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## D4.3

# Roadmaps for wide scale deployment

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Deliverable main author: Helmi Ben Hmida (Fraunhofer)

Contributing authors: Stefano Chessa (CNR-ISTI), Carmen Pastor (TECNALIA), Marielle Swinkels (NBCO), Esther Davidson (Zealanddenmark), Dag Forsen (Halsansnyaverktug) Anders Lundkvist (stairwaypr), Daria Nochevnik (Kent), Lucia Prieto (Kronikgune)

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## Document History

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## 1 Introduction and background

In this document, we introduce the final version of the Roadmap. The objective of the Engaged WP4 was to consolidate the results of the WP3 workshop discussions into roadmaps. These roadmaps indicate how the market uptake of AHA solutions can be facilitated in specific regions, and then these roadmaps spread among the AHA community. WP4 relied strongly on input delivered by clusters of regions, member states, and/or projects. The 'roadmap generation clusters' were formed, and were used to connect together the results of the mutual learning workshops and the action plans of the EIP AHA action groups. The clusters identified how they could contribute to the common issues in these plans by means of the roadmaps. In this way, WP4 helped the ENGAGED project to contribute to the implementation-oriented activities in the action plans of the action groups of the EIP AHA's Strategic Implementation Plan. The work package did so by enhancing the deployment process of independent living solutions, which will thus in the future help people and their family carers to live independently at home, to experience a healthy condition and a good quality of life and to cope with the consequences of both ageing and chronic diseases in their general daily activities. A validation process of this Roadmap has already been undertaken with the participation of several ENGAGED partners and external reviewers who volunteered to review the different roadmaps.

## 2 Summary of the Roadmaps creation strategy

Few months ago, the Roadmaps draft version has been created and released. These roadmaps detail the process of how to successfully establish an Active and Healthy Ageing solution (AHA). To this end, the roadmaps have made an attempt to address some of the most critical subjects in social innovation in health and social care like:

- Developing a culture of evidence;
- Creating business models for sustainable social innovation;
- Facilitating user engagement in social innovation;
- Network sustainability.

The table below summarizes, for each Roadmap, the connected ML workshops; the related EIP AHA action groups (Pillar) and the responsible team.

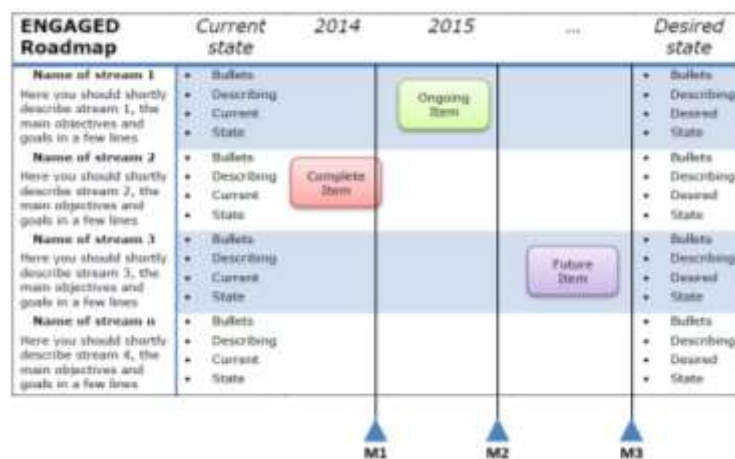
<b><u>Roadmap Stream</u></b>	<b><u>Connected Mutual Learning Workshops</u></b>	<b><u>EIP AHA Action Group</u></b>	<b><u>Working Team</u></b>
<b>Evidence</b>	1-Evidence 2-Prevention 3-Interoperability	C2 A2 B3 D4	<b>Team 1:</b> NBRCO- ZEALCO
<b>User Empowerment</b>	4-User empowerment 2-Prevention	C2 A2	<b>Team 2:</b> TECNALIA- CNR-ISTI

	3-Interoperability	B3 A3 D4	
<b>Business Model</b>	5-Business Model 2-Prevention 3-Innovation procurement	C2 B3	<b>Team 3:</b> NTFH- Stairway
<b>Network sustainability</b>		C2 A2 B2 A3	<b>Team 4:</b> KRONIKGUNE-Kent

**Table 1. Roadmap creation teams**

For each of the identified Roadmaps, the relevant challenging stream will be acknowledged where the Roadmap will make a step forward to evaluate its status, specify the desired one, and trace the main liable activities to reach it. Based on D4.1, the roadmap creation will be based on a loose model that allows for flexible and dynamic restructuring of states, timeframes, objectives and milestones. The created model consists of streams, states and items.

- A stream is a collection of different topics, e.g. innovative procurement was the topic of the first workshop held during the AAL Forum 2014 and could be a stream.
- Each stream must provide the current state and the desired final state at the end of the process. We can also name those prerequisites and objectives.
- To reach the desired state each stream will have to perform various tasks that take a certain time - the so-called items -, to allow for a definition of both tasks and other potential entities relevant for the roadmap.



**Figure 1. Roadmap template overview**





For each Roadmap, the relevant stakeholders and an analysis of the obstacles that could prevent a successful implementation of the roadmap will be highlighted interposed by different suggestions of how these obstacles could be overcome. The relevant stakeholders have already been identified in the previous tasks of the ENGAGED Thematic Network, specifically within WP2 “Community Building” in form of 2 different deliverables identifying the relevant stakeholders in the AHA environment. Therefore, the creation strategy for the roadmaps needs to be focused on the analysis of Mutual learning workshops requirement, the Roadmap stream itself, the suggestion of milestones and activities to reach the identified desired situation and end with the difficulties while implementing it and the provision of suggestions to overcome them. This strategy is based on the outcomes of the different activities already carried out in the ENGAGED Thematic Network, mainly the six Mutual Learning (ML) workshops organized by the ENGAGED consortium within WP3 “Operationalization” work.

Once the Draft version has been created, the ENGAGED consortium members, and external experts have committed to review, adjust and validate the four created roadmaps. An evaluation strategy has been set for this process in order to analyse the adequacy with respect to the aims and objectives already proposed, its coherence and clearness and the type of activities and milestones proposed for the presented roadmaps. Following the experts’ feedback and suggestions, already provided, the different roadmaps have been further updated in order to achieve the targeted purposes behind its creation. In the following, we will expose the roadmap validation strategy, the involved stakeholders and the actual adjusted Roadmaps. Sections four to seven will highlight the different Roadmaps final versions and finally section 8 will conclude the deliverable.

### **3 Roadmap validation strategy**

The roadmap validation task aims to endorse the generated Roadmap draft version by the ENGAGED consortium members, the Roadmap clusters and the EIP AHA action group. The evaluation has taken place in main two forms:

- 1- A specific engaged Roadmap pre-validation event
- 2- Online Validation

In the following, both of the evaluation methodology will be detailed:

#### **3.1 Specific engaged Roadmap pre-validation event**

After having prearranged a wide number of initiatives around mutual learning strategies and innovative solutions for active and healthy ageing, the ENGAGED project has organized a Roadmap validation session as a satellite event to the annual EHTEL Symposium, held on the 25<sup>th</sup> November 2014. The highlighted conference has demonstrated ENGAGED's place in EHTEL's "innovation circle", a novel approach for understanding innovation, innovation governance and collective innovation. Although the main conference was based in Brussels, three sides, linked via video conferencing in three different locations, presented the results of the ENGAGED project. Different numbers of people were present in each location:





1. Kent – Kent Innovation Hub - 15 people
2. Barcelona – Universitat Barcelona - 7 people
3. Bruxelles – EESC - 60 people

Within the conference, ENGAGED initially emphasized its role as a sharing community that brings together European people and groups interested in active and healthy ageing from around the world. After discussing the barriers to active and healthy ageing, the ENGAGED community is currently writing down guidelines about successes and constraints. As we were in the end of Draft Road mapping stage when the conference has taken place, we have selected three main vertical interrelated themes to discuss: Business Models, Impact Assessment, and User Involvement, where we have tried to share among us all the main directions and gaps in each of the three roadmaps. Finally, a fourth roadmap concerns the community building perspective – how to transfer this knowledge to other communities in Europe, which is however more related to the connection of different networks in order to expand the learning community. The whole Engaged Road mapping pre-validation Event Report can be found in Appendix 2.

### **3.2 Engaged online Roadmap validation**

After the main (Pre) validation event, the roadmaps were more targeted and clear; we preferred to have an on-line revision of the completed version with experts, but not a special presentation session as we thought that such a dedicated session could be of no real added-value. We foresaw the validation with the eventual selected experts, sending them our roadmap, same the validation document to provide their feedback, and after our revision of their comments/suggestion, having a final telephone conversation with them to discuss and agree on the final roadmap. The Roadmap validation task was undertaken through three main phases:

- 1- Roadmap validation preparation
  - a. Suggestion and invitation to the Roadmap reviewers
  - b. Brainstorming and specification of the review criterion
  - c. Creation of an evaluation form
- 2- Roadmap validation execution
  - a. Distribution of the roadmap
  - b. Reception of the reviewer feedback
- 3- Validation feedback compilation and roadmap adjustment
  - a. Roadmap specific feedback compilation
    - i. Telco with reviewers in case of need for clarifying questions-issues
  - b. Adjustment and re-distribution of the Roadmaps based on the reviewers feedback



### 3.2.1 Roadmap validation preparation

As previously highlighted, the Roadmap validation preparation consists mainly of three main directions:

- Suggestion and invitation to the Roadmap reviewers
- Brainstorming and specification of the review criterion
- Creation of an evaluation form

Concerning the Suggestion and invitation of the Roadmap reviewers, the following organizations were invited due to their involvement on the Project, in the AHA and/or as a member of the Roadmap clusters.

Organization	Organization classification							Reviewed Roadmap			
	EIP AHA	Thematic network	EU Primary User Interest groups networks: elderly, patients, citizens	Health & Social Care network	European Investors network	pan-European regional governments & Innovation/ business clusters	Research Networks/consultant	Business innovation Roadmap	User Empowerment Roadmap	Evidence on Impact Roadmap	Network Sustainability Roadmap
Kronikgune	A1, B3, C2 AGs	Engaged		X	Coral	X		X	X		
AGE	D4 AG	Engaged							X		
KENT	B3 AG	Engaged		X	Coral		X		X		
Fraunhofer institute							X	X	X	X	
Jon Dawson Associates/ Liverpool commissioning group	C2 AG		X		Coral/ EC HA				X	X	
Working group EIP AHA Repository: viability of good practices					Coral/ ER RI N/ EC HA					X	
Smarter Futures										X	
STOP&GO project										X	
NHS 24	B3 AG			X	Coral/ EC HA	X			X		



Life Technologies	Supporting	B3 AG						X		X		
Tecnalia		A2, C2, D4 AGs			X	Co ral			X			X
Assembly of European Regions						AE R		X				X
European Health Management Association EHMA								X			X	
European Health Telematics Association EHTEL								X	X		X	X
ISTI-CNR									X			
Welfare Innovation Zealand Denmark A network of 17 Danish Local Authorities					X						X	
New Tools for Health								X	X			
European Venture Philanthropy Association (EVPA)					X						X	
ECHAlliance					X						X	

**Table 2. Overview of the reviewers' organizations**

For the Roadmap evaluation, the Roadmap team has also initiated a brainstorming about the evaluation criterion. After some discussions, the following criteria were set up for validation of the different Roadmaps:

1. Adequacy of the Roadmap
  - a. Relevancy
  - b. Coherent objectives
2. Operation of the Roadmap
  - a. Realistic milestones
  - b. Relevancy of suggested activities
3. Coherency and clearness of the Roadmap
  - a. The objectives, milestones and deadlines of the roadmap are clearly expressed
  - b. The timings of the roadmap and of the milestones are compatible with the objectives
4. Suggestion for Roadmap improvement



### **3.2.2 Roadmap validation execution**

Based on the Roadmap review strategy set by the Roadmap team, the second phase of the roadmap review consisted of the validation of the different Roadmaps through sending the corresponding roadmaps to the reviewers who accepted our invitation. To this end, an online evaluation form was created and communicated with the correspondent Roadmap reviewers (See Appendix 1). The review process took place between March and May 2015, when the second review phase ended with submission of the completed review form to the correspondent Roadmap team leader.

### **3.2.3 Validation feedback compilation and roadmap adjustment**

Finally, and after a successful execution of the phase 1 and 2 of the roadmap validation strategy, the last phase consisted of compiling the Roadmap specific feedback, re-contacting the reviewers in case of need and, finally, compiling all the feedback and adjusting the Roadmap Draft version based on this. Following these steps, the different roadmap teams compiled the reviewers' feedback. In case of conflict between reviewers' feedback, the Roadmap team opted to take the majority of review decisions into consideration. In parallel, reviewers' remarks were, in case of need, again discussed with them. Once compiled, the Roadmap was adjusted based on the different comments and finally re-diffused to the different reviewers. In the following sections, the four created Roadmap will be presented.

## **4 Business Model Roadmap**

### **4.1 Executive summary**

The increased demand for more and better outcomes in healthcare and social care combined with steady state and decreased resources cannot be dealt with in the long term using the current business models. There is also a growing and potentially very lucrative consumer market that needs to be addressed and exploited. The return on Europe's investments in technology and process development depends not only on the overall framework conditions for innovation and entrepreneurship, but also on effective business models. (EU) Innovation in business models mainly comes from new activities (content), new linkages between activities (structure) new markets (context) and/or new partners (governance). This roadmap should increase Europe's attractiveness for innovators and contribution to the overall objectives of Innovation Union. At a company level, it will help companies to develop new or strengthen existing business models and thus grow in terms of jobs and turnover.

This document describes the rationale behind and the process up to a roadmap for designing and suggesting new business models with the purpose to give all (current and new) stakeholders in the healthcare and care industry a better way to meet future demands. The change process is spurred and enabled by an increasing digital dimension of the work carried out in healthcare and social care. This document also provides a high-level view on the activities and milestones that form the basis for the roadmap itself and will be used as a part of a combined roadmap.



The Business Model Innovation roadmap has been subjected to a peer-review by 6 experts in 6 different countries to ensure consistency, validity and that the roadmap has a potential to be beneficial regardless of which geographical market it is to be used. The strategy has been to use skilled experts who have not been directly involved in the creation of the roadmap. The general reviewer feedback has been very positive, with some good suggestions for improvements that have been considered in the final version of this document.

## **4.2 Need for innovation in Business Models**

The increased demand for healthcare and care combined with the steady state resources can be dealt with in the short term within the current business model. Over a decade health services will have to produce significantly better health care outcomes for the same resource.

### **4.2.1 Why it has not already happened?**

It is safe to say that leaders in most healthcare and care system to a certain degree already today recognize the need to develop a new business model for their organization. They all know about the fact that an aging population with a high prevalence of chronic condition will stress soon the current system to the max. Despite the leaders' growing awareness there is currently very little of true business model innovation happening in our industry. The main reasons for this could be that leaders, decision makers and policy makers are either not fully aware of the implications of the demographic challenge and/or that they do not have availability of or knowledge about any new forms of applicable business model innovations. In addition to this, we know from other industries that old business models will be fighting back against the new one when the new is to be introduced.

### **4.2.2 How can we get a buy-in from industry?**

The above highlighted reasons give the need for the work on the business model roadmap to be well grounded in the current market situation and the results to be presented in an easy to comprehend way to the external stakeholders. By including an element of industry cross-fertilization to the process, lessons can be learned from other types of industries that already have been thru a high degree of business transformation or disruption.

### **4.2.3 New social services on the rise**

Introduction of new services in home, health and social care provides a number of new challenges. Many of these new services are based on a digital infrastructure and may be served to broad groups of people. In many cases the digitization of services goes right across existing boundaries, between knowledge, professions and functions. In that sense they require change of processes and operations within the healthcare and social care system. Another change relates to the changing role of patient and consumer, who is empowered with new tools for knowledge and health. Service innovation is thus social innovation.



#### **4.2.4 New value creators, new roles and new rules**

From the perspective of a business model, what value is being created is now re-defined by the processes of co-creation and co-production between patients/consumers and different stakeholders as is who is creating the value. Roles between a health system and caring system could be seen as defined by rules and regulations as is with patient security, integrity, and patient's rights with, and also a broad range of liabilities, where the consumer market with more options for will and choice. Evidently hospital and medical devices are subject to rigors safety standards, while the same does not apply to consumer electronics. However as technology becomes part of everyday life, where ever you are, and provides access to services in the same respect, there will be an increasingly need for discussion on responsibilities and liabilities for involved actors. What today may seem as two different fields of knowledge and operations are increasingly interconnected.

A relative simple example, such as digital home care, provides a complex environment where the user interact with a multitude of services and service providers, based on a combination of several digital infrastructures. In such a case the experiences from for example Sweden show that if there does not exist clear roles and responsibilities between the parties, the introduction of new services for the benefit of citizens will be halted. If there is not a business model that can present what value is created, by whom and defining payer, there will also difficulties for the introduction of new services. In addition digital services may cross-scope of time and place, providing new opportunities across European borders and thus providing huge opportunities, well in line with the outlook of Horizon 2020.

As part of the process a mutual learning workshop was conducted as a side event to the AAL-forum in Bucharest. The workshop was about industry business models including one or more of the cure and care, prevention and active ageing and independent living markets. The workshop analysed current approaches and experiences from different European regions, allowing mutual learning and sharing practices among regional representatives and stakeholders. Marc Lange, ETHEL and Anders Lundkvist, Innovation Unit, kicked off the workshop by providing theoretical and empirical state of the art when it comes to modern business models. Participants then went on into three interactive tables each covering a certain specific aspect of business models in the AAL-space. The outcome of these quick sessions was compiled and presented during the concluding session.

#### **4.2.5 Inputs from the Engaged ML Workshop**

Input from the Bucharest workshop shows that consumer electronics giants are entering the health and caring market. These actors bring new business models as well as new tools for value creation. The workshop more specifically identified the need for:

- Stakeholder mapping in respect to regional and cultural differences, as there are different well fare systems operating in Europe.
- A more general view on business models for the society, which can include how regulations affect roles and responsibilities and thus alter market conditions.





- A more precise business model that enable regions and municipalities to make effect on not only the cost benefit level of new services and technology, but also on perceived quality of services, quality of life and citizen value.
- A business model that provides enterprises not only with a tool for the creation of value in health/caring, but also works as a tool for sharing value.
- A business model that allows the **user/patient/customer/citizen** to **participate** in the **development, design and delivery** of services and clearly demonstrates the value of interaction. Increasingly patient empowerment is seen as a key driver in the transformation of the health care system.

In order to get a truly prosperous market in Europe for healthcare and care innovators ranging from SMEs all the way up to major corporations, it is imperative that new business models are widely spread and implemented. Today many European enterprises, whether large or small and medium sized, lack awareness and tools to innovate their business models and this roadmap is aiming at filling that void.

## 4.3 Roadmap

### 4.3.1 Definition:

The created Roadmap aims to create a strategic action plan to innovate the EU Business model based on the bellow objectives. It aims to create a dynamic framework to state the art business model innovation for AAL-related activities in Europe. The goal is to radically improve the situation for all involved stakeholders including but not limited to citizens, society, payers, providers and vendors.

### 4.3.2 Issues & challenges:

While creating the new business model, the main challenge is how to think outside of one's own dominant business logic since truly new and novel ideas can only be found beyond the boundaries of the current concepts. Another challenge is that up to now the business model focus has been on technology-based innovation, as many enterprises start with product- and prior-knowledge based solutions, phrased as "products looking for a need". There is also rarely any place for or recognition of any other value creators beyond the staff itself. Today patients/users are seen as cost drivers not as assets and/or enablers. Finally, the lack of systematic tools that facilitate creativity and divergent thinking, which is essential, for developing innovative business models is foreseen as some of the main issues toward innovation in Business model.

### 4.3.3 Roadmap selection argumentation and relation with the ML workshops

This particular roadmap has been selected from a number of potential candidates based on a combination of different factors that are external and internal to the Engaged Network itself. The first one is that there is a big need for business model innovation for the AAL-market and the lack of proper frameworks is leading to all sorts of problems for stakeholders trying to





move things forward. One could argue that there are many other industry challenges related to AAL with similar magnitude as business models, but the Engaged ML Workshops have all identified business model innovation to be essential for a healthy development of the market conditions. In addition to this, many other success factors have been seen as dependent on having the business models in place. All this has led to the conclusion that business model innovation is a top priority for going forward.

#### 4.3.4 Roadmap aims and output

This roadmap will contribute with different four perspectives on business model innovation:

- A more general view on **business models** for the **society**, which can include how regulations affect roles and responsibilities and thus alter market conditions.
- A more precise **business model** that enable **regions** and **municipalities** to make effect on not only the cost benefit level of new services and technology, but also on perceived quality of services, quality of life and citizen value.
- A **business model** that provides **enterprises** not only with a tool for the creation of value in health/caring, but also works as a tool for sharing value.
- A **business model** that allows the **user/patient/customer/citizen** to participate in the **design, creation and production/delivery of services** and clearly demonstrates the value of interaction. Increasingly patient empowerment is seen as a key driver in the transformation of the healthcare system.

The roadmap will address how to facilitate innovation in business models and allow a maximum number of companies to innovate their business models. The aim is to turn the project into a self-sustainable platform after the end of the EU funding.

For the section on actual and desired status inputs have been used from the ENGAGED project work in combination with many leading practitioners and academics in the business model innovation for health and cure field including but not limited to the highly acclaimed UK health economist Paul Corrigan, CBE.<sup>1</sup>

#### 4.3.5 Roadmap Stream status and perspectives overview

##### 4.3.5.1 Actual status

- **Fragmented novel markets under formation**

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<sup>1</sup> [http://www.reform.co.uk/wp-content/uploads/2014/10/Going\\_with\\_change.pdf](http://www.reform.co.uk/wp-content/uploads/2014/10/Going_with_change.pdf)

<http://www.aihealthsolutions.ca/media/Corrigan-slides.pdf>



We are still in the early phase of the market development lifecycle, no clear rules and roles are universally defined. New entrants could be hesitant to invest.

- **Proprietary solutions and markets with little cross-over from other industries**  
Lack of outside inputs and standardization and poor interoperability leads to “information silos” and with high cost of ownership and that the solutions are evolving too slow or not at all.
- **Static/old procurement processes**  
Public sector/ private buyers do not encourage innovation by stipulating specific product specifications rather stipulating a challenge to be solved.
- **No/little user involvement**  
Today, products are often designed by experts without any major user interaction. If there is any user involvement it is typically happening at the end of the development cycle for testing and validation etc.
- **Huge barriers of entry to markets with a few players**  
Especially for new entrants in the form of SMEs it is particularly difficult and risky to enter the AAL-market in its current state. It is hard to get access to the right resources for the later stages of the development cycle for testing and validation etc.
- **A growing consumer market with a low level interaction with the current AAL ecosystem**  
The consumer electronic giants such as Apple Computer are currently providing a growing share of the AAL target group with hardware and other solutions for general ICT applications. There is a huge potential not being leveraged today.

#### 4.3.5.2 Desired Status

- **A common understanding and awareness of Business Model Innovation importance**  
The more Business Model Innovation becomes second nature in the AAL-industry, the more it can benefit from the overall progress and development in the global ICT- and service as a whole.
- **Increase EU market competitiveness and address new social changes**  
This one of the most important outcomes, combining economic growth with improvements of peoples’ quality of life.
- **Established pan-European market with clear roles and rules**  
This makes the investment case much more solid both for existing players as well as for new entrants.



- **Open solutions based on standard hardware and well defined standards for connection, communication and information exchange (e.g. Continua)**
- **Modern procurement that stimulates innovation**  
This is assumed to benefit new players with creative and new solutions.
- **User centric approach/user involvement and co-production**  
It is a well-known fact that most of the major and successful contemporary global B2B/B2C-products being marketed today have had extensive user involvement as part of the entire R&D process. This is also true for the most innovative AAL-projects up to this date. *Any new business model needs to find value creators that at present are not seen as creating value.* By utilizing the individual users/customers as value creators in the healthcare and care system more and better outcomes can be generated without increased expenditure for the provider.
- **Reduced barriers of entry has attracted new entrants**  
By having a healthy and prosperous AAL-ecosystem, the number of really good solutions available is more likely to be higher compared to a situation with few players.
- **AAL solutions are universally and readily available for the consumer**  
Consumers can easily buy and install AAL solutions via App Store and similar platforms

#### 4.3.5.3 Gap analysis

- **Resistance to change, current best practice in Health and Care is a barrier for new methods and designs**  
There is a need to create incentives for why to initiate a many times cumbersome change process. It is of course easier to stick to the old system.
- **Lack of insight and knowledge in new services and consequences thereof**  
Awareness is critical to create motivation and room for investment
- **Very little cross-industry interactions – i.e. “re-inventing the wheel”**  
A lot of time and money will be spent developing things that already exist
- **Lack of process knowledge when meeting new challenges and situations in Health and Care**  
This leads to confusion, increased risk and a slowdown in the development process
- **Optimally, end users are included in final development stages, when they should be looked upon as co-creators of new services**  
When users are not involved from the beginning, there is a big risk that you end up developing the wrong solutions designed in the wrong fashion.



#### 4.3.6 Suggested Roadmap

The roadmap addresses the following four dimensions:

- Advancing existing knowledge about business model innovation (Business Model Innovation), e.g. by identifying patterns in- and especially outside the AAL-market, exploring management structures, analysing the potential of transfer across sectors and EU member states;
- Making this knowledge easily accessible;
- Developing mechanisms how to adjust the knowledge to individual markets companies, and
- Packaging the above in a “Business Model Innovation-toolkit”, reaching out, via existing and new channels, to a maximum number of companies.

The roadmap consists of the following work packages, each one composed of one or more activities:

- **WP1.Initiation** – analyse and synthesize ecosystem
- **WP2.Ideation** - adapting patterns
- **WP3.Open enhancement & verification**
- **WP4.Create and package a Business Model Innovation tool-kit**
- **WP5.Distribute and deploy**
- **WP6.Evaluate and next step**

For step 1-3, The Business Model Navigator<sup>2</sup> concept, Prof. Oliver Gossman, et al, was used as a tool in the project work. The main reason for selecting this model over others is that there is a big need for the cure and care markets to get influences, ideas and inspiration from other industries which have come further in their use of ICT in mission critical and core business processes. The Business Model Navigator uses a unique approach not found in any other model for cross fertilization that is based on 55 different business model patterns derived from many industries. A link to more info about the Business Model Navigator can also be found down below<sup>3</sup>

#### 4.3.7 Milestones and related recommended actions

	<u>Milestone</u>	<u>Timeframe</u>	<u>Actions</u>	<u>Stakeholders</u>
M1	Stakeholder engagement and working group	2015	Invitations to potential participants and	ENGAGED network

<sup>2</sup> <http://www.bmi-lab.ch/for-practitioners.html>

<sup>3</sup> [http://www.im.ethz.ch/education/HS13/MIS13/Business\\_Model\\_Navigator.pdf](http://www.im.ethz.ch/education/HS13/MIS13/Business_Model_Navigator.pdf)

	formation is done		stakeholders Establish digital workspaces for collaboration	
M2	A detailed analysis of the European ecosystem for AAL-business is done	2015	Develop a plan for the execution of WP1 Establish working groups for the analysis of the ecosystem Collaborative project work towards a well-defined outcome	ENGAGED network
M3	Draft of a number of creative business model concepts based on patterns from other industries has been generated	2015	Conduct a series of workshops based on The Business Model Navigator Tool-kit Document and publish on internal workspaces	ENGAGED network
M4	A selected number of new business models has been enhanced and validated by a broad group from all parts of the EU	2016	Conduct a series of Cross-Industry workshops based on the Business Model Navigator Tool-kit Selection of patterns and generation of new business models. Validation of new models.	ENGAGED network plus external stakeholders
M5	A Business Model Innovation-toolkit has been created	2016	Compilation of project results up to milestone 4 (M4) Approval from all major stakeholders	
M6	A Business Model Innovation-toolkit has been published on-line and promoted to all relevant stakeholders	2016	Creation of companion web site for the Business Model Innovation-toolkit Execution of various types of digital direct marketing	ENGAGED network



	across Europe		and social media activities	
M7	The Business Model Innovation-toolkit has successfully been used in a couple of projects across Europe	2016	Active recruitment and support of potential project candidates.	ENGAGED network plus external stakeholders
M8	The project has been evaluated and has found a way to live on to and beyond the end of the EU-funding.	2017	Establish metrics and methods for impact assessment of this project. Discussions with stakeholders of future hosting and ownership of the Business Model Innovation-toolkit.	ENGAGED network plus external stakeholders

#### 4.4 Conclusion

We see a lot of potential stakeholders of the Business Model Innovation roadmap inside and outside the current AAL ecosystem. These potential stakeholders could be found in any of the three parts in the triple-helix model including but not limited to other research projects, academic and non-academic research organizations, SMEs and larger companies, public and private health and care organizations. One of the major hurdles to overcome in reaching full scale implementations of AHA solutions is the proprietary nature of the current health and care industries. The roadmap will contribute by offering some key tools to community members that will help them to reach a situation (with the ecosystem) that could then benefit from the overall evolution of the ICT-industry. In order to reach this desired state, extensive use of Internet and social media channels for communication and interaction across all European member states and beyond will be instrumental for success.

## 5 Evidence on impact Roadmap

### 5.1 Introduction

The ENGAGED project organized a mutual learning workshop on the topic of Evidence on Impact of independent living solutions. This event was a joint action of the CASA project<sup>4</sup>, the thematic network ENGAGED and the action group C2 Deployment of innovative independent living solutions. To scale up independent living solutions in testing grounds and reference sites we need to collect and share more evidence on impact across Europe. However, in the area of independent living solutions the testing grounds for wide scale

<sup>4</sup> <http://www.casa-europe.eu/>





implementation lack a joint European framework of methodologies. Experts of regions across Europe of the CASA project and of the thematic network of ENAGED attended to these two-day working event. They shared their experience and knowledge on research methodologies and indicators for collecting evidence on the impact. Also from the action groups, the monitor group and Reference Sites of the European Partnership of Active&Healthy Ageing experts joined this event. During the event not only knowledge was shared, but also we worked together on the development of a joint methodology framework for monitoring the impact. One of the CASA partners, Scotland, sent experts from their region to share knowledge with the innovation clusters of the Reference site of Noord-Brabant. The innovation clusters in Noord-Brabant are running four testing grounds for large scale deployment of independent living solutions. The experts have helped them to develop a framework for collecting data for evidence on impact. The testing grounds of the Reference site of Noord-Brabant would like to use this framework, and share - of course - the results across Europe.

The objectives of the event were:

1. To share knowledge and experiences on tools for impact assessment of AHA solutions
2. To develop a joined European methodology framework for monitoring the impact of independent living solutions to create a better overview of existing innovations ready for market uptake and the scientific and experiences based evidence of these innovations in practice.
3. To help the Brabant testing grounds for wide scale deployment of independent living solutions to develop a framework for impact assessment.

Outcomes of the mutual learning workshop

- A draft concept of a Framework for impact assessment to be used in the testing grounds of the region of Noord-Brabant
- A common sense and vision about:
  - The minimum set of assessment criteria we need to know about to choose and to buy or procure independent living innovations and to reach upscaling across Europe
  - The approach for assessing existing evidence that is needed for wide scale deployment of independent living solutions.

The scale of measurement and the organization of the process needed for impact assessment in regions and the exchange between regions.

## 5.2 Roadmap Stream overview

The roadmap aims to develop and implement of a European monitoring framework for impact assessment of independent living solutions in testing grounds/ reference sites for wide scale deployment across Europe. A European monitoring framework for impact assessment could help to implement and scale up innovative solutions in a region or country. If this is developed and used in a joined collaboration with regions across Europe it is possible to reach scale on the evidence, to compare the outcomes of similar solutions/ interventions and to





communicate about the evidence on a bigger scale. It could help exchange the impact of certain solutions in one region with other regions. The EIP AHA has developed a Monitoring Framework for impact assessment of the Reference Sites and Action groups. Based on the developed theoretical framework for the EIP AHA a Questionnaire has been developed for the Reference sites and Action groups. The goal was to assess the impact of the EIP AHA collaboration on a European level. For the regional level of wide scale deployment by the means of testing grounds and reference sites a concrete and more practical framework is still needed. For the mutual learning workshop experts of three different reference sites exchanged existing impact assessment tools: Scotland, Catalonia and Noord-Brabant. With experts of the EIP AHA C2 action group was also an exchange about their actions and the gaps they identified. Also with the European Commission knowledge was exchanged about the monitoring framework of the EIP AHA. Based on the exchanges a matrix was developed to start working jointly on a monitoring framework for impact assessment for independent living solutions in regions and for exchange and comparison between regions.

### **5.3 Roadmap Stream status and perspectives overview**

#### **5.3.1 Actual status**

##### **Lack of evidence culture**

One of the barriers for wide scale deployment of innovative solutions is a lack of evidence on the impact of these solutions in different regions. This makes it difficult for investors and reimburses or buyers and policy makers to judge about the impact of the solution in daily live. They lack a good basis for decision making about economic and social impact such as cost effectiveness and the impact on the quality of life.

Also comparison between regions in and across Member States using similar innovations related to certain interventions is not possible. There is also no exchange between regions about the outcomes of impact assessments. There is a lack of evidence culture for this. Therefore we lack evidence on the impact of innovations on a big scale.

##### **Lack of monitoring framework for independent living solutions**

In the field of independent living solutions, we lack a good monitoring framework to assess the impact of innovations in different testing grounds and reference sites for wide scale deployment. For medical solutions already a MAST framework exists, but for the broader field of independent living there is no common understanding yet in different regions across Europe.

#### **5.3.2 Desired status**

A European overview and insight in a minimum set of criteria for experience based evidence and evidence based practice to help consumers in their decision making process to make better use of independent living solutions in their daily live and to help entrepreneurs to scale up these solutions.



### 5.3.3 Gap analysis

In the mutual learning workshop a first matrix was discussed and developed with different criteria to explore the different areas and perspectives for impact assessment of concrete innovative solutions to scale up in testing grounds/ in practice. The focus point was to develop a framework for the three Noord-Brabant testing grounds on Self Care, Informal Care and Dementia that can be used by other testing grounds across Europe.

A first minimum set of criteria was formulated to reach wide scale deployment:

- The price of a product/ service (affordability)
- Were to buy or get access to a product or service?
- Effectiveness and reliable use
- Cost effectiveness
- Quality of life
- How many users are using the product/ service?
- How do they judge the product/service?

*The main gaps identified were:*

- A lack of collection and insight in user experiences in testing grounds or reference sites for wide scale deployment on how they experience innovative independent living solutions in daily live. With users is meant the citizens, patients and informal carers and professional care givers.
- A lack of a theoretical European framework for impact assessment of independent living solutions. Which impact criteria do we need to assess to cover the impact on independent living which we need to know to reach wide scale deployment?
- A lack of a good balance between user experiences (practice based evidence) and evidence based practice (quantitative intervention research). A lot of emphasis is put on randomized trials and evidence based practice. Because of different contexts in Europe (different health and social care systems, financial systems, cultural differences, different interventions etc.) in which innovations are implemented it is difficult to compare results on an individual intervention level in a quantitative way.

## 5.4 Suggested Roadmap

### 5.4.1 Roadmap overview

*The main directions for development of the monitoring framework*

1. Development of a tool: **a consumer platform** with methodologies to collect users' experiences (primary and secondary users) to assess from user perspective the impact of independent living solutions across Europe.



2. Develop or select a minimum set of quantitative and qualitative outcome criteria to assess the impact of independent living solutions across Europe, **adjustable to specific target groups and different regional contexts across Europe.**
3. Explore how the quantitative and qualitative approaches can be linked to the European monitoring framework of the EIP AHA to be used by different regions.

#### 5.4.2 Milestones, time frame and related recommended actions

The process of the Evidence on Impact Roadmap development is divided in three stages. In the table below an overview is given of the milestones, the time frame and different stakeholders that have been participating in the development of the roadmap.

Stages of roadmap development	Milestones	Time frame	Multi Stakeholder Group
<b>Stage 1:</b> Roadmap for the development of an actual regional consumer platform for the testing grounds in Noord-Brabant to learn how this kind of consumer tool can be used to improve the collection of <b>practice based evidence</b> from primary and secondary users of independent living solutions in a region.	1,2,3,4,5,6	2014	<ul style="list-style-type: none"> <li>• Reference Site EIP AHA of Noord-Brabant;</li> <li>• ENGAGED network</li> <li>• C2 + B3 Action Groups of EIP AHA;</li> <li>• Health Cluster Europe including the CASA Interreg project</li> </ul>
<b>Stage 2:</b> Development of a minimum set of assessment criteria of quantitative and qualitative data to be used by the testing grounds of Noord-Brabant as a learning exercise to improve the insight in regional <b>evidence based good practices of independent living solutions from an European up-scaling perspective</b> to build the European market	7	2015	<ul style="list-style-type: none"> <li>• Reference Site of Noord-Brabant;</li> <li>• ENGAGED network</li> <li>• Health Cluster Europe</li> <li>• INNOVATE DEMENTIA Interreg project</li> <li>• STOPandGO project</li> <li>• Working group including experts of all Action groups of the EIP AHA</li> </ul>



			<ul style="list-style-type: none"> <li>• ECHalliance</li> </ul>
<b>Stage 3:</b> Development of an <b>interregional monitoring framework for impact assessment of good practices of innovative independent living solutions</b> across Europe, including a consumer platform tool and minimum set of quantitative and qualitative criteria and methodology to assess the level of evidence on impact of independent living solutions that are used across Europe.	8,9,10	2015/2016	<ul style="list-style-type: none"> <li>• Reference Site of Noord-Brabant;</li> <li>• ENGAGED network</li> <li>• Health Cluster Europe</li> <li>• INNOVATE DEMENTIA Interreg project</li> <li>• STOPandGO CIP project</li> <li>• Working group including experts of all Action groups of the EIP AHA</li> <li>• ECHalliance</li> <li>• AAL projects</li> <li>• EVPA</li> </ul>

#### 5.4.2.1 Milestones in 2014

In 2014 the development of the roadmap has started. The first six milestones for 2014 were mainly focused on the first direction that has been identified for the roadmap: improvement of the collection of user experiences by a user platform. A user centric design approach and up scaling perspective are the central focus and starting points for the development and implementation of a consumer platform. Therefore it is important that all stakeholders of the whole value chain and potential users of the consumer platform are involved from the beginning of the process of the development of the roadmap.

#### M1- Coordination of the roadmap: exploration phase (Month 4-12/14)

##### *Coordination team*

Reference Site Noord-Brabant of the EIP AHA coordinates the exploration phase of the development of the roadmap for the first identified gap: the development of the consumer platform. The regional cooperative Slimmer Leven 2020 and the province of Noord-Brabant coordinate the development process. The Reference Site Noord-Brabant is a regional multi stakeholder network that is focused on the deployment and scaling up of innovative independent living solutions. This action was a follow up of the preparation work they did for



the organization of a European mutual learning seminar on evidence on impact that took place in Eindhoven at 3 March 2014. The idea of the consumer platform was the outcome of this seminar.

### ***Noord-Brabant Working Group and European Advisory network of experts***

A group of five experts with different backgrounds form a working group. They represent different stakeholders (users, education and research, businesses, government, health-&social care) of the Reference Site Noord-Brabant and are a member of the Cooperative Slimmer Leven 2020. They have developed the roadmap in co-creation with the members of the CSL2020 and the testing grounds of H@H in the region of Noord-Brabant and experts of a European advisory network.

Important first users of the platform to create mass are the Noord-Brabant testing grounds of Health@Home. Also other living labs and testing grounds in the Netherlands are the first users. In a second stage living labs of other regions in Europe could be future users of the consumer platform. To create commitment for this second stage, different experts across Europe of different stakeholder groups will already be involved from the start. The development of the Dutch consumer platform and the second stage is shared with a European Advisory network of experts during several meetings and events of: regional governments of CORAL<sup>5</sup>, the C2 and B3 Action groups of EIP AHA, the ENGAGED network, a working groups in which representatives of all the action groups of the EIP AHA are involved in the development of an assessment tool with criteria for the validation of good practices across Europe, the collaborative of Reference Sites of the EIP AHA and the Health cluster Europe of the Interreg project E-UCARE.

### **M2- Mapping and analysis of existing platforms (Month 4-7/2014)**

A quick scan has been carried out to get an overview across Europe and in the Netherlands of existing platforms. Also they have looked into other branches to existing instruments like Zoover and Amazon. A subcontractor has been selected to do this work and has been financed by the province of Noord-Brabant. Based on the formulated starting points of the consumer platform- that were formulated in the mutual seminar - an analysis has been done about the usage of these platforms or relevant functions that are preferable to build in a new platform. A report has been delivered with the overview and results of the analysis and recommendations for the testing ground Noord-Brabant and use of the platform across Europe by other regions.

### **M3- Search for and mobilization of private party (Month 4-7/2014)**

At the start of the exploration phase in M1 several channels have been used to search for and to mobilise a private partner that is willing to build a consumer platform. Several bilateral meetings have been planned with the coordination team with several interested companies. Goal was to find as soon as possible a private partner who would like to grab this business opportunity and who is willing to invest in the development of the platform. Within 2 months

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<sup>5</sup> <http://www.coral-europe.eu/>



‘time a company was found that would like to start the building of the consumer platform ASAP. The launching of the platform took place at the 23 October during the Health Forum in Eindhoven in the Netherlands.

#### **M4- Dissemination of the concept (Month 7-12/2014)**

Several bilateral communication activities have been carried out during the exploration phase. As soon as a private partner was found, dissemination activities of the ENGAGED project have been fine-tuned with the development plan of the company. Dissemination activities took place by using the communication channels and events of the multi stakeholder network Health@Home community of Noord-Brabant, the EIP AHA, the ENGAGED thematic network and the CASA project:

- 2 July 2014 a Brabant Health@Home meeting was organised. During a workshop the concept has been presented to and shared with the participants.
- CASA final conference 7 October 2014: the concept was presented to other regions and the European Commission.
- The World Health forum at 23 October 2014 was the event where the consumer platform has been launched. During this event several regional innovation clusters and regional governments in Europe were personal invited by the Reference Site of Noord-Brabant to explore the opportunities for testing the consumer platform in their own region. They were asked if they were willing to invest to test the same the same concept in their region, later in 2015. Based on that 1 region has reacted (the region of Zeeland) to come back on this opportunity in 2015.

#### **M5- Recommendations for support for the next phase (Month 7-12/2014)**

Pre-testing of the platform started in the testing ground of Noord-Brabant in 2014. The private partner developed a private business model. They also explored the financial and investment possibilities to cover the costs for the development and testing phase. Which investors would be interested and willing to invest in the development of the platform? The working group has offered support to the private partner in bringing relevant partners together in the region. Also the working group has helped the private company in making connections with other regions within Europe. Based on these connections the company has explored the opportunities for the development and testing of the consumer platform in other regions across Europe in 2015. Which region would be willing to invest in it? Which regions would be willing to collaborate on this together?

#### **M6- Financial plan (Month 4-12/2014)**

The total amount of hours in the exploration phase that has been carried out by the experts of the province of Noord-Brabant and by the experts of SL2020 has been financed by the regional Smart Health Programme. For the follow up actions in 2015 a new proposal has been made and presented to the regional program of Noord-Brabant and CORAL. The province of Noord-Brabant is willing to invest in the follow up actions and made a budget reservation for 2015 that enables to continue the work in collaboration with other CORAL regions and experts of the EIP AHA.





#### **5.4.2.2 Milestones in 2015/2016**

In 2015 the development of an interregional monitoring framework for independent living has started in collaboration with the EIP AHA. During the reviewing of the draft roadmap it was agreed that there are different evidence on impact methodologies and frameworks that are used at the moment. These methodologies have been developed in European projects such as the MOMENTUM assessment framework, the MAST framework, etc. We do not have to develop new assessment tools to measure the evidence on impact of independent living solutions in regions. But, we miss an overview in Europe of available evidence on impact of independent living solutions. A European framework is needed to exchange different type of evidence results of different sources between different regions across Europe.

This framework helps to identify trends in terms of impact of solutions in different parts of Europe. It allows different assessment frameworks to be used in different regions. It helps to identify trends based on the outcomes of the different assessment frameworks that are used.

##### **M7- Development of a minimum data set for independent living (Month 1-8/2015)**

A desk research of micro- and macro studies will be conducted to select a minimum set of social and economic impact indicators for independent living. This evidence needs to be build on generic indicators related to a mix of categories that cover the scope of independent living. The focus will be on generic impact indicators that are appropriate for different contexts and target group area's in the field of independent living in Europe. This is necessary for scaling up the evidence of independent living solutions.

Also often used validated quantitative and qualitative instruments and mixed-methods research design across Europe will be identified from the existing repository of EIP AHA and the work of the action groups of EIP AHA.

Together with the EIP AHA and representatives of the different action groups a methodology will be developed for the assessment of the level of available evidence on impact of independent living solutions across Europe and how to collect this in the repository of the EIP AHA.

##### **M8: Testing and peer reviewing of the framework (Month 6/2015-4/2016)**

The framework will be tested in the area of Dementia. This will be done from the perspective of building the European market.

The framework will be tested an peer reviewed in the European STOP and GO Project<sup>6</sup> in the pilot region of Brabant. This enables also to include not only the evidence based practice sources, but also the practice based evidence source by the means of the consumer platform. The STOP & GO project is focused on the development of innovative procurement. In Brabant the innovative procurement process will be focused on independent living of people with Dementia. A multi-stakeholder group of businesses with innovative solutions for people with dementia at home, local government, research centres and end user organisations will

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<sup>6</sup> <http://stopandgoproject.eu/>





improve the procurement process. A shared risk investment approach is leading. The impact of solutions is the basis to decide in the end if a solution will be financed by procurement.

Another action is to organize a peer review with missing stakeholders that are also important for building the market and who look from a market and business perspective such as impact investors. They are interested in social and economic impact of solutions. They are interested in the fact if an innovation of a business is impact ready and therefore ready for investment for a broad uptake in the market. Together with different European networks such as CORAL, ECHAlliance a European Do-concept for peer reviewing will be developed for investors and investees and living labs. The concept will help to:

- Do: to collect innovative solutions across Europe for different target groups such as innovations for people with Dementia and to share, store, and validate data at an investment, fund and/or portfolio level
- Assess: investors analyse the quality, level and efficacy of the work generated.
- Review: shared insights on the framework and feedback from all parties.

#### **M9: Testing of the consumer platform in two different countries (Month 6/2015-12/2016)**

The consumer platform offers a new qualitative tool and practice based evidence source to regions to collect user experiences based on the use of innovations in daily practice.

The concept of the consumer platform needs to be tested in at least two other regions in Europe. The goal of this test is to learn more about how the consumer platform can be used in other regions across Europe.

Within CORAL and regions of the AER and ECHAlliance regions will be informed about the concept of the consumer platform and the regions will be invited to test the consumer platform. Bilateral contacts with interested regions will be planned in Brabant in 2015 to explain the concept more in depth. The Dutch company of the consumer platform will explore the regional context of the interested regions. They will plan a two-day visit to the region to talk with different stakeholders of the value chain in the other country to get an insight in the possibilities for exploitation of the concept to this other regional/national context.

For the development phase a new financial plan will be made in co-creation with the interested regions.

The use of the consumer platform will be tested in two regions and evaluated.

A peer review in each region will be organised by a multi stakeholder group and experts of different regions across Europe. Two case studies will be derived in which the lessons learned and recommendations will be described for how to link this practice based evidence on impact source to the European holistic framework.

#### **M10-Disseminate results to raise awareness for a holistic approach**

The challenge is to get a common understanding about the importance of a **holistic framework** that contains an interrelated medical & ethical impact framework and a social & economic impact framework. Integration of these different types of data collection from different sources is still a challenge and not a common approach across Europe. Although



some existing frameworks such as MAST are offering a holistic approach, decision makers are still focused on a limited amount of type of data collection and interested in the outcomes of limited sources. Also decision makers of the medical field are often only focused on specific medical indicators instead of more generic indicators related to the quality of life. The practice based evidence sources also are used very limited. The consumer platform is a good practice to show the importance and the possibilities of this tool to build in this source for decision makers. Dissemination of the vision and sharing of experiences from practice will be done by existing channels of bigger network events by organizing workshops and sessions at the AAL Forum, during the eHealth week and in European project events. Also dissemination to regional levels will take place by existing channels of CORAL, ECHAlliance and the AER. The repository of the EIP AHA is also an important channel to disseminate the vision and to offer tools and guidance how to bring this into practice.

#### **5.4.2.3 Recommended actions**

##### **Summary of Actions 2014**

- Development of a regional consumer impact assessment platform for independent living solutions tested in the testing grounds in Noord-Brabant;
- Share the first ideas, methodologies used with other CORAL regions and reference sites;
- Develop a minimum set of quantitative and qualitative generic criteria related to different type of data collection for independent living to be used in the regional monitoring framework, based on the outcomes of the work and results and experiences of the monitoring framework of the EIP AHA.
- Explore, decide on and define the approach for the regional (and inter-regional) monitoring framework for testing grounds/reference sites including quantitative and qualitative evidence based criteria and qualitative more user experiences based criteria of different sources from science and practice.

##### **Summary of Actions in 2015-2016**

Development of a European consumer impact assessment platform and holistic monitoring framework with minimum data set to measure the impact of independent living solutions in different regions in Europe: test the methodologies and tools in two other regions/reference sites:

- Disseminate the vision, tools and methodologies used for the consumer platform and the minimum set of other criteria's within a holistic European monitoring framework to collect and identify trends in the existing evidence on impact with other CORAL regions, the regional ecosystems connected to the ECHAlliance and the AER;
- Test and peer review the holistic framework in the STOPandGO project during an innovative procurement process focused on innovative solutions to support the independent living of people with Dementia.



- Test and peer review the holistic monitoring framework for evidence on impact for different target groups such as people with Dementia from a market and business perspective by a multi stakeholder approach with also impact investors.
- Stimulate and mobilize 2 other regions to translate the consumer platform tool to their regional context and test it out in their own region.
- Disseminate and share the results and vision within the EIP AHA and events of ENGAGED partners and European events of AAL Forum, the eHealth week and European projects events.

## 6 User Empowerment Roadmap

### 6.1 Executive summary

This roadmap has been designed in the ENGAGED Thematic Network in order to achieve **User Empowerment**. User involvement is one of the major barriers for the introduction of innovative solutions for active and healthy ageing (AHA). Therefore this roadmap aims to involve (and to keep involved) in a relatively short period of time a sufficient number of users to reach a critical mass so that it can affect the political decisions affecting the European market for active and healthy ageing. To this purpose, the roadmap identifies three main actions:

- The active involvement of more and more users by adopting different involvement strategies targeting the different classes of users.
- The construction of suitable toolkits aimed at facilitating the interaction and knowledge sharing among users.
- The setting-up of network of users that, strong of its representativeness, could bring the users' instances, needs and proposals at the attention of the institutions at all levels (local, national and European). This network could be composed of different associations of users or of relevant initiatives in the field of user involvement representing various type of stakeholders, who normally work together jointly in working groups and advisory boards. This network can be based initially on an internet hub with good practice in the field of user empowerment, which can serve better the scope and present much less challenges than any other type of users' group of fora. Its final aim is to work jointly in the improvement of the empowerment of the users at all levels.

In the following subsections, the different components of the User Empowerment roadmap will be presented, starting from a definition of the roadmap, the objectives to be reached, the challenges to meet, and the different milestones and actions to be carried out in order to achieve the desired final state of the art with respect to the User Empowerment requirements. This overarching objective entails that the user is involved from the start in all the processes related to his/her health and wellbeing, is well informed, better aware, and is actively



participating in all these processes. Last but not least, we will draw conclusions, highlighting that at this stage our strategy for this roadmap needs to be validated with some experts already identified.

## 6.2 Introduction

The C2 Action Group (Independent Living Solutions) of the EIP AHA has identified the topic of *“user involvement” as one the four major barriers to the deployment and uptake of innovative solutions in the European market for active and healthy ageing*. The European Network of Living Labs<sup>7</sup> – ENOLL - (gathering 340 accredited living labs all over and outside Europe) highlights that there is a growing interest in the domain of active and healthy ageing in the world and there are concrete good practices in user empowerment coming from real life experimentations, testing and cooperation, especially within public-private partnerships (PPP). AGE Platform Europe<sup>8</sup> brings to European initiatives and projects the perspective of user involvement (“nothing about us without us”), stressing the key benefits that older persons, research and the society as a whole can gain from the direct and early engagement of the final beneficiaries in both the research and the decision-making processes. These examples reinforce the importance of the issue of User Involvement.

The ENGAGED Thematic Network addressed the issue of User Empowerment by organising a User Empowerment Mutual Learning Workshop (MLW), which gathered representatives from the ENGAGED Thematic Network, the C2 Action Group (Independent Living Solutions) of the EIP AHA, and final beneficiaries. Moreover ENGAGED organised other two MLWs which also tackle this issue partially:

- MLW on Prevention: entitled “Innovative Preventive Solutions and Evidence” and held in Athens –during the eHealth week- on the 13<sup>th</sup> May, 2014, and
- MLW on Interoperability: entitled “Challenges in the provision of AHA services and the opportunities of interoperability” and held in Brussels on the 19<sup>th</sup> February, 2014.

The result of these activities has led to the preparation of the present roadmap.

## 6.3 Roadmap

### 6.3.1 Definition:

User empowerment is a key element for successful initiatives in the field of Active and Healthy Ageing. Empowered users are more likely to make proactive decisions about their own well-being and consequently remain active and healthy for longer. The roadmap for user empowerment presents the various activities to be undertaken in order to facilitate and systemize user empowerment, i.e. ensure that user empowerment is ensured at all levels and that users are involved from the outset in all processes related to their health and wellbeing.

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<sup>7</sup> <http://www.openlivinglabs.eu>

<sup>8</sup> [www.age-platform.eu](http://www.age-platform.eu)



### 6.3.2 Issues & challenges:

User empowerment in the field of independent living covers a wide range of areas and addresses each one's use of innovative technologies and services. Specifically, it covers:

- **Inclusion;**
- **Co-creation** including user feedback on their experience using services and products and co-design with older people;
- **Awareness raising** including access to information, understanding of existing barriers and ways to overcome them;
- **Confidence building** including confidence in using technology and being able to purchase technology.

Moreover understanding the diversity of users is essential to achieve an effective user empowerment. Users are a diverse group, heterogeneous itself and changing over time. This is particularly relevant when addressing older users' needs, often portrayed as a homogeneous group while it may often cover a 30 year lifespan (60-90 years old).

In order to help with this complexity, the definition of end-users suggested by the Ambient Assisted Living (AAL) Joint Program<sup>9</sup> can serve as a good starting point:

- Primary end user is the person who is actually using an AAL product or service, a single individual (i.e. older people and people with chronic diseases).
- Secondary end users are persons or organizations getting directly in touch with a primary end user, such as formal and informal care persons, family members, friends, neighbours, care organizations and their representatives.
- Tertiary end users are such institutions and private or public organizations that are not directly in contact with AAL products and services, but who somehow contribute in organizing, paying or enabling them.

#### 6.3.2.1 Roadmap selection argumentation and relation with the ML workshops

The selection of the User Empowerment theme for the present roadmap has been motivated by the fact that this theme is common to several ENGAGED mutual learning workshops (MLW):

- The first one is the MLW on User Empowerment, previously mentioned.
- The second one was the MLW on Prevention (event entitled "Innovative preventive solutions and evidence"), which was held on the 13<sup>th</sup> May in Athens during the eHealth Week.
- The third one was the MLW on Interoperability held on the 19<sup>th</sup> February in Brussels and entitled "Challenges in the provision of AHA services and the opportunities of interoperability".

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<sup>9</sup> <http://www.aal-europe.eu/>





This theme is also common to various EIP AHA AGs (action groups), such as the C2 (Independent living systems), A2 (Fall prevention), B3 (Integrated care), A3 (Prevention of Frailty) and D4 (Age-friendly environments).

But the main reason for the selection of this theme is that user empowerment is an important element of providing support for Active and Healthy Ageing. Empowered users are more likely to avoid falling into a dependency through institutional care, more likely to make proactive decision about their own well-being and consequently fulfil the objectives of active and healthy ageing and life extension.

#### **6.3.2.2 Alignment with the EIP AHA action groups**

The present roadmap addresses the key issue of user involvement, which is identified by the C2 Action Group (Independent Living Solutions) of the EIP AHA one of the major barriers for the introduction of innovative solutions for active and healthy ageing. For this reason, the ENGAGED Thematic Network organized a *User Empowerment Mutual Learning Seminar*, in connection with the EIP AHA C2 Action Group. The seminar, which took place in Eindhoven on October 23rd 2013 in the light of the “Smart Health Meets Design” Fair, was conceived by the ENGAGED partners (Noord-Brabant, EHMA and AGE Platform Europe) as a moment for gathering different interested stakeholders around the table (user forum) for a fruitful discussion about the empowerment of end users.

The goal of this user forum was to share lessons learnt for moving towards the concrete implementation of solutions in the European market place, by working on evidence-based guidelines for daily life practice. After the presentations, the interactive tables were introduced to the key discussion points and interaction among the participants was encouraged. Divided into 5 groups, the 38 attendees discussed about the benefits of user involvement and good practices (working group A, split in 2 groups), toolkits on user involvement (working group B) and about understanding the users (group C, split in 2 groups). In the light of a reinforced engagement within the Thematic Network and with the involved participants, all attendees were invited to a meeting of the C2 Action Group of the EIP AHA in Brussels on November 4<sup>th</sup> with the objective to open up the discussion with external participants.

#### **6.3.3 Aims**

The present roadmap identifies a number of activities with reasonable milestones to be undertaken to reach the final objectives of the user empowerment roadmap. The identification of the tasks stems from the analysis of the gap between the present situation and the desired situation, and focuses on the tasks to address this gap. The final roadmap will pass through different steps of validations (the first, already passed, was during the ENGAGED open Multi-community workshop in Brussels on November 25th), including the feedback of external experts, which is now being collected and included directly in the present document.



### 6.3.4 Roadmap Stream status and perspectives overview

This roadmap has been developed from a clear and unambiguous understanding of the current state of the art in the area of User Empowerment. The desired objectives have been defined and specified on this basis in order to be able to conduct a Gap Analysis exercise. This exercise has provided a prioritization of the different actions that must be undertaken in order to reach the objectives.

#### 6.3.4.1 Actual status

- **Lack of user empowerment:** “user involvement” is one the four major barriers to the deployment and uptake of innovative solutions in the European market for active and healthy ageing (AHA). Not involving the users means to design and develop products and services that do not consider the needs and expectations of the final beneficiaries.
- **Stock-taking of concrete good practices in user empowerment:** from real life experimentations, testing and cooperation, especially within public-private partnerships (PPP) and from some Action Groups of the EIP on AHA, mainly C2 and B3 Action Groups (AGs). For instance, the C2 AG has published a deliverable (entitled “Deliverable 4: A Set of good practices that supports the implementation of interoperable and independent living solutions” April 2014) consisting of a repository for good practice relating to user empowerment and to collate evidence of such practice from across Europe.
- **Miss the perspective of user involvement (its benefits):** key benefits that the society, as a whole, can gain from the direct and early engagement of the final beneficiaries in both the research and the decision-making process are not considered and fully exploited.

#### 6.3.4.2 Wished Status

- **Users are involved from the outset in all processes related to his/her health and wellbeing,** being well-informed, better aware, and actively participating in all these processes.

To involve users, it is first necessary to identify the different user profiles who are concerned by the service/product to be develop – paying due attention to the groups the most at risk of exclusion or so far excluded, to analyse existing ways to reach the different groups of users, set up methodologies and processes to ensure effective and adequate involvement and carry out consultations and co-creation exercises. To maximise results, it is recommended when available and adequate, to gather different groups of primary, secondary and tertiary users to share information, confront ideas and positions, and co-design efficient services and products which meet the requirements and wishes of all groups of users.

The Design for All approach is a relevant methodology to use here. Design for All is the intervention into environments, products and services which aims to ensure that anyone,





including future generations, regardless of age, gender, capacities or cultural background, can participate in social, economic, cultural and leisure activities with equal opportunities.<sup>10</sup>

### **For older people**

- Participation allows to increase the sense of ownership
- It reduces the feeling of being exploited by research
- It enhances social participation
- It contributes to the development of skills of older people
- It allows to keep at pace with (the) research developments and innovation
- It helps the users understand their role in the process, technology and methodology used

### **For researchers and businesses**

- Participation ensures researchers and innovators understand users better
- It forces researchers, innovators and beneficiaries to speak the same language
- It explores ways to bring users in the discussion: engaging users means acquiring efficiency, efficacy and consistency, while late involvement often means a high risk that the feedback from the users will not be implemented
- It reduces the gap between research and practice
- It encourages the consensus between/within stakeholders
- It helps achieve better research results and innovation, encompassing hard-to-reach groups
- It facilitates user/society acceptance and therefore business development of innovation

### **For society**

- Participation of beneficiaries diminishes the risk of ageism
- Research priorities, product development and service provision reflect the needs and wishes of users, ensuring that money and resources are not wasted
- Improve services and products (i.e. accessibility) for the benefit of society as a whole

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<sup>10</sup> <http://designforall.org/design.php>



#### 6.3.4.3 Gap analysis

At this stage, the main challenges we have is:

- how to raise awareness about the benefits of user involvement and good practices,
- how to use the existing toolkits on user involvement,
- to make all stakeholders better understand users' needs and wishes
- To genuinely involve the final beneficiaries since the designing phases of products and services are meant for them.

The gaps we have identified in our analysis are the following ones:

- **Lack of European scale:** so far user empowerment is limited to a few localised networks.
- **Limited set of interesting topics are addressed:** only specific diseases, some organisational processes ...
- **Tools and platforms for professional support are necessary and actually missing:** users networks rely mainly on direct interaction. If wide EU scale is targeted, tools are a must.

In the process of identifying the different actions that need to be undertaken in order to cover the existing gaps mentioned previously, there already exist several guidelines provided by several European projects and other organisations which have also addressed the issue of user involvement. Some of these guidelines that are worth revising are as follows:

- *Guidelines on involving older people in social innovation development*<sup>11</sup>, from the INNOVAGE project: aim at presenting some common practices and suggestions for allowing the genuine participation of seniors in social innovation process. The guidelines highlight the complexity of dealing with users and of engaging with them, while suggesting useful methodologies for user involvement, taking into account the inter-disciplinary approach needed when discussing and implementing social innovation.
- *Guidelines for co-producing Age Friendly Environments with Older people*<sup>12</sup>, from the AFE INNOVNET project: aim at providing a step-by-step guide on how to design, implement, monitor and assess age-friendly policies, strategies, and initiatives in partnership with older citizens and relevant stakeholders. These guidelines benefit from the knowledge and expertise of the D4 AG on Age-Friendly Environments of the EIP AHA.

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<sup>11</sup>[http://www.age-platform.eu/images/stories/Publications/INNOVAGE\\_Guidelines\\_on\\_OP\\_involvement\\_FINAL.pdf](http://www.age-platform.eu/images/stories/Publications/INNOVAGE_Guidelines_on_OP_involvement_FINAL.pdf)

<sup>12</sup>[http://afeinnovnet.eu/sites/default/files/AFE-INNOVNET\\_D4.3\\_FINAL.pdf](http://afeinnovnet.eu/sites/default/files/AFE-INNOVNET_D4.3_FINAL.pdf)



- *AAL Toolbox: Methods of User Integration for AAL innovations*<sup>13</sup>, from the AAL programme: provides method cards for user-centred design process of AAL technology. It is a selection of different best-practice methods to be used in the different phases of product development (understanding, conceptualizing and testing).

### 6.3.5 Suggested Roadmap

The main objective of this roadmap is to create a network of users that will make the strategy for user empowerment self-sustaining. The purpose of this network is to bind together the users, to facilitate their interaction by means of common toolkits to stimulate their participation and finally to give the users more strength in the presentation of their needs and to pressure the legislator and the public administration in meeting their proposals. That would allow the sharing of experiences and knowledge among users. This network could be composed of different associations of users or of relevant initiatives in the field of user involvement representing various type of stakeholders, who normally work together jointly in working groups and advisory boards. This network can be based initially on an internet hub with good practice in the field of user empowerment, which can serve better the scope and present much less challenges than any other type of users' group of fora. Its final aim is to work jointly in the improvement of the empowerment of the users at all levels.

To reach this objective in a relatively short period of time, it is proposed to start by establishing channels with existing specific users associations, and by creating appropriate tools to support the social network of users. The key to reach a critical mass of users is the role played by the action groups (AGs) that will implement the best strategies for user empowerment addressing specific classes of users. Note that the role of the AGs is rather important. In fact, on one hand they operate to enlarge the base of empowered users; on the other hand, they should keep the attention of the already involved users. This will be achieved by using the tools under development, and by organizing cycles of seminars, workshops and conferences in order to let users exchange their experience and in order to facilitate the interaction with other stakeholders, like specialists, service providers, institutions etc. Once a critical mass of users has been reached, the roadmap proceeds with the creation of the network itself and the first election of its leaders. This election has the objective of giving key roles to the users themselves. The first initiative of the newly elected chairs and committees, will be then a revision of the strategy for user empowerment (by the identification of new objectives and operative plans), at least for the next two years. The revision of the roadmap and the involvement of users in the leading position of the association are the two pillars that will make the roadmap self-sustaining over the years.

#### 6.3.5.1 Milestone

The roadmap comprises four milestones:

#### **Milestone 1: Identification of the best practices:**

<sup>13</sup>[http://www.aal-europe.eu/wp-content/uploads/2015/02/AALA\\_ToolboxA5\\_online.pdf](http://www.aal-europe.eu/wp-content/uploads/2015/02/AALA_ToolboxA5_online.pdf)



The purpose of this milestone is to identify, for each class of different users, the best practices for their empowerment. The reason for differentiating into classes of users is that users generally have different abilities (for example in accessing and using technological tools, or in the interaction with other people) and different needs. Hence, they will be looking for different information and services, and they will thus need different strategies for their empowerment. This milestone is achieved not only by the study of existing documentation and state of the art, but also by establishing contacts with main user associations at the European level to precisely classify the users stakeholders on the base of their needs, interest and abilities.

### **Milestone 2: Setting action groups focused on each class of users to implement user empowerment:**

The first step to reach this milestone is the creation of action groups (AGs), one for each class of users identified in Milestone 1. Each AG will focus specifically on its class of users to implement the best-known strategies for their empowerment. To this purpose, the AG will establish permanent channels with all relevant users associations by organizing open events. Where appropriate, the AG will exploit conferences, mutual learning workshops, internet channels, etc. to keep the links with user associations.

In other words, the AGs will implement a personalized strategy to involve specific classes of users, by using tailored tools and methodologies. This is because users are not all the same, and they may have specific needs, objectives and abilities and thus they need different strategies to be involved and to stimulate their participation.

### **Milestone 3: Development of toolkits for user empowerment:**

This milestone aims to develop a platform or a set of toolkits that will support the community of users. These tools are essential in order to keep the community live and updated. It will enable the exchange of experiences and ideas, and it will facilitate the interaction with other stakeholders (e.g. specialists, service providers etc.). The development of this platform will start by considering the existing social platforms (in a first stage the existing platforms will be evaluated and selected), and will proceed through iterative steps of refinement and evaluation. In the early stages, this platform will be used to support the action groups in their interaction with relevant users' associations. By collecting information about user experience, this platform will be progressively refined and open to individual users.

### **Milestone 4: Creation of a Network:**

The purpose of this milestone is to create a network supporting the further activities of the AGs and the users. This is the key to make the roadmap self-sustaining, as the network will operate as a unique interface towards the institutions (either at local, national or European



level), to devise strategies for funds rising to support its activities, and to foster the further user empowerment activities in order to enlarge the base of users. A network would reach more easily these objectives because it would stimulate the participation of users by offering cooperative services (in particular the sharing of knowledge among users), thus facilitating the exchange of ideas and the identification of innovative approaches to the users' problems. By enrolling more and more users, it thus would reach the critical mass to propose solutions and to influence the decisions at the highest levels. This network could be composed of different associations of users or of relevant initiatives in the field of user involvement representing various type of stakeholders, who normally work together jointly in working groups and advisory boards. This network can be based initially on an internet hub with good practice in the field of user empowerment, which can serve better the scope and present much less challenges than any other type of users' group of fora. Its final aim is to work jointly in the improvement of the empowerment of the users at all levels.

The creation of a different kind of organization, such as an association, has also been analysed but finally it is not considered adequate since there already exist different users' organisations to work with at both national and European levels, so it is not necessary to create another one. The main problem is making this collaboration possible (funding, time management, awareness raising, etc.). This is a task that each project, each initiative needs to carry out at its own level and within its own context.

Once this network has been created, an important step is to make the users themselves take responsibilities and leadership of this network. The AGs will not disappear, but they will be renewed with users and will maintain their role of enlarging the base of users. A general chair for the network should be elected, along with the chairs of the different committees, so that they can further revise the strategy for user empowerment and define objectives and operative plans for the forthcoming years.

### **6.3.5.2 Milestones and related recommended actions**

Milestone 1: Identification of the best practices (Month 6):

- Main result: at this milestone the consortium has identified the different classes of users, and, for each class, the specific best practice for the empowerment of the users in such class.
- Actions: study of the state of the art, establishment of contacts with existing user associations.
- Time frame: months 0-6.

Milestone 2: Setting action groups (AGs) focused on each class of users to implement user empowerment (Month 12):

- Main result: creation of one AG for each class of users and establishment of permanent connections with the relevant users associations for the AG. AGs will thus implement a personalized strategy to involve specific classes of users, by using tailored tools and methodologies.



- Actions: formation of AG, identification of a structure and leadership for the AG, organization of events (either workshop or internet events) to involve the relevant user associations.
- Time frame: months 5-12.

Milestone 3: Development of toolkits for user empowerment (Month 24):

- Main result: creation of toolkits (or platform) that will support the community of users.
- Actions: identification of most suitable social platforms and selection of a platform. Refinement and development of the social platform based on the users' need collection of user experience and refinement.
- Time frame: months 5-24.

Milestone 4: Creation of a Network (Month 18):

- Main result: creation of a network to which, the users involved in the empowerment program, can take the membership.
- Actions: identification of relevant user' organisations to involve in this network, identification of responsibilities and leadership of the network, election of the chairs of the committees and of the general chair, revision of the strategy for user empowerment for the next two years.
- Time frame: months 12-21.

## 6.4 Feedback from the validation process

This roadmap for User Empowerment was presented at the ENGAGED Open Multi-Community Workshop held on the 25<sup>th</sup> November in parallel in three different sites: Brussels, Kent and Barcelona. The audience there had the opportunity to learn about the different roadmaps presented and to suggest their own views and preferences. After the presentation of the roadmaps, the audience could interact and discuss the ideas presented in order to give their feedback regarding the main issues presented about each roadmap, mainly: the central theme, the actual situation, the targeted situation, the gap analysis and the proposed milestones. With respect to the User Empowerment roadmap, the audience agreed with the strategy presented and they highlighted that people getting together is the first step: "we first need to connect and then we can start collaborating with other partners". Moreover it was mentioned that some tension could arise with these new profiles, since the healthcare professionals are reluctant to change their procedures. In this sense, it was suggested to look at new ways to get the resources available in order to make people feel better and be part of the solution (never part of the problem). It was also pointed out the experience of the WSD (whole system demonstrator), that is a small scale design for people with autism that can support and help others to co-design and co-create. It was agreed that there already exist a lot of groups created





for critical diseases. But we need to involve also the rest of the users. And how to involve them and which tools should we use? We need to get their requirements so that we can start designing the toolkit. The proposed roadmap meet these observations, by taking into account the need for involvement of existing user groups (with their background and experience) and by taking into account the development of tools inspired to social platform aimed at facilitating the interaction between members, different groups, and specialists. In summary, now at this stage we need to validate our strategy for this roadmap with some experts already identified.

This validation process of the user Empowerment Roadmap has already taken place and the feedback and recommendations suggested by the experts that have validated this roadmap (people from three existing ENGAGED partner organisations that have volunteered for this process) have already been considered and reflected accordingly in the final version of this roadmap resented in the actual document. It can be concluded that this roadmap has been successfully validated by two of the three organisations, and only a remark regarding the definition of a milestone has been annotated. Regarding the opinion of the third expert organisation that has validated this roadmap; all their concerns have been addressed in the actual document, aiming to provide a clarification of the different issues that were not so clear from their point of view. Hence, the roadmap objectives have been better explained, the context of this roadmap and its connection with the different MLW (mutual learning workshops) carried out during the project have been carefully addressed, and the gap analysis has also been further discussed in order to achieve a better understating of the whole roadmap and the proposed activities and milestones (also redefined somehow).

Regarding the relevance of the roadmap, it has been highlighted that fostering user empowerment is crucial to create more efficient markets and an appropriate political context for active and healthy ageing. With respect to the roadmap objectives, these have been assessed as coherent and well aligned with the roadmap background. And regarding the suggested activities and milestones, these have been considered as appropriate and it has been suggested not to differentiate between the creation of the network and the definition of the responsibilities and the network leadership. In this sense, it has been suggested to identify the potential 'drivers' of this process already from the first stage of this roadmap in order to succeed in the identification of this leadership.

Finally, in order to deploy this User Empowerment roadmap the following three issues should be addressed at an initial stage:

1. Identification of the relevant stakeholders for this Roadmap:

Apart from the different users organisations (associations, platforms, elderly users' organisations, networks, alliances, etc.) the various AGs of the EIP on AHA that have identified the user (or patient) empowerment as a main issue, that is the AGs C2, A2, B3, A3 and D4 are relevant to be addressed in this process. The coordination teams of theses AGs should be initially targeted in the communication process to facilitate the dissemination of the roadmap. Moreover, the EC policy officers from the DG-CNECT and DG-SANTE should be well informed so that this roadmap can be promoted at the political level. Finally, other



EU coordination and support actions (such as PROEIPAHA) or other EU thematic networks (AFE-INNOVNET, AGEING WELL, etc.) should be targeted for dissemination and further up-take purposes.

2. Analysis of the obstacles to a successful implementation of AHA solutions:  
The main obstacle from the point of view of the user empowerment focuses on how to raise awareness about the benefits of user involvement and the existing good practices and toolkits to be used. Also an important obstacle is how to genuinely involve the final beneficiaries since the designing phases of products and services that are meant for them.
3. Suggestions of how those obstacles could be overcome:  
The main suggestion proposed consists of the uptake of this roadmap, in which different activities to overcome the previously mentioned obstacles have been defined. In order to raise awareness of the wished situation, the identified relevant stakeholders are crucial for dissemination purposes and to finally achieve the involvement of the final users in all this process.

## **7 Network sustainability Roadmap**

### **7.1 Definition:**

Network sustainability is identified as a key issue to enable common learning and knowledge sharing in a collaborative and participative environment. Sustainability is defined by a network of stakeholders/participants that interact, and directly affect the internal dynamics of the network. Experts point to that fact that collaborative learning and knowledge constructing is much more than exchanging information and sharing knowledge. However, the key prerequisite that enables any kind of knowledge exchange is the willingness of participants to share the information they have. In other words, there is a clear cyclical dynamic of sharing information and learning which ultimately determines the sustainability of knowledge exchange within a network.

### **7.2 Issues & challenges:**

The key challenge for European, national and regional policymakers is how to empower the learning community with supportive learning tools that can be used by the different stakeholders to develop a sustainable ecosystem for a learning economy for active & healthy ageing solutions.

The main gaps identified in facing this challenge were:

- Learning environment, which needs to be developed as well as learning methods and strategies to encourage the building of a learning community



- Lack of learning on horizontal topics for wide scale deployment that are related to each other: evidence on impact, business model development, user involvement and finance.
- Lack of scenarios to reach a sustainable and dynamic learning community with the proper environment, learning methods and constraints.

### **7.3 Aims**

This roadmap aims at providing valuable information on the status and key elements of network sustainability and, ultimately, concrete actions to be carried out to reinforce and ensure the sustainability of the network. Alignment with the EIP AHA will be considered as a crosscutting issue in the contribution of this roadmap. The final roadmap provides a list of recommendations and activities framed along a timeline, which comprises milestones and development periods.

### **7.4 Roadmap stream status and perspectives overview**

#### **7.4.1 Actual status**

- Lack of learning culture across Europe and within regions and European, national and regional policymakers: One of the barriers for wide scale deployment of innovative solutions is a lack of learning culture in different regions across Europe. Stakeholders in these communities experimented with the new learning tool of mutual learning workshops to achieve this. There are examples of existing learning communities on different levels: European, global, regional, national levels. A lot of AHA networks on the European and regional levels are still focusing on and using instruments for generating knowledge instead of the circulation of knowledge and skills.
- Lack of a learning environment, learning methods and missing incentives for the building of a sustainable learning community.
- Lack of learning on horizontal topics for wide scale deployment that are related to each other: evidence on impact, business model development, user involvement and finance.
- Lack of scenarios to reach a sustainable and dynamic learning community with the proper environment, learning methods and constraints.

#### **7.4.2 Desired Status**

An environment with appropriate learning methods and practices for multi-stakeholder networks that collaborate on a regional and European level on wide scale deployment of active and healthy ageing solutions. Scenarios of moving towards a self-sustained learning network of multi-stakeholder networks in regions and across regions collaborate together and learn in a dynamic way. Sharing knowledge on and working on horizontal topics, and ‘learning by doing’ at all stages of the innovation cycle.



### 7.4.3 Gap analysis

The collaboration with other stakeholders in EIP AHA Reference Sites and other regional learning networks for innovation at a regional or a national level is not an easy task for at least five reasons. They are:

- Different organizational interests and motivations of stakeholders.
- Lack of a common language among stakeholders when talking about value for end users or value propositions from a multi-stakeholder perspective.
- Differences in the learning attitude and communication skills between stakeholders. (Not everyone is open for learning or willing to share knowledge or is used to contribute to the collaboration other than receiving the benefits/outcomes of the collaboration.)
- The level of awareness and competences differ between stakeholders and project leaders of reference sites. Capacity building is important.
- Primary and secondary users are not equal partners yet when participating in the multi-stakeholder collaboration. There are different groups with different levels of awareness and competences. The literature distinguishes different levels of learning: There is a group of users that is not interested at all in innovations. There is a group that is interested in, but not aware of the possibilities of, innovations and lacking in competences how to use these. There is a group that is aware of innovations, but does not yet have the competences how to use the innovations. There is a group that is aware and has user experiences and the competences that have been developed to participate in stakeholder collaboration. The literature distinguishes different stages of engagement: Information and opinion development connect users to innovations to test these in practice, and the third level is real participation in the collaboration with other stakeholders to implement and scale up innovations. Capacity building is a major tool to bridge gaps and overcome barriers.

Within the EIP AHA Action Groups it is difficult to align horizontally with European project consortia related to the central theme or focus of each action group. The lesson learned in the action groups is to engage key persons in the projects in that action group, and then to find out how that action group can offer an added value to those projects by connecting them with other projects on horizontal themes related to barriers for innovation and wide scale deployment. The project leaders of the regional-national and European learning networks have to learn how to improve the learning environment. They also find it difficult to engage experts and non-experts from other initiatives across regions within the reference sites. The questions that arise include: How to engage these people in a broader sense in the running projects and activities, for instance, in testing grounds for wide scale deployment? How to organize this in an efficient and effective way?

#### 7.4.3.1 How to move further towards a sustainable learning community?

In this collaboration, a learning approach needs to be a central focus. The challenge for



regions is how to empower the learning community with supporting learning tools that can be used by the different stakeholders to develop an ecosystem for a learning economy for active & healthy ageing solutions. In the Word Resources Report (WRR), the movement from a knowledge economy to a learning economy is explained. The table shows the differences between the two types of economy and the directions to be taken for the development of a learning economy.

Knowledge economy	Learning economy
<b>Generating new knowledge</b>	<b>Circulation of knowledge and skills:</b> which types of knowledge may develop, how knowledge is shared, how learning takes place in a broader sense
<b>Small group of outstanding individuals</b>	<b>Everyone,</b> no matter what their station in life, must be able to adopt new ideas and handle changing circumstances.
<b>Monologues of society and science, and scientists asking their own questions</b>	<b>Dialogue</b> between science and society, science needs to help with solving problems
<b>Institutions in silos</b>	<b>Responsive institutions:</b> promoting good networks, supportive regulations and helpful institutions, developing strategic agendas as sign posts, an intelligence system with short and long term parameters for performance, forms for a managed globalization and pragmatic policy on Europe

**Table 3. Differences between the knowledge and learning economy**

During the open session of ENGAGED about learning communities at the World Health & Design Forum in October 2014 the following output and insights were gained: A Learning approach differs from a good practice approach that is focused on the sharing and promotion of end results and knowledge that has been generated. It is often very hard to transfer the knowledge from a good practice or scientific research to a different context in society as well as to take up the good practice on a larger scale. A learning approach is much more focused on the circulation of knowledge and skills **during** the process of acting together to face the relevant challenges.

A learning approach is about:

- Asking questions and reflecting on a practical case
- Sharing experiences, insights and ideas
- Clarifying the approach of reasoning and acting
- Continuing the exploration and deployment of new skills and working forms

Asking questions is the key for learning:

- Learning from and with each other
- Bringing in a practical challenge to learn from





- Participating and learning from the thinking framework of the other
- Searching together for missing links
- Facilitating and coaching the mutual learning process

The feedback from experts that was collected at the World Health & Design Forum includes the following statements: We have forgotten to ask the right questions. We are much trained in giving the right answers. Existing learning methods need to be offered to key persons of the regional and European learning community.

These methods can be used by them to improve the learning and collaboration skills of all stakeholders within their learning community.

#### 7.4.3.2 Constraints of a learning community

Besides the learning methods, the learning environment is another key factor for success. What are the constraints for a learning community? When does it work? In the table below the critical factors are summarized.

Key components/ critical factors	Clarification
<b>Shared mission</b>	Vision, Values, Identity
<b>Motivation</b>	Willingness to learn and to share
<b>Safety</b>	Open up to learning in a safe learning environment
<b>Trust</b>	Feeling supported and stimulated to face the challenges
<b>Feedback</b>	Ability to give and to receive
<b>Ownership</b>	Contribution during the process with concrete outcomes
<b>Communication skills</b>	Listen, summarise, ask questions about questions

Table 4. Constraints for a learning community

#### 7.4.3.3 The Network Sustainability Triangle

The dimensions suggested below essentially enable the assessment of the sustainability of a given network as the whole (this assessment models known as the "the sustainability triangle"), as well as improve the knowledge sharing experience of the network members through the knowledge exchange patterns.

The two main dimensions to take into consideration are:

- a) Overall network sustainability assessment: the sustainability triangle
- b) Sustainability of knowledge sharing: knowledge exchange patterns

These two aspects - the overall network sustainability and the sustainability of the knowledge sharing are explained in more detail below.



***Overall network sustainability assessment – the sustainability triangle***

The starting point that we would suggest is that each network as a form of an organization has to balance three fundamental elements to reach a relevant and sustainable level:

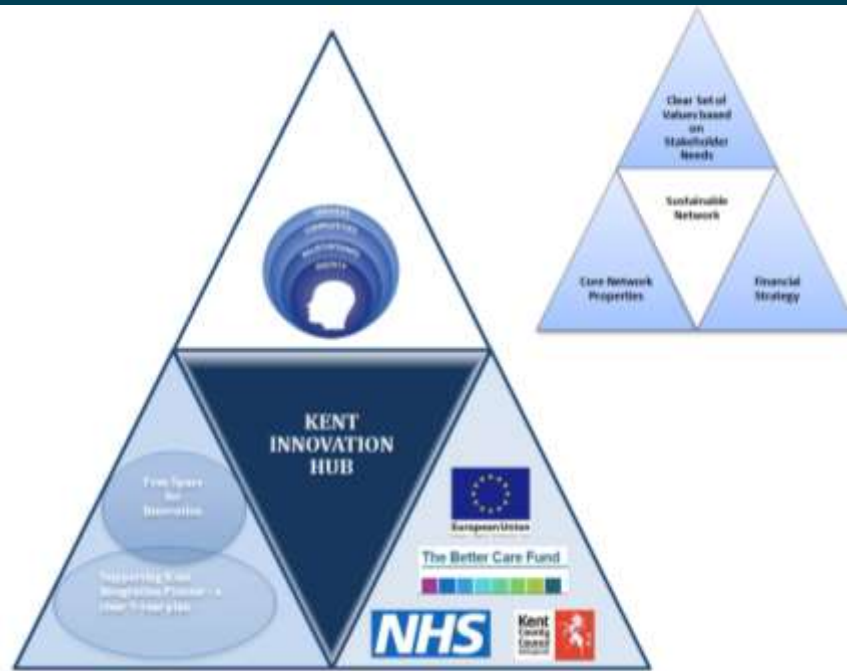
- a) **A Clear Set of Values based on Stakeholder Needs** – this component has to underpin the network’s strategy to ensure its successful implementation and evolution in the long run.
- b) **Core Network Properties** – the basis of network development, which encompasses network’s vision, structure, and relationship with stakeholders and internal organization.
- c) **Financial Strategy** – enables an efficient use and attraction of financial resources in pursuit of achieving the strategic goals of the network. Such a strategy would have to reinforce the set of values based on stakeholder needs and the core characteristics of the network properties correspondingly.

The three above-mentioned components are illustrated in the Network Sustainability Triangle, which could be used as a basic model for evaluating network sustainability.



**Figure 2. Network Sustainability Triangle**

Case study providing an example of a Sustainable Network: The Kent innovation Hub. For the purposes of this Roadmap, we analysed the Kent Innovation Hub initiative applying the network sustainability triangle model (in this document we will avoid the deliberate description of these specifics and present the key facts below).



**Figure 3. The Kent innovation Hub**

**a) Clear Set of Values based on Stakeholder Needs**

- ⇒ The acknowledgement of the unsustainability of the present system, including the economic challenges to come;
- ⇒ Shared understanding and vision of citizen-centred integrated health and social care services, as well as the pace and scale of their development;
- ⇒ Shared account of the meaning of ‘innovation’.



**Figure 4.Values of the Kent Innovation Hub**

**b) Core Network Properties**

- ⇒ Free space for innovation focusing on co-designing solutions with all the stakeholders: citizens, private sector, academia, clinicians and other health and social care providers;
- ⇒ Involving participants on the local, national and international levels;
- ⇒ At the same time, Kent Hub supports the Integrated Care and Support Pioneer Program in Kent, which has a clear five-year strategy (2013-2018).

**c) Financial Strategy:** The Kent Plan (2013-2018) in combination with the EU-funded projects and potentially linking up to the structural funds.

***Sustainability of knowledge sharing: knowledge exchange patterns***

*Knowledge sharing* is often defined as a process of communication between two or more people involving the transfer and acquisition of knowledge. Bearing in mind the general findings from the literature review, we would point out the following preconditions for a sustainable knowledge sharing within a network. The preconditions need to be that knowledge sharing in the network:

- 1) *Is task-driven or problem-oriented;*
- 2) There should be *a clear overview of relations and competences* of participants provided (and ideally, linked to a communication tool – a virtual platform or an organigramme) in order to enable communication across the network;
- 3) Community management & facilitation are needed in order to ensure a balanced relationship between stakeholders, a flow of knowledge and a common language, the feeding of shared values, continuity and disruption and the organisation of regular activities. Someone or a group of persons needs to facilitate the network.

- 4) A space for interaction is needed and some online tools are needed to facilitate exchanges between stakeholders (platform, social media etc.) however any online initiative should always be geared towards the offline.
- 5) The *role of interpersonal communication* cannot be understated: connections are what make the network sustainable. The objective of the network should always be to create new connections with added value for stakeholders.

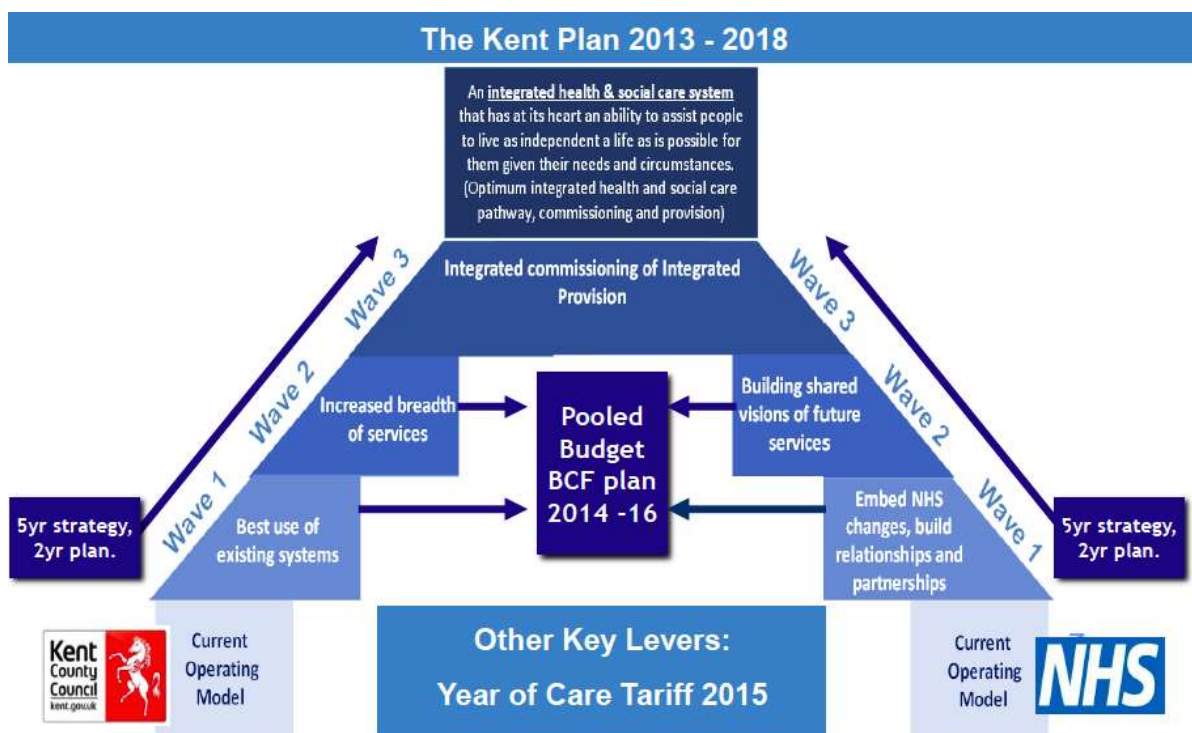


Figure 5.Kent Plan

## 7.5 Suggested Roadmap

With the aim to facilitate learning across the EIP AHA, both on vertical and horizontal topics, this roadmap seeks to provide a vision for knowledge sharing and for creating a learning environment.

### 7.5.1 Milestones and related recommended actions

#### *Creating an EIP AHA Organigram and designating a community manager*

*A detailed organigram (network description) that*

- reflects work relations between the participants
- shows their competences outside EIP AHA (including involvement in EU projects)
- provides contact points for the participants

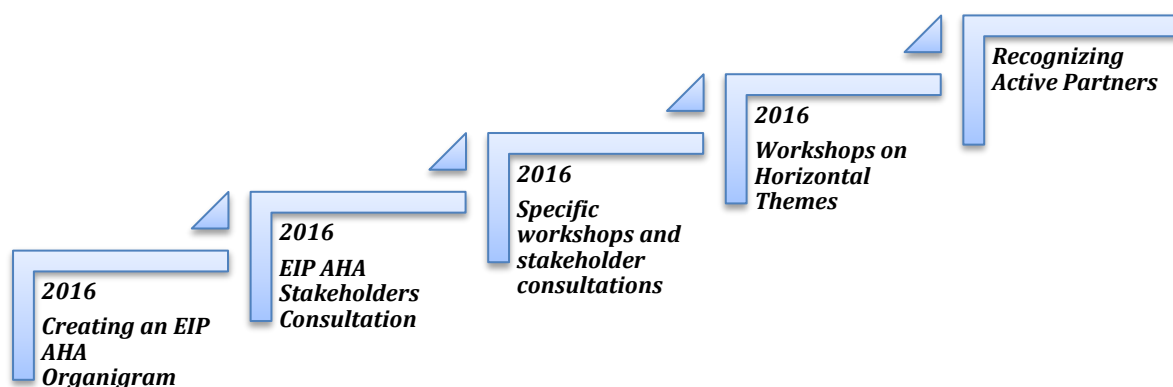


- Gathering feedback across the partnership on the barriers and enablers to facilitating and sustaining the continuity of learning between the partners (i.e., learning tools/methods)
- Incorporating the new methods of learning and improving the learning environment where necessary
- Designating facilitators: facilitators should have experience in managing complex networks, and facilitating knowledge and creating opportunities for people to connect. The facilitation of the network needs to be funded, otherwise there is a risk that after a certain momentum the network vanishes.
- Quality-checking the facilitation of the network.

#### ***Specific workshops and stakeholder consultations***

- Organizing result-oriented workshops and consultations, i.e. to obtain tangible outputs like project recommendations/consultations/ a series of briefing exchanges and identification of cross cutting topics for Action Groups
- Creating workshops on cross-cutting topics across the Action Groups
- Participation of the Action Group members and stakeholders outside and inside the EIP
- In order to incentivize partners to be active, forms of recognition have to be established (publicizing names of organizations who gave input in document development, workshop initiatives , providing feedback and an evaluation based on the information provided, etc.).

Overall, the involvement of the relevant stakeholders at the stage of workshops and consultations will be aimed at creating ownership of the ideas and thus facilitating their implementation on the ground.



**Figure 6. Network sustainability - milestones evolution**





## 7.6 Validation

The validation of this roadmap consisted on a revision of the first version of the document by different persons involved in the project. Participation in the validation process was voluntary. It was conducted between 19<sup>th</sup> and 29<sup>th</sup> May 2015. The reviewers were asked to provide their view on the adequacy of the tool, the operation of the roadmap and the coherency and clearness of the roadmap. An evaluation form was distributed among the roadmap reviewers and collected completed once the validation period had ended. Some reviewers also provided specific comments on the document.

## 7.7 List of Relevant Literature analysed for the purposes of the Roadmap creation

### Part I: Community Learning, Knowledge Sharing, Networks, Sustainability of Learning, Network Sustainability

1. Barrett, M., Cappelman, S., Shoib, G., & Walsham, G. (2004). Learning in knowledge communities: Managing technology and context. *European Management Journal*, 22(1), 1-11. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.emj.2003.11.019>
2. Fazey, I., Bunse, L., Msika, J., Pinke, M., Preedy, K., Evely, A. C., et al. (2014). Evaluating knowledge exchange in interdisciplinary and multi-stakeholder research. *Global Environmental Change*, 25(0), 204-220. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.gloenvcha.2013.12.012>
3. Lado, A. A., & Zhang, M. J. (1998). Expert systems, knowledge development and utilization, and sustained competitive advantage: A resource-based model. *Journal of Management*, 24(4), 489-509. doi:[http://dx.doi.org/10.1016/S0149-2063\(99\)80070-1](http://dx.doi.org/10.1016/S0149-2063(99)80070-1)
4. Mahalakshmi, G. S., & Geetha, T. V. (2009). Argument-based learning communities. *Knowledge-Based Systems*, 22(4), 316-323. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.knosys.2008.10.013>
5. Matschke, C., Moskaliuk, J., Bokhorst, F., Schümmer, T., & Cress, U. (2014). Motivational factors of information exchange in social information spaces. *Computers in Human Behavior*, 36(0), 549-558. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.chb.2014.04.044>
6. Naudé, P., Zaefarian, G., Najafi Tavani, Z., Neghabi, S., & Zaefarian, R. (2014). The influence of network effects on SME performance. *Industrial Marketing Management*, 43(4), 630-641. doi:<http://dx.doi.org/10.1016/j.indmarman.2014.02.004>
7. Pan, Y., Xu, Y. (.), Wang, X., Zhang, C., Ling, H., & Lin, J. Integrating social networking support for dyadic knowledge exchange: A study in a virtual community of practice. *Information & Management*, (0) doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.im.2014.10.001>
8. Reyshav, I., & Te'eni, D. (2009). Knowledge exchange in the shrines of knowledge: The “how’s” and “where’s” of knowledge sharing processes. *Computers & Education*, 53(4), 1266-1277. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.compedu.2009.06.009>
9. Trentin, G. (2011). 6 - graphic knowledge representation as a tool for fostering knowledge flow in informal learning processes. In G. Trentin (Ed.), *Technology and knowledge flow* (pp. 133-156) Chandos Publishing. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/B978-1-84334-646-3.50006-X>
10. van Geenhuizen, M., & Ye, Q. (2014). Responsible innovators: Open networks on the way to sustainability transitions. *Technological Forecasting and Social Change*, 87(0), 28-40. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.techfore.2014.06.001>
11. Wang, Y., Gray, P. H., & Meister, D. B. (2014). Task-driven learning: The antecedents and





outcomes of internal and external knowledge sourcing. *Information & Management*, 51(8), 939-951. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.im.2014.08.009>

12. Yang, S., Fang, S., Fang, S., & Chou, C. (2014). Knowledge exchange and knowledge protection in interorganizational learning: The ambidexterity perspective. *Industrial Marketing Management*, 43(2), 346-358. doi:<http://dx.doi.org.chain.kent.ac.uk/10.1016/j.indmarman.2013.11.007>

## **Part II-Inter-Organizational Learning, Learning Networks, Networked Networks, Network Sustainability**

13. David R. Connelly (2007) Leadership in the Collaborative Interorganizational Domain, *International Journal of Public Administration*, 30(11), 1231-1262, DOI: [10.1080/01900690701230150](https://doi.org/10.1080/01900690701230150)
14. Louise A. Knight (2000) Learning to collaborate: a study of individual and organizational learning, and interorganizational relationships, *Journal of Strategic Marketing*, 8(2), 121-138, DOI: [10.1080/096525400346213](https://doi.org/10.1080/096525400346213)
15. Pete Mann, Sue Pritchard & Kirstein Rummery (2004) Supporting interorganizational partnerships in the public sector, *Public Management Review*, 6(3), 417-439, DOI: [10.1080/1471903042000256565](https://doi.org/10.1080/1471903042000256565)
16. Zeno C.S. Leung (2013) Boundary Spanning in Interorganizational Collaboration, *Administration in Social Work*, 37(5), 447-457, DOI: [10.1080/03643107.2013.827999](https://doi.org/10.1080/03643107.2013.827999)
17. Myrna Mandell & Toddi Steelman (2003) Understanding what can be accomplished through interorganizational innovations The importance of typologies, context and management strategies, *Public Management Review*, 5(2), 197-224, DOI: [10.1080/1461667032000066417](https://doi.org/10.1080/1461667032000066417)
18. H. I. Kulmala , A. Vahteristo & E. Uusi-Rauva (2005) Interorganizational operations in value chains—Experiences from networked software firms, *Production Planning & Control: The Management of Operations*, 16(4), 378-387, DOI: [10.1080/09537280500063335](https://doi.org/10.1080/09537280500063335)
19. Rifkin W.L.F., (1997),"A review and case study on learning organizations", *The Learning Organization*, Vol. 4 Iss 4 pp.135 - 148
20. Wai-Ki Fu, Hing-Po Lo & Drew Derek S. (2006) Collective learning, collective knowledge and learning networks in construction, *Construction Management and Economics*, 24(10), 1019-1028, DOI: [10.1080/01446190500228258](https://doi.org/10.1080/01446190500228258)
21. Hackney R., Kevin C. Desouza & Zahir Irani (2008) Constructing and Sustaining Competitive Interorganizational Knowledge Networks: An Analysis of Managerial Web-Based Facilitation, *Information Systems Management*, 25(4), 356-363, DOI: [10.1080/10580530802384654](https://doi.org/10.1080/10580530802384654)
22. Hsiao P., Brouns F., Kester L. & Peter Sloep (2013) Cognitive load and knowledge sharing in Learning Networks, *Interactive Learning Environments*, 21(1), 89-100, DOI: [10.1080/10494820.2010.548068](https://doi.org/10.1080/10494820.2010.548068)
23. Junki K. (2006) Networks, Network Governance, and Networked Networks, *International Review of Public Administration*, 11(1), 19-34, DOI: [10.1080/12294659.2006.10805075](https://doi.org/10.1080/12294659.2006.10805075)
24. Škerlavaj M., Dimovski V., Mrvar A. & Pahor M. (2010) Intra-organizational learning networks within knowledge-intensive learning environments, *Interactive Learning Environments*, 18(1), 39-63, DOI: [10.1080/10494820802190374](https://doi.org/10.1080/10494820802190374)
25. Katz S. & Earl L. (2010) Learning about networked learning communities, *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice*, 21(1), 27-51, DOI: [10.1080/09243450903569718](https://doi.org/10.1080/09243450903569718)
26. Kester L., van Rosmalen P., Sloep P., Brouns F., Koné M. & Koper R.(2007) Matchmaking in learning networks: Bringing learners together for knowledge sharing, *Interactive Learning Environments*, 15(2), 117-126, DOI:[10.1080/10494820701332663](https://doi.org/10.1080/10494820701332663)



27. Chen-Yen Yao, Chin-Chung Tsai & Yen-Chiang Fang (2014): Understanding social capital, team learning, members' e-loyalty and knowledge sharing in virtual communities, Total Quality Management & Business Excellence, DOI: [10.1080/14783363.2013.865918](https://doi.org/10.1080/14783363.2013.865918)
28. Javernick-Will A.(2011) Knowledge-sharing connections across geographical boundaries in global intrafirm networks, Engineering Project Organization Journal, 1:4, 239-253, DOI: [10.1080/21573727.2011.613458](https://doi.org/10.1080/21573727.2011.613458)
29. Carroll J. M. & Rosson M. B. (2003) A Trajectory for Community Networks Special Issue: ICTs and Community Networking, The Information Society: An International Journal, 19:5, 381-393, DOI: [10.1080/714044685](https://doi.org/10.1080/714044685)
30. Lawthom R.(2011) Developing learning communities: using communities of practice within community psychology, International Journal of Inclusive Education, 15:1,153-164 Brew A. & Cahir J. (2014) Achieving sustainability in learning and teaching initiatives, International Journal for Academic Development, 19:4, 341-352, DOI: [10.1080/1360144X.2013.848360](https://doi.org/10.1080/1360144X.2013.848360)
31. Wells M. (2014) Elements of effective and sustainable professional learning, Professional Development in Education, 40:3, 488-504, DOI: [10.1080/19415257.2013.838691](https://doi.org/10.1080/19415257.2013.838691)
32. Muijs D., West M. & Ainscow M. (2010) Why network? Theoretical perspectives on networking, School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice, 21:1, 5-26, DOI: [10.1080/09243450903569692](https://doi.org/10.1080/09243450903569692)

## 8 Conclusion

The ENGAGED project conducted an in-depth collaboration with different AHA stakeholders to validate the draft version of the different suggested Roadmaps. The project then produced a set of Roadmaps for facilitating and scaling up the market uptake of AHA solutions (within specific regions), and spread these roadmaps among the AHA community. This deliverable therefore includes the final version of the four suggested roadmaps on: User empowerment, Business model innovation, Impact assessment and network sustainability.

- The User Empowerment roadmap aims to involve (and to keep involved) a sufficient number of users to reach a critical mass of people who are well-informed about and able to make better decisions on their own benefit and health. It is anticipated that the existence of this critical mass of people can influence the political decisions affecting the European market for active and healthy ageing. Thus, we would work with such methods as inclusion and co-creation, including user feedback on their own experiences – we would like to co-create products with users, to promote awareness raising and to build confidence so that users have a greater sense of trust in the technologies.
- The Business model innovation roadmap aims at emphasising the need of a business model to create more and better outcomes in the future. With an ageing population, we need new ways to do this. It requires radical new thinking that revolves around the co-creation of value. By using technologies in a smart way, we can achieve that older people feel useful, and needed, in a smart way.



- Impact assessment roadmap: At the mutual learning workshop in Eindhoven in March 2014, we developed a first matrix showing what is needed from impact results to scale up initiatives. We need to measure impact assessment to make it comparable. Based on these motivations, the targeting of information in an Impact assessment roadmap is to be used to obtain a better understanding of the balance between qualitative and quantitative indicators and follow a monitoring framework approach.
- The Network sustainability roadmap is identified as a key issue to enable common learning and knowledge sharing in a collaborative and participative environment. It is defined by a combination of stakeholders/participants who interact on, and directly affect, the internal dynamics of the network.

As of June 2015, after validating the different Roadmaps, the ENGAGED consortium team members are concentrating on the distribution of the different Roadmaps so as to facilitate their uptake by relevant stakeholders.



## Appendix A: ENGAGED Roadmap Evaluation Form

This form is used for the collection of feedback from reviewers:

Link to PDF version of Roadmap:

<https://drive.google.com/file/d/0BxTTvPp1wVBkd0Q3Xy1MbFpDVVU/view?usp=sharing>

Link editable version for comments:

<https://docs.google.com/document/d/1la1m66Hi3mZPwBabW9W1SMTJNYUCmf7BJ0zZSH1w2Mc/edit?usp=sharing>

\* Required



Roadmap \*

Network sustainability Roadmap

Reviewer name and affiliation \*

Reviewer email \*

### Adequacy of the Roadmap

Relevancy \*

Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

The  
issues  
addressed  
in the  
Roadmap  
are  
relevant

☐
☐
☐
☐
☐

Please provide comments to explain your answer above



**Coherent objectives \***

Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

The  
roadmap  
objectives  
are  
coherent  
with the  
gap  
analysis

☐☐☐☐☐

**Please provide comments to explain your answer above**

## Operation of the Roadmap

**Realistic milestones \***

Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

The  
identified  
milestone  
are  
realistic

☐☐☐☐☐

**Please, suggest new milestones or amend the identified ones**

Relevancy of suggested activities \*

Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

The  
suggested  
Activities  
Relevant  
for the  
Roadmap

☐
☐
☐
☐
☐

Please, improve suggested activities

## Coherency and clearness of the Roadmap

Objectives, milestones and deadlines of the roadmap \*

Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

The  
objectives,  
milestones  
and  
deadlines  
of the  
roadmap  
are clearly  
expressed

☐
☐
☐
☐
☐

The  
timings of  
the  
roadmap

☐
☐
☐
☐
☐





Totally agree

Agree

Neither agree  
nor disagree

Disagree

Totally  
disagree

and of the  
milestones  
are  
compatible  
with the  
objectives

## Comments

Observations for Roadmap Developer





## **Appendix B: EHTEL 2014 Symposium – ENGAGED Pre-Validation Session 25/11/2014**

Three sides, linked via video conferencing in three locations, presented the results of the Engaged project. Different numbers of people were presented in each location:

4. Kent – Kent Innovation Hub - 15 people
5. Barcelona – Universitat Barcelona - 7 people
6. Bruxelles – EESC - 60 people

The workshop session was organised as a pre-session to the EHTEL annual two-day symposium on 25-26/11/2014, and some of the Engaged members and guests stayed on in Brussels to attend the symposium also. The overall session was animated by Gérard Comyn of CATEL, France, a French telemedicine organisation.

### **Introduction – Mariëlle Swinkels (Province of Noord-Brabant, CORAL member)**

Engaged is a European thematic network that collaborates on finding out how to get engaged as much as possible with other EU networks and how to become a learning community. It is a multi-stakeholder network involving health managers, users, regional governments, innovation clusters, developers and specialists. Its focus is on improving deployment and development of all kinds of active and healthy ageing solutions. Engaged tries to emphasise horizontal topics such as user involvement and funding possibilities and capacities, to implement solutions in reference sites, and to go more in-depth in finding solutions for the barriers.

We have to move from the current knowledge economy towards a learning economy where we connect knowledge and skills. We need to share with everyone who comes from different perspectives and to integrate science in a collaborative way. We need more responsiveness from European Institutions with regard to a vision towards 2030, better parameters to measure a learning community, and instruments to assist the way towards this learning economy. So far Engaged has tried out using tools such as the Engaged portal and Yammer and its members have met in mutual learning workshops to share discussions about these horizontal topics. This is important because there is not yet a rich "evidence culture" in Europe: we want to show how this kind of activity can be done.

We have discussed the barriers to active and healthy ageing, and we are now writing down guidelines about successes and constraints. We are at the stage of road mapping and have selected three main interrelated themes to discuss: Business Models, Impact Assessment, and



User Involvement. Today we want to share among us all the main directions and gaps in each of the three roadmaps.

A fourth roadmap concerns the community building perspective – how to transfer this knowledge to other communities in Europe, which is however more related to connection of different networks in order to expand the learning community.

### **User involvement roadmap – Carmen Pastor (TECNALIA)**

Carmen was introduced by Francisco Lupiáñez-Villanueva from Open Evidence in Barcelona, who emphasised how more user involvement, patient involvement, and professional involvement in order to facilitate buy-in and to enlarge the market in services.

1. The central theme of this presentation is:
  - User empowerment. Users are far less likely to fall into a situation of dependency, if they engage actively in creating a long life for themselves. We work with inclusion, co-creation including user feedback on their experiences – we would like to co-create products with users, focus on awareness raising and building confidence so that users trust more in the technology.
  - A lot of our findings came from a Mutual learning seminar, held in October 2013 in Eindhoven, Netherlands, held in collaboration with the C2 action group of the European Innovation Partnership Active and Healthy Ageing (EIP AHA) initiative. The user forum provided a fruitful discussion about the empowerment of users.

#### **2. Actual Situation**

Lack of user empowerment is one of the four main barriers for products of AHA. There are concrete good practices established in the area. The perspective of user involvement in old age should be considered in relation to the real benefits of involving the users. There is further collection of best practices made by Action Groups on EIP AHA as well as also by the European AGE Platform and by European living labs.

#### **3. Targeted Situation**

Users should be made aware of the reality about being better informed and making better decisions on his or her own benefit and with regard to his/her health, that will eventually also create better availability in the market.

#### **4. Gap Analysis**

Some gaps need to be filled to reach the targeted situation. We must take as the point of departure in terms of the good practices already found and reach a European scale, since user empowerment is generally limited to a few networks only. Another gap is the limited set of interesting and relevant topics addressed. We also need to make tools and platforms available for professional support; they become "a must".

#### **5. Proposed milestones**

M1 – Identification of a set of best practices, different classes of users to propose different tools.

M2 – Create make action groups that focus on the different classes of users.



M3 – Develop toolkits for user empowerment to make different guidelines and address barriers. The final toolkit should be ready by the end of 2014.

M4 – Creation of an association of users formed on a voluntary basis by the end of 2016.

M5 – Building of the Association Leadership to create a new roadmap strategy.

Carmen encouraged the attendees to ask questions about how we can best understand users and empower them, involves users in the creation of toolkits, and both raise awareness and involved in the co-creation process.

#### Discussion – The future of the project

Input to the discussion came from Carmen Pastor herself; James Lampert and Robert Stewart from Kent; Paolo Alcini from the European Medicines Agency; Russell Jones from Chorley Wood, England; and Mariëlle Swinkels, Netherlands. Illustrations of work in different areas was offered.

**Healthcare professionals and patients:** We have to take into account the tensions between carers and patients, and whether they agree on the way to use new types of care. The process should be done collaboratively, involving all the stakeholders in the environment as well as considering the concerns of the medical actors. Everyone should be empowered in a collective approach, not broken down into silos. We have to change the way that professionals work, but also realise that they work in environments influenced by their own professional standards. We have to integrate communities that help to create active ageing, and encourage citizens and doctors to accept the new socio-economic situations. In Kent in England, there are examples of telehealth groups that have been created to make services that are useful for users, for example, what are called "dementia-friendly communities". This has been done through a process of co-creation. In the Basque country in Spain, in terms of treatment, professionals including surgeons and general practitioners have been involved in the process. We should also consider patients who do not have critical diseases, and involve them in a more advanced system. The question regarding communication is essential and we have to consider a top to bottom approach to enable doctors to treat patients and diseases differently. From then on we can start building the toolkit. There are examples of going to the individuals instead of having them come to us. In Intel, the IT company, there was an exercise undertaken in 20 countries, with 1,000 households. Both social scientists and behavioural scientists visited peoples' homes, and followed medical teams in clinics, which was very valuable in understanding their situations. In Noord-Brabant in the Netherlands, there has been work on capacity-building at different stages of development with older adults: in the last phase that we are entering now in the initiative, we are engaging in capacity building and collaboration, which can be facilitated by both online and physical tools.



## **Business model innovation roadmap value creation in a digital society – Dag Forsén (HalsansNyaverktyg, Sweden Business model innovation roadmap)**

The two useful factors for the market are the Business Model and Impact Assessment. We need a business model to create more and better outcomes in the future. With an ageing population, we need new ways to do this. It requires radical new thinking that revolves around the co-creation of value. By using technology in a smart way we can achieve that people feel useful and feel needed in a smart way.

It would be useful to have tools to map what happens during a disease treatment both regarding self-management and the time spent with the doctor, which can also lower the costs.

Value creators in healthcare (Corrigan, 2013) in relation to the People Powered Health movement<sup>14</sup>:

- Instead of improving existing things, we need to look outside the box and see new value-breakers i.e. the pharmacies and pharmacists.
- We need to find value by using new parts of the industry to apply technology through new business models. We need a lot of feedback from users and proposed best practice patterns.

**Involve users:** In Västerås in Sweden, they have been very proactive in involving digital solutions in citizen involvement. There was user involvement from day zero. The community asked each other questions about "What makes you feel happy, safe, and secure?"

**Getting connected and minimising loneliness through use of technology:** In Sweden, there is what we call "iPad ladies", 500 80+ year old adults are so eager to get out their news, using digital tools. These women want to use technology in a very easy way, both to help themselves and help others. In this way, they can be both independent and needed. The company is doing a research project on loneliness: feeling needed is very beneficial for people's health.

**How do you self-manage your own condition(s)?** Sarah Riggare of Nernelabs Sweden is experiencing early onslaught Parkinson's disease. She uses digital tools to manage her hours spent managing her own condition better (those many hours when she is not able to see a doctor). The few hours in which she is able to see her own general practitioner and/or clinicians were referred to as "the orange dot". It is a real challenge. She saves the Swedish national health system 30,000 euros a year because she has managed to reduce substantially her medicine prescriptions.

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<sup>14</sup> <http://www.nesta.org.uk/project/people-powered-health>





**Using standard technology, but interesting techniques and approaches:** Scotland's "Living it up" programme (under the leadership of George Crooks of NHS24, Scotland) has concentrated on user involvement through by focusing on the idea of everyone being able to add something valuable to society - they call it the "Shine" initiative. The important thing is to add to society and not only to receive. It means much more voluntary activity, and more involvement in people's communities. They are using standard technology, like televisions, and so elderly people can access the initiative's website via their own television.

Technology can change everything! The dilemma in the IT industry is that, going forward, we are supposed to create more and better outcomes for less. This process needs to be sustainable. When an industry is involved in a heavy stressful or disruptive situation, people experience resistance to change. So it is important to focus on people working together.

The attendees were provocatively asked to envisage how companies like Facebook or Google would handle situations in which they were to provide, or cooperate in providing, healthcare services using social media.

- What would Facebook do if they were responsible for care for elderly persons in your area?
- What would Amazon together with Google deliver if they were in charge of a project for creating empowered patients?
- Using modern ICT platforms, how could users or patients or citizens become value creators in new and innovative business models?

### Discussion

Discussants in this session of the workshop involved: Amanda Rimington, Kent; Russell Jones, general practitioner, England; James Lampert, Kent; and Javier Quiles of SerGAS, Galicia, Spain.

Patients want to interact with their doctors in traditional situations, but we also need to ask them what they really need in really sensitive (clinical or medical) situations. The power of the internet does not move easily into the sensitive situation of consultation with the patient's general practitioner.

While it is indeed a sensitive issue, we need to find innovative, new ways to integrate IT and use the peer-to-peer knowledge creation as shown in e.g., Facebook, to help patients know more about their own health situations. We must consider at what point the internet, and patients whose use of systems is also being changed as a result of use of the internet, actually meet. The example of a Facebook profile on healthy living and arthritis is very popular in Galicia, Spain. However, the site stopped growing because the issue is serious and gets complicated from the patients' and the public healthcare systems' point of view.



While we are changing the way that healthcare is being provided, health systems themselves are not very flexible. In some cases, central health authorities have too little understanding of the need for technology. The main goal is to achieve best practices for patient engagement, and to understand what happens on some reference sites, where their experiences can show how that these things work.

Facebook, as an example company, would probably personalise the care, and offer access to education and self-management, thus making the patients active participants. Patients could look up their medication, and track their weight. Such a system would allow patients to develop their own care plans, which would empower the patient and strengthen the relationship between carer and patient.

Facebook might indeed connect people, but the kind of personal security available through Facebook could be problematic. Google or Amazon, as examples, would enable people to collaborate and develop kits and devices that are interoperable, but we will need to make this actually interesting or motivating for people.

We should consider how to embed such a system inside public sector innovation, knowing that health in Europe is not a market like it is in the United States of America. We have not implemented these types of systems to a satisfactory extent, yet, with real users.

Moreover, said others, we need knowledge on how to finance new health and medical practices, and how to reform the health system. We can look later at Facebook, and at new business models etc., said others.

### **Impact assessment roadmap - Mariëlle Swinkels, Noord-Brabant**

At the mutual learning shop that took place in Eindhoven, Netherlands, in March 2014, we developed a first matrix showing what we need from impact results to scale things up. We need to measure impact assessment to make different forms of impact comparable. Two main gaps identified in the workshop were that: first, while we already have some quantitative statistics, comparing these across regions is difficult because we use different health and care systems. Second, we need a qualitative approach such as minimum set of indicators to show balance between the quantitative and qualitative data in order to show how users experience the various initiatives. People at the Eindhoven workshop also discussed a cluster approach for identifying trends across Europe. These initiatives exist and have outcomes, and they can be identified as trends through a more qualitative approach.

Targeting information for road mapping is intended to get a better understanding of the balance between qualitative and quantitative indicators and lead to a monitoring framework approach.



Components include, first, building a collection of user experiences from different reference sites. The approach can be that users can rate the innovation that they use; the professional expert teams behind the innovation can give their opinions; and small- and medium-sized enterprises can add their qualified innovations to the platform. This is a methodology used in Noord-Brabant, that could be adopted in other regions. Second, it means finding a balance between a statistical approach and a qualitative approach of measuring trends.

Regarding the cluster approach, the European Innovation Partnership assessment method that has already been set up by the European Commission could be used.

- However, we also need:
  - Statistical indicators for the individual level.
  - Sustainable organisation of health care.
  - Innovation & growth.

With these clusters gathered in each region, we can discover various trends.

Engaged has considered new ways for an implementation strategy to be created, considering the different healthcare systems in the countries which will make the strategies different. In the Netherlands, for example, the statistical approach does not fit.

#### Discussion:

Discussants involved Marc Lange, EHTEL; Mariëlle Swinkels, Noord-Brabant; Robert Stewart, Kent; and Anne Tidmarsh, Kent.

We need to analyse the total population to have both a qualitative and statistical approach. There is a difference in the needs for evidence shown by scientists, on the one hand, and policy-makers, on the other hand. Scientists need something robust and quantitative, but this can delay the policy-makers from making decisions. Decision-makers/policy-makers need to say that they have some elements that are ready, and then make a decision. If they wait for the scientific results, they will have to wait at least 10 further years for better results. Yet, of course, the decision-makers need some level of scientific grounding for their decisions.

A lot of the evidence that decision-makers seek is not available since scientists simplify what it is that they are looking at; they take away multiple chronic conditions and focus on single disease conditions. We need a new paradigm – a system that examines what is needed in a doctor-patient consultation, and into the amount that the patients themselves can invest in their own care. We need to redefine evidence and understand it in broader, social terms.

Trying to add the quantitative point of view would be useful to work on further. However, once you have implemented a practice that turns out not to work, you have to be brave enough to stop it. As an example, that is part of what the Kent Innovation Hub is trying to do.



There is a challenge between the two worlds of science and policy decision-making. For the Engaged road mapping process, there is a tension about how to do user involvement. New business models need new impact indicators. We just need just to start doing things, to show how things can be different. What are called "impact investors" are now looking for contacts with regions. This is a different approach from investing venture capital in companies. The direction is perhaps to build in steps incrementally, and simply to start doing things. There is already a consumer platform that is operating in Noord-Brabant, that could be spread to other regions. We should also use the Commission's impact assessment framework, that is already there.

### **Kent's contribution to road mapping: Network Sustainability – Robert Stewart (Kent Innovation Hub)**

The Kent Innovation Hub is an attempt to bring together people in the Kent area, and to have a free space for communication that includes citizens. We want to share Kent's good practices, even if aspects of what is being done in Kent are different from different areas, and we want to make this into a two-way communication.

We wanted to structure the Kent Innovation Hub based on network sustainability – a new way of delivering services. We want citizens to be at the centre so that they can help to co-design and co-produce the new system. Citizens must own the solution. Healthcare needs to become less of a medically-owned model, and should empower the process of ageing rather than seeing ageing as a problem. The Kent Innovation Hub shows that the citizens are concerned with their dignity, their relationships with others, and the entire community. As a general practitioner, it can become necessary to do such things as admit patients to hospital etc., which is not necessarily wished for by the citizens themselves.

The hub creates new ways for individuals not only to be dependent on the "orange dot" (the once-in-while face-to-face appointment with their general practitioner), but considers the circumstances that enables individuals to stay in their own home. With a goal of 2018, Kent is moving towards a form of care that increasingly involves the person himself or herself, empowerment, and ways to create new forms of care.

The three most important things for Kent are:

- Communicating information – we need to give people information about the surrounding context, and the problem that they are facing, to allow for an early stage conversation. Citizens do have ideas on how to do health differently, but we need a much more local contact, and later we need to share this with policy-makers. It is an attempt at making a network of knowledge about delivering care.
- Implementation – we need to scale up the project, and we need a paradigm shift towards a place where the patient values healthcare and social care. Healthcare professionals will become more like advocates, so that the time a patient spends with a general practitioner is used most effectively. The focus is on the integration



of contexts, and building local teams to reach the goals set by individuals themselves.

- More personal ownership – with the Kent credit card<sup>15</sup>, budgets are known, and there is a platform available for personal ownership. A certain sum of money is loaded onto the individual's card, based on the needs identified for the diseases that he or she has – citizens can decide what to buy with that budget, within reason. This system is proving to offer more empowerment to the patients concerned.

### Discussion

Contributors to the discussion included Paolo Alcini (European Medicines Agency) and Diane Whitehouse (EHTEL).

We need personalisation of healthcare, and then standardisation, depending on the level of comparability of data. We agree on having certain levels, for example, of social sustainability, but there are big differences between regions and countries.

The focus should be on working with people in their own communities so that they begin to understand the challenges facing today's healthcare systems – the example given by Kent is inspirational in this regard. We need to be sustainable, and to start on making the changes needed now.

### **The future Engaged Roadmap – Esther Davidsen (Zealand, Denmark)**

We have three main roadmaps on which we want to have concrete steps in the beginning. Yet, the further you go along the road, the more blurred the picture becomes. Engaged has considered how to cross ideas with other sectors, for example, business models. We had precise solutions about consumer-driven platforms presented alongside impact assessment. In the future, we will include the knowledge from today's workshop, here in Brussels, and also from a number of experts. The roadmaps will be both sophisticated and concrete. The ultimate idea is that the project's final road mapping results will be presented at the health Forum in May 2015 in Riga, Latvia.

### **Concluding discussions**

Discussants in this final session of the workshop included Gérard Comyn, CATEL (workshop facilitator); John Crawford, IBM; Dag Forsén, HalsansNyaverktyg, Sweden; Russell Jones, general practitioner, England; Marc Lange, EHTEL; Francisco Lupiáñez-Villanueva, Open Evidence, Barcelona, Spain; and Mariëlle Swinkels, Noord-Brabant.

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<sup>15</sup> This is a system that is being trialled both in Kent and in other parts of England. Patients are allotted a certain budget - with a ceiling - that they are able to spend on their own healthcare and social care. The sum of money is placed on a specially-designed credit card.



The workshop's concluding discussions covered five main domains. These were living labs, business models, evidence-gathering, changing healthcare professionals' behaviour, and the role of the private sector.

- Living Labs

In Sweden, for example, work on living labs is on-going. The work of living labs needs to be scaled up, but we also need more instruments to do this. Focusing on reference sites that are associated with living labs could be an idea.

- Change the way that healthcare and social care professionals work

Change is a cultural problem. It takes time to change. In the living labs, where users and professionals are working together, people's mentalities are changing step-by-step as they work together in a natural, incremental process.

- Business models

We should not hand over everything (i.e., all data, all processes) to companies like Facebook and Google. But we can be inspired by the good parts of what these companies do. There are also other models available, such as the way in which tax assessment and payment has moved online in Sweden.

One question is also whether people are "digital enough" to use these kinds of apps since, for example, people aged 80+ are not using IT as much as younger people. Yet the numbers of how people use IT, are also changing. So, we can consider whether to design apps and systems for right now (today) or for the future. IT is involved in a fast development, and some apps could be designed more wisely for those people with real medical and health needs.

In developing a business model, you need to see where the costs and benefits are. These two elements of costs and benefits do not come out of the same people's pockets. With telehealth, it might be advantageous to have people stay at home, and provide their data online, instead of having to go on a waiting list for a clinical appointment. In this way, we should be able to spot potential new benefits in healthcare and who can contribute best to the benefits. For examples, companies might be interested in saving employees days of work, when personnel who are responsible for caring for their elderly parents end up having to take time of work (cf. the business models discussion workshop organised by Engaged in Bucharest, Romania in September 2014).

- Private sector

We need to figure out how to use the private sector, and not to be so scared of it. There must be a middle way.

There are several examples available, already today, of where the private sector can collaborate with the public sector. Examples include telehealth (Galicia, Spain), and Health





Denmark (Denmark). These are useful examples of engaging the private sector with the public sector. Large corporations (for example, IBM) are also allowing their personnel to take sabbaticals and to work with various countries as technology ambassadors.

Companies are interested in getting engaged, and not just for commercial purposes. It is interesting to engage with industry, because companies can deliver replicable industrial tools, that allow stakeholders to use these tools and reach some goals. Companies know about "massification". Nicole Hill of Alcatel-Lucent, France, invited Engaged to create a strategy for a means of engaging with private investors. This is a call for action!

There is some knowledge-gathering/growing-up to be done. Healthcare professionals are good at change as long as they are convinced of the need for that change. But new structures that are introduced without any evidence wither away. Patients **and** professionals are looking for evidence to make sure they are not wasting their time. Fewer than 1 % of European Union projects' technology solutions are taken up by private companies after the projects end. Users realise that ultimately the decisions will be made by political high-level decision-makers, and so they turn off.

- Evidence

The European Innovation Partnership action groups are creating a better understanding of evidence. In Engaged, we could bring some of this learning together, and help to transfer the knowledge and work already done.