

**Personalised care and cure for healthy  
and active ageing:  
Aligning policy agendas**

Conference scoping paper and conclusions  
*Regions as motors of new growth through smart specialisation*

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## 1. Introduction

Healthy ageing is a huge challenge and a big opportunity at the same time. A societal challenge that affects people's lives, the cost of healthcare and many other aspects of our lives. An opportunity as researchers, enterprises, hospitals, care organisations, cities, regions, nations and actors at the European level have set out to develop solutions to support healthy and active ageing.

**While smart specialisation strategies are still being formulated, it is clear that at least 30 European regions have identified 'Health' as an area of strength from which to develop economic growth.** Today Europe is not reaping the full benefits from all ongoing initiatives as **many of them are small in scale, remain within their own local or national health care system and do not benefit from good practices already developed elsewhere.** In addition more radical solutions to the healthy ageing issues require a systemic approach, where actors at different governance levels – European, national, regional - have to coordinate their strategies and work together. The ultimate goal of the conference and the workshop are to identify those initiatives that would benefit from joined up actions and would boost their combined effectiveness.

An ageing population will lead to increases in the number of people suffering from chronic, expensive-to-treat diseases and disabilities and straining health care systems. Low birth rates, increasing longevity lead to a growth of people aged 65+ in the EU by 70% in 2050. The 80+ group will grow by 170%. This will lead to a raised demand for healthcare while decreasing the working population. It could push up healthcare spending by 1 to 2% of GDP in Member States by 2050. On average this would amount to about 25% increase in healthcare spending as a share of GDP.<sup>1</sup>

For this workshop we have chosen to focus on the case of the contribution of personalised care and cure to challenges for healthy ageing. These two concepts are potential drivers for bringing together parts of the health system and bringing more radical solutions where Europe can take a leading role. The focus is on personalised care and cure with implications for a) individual **patients and their families**, b) for **technologies, businesses and business models** needed to develop and implement (personalised) products and services and c) for the **health care systems** required to regulate the implementation and to guarantee sustainable, accessible and affordable cure and care.

**Personalised cure** (often also referred to as personalised medicine) is a broad and rapidly advancing field using a medical model that focuses on the alignment of a medical treatment with the genetic profile of an individual. It is about the ability to classify individuals into subpopulations that differ in their susceptibility to a particular disease or their response to a specific treatment<sup>2</sup>. It is also about choosing, for a specific patient, the most suitable option for treatment and care plan from those that are available. Preventive or therapeutic interventions can then be concentrated on those who will benefit, sparing expense and side effects for those who will not. From a

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<sup>1</sup> The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004-2050) Report prepared by the Economic Policy Committee and the European Commission (DG ECFIN). 2006 (Special Report n° 1/2006). Page 34

<sup>2</sup> PCAST, 2008.

biomedical perspective<sup>3</sup> it concerns a treatment that leads to more effectiveness. From a societal aspect it could lead to longer healthy lives less harmful side effects of medical treatments. From an economic perspective it can save costs as expensive and long treatments can be avoided or reduced (e.g. through lower dosages).

The concept of **personalised care** is much broader, in the sense that it does not only covers biomedical care but any care that might lead to an improved health experience by the individual. This includes institutionalised care as well as care at home.

Personalised care and cure play an important role in policy strategies and programmes in the domains of health, research and innovation, ICT and economic development. It is not surprising that multiple good initiatives are taken by many actors each working from their own remit and geographical scale. Patients more and more become 'consumer patients', and expect the best quality healthcare at an affordable price. This raises challenges of providing equal and affordable access to modern health services for all. The civil society will become a 'serious player' influencing the political decision-making process in order to safeguard the sustainability of healthcare systems in Europe.

## 2. Challenges considering healthy ageing and the role personalised care and cure could play

### 2.1 Challenges in supporting healthy and active ageing

Ageing populations will overwhelm the system in the coming years. **The main challenge is to support healthy ageing throughout the lifespan**, aiming to prevent health problems and disabilities from an early age, and tackling inequities in health linked to social, economic and environmental factors. Better-adapted healthcare services and prevention of chronic diseases could reduce public spending. Moreover, new technologies can potentially contribute to future sustainability by improving healthcare and health systems. Examples can be found in genetic technologies, medical technologies and information and communication technologies.

Living longer does not necessarily need to lead to more years with a poor life quality for the individual. On the contrary, longer life expectancy will lead to proportionally even bigger increase in Healthy Life Years. Still, changing life styles and life style related diseases (obesity, diabetes, coronary heart disease) would be a major future health challenge. Patients increasingly demand better information about their condition, treatment options and performance of clinical teams. Self-ownership is therefore increasingly important for patients. Technological developments will be integrated in everyday devices to assist in and outside the home. These developments will ask for adjustments to the current medical reimbursement systems that are now based on treatments by health professionals.

### 2.2 The role of personalised care and cure in addressing these challenges

Personalised cure can alleviate some of these challenges by offering more accurate and early-stage diagnosis of diseases and by tailoring treatments to individual patients. Theoretically this could make health care more cost effective, cause less side effects to patients, postpone or prevent certain diseases and reduce the amount of care needed

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<sup>3</sup> See amongst others: Bloem, S.J.G., (2012). Gepersonaliseerde zorg de juiste richting. Inaugural lecture at Neyenrode Business Universiteit and Ginsburg, G.S., & Willard, H.F. (2009). Genomic and personalized medicine: foundations and applications, Translational Research, Volume 154, Number 6, p. 277 – 287.

for the treatment and recovery of diseases. Personalised care on the other hand, could play a beneficial role by means of the prevention of diseases, the improvement of the living conditions of those with chronic or cognitive diseases, the postponement of institutionalised care and through the delivery of care at a distance.

Despite the promise of personalisation and the opportunities it provides for addressing healthy ageing challenges, a number of obstacles to the advancements of personalised approaches still exist. These are obviously scientific challenges, but also challenges of patient empowerment, uptake of new technologies and privacy issues, economic challenges and those related to the healthcare systems.

Smart specialisation strategies need strong partnerships with the private sector. Based on a large number of interviews, a recent study by McKinsey shows that **the economic and operational challenges seem to be the biggest hurdle**, although scientific difficulties remain<sup>4</sup>. If the business sector is reluctant to invest in research and innovation due to the failing reimbursement systems and operational challenges in the health systems, it is up to policy makers to take away these blockages across the system. **Here lie opportunities for a further alignment** of regional, national and European policy making to jointly resolve these issues and support the relationships between the different stakeholders. The question is who does what at which level?

### *2.2.1 Empowerment of the patient and self-management*

There is a clear tendency in healthcare towards a more patient-centred care system in which self-management of the patient in the home, self-monitoring and self-care methods are necessary elements<sup>5</sup>. Chronic-care patients will increasingly be involved in designing and carrying out their own care. Reasons for this tendency are obvious: patients will benefit when they are able to take responsibility in relation to their health. Also, giving more responsibility to patients might reduce health care expenditures<sup>6</sup>.

Moreover, personalised support will be readily available when needed, such as calculators counting calories for diabetes patients to an implanted ‘glucometer’ that instigates alerts from a different location. The adherence to a medical regime is, especially for elderly patients, an important future challenge and thereby an opportunity for personalised approaches. It is also one of the key goals set by the European Innovation Partnership on Active and Healthy Ageing for instance. Coordination of the mix of medications is another important challenge, besides adherence to medical regimes. One medication might interfere with another one, or works counterproductive for another existing (chronic) disease and personalised approaches are needed in order to provide for the right treatment at the right dose for each patient. This personalised approach is often referred to as combining ‘high touch with high tech’<sup>7</sup>. Local, national and European governments can support the further participation of individuals in education and treatment programs to encourage specific health outcomes, and to help them monitor and manage their or their families’ chronic diseases.

### *2.2.2 Uptake of new technological personalised solutions by elderly*

New technologies such as e-health systems and telematics technologies play an increasingly important role in transferring the chronic care from hospitals to the

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<sup>4</sup> *The microeconomics of personalized medicine*. McKinsey, 2010.

<sup>5</sup> Economist Intelligence Unit: *Never Too Early: Tackling Chronic Disease to extend healthy life years*, 2012

<sup>6</sup> *Subjective experienced health as a driver of health care behavior*. Sjaak Bloem and Joost Stalpers, July 2012 Nijenrode Papers series.

<sup>7</sup> Economist Intelligence Unit, 2012

patient's homes. E-health systems are useful for global warning systems for diseases, but also for sharing individual patient records amongst different care and health providers. Telematics can be used in remote diagnosis and treatment for instance. Imaging technologies can support the identification of diseases indicators, treatment and monitoring. Systems biology developments and genomics support the individualised approach to identifying at-risk populations, targeted screening and precision medicine, just to name a few examples of technological opportunities for further personalisation of healthcare and treatment<sup>8</sup>. If elderly and patients with chronic diseases are to use these new technologies, they must be intuitive, easy-to-use, and well-supported. Most people, also younger ones, have difficulties using and adapting to new technologies. Service is therefore crucial, as well as an easy set-up, remote or zero configurations is major part of the success of the technology<sup>9</sup>. Thus, 'living' lab environments and home trials might be therefore crucial to further stimulate the uptake of new personalised solutions by elderly and other patients.

### 2.2.3 Data protection and ethical issues

Personalised approaches also lead to a number of ethical questions related to the use and possible misuse of the information and data. For instance, diagnostic test information could be misused could harm patients<sup>10</sup>. **Different countries have different regulations with regards to data protection and privacy**, which might hamper the exchange of information and samples in biobanks for instance. **Here alignment is needed to further support personalised approaches and in the same time sufficiently protect the patients' privacy.**

### 2.2.4 Technology and business models

The recent progress in "omics" technology, molecular and systems biology, and information technology provides a large promise for novel therapeutics and reduction of healthcare costs. However, several studies have shown that there is little evidence that these benefits are accruing in mainstream medicine<sup>11</sup>. With increasing healthcare costs stakeholders such as healthcare providers, payers, regulators, patients and drug developers need to reconsider the economics of healthcare and the related business models. Managing the massive amount of data generated by for instance 'omics' technologies, population-based cohorts or collected in electronic health records is one of the biggest challenges in the health system. Sustainable data storage and interoperability issues are just some of the hurdles that need to be taken in order to combine and interpret data efficiently and work towards a more effective care and cure.

**Thus, increased collaboration and coordination are required across the health care system. Moreover, translating fundamental knowledge into the clinical practice is still a challenge.** Smart specialisation strategies could for instance support multi-centre clinical trials and coordinate these with regions in other parts of Europe.

New molecular technologies have led to the identification of a number of novel drug targets. Biological understanding of these targets is still insufficient. Moreover, although biomarkers are currently developed as diagnostic tests jointly with drug development programmes, the expectation is that only a very small percentage of

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<sup>8</sup> Economist Intelligence Unit, 2012

<sup>9</sup> Home Healthcare with Technology for Active Aging, Philips Publications based on RAND research, by Laurie Orlov.

<sup>10</sup> The microeconomics of personalized medicine, McKinsey, 2010.

<sup>11</sup> Toward Precision Medicine: Building a Knowledge Network for Biomedical Research and a New Taxonomy of Disease. Committee on a Framework for Development a New Taxonomy of Disease; National Research Council. ISBN 978-0-309-22219-8

these diagnostic tests will be launched in the next five to ten years<sup>12</sup>. Challenges for the business models here can be found between diagnostics providers and pharmaceutical partners. New therapeutics have traditionally been priced by value related to the impact of the treatment, while diagnostics have been priced according to production costs with a margin added<sup>13</sup>. Thus, although these diagnostics could create commercial benefits, they also could lead to higher costs, more risks and even a reduced market share. According to the McKinsey study, “the molecular-diagnostics business holds significant risk as a result of factors such as development costs, the timing of development and approval, time-to-payer coverage, rates of provider adoption, and peak sales prices”. As leading pharmaceutical companies outside Europe are also faced with threats to their current business models, this could be the right timing for European companies to take a lead role in upcoming new business models. This will only happen if collective stakeholders manage to create a conducive environment.

Despite this reluctance of the industry to invest in personalised diagnostics, different ‘personalised’ tests are currently on the market. Some tests help avoid using expensive therapies, while others delay expensive procedures. Some personalised medicine has the potential to reduce health care costs but not all do so, and so far investments have not been huge. The standardisation of the protocols for using and analysing the tests and using the information correctly are an obvious hurdle<sup>14</sup>. The McKinsey study suggests therefore that more health economic evidence is needed to stimulate the industry to adopt tests and align with other stakeholders. **Smart specialisation strategies engaging in many local and small-scale pilots do not support this harmonisation process, if the results of these pilots are not transferable.** Thus exchange of the evidence from these pilots and interoperability of protocols would offer great opportunities. A major point for debate for this workshop is to discuss how stakeholders at different levels can help overcome the current business sector’s risk avoidance.

### 3. Current initiatives at European, national and regional level

#### 3.1 European level

In 2010 the European Commission and its Member States launched a strategy for smart, sustainable and inclusive growth for the coming decade: the **Europe 2020 strategy**. The promotion of good health is integrated in this ten-year strategy<sup>15</sup>. For health policies and activities, the objective of smart and inclusive growth will be leading and a strong focus will be put on innovation in the healthcare sector, productivity and competitiveness, improving skills and jobs in this sector, and sustainable, healthy ageing, and efficient and effective health systems. Innovation in health, in the broadest sense, will be of crucial importance.

The **Innovation Union**<sup>16</sup> is one of the flagship initiatives that aims to re-focus R&D and innovation policy on the challenges facing our society, such as climate change, energy and resources efficiency, health and demographic change. The **European Innovation Partnership on Active and Healthy Ageing**<sup>17</sup> (EIP AHA) was proposed as a pilot project in

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<sup>12</sup> McKinsey, 2010.

<sup>13</sup> Stratified and Personalised medicine: an overview. Life sciences Scotland and Scottish Enterprise.

<sup>14</sup> McKinsey, 2010.

<sup>15</sup> A Budget for Europe 2020 (COM(2011)500 Final).

<sup>16</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm/](http://ec.europa.eu/research/innovation-union/index_en.cfm/).

<sup>17</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?section=active-healthy-ageing/](http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing/).

2011 aiming 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. The goal of the EIP AHA is to increase by 2 the average number of healthy life years (HLYs) in the European Union by 2020.<sup>18</sup> The priority area care and cure is based on the principle of integrated care. This means that **collaboration within health care services and among social, health, community carers/care providers is the way forward** to benefit all Europeans whilst helping to address resource efficiency and sustainability. Thus building health systems on integrated care models, including remote patient monitoring and management of chronic conditions. EIP topics that relate to personalised health are mostly related to personalised care solutions, helping elderly people to maintain an independent living and to have a greater self-management of daily life. This could include providing care at a distance and creating the platforms for more interaction between personalised cure and care. The partnership involves many regions and cities, providing a good coordination platform for aligning smart specialisation strategies.

In line with the Europe 2020 strategy, in 2011 the European Commission proposed its third multiannual programme of EU action in the field of health (2014-2020), 'Health for Growth', to strengthen and emphasise the links between economic growth and a healthy population<sup>19</sup>. The general objectives of the programme is to work with Member States encouraging innovation in healthcare and increasing the sustainability of health systems in order to improve the health of the EU citizens and protect them from cross-border health threats. Four specific objectives are defined with a strong potential for economic growth through better health<sup>20</sup> including the development of common tools, the increase of access to medical expertise and information, the dissemination of take up of best practices and tackling health emergencies.

Horizon 2020 has identified *Health, Demographic Change and Wellbeing* as one of its policy priorities and societal challenges that ask for a critical mass of research and innovation. Horizon 2020 combines the societal, the research and innovation and the economic growth perspectives of Healthy Ageing. Personalised cure and care are only one of many sub-topics of this broad policy topic. It also stimulates industrial leadership particularly in enabling and industrial technologies, including those that can be applied in life sciences, medical applications and health care. The proposal for Horizon 2020 acknowledges that *"the complexity of the challenge and the interdependency of its components demand a European level response"*. **This is obviously something that Horizon 2020 can not tackle on its own.**

In addition to the new initiatives in Horizon 2020 a number of initiatives have been in operation in the context of previous framework programmes for research and innovation.

The **Ambient Assisted Living Joint Programme**<sup>21</sup> (AAL JP) was established as an Article 185 initiative in 2008. Its aim is to create better condition of life for the older adults and to strengthen the industrial opportunities in Europe through the use of information and communication technology (ICT). The projects it supports are focused on innovative ICT-based products, services and systems for ageing well at home, in the community, and at work. While working well in the heart of the healthy ageing topic, only some of its activities are focused specifically at personalised health and mostly at the personalised care aspects. The **Innovative Medicines Initiative** is another Joint Initiative that focuses on the cure side of the health system and aims to build a more collaborative

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<sup>18</sup> Strategic Implementation Plan for the European Innovation Partnership on Active and Healthy Ageing (17 November 2011).

<sup>19</sup> Proposal for establishing a Health for Growth Programme, the third programme of EU action in the field of health for the period 2014-2020 (2011).

<sup>20</sup> Impact assessment accompanying the proposal for establishing a Health for Growth Programme, the third programme of EU action in the field of health for the period 2014-2020 (2011).

<sup>21</sup> <http://www.aal-europe.eu>

ecosystem for pharmaceutical research and development. Its focus is much broader than Healthy Ageing, and works towards generic health solutions related to for instance early diagnosis, biomarkers, electronic health records, all which could possibly contribute to developing personalised medicines.

The **Digital Agenda for Europe** contributes to addressing the societal challenge of Healthy Ageing by stimulating ICT-based support for dignified and independent living and eHealth technologies for the European healthcare. An important topic that is in this Agenda as well as in the Health for Growth strategy is the issue of interoperability of systems and solutions across European countries and regions. If Europe envisages a more integrated and joined up approach towards healthcare systems, this is a pressing issue that needs to be tackled as a priority. eHealth can benefit citizens, patients, health and care professionals but also health organisations and public authorities and may deliver more personalised ‘citizen-centric’ healthcare, which is more targeted, effective and. The European Commission’s **eHealth Action Plan 2012-2020**<sup>22</sup> has the vision to utilise and develop eHealth to address several of the most pressing health and health systems challenges of the first half of the 21<sup>st</sup> century. The Action Plan emphasises cross-border activities but it has to be noted that **as work done at the EU level has a strong effect at the national level and vice versa, national and regional authorities, healthcare and social care professionals, industry, patients, service providers, researchers and EU Institutions are encouraged to closely work together.**

Thus **all key strategies and initiatives at European Commission level prioritise healthy ageing as a societal challenge** and supports actions that can help improve lives, reduce the societal costs of healthcare and provides opportunities for economic growth and industrial leadership. These separate EU initiatives are not necessarily well aligned. The more generic topics personalised cure (or medicines) and personalised care are interwoven into all the abovementioned initiatives. **However there is at the moment no dedicated policy concept or strategy to use ‘personalised’ health as a driver** for stimulating integrated health care systems or for creating innovative system solutions that could give European companies a leading edge. The question is whether this is an omission, or whether the concepts are too generic to tackle in one coherent strategy. In addition, **regional strategies are not necessarily developed with these existing European roadmaps and initiatives in mind.** Local initiatives could be scaled up and gaining in quality if better aligned with existing initiatives in Europe.

### 3.2 National level

Already in 2006 national agencies and ministries together with the European Commission and international organisations such as the WHO, AGE, EuroHealthNet mapped the key challenges and national strategies for Healthy Ageing in Europe.<sup>23</sup> The report stated that **the majority of national policies was on health and promoting health of older people rather than care of older people.** The report had no specific attention to personalised care and personalised cure as enabling factors for addressing healthy ageing.

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<sup>22</sup> eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century (2012).

<sup>23</sup> Healthy Ageing, A challenge for Europe, The Swedish National Institute of Public Health, Stockholm, 2006



Another mapping of national initiatives can be found in a 2011 report on eHealth strategies in Europe.<sup>24</sup> While eHealth covers many health policy aspects, not only healthy ageing, it acts as an enabling technology for personalised care and cure. The report is very positive about the progress made across Europe regarding health systems that “.. aim at ensuring healthcare provision, which is “patient-centred and responsive to individual need.” However, it also states that it is widely recognised that **semantic interoperability** is the key factor for realising a wide range of expected benefits from the implementation of eHealth infrastructures and applications. This holds not only for the regional or national level, where in many countries multiple languages may be involved [...] but even more so in trans-border and pan-European situations, where potentially more than 20 languages and three alphabets are concerned.

These two example reports demonstrate the difficulty of creating transparency, which Member State does exactly what in this policy domain. **In order to streamline European, national and regional initiatives and strategies a clear definition and scoping of the key elements of these strategies needs to be agreed between all actors involved.** In addition for more radical innovations to occur, a systems approach to these interconnected challenges and solutions is necessary.

### 3.3 Regional and local level

The heart of this conference is about the regions as motor for economic growth. Healthy ageing and personalised health play a key role, not only from a societal perspective (e.g. distant care concepts in sparsely populated areas) but also from an economic perspective where social and technological innovations, new care organisations can create new business opportunities. Accordingly, **we can find policy initiatives dealing with the topic stemming from research and innovation, from industrial as well as health and social policy domains. The challenge is to bring these domains together.**

Most European regions have formulated their regional innovation and smart specialisation strategies (RIS3), which is a strategic approach to economic development through targeted support of Research and Innovation (R&I). These strategies form the basis of Structural Funds investments in R&I as part of the future Cohesion Policy’s contribution to Europe 2020.

As an element of the preparation of their 2014-2020 Structural Funds Operational programmes, the regions have undertaken a strategy development process that has helped to identify their (potential) strengths and domains where innovation can help boost economic growth. A quick glance at all these regional strategies shows that finding solutions to societal challenges is an important driver for innovations and economic growth. Thus not surprising, many of the European regions have identified *Health* as one of their key focus areas for research and innovation. Their actions build on existing competences and clusters and aim at achieving societal beneficial innovations. While at this stage of S3 formulation, a complete overview of the health related smart specialisations is not yet available, a quick overview of RIS3 strategies shows that more than 30 EU regions have chosen ‘Health’ as one of their priority topics.

Nevertheless, under the broad label *Health* many other topics beside personalised care and cure are foreseen in the regional innovation strategies. Typical topics within these

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<sup>24</sup> Karl Stroetmann, et al., eHealth Strategies, European countries on their journey towards national eHealth infrastructures, report for the European Commission, Information Society, Brussels, 2011

RIS3 are supporting clusters developing medical technologies (e.g. Flanders with Nanotech-for-Health) or creating living labs and population networks (e.g. North Netherlands).

Typically the regional actions would be either focused on the care side of the spectrum or on the cure side. As the care and cure sides mobilise quite different communities and involve distinct stakeholders, there are not many regional examples yet where the two concepts are integrated. From an economic point of view they involve different parts of the health 'value chain' and support quite distinct business models of the enterprises involved. An interesting topic of debate is whether bringing these two sides of the spectrum together opens new avenues for more radical innovations in the health system and what bottlenecks need to be overcome to achieve this.

At this stage most of RIS3 have identified topics at a high level of aggregation and priorities as defined by regions are not yet specific enough. The specific niches, competences, programmes and actions are being defined in the upcoming Operational Programmes 2014-2020. **The widespread number of regional actions and strategies on healthy ageing both offer advantages** (linking up these individual initiatives could bring scale, speed up the valorisation process and allow for an efficient division of labour) **and disadvantages** (fragmentation, duplication of efforts and lack of critical mass of individual initiatives). To reap the benefits from the advantages requires networking, partnership and coordination between regions.

Cities are another active player in the healthy field. As an example in the context of the EIP 32 cities and regions were awarded a star rating for their excellent projects in healthy ageing. The overview of awardees is a mix of cities (e.g. Liverpool, Nijmegen, Oulu) and regions with projects spanning from prevention, eHealth solutions, organisational innovations in the health care chain, medical technology development, distant care solutions, training programmes and many more. Each of these initiatives could be a helpful good practice example for other regions. And some of these examples could bring much more economic growth to the partners involved, **if there were a platform for scaling their projects up in a Europe wide internal Healthy Ageing market.**

**Developing an overview of which regions and cities have identified healthy ageing as a key priority and subsequently what specific sub-topics, niches and value chains are being addressed in each region is a prerequisite for aligning strategies.**

## 4. Towards better alignment of strategies and actions

### 4.1 Summary of key issues

The above paragraphs have argued that:

- Healthy ageing is a pressing and wide ranging societal issue that needs to be tackled urgently
- As a global issue it provides opportunities for new business development with the private sector as an important motor for economic growth
- It requires a reshaping of current organisational and business models and funding arrangements for health, cure and care to ensure long-term sustainability of the systems and offer opportunities for Europe to create an internal market for healthy ageing innovations. Particularly the combination of personalised cure and care could provide new avenues for growth and improved health for the elderly
- At European, national, regional and local level many initiatives are in place to encourage organisational, technological and social innovations in this field

- While good steps are made to develop cross-border networks and partnerships, strategies, programmes and projects remain fragmented and good practice is still slow to disseminate.

Partnerships between governments, health care funders, researchers, innovators businesses and hospitals and health professionals are evolving in many places in Europe as all the above examples demonstrate. However the current model is not sufficient to really address some fundamental healthy ageing issues that go beyond the current fragmented health systems. We are moving too slowly to grasp the economic opportunities in a dynamic global market and to tackle the societal issue in a systemic manner. We are taking steps, but incremental ones. The European Alliance for Personalised Medicine also identified a big shift that needs to be made. The same holds true for personalised care and even more so for connecting personalised care and cures as a more radical route to change.

#### 4.2 Possible next steps

This conference workshop aimed to discuss **the appropriate actions at all governance levels in order to align strategies to make a step change in addressing healthy ageing** in general and using personalised care and cure as a driver for that process. The regions have a big role to play but their current health strategies are mostly developed looking at the local strengths and local impacts. There is a need for excellence to address many of the healthy ageing issues and smart specialisation strategies should help identifying which actors can provide the necessary competences. Some regions can choose to act as a test bed (living lab) linking up potential solutions developed elsewhere in Europe with pilots and trial applications locally. As Health Ageing is a global issue, **smart specialisation strategies are a unique opportunity to define what specific strengths regions have to offer and which role regions could play in the wider European agenda**. This requires a European mind set in defining what value regions could add to existing European and national initiatives and strategies.

The following actions could be envisaged, each with different levels of complexity and time scales involved:

1. A transparent **mapping** of programmes and initiatives related to both personalised care and cure in the context of Healthy Ageing at EU, national and regional level needs to be made based on the current competences and strengths
2. The development of a **common vocabulary** defining the specific topics, their priorities and inter-linkages needs to be agreed in order to support dissemination of good practice
3. The **sharing of good practices** and **policy learning** at the level of integrated health systems, programmes and specific initiatives to address healthy and active ageing needs to be supported
4. Provide **policy programming platforms** to help national, regional and local governments with matching up and coordination of local strategies (e.g. joint programming for regions)
5. The **interoperability** of personalised care and cure solutions needs to be taken into account from the start of each initiative
6. Exploring the possibilities of **scaling up** regional and local initiatives (test-beds, living labs, new care concepts) to develop common European standards and reaping the opportunities of an internal European healthy ageing market
7. Removing **regulatory barriers** and developing clear, consistent and predictable regulatory and reimbursement pathways
8. Supporting cross-border **clinical trials** and **bioinformatics infrastructures** to support the research for personalised cures

### 4.3 Conclusions of the workshop

The lively debates in the workshop on Healthy Ageing demonstrated that the topic is of high interest to regions. The three presentations of regional showcases - Flanders, Skåne and Scotland - illustrated the breadth and depth of the regional policy strategies and programmes in Healthy Ageing. While Flanders focussed on cluster strategies to develop new medicines for specific target groups, Scotland emphasised the need for a digital strategy and innovative service redesign for care to unlock invisible resources in the communities. Skane has linked its personal health strategy with the strategy for smart cities. In order to take full advantage of complementary competences, the three regional speakers expressed both the necessity and the political will to work across the regional and national borders. Regional systems could well be a basis for finding global scalable solutions in collaboration with other regions.

The European Commission's overview of the numerous cross-border collaborations under the auspices of European Innovation Partnership on Active and Healthy Ageing (EIP AHA) was another encouraging signal that there is widespread commitment with many stakeholders, to develop common actions. Vertical alignment is required to develop common policies and build critical mass in areas of the highest importance in the re-design of the care and cure systems.

The panel discussion highlighted the variety of stakeholders that needs to be involved to address challenges within the entire health and care systems, among others regional, national and European policy makers, hospitals, medical practitioners, care organisations, care givers, (pharmaceutical) companies, health insurance companies and of course the patients, older people and the end users of care and cure. The business model of the industry, for example pharmaceuticals', is changing and requires multi-stakeholder approach with more involvement of patients, their organisations and their communities to find solutions for stratified medicine and better community-supported care.

In the care domain strong triple helix relations are indispensable. The regional scale proved to be optimal for experimentation and scaling up of successful pilots. This exemplifies the 'glocal' approach for European collaboration giving voice to the regions and simultaneously incentivising the interregional co-sharing of experience to find solutions for different delivery systems. Speakers also pointed out that in some cases very good partners are outside Europe, so an open innovation model should be extended to include global partners. Nevertheless, the most appropriate role that each of these stakeholders could play to develop common visions and joined up strategies still needs further debate and dialogue.

There are a number of conclusions to be drawn from the debate:

- **Networking and co-designing** – as healthy ageing related smart specialisation strategies are initially developed locally and regionally, there is no clarity yet whether the regions share common goals. It was suggested that more cross border co-design of roadmaps should be undertaken, in order to align public interventions and activities, as well as cross-level between regional, national and European roadmaps. Networking opportunities need to be provided to make this

happen. As one speaker pointed out, it is a matter of bringing the people who really implement the strategies together;

- **Overcoming barriers** – while there is commitment and political will from high-level stakeholders, the incentives to work together across borders need to be strengthened. There are still bottlenecks to be overcome such as different regulations in health (care) systems, cultural differences and different governance models. Framework conditions to enable disruptive change are fundamental.
- **Optimising funding** – in addition to strategic roadmaps, there would be a need to simultaneously develop financial roadmaps to support the implementation of smart specialisation strategies and ensure that large scale implementation can be financed along the whole value chain. For example, this may entail combination of various available funding sources, in order to ensure continuous support to all innovation stages, all the way to large scale deployment, without unnecessary pauses in between. Today there are few financial instruments available at the scale that care innovations really need.

The workshop also embarked on a discussion on possible next steps.

- **Platforms for cooperation** – it is essential to make optimal use of regional platforms to exchange knowledge on each others strategies and implementation programmes. Existing platforms such as those offered by EIP AHA are already valuable for this purpose, but could be complemented by other tackling particular challenges related to personalised care and cure.
- **Incentives for co-investments** – platforms for cooperation should elaborate and disseminate good practices and financial engineering tools to serve as incentives for regions to work across borders. It was put forward that not only could we look towards INTERREG for support for cluster platform support, but also that Article 60 CPR provides opportunities for concrete co-investments. The role of the European Commission is to raise more awareness and incentivise collaboration across the regions involved in EIP AHA and other RIS3 regions to link up with their regions' smart specialisation strategies and to use the opportunities for co-investment offered in the new Cohesion Policy.

Because of the short time to initiate this debate on 'matching strategies for common goals' in the domain of personalized care and cure for active and healthy ageing, a follow-up workshop can be envisaged, possibly facilitated by the S3 Platform and the EIP AHA.