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## Acronyms

<b>AAL</b>	Ambient Assisted Living
<b>AALOA</b>	Ambient Assisted Living Open Association
<b>CIP</b>	Competitiveness and Innovation Programme
<b>COPD</b>	Chronic Obstructive Pulmonary Disease
<b>CVD (CVS)</b>	Cardiovascular Disease (Cardiovascular)
<b>EC</b>	European Commission
<b>EEC</b>	European Economic Community
<b>EIP on AHA</b>	European Innovation Partnership on Active and Healthy Ageing
<b>EP</b>	European Parliament
<b>EU</b>	European Union
<b>FP7</b>	Seventh Framework Programme
<b>GDP</b>	Gross Domestic Product
<b>HLY (HLYs)</b>	Healthy Life Years
<b>HTA</b>	Health Technology Assessment
<b>ICT</b>	Information and Communications Technology
<b>LIMM</b>	Lund Integrated Medicines Management Model
<b>MS/MSs</b>	Member State(s)
<b>MSD</b>	Musculoskeletal Disease
<b>PSP</b>	Policy Support Programme
<b>R&amp;D</b>	Research and Development
<b>SG</b>	Steering Group
<b>SIP</b>	Strategic Implementation Plan
<b>SME</b>	Small and Medium Enterprise
<b>UN</b>	United Nations
<b>WHO</b>	World Health Organisation
<b>YLD</b>	Years Lived with Disability

# OPERATIONAL PLAN

## I BACKGROUND

With this Strategic Implementation Plan, the Steering Group (the SG) of the European Innovation Partnership on Active and Healthy Ageing (the EIP on AHA) delivers its rationale, its vision and suggestions for addressing the challenge of active and healthy ageing.

The Partnership aims to identify and remove persisting barriers to innovation for active and healthy ageing, through interdisciplinary and cross-sectoral approaches.

The Steering Group is convinced that this Partnership has already delivered **added value**. Indeed, it has brought a very wide range of stakeholders into close cooperation. Valuable lessons have been learnt about the challenge of European collaboration in and across the fields of innovation, health, social care and ICT. It is the first time that such a broad range of stakeholders - from health and social care sectors as well as business and civil society - have agreed on a shared vision and a comprehensive framework for action. The latter is underpinned by innovation and is expected to radically improve active and healthy ageing in Europe.

The Partnership identifies a set of actions that can start as early as 2012 and deliver measurable outcomes within the 2012-2015 timeframe. The Strategic Implementation plan sets out more detailed explanations on the work of the Steering Group and its suggestions for the way ahead.

### I.1. Challenge of ageing – general overview

Ageing societies are an emerging and seemingly irrevocable trend in Europe, but also in the US, Japan and China. Progress in health care, an increase in levels of wealth, improvements in standards of living, and better nutrition, combined with reduced fertility rates, have contributed to an increase in the number of older people. According to recent projections, the number of Europeans aged 65+ will almost double over the next 50 years, from 85 million in 2008 to 151 million in 2060.

This trend represents a challenge for public authorities, policy makers, businesses and the non-profit sector; especially as it comes at a time of steady decline in the number of health professionals (nurses and doctors) and increases in the availability of healthcare products and services.

### I.2. Challenge of ageing – key role of innovation

Demographic ageing societies require a timely and well-planned response containing its negative social and economic effects and eventually turning the challenge into an economic opportunity, capable of offering better prospects for the ageing population when it comes to quality of life and overall health and well-being.

New solutions and approaches are needed and innovation can play a key role in rethinking and changing the way we design and organise our society and environment, and manage, finance and deliver care and social services.

However, the successful and efficient introduction of innovative solutions requires more than just a proven idea. Several barriers and bottlenecks<sup>1</sup> first need to be overcome. These do not only concern health and care systems, but also affect other important sectors influencing people's health or quality of their daily lives like housing and transportation. Amongst the top

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<sup>1</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing&pg=consultation](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing&pg=consultation)

ones are lack of user involvement in research and innovation, lack of cooperation and poor communication among players, fragmented and innovation-averse financing, lack of interoperability and standards, and inflexible or inadequate legislation.

Through the Europe 2020 strategy framework and its "Innovation Union" flagship initiative, the European Commission has committed to overcome the barriers to innovation, especially for addressing the major societal challenges. It put forward the novel concept of European Innovation Partnerships (EIPs). Active and Healthy Ageing (AHA) was chosen as the pilot area.

This document, notably the Strategic Implementation Plan prepared by the Steering Group of the Partnership constitutes a first delivery of this initiative.

### **I.3. Vision of health and active ageing**

Active and healthy ageing despite its importance happens to be perceived and understood differently. Hence the key building blocks encompassing a vision for the future of health, ageing and innovation policies need to be identified.

#### **I.3.1. Definition of active and healthy ageing**

Based on the WHO definition<sup>2</sup>, active and healthy ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. It applies to both individuals and population groups.

“Healthy” refers to physical, mental and social well being. “Active” refers to continuing participation in social, economic, cultural, spiritual and civic affairs, not just the simple ability to be physically active or to participate in the labour force. Therefore active ageing also links to maintaining autonomy and independence for the older people.

This definition also determines the meaning of an 'elderly' or older person. Usually it is related to the age at which a person becomes eligible for statutory and occupational retirement pensions. However, in the context of the EIP and its broad active and healthy ageing definition, the meaning of old age can vary, based on people's health, social, functional or even economic status, and therefore a varied geometry approach is followed.

#### **I.3.2. New paradigm of ageing**

Ageing, though one of the greatest societal challenges influencing the outlook of European economies and societies, should be considered an **opportunity rather than a burden**; a positive vision which values older people and their contribution to society; their empowerment to influence and benefit from user-centred innovation in active and healthy ageing. This involves changing our perception of older individuals, beyond their predominant position in society as patients and recipients of benefits. They should also be considered in equal measure as empowered consumers and active participants of societies and labour markets bringing value to the economy and prosperity of the communities they live in.

*"The Steering Group stresses the importance of ageing being recognised as Europe's opportunity for the future."*

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<sup>2</sup> WHO, *Active Ageing. A policy framework*, 2002

### I.3.3. Innovation serving the older generation

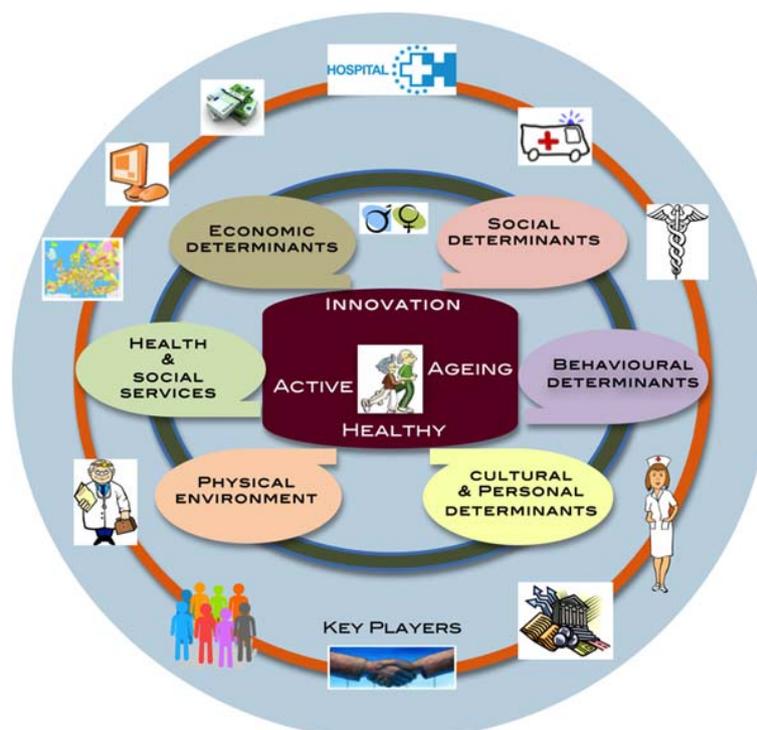
Innovation, in all its forms – spanning across technology, process and social innovation – can be a crucial contributing factor to improving the health and well-being of citizens as well as the sustainability of care systems, and to enhancing Europe's global competitiveness and growth. It is also important to ensure the continuity across the innovation chain, starting from research, to pilot projects, to the diffusion and scaling up of innovation into mainstream care.

Innovation in services and products for active and healthy ageing may require large investments and carries risks. It also requires developing more fundamental knowledge and better integrating the supply and demand side along the whole research and innovation cycle. However, if based on solutions which are effective, cost-efficient and evidence based it can bring multiple returns. In this way, healthy ageing should be perceived as an economic multiplier. Added value can be created through better outcomes for older people and increased work satisfaction of health professionals and care personnel, better quality of life and financial security of informal/family carers, as well as improved efficiency and increased productivity of health and social care systems.

*"The Steering Group believes that the partnership should respond to the challenge of active and healthy ageing by harnessing innovation, testing new organisational frameworks, stimulating new forms of entrepreneurship, promoting new work practices, encouraging creativity and sharing of experience."*

### I.3.4. Focus on a holistic and multidisciplinary approach

In order to respond effectively to the societal challenge of ageing, new methods and innovative approaches need to be developed and applied in addition to traditional policies. This shift in focus calls for a more holistic and multidisciplinary approach with strong user involvement, requiring not only a new way of thinking about demographic ageing, but developing a framework to harness these opportunities. The European Innovation Partnership should aim to encourage collaboration among a wide range of relevant public and private actors across borders, sectors and systems and involve older persons and patients as co-designers of services they will benefit from.



Source: European Commission, on the basis of "Active ageing - a Policy Framework", WHO 2002

***"The Steering Group emphasises the significance of active involvement of all partners, both public and private, across the entire innovation value chain, in the shaping and implementation of active and healthy ageing policy. It should lead to the development of a holistic and coordinated approach across different stakeholders, systems, disciplines, sectors and institutions with a strong involvement of end users."***

### **I.3.5. Development of dynamic and sustainable care systems of tomorrow**

Europe's care systems seek to support optimal health, quality of life and independent living and constitute a vital part of European citizens' lives, economies and societies. Due to growing demand (ageing, increased chronic diseases burden), outflow of health professionals, care personnel and informal/family carers, and ongoing budgetary consolidation, innovative approaches are needed in order to foster better efficiency of health and social care systems while guaranteeing their accessibility and long-term financial sustainability<sup>3</sup>. The current economic crisis adds to the gravity of the situation putting an enormous pressure on public finances and on citizens' means to afford health and care services/products.

There is a need for urgent action to shift the focus from acute, reactive, and hospital-based care to long term, proactive and home-based care, integrating both health and social settings. This should be underpinned by health promotion, disease prevention, independent living and integrated health, social, community and self care. Living and working environments also need to be adapted to empower older people to remain functional and active for longer.

The design of new care systems - while continuing to be based on the common values of universality, access to good quality care, equity and solidarity<sup>4</sup> - must accommodate new realities and acknowledge the need for cost-efficient investments.

***"The Steering Group urges all partners to move towards a patient-centred care systems of tomorrow. There is little time left before financial sustainability is at risk, which in turn threatens older people's and patients' likelihood to live in dignity. A design based on key values and principles must accommodate new realities and acknowledge the need for cost-efficient investments."***

## **I.4. The European Innovation Partnership (EIP) on Active and Healthy Ageing**

### **I.4.1. Added value of the European Innovation Partnership**

The Partnership aims at delivering value to the European citizens, improve health and quality of life of the older people, and respond to the societal challenge of ageing.

To do so, the Partnership must overcome or reduce barriers in the area of active and healthy ageing. It intends to achieve this by identifying cross-cutting solutions, bridging sectors, competences and instruments and sharing best practice, in a wide, result-oriented, collaborative effort. The EIP brings together key players across the health, care and other sectors (i.e. communication, housing, transport) representing the entire innovation value chain – from researchers, businesses, policy makers and regulators, public and private organisations to end users (i.e. health professionals, with an emphasis on geriatricians and gerontologists; care personnel; informal/family carers; patients; older people). The EIP aims to improve framework conditions by removing the bottlenecks and anticipating common regulatory and other needs at all stages of the innovation chain.

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<sup>3</sup> The current total expenditure for health care alone in the EU 27 is already high (from 6% of GDP in Lithuania to 11.2% in France, with most of it publicly financed) and as a result of the ageing population, it is likely to rise further: by roughly 1.5 and 2% GDP by 2060 (for details see 2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060), European Economy 2/2009)

<sup>4</sup> Council Conclusions on Common Values and Principles in European Union Health Systems (2006/C 146/01).

The EIP builds on and adds value to existing active and healthy ageing initiatives. It is not a new programme or funding scheme. Instead it aims to be complementary to them by maximising the use of existing knowledge and best practice.

#### **I.4.2. Objectives of the European Innovation Partnership**

The Partnership aims to **increase by 2 the average number of healthy life years (HLYs)<sup>5</sup> in the European Union by 2020, by securing a triple win** for Europe:

- Improving the health status and quality of life of European citizens, with a particular focus on older people.
- Supporting the long-term sustainability and efficiency of health and social care systems.
- Enhancing the competitiveness of EU industry through an improved business environment providing the foundations for growth.

In practical terms, the EIP first identified barriers to innovation and developed a common vision of health, ageing and innovation policies. Then it set common objectives, and identified priority actions, agreeing to implement these on the widest scale possible.

#### **I.4.3. Governance of the EIP**

The Partnership is about teaming up – enabling the contributing stakeholders, Member States, the European Commission, and programme and initiative owners to achieve their objectives more efficiently and effectively. Existing remits and responsibilities for decision making in the field of active and healthy ageing are fully respected and are not changed by the Partnership.

The Partnership has been led by a Steering Group consisting of some 30 high-level stakeholders spanning both the demand and supply sides. The European Commission, acting as a facilitator and coordinator, provided organisational and operational support as well as chaired the Steering Group through two Commissioners; for *Health and Consumers* and for *Digital Agenda*.

The first main outcome of the work of the Partnership is the Strategic Implementation Plan (SIP) developed from May to November 2011, which is presented in this document.

In its work, the Steering Group has built on 524 contributions from a public consultation, a series of thematic workshops, and 130 submissions of activities and commitments by stakeholders<sup>6</sup>.

#### **I.5. Strategic Implementation Plan**

The Strategic Implementation Plan (SIP) outlines a set of operational, effective and efficient strategic priority action areas to address the challenge of ageing through innovation. The priority action areas and individual actions in this document represent the consensus achieved by the Steering Group. **Its members commit – each within their respective remits and responsibilities - to implement the actions of the SIP, and engage with relevant stakeholders.** The SIP also lists a number of enabling or framework conditions, including regulatory and funding conditions that are necessary for these actions to be carried out at the widest scale. The Steering Group invites the **European Commission, Council of the EU and**

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<sup>5</sup> For indicators of healthy life years, triple win and other indicators see the monitoring and evaluation framework below.

<sup>6</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing&pg=consultation](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing&pg=consultation)

**the European Parliament to respond, to express their support for the Plan, and to address these conditions.**

Addressing the complex issue of active and healthy ageing requires comprehensive work on a broad scale. In order to determine the best way forward and focus on those innovative actions which deliver the highest impact, the Steering Group has structured the work needed in three pillars reflecting the 'life stages' of the older individual in relation to care processes:

1. prevention, screening and early diagnosis
2. care and cure
3. active ageing and independent living

In addition, horizontal issues have been identified that address framework conditions and are enablers for all other priorities and actions. These include the mapping of research, funding schemes, compiling an evidence base, monitoring and evaluating actions, as well as working on the regulatory framework and (public) procurement.

The details of the pillars, strategic priority action areas and specific actions are described in the following sections of the document.

## **I.6. Next steps – implementation and process**

The Steering Group members commit – each within their respective remits and responsibilities - to implement the actions of the Plan and engage with relevant stakeholders.

However, the implementation of the actions needs to extend far beyond those who have been active in the Partnership so far. The Steering Group therefore suggests that the European Commission defines and launches **calls for commitment**, to involve all interested parties in **Action Groups**, based on the principles of:

- *Engagement*: underwriting the EIP and its criteria;
- *Inclusiveness*: open to all relevant actors and constituencies;
- *Critical mass*: mobilising sufficient resources;
- *Partnership*: working together with other parties in the action;
- *Delivery*: timely delivery of agreed outcomes;
- *Advocacy*: inspiration to all participants of the innovation chain.

Based on support from the European Commission, such Actions Groups should jointly carry out the selected actions and address specific barriers, seeking synergies wherever possible between different actions and avoiding creating silos. Mechanisms will be put in place to ensure that this Partnership on Active and Healthy Ageing and its Plan can be further developed following a strategic and sustainable approach. The Steering Group in particular invites **Member States, regional and local authorities to be closely involved** in the implementation of the Partnership actions.

Action Groups will be time-bound, can propose to amend or extend actions and must periodically report to the wider Partnership community. Mechanisms will be put in place to ensure that the relevant Action Groups develop expected synergies and avoid silo-approach

The Steering Group therefore suggests that the Commission establishes a **Conference of interested partners** meeting at least once a year, widely representing the Partnership community. The Steering Group members intend to guarantee the continuity of the process until the new governance structure is set up.

The Steering Group also invites the European Commission as well as Member States and regional authorities to lay down the suitable institutional, policy, regulatory and funding frameworks in support of the partnership's goals.

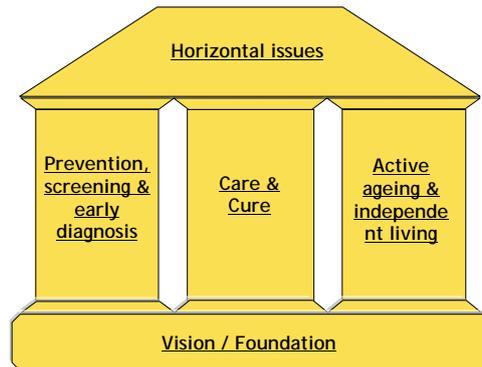
To this end, the European Commission is invited to respond to the Partnership's SIP by early 2012, and to present the SIP for discussion and endorsement to the European Parliament and the Council.

## II MAIN AREAS OF ACTION

### II.1.Strategic pillars

The partnership has followed a life-stage approach, from prevention, care and independent living.

While priorities and actions are defined within each pillar, one should view these in a broader perspective as several priorities and actions are relevant to more than one pillar, hence synergies and complementarity are expected to develop.



In particular the Steering Group has recognised the importance of innovation in support of the three main pillars of:

- **Prevention, screening and early diagnosis** as an integral part of life-event approaches to keeping people healthy and postponing the onset of the illnesses.

Fundamental to Europe's search for a new paradigm on ageing is the need for health and care systems to move from a reactive and curative approach to disease – with a main focus on acute care - to proactive care based on health promotion, disease prevention, including older people vaccination and self-management. For the purpose of the EIP, the scope of health promotion and disease prevention concentrates mainly on older people.

The ageing population and the expected increase in prevalence of chronic diseases will entail a necessary shift towards a preventive approach, with focus on promoting health and an increased role of citizens in managing their health. Onset of chronic conditions (diabetes, CVD, respiratory diseases, cancer, MSDs etc.) is influenced by a number of lifestyle related risk factors (e.g. alcohol consumption, lack of physical activity, smoking and an unhealthy diet). These risk factors contribute significantly to the increased burden of conditions and disability among older people. Associated healthcare costs will rise accordingly "unless greater efforts are made to either prevent or treat these conditions".

This preventive approach is not only beneficial for patients but also offers promise in cost-containment and efficiency for health systems, as costly interventions and treatments can be avoided.

In practice, however, this shift from curative to preventive investment has proved difficult to deliver, with only three per cent of current health expenditure in the EU invested in prevention and public health programmes<sup>7</sup>.

<sup>7</sup> OECD, Health at a Glance: Europe 2010, p. 12

It is clear that new organisational, process and technical innovations are needed to maximise the impact of preventive measures and services.

To achieve this vision, the Partnership has identified three priority action areas with corresponding objectives that will guide these actions:

- Improving effectiveness of clinical outcomes through improved health literacy, patient empowerment, ethics and adherence programmes (A1)
- Realising innovation in personal health management through validated programmes and good practices for early diagnosis and preventive measures (including health promotion) (A2)
- Implementing integrated programmes for prevention, early-diagnosis and management of functional decline, both physical and cognitive, in older people (A3)
- **Care and cure** as integral pathways of integrated care, aiming to develop a more holistic and personalised approach to multi-dimensional health needs.

Integrated care is defined in terms of collaboration, alignment, training and connectivity. Among social, health, community care providers and carers. This is seen as the way forward that will benefit all Europeans (in particular older people) whilst helping to address resource efficiency and sustainability of care systems. The objective is to achieve integration between hospital, community home and self care.

Over 100 million citizens, or 40% of the population in Europe above the age of 15, are reported to have a chronic disease; and two out of three people, who have reached retirement age have had at least two chronic conditions<sup>8</sup>. Moreover, it is widely acknowledged that 70% or more of healthcare costs are spent on chronic diseases<sup>9</sup>. This corresponds to 700 billion EUR or more in the European Union and this figure is expected to rise in the coming years. This, as a result is putting pressure on the sustainability of health and social care systems, and on the wider economy and society. Fostering integrated care by introducing viable models, centred around the older, often frail, patient and their family/carers is the sustainable way forward. These models should include chronic disease/conditions management, community based case management and all-inclusive care<sup>10</sup>, enabled by innovative tele-health and assisted self-management solutions when relevant with the aim of reducing avoidable/unnecessary hospitalisation.

While existing experiences show that integrated care models can provide significant benefits there are still barriers to large scale investments, implementation and take up of such models. Health and social care systems operate principally in silos. Current solutions are largely proprietary, from single providers and with a single focus (i.e. only tele-health or telecare or social interaction), that cannot be easily adapted to different needs and target groups. From an internal market perspective, there are also legal and regulatory uncertainties (e.g. data protection) and market fragmentation. In addition, there are no clear incentives for adopting innovative services and existing reimbursement and procurement procedures are not always innovation friendly. As a result, the substantial societal and market potential of innovative tools and services for integrated care has not been fully achieved. There are also a number of bottlenecks and barriers at the interface between social and health care settings, such as

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<sup>8</sup> European Chronic Disease Alliance; WHO Europe

<sup>9</sup> See <http://www.oecd.org/dataoecd/43/9/48245231.pdf> and "The future of healthcare in Europe", The Economist Intelligence Unit Limited 2011 ([http://www.eufutureofhealthcare.com/sites/default/files/EIU-Janssen%20Healthcare\\_Web%20version.pdf](http://www.eufutureofhealthcare.com/sites/default/files/EIU-Janssen%20Healthcare_Web%20version.pdf))

<sup>10</sup> For example PACE - Program of All-inclusive Care for the Elderly (PACE) is an innovative long-term care model that allows frail elders to continue living at home.

fragmentation of care, silo budgeting, lack of coordination and collaboration etc. In order to realise this vision of more integrated and collaborative care, the partnership has put forward the following three priority action areas with corresponding objectives:

- Disseminating and implementing, as appropriate, protocols, education and training programmes for health professionals, care personnel and informal/family carers with the special attention to emerging roles and comprehensive case management, for example on frailty, multi-morbidity and remote monitoring (B1)
- Piloting and establishing multi-morbidity case management, with new models of care for a range of chronic conditions, including protocols and individualised care plans (B2)
- Reducing avoidable/unnecessary hospitalisation of older people with chronic conditions, through the effective implementation of integrated care programmes and chronic disease management models that should ultimately contribute to the improved efficiency of health systems (B3)
- **Active ageing and independent living** as a felt need and a future reality for many older Europeans.

Innovation is an effective tool helping to empower older people to remain active at work and in society for as long as possible, and to extend the possibility of autonomous living by supporting formal and informal/family carers to provide assistance. It also covers new approaches to keep older people socially included and to help overcome cognitive impairment and prevent depression.

Deployment of innovative approaches and solutions, including those enabled by social innovation and by ICT can facilitate change of current practices and better deliver the desired results. To be interoperable, scalable and ensure 'buy-in' of the end users, technical solutions for active independent living still need to overcome a number of barriers, such as limited standardisation, complex procurement procedures and limited involvement of users in the innovation process. Indeed, user involvement is key to enhance ownership, trust and confidence, as well as to ensure that solutions to be developed are driven by an assessment of older people's needs.

Furthermore, social innovations and new ways of organising society around independent living for older people can be strengthened by wider use of innovative ICT solutions.

To help achieve this vision, the partnership suggests focusing on the following three main priority action areas with corresponding objectives:

- Supporting people with cognitive impairments at home, through regional co-operation on proving solutions, pooling socio-economic evidence on return of investment and viable business models for innovation, building on users' experience, and diffusing this information for re-use (C1)
- Enhancing deployment and take up of interoperable independent living solutions based on open standards (C2)
- Supporting social inclusion of older people by replicating proven solutions with validated socio-economic evidence on the return of investment and viable funding models for innovation, building on experience from a large user base (C3)

To provide support for the realisation of these objectives favourable framework conditions need to be put in place, to ensure the efficient sharing of knowledge and good practices, while providing a sound evidence base.

The partnership thus recognises the need to address:

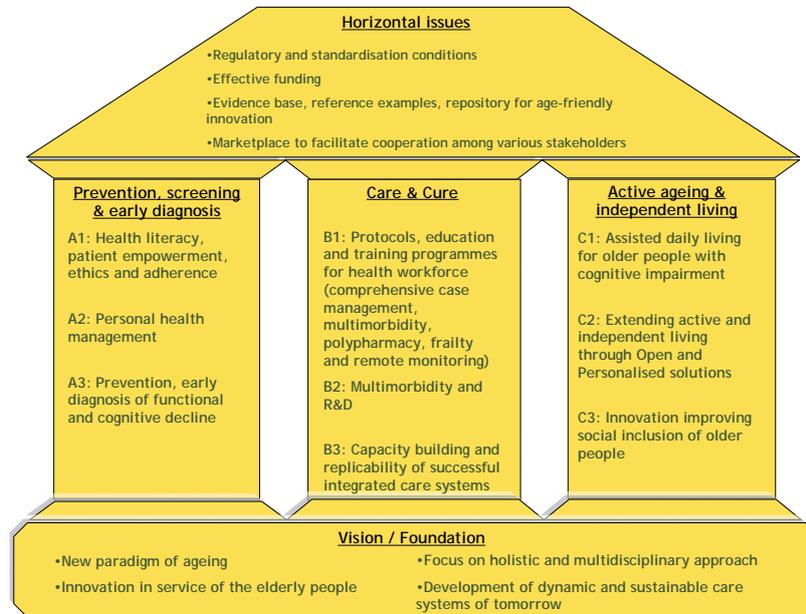
- **Horizontal issues such as funding, regulatory conditions, evidence, exchange of good practices and monitoring that cut across the pillars**

The Steering Group invites Member States, the European Commission and the European Parliament, national and regional authorities, programme managers and all relevant decision makers and players to establish those conditions, in particular regarding:

- a) **Regulatory and standardisation conditions:** to facilitate and enable deployment of ICT and innovative solutions for active and healthy ageing, as well as to ensure clarity, flexibility, where possible and necessary, and robustness of the legal system (D1)
- b) **Effective funding:** to optimise the use of existing financial tools, stimulate the active use of innovative procurement (incl. pre-commercial), develop innovative incentive mechanisms at the appropriate levels (e.g. public, private, third party payers etc), and explore venture capital support (D2)
- c) **Evidence base, reference examples, repository for age-friendly innovation:** to establish a shared basis of sound and robust data, to enable the exchange of tested and proven practices, and their dissemination, as well as to help replicate and scale up successful cases. This also includes collecting current reference examples (e.g. where countries, regions, cities provide for integrated implementation of the actions in one single location) and a repository of innovation for age-friendly environments (D3)
- d) **Marketplace to facilitate cooperation among various stakeholders:** to link up interested stakeholders to create partnerships helping implement innovative solutions and actions in the area; facilitate innovation and knowledge transfer by networking between individuals and organisations, in the EU and internationally (D4).

## II.2.Strategic innovation priority action areas

The themes above provide the pillars of the EIP strategic framework, within which a set of strategic priority action areas have been identified, to be gradually implemented. The strategic framework also identifies a number of horizontal issues, including regulatory and funding conditions, evidence and good practice sharing, which are necessary to carry out the implementation of the EIP actions. Finally, underpinning these actions the framework sketches out the main building blocks of the EIP vision summarised below:



The Steering Group identified the set of priority action areas based on the four specific criteria for prioritisation as proposed in the Guidance Paper as those:<sup>11</sup>

- (1) likely to make the greatest contribution to the objectives of the partnership;
- (2) that will benefit particularly from the partnership approach;
- (3) likely to significantly contribute to overcoming the key bottlenecks and barriers;
- (4) that will facilitate innovation in an area where European industry has or may develop a competitive advantage.

The list of priority action areas should not be seen as exhaustive. It should rather constitute a framework for wider engagement of all relevant actors in active and healthy ageing.

The priority action areas aim at balancing short term wins with long term objectives. The Steering Group members recognise the need to capitalise *a priori* on innovation in terms of technologies, processes, systems and approaches that already exist and work.

## II.3.Priority action areas and first group of actions

From the key action areas, five actions and a number of horizontal measures have been singled out as "ready to launch" in 2012 i.e. stakeholders' have demonstrated significant readiness and commitment to engage in these actions.

These include:

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<sup>11</sup> SEC(2011) 589 final: Commission Staff Working Paper: Guidance paper for the steering group of the pilot European innovation partnership on active and healthy ageing; p. 6

- "**Prescription and adherence** action at regional level" – launch of an adherence programme for various disease areas supported with innovative solutions.
- "Personalised health management, starting with a **falls prevention** initiative" – launch of validated and operational schemes for early diagnosis and prevention of falls, based on ICT tools.
- "Action for prevention of **functional decline and frailty**" – launch of an initiative for preventing functional decline (with first action focused on physiological frailty and **malnutrition**) among older people, supported by innovative tools, networks and information/education.
- "Replicating and tutoring **integrated care models** for chronic diseases of older people, including remote monitoring at regional level" – launch of programmes for integrated care models (including case and disease management with remote monitoring and chronic care) specifically fitted to care delivery for older people.
- "Development of **interoperable independent living solutions**, including guidelines for business models" – launch of cooperation networks for open and personalised solutions for independent living of older people supported by global standards, interoperable platforms and new evidence on the return of investment of these solutions and applications.

A number of horizontal actions will also start in 2012, which, among others, will look at the relevant regulatory framework currently being revised, build up a repository of pertinent robust evidence and data, as well as create a marketplace to replicate and exchange ideas and good practices.

Also, within this group a specific action will be launched shortly:

- "Thematic Marketplace: **Innovation for age friendly buildings, cities and environments**" - launch of cooperation platform/network, based on the WHO age-friendly cities initiative, including a covenant of major cities/regions/municipalities and a "seniors for innovation" initiative, with the objective of promoting active ageing more broadly and supporting accessible living spaces, mobility, safety and ICT solutions.

The development of the next steps relies on the success of these first actions and will be planned gradually to reflect the progress made.

### III IMPLEMENTATION PLAN

#### III.1. Pillar A: Prevention, screening and early diagnosis

##### III.1.1. Description of the priority action area

###### a) Ideas for priority action areas

###### Identified Priority Action Area A1

Health literacy, patient empowerment, ethics and adherence<sup>12</sup> programmes, using innovative tools and services

###### Rationale

One of the key elements for enabling health promotion, disease prevention and chronic conditions management is health literacy. Low functional health literacy is a particular issue among older people. Research has shown that people with inadequate health literacy are less knowledgeable about the importance of preventive health measures, and have higher risk of hospital admission. The WHO suggests that additional costs of limited health literacy range from 3-5% of the total health care cost per year.

The WHO also stresses that “increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments”<sup>13</sup>. Poor adherence undermines effectiveness of therapy, including pharmacotherapy. Similarly, limited vaccination may weaken the health outcomes of patients. This carries a significant human cost in terms of patient safety and quality of life. It also presents a serious problem for health systems, both in terms of inferior health outcomes, unnecessary treatments and hospitalisations, and in terms of resources wasted e.g. through the non-use of prescribed medicines funded by healthcare systems. Furthermore, low adherence is connected to the development of microbial resistance, which is fast becoming an urgent global problem.

Medication non-compliance is also a problem, especially in the case of long-term care and increases with age. Compliance diminishes with an increased number of drugs and of doses per day, the complexity of treatments, the failure of previous attempts, and occurrence of side-effects. 79% of patients take their "once a day" dose, but only 51% of those supposed to take four doses do so. In older patients, memory difficulties may be exacerbated by other medications - older patients are often receiving treatment for several chronic health conditions simultaneously, leading to complicated poly pharmacy - or early dementia.

Ultimately older people will need to be sufficiently empowered to judiciously assess the real value of medicines, tests and treatments; more consciously weigh up the costs and benefits of the “medicalisation” of their lives and take charge as co-producers of their own health, to the extent that they have the capacity and wish to do so.

###### Objective of priority action area

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<sup>12</sup> Adherence or compliance or concordance in medicine are often used exchangeably to define the degree to which a patient correctly follows medical advice (compliance to medicine/ drug or medical devices - treatment regimens). However, concordance is used to refer specifically to patient adherence to a treatment regimen that is designed collaboratively by the patient and physician, to differentiate it from adherence to a physician only prescribed treatment regimen. In the SIP, for the sake of consistency, only adherence and compliance are used, but taking account of patient involvement in the treatment process.

<sup>13</sup> Haynes RB. Interventions for helping patients to follow prescriptions for medications. Cochrane Database of Systematic Reviews, 2001, Issue 1. Cited in the report Adherence to long term therapies: evidence for action, WHO, 2003

- Improving effectiveness of clinical outcomes through improved health literacy, patient empowerment, ethics and adherence programmes

### **Actions to be launched**

- Deliver a prescription and adherence action at regional level, supported by innovative tools
- Develop innovative tools and applications to promote health literacy and patient empowerment for informed lifestyle choices, including a pan-European online community using ICT based solutions and social marketing methods

### **Possible other future actions**

- Develop capacity-building schemes for health literacy and patient empowerment, by identifying and collecting existing innovative solutions and good practices that have been tested and proved effective (quantitative and/or qualitative evidence) and disseminate them to interested and relevant stakeholders
- Support health promotion in the workplace including for informal/family carers
- Develop studies to quantify: a) the increase in patient empowerment and health literacy introduced by the availability of innovative applications and b) their effect on health outcomes
- Support additional research in personalised health approaches to bring prevention closer to the needs of individuals
- Launch innovative use of dispensing health/quality of life data to identify at-risk patients
- Develop and explore the possibility, in close collaboration with Member States and the ECDC, of setting up of an innovative partnership on vaccination of older people, taking into account safety, effectiveness and utility considerations.

### **Required specific conditions**

- Availability of the necessary supportive IT infrastructure
- Sufficient knowledge by the patient (health literacy)
- Orchestrated approach by the different categories of healthcare practitioners
- Familiarity of professionals with the use of specific, innovative supportive tools, like questionnaires and social, and digital literacy

### **Proposed Specific Action**

#### **Prescription and adherence action at regional level**

#### **Deliverable**

By 2014 the project aims to deliver tangible adherence approaches for various chronic disease areas in at least 30 EU regions. Specifically, the implementation of a number of pilots in different disease areas (e.g. musculoskeletal, diabetes, Parkinson's Disease, etc) and in different member states.

#### **Rationale - WHY**

Poor adherence severely compromises the effectiveness of treatment: a) health outcomes predicted by treatment efficacy data cannot be achieved and b) health outcomes cannot be accurately assessed. This makes adherence a critical issue in population health, from the perspective of both quality of life and of health economics.

The reasons behind poor adherence are multi-factorial and complex, related to social and

economic aspects, health systems and professionals, specific diseases as well as individual patients. Tackling non-adherence, with its complexity, requires a multi-stakeholder, patient-centred approach.

Adherence to long-term pharmacotherapy for certain chronic illnesses in developed countries averages 50% (measured as the percentage of patients that stop therapy within 1 year). It varies between 67% for cholesterol lowering drugs to only 13% for inhalation corticosteroids<sup>14</sup>.

Increased adherence to medication requires behavioural change at the level of the patient, which is influenced by three factors: knowledge (information, education, communication), skills (training, coaching, tooling) and motivation (empowerment, encouragement, addressing concerns).

It is stressed that better care coordination in dispensing or use of mobile technology to support adherence through reminders and trackers, lead to more efficient use of resources and efficacy of health interventions. Improving clinical trial design and developing sustained release preparations that require fewer doses during the day offer ways of addressing poly-pharmacy adherence to dosage schedules.

This will lead to the better health condition of patients, increased quality of life and reduced worsening of the disease and hospitalisations as a result of this. Ultimately, it will lead to the reduction of a significant personal, economic and societal burden and eventually a reduction of healthcare costs.

### **Added-value – why it is appropriate for EIP**

An increase in therapy compliance, with minor cost outlays, plays a critical role in improving the health status for European citizens and the (cost)-effectiveness of treatment. Innovative solutions can help improve treatment efficacy data and indicators to more appropriately drive public health policy as well as contribute to the creation of a viable market for tracking tools and services. The EIP with its partnership approach offers an advantage in formulating more effective strategies and interventions to address the complex nature of adherence in a more coordinated and holistic way.

### **How**

- Form a multiple stakeholder/member state partnership, led by an expert centre on adherence
- Develop adherence programmes/protocols for specific chronic diseases and tailored to member states' level of infrastructure and capacities (i.e. individualised drug treatment programmes e.g., via the Lund Integrated Medicines Management (LIMM) model)
- Develop electronic tools to monitor and alert non-adherence in pharmacies and in home settings, including mobile technology to support adherence through reminders and trackers, behavioural change models, communication services and data services
- Train healthcare professionals, incl. pharmacists, care personnel and informal/family care in monitoring adherence to treatment of older people with chronic conditions
- Information/awareness and health literacy strategies to support older patients, informal carers and families in adherence, including life-style recommendations.
- Potentially develop new clinical trials schemes to help address issues associated with multi-drug treatment regimens and dosage schedules

### **Specific conditions for the action**

<sup>14</sup> Herings et al. On Chronic Pharmacotherapy. Report 2002

To achieve the objective of the action, a number of conditions have to be put in place. These might require funding, organisational changes in care settings, as well as changes and/or adaptations in professionals' practices and in legislation. In detail:

- Co-financing of pilot projects and deployment of successful cases
- Strong cooperation among the different categories of health professionals, care personnel, informal/family carers and with patients
- Clarified and improved privacy restrictions in transferability of health data between professionals

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission and or other private or non governmental organisations to address these conditions within their respective competences and responsibilities.**

## **Identified Priority Action Area A2**

Personalised health management

### **Rationale**

There is emerging evidence that involving (older) people in their own care (shared decision-making) and engaging people in community initiatives as co-producers of health and wellbeing both improves quality of life and can reduce demand for health and social care services. Recent UK-based research, exploring outcomes of a range of co-produced interventions, demonstrated that the health-related quality of life of older people improved by between 3-12%, whilst reducing hospital stays by 47%<sup>15</sup>.

This priority Action Area aims to move forward innovation in prevention and early diagnosis by integrating it with a bold vision of the "innovation-enabled citizen as a co-producer of his/her health". This may include the development and deployment of ICT-enabled personal guidance systems and services that promote a healthy lifestyle, as well as organisational innovation, (such as enabling regional/national pharmacists or other healthcare professionals and payers to play a more active role in prevention), to better use scarce healthcare resources.

### **Objective of Priority Action Area**

- Realising innovation in personal health management through validated programmes and good practices for early diagnosis and preventive measures (including health promotion)

These will encompass innovation in organisation, business models and tools and services for early diagnosis and prevention of diseases, centred on identified users' specific needs.

### **Actions ready to be launched**

- Implement validated and operational programmes for prevention and early diagnosis of specific chronic conditions e.g. cardiovascular, diabetes, Alzheimer's/dementia, Parkinson's Disease, with falls prevention as a first use case (see box below for details)

### **Possible other future actions**

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<sup>15</sup> Windle, K., Wagland, R., Forder, J., D'Amico, F., Janssen D and Wistow, G. (2009) *National evaluation of partnerships for older people projects: final report* Personal Social Services Research Unit, University of Kent, Canterbury.

- Develop and deploy innovative tools and good sharing of practice for early disease diagnosis, for example promoting early screening programmes in community care facilities and pharmacies
- Establish a stakeholder ecosystem (of health professionals, care personnel and informal/family carers; patients, carers and user organisations; nutrition, food, beverage, pharmaceutical, fitness industries; public healthcare authorities; healthcare centres; health insurance companies; health policy makers; and healthcare regulators) which supports the model of the "citizen as co-producer of health" and promotes it as an effective complementary approach to institutional care and prevention schemes
- Develop new business models for health promotion – i.e. co-production of health business model – an evidence-based, general, alternative way of creating and augmenting personalised health
- Building on the stakeholder ecosystem, create a loop of information exchange and utilisation, parallel and complementary to conventional healthcare and telehealth with the purpose of empowering, educating and informing the individual citizen of choice architectures and evidence for personal and professional decisions in the context of retaining good health
- Devise a “One Stop Shop” suite of tools and services for disease prevention and early diagnosis - targeting a range of chronic conditions affecting the whole population

#### **Required specific conditions**

- Recognition of formal standardisation processes, voluntary *de facto* industry standardisation for diagnosis data exchange
- (Co-)financing of best practice cooperation
- (Co-)financing of research and innovation
- Incentives for scaling up good practices
- Enhanced cooperation within and between care settings

#### **Proposed Specific Action**

##### **Personalised health management, starting with a Falls Prevention Initiative**

#### **Deliverable**

By 2015: To have in at least 10 European countries (15 regions) validated and operational programmes for early diagnosis and prevention of falls. The programmes will use innovation in organisation, delivery and business models, in risk registers, toolboxes and services. Good practices will also be made available for replication in other regions.

The action will build on a network of actors involved in ongoing cooperation and on new common activities to develop/adapt guidelines and best practice sharing in falls prevention.

#### **Rationale - WHY**

Falls are the dominant cause of injuries among older people. They account for 29% of fatal injuries amongst older people (60+) and this percentage increases sharply after the age of 70<sup>16</sup>. Each year, one in every three adults age 65 and older falls, mostly in the home environment. Falls often lead to long-term physical disability (e.g. loss of mobility), severe dependency and reduction in quality of life. The associated costs of treatment and

<sup>16</sup> Eurosafe, 2009 Report, Injuries in the European Union, Statistics Summary 2005-2007

rehabilitation account for significant expenditure in both health and social care. Falls are the most preventable cause of needing nursing home placement<sup>17</sup>.

Considerable evidence now exists that most falls among older people are associated with identifiable and modifiable risk factors. Most falls and resulting injuries among older persons are shown to result from a combination of age and disease-related conditions and the individual's interaction with their social and physical environment. It is also known that risk is greatly increased for those with multiple risk factors. There is good evidence to show that some interventions, particularly promoting physical activity, balance training and exercise, are effective<sup>18</sup>.

### **Added value – why it is appropriate for EIP**

As new technological solutions to monitor falls become available the EIP can also add particular value by helping new technology move to the market, connecting research to innovation and strengthening procurement processes.

To achieve successful implementation by and sustained engagement of older people in integrated falls prevention programmes, requires work across the traditional system and professional boundaries, giving strong added value from the partnership approach of the EIP.

### **How**

- Create a European network for fall prevention, bringing together the many innovative initiatives, from individual solutions to local or regional or national programmes, creating visibility and raising awareness, exchanging experiences and good practices
- Agree on systematic and comparable data collection on the impact and return of investment from prevention measures
- Establish assessment tools, evidence based standards of care and best practice guidelines
- Ensure availability of 'proven' tools and multidisciplinary care services (for training, empowerment, early diagnosis, detection, prevention of falls, etc.) targeting older people with chronic conditions/disabilities
- Support Member States and regions/municipalities, care organisations and insurance companies to define and invest in their individual programmes supported by guidelines, toolkits and evidence-based standards of care

### **Specific conditions for the Action**

To achieve the objective of the action a number of conditions have to be put in place. These will require funding, legislative and organisational changes as well as changes and or adaptations in professionals' practices and/or market strategies

- Standardisation in information, data exchange and services
- Joint development of organisational and technical guidance
- Incentive schemes for scaling up successful good practices across Europe
- Clarified and improved privacy restrictions with the aim of sharing large scale data on falls

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission and/or other private or non governmental organisations to address these conditions within their respective competences and responsibilities.**

<sup>17</sup> Bauer, R., Kisser, R. PHASE project, Policy Briefing 14: injuries among older people.

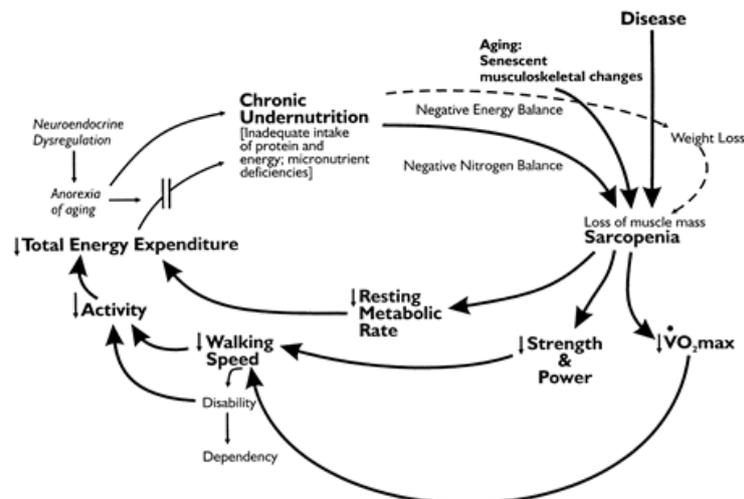
<sup>18</sup> Gillespie LD, Robertson MC, Gillespie WJ, Lamb SE, Gates S, Cumming RG, Rowe BH (2010) Interventions for preventing falls in older people living in the community (Review), Cochrane Collaboration

### Identified Priority Action Area A3

Prevention and early diagnosis of functional decline, both physical and cognitive, in older people

#### Rationale

Frailty<sup>19</sup> both physical and cognitive is highly prevalent in old age. Functional decline is a major health problem, particularly in ageing countries. The prevalence of disabilities increases dramatically with age, from 30% in those aged 65 to 74 to 50% in the 75-84 age group and 80% for those over 85. The annual incidence of functional decline in community-dwelling people over 75 years old is nearly 12%<sup>20</sup>.



Source: Fried, L.P. *Frailty*, idem

There is agreement that frail older people are vulnerable and at high risk of a range of adverse health outcomes (acute and chronic illness, falls, disability, mortality) and increased utilization of resources, community, hospital, and long-term care institutions. Frail older people are at higher risk of adverse outcomes such as onset of disability, morbidity, institutionalisation or mortality, and may experience a failure to respond adequately in the face of stress. Frailty is associated with loss of mobility and loss of cognitive function of older people.

There is also increasing evidence that education, prevention and promotion of healthy lifestyles (nutrition, exercise, social/intellectual activity, etc.), starting from an early age and continuing into the older population, may promote the development of healthy ageing and reduce the incidence of frailty and the number of years of dependency<sup>21</sup>.

Finally, evidence suggests that planned, coordinated and systematic health and social service interventions in the frail elderly population can have a significant impact on health outcomes, quality of life, patient and caregiver satisfaction, and the pattern of hospital and nursing home utilisation and cost.

<sup>19</sup> Frailty is a multidimensional construct that implies vulnerability. Frailty emerges when health stressors overwhelm the individual's physiological, psychological and social reserves. The most distressing outcome of frailty is the older person's ability to function and eventually to live independently. Thus, frailty has disability at its core, and this has been shown to increase the risk for adverse health outcomes, including falls, hospitalization, institutionalization and mortality. Rockwood K, Song X, MacKnight C et al. A global clinical measure of fitness and frailty in elderly people. *CMAJ* 2005; 173(5):489-495. Espinosa S, Walston J. Frailty in Older Adults: Insights and interventions. *Cleveland Clinic Journal of Medicine* 2005; 72(12):1105-1112.

<sup>20</sup> Hebert, R., Brayne, C., and Spiegelhalter, D. Incidence of Functional Decline and Improvement in a Community-Dwelling, Very Elderly Population. *Am.J Epidemiol.* 5-15- 1997;145(10):935-44.

<sup>21</sup> Fried, LP. Frailty. In: Hazzard RR, Bierman E, Blass J, Ettinger W, ed. *New York, NY: McGraw Hill: 1994:1149-1155*

Functional decline, both physical and cognitive, is not an inexorable process in frail older people and rehabilitation could significantly improve the functional state of old people. Thus, any improvement or stabilisation of functional decline could ultimately generate huge benefits for the health care system.

### **Objective of a priority action area**

- Implementing integrated programmes for prevention, early diagnosis and management of functional decline, both physical and cognitive, in older people.

### **Actions ready to be launched**

- Validate programmes for prevention of functional decline and frailty (with first action focused on physiological frailty and malnutrition) among older people supported by tools, networks and information reaching at least 1.000 care providers across the EU (for details please see the box)

### **Possible other future actions**

- Improve the understanding around frailty for healthcare professionals, care personnel, informal/family cares and patients and shift the approach from disease-management to integrated case management
- Develop and implement early diagnosis and screening programmes for selected diseases
- Create a functional capacity evaluation tool for active ageing in the workplace which would help establish a fit between capabilities and workload
- Where dementia is diagnosed, define an optimal approach for the support of carers and patients.

### **Required specific conditions**

- Greater awareness in the population of the role of lifestyle, positive health behaviour and prevention at all ages in promoting healthy ageing and in preventing/delaying frailty

### **Proposed Specific Action**

#### **Action for prevention of functional decline and frailty**

##### **Deliverable**

By 2015: validated programme for prevention of functional decline and frailty (with first action focused on malnutrition) among older people supported by tools, networks and information reaching at least 1.000 care providers<sup>22</sup> across the EU

##### **Rationale – why**

Malnutrition, highly prevalent in the older population, is one of the key determinants of frailty. The link is well established. Malnourished older people are at risk of experiencing falls, prolonged hospitalisation, institutionalisation, postoperative complications and infections, pressure ulcers and complicated wound healing, and dying.

In the EU over 20 million older people are estimated to be at risk of malnutrition, with as a result annual cost of health and social care of €120 billion. At the same time less than 50% of malnourished inpatients are actually treated (much less in some EU countries).

Reduced malnutrition presents potential savings in unnecessary use of formal services, combined with lower mortality, medical complications, hospital days, and re-admissions, but

<sup>22</sup> For the purpose of SIP, care providers should be understood as health or other care settings, including hospitals, community and social care units

also longer tenure in the home or community and improvement of functional benefits.

### **Added Value – why it is appropriate for EIP**

Given the high prevalence of costly frailty among older people, and the importance of malnutrition as a determinant of frailty, support of preventive actions offers opportunity for significant improvements in the functional status and quality of life of older people, with very low cost interventions.

A wide consensus on a clinically validated frailty model as well as operational definitions will spearhead the development of targeted interventions (including clinical trials), products and services aligned with clinical goals.

### **How**

- Create a collaborative multi-stakeholder committee grouping interested parties.
- Agree on operational and regulatory definitions of pre-frailty and frailty and offer regulatory overarching guidance for frailty-related conditions.
- Develop and implement EU wide nutrition screening programmes to identify those within an older population who could benefit from specialised nutrition interventions e.g. a simple, validated, easy-to-implement tool to determine nutritional status associated with frailty and/or dementia.
- Validate the operational approach, define standards/protocols for interoperability of a screening/diagnostic tool-kit for older people presenting risk factors of frailty, including risks of sarcopenia, malnutrition and dementia.
- Define adequate endpoints/protocols to perform clinical trials; launch clinical trials to validate the diagnostic tool set and interventions.
- Define guidelines for multidimensional interventions, including, as early as possible, nutritional aspects (i.e. nutrients, vitamins, healthy eating) and promotion of physical activity; launch nutrition and physical activity screening programmes using screening/diagnostic tool sets.
- Propose to primary care providers and specialists (physicians, nurses and other health care professionals) evidence-based guidelines on interventions, which may prevent, delay or slow progression of frailty.

### **Specific conditions for the action**

To achieve the objective of the action, a number of conditions have to be put in place. Many of these concern so-called framework conditions, such as funding, legislative and or organisational changes as well as changes and/or adaptations in professionals' practices and/or market strategies. Other specific conditions include:

- Co-financing of pilot project and programmes
- Development of standards for diagnosis and data exchange, as well as promoting interoperability of nutrition screening tools
- Definition of adequate end points / protocols to perform clinical trials
- Proposal for clinical trials methodology and regulatory science for R&D

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission and or other private or non governmental organisations to address these conditions within their respective competences and responsibilities.**

## III.2. Theme B: Care and Cure

### III.2.1. Description of the action:

#### a) Ideas for priority action areas

##### **Identified Priority Action Area B1**

Protocols, education and training programmes for health professionals, care personnel, informal/family carers, with the special attention to emerging roles and comprehensive case management, for example on multimorbidity, polypharmacy, frailty and remote monitoring.

##### **Rationale**

Chronic conditions, such as heart failure, respiratory and sleep disorders, diabetes, obesity, depression, pain, dementia, and hypertension affect 80% of people over 65, and often occur simultaneously (multimorbidity)<sup>23</sup>. Fostering integrated care particularly for older patients requires more holistic and coordinated approach. It is necessary to enhance coordination and communication among the different actors involved in delivery of care to older patients. To achieve this it is essential to adopt a multi stakeholder approach, throughout the care process both for providers and users, starting from training to service delivery and self management.

Patient empowerment is needed to realise shared-decision making in healthcare, including effective self management of patients and carers/families in partnership with health professionals. Adequate training and support to carers can yield a double saving (formal and informal care): to people with chronic conditions, by supporting them to stay in their own homes and benefit from good care; and to the carers themselves (who are often older people) by ensuring that they remain in good health and mentally fit. Innovative and inexpensive initiatives to support carers do yield good results, e.g. services provided for Alzheimer's patients.

##### **Objective of a priority action area**

- Disseminating and implementing, as appropriate, protocols, education and training programmes for health professionals, care personnel and informal/family carers with the special attention to emerging roles and comprehensive case management, for example on frailty, multi-morbidity and remote monitoring

##### **Possible future Actions**

- Develop and/or adapt protocols for management of co-morbidities including polypharmacy based on multi-stakeholder approach
- Disseminate and implement, as appropriate, education and training programmes and teaching manuals for health professionals, care personnel and informal/family carers with special attention to emerging roles and case management programmes, for example on frailty, multi-morbidity and remote monitoring
- Implement training for end-users (carers, patients) on how to use new tools for personalised case management

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<sup>23</sup> F. Luppi, F. Franco, B. Beghe, L. M. Fabbri (2008): 'Treatment of chronic obstructive pulmonary disease and its comorbidities', ProcAm Thorac Vol 5, states that conditions such as chronic heart failure and COPD often develop together with one or more co-morbid conditions. More than half of all older people have at least 3 chronic medical conditions and a significant proportion has 5 or more; and these are often unrecognised and untreated.

- Define outcome criteria and health care indicators and tools to document the quality of specific care (e.g. pain care and its societal impact).

### **Identified Priority Action Area B2**

#### **Multimorbidity and R&D**

##### **Rationale**

Co-morbid chronic diseases are associated with a decline in many health outcomes, such as quality of life, mobility, functional ability and mortality, with psychological distress and with increases in hospitalisations and use of health care resources. To make progress it is essential to look both at longer term issues as well as securing improvements in the short term.

##### **Objective of a priority action area**

- Piloting and establishing multi-morbidity case management with new models of care for a range of chronic conditions, including protocols and individualised care plans.

##### **Possible future actions**

- Support research and development in order to explore personalised case management and chronic care models which represent individual patients' profile and support self-care, based on optimal management and personalisation tools.
- Develop/explore personalised predictive algorithms and advanced support mechanisms for management of chronic conditions.
- Explore and apply disease management services including: enrolment and stratification of patients; medical care and follow up programmes; patient empowerment (education, coaching, monitoring, self management).
- Explore IT support for patients and providers such as artificial intelligence for complex situations, including evidence based cost-effective/efficient assessment.
- Support research in order to develop measures to enable biometrics and group stratification (e.g. with respect to treatment response, disease(s) presentation, genetic predisposition, environmental factors, etc).
- Develop a European framework to tackle chronic conditions in a patient-centred approach - exchanging best practices in four major chronic conditions areas (CVS, Diabetes, CNDs MSDs and COPDs), and extrapolating the commonalities across diseases and geographic regions in Europe.

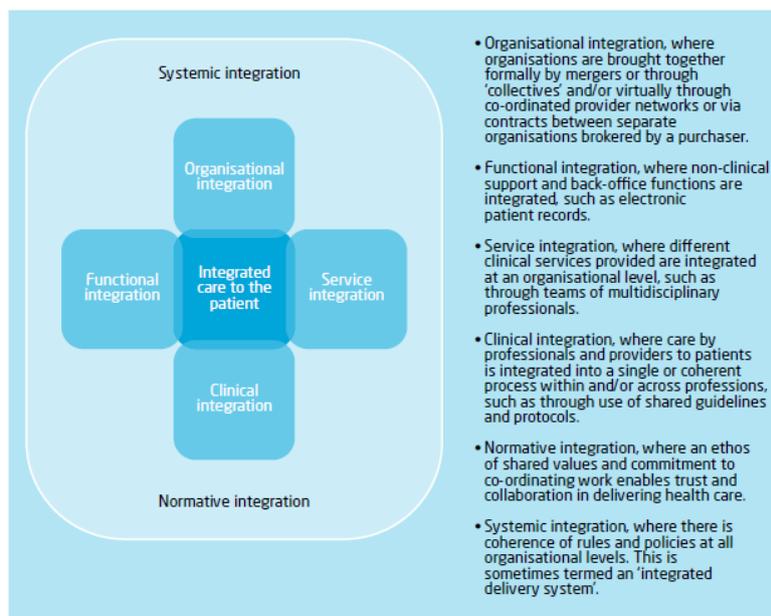
### **Identified Priority Action Area B3**

#### **Capacity building and replicability of successful integrated care systems based on innovative tools and services**

##### **Rationale**

Integrated care is about the coordination of care between primary and secondary care (vertical integration) and between health, social and community care (institutionalised and informal care - horizontal integration), and it should be centred on the individual person.

Integrated care can be organised in different ways depending on the healthcare system, approach and needs. Comprehensive models propose multiple facets, at different levels of care provision. One of the most inclusive examples is presented below.



Source: Fulop et al 2005, in Lewis et al (2010)

The approach is shifting from reactive to preventive, proactive and patient-specific care, from institutional to community/home based care; bringing in benefits in terms of reducing avoidable/unnecessary hospitalisation, more sustainable and optimised use of resources and more efficient care throughout the whole care system. Ultimately, this will bring benefits for end users and realise the concept of patients as co-producers of health as an integral part of the entire system.

For the purpose of this Priority Action Area, the integrated care concept concerns collaboration among all parties within care systems that play a role in providing care to a specific person. Patient centred holistic care needs to ensure that older patients are empowered and well informed in order to participate in their care and use innovative solutions with confidence.

To deliver integrated care, a comprehensive set of measures have to be put in place, ranging from: organisational and administrative innovations, new business models, compatible processes, well-defined patient-specific care plans, telehealth and telecare systems and their combination, and interoperable ICT systems.

Existing pilot projects or experiences, which have implemented these innovative approaches, have shown that reduction in avoidable/unnecessary hospitalisation<sup>24</sup> can be achieved if remote chronic disease management and integrated care is made available to individuals.

### Objectives of the Priority Action Area

- Reducing avoidable/unnecessary hospitalisation of older people with chronic conditions, through the effective implementation of integrated care programmes and chronic disease management models that should ultimately contribute to the improved efficiency of health systems.

### Actions ready to be launched

- Replicating and tutoring integrated care for chronic diseases, including disease/case management models with remote monitoring at regional level.

### Possible other Actions

<sup>24</sup> Inglis SC, Clark RA, Cleland JGF, McAlister F, Stewart S. [Structured telephone support or telemonitoring programs for patients with chronic heart failure](#). *Cochrane Database of Systematic Reviews* 2010, Aug (4), Issue 8. Art. No.: CD007228. DOI: 10.1002/14651858.CD007228.pub3.

- Develop and/or adapt guidelines for the organisation and implementation of integrated care (or its components, e.g. chronic condition management, tele-health) implementing innovative tools and services
- Validate and pilot promising solutions coming from the research phase
- Develop/explore new generations of tools and services for more effective chronic conditions management, assisted self-management for home and integrated care
- Achieve consensus, first at national level, then across Europe, on guidelines and standards of treatment for multi-morbidity (this being in direct link to activities under Action Area B2), at least for the most relevant chronic diseases which often occur simultaneously, such as heart failure, respiratory diseases, sleep apnoea, diabetes, obesity, depression, pain, dementia and hypertension

### **Specific conditions**

- Co-financing of deployment of evidence-based integrated care implementing organisational changes and development of new business models and innovative incentive mechanisms.
- Clear organisational rules and responsibilities in relation to integrated care models, including remote management of chronic conditions.
- Clear legal framework to implement integrated care, including data protection and liability.
- Clear rules for procurement (including pre-commercial procurement and innovative approaches to procurement).
- Incentives' mechanisms to encourage evidence-based 'continuity of care services' at all levels, as an important prerequisite for payers or service providers to invest in integrated care/ chronic disease management
- Secure strong commitments:
  - from national and regional health authorities and from health professionals, care personnel and family/informal carers to team up and organise models for integrated care,
  - from payers/insurers to implement innovative incentives schemes,
  - from industry to invest in deployment and scaling up of interoperable solutions,
  - from procurers and venture capitalists to invest in innovative solutions.

### **Proposed Specific Action**

#### **Replicating and tutoring integrated care for chronic diseases, including remote monitoring at regional level**

#### **Deliverables:**

- By 2015: Availability of programmes for chronic conditions/case management (including remote management/monitoring) serving older people in at least 50 regions, available to at least 10% of the target population (patients affected by chronic diseases in the regions involved).
- By 2015-2020: Based on validated, evidence-based cases, scale-up and replication of integrated care programmes serving older people, supported by innovative tools and services, in at least 20 regions in 15 Member States.

#### **Rationale – why**

The increased complexity of health problems and the specificity of chronic conditions require adequate provision of care, which implies changes in professional activities, qualifications

and care settings and processes.

Reform of health systems needs to involve development of integrated care models that are more closely oriented to the needs of the patients: multidisciplinary, well coordinated and accessible 24 hours a day, as well as anchored in community and home care settings. In addition, to be operational, large scale programmes and models need interoperable and effective ICT systems to support the provision of care.

The action will build on currently operational services and ongoing activities in pilots, programmes and standards.

### **Added value – why it is appropriate for EIP**

Proven models across Europe confirm an improvement in the quality and accessibility of care, and greater focus on the needs and wishes of patients with chronic conditions. Ultimately, they appear to be cost-effective, leading to containment or reduction of associated costs (lower costs and utilisation, net cost savings).

The EIP with its partnership and holistic approach can help create good and effective communication and coordination channels across the entire care process. Scaling-up and generating critical mass at EU level is a key for successful implementation, but requires overcoming operational silos, implementing organisational changes, innovative business models and incentive measures, convergence of technology and promotion of standards towards interoperable ICT tools.

Therefore to be successful, this action will require a wide convergence of visions and commitments to act from multiple stakeholders; the Partnership can therefore bring a unique added value and be a pre-requisite for success.

### **How**

- Compile a comprehensive map of stakeholders involved in operational and piloted services on remote management of chronic diseases and/or integrated care (i.e. comprising national/regional authorities, patient and care organisations, industry, service providers, insurance companies, procurers and venture capitalists), and building a stakeholder network.
- Provide technical and expertise support in setting up multidisciplinary teams as well as developing comprehensive curricula for the care workforce serving older patients with (multiple) chronic conditions within the setting of integrated care.
- Develop training/coaching programmes for end-users (including health professionals, care personnel, informal/family carers and patients) in the use of innovative solutions (i.e. decision, support systems, coaching tools, shared electronic care records, assisted self-management tools) and raising awareness of their availability and benefits.
- Coach of regions: cooperation between "pioneering regions" with successful operational models and "follower regions".
- Identify successful organisational models for integrated care, scalable and reproducible, and supporting their implementation within the community, in regions across the EU. This also involves definition and promotion of new care pathways for patients as they migrate between social and health care providers.
- Map and collect evidence on health and economic outcomes of integrated care models and pilots. (including remote management of chronic conditions, tele-care, etc.) to be accessible in one repository/database
- Set up an evaluation/assessment mechanism- with accepted and validated indicators/measures – to enable assessment and evaluation of performance and analysis of good operational practices, including business models, in integrated care (or its

components such as tele-health, tele-care, chronic condition monitoring, etc.) in view of their replication in other regions.

- Explore the effectiveness of existing funding models and developing, where appropriate, alternative funding models for integrated care programmes and remote management of chronic diseases, which fit country-specific needs.
- Build networks of stakeholders to:
  - roll out a large number of structured programmes for remote management of chronic diseases in at least 15 Member States,
  - pilot and establish integrated care models on multi-morbidity chronic cases in a significant number of regions,
  - move pilots into full deployment, replicating across Member States/regions, with the use of existing EU financial tools such as Structural Funds, FP7, Horizon 2020 and CIP programmes, as well as national/regional and private funding.

### **Specific conditions for the Action**

To achieve the objective of the action a number of conditions have to be put in place, as outlined in the list above. These will require funding, legislative and organisational changes as well as changes or adaptations in professionals' practices and/or market strategies. Other specific conditions include:

- Defragmentation of social and healthcare strategies and linking of social care and healthcare budgets, and financial transparency with (cost-sharing) models.
- Joint definition of standards and guidelines for take up of standards, for interoperable systems and services in support of integrated care.

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission, payers and other private or non governmental organisations, to address these conditions within their respective competences and responsibilities.**

### III.3. Theme C: Active Ageing and Independent Living

#### III.3.1. Description of the actions

##### a) Ideas for priority action areas

###### **Identified Priority Action Area C1**

Assisted daily living for older people with cognitive impairment

###### **Rationale**

The annual direct and indirect costs for care of Alzheimer and other dementia diseases are of the order of €130 billion in the EU27 (€21 000 per patient)<sup>25</sup>. 56% of these costs are borne by informal care<sup>26</sup>. Due to demographic ageing, cognitive impairments are set to increase with an associated need for independent living solutions, telecare, and smart environments (solutions) to improve the quality of life of older person by delaying their institutionalisation while also supporting formal and informal/family carers.

###### **Objective of a priority action area**

- Supporting people with cognitive impairments at home through regional co-operation on proving solutions, pooling socio-economic evidence on return of investment and viable business models for innovation, building on users' experience, and diffusing this information for re-use.

###### **Possible future actions**

- By 2012 establish a network of at least 20 regions committed to jointly define and introduce programmes for "daily assisted living" of older people with cognitive impairment.
- By 2013 establish a stakeholder platform for the development of guidelines and sustainable financing models, taking into account of organisational approaches in formal and informal care, the cross-cutting nature of budgetary execution (across health and social care portfolios) and ensuring conditions for return on investment.
- By 2013 launch a network of at least 40 regions co-operating on proven solutions and pooling significant socio-economic evidence (including from large scale pilots funded by regional authorities or the EU). The network will target a potential pool of 50.000 users, commit to innovative public procurement at the regional level, and assess potentials for return on investment in re-using of viable business models.

###### **Identified Priority Action Area C2**

Extending active and independent living through Open and Personalised solutions

###### **Rationale**

ICT solutions can prolong independent living of older people and extend the time they remain active and safe in their preferred environment. They also have a huge potential to enhance social inclusion and participation of older people, reduce depression rates, enhance quality of work for cares and make overall care provision economically sustainable (e.g. by avoiding and reducing hospital stays).

<sup>25</sup> Dementia in Europe Yearbook, Alzheimer Europe, 2008, p.67-70

<sup>26</sup> European Commission Communication on a European Initiative on Alzheimer's disease and other dementias, 2009

Current solutions for telemonitoring, telecare or social interaction are largely proprietary, based on single provider design and cannot be easily adapted to multiple and changing users' and organisational needs.

### **Objective of a priority action area**

- Enhancing deployment and take up of interoperable independent living solutions based on open standards.

### **Actions ready to be launched**

- Development of interoperable independent living solutions, including guidelines for business models – extending active and independent living through open and personalised solutions supported by global standards, validated implementation of interoperable platforms and new evidence on the return of investment.

### **Possible other future actions**

- By 2014 establish a coordinated research and development effort on highly supportive and intelligent user environments and robotics for assisted living and on next generation service platforms based on cloud computing and semantic interoperability.

#### **Proposed Specific Action**

#### **Development of interoperable independent living solutions, including guidelines for business models**

##### **Deliverables**

- By 2015 availability of key global standards and validated implementations of interoperable platforms, solutions and applications for independent living.
- By 2015 availability of evidence on the return on investment of these solutions and applications, based on experience involving at least 10 major suppliers, 100 SMEs and 10.000 users.

##### **Added value – why it is appropriate for EIP**

This action can provide essential inputs to the creation of a new and coherent market for cost-effective products and services for older persons to live a more active and independent life.

The action reinforces ongoing activities in Europe (and elsewhere) in the area of research and innovation supported through public-private partnership. Public and private stakeholders such as the Continua Alliance, have already aligned – or are in the process of aligning – their resources (financial and other) to create a new market for solutions addressing demographic change. More than 40 research projects have grouped themselves to voluntarily sign the AALOA declaration on open service platforms to be used in the development of solutions for independent living.

Furthermore, this action will support both the EU and Member States to fulfil their commitment regarding the implementation of the UN Convention on the Rights of People with disabilities, as well as their involvement in the UN Open Ended working group on ageing: e.g. by providing solutions which better meet the accessibility and usability needs of an ageing population.

##### **How**

- By 2013 launch a cooperation platform of key stakeholders encompassing industry, user and care organisations, service providers, insurance and housing companies and regions/major cities
- Between 2012 and 2014 pursue joint development of open standards and reference architectures, leading to an accelerated global standards setting for independent living

solutions for older people, and developing and disseminating guidelines on sustainable financing and business models based on these open standards

- Promote wide availability of open and flexible solutions and tools for building independent living applications and services
- Mobilise and pool demands including at least 10 pan-European implementations based on innovative procurement to accelerate developments
- Launch large scale pilot projects involving at least 10.000 users to develop comprehensive socio-economic evidence on impact from innovation

### **Specific conditions for the Action**

To achieve the objective of the action, a number of conditions have to be put in place, these will require funding, legislative and organisational changes as well as changes or adaptations in professionals' practices and/or market strategies. Other specific conditions include:

- Availability of adequate support from EU and other funding instruments, for example, AAL, CIP ICT PSP, FP7, Horizon 2020, Public Private Partnership schemes, structural funds. Similarly funding mechanisms of the European Investment Bank and/or European Investment Fund.
- Putting in place standardisation mandates or other formal/informal standardisation mechanisms.

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission, payers and other private or non governmental organisations, to address these conditions within their respective competences and responsibilities.**

### **Identified Priority Action Area C3**

Innovation improving Social Inclusion of older people

#### **Rationale**

As a result of impaired mobility, health and/or cognitive functions decline, many older people suffer from loneliness and social isolation. Depression affects 1 in 5 older people living in the community and 2 in 5 living in care homes. This has a major negative impact on their quality of life and on the costs of care.

Digital connectivity is one of the proven ways to improve social inclusion, while social innovation and experimentation can also play an important role, taking account of human factors. The EIP proposes to pursue the opportunity of "easy to use" solutions, including social innovation and digital communication for mediation of physical interaction, which have proven (on a small scale) to be effective and reduce depression, and can demonstrate a potential for scaling up across Europe.

#### **Objective of a priority action area**

- Supporting social inclusion of older people by replicating proven solutions with validated socio-economic evidence on the return of investment and viable funding models for innovation, building on experience from a large user base.

#### **Possible future actions**

- By 2012 define and launch a cooperation initiative involving at least 20 regions/municipalities committed to introducing easy to use, accessible and affordable digital environments for combating social isolation and mediating virtual and physical (intergenerational) interaction of older people

- By 2013 develop common guidelines for public procurement and regional replication of viable experiences, for example covering proven functional specifications with proven impact on social inclusion, deployment guidelines for organisational and financial approaches
- By 2013 launch large scale deployment actions involving public and private partnerships to deliver operational solutions with a large user base to provide reliable evidence of impact and financing models with a good return of investment.

**Possible other actions with longer term impact**

- By 2014 pursue the establishment of a coordinated research and development effort based on multi-disciplinary research, improve understanding of depression related to social isolation and possible treatments; and explore ground breaking solutions for reliable early diagnosis and mediated therapies, such as 3D virtual presence and social robotics.

### III.4. Theme D: Horizontal issues

#### III.4.1. Description of the action:

The horizontal issues can be divided into 4 main categories:

- Regulatory and standardisation conditions
- Effective funding
- Evidence base, repository for age-friendly innovation
- Marketplace to facilitate cooperation among stakeholders

#### III.4.1. Possible activities

#### Identified Priority Action Area D1

**Regulatory and standardisation conditions**, otherwise called **framework conditions** include standardisation, regulation, funding incl. reimbursement and certifications conditions as well as a mapping of research and innovation.

Actions described in this Strategic Implementation Plan require specific conditions to be put in place for priorities and actions to be implemented successfully. The Steering Group invites Member States, the European Parliament, national and regional authorities, programme managers, the European Commission, all relevant decision makers, and where appropriate regulatory agencies, to consider the overall objectives of the priorities and actions proposed in this Plan and to establish those conditions, in particular by:

- Revising European regulatory frameworks to ensure clarity, flexibility as well as to respond to the needs of all stakeholders. In particular in relation to the revision of:
  - Directives 90/385/EEC, 93/42/EEC and 98/79/EC on medical devices. Medical devices and, above all, *in vitro* diagnostic devices must, as is already the case today, continuously adapt to the state of the art, to be interoperable, when necessary, and to contribute to healthy ageing and the Partnership objectives.
  - Directive 2001/20/EC on the conduct of clinical trials on medicinal products. It is crucial to ensure a proportionate regulatory framework which facilitates the conduct of clinical trials in the EU without compromising on patients' safety and rights and data robustness.
  - Directive 95/46/EC on the protection of individuals with regards to the processing of personal data and the free movement of such data. It is important to ensure the fundamental right to the protection of personal information, and at the same time to allow individuals to access and use their health data and to enable further legitimate interests of public health protection, scientific research and the development of health services. In this context, the specifics of health data should be recognised and the importance of the portability of health data emphasized. This may require a specific treatment of the category of health data and could call for a higher level of harmonisation of data protection across EU than that provided by the current framework.
- Mapping legislative gaps for the achievements of the proposed actions as well as proposing regulatory solutions to address such gaps. Specific areas identified as needing attention are liability issues and procurement rules and procedures.

- Closer cooperation of the European Commission with Member States and or regional and local legislators to exchange good practice for regulatory frameworks in the area of active and healthy ageing.
- Ensuring standardisation frameworks by the European Commission and relevant stakeholders, in order to facilitate the development and take up of interoperable ICT solutions.

### **Identified Priority Action Area D2**

**Effective funding** requires the optimised use of existing financial tools at EU/national and /or regional level, as well as, stimulation of the active use of innovative procurement (including pre-commercial), development of innovative incentive mechanisms at the appropriate levels (e.g. public, private, third party payers etc), and exploration of venture capital support.

Implementing innovation in health and social care serving particularly the older part of society, is a costly and complex process. To facilitate the implementation of the SIP the EIP Steering Group:

- Invites the EC to ensure that implementing bodies (i.e. Member States, regions, private operators) are aware of existing funding mechanisms, and facilitate their access to and their use of adequate EU funding instruments in order to stimulate innovation in the area of active and healthy ageing.
- Invites the European Commission to align and streamline funding in research and innovation within the FP7 (and the forthcoming Horizon 2020), Competitiveness and Innovation Programme (CIP), Public Health Programme (Health for Growth), Structural Funds (Cohesion and regional Policy) and other relevant EU funding instruments towards the objectives of the EIP actions in order to optimise their use and improve efficiency while avoiding overlap and duplication.
- Encourages the European Commission Member States and relevant regional authorities to create and/or adapt the conditions for mobilising structural and regional funds to support the implementation of the Plan and achieve the objectives of the EIP, and to make the most effective use of funding allocated for healthy ageing and ICT for health within the Cohesion Policy 2014-2020.
- Invites providers, payers of services and all relevant stakeholders to introduce, design and/or adapt where needed, innovative business models and specific incentives schemes to enable implementation of evidence-based integrated care programmes (including chronic conditions management models), deployment of aged-related tools and services, in support of active and healthy ageing.

### **Identified Priority Action Area D3**

**Evidence base, reference examples, repository for age-friendly innovation** with a special focus on knowledge sharing of sound and robust evidence and data and reliable methodologies, to enable the exchange of proven and tested practices, their dissemination, and the replication and scaling up of successful cases. The Steering Group in view of specific actions and gaps identified in data and evidence, encourages the Commission, with Member States and other stakeholders, to carry out the following activities in the area:

- Aggregation and dissemination of more standardised data and evidence in innovation for health and ageing, including shared methodologies for evaluation and validation of innovative health promotion and disease prevention programmes, diagnostic and

management procedures, and care processes, building on the experience of EUnetHTA and Methotelemed

- Setting up a platform at the EU level supporting development/ improvement of systematic registration of relevant health outcomes using standardised indicators and providing both general comparative data as well as disease/procedure specific data (including e.g. a template for annual reporting from registries, self-check of patient outcomes against aggregated data from their own country), as well as enabling comparison of the process and outcomes data of care of co-morbid chronic patients across Europe
- Exploring a reliable system for documenting compliance with evidence-based standards of care.

Since a number of actions, as identified by the Steering Group in this paper, aim at speeding up innovation diffusion (bringing ideas to the market for the benefit of end-users), taking up and scaling up of existing evidence base models, programmes and solutions, the Steering Group strongly recommends focusing on activities aimed at increasing the breadth, depth and speed of the **knowledge/ know-how transfer and exchange of good practices across different levels**, and making these available also in the most vulnerable regions. The Steering Group suggests:

- Promoting and speeding up implementation, evaluation (in terms of economic and health outcomes) and validation of innovative procedures, devices and care processes in hospitals and community settings
- Creating a repository of documented good practices (evidence-based) enabling easy/user friendly access and wider dissemination of available high-quality evidence in the area of active and healthy ageing (e.g. a dedicated portal)
- Developing an assessment tool to enable multidisciplinary stakeholder groups to better assess their readiness to adopt telehealth or eHealth solutions
- Enabling mutual learning and exchange, with the use of innovative tools and social networks within European networks committed to healthy and active ageing.

#### **Identified Priority Action Area D4**

**A marketplace to facilitate cooperation and replication of ideas among various stakeholders** aimed at linking up interested stakeholders with the objective of creating relevant partnerships and implementing innovative solutions. It will help facilitate innovation and knowledge transfer by providing stakeholders with the opportunity to meet and network with individuals and organisations in the EU and internationally. In this view and for the purpose of the EIP the Steering Group suggests to the European Commission the following:

- Setting up an on-line "market" facilitating the matching of stakeholders interested in cooperation on various subjects; an on-line platform to be the "marketplace" for ideas and innovative solutions, replication and new cooperation; the platform should aim to stimulate ideas for implementation and partnering in a bottom-up fashion, to encourage and collect such contributions from all over Europe, and to propose an evaluation mechanism to safeguard the EIP criteria
- Promoting and fostering networking activities (e.g. speed dating/networking) for finding partners, and easy matching among regional authorities and the stakeholders contributing to innovation (business, research, civil society) and enabling mutual learning and exchange, with the use of innovative tools and social networks

- Supporting exchange of reference examples for innovation in active and healthy ageing, while capitalising on ongoing concrete initiatives of countries, regions, cities and organisations that pursue the EIP vision
- Supporting initiatives aimed at bringing together social innovators, young programmers/developers and the community of older people to create partnerships and address their needs in a spirit of intergenerational solidarity.

### **Proposed Specific Action**

#### **Thematic Marketplace: Innovation for age friendly buildings, cities and environments**

##### **Deliverables**

- By 2012: launching, based on the WHO age friendly cities initiative, a network of major cities/regions/municipalities committed to deploying innovative approaches to make their living environment more age friendly, including the use of ICT solutions.

##### **Rationale**

Better age friendly living environments are necessary to promote active ageing and support the specific needs for accessible living spaces, mobility, safety etc associated with the growing proportion of older people in society.

##### **Added value – why it is appropriate for the EIP**

Within this area, the Steering Group has agreed to develop adequate actions in support of Innovation for age friendly buildings, cities and environments, bringing about benefits for older people.

An EIP action on innovation in age friendly living environments, building on the work by the WHO on age friendly cities, could have a substantial impact on promoting active ageing more broadly and supporting the specific needs of older people for accessible living spaces, mobility, safety. This approach could strengthen involvement of older people in city and urban policy development.

##### **How**

- Using the opportunity of the WHO age-friendly initiative, as well as building on and bringing together ongoing innovative work in public transport, ICT, smart cities, establishing a cooperation agreement with all parties involved, including a covenant of major cities/regions/municipalities and a "seniors for innovation" initiative, bringing together innovative experiences for analysis and re-use.
- Accelerating standardisation and interoperability of required devices, systems and services by involving major supply and demand side actors and pooling demands by 2013.
- Developing comprehensive common guidelines for innovation in support of age friendly environments to facilitate replication, in cooperation with the WHO, and building on experience from at least 25 regions/cities/municipalities.

##### **Specific conditions for the Action**

To achieve the objective of the action a number of conditions have to be put in place, as outlined in the list above. These might require funding, legislative and organisational changes as well as changes or adaptations in market strategies.

**The Steering Group calls on all stakeholders including Member States, regional or local authorities, the European Commission, payers and other private or non governmental organisations, to address these conditions within their respective competences and responsibilities.**

#### IV MONITORING AND EVALUATION FRAMEWORK

Monitoring of HLYs is useful for monitoring trends in the health of the population or population groups. This is also useful for public health policy if tools are available that indicate where observed trends in HLY originate (difference in mortality vs. disability level, which age groups, which causes) and what the likely impact is of policy interventions on HLY (and gaps).

Such measures as HLY are also useful to prioritise between alternative actions to achieve specific policy aims, for example the aim of the EIP AHA to increase HLYs by two years by the year 2020, and could then serve to translate intermediate effects of the actions into their impact on HLYs.

However, in order to monitor the progress towards the objectives of the partnership (increased health and quality of life of older people, enhanced sustainability of care systems, stimulated market growth) and achieve the overarching goal a single-indicator approach based on measuring only HLYs only appears to be inherently insufficient.

In order to support the implementation of the Partnership's diverse activities, it would be useful to build a monitoring framework based on a set of indicators, accompanied by a set of specific objectives and potentially concrete targets. Such a framework should also enable the linking of the various actions to be undertaken under the Partnership with the overall objectives. The approach should be both a bottom-up exercise (from specific actions to the headline target) and top-down activity (from the "triple win" to specific objectives).

Therefore, this potential monitoring framework could be based on a multi-dimensional approach, with various levels (from actions at micro level, through interface layers, to the headline target and strategic objectives at macro level) and with multiple indicators and targets/specific objectives;

The multidimensional approach is also justifiable given the variety and number of individual actions in the framework of the Partnership, be it at local, regional or at European scale, being put forward, and considering the comprehensiveness of the top level including HLY, Quality of Life, sustainable health care systems and Innovation based competitiveness.

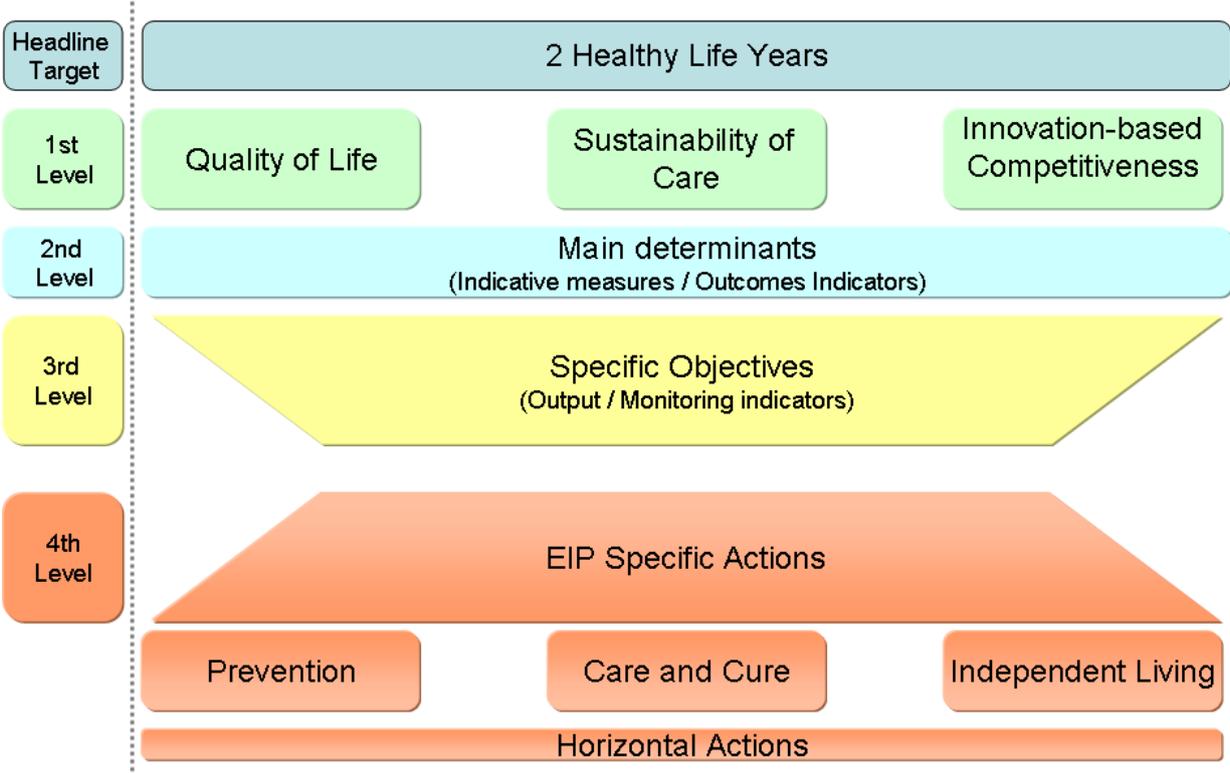
In other words, the monitoring framework should seek to assess the impact of individual actions performed at micro level on macro targets and on specific objectives describing the situation of the whole population (e.g. HLY+2).

The proposed monitoring framework could be based on 4 levels (see Table 1):

- 1<sup>st</sup> level (top) macro level: captures HLYs and 'triple win' objectives, namely Quality of Life, sustainable care systems and innovation based competitiveness.
- 2<sup>nd</sup> level (main determinants): 1<sup>st</sup> level determinant indicators disaggregated into various indicative measures (e.g. Years Lived with Disability – YLD - for selected diseases, chronic diseases screening and treatment quality, cost-effectiveness of care/Healthcare spending).
- 3<sup>rd</sup> level (specific objectives) interface objectives between HLYs+2 and individual actions, e.g. increasing the rate of early diagnosis, decreasing avoidable inpatient services, increasing adherence to medicine regimes and treatments.
- 4<sup>th</sup> level (micro level): a mix of output and outcome indicators which would measure individual actions– (, e.g. increasing community care services in a region, providing training for care workforce on diagnostic tools in a number of hospitals in a region/country).

Therefore, the **top first level** would cover the HLYs with its headline target, and would be completed by the main objectives (increase health and quality of life of older people, enhance sustainability of care systems, stimulate market growth) of the EIP on AHA, i.e. quality of life; sustainability of health systems; business competitiveness and innovation.

**Table 1: The following figure presents an overview of the above described approach**



## Annex I - Steering Group Members

1. **The Rt. Hon. Zoltan Cséfalvay**, Minister of State, Hungary
2. **The Rt. Hon. Benoît Cerexhe**, Minister of Research, Belgium
3. **The Rt. Hon. Maciej Banach**, Undersecretary of State, Ministry of Science and Higher Education, Poland
4. **The Rt. Hon. Cristina Garmendia Mendizábal**, Minister of Science and Innovation, Spain
5. **The Rt. Hon. Annette Schavan**, German Minister for Education and Research, Chair: Joint Programming Initiative More Years, Better Lives
6. **The Rt. Hon. Leire Pajin**, Spain Minister of Health, Welfare and Gender Equality; Chair, e-Health Governance Initiative
7. **Ms Lena Gustafsson, President**, Ambient Assisted Living Joint Programme
8. **Mr Philippe Amouyel**, Chair, Joint Programming on Alzheimer and Neurodegenerative Diseases
9. **Mr Wolfram Kuschke**, Member of Parliament in North Rhine-Westphalia, Germany
10. **Mr Anke Boye**, Mayor of Odense, Denmark
11. **Mr Andrew Witty**, CEO GlaxoSmithKline
12. **Mr Emmanuel Faber**, CEO Danone Europe
13. **Mr Guy Lebeau**, CEO Johnson & Johnson Europe
14. **Mr Frans van Houten**, CEO Philips
15. **Mr Esko Aho**, Executive Vice President, Nokia
16. **Mr Gil Baldwin**, CEO Tunstall Healthcare Group
17. **Mr Vittorio Colao**, CEO Vodafone Group
18. **Ms Sharon Higgins**, Director, Irish Medical Device Association
19. **Ms Christine Dawson**, Director, European Social Insurance Platform
20. **Mr Anders Olauson**, President, European Patients' Forum
21. **Ms Anne-Sophie Parent**, Director, AGE Platform Europe
22. **Mr Alain Franco**, Secretary General-Vice President of the International Association of Gerontology and Geriatrics
23. **Ms Madeleine Starr**, Head of Policy Development, Carers U.K.
24. **Mr Konstanty Radziwill**, President, Standing Committee of European Doctors
25. **Mr Paul De Raeve**, Secretary-General, European Federation of Nurses Associations
26. **Ms Marianne Olsson**, Senior Advisor, County Council Sörmland, Sweden
27. **Mr Sergio Pecorelli**, President, Italian Medicines Agency, Italy
28. **Mr Jos Peeters**, Chairman, Capricorn Venture Capital
29. **Mr Joseph Bannister**, Chairman, Malta Financial Services Authority, Malta