcal disease and other vaccine preventable diseases in older adults, there is a gap between vaccination recommendations for older populations and actual vaccination rates in Europe which remain low. For instance, although countries in Europe have vaccination schedules that recommend annual influenza vaccination among persons 65 years and over, except in two countries (UK, Netherlands), flu vaccination coverage is below WHO and EU objectives (75% set for 2010).

According to this manufacturer, a shift is needed from paediatric-centric vaccination programmes to life-course immunisation strategies by establishing, strengthening and coordinating adult and senior vaccination policies in Europe. Furthermore, they mention that innovative vaccines are available or upcoming that can further reduce the disease burden and improve the activity and quality of life of seniors. This might reduce the considerable morbidity, unnecessary complications and deaths in older adults (50-60 years old and over), and keep them healthy, active and autonomous at work and in their social life (against flu, pneumococcal disease, shingles). As a side-effect, costly treatments would decrease the

pressure on health care services, especially hospitals, eased, health care costs for the individual and society decreased, and work absenteeism decreased.

**Regional prevention centres**
An organisation has opened ten prevention centres across its country targeting active people, pre-retirees and retirees by offering them the opportunity to take a preventive personalised medio-psycho-social assessment. These centres also organise educational conferences and workshops for anyone aged 50 and older - active, pre-retired or retired (and their spouse) - provided that his/her supplementary pension fund is adhering to the prevention centre.

*The second subcategory, **disease/disability prevention** includes activities focused on identification (i.e. early diagnosis or detection) and treatment of asymptomatic persons who have already developed risk factors or pre-clinical disease, implying negative outcomes without treatment, but in whom the condition is not clinically apparent.*

*Some examples of disease/disability prevention are:*

**Preventing injuries using smart body fixed sensor-based technology**
This research project has the ultimate goal of assisting older people in maintaining independent mobility and daily life activities and to prevent injuries by introducing smart body fixed sensor-based technology that allows medical professionals to initiate interventions in the home environment. To achieve this goal, this project will design, test and release a next-generation, smart, wireless on-body system which enables: monitoring of activities of daily living, simultaneous real-time active control of physical performance using principles such as sensory augmentation and biofeedback. The architecture will introduce new ICT solutions that make the proposed system: easy-to-wear and easy-to-use, active anywhere, anytime, and cost effective.

**Alzheimer's: innovation in diagnostics**
A national public authority has several programmes supporting innovation in healthy ageing such as 'Research and Growth and Competence' centres dealing with diagnostics and treatment of Alzheimer's, smart IT solutions or prevention like anti-diabetic food centres. One of the main anticipated outcomes is innovation in the diagnostics of Alzheimer's disease.

*The third subcategory, **treatment** deals with all possible proven interventions and programmes that help treat symptoms of diseases and conditions that have been developed in older people and which lessen the impact of the disease. These can include medical products and devices, therapeutics, patient adherence or compliance programmes, monitoring patients on treatment.*

*Some examples of 'treatment' are:*

**Spinal complaints: development of new technologies**
A health/social care provider aims to improve the life standards of older people living with spinal complaints through the development of new technologies in spinal surgery and the improvement of surgical and non-surgical treatment possibilities. They also aim to improve and develop rehabilitation modalities.

**Chronic diseases: an all disease management programme**

This European-wide social insurer platform is involved in numerous initiatives, including an all disease management programme, which is patient centred and focused on secondary prevention, i.e. preventing/delaying progression of a diagnosed disease. The primary objective of this programme is to improve the care provided to chronically ill insured persons with the aim of avoiding the onset of permanent damage and/or future complications as a result of their disease. This programme is intended to help ensure that care is provided in a cost-effective manner according to the needs of the patient. The long-term aim is also to reduce overall treatment costs by avoiding complications, hospitalisation, and permanent damage to the patients in question.

Results already show significant advantages for enrolled patients, including lower overall mortality rates; lower occurrence of major complications – myocardial infarction, stroke, chronic renal insufficiency, amputation of lower leg or foot; lower average overall drug and hospital costs; and, a lower increase in drug and hospital costs.

**Rheumatoid arthritis: reducing pain and risk of cardiovascular disease**

The aim of this local university's initiative is to increase physical activity in patients with rheumatoid arthritis in order to improve their mobility, reduce pain and reduce the chance of cardiovascular disease - the major cause of death in this patient group. The programme also aims to provide evidence for the benefit of exercise to rheumatoid arthritis patients to educate health providers.

An exercise programme is delivered 3 times a week - twice in a hospital setting combined with one home-based activity to show that a mild walking exercise improves the mobility of these patients and improves their mental well-being. A direct link from this exercise to the reduction of heart disease cannot be made, however, patients' health improves once they experience the exercise and are given precise evidence of the benefits by health professionals.

**Dementia: slowing down using computer games**

A research/academic institution underlines the importance of mental training and measurement. According to them, maintaining cognitive abilities is important for healthy ageing as well as for slowing down dementia caused, for example, by Parkinson and Alzheimer diseases. Computer games, combined with data collection and evaluation could deliver hints about the declination process of mental abilities. A technology incubator (a company specialised in the development of technology start-up companies) should help finance and supervise the development of such a start-up, and decide on several milestones.

**4. Innovative solutions for active ageing: 15% of existing initiatives**

*This category is about innovative solutions for active ageing, independent living and social inclusion. It refers to the provision of health care and social services that help and assist older people in realising their potential for physical, social and mental well-being throughout their lives. It also refers to their participation in society according to their needs, desires and capacities. Therefore, this category contains independent living initiatives and solutions. It addresses the availability of web-tools and a wider variety of toolkits for social interaction activities and for the provision of services at home, in mobility and in the workplace. These are aimed at improving older people's quality of life, mental health, and self-esteem. As a result, the following subcategories are defined: independent living initiatives, web-tools, social interaction and active ageing and the workplace.*

***Independent living initiatives*** *are designed in order to extend the time older people can live in their own homes by increasing their quality of life, autonomy, and safety, and by assisting them in carrying out their daily activities (e.g. ambient assisted living), while respecting privacy and ethical requirements.*

*Some examples of independent living activities are:*

**Staying at home: therapy, consultation, technical aids, and home adaptations**
This initiative involves mobile occupational therapy and includes the involvement of health insurance companies and municipal social funds. The aim is to enable older persons or persons with an existing health problem to stay in their home, to promote their competence to perform daily occupations, and to improve their quality of life and well-being within their personal context. The affected older persons receive therapy, consultation, technical aids and home adaptations, which have prevented many of them from institutionalisation.

**Monitoring changes in cognition and mood**
A large firm in collaboration with academia, jointly funded by the industry and the public national authority, is doing research to enable older people to continue living independently in the homes of their choice, with the help of technology. There are three strands of research: fall prevention, cognitive function and social connection.

The centre combines clinical knowledge with the latest technology to conduct breakthrough research into the physical, psychological and social consequences of ageing. The assessments performed at the centre have uncovered a number of health conditions that otherwise might have gone undetected, from heart disease to early cognitive decline and hidden depression. Furthermore, they have a platform, which is a combination of hardware, sensors, software, services, and a graphical development environment that enables therapists, clinicians and engineers to rapidly deploy technology solutions for biomedical research.

They also have a prototype service, including specially designed hardware, to investigate the way technology can help to detect significant changes in cognition and mood for older people in their home.

**Dementia: cognitive support**
According to this university, persons with mild dementia should be able to take part in society without being seen as very different, just using a bit more cognitive support than the rest of us who use calendars and other memory aids. Therefore, this university is running an initiative which aims to be a holistic solution by assisting persons with dementia within their own homes and outside. It gives dementia patients an increased independence and quality of life, while relieving their carers from always having to be around to support them. This service could easily be customised to address the individual needs of each person and their carers, for memory support, helping with daily activities, maintaining social contacts and increased safety.

**Raising awareness on the impact of fall injuries among older people**
An EU-level NGO has partnered with national institutes of public health, pension organisations, and care professionals to raise awareness of professionals as to the impact of fall injuries among older people. An increase in local initiatives for older people's safety has been observed and an EU-status report on the size of problem and strategy for prevention proposed.

**Reducing falls by increasing muscle strength**
The aim of this SME is to reduce falls and the knock-on effect by increasing muscle strength through simple chair based exercises, which are on a DVD. According to them, their clients have reported that they have found the programme extremely beneficial and they have better health as a direct result of following the routine 2-3 times a week. This SME reports that the DVD has helped sufferers of arthritis to increase their mobility and the use of their hands and stroke patients (with weak legs) to walk further and longer. This SME cooperated with a research centre and is working on a second DVD.

**Implementation of national fall prevention strategy at local level**
A private individual is involved in a local initiative involving a fall prevention programme and implementation of a national fall prevention strategy. The aim is to prevent falls and injuries amongst the older people in a local area by providing them with an 8 week balance exercise class, home exercises and educational sessions. Results already indicate clinical functional improvements in balance for the group of participants.

*Web-tools are web and digital tools such as ICT tools, soft and hard ware, internet, social networking and communication tools like facebook, twitter, skype, and e-services on social and health care (counselling, advice, blogs).*

*Some examples of web-tools are:*

**Social networking: introduction to the 3D-world**
A project has been launched by a consortium to introduce older people to the 3D-world (e-mail, skype, websites), so that they can meet other people and take note of different products and services. The result is that people create new social networks not only in the 3D-world, but also in the real world.

**Older people using computers and mobile phones**
A not-for-profit charitable company has developed a programme for older people, jointly with two other organisations, creating an opportunity for learning and training older people to use computers and mobile phones, enabling them to live more independently. By creating more learning opportunities available for older people, members feel that learning is a lifelong process which does not have to end as they age. The centres where the training is provided are to be consistently expanded thus targeting a wider audience amongst older people.

*Social interaction covers social activities among older people themselves, between older people and carers (health and social workforce) or a combination of programmes aimed at both health and social gains overcoming social loneliness.*

*Some examples of this subcategory are:*

**Social interaction through a creative meal setting**

A regional public authority has taken the initiative to organise meals for older people in a creative meal environment aimed at developing a transnational cluster model to support active ageing. The outcome is that these people not only eat nutritious food, but experience a positive meal situation in a harmonious social environment. This makes older people want to eat, preventing malnutrition and sequelae in older people at high risk. A quadruple helix model is used which involves innovation actors, regions, the older people, municipalities, industry, and a university.

**Improving well-being for older adults after stroke**

A national project of different universities has the aim to improve well-being, activity and social participation for older adults after a stroke. They work together with hospitals, senior centres, health care professionals (occupational therapists) and volunteers. The universities hope to develop this project across borders.

**Free help-line on local activities and services for older people**

A regional authority aims to support older people to live independently and to stay well for as long as possible, focusing on the older people who do not intensively use health or social care services. The first strategy's annual action plans have delivered over 40 projects, including a project which is run for all older people, but especially for those who are isolated or otherwise hard to reach. This project provides a free phone number to ask for help to find local activities and services. There is also a region wide network of volunteers who visit an older person at home if a little more help with information provision is needed.

**Financial support for community volunteers to help keep older people active**

This initiative is a national programme targeting older people and communities. The Government provides financial resources to support volunteer community agents to keep older people active and make the most of their later lives. This helps older people try new things, contribute to their communities and build social contacts. This money is available for local community groups or organisations within 30 selected areas.

*The subcategory **active ageing and the workplace** includes support or a customised workplace, enabling older people with conditions/diseases to participate in working life.*

*Some examples of this subcategory are:*

**Providing support in returning to work following a stroke or burn-out**

A consulting company in cooperation with informal carers is supporting people back to work after burn-out or a stroke. According to them, going back to work is good for increasing self-esteem and preventing social isolation.

**Supporting health professionals to continue work after retirement age**

In this project, a research institute and a social insurance organisation are developing a career planning service to enable health professionals such as nurses and radiographers to continue to work after their retirement age. According to this institute, the challenges that are placed on Allied Healthcare Professionals (e.g. occupational therapists, physiotherapists, nurses) within the system are changing as it faces demographic changes and an increasing need to treat patients at home rather than in hospital. Furthermore, these employees have built their careers in an employment environment where a salaried position is the norm; however, changes in patient demands and treatment options have led to an increasing emphasis placed upon an entrepreneurial attitude to work. This project creates ways to enable them to extend their

careers in an entrepreneurial and responsive manner. This can lead to individuals setting up their own private practice business venture rather than the conventional salaried position. The service is being developed together with end-users and will be piloted.

**Development of tools to strengthen inclusion of older people in job market**
The aim of this research institution is to strengthen participation of older people in society. Therefore, among other, they develop and test new tools to strengthen inclusion of older people in the job market. The project is still in progress with five countries participating. The outcomes are to include a database and a tool-kit that introduce results of pilot projects and inform others on how to implement the tools themselves.

### 5. Valorisation of research/Product development: 11% of existing initiatives

*This category is about the process of converting research findings into practical medical and health applications to enhance human health and well-being.*

*Some examples of this category are:*

**Innovative drugs: novel and scaleable processes to develop drugs faster**
A research/academic institution has partnered with major pharmaceutical companies to use research and science to manufacture more innovative drugs for older people. Significant progress has been observed by using novel and scaleable processes to develop drugs faster, yet a funding issue remains as it covers only part of the innovation process.

**Development of smart orthotics for upper limb tremor suppression**
A research centre is working closely with a number of European universities with the aim of developing smart orthotics for upper limb tremor suppression. The proof of concept has been successfully tested and validated on tremor patients.

**New generation of hip protectors: successful testing**
A private individual has been involved in the development of a new generation of hip protectors using new technology to overcome the failings of earlier generations. A successful testing of the new generation of hip protectors has already been observed.

### 6. Training: 7% of existing initiatives

*This category addresses health literacy, training and educational programmes targeted at patients, health professionals, other carers and care providers.*

*The first subcategory deals with the involvement of **patients** by initiatives and programmes, rising awareness of diseases, and disseminating information about diseases, as socio-educational projects enabling better quality of life and autonomy.*

*Some examples of involvement of patients are:*

**Socio-educational project for retired people**

A specialised training organisation in the field of active ageing has taken the initiative in developing a socio-educational project to achieve the best possible quality of life for retired people and to promote their participation and greater contribution to society. As a result, they have opened more than 10 schools for people over 50 and several older people's associations have been created. Around 90% of the participants of the schools are still being trained and participating through the created associations or other associations.

**Alzheimer's: information, experience and knowledge for the family**

An EU-level non-profit organisation, representing nurses, has developed an internet programme for families who have a relative with Alzheimer's. The aim of the programme is to bring information, experiences and knowledge directly to the family. As a result, it has indeed helped families, husbands and wives, who are not able to get out of their house because their relative has Alzheimer's. With this programme, they can come in contact with others in the same situation. There is also tailored information about the disease and a book explaining this initiative has been published.

**Training and support Alzheimer's patients and their carers**

A charity registered organisation in cooperation with a regional working group has produced a training DVD which aims to change attitudes of professionals about what people with dementia are capable of. Health Board partners and a local authority have developed a post-diagnostic support service to provide information, training and support to people diagnosed with Alzheimer's and their carers, such that these people could empower their lives. The support service team consists of a social worker, a community-psychiatric nurse and a co-coordinator. The outcomes so far are very positive for individual participants.

*The second sub-category is training of **health and care professionals**. Some examples are:*

**Nutrition and healthy ageing**

An industry association is targeting health care professionals by training physicians on the link between nutrition and healthy ageing and providing them with the means and tools to cascade the information further to regional and local physicians.

**Programme for professionals: supporting carers through dementia**

An international public authority organisation is carrying out research on dementia. This research shows that carers want to care, and people with dementia want to stay at home. It also shows that governments and other providers cannot afford an increase in institutionalisation. To keep people at home, the welfare of carers is crucial. Therefore, they have devised a programme to teach health and social care professionals how to support carers through these transitions. It is delivered in an affordable and accessible way. The course material has been written and will be offered to students in an on-line programme.

**Programme for users of patient data systems**

An association has developed a module specifically for Health Information Systems (HIS). This module is aimed at users of patient data systems, such as doctors, nurses and health care support staff. After the training, the user understands the key features of a HIS; can use a HIS safely and efficiently; understands the ethics, rules and regulations relating to HIS; understands confidentiality, security and access control when using a HIS; and, understands and can interpret electronically recorded data. This association recognises that national requirements, including patterns of practice, culture, language and legislative frameworks, vary from country to country. Therefore, they have created specific local versions of the

certification for different countries in association with health informatics experts in these countries.


**7.** <u>**Coordination of actions/partnerships/exchange information:**</u> **6% of existing initiatives**


**Networking and best practice exchange in physical activity promotion**
A NGO has partnered with a number of national sport organisations across Europe to promote health enhancing physical activity. Together, they engage in networking and best practice exchange with a view to qualifying existing and developing new initiatives. They also highlight and promote cooperation between sport organisations and business, schools, local governments, health organisations and others. Local and regional partnerships have been formed to fund, design and implement local community services for physical activity promotion.


**Inventory of world-wide research centres on ageing**
A European wide research/academic association is working closely with 480 international actors of research in gerontology (most of them in Europe) to have an inventory of all important world research centres on ageing. This can allow better contacts between these centres and can be the start of multi-centre research. The next step is to begin big research projects in the shortest time.


**Consortium addressing key bottlenecks in R&D of medicines**
A research-based pharmaceutical company is participating in an EU initiative, which initiates collaborative projects that address key bottlenecks in R&D of medicines covering safety, efficacy, education and training of researchers, and knowledge management. Each project is conducted by a consortium made up of interested pharmaceutical companies and a group of academic centres and SMEs from several EU countries. The initiative has its own research agenda but many of its ongoing and future projects will address issues of relevance to healthy ageing. This initiative focuses on tackling specific scientific barriers relating to drug development, a process which can take up to 12 years from compound discovery to registration of a medicine.


**Coordination of existing ageing research programmes in Europe**
This initiative is in its second phase and aims to coordinate existing ageing research programmes in Europe in order to maximise synergy and minimise duplication. It actively promotes ageing research and capacity building in this field and is a consortium dedicated to improving the experience of later life through research and related activities. A project included in this partnership is designed to create a definitive road map for ageing research in Europe. This project has undergone an extensive consultation, with all relevant stakeholders (European, national and local). Both this partnership and the project are multidisciplinary initiatives spanning biogerontology, environmental sciences, clinical sciences, and social and behavioural sciences.


**Cluster of research on assistive technologies**
A local public authority is cooperating with a technical development group in this project. This is a project under the Seventh Framework Programme (FP7) which aims to lay the groundwork for the creation of a new cluster of research on assistive technologies. To achieve this aim, this project focuses on improving coordination among local actors operating in the sector and on maximising existing efforts and infrastructure and the establishment of a

common vision and strategy. In other words, improving the socio-economic development and strengthening capacity for research and technological innovation not only in the city but also at regional level.

## 8. Guidelines/Influence policy-making: 5% of existing initiatives

*This category addresses clinical guidelines as well as strategic and policy driven guidelines/programmes and models that provide practical guidance for the creation of interoperable products.*

*Some examples of this category are:*

**Interoperability guidelines to create interoperable products**
This company belongs to a membership organisation of more than 230 companies, public health authorities, research organisations and other companies in all parts of the world. It is a non-profit, open industry organisation of health care and technology companies has joined together in collaboration to improve the quality of personal health care. This organisation has been working to establish the conditions necessary to enable an ecosystem of interoperable personal health solutions. Ageing independently is one of the working pillars of this organisation, together with Health and Wellness and Chronic condition management. The members of this organisation develop products and services for use across the continuum of life.

The key outcomes are the Interoperability Guidelines that provide practical directions on creating interoperable products. Tested and final products obtain the organisation's certification through an independent verification process. As of January 2011, approximately 25 products have received this certification.

**Directive on dental care for older persons residing in institutions**
A health/social care provider has collaborated with different universities and the insurance sector to develop and implement a national directive on dental care for older persons residing in institutions with the aim of improving oral care of these older people. An improvement of dental care in nursing homes and similar institutions has already been observed.

**Policy recommendations on depression**
This patient-driven pan-European organisation has established an expert platform of neutral multi-stakeholders, which acts vis-à-vis political decision makers and provides policy recommendations on depression. It is composed of leaders from stakeholder groups that represent various disciplines in the area of depression, i.e. health care professionals, patient groups, carers, workplace promotion associations, policy makers, industry as well as key opinion leaders (including psychiatrists, psychologists and health economists). Other experts (.e.g. geriatricians) are consulted on an ad hoc basis. The mission of this expert platform is to support the European institutions in the implementation of recent EU mental health policy developments.

## 9. Environment/Infrastructure: 2% of existing initiatives

*This category focuses on mobility and safety needs of older people, including an assessment of infrastructure provision and maintenance, public transport options, new technologies, vehicle design and regulation.*

*Some examples are:*

**Highly sustainable and healthy residential building**
This industry-led initiative brings together a consortium of multinational companies from across the construction value chain to address the European need for highly sustainable residential buildings. The main aim is to accelerate the uptake of energy-efficient, healthy homes that integrate smart technology into cost effective solutions that reduce the consumption of resources while enhancing the quality of life of its inhabitants.

**Equipping preferred living environment with home technology**
A research institute has extensive experience in adapting houses with technology, such that older persons can keep as long as possible independent in their own preferred living environment while maintaining a high quality of life. As a result, during the last decade, many houses in cooperation with housing associations, building companies, care organisations, consultancies and industrial suppliers have been equipped with home technology, varying from a €2000 to more than €10,000 per dwelling.

**Designing sustainable communities for active ageing**
People's health is affected by the nature of their physical environment – such as living in poor housing or in a deprived neighbourhood with lack of access to green spaces – which impacts negatively on physical and mental health. Consequently, this national wide initiative aims at designing sustainable communities for active ageing, which also includes the protection of green spaces, a community sport programme and improving access to land so that people can grow their own food.

**Infrastructure to avoid that older people lose their autonomy**
A private individual is involved in a project on housing for older people. This project proposes that housing professionals coordinate medical-social interventions so that older people who wish to continue to live at home do so in an 'ageing-friendly' adapted environment. To avoid losing their autonomy, an infrastructure is provided whereby, for example, nearby transport allows older people to participate in activities outside of the house or a social care provider is available to accompany them to the supermarket.

## 10. Boosting competitiveness (SMEs): 1% of existing initiatives

*This category is about market expansion and fostering competitiveness and growth of businesses (including SMEs) in the pharmaceutical, medical devices and ICT enabled health care sectors.*

*The focus is on creating incentives and conditions (legal, financial, business etc.), facilitating development of innovations and its commercialisation, bringing returns on investments, and bridging the supply demand gap.*

*Some examples of this category are:*

**Health as major economic growth factor for the region**
A private individual in close cooperation with regional authorities has written a plan to develop the health sector (health care delivery, health sciences, medical technology sciences, biotechnology, health economies, health IT, and health industry) into a major economic growth factor for the region. This plan has been implemented.

**Supporting SMEs to develop innovative products for wellness and health**
A national initiative has the aim to support SMEs that are developing innovative products, services or applications for the growing wellness and health market, and to help them with core services (market intelligence, product technology and innovation support, business development) to take advantage of the opportunities that exist in this expanding market. Furthermore, they generate a community of health and wellness companies and partners.

### (iv) Future initiatives

### 1. Innovative way of care: 21% of future initiatives proposed

*Innovative way of care is a very broad concept that covers innovative organisation of care such as modernisation and re-organisation of care structures as well as integration of care delivery (health and social, home and self care) as well as tele-care and tele-health. The new approaches to organisation of care, tele-care and tele-health are defined below and some examples of each category are given.*

*'Innovative organisation of care'* *is defined as the transformation of care systems from reactive and episodic to integrated and proactive, based on continuum of care – from diagnosis through treatment to rehabilitation. In other words, vertical and horizontal integration of care based on ICT, case and disease management, and interaction of all actors involved in delivery of care (patients, care providers, insurers and payers, pharmacists, health professionals and other carers) in a more coordinated and collaborative way.*

*An example of 'innovative organisation of care' is:*

**Reimbursement and funding for cardiac devices and disease management**
An industry association would like to develop new models for reimbursement and funding for remote cardiac device monitoring and ultimately chronic cardiac disease management that would fit country-specific needs. These new funding models should respond appropriately to the new paradigms of care and to the medical technology and ICT solutions designed with a holistic approach. This should be achieved through a collaboration of all stakeholders (Ministries of health, patient organisations, health care providers and industry) involved in the development, communication and application of these novel solutions. As a result, this might, among other things, bridge the gap in hospital, ambulatory and community care management for cardiac conditions. This, of course, might improve the access and quality of care.

*There are many definitions of* *"tele-care and tele-health".* *By categorising, the following definition of tele-care is used, namely:* **tele-care** *is used to monitor the situation of people dependent on external help (i.e. older people or disabled people) in the home setting, by providing person-centred technologies, for instance social alert systems and social services.*

*An example of tele-care is:*

**Decentralised assistance treatment with smart ICT**
A company has in mind to start an R&D project in cooperation with public authorities, professionals and citizens aimed at creating and implementing a generic base platform on which applications can be developed to facilitate a reduction in the degree of a patient's dependency and thus improving their autonomy. The idea is to decrease patient's dependency by promoting decentralised assistance treatment and care through support by smart ICT, which is continuous and personalised. Furthermore, the patient will profit by increasing the monitoring and control measures of its evolution. Health professionals can evaluate the health condition and patient's progress through the data collected by the platform. Appropriate corrections and modifications could therefore be made to increase the effectiveness of treatments.

*As stated earlier, there are many definitions of tele-health. Tele-health concerns clinical issues as well as non-clinical issues. By categorising, the following definition of tele-health is used, namely: **Clinical tele-health** is the use of telecommunication technologies to provide health care services and access to medical and surgical information like medical data, medical images or laboratory tests, health advice by telephone in emergency cases, and advice on prevention of diseases. Furthermore, **non-clinical tele-health** incorporates distance education, health care system integration and management.*

*Some examples of tele-health are:*

**Remote communication by voice and video transmission**
According to a consulting company, there is a low implementation of modern technologies in the provision of social services. Options that are available today, especially in wireless technology, remote multimedia communication and data transfer, are being only partly used. A uniform system to monitor the services offered and their respective billing and payment is lacking. Social service providers have a limited range of technologies at their disposal that aim to improve logistics and time management.

This ICT health care consulting company proposes a number of future initiatives, including tele-health technology that would allow remote communication with the end-user/patient through the use of voice and video transmission without the physical presence of health care and social care personnel. They also propose integration of existing data sources (registries and information systems) to increase the availability and relevance of data.

**The citizen as a co-producer of the health service model**
A consortium consisting of academia, research centres, universities, SMEs, hospitals and the IT industry are interested in creating a community and involving different stakeholders in raising political awareness of ICT for Patient Guidance Systems. This would enable the citizen to be a co-producer of the health service model. The aim is for health issues management in the future to be predictive, preventive, personalised, participative, and pervasive and to break down barriers between the supply side and demand side.

**2.  Evidence/data/research: 19% of future initiatives proposed**

*This category is about all types of research activities (general, medical) and in particular data collection, and economic cost-benefit/effectiveness analysis. Therefore, the following subcategories are defined: medical research, collection of data, and other.*

*The category '**medical research**' covers basic and applied research. Basic research is the understanding of the nature of diseases, processes and conditions, while applied research is scientific and societal research conducted to improve health and well-being, but without the practical application of the findings.*

*An example of medical research is:*

**Exploring parameters of brain functioning**
A specialised laboratory would like to contribute to finding more evidence at the neurophysiological level on the benefits of any type of intervention in older people. The parameters of brain functioning could serve to take decisions on the type of interventions that

are appropriate to take with older people. For instance, to evaluate the benefits of drugs to see how brain networks improve their efficiency as a direct effect of a particular product.

The most interested type of actors in this ageing research include people interested in aging from different perspectives, cognition, sociology, psychology, psychiatry, neurology, neurophysiology, neuropsychology. Additionally, it would be important to involve pharmaceutical companies that would like to evaluate the benefits of drugs and see how brain networks improve their efficiency as a direct effect of a particular product. A number of papers have already been published on brain activity in healthy and pathological aging.

*Collection of data is about information and evidence. Therefore, it includes as well primary data for statistical analysis and econometric modelling as data regarding implementation of an intervention, as reporting and monitoring factual information.*

*An example of 'collection of data' is:*

**Database integrating nutritional, psychosocial, environmental and genetic data**
A private individual is launching the idea of a large scale database of non-immunological data integrating nutritional, psychosocial, environmental, genetic and other parameters into individualised signatures associated with that person's likely healthy or unhealthy ageing trajectory. Immune ageing is associated with ill health, poor response to vaccination and decreased life expectancy. This database might be particularly interesting for multli-disciplinary teams spanning sociologists, psychologists, geriatricians, epidemiologists and many others.

*The last subcategory 'other' is, among other things, about cost effectiveness (qualitative) and cost benefit (in monetary terms) analysis and studies. In other words, it deals with economic evaluations that examine and compare the costs of health interventions and strategies (any activity aiming to improve health) with the expected health outcomes/gains (reducing the risk of any health problems).*

*An example of this subcategory 'other' is:*

**Coordination of clinical trials and treatment of Alzheimer's disease**
An industry group formed to coordinate research proposes the coordination of clinical trials and treatment of Alzheimer's disease and mild cognitive impairment with other academic partners in the EU.


3. <u>**Continuum of care:**</u> **16% of future initiatives proposed**

*Continuum of care is about health promotion, disease and disability prevention and treatment for rehabilitation.*

*First of all, **health promotion** measures are aimed at raising awareness and to disseminate information about health and physical activity, nutrition, clinical tests et cetera.*

*Some examples of health promotion are:*

**Promoting prevention to ensure self-sufficiency in old age**

This organisation proposes to work together with public administrations, the health insurance sector, media, and personalities to promote prevention so that the people can be self-sufficient in old age. They would do this by helping older people change their lifestyles - particularly their eating habits. The aim is to also significantly reduce utilisation of health insurance.

**Improving health knowledge of patients and their families**

According to a patient organisation, organisations running health campaigns are concerned that inappropriately informed society encounters difficulties in undertaking preventive actions. The aim of this proposed initiative is to improve the health knowledge of patients and their families (as informal carers) by prevention-focused health care management based on education. In particular, the aim is to improve individual patients' compliance with recommendations for non-pharmacological (physical activity and diet) and pharmacological treatments.

*The second subcategory, **disease/disability prevention** includes activities focused on identification (i.e. early diagnosis or detection) and treatment of asymptomatic persons who have already developed risk factors or pre-clinical disease, implying negative outcomes without treatment, but in whom the condition is not clinically apparent.*

*An example of disease/disability prevention is:*

**Alzheimer's: identifying markers for early diagnosis**

According to a research institute, the rate of progress of Alzheimer's disease can only be decreased for 30-40% of the patients today. This research institute, in cooperation with a health care provider, is proposing to identify markers for early diagnosis of Alzheimer's, to evaluate the effectiveness of new pharmacological treatments for the prevention of Alzheimer, and to start the treatment of Alzheimer's at an earlier phase.

*The third subcategory, **treatment** deals with all possible proven interventions and programmes that help treat symptoms of diseases and conditions that have been developed in older people and which lessen the impact of the disease. These can include medical products and devices, therapeutics, patient adherence or compliance programmes, monitoring patients on treatment.*

*An example of 'treatment' is:*

**Implementing full homecare-package for stroke, COPD, and heart failure**

The primary goal of this proposal is to implement the full homecare-package for stroke, chronic obstructive pulmonary disease (COPD) and hearth failure in pilot-projects in 10 different Member States. Participating regions are committed to monitor their results by the benchmarking system in order to compare their baseline with the pilot-results and the pilot-results with best international practice. The final goal of the project is that each executive region, in collaboration with the centres of excellence, summarises their executive results in a report to be disseminated before a national conference. This is supposed to give the best possible platform for dissemination of new health care interventions which are beneficial to Europeans both as patients/relatives and citizens.

**4.** <u>**Innovative solutions for active ageing:**</u> **13% of future initiatives proposed**

*This category is about innovative solutions for active ageing, independent living and social inclusion. It refers to the provision of health care and social services that help and assist older people in realising their potential for physical, social and mental well-being throughout their lives. It also refers to their participation in society according to their needs, desires and capacities. Therefore, this category contains independent living initiatives and solutions. It addresses the availability of web-tools and a wider variety of toolkits for social interaction activities and for the provision of services at home, in mobility and in the workplace. These are aimed at improving older people's quality of life, mental health, and self-esteem. As a result, the following subcategories are defined: independent living initiatives, web-tools, social interaction and active ageing and the workplace.*

*__Independent living initiatives__ are designed in order to extend the time older people can live in their own homes by increasing their quality of life, autonomy, and safety, and by assisting them in carrying out their daily activities (e.g. ambient assisted living), while respecting privacy and ethical requirements.*

*Examples of this category are:*

**Safe at home**: **installation of 'personal security' services**
A regional public authority together with industry, research institutes and health care providers would like to foster implementation of 'personal security' services on a large scale for older people. Social care and health providers are trained to attend vulnerable clients' homes. Once the risk has been identified, a referral is made from the agency to the Fire Service who attends and puts in place risk reduction measures at no cost to the individual. This may range from a standard home fire risk check to, in the extreme, supplying a sprinkler system and a care call package linked to a call provider.

These security services satisfy some of the most important needs of older people: feeling safe at home against events such as gas and water leakage, water, temperature problems (summer heat), falling, etc. There is also room for exploring regional variations as the service providers can vary from region to region.

**Fall prevention**
According to a university, fall prevention continues to be a challenge in Europe contributing to the loss of independence of older people. About 40% of nursing home placements are related to falls. As such, this university proposes that the implementation process in fall prevention could be combined with research on physical activity, taking into account body structure, functional capacity, and personal factors. Interventions should focus on reducing falls and fall related injuries, and increasing adherence to the programs by the end-user in the community-dwelling setting. A gender-specific approach should be used. European standards should be established to train future fall instructors taking into consideration different national contexts. Finally, recommendations and international guidelines for successful interventions should be developed in collaboration with other fall prevention researchers and NGOs.

*__Web-tools__ are web and digital tools such as ICT tools, soft and hard ware, internet, social networking and communication tools like facebook, twitter, skype, and e-services on social and health care (counselling, advice, blogs).*

*Some examples of web-tools are:*

**Scaling-up internet community to European level**
A non-profit organisation has developed and implemented an internet community in cooperation with a public broadcasting organisation and an organisation for older people. The aim is social participation for older people, but also empowering of self-management by contact with other people with the same disease. In practice, online contacts often result in offline contacts. The idea is to scale up this initiative to European level and to elaborate this initiative with other e-modules, coaching, information and training. This initiative is already being positively discussed with interested partners and other key stakeholders such as organisations for older people, media, IT industry, food and nutrition and physical activity or prevention institutions.

**Creating an online community**
A private individual proposes an initiative aimed at improving the quality of life of older people by creating an online community. This is to be achieved by creating and sharing content, blogging, creation of social networks and the development of joint activities for people with the same or similar interests. The aim is to cut boundaries between regions and countries and to show that people with common interests can communicate with each other regardless of borders. The project idea is based on current advanced technologies of computer science, hardware and software technology to support Web 3.0 internet activities. A team of representatives from consultants in the field of psychology, sociology, IT specialists and experts in computer graphics is to be involved.

*Social interaction covers social activities among older people themselves, between older people and carers (health and social workforce) or a combination of programmes aimed at both health and social gains overcoming social loneliness.*

*An example of this subcategory is:*

**Local centres offering personalised programmes**
According to a stakeholder, older people often seek a friendly-environment where they can feel included and empowered. This stakeholder proposes the creation of local centres of active ageing where older people can have a true global evaluation of their state and follow a personalised program. The programme is carried out by a multidisciplinary coaching team: psychologist, physical coach, memory specialist and an art therapist. The centres all have a computer classroom, fitness room, art room, individual consulting room and a socialisation tea room. Possible partners would be insurance companies, health care providers.

*The subcategory active ageing and the workplace includes support or a customised workplace, enabling older people with conditions/diseases to participate in working life.*

*An example of this subcategory is:*

**Active participation in the workforce for people with Multiple Sclerosis**
According to this respondent, independent research shows that people living with Multiple Sclerosis tend to have a lower participation in paid employment compared to those with other chronic conditions. Many people with Multiple Sclerosis stop working within 2-3 years of diagnosis. Therefore, this industry association proposes a programme to support people with Multiple Sclerosis in the workplace to enable them to be productive and rewarded for at least 2 years longer. The planned programme thus envisages a variety of actions, ranging from flexible working conditions and the use of new technology to support active participation in

the workforce. Subsequently, this initiative could be broadened to a wider range of people with disabilities. Multiple Sclerosis is the starting point as this disease often strikes during the prime of life and continues for many decades. Key partners for this initiative are major, progressive employers in Europe, patients groups, physician groups, innovative pharmaceutical and medical devices companies, as well as companies leveraging cutting-edge technologies supporting a flexible working environment.

## 5. <u>Valorisation of research/Product development: 9% of future initiatives proposed</u>

*This category is about the process of converting research findings into practical medical and health applications to enhance human health and well-being.*

*An example of this category is:*

**Development of an infrared imaging device**
An SME specialising in R&D of biomedical devices (most notably infrared cameras for biomedical purposes) proposes the development of an infrared imaging device for the assessment of microvascular function. In doing so, an infrared functional imaging device would be ready for serial production, and a large database of microvascular functional properties in adult and geriatric populations affected with different diseases could become available. Main partners to be involved would include medical universities, image analysing research institutions and other SMEs.

## 6. <u>Training: 6% of future initiatives proposed</u>

*This category is about health literacy, training and educational programmes targeted at patients, health professionals and other carers and care providers.*

*The first subcategory deals with the involvement of **patients** by initiatives and programmes, rising awareness of diseases, and disseminating information about diseases, as socio-educational projects enabling better quality of life and autonomy.*

*Some examples of involvement of patients are:*

**Training mechanisms to enable older people to use new devices**
A federation of national medical informatics associations would like to establish compatible training mechanisms across different countries to enable older people to use new devices to improve their quality of life and to reduce costs for the community. This would also promote integration of health and social care and improve communication with everyone involved in patient care.

**Training older people on risks and benefits of new technologies**
A private individual proposes the training and coaching of older people on the risks and benefits of new technologies.

*The second sub-category is training of **health and care professionals**. An example is:*

**Training care staff to implement mental health promotion activities**
An NGO aims to develop training (mainly through e-learning) and a handbook for mental health promotion in older people's residences and home visits. The aim of this new project would be to disseminate European-wide information on mental health promotion in older people's residences and train the care staff to implement mental health promotion activities. This project would be carried out in close partnership with other NGO's representing older people and their caregivers, research and development institutions from the Member States and training organisations in the field.

### 7. <u>Coordination of actions/partnerships/exchange information:</u> 8% of future initiatives proposed

**Research agenda to fight neurodegenerative diseases**
According to this initiative, despite scientific progress made in the last 10-20 years in the field of neuroscience, lack of treatment for neurodegenerative diseases remain. As such, this initiative includes 23 European countries and aims at building and implementing a strategic research agenda to fight neurodegenerative diseases. In the future, the aim is to bring together the participating countries to share goals that are reflected not only on the EC budget, but also on their own budgets to reduce fragmentation.

### 8. <u>Guidelines/Influence policy-making:</u> 5% of future initiatives proposed

*This category addresses clinical guidelines as well as strategic and policy driven guidelines/programmes and models that provide practical directions on creating interoperable products.*

*An example of this category is:*

**Developing a pan-European dementia strategy**
According to a regional public authority, 30%-50% of people with dementia are undiagnosed. Therefore, this public authority puts forward a proposal to develop a pan-European dementia strategy with an integrated dementia pathway incorporating its own standards and outcome measures with an emphasis on quality, innovation, prevention and productivity. Furthermore, this authority suggests the development of digital services to underpin the integrated pathway and to benefit service users, carers, citizens, and professionals. Finally, this authority proposes to develop a peer review quality assurance system across Europe. According to this public authority, a high level group incorporating clinicians (health care and social care), academics, commissioners, service users, carers, industry and politicians should be developed.

### 9. <u>Environment/Infrastructure:</u> 2% of future initiatives proposed

*This category focuses on mobility and safety needs of older people, including an assessment of infrastructure provision and maintenance, public transport options, new technologies, vehicle design and regulation.*

*An example of this category is:*

**Evolving health systems closer to the citizen's health**

According to an industry association, currently in many Member States, all professionals in the health network of a public administration can access the history of a citizen. However, the growing demand of citizens to access information regarding their own health history has been supplied by means of virtual offices of services to the citizen, which merely make administrative procedures in a more accessible form.

Taking this into consideration, this association launches the idea of stepping beyond the administration and evolving health systems to get closer to the citizen's health, family and all those features of a personal health history. The target is that citizens acquire a means of consultation that may satisfy their needs of information, acquire new tools for their care and obtain a common communicative space for themselves and for their family and their health professionals. It is intended to put citizens within reach of features of a personal health history, but framed in the health system of a public administration.

## 10. <u>Boosting competitiveness (SMEs):</u> 1% of future initiatives proposed

*This category is about market expansion and fostering competitiveness and growth of businesses (including SMEs) in the pharmaceutical, medical devices and ICT enabled health care sectors.*

*The focus is on creating incentives and conditions (legal, financial, business etc.), facilitating development of innovations and its commercialisation, bringing returns on investments, and bridging the supply demand gap.*

*An example of this category is:*

**Providing industrial consciousness to drive developments to the market**

An industry company proposes to provide industrial consciousness on how to drive developments to the market, appreciate the regulatory pathway to acceptance and use and provide better understanding on how licensing business models and the associated intellectual assets (including IP) are leveraged.

AARP, USA

Abbott Nutrition International

Academy of Finland, Finland

Acarix A/S, Lyngby, Denmark

ADEBAG, France

AGE Platform Europe

Age Related Macular Degeneration (AMD) Alliance International, United Kingdom and United States

Age UK, International Department, United Kingdom

Agence Economique De Bretagne, service international et Europe, France

Agfa HealthCare, Business Development & Marketing, Mortsel, Belgium

AGILE (Chartered Physiotherapists working with Older People), United Kingdom

Allgemeine Ortskrankenkasse (AOK), Deutschland

Alzheimer Scotland, Public Policy Directorate, Scotland, United Kingdom

American Health Information Management Association Global Services Offices (AHIMA GSO)

Amgen B.V.

Amsterdamse Innovatie Motor, The Netherlands

Anglia Ruskin University, United Kingdom

Artica Telemedicina, Spain

Asociación Española de FItoterapia y Nutrición Responsable (AFINUR), Spain

Associação Nacional das Pequenas e Médias Empresas (ANPME), Portugal

Association du Pole Allongement de la Vie Charles Foix, France

Association E-Seniors, France

Association Gérontologique de Gâtine (CLIC de Gâtine & Réseau de santé), Parthenay, France

Association Internationale de la Mutualité (AIM)

Association of British Insurers (ABI), United Kingdom

Association of the European Self-Medication Industry (AESGP)

Association of Universities in The Netherlands (VSNU), the Netherlands Federation of University Medical Centers (NFU), the Netherlands organisation of Health Research and Development (ZonMw), scientific institutions and several public-private partnerships supported  to join forces by the Ministry of Economic Affairs, Agriculture and Innovation, the Ministry of Health, Welfare and Sport, the Ministry of Education, Culture and Science.

Association pour le Redéveloppement Économique de Seine Amont, France

Association pour l'innovation et la longévité (APIL)

Aston University, Aston Research Centre for Healthy Ageing, Birmingham, United Kingdom

AT4 wireless S.A. Engineering and Solutions Division, Spain

Autonomous University of Madrid, Department of Psychobiology and Health, Research group "Assessment and Ageing" (EVEN), Spain

Ayuntamiento de Girona, Área de Políticas Sociales y Cooperación, Sección de Salud, Equipo Municipal de Promoción de la Salud, Técnica de Salud, España

Azienda Sanitaria Provinciale di Catanzaro, Catanzaro, Italy

Azienda Sanitaria Regionale del Molise, Unità Operativa Sovradistrettuale Cure Domiciliari, Isernia, Italia

Bayer HealthCare AG

Belgian Federal Minister for Social Affairs and Health Cabinet of Laurette Onkelinx, Flemish minister of Welfare, Public Health and Family Affairs Cabinet of Jo Vandeurzen

Birkhoven Zorggoed, Afdeling Behandeling en Begeleiding, Nederland

BKK Bundesverband, Abteilung Versorgung,  Abteilung Politik – Europa, Deutschland

Boston Scientific, Health Economics & Public Affairs

Brainport Development N.V., The Netherlands

Bristol community health physiotherapy, Bristol, United Kingdom

British Medical Journal Group, Best Health, BMJ GROUP, United Kingdom

Budapest University of Technology and Economics, Biomedical Engineering Knowledge Centre, Hungary

Bundesarbeitsgemeinschaft der Seniorenorganisationen BAGSO e.V., Pflege- und Gesundheitspolitik, Deutschland

Cabinet of Jo Vandeurzen Flemish Minister of Welfare, Public Health and Family Affairs

CALLIOPE (CALL for InterOPErability) Thematic Network

Capgemini Consulting Netherlands B.V. Public & Health, The Netherlands

Cáritas Diocesana de Valladolid, Residencia San José, España

CECODHAS Housing Europe

CEFRIEL, Italia

Cekoïa Conseil, France

Celgene bvba/sprl, Government Relations and Public Policy Europe, Belgium,

Centre communal d'action sociale

Centre de Recerca i Investigació de Catalunya S.A., Information Technologies and Telecommunication Department (ITT), España

Centre de Recherche Public Santé / Laboratoire National de Santé, Department of Immunology, Luxembourg

Centro para el Desarrollo Tecnológico Industrial (CDTI), EU's R&D Framework Programmes Department, Directorate of Global Innovative Programmes, Spain

Česká asociace sester, Praha, Česká republika

Charité - Universitätsmedizin Berlin, Julius Wolff Institute, Germany

CiS Forschungsinstitut für Mikrosensorik und Photovoltaik GmbH, applikationszentrum mikrooptische systeme, Germany

Citilab

City of Turnhout, Urban Development, Belgium

CNR Santé, FRANCE

COCIR, European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry

Community of Regions for Assisted Living (CORAL)

Confédération des Organisations Familiales dans l'EU (COFACE)

Confederation of the Food and Drink Industries of the EU (CIAA)

Conseil Général, France

Conseil Régional d'Aquitaine, France

Conseil Régional des Pays de la Loire, France

Consejería de Salud (Ministerio Regional de Salud de Andalucía), Departamento Secretaría General de Salud Pública y Participación País, España

Consejería de Sanidad y Dependencia Junta de Extremadura, Extremadura, Spain

Consejería de Sanidad y Dependencia Junta de Extremadura, Dirección Gerencia Servicio Extremeño de Promoción de la Automía y Atención a la Dependencia (SEPAD), Spain

Consejería de Salud de la Junta de Andalucía; Escuela Andaluza de Salud Pública, España.

Consellería de Sanidade, Xunta de Galicia, Servicio gallego de Salud España sociosanitaria, España

Consultoría de Gestión, Spain

Continua Health Alliance (Private Stichting) c/o CISCO

Council of Occupational Therapist in the Europe Countries (COTEC)

Councillor Felicity Hindson (Executive Member for Adult Social Care) Hampshire County Council, United Kingdom

Coventry University, Health Design & Technology Institute, Coventry, United Kingdom

Cruz Roja Española, España

Dansk sygeplejeråd , København K, Denmark

Debreceni Egyetem, Egészségügyi Kar, Gerontológiai Tudományos Koordinációs Központ, Magyarország

Deelgemeente Kralingen Crooswijk, afdeling Expertise, Nederland

Deutsche Krankenhausgesellschaft e.V. (DKG-), Deutschland

Deutsche Telekom AG

DI, ITEK, Denmark

Diputación Foral de Bizkaia, Departamento de Acción Social, España

Dirección general de Salud Pública, Departament de Salut. Generalitat de Catalunya y Universitat de Barcelona, Spain

Doro AB, Sweden

Eberhard Karls Universität Tübingen, Department I, Research, Strategy and Legal Affairs EU-Office, Germany

eHealth Focal Point for Europe (EHTEL)

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Equity in Health Intitute, Italia

Erasmus MC Rotterdam, geneeskunde voor verstandelijk gehandicapten, afdeling

Espace Seniors association, Belgique

EU Health Forum

Eucomed, The European Medical Technology Industry Association

Eucomed, The European Medical Technology Industry Association, Working Group Ophthalmology

Eurocarers, European association working with and for carers

Eurodiaconia

EuroHealthNet, Policy and Advocacy Unit

Europäischer Heilbäderverband (EHV) European Spas Association (ESPA)

Europe Healthcare Compliance Packaging Council of Europe ( HCPC)

European Alcohol Policy Alliance (Eurocare)

European Alliance of Medical and Biological Engineering and Science (EAMBES), with siège légale c/o Division of Biomechanics and Engineering Design, Katholieke Universiteit Leuven, Belgium

European Association for eHealth Interoperability (IHE-Europe)

European Association for Injury prevention and Safety promotion

European Biopharmaceutical Enterprises (EBE)

European Centre for Health Assets and Architecture (Echaa)

European Coalition on Homeopathic and Anthroposophic Medicinal Products (ECHAMP E.E.I.G.)

European Diagnostic Manufacturers Association (EDMA)

European Federation for Complementary and Alternative Medicine (EFCAM)

European Federation of Associations of Health Product Manufacturers (EHPM)

European Federation of Medical Informatics (EFMI)

European Federation of Nurses Associations

European Federation of Pharmaceutical Industries and Associations (EFPIA)

European Foundation for the Care of Newborn Infants (EFCNI)

European Games Developer Federation Ekonomisk Förening (EGDF), Malmö, Sweden

European Generic Medicines Association (EGA)

European Health Management Association

European Hearing Instrument Manufacturers Association (EHIMA) Aisbl

European Heart Network

European Hospital and Healthcare Federation (HOPE)

European Institute for healthcare research and social economy (IEGUS )

European Institute of Women's Health

European Medicines Agency (EMA)

European MHealth Alliance

European Network of Agricultural Social Protection systems (ENASP)

European Network of Occupational Therapists in Higher Education (ENOTHE)

European Nutrition for Health Alliance

European Organisation for Research and Treatment of Cancer (EORTC)

European Parkinson's Disease Association

European Patients' Forum

European Platform for Patients' Organisations, Science and Industry (EPPOSI)

European Platform for Sports and Innovation (EPSI)

European Public Health Alliance (EPHA)

European Regions Research and Innovation Network (ERRIN)

European Social Insurance Platform (ESIP)

European Social Network

European Technology for Business Ltd.

European Union Geriatric Medicine Society

Expertisecentrum Dementie Vlaanderen vzw, België

Federacja Pacjentów Polskich, Poland

Fédération Européenne des Retraités et des Personnes Agées (FERPA)

Federation of the European Ergonomic Societies (FEES)

Federazione Italiana delle Industrie Termali e delle Acque Minerali Curative (Federterme), Italia

Fin-Ceramica Faenza S.p.A., Italy

Fit for Work Europe Coalition

Fomento San Sebastián, Programas Europeos, San Sebastián, Spain

Fondazione IRCCS, Istituto Nazionale neurologico Carlo Besta, Milan, Italy

Fondazione IRCCS, Ospedale Maggiore Policlinico di Milano U.O. Neurofisiologia; Università degli Studi di Milano, Dipartimento di Scienze Neurologiche, Italia

Forum MedTech Pharma e.V.; Bayern Innovativ GmbH, Nürnberg, Deutschland

France Telecom Orange Healthcare Division, France

Fraunhofer Gesellschaft, Fraunhofer Institut für Software- und Systemtechnik (Fraunhofer ISST), Business Communication Management, Deutschland

Fraunhofer Gesellschaft, Fraunhofer Institut für Zelltherapie und Immunologie, Abteilung Zelltherapie, Deutschland

Fraunhofer Gesellschaft, Portugal Research Center for Assistive Information and Communication Solutions (Fraunhofer AICOS), Portugal

FrieslandCampina, Corporate R&D, The Netherlands

Fundación INGEMA, Departamento I+D, España

Fundación Marqués de Valdecilla-IFIMAV, Spain

Fundación Tekniker (Social Technology and Health), Spain

GE Healthcare (Europe) Government Relations, United Kingdom

Gemeente Amsterdam, Geneeskundige en Gezondheidsdienst: Dienst Wonen, Zorg en Samenleven, Amsterdam, The Netherlands

Geria-tec, España; Universidad de Almería, Investigación I+D+I, España

GeronTech (The Israeli Center for Assistive Technology & Aging), Israel

Gesundheitswirtschaft Nordwest e.V., Bremen, Deutschland

GlaxoSmithKline

Global Alliance of Mental Illness Associations and Networks – Europe Based (GAMIAN-Europe)

Gobierno del Principado de Asturias, Consejería de Salud y Servicios Sanitarios, Dirección General de Calidad e Innovación, España

Government of Catalonia ACC1Ó (Catalonia Competitiveness Agency) International R+D+I division, Spain

Graz University of Technology, Institute of Process and Particle Engineering, Austria

Groupe Associatif SIEL Bleu (siège européen à Strasbourg), France

Groupement d'intérêt économique Foncière Développement, France

Groupement International de la Répartition Pharmaceutique (GIRP) (The European Association of Pharmaceutical Full-line Wholesalers) Aisbl

Grunenthal Sweden AB, Market Access, Sverige

Guerir Huisartsgeneeskunde, Nederland

Hannover Medical School Children's Hospital, Department of Paediatric Kidney, Liver and Metabolic Disases, Hannover, Germany

Hartford S.L., Dirección general, España

Health and Environment Alliance Brussels, Belgium

Health Cluster Portugal, Portugal

Health First Europe

Healthy Ageing Network Northern Netherlands, The Netherlands

Hellenic Nurses Association (HNA), Greece

Helmholtz Association of German Research Centres, Germany

Helmholtz Zentrum München,  Institut für Epidemiologie II, Deutschland

HEXIUM Technical Development Co. Ltd., Hungary

HL7 International Foundation, Belgium

Hôpital d'Yvetot, France

Hospital De Barbastro, Servicio De Informatica, Spain

Huawei Technologies Dusseldorf GmbH, Enterprise Department, Germany

ICZ a.s., Business Development Healthcare, Praha, Česká republika

Indra Sistemas S.A., Health Division, Spain

Indra Sistemas S.A., Mercado de Administración Pública, España

Innobasque-Agenciaa Vasca de la Innovación Area, España

InnoSportNL, Arnhem, Nederland

Institut Català de la Salut ( ICS), del Departament de Salut de Catalunya, España

Institut Français des Sciences et Technologies des Transports de l'Aménagement et des Réseaux (IFSTTAR) (ex INRETS en 2010), laboratoire Ergonomie et Sciences Cognitives pour les Transports (LESCOT), France

Institute for Older Persons and Social Services (IMSERSO)

Institute of Digital Healthcare, Warwick University, West Midlands, United Kingdom

Institute of Health Carlos III (Ministry of Science and Innovation), Spain; Rafael De Andres Medina Fund for Health Research, Spain

Institute of Health Economics and Clinical Epidemiology, University Clinic of Cologne, Cologne, Germany

Institutet för Gerontologi Hälsohögskolan, Finland

Instituto de Biomecánica de Valencia (IBV), Departamento de Personas mayores y atención a la dependencia, España

INTEL Corporation Global Public Policy, Belgium

International Association of Gerontology and Geriatrics - European region

International Federation of Health Information Management Associations (IFHIMA)

International Sport and Culture Association (ISCA)

IRCCS Fatebenefratelli, Brescia, Italy

IRCCS Fondazione Salvatore Maugeri; Istituto di Lumezzane, Brescia, Italia

Italian Federation of the chemical industry (Federchimica), Italy

Jacobs University Bremen, AgeAct Research Center, Germany

Jacobs University Bremen, Jacobs Center on Lifelong Learning and Institutional Development, Germany

Janssen Pharamceutica N.V., Office for Campus Strategy and Growth, Belgium

Joint Programming Initiative for Combating Neurodegenerative Diseases, in particular Alzheimer's Disease (JPND)

Joint Programming Initiative „More Years, Better Lives – The Potential and Challenges of Demographic Change"

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maatG France, Biomedical Applications, France

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Macrosad SCA, Cooperativa de Interés social, Formación y consultaría, España

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Marina d'Or - EHMCV - Centro Médico Especializado del Balneario de agua marina Marina d'Or, España; Oropesa del Mar (Castellón), España

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Medtronic International External Affairs Tolochenaz, Switzerland

MegaKoto Oy, Suomi

Mensana, België

Mental Health Europe (Santé Mentale Europe) Aisbl

Merck Serono, Switzerland Health Policy and Market Access

Microsoft

Ministerio de Sanidad, Política social e igualdad, Innovación en Enfermedades crónicas e e-health, España

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Nestlé S.A.

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New Tools for Health Sweden, Sweden

NHS 24 Scottish Centre for Telehealth & Telecare, United Kingdom

NHS West Midlands, Birmingham, United Kingdom

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Novartis

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Nutricia Advanced Medical Nutrition, Global Marketing Department, The Netherlands

Nutricia Advanced Medical Nutrition, Global Medical Department, The Netherlands

Objectif Plein Emploi, Luxembourg

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ONPA, France

Optimální o.s., Česká republika

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Oudere Vrouwen Netwerk Nederland (OVN-NL), The Netherlands

Pain Concern, United Kingdom

Pfizer, Inc.

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Private individual: Woolley, Judith, United Kingdom

Private individual: Yaman, Prof. Dr. Hakan

Private individual: Zavoral, Petr, Czech Republic

Private individual: Zia, Gianluca, Civil Engineer, Italy

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Private individual: The respondents are an European consortium for innovation in ICT-based methods of predictive, preventive, personalized, participative, pervasive, public partaking in coping with chronic diseases and other health issues.

Private individual: ΕΛΕΝΗ ΕΥΤΥΧΙΔΟΥ ΕΛΛΑΔΑ, Greece

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PwC Advisory, The Netherlands

Radboud University Nijmegen, Geriatric Department, Medical Centre and Network for Care and Welfare for Frail Elderly Persons, The Netherlands

Randox, medical science, Nederland

Region Halland, Sverige

Région Ile-de-France Unité développement, France

Région Provence-Alpes-Côte d'Azur, France

Region Skåne, Department for Regional Development, Sweden

Regione Lombardia, Direzione Generale Sanità, Milano, Italia

Regione Marche, Servizio Industria, Artigianato, Istruzione, Formazione, Lavoro, Italia

Regione Piemonte, Direzione Innovazione, Ricerca ed Università, Italy

Regione Puglia, Italy

Reha-Zentrum am Meer, Bad Zwischenahn und Heilbäderverband Niedersachsen e.V., Bad Zwischenahn, Deutschland (Niedersachsen)

Research Councils UK on behalf of the following UK research councils: Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC), United Kingdom

Retraite Complémentaire des salariés Agirc-Arrco, Direction de l'action sociale, France

F. Hoffmann-La Roche, Roche Diagnostics Deutschland GmbH, Professional Relations, Diabetes Care EMEA/LatAm, Germany

F. Hoffmann-La Roche, Roche Diagnostics Deutschland GmbH, Health Care Affairs, Mannheim, Deutschland

Romanian Nursing Association, Romania

Royal College of Nursing, Nursing Department, London, United Kingdom

Royal DSM, The Netherlands

RWTH Aachen, Technology and Innovation Management Group, Aachen, Germany

Sagevox CEO, France

Sanidad Castilla y León (SACYL), Gerencia REgional de SAlud, Spain

Sanofi-aventis, European Affairs Department France, France

Sanofi Pasteur, Vaccines division of sanofi-aventis Group, France; Sanofi pasteur MSD, France

Scheldemondraad, Belgium-The Netherlands

Scottish Council on Deafness, Scotland, United Kingdom

Scottish Enterprise commissioned project, United Kingdom

Secar Bohemia, a.s., úsek aplikovaných technologií, Česká republika

Senexis Ltd., United Kingdom

Sensormind Ltd., Ireland

Serveis de Salut Integrats Baix Empordà, Departamento de Evaluación e Investigación, Palamós, España

SIA "Pirmais Patronāžas Serviss", Latvija

Smart Homes, The Netherlands

Smith & Nephew GmbH Wound Management, Germany

Solihull Care Trust Public Health, United Kingdom

Søndr Land Kommune, Norway

South East Health Technologies Alliance (SEHTA), United Kingdom

Southern Danish University, Denmark

Staatsministerium für Soziales und Verbraucherschutz, Freistaat Sachsen, Deutschland

Stadt Tengen, Baden-Württemberg, Deutschland

Staffordshire Fire and Rescue Service, Central Risk Reduction, Staffordshire, United Kingdom

Standing Committee of European Doctors (CPME)

Stichting NIGZ, Nationaal Instituut voor Gezondheidsbevordering, Nederland

Suomen sairaanhoitajaliitto ry / Gerontologisen hoitotyön asiantuntijaryhmä (Finnish Nurses association), Finland

Svenska Cellulosa Aktiebolaget, SCA, Sweden

Synapse Research Management Partners, Spain

Syntens, Nederland

Target Business Consultants Group, Duisburg, Deutschland

Technopolis Group

Tekniker IK4

The European Association for Bioindustries (EuropaBio) and on behalf of the Healthcare Council

The European Chemical Industry Council (Cefic), Research and Innovation Department

The European Consumers Organization (BEUC)

The European Federation of IASP chapters (EFIC)

The European Federation of National Associations of Orthopaedics and Traumatology

The European Health and Fitness Association, Department: European Affairs

The European Research Area in Ageing (ERA-AGE) and FUTURAGE

The Global Coalition on Aging, The United States

The International Diabetes Federation European Region

The Swedish Council for Working Life and Social Research (FAS), Sweden

The University of Birmingham, Centre for Healthy Ageing Research, Birmingham, United Kingdom

UK Government, United Kingdom

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Universidad de Granada, departamento Nutricion y Bromatologia, Spain

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Universitat per a Majors (Senior Citizens' University), Universitat Jaume I (James I University), Castellón, Spain

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Universitätsklinikum Freiburg, Zentrum für Geriatrie und Gerontologie Freiburg, Deutschland

Université Pierre Mendès-France, Structure Fédérative de Recherche "Santé et Société", Grenoble, France

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University of Bologna, Department of Statistical Sciences, Italy

University of Leicester, Department of Genetics, Leicester, United Kingdom

University of Milano, Department of Biology, Milano, Italy

University of Stirling, Dementia Services Development Centre, United Kingdom

Uniwersytet Medyczny w Łodzi, Polska

Væksthus Hovedstadsregionen, København, Denmark

Vanhus- ja lähimmäispalvelun liitto (Union for senior services), Suomi

Västra götalandsregionen, Folkhälsokommitténs kansli, Sverige

Verbund für Integrative Angebote Berlin (VIA) gGmbH Qualitätsmanagement und Entwicklung Psychiatrie Deutschland, Berlin, Deutschland

Verklizan BV  Department: Business Analysis and European Activities, The Netherlands

Vinnova Health Department, Sweden

Votekon Oy, Suomi

Vrije Universiteit Brussel, UZ Brussel, Department of Neurology, Belgium

Wijnsma Services, Nederland

Zentralverband Sanitär Heizung Klima (ZVSHK), Abteilung Betriebswirtschaft, Potsdam, Deutschland

Zentrum für zivilgesellschaftliche Entwicklung (zze)/ Centre for Developments in Civil Society, Freiburg, Germany

ΔΗΜΟΣ ΗΡΑΚΛΕΙΟΥ ΑΤΤΙΚΗΣ- ΤΜΗΜΑ :ΚΕΝΤΡΙΚΗ ΥΠΗΡΕΣΙΑ ΕΡΓΟΘΕΡΑΠΕΙΑΣ, ΕΛΛΑΔΑ

Συνομποσπονδία Εργαζομένων Κύπρου- ΣΕΚ (Παγκύπρια Επιτροπή Συνταξιούχων- ΣΕΚ), Κύπρος

ГИС-ТрансферЦентър, България

## European Innovation Partnership for active and healthy ageing
### <u>Consultation questionnaire</u>

If you are based in the EU and have a personal, professional or business interest in active and healthy ageing, we would like to hear your ideas and opinions on our new pilot innovation partnership.

## About the partnership

The partnership is part of our [Innovation Union](#) strategy that sets out to boost Europe's competitiveness while tackling major social issues. The issue here – active and healthy ageing – is relevant to all European countries, and Europe has the potential to lead the world in providing innovative responses.

**Aims**

**The main target is to add 2 years to the average healthy lifespan in the EU by 2020.**

We are setting up this partnership to promote the development of **innovative products and services** that will help older people stay **healthy, active and independent for longer**. The partnership should also help keep Europe's social and healthcare systems effective and sustainable, and encourage competitive markets, as a spur to innovation.

In pursuing those aims, the partnership will focus on three areas:

- **prevention and health promotion** - medical technology, medicines and treatment for age-related chronic diseases and others
- **integrated health and social care** for the elderly, improving home-based care and self-care; and new large-scale, innovative solutions for long-term care of the elderly
- **independent, active living** for elderly people, supported by innovative products, devices and services

**Who will be involved?**

The partnership brings together major players from the demand and supply side: **public authorities, public and private healthcare providers, standard setters and procurement professionals, private sector, health professionals, researchers and user groups** – people from all stages of the innovation cycle, from research to end use.

**What will the partnership do?**

The idea is for partners to work together towards common goals, identifying and overcoming barriers to innovation.

They will tackle weaknesses in the European research and innovation system – such as under-investment, fragmentation, duplication, weak support systems for innovation. This will involve:

- making rules and systems more supportive of attempts to put new ideas into practice
- helping leverage financing and investment for innovation projects (from existing funds)
- improving coordination between systems for funding research and innovation at European, national and regional level.

As well as fostering innovation in products, processes and services, this should also reduce the amount of time needed to develop and market products that draw on new ideas.

## About the consultation

This consultation is open to all interested parties operating at EU, national, regional or local level. With it we hope to:

- build up a fuller and more detailed picture of existing national, regional and local initiatives
- hear what you think Europe's weaknesses are regarding innovation
- spot potential synergies between different sectors and levels
- identify the scope for action at European level – and for developing the partnership.

**Respondent information**

1. I am replying:
   - ☐ as a private individual
   - ☐ for the public authority I work for
   - ☐ for my employer (other than a public authority)

**If "as a private individual":**
2. Please provide your name, country of residence and email address

| |
|---|
| |

**If "for the public authority I work for":**
2. Please indicate whether the authority is:
   - ☐ international
   - ☐ EU-level
   - ☐ national
   - ☐ regional
   - ☐ local
   - ☐ Other (please specify)

| |
|---|
| |

Please provide the name of the authority you work for, the department (if any), the country where the authority is based and its email address

| |
|---|
| |

**If "for my employer":**
2. please indicate the sector(s):
   - ☐ Industry
     - o large company
     - o small or mid-sized business
   - ☐ Healthcare / social care provider
   - ☐ Research / academic
   - ☐ Organisation for older people / patients' organisation / other charity or NGO
   - ☐ Other (please specify)

Please provide the name of the organisation you work for, the department (if any), the country where the organisation is based and its email address.

| |
|---|
| |

When answering these questions, you may want to refer back to the <u>introduction to this survey. (Click to open the introduction in another window.)</u>

**Barriers to innovation**
3. What are the **3 main barriers** to innovation?
   ☐ Patent environment
   ☐ Complex or unclear regulations or lack of regulations (Please specify)
   ☐ Lack of standards
   ☐ Lack of training for end-users (Please specify)
   ☐ End-users' resistance to new ideas
   ☐ Lack of evidence for benefit of specific innovation (Please specify)
   ☐ End-users (patients, older people, care professionals) are not involved closely enough in the development and use of new innovative solutions
   ☐ Evidence of the benefits of innovation is scattered – hard to get an overview
   ☐ Different funding bodies have different priorities in Europe
   ☐ Lack of funding
   ☐ Funding only covers *part* of the innovation process (Please specify which parts are neglected.)
   ☐ Public authorities are not willing enough to buy novel solutions

   ☐ Other (Please specify)

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4. How do you think a European Innovation Partnership could help overcome the innovation barriers identified? Please explain briefly.

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5. Thinking about the main barrier/s you identified above (points 3 and 4), please explain how removing a barrier would benefit a specific innovation for active and healthy ageing (please provide a concrete example of a product or service and how it helps active and healthy ageing).

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```

**Existing initiatives:**
6. Have you been involved in programmes, initiatives or projects relating to innovation for active and healthy ageing (e.g. research, technology transfer, capacity building, training, financing, deployment, validation/testing of new solutions, standardisation) at trans-national, national, regional or local level?
   ☐ YES (if yes, go to Q7)
   ☐ NO (if no, go to Q8)

7. Please describe *one* such programme, initiative or project and explain how you were involved.

    a. Name of programme, initiative or project

| |
|---|
| |

    b. Target group
- o Elderly people
- o Informal carers
- o Patients
- o Health and social care professionals
- o Health and social care providers
- o Financing entities
- o Regulators
- o Industry
- o Other – please specify

| |
|---|
| |

    c. Aim of the programme, initiative and/or action

| |
|---|
| |

    d. Partners

| |
|---|
| |

    e. Outcome

| |
|---|
| |

    f. Web link

| |
|---|
| |

    g. What barriers did you encounter in this process

| |
|---|
| |

**Future initiatives**

8. How do you think you could contribute to achieving the European Innovation Partnership's strategic objectives (e.g. financing, expertise and know-how, implementation, new business models)?

| |
|---|
| |

9. Do you already have ideas for starting a project or programme in connection with the European Innovation Partnership?

    a. Aim of the proposed programme or project and main deliverables

| |
|---|
| |

    b. Evidence base, demonstrating the need for action

| |
|---|
| |

    c. Approximate budget (*optional*)

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10. If you are thinking of starting a project or programme, which key partners would you need for it to be successful?

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11. How do *you* think a European Innovation Partnership could support active and healthy ageing through innovation?

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12. Do you have any other comments?

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