READi for Health
Regional Digital Agendas for Healthcare

D4.4 READi for Health Joint Action Plan (JAP)

Contents

1   INTRODUCTION

1.1 READi for Health

READi for Health aims to **strengthen the research potential of four leading eHealth regions** (Murcia, Skåne, Oulu and Midi-Pyrénées) by supporting their triple helix clusters to become world-class players in domains related to the EU Digital Agenda for the Healthcare market.

The major limitation of the eHealth market today is not scarcity of technology, but that innovation up-take is slow compared with other sectors not depending on Public Administration. As a consequence, European public sector expenditure has not been used to spur innovation. However, with an aging population and under current economic conditions, it is critical to facilitate its incorporation to raise the efficiency and quality of healthcare delivery.

Funded by the EU's FP7-REGIONS programme, the partners will:

- develop smart specialisation strategies for quick eHealth innovation up-take, ensuring that all the partner regions are eHealth innovation friendly, particularly for SMEs.

- boost the competitiveness of the clusters and their members by encouraging the development of a demand driven market and the integration of research agendas.

- stimulate the use of innovative public purchasing instruments such as Pre-Commercial Procurement and Public-Private Partnerships.

- support the internationalization of all the clusters members but particularly SMEs, through skills development, identifying an international co-operation strategy and the creation of a global network of eHealth clusters.

These aims are to be achieved through specific measures that are integrated into this Joint Action Plan with a view to accessing and optimize all the resources that might be available regionally, nationally and at an EU level and implementing these measures over the next 18 month period.

1.2 Our unique partnership

The four partner regions of the READi for Health project constitute an excellent foundation for cross-regional collaboration to promote eHealth. Together the consortium has access many of the important capabilities and frameworks required for internationally competitive eHealth development. With joint actions, the consortium's capabilities and shared best practice will provide an eHealth innovation platform that has the scale that is needed to attract the best joint research and innovation activities.

From a technological standpoint, our focus is to enable the clusters to work on several priorities that include Semantic interoperability and standards (interoperability), Cloud computing (cloud) and secure information access from any device, with focus on mobile access (security), as well as Internationalisation and Pre-commercial procurement (PCP).

There are many advantages of bringing together the four EU- regions in the READi for Health project, among them the ability to:

- influence and contribute to policy development by testing eHealth hypotheses in real world conditions
- transfer knowledge and experiences between regions to kick-start new projects promoting eHealth
- provide more attractive markets for stakeholders wanting to develop new eHealth solutions
- work collaboratively or regionally on several solutions at the same time; share best practise and compare results to see what works best.

It is also worth stressing that the contents of this JAP mirror the key challenges of the four ecosystems, identified by canvassing the needs and prerequisites of the stakeholders: patients/citizens, healthcare leaders and professionals, academia, businesses (particularly SME's), innovation support structures as well as politicians and policy makers.

To further spread the results and experiences gained through the READi for Health project, two additional eHealth clusters (Estonia and Extremadura) will be mentored. These clusters have been invited to partake and contribute, exclusively as non-READi for Health partner regions, in the actions outlined below.

2 THE NEED

2.1 From the European Framework…

The European Commission's eHealth Action Plan 2012-2020[1] provides a roadmap to empower patients and healthcare workers, to link up devices and technologies, and to invest in research towards the personalised medicine of the future. This means providing smarter, safer and patient-centred health services. Given the fast growing uptake of tablets and smartphones, the Action Plan also includes a special focus on mHealth.

The actual framework is that public health expenditure in the EU's 27 member states was on average 5.9% of GDP in 1990, rose to 7,2% of GDP in 2010, and the projections show that **expenditure may continue to grow** to 8,5% of GDP in 2060 due to the ageing population and other socio-economic and cultural factors. The impact of these changes is already being felt today and is particularly acute at a time of increased pressure on public budgets, a steady decline in the number of health personnel, higher incidence of chronic diseases and **growing demands and expectations from citizens for higher quality services and social care**.

Deep-rooted structural reforms are needed to ensure the **sustainability of the health systems** while securing access to services for all citizens. As part of those efforts, Europe must reduce its overall **regulatory burden** while ensuring safety. eHealth and wellbeing are areas with high growth potential and possibilities for innovation by unlocking effective health data exchange.

eHealth benefits citizens, patients, health- and care professionals but also health organisations and public authorities. eHealth, when applied effectively, delivers more personalised 'citizen-centric' healthcare, which is more targeted, effective and efficient as well as it helps to reduce errors and the length of hospitalisation. It facilitates socio-economic inclusion and equality, quality of life and patient empowerment through greater transparency, access to services and information and the use of social media for health.

Despite the opportunities and benefits, major barriers hamper the wider uptake of eHealth:

- lack of awareness of, and confidence in eHealth solutions among patients, citizens and healthcare professionals;
- lack of interoperability between eHealth solutions;
- limited large-scale evidence of the cost-effectiveness and clinical value of eHealth tools and services;
- lack of legal clarity for health and wellbeing mobile applications and the lack of transparency regarding the utilisation of data collected by such applications;
- inadequate or fragmented legal frameworks including the lack of reimbursement schemes for eHealth services;
- high start-up costs involved in setting up eHealth systems;

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[1] *eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century*

- regional differences in accessing ICT services, limited access in deprived areas.

2.2 …to the Regional reality

An action plan must be grounded in the real resource and knowledge base available in each of the partner regions. To this end, we mapped our current research, business and policy environments to investigate our real potential. A wide variety of stakeholders within healthcare and wellness, academia, business, innovation support infrastructures, funding or investments, patient organisations, as well as politicians and policy makers were invited to participate in surveys and in depth interviews to identify and explore the key challenges related to widespread implementation of an eHealth system. The results[2] were then used to identify strengths, weaknesses, opportunities and threats on both regional- and consortium levels and form the basis for developing the actions outlined in this JAP.

In parallel, we mapped the main eHealth challenges within the healthcare sector to unearth concerns that could be translated into business needs and development gaps and prioritising these by taking into account the feasibility, acceptability and impact on the system. From this work we were able to discover that healthcare leaders, politicians, and policy makers prioritise the same three main drivers for implementation of eHealth solutions:

- to improve healthcare services for patients and citizens;

- to improve patient safety (i.e. access right health information at the right time across whole care chain);

- to work smarter (for instance, by finding new ways of working, improving healthcare sustainability);

But our work also confirmed the key **challenges and barriers** that need to be addressed to promote eHealth innovation, product development and uptake.

Figure 1.   READi regions key challenges

A strategic approach to eHealth

The WHO, OECD and other international bodies have underlined the importance of a global coordinated approach to tackle the specific issues related to eHealth. In this sense, it is important to set a common basis as key components for market growth.

There is a need for clear regional visions regarding eHealth and long-term eHealth strategies that are made know to all stakeholders, as well as a need to encourage new ways of working. Regional eHealth strategies may provide long-term guidance on eHealth priorities and thus empower health care leaders, professionals and patients/citizens to innovate in healthcare services. Such strategies would also enable strategic considerations to be taken account in the planning processes associated with academic research, business development and regional investment.

Communication and capacity building

On the one hand, patient empowerment and digital health literacy are essential for successful eHealth deployment. On the other, eHealth enables individuals to manage their conditions or even prevent them from arising. A precondition of this is that potential users (citizens, patients, health- and social care professionals) are made aware of what is available and how they can access it.

The variety of terms that are used in parallel or synonymously with eHealth (mHealth, digital health, telemedicine etc.) contributes to a lack of clarity. A simplification of terms will make it easier for all to understand policies and practices that are focused on digitally-enabled technologies for health.

Promoting innovation and the uptake of eHealth solutions in the healthcare system also requires raising awareness of the benefits of eHealth and understanding barriers to adoption. Good examples of projects and eHealth solutions that have been successfully implemented can illustrate the additional value created for caregivers, patients or citizens. But we can also learn from projects that have failed.

Similarly, the evaluation of clinical evidence and analysing health economics (the business case) are important steps in eHealth product development. Such data may help to lower the barriers for uptake of innovations in the science-based, often complex and conservative public healthcare organizations, and to help leaders provide a rationale and incentives for change management of healthcare routines, service models or organizations.

Cross-functional collaboration

eHealth is at the intersection of traditionally different sectors such as healthcare, life sciences and ICT. Solutions will be most effective when stakeholders that include purchasers, health- and social care, business, academia, and end-users (patient organisations, citizens, healthcare professionals) are involved to create a fully functioning eHealth ecosystem.

Experience to date has shown that bringing stakeholders from different backgrounds together into collaborative projects, to speak the same language and have common expectations, involve the right people at the right time, to be difficult. Thus, to become leading regions, cross-functional collaborations must be actively facilitated and improved both with regards to research/innovation and business development activities.

The organisational layer of interoperability is concerned with how organisations, such as public administrations in different member states, cooperate to achieve their mutually agreed goals. In practice, organisational interoperability implies integrating business processes and related data exchange and finding instruments to formalise mutual assistance, joint action and interconnected business processes in connection with cross-border service provision.

Within this framework, *end-user involvement* (healthcare professionals and patients/citizens) is also crucial for successful implementation of sustainable eHealth solutions as well as to strengthen *patient empowerment*.

Innovation and market growth

Ensuring the right legal and market conditions for entrepreneurs to develop products and services in the fields of eHealth and wellbeing is important to support market growth in this area. Once again, encouraging closer cooperation between research bodies, industry and those responsible for implementing ICT tools and services will enable faster and wider take-up of research results in the market.

eHealth is often a diversification area for companies and requires cross-functional skills. The traditional division in health care products and consumer products is also challenged. The innovation support system is often tailored to traditional business sectors. Thus, to efficiently promote eHealth innovation and product development there is a need to establish specific support to eHealth entrepreneurs and SMEs bringing together key competencies and access to customers/end-users.

Innovators and companies need knowledge about customer and healthcare needs, access to healthcare expertise, and access to healthcare for product development. Particular attention should be paid to the design and user-centricity of eHealth solutions. Specific skills are also needed to address regulatory requirements of eHealth products, data security and privacy and data storage etc.

Most companies involved in eHealth see it as a global market. However, the reality is that the healthcare sector is a fragmented market and regional and national agendas do not always prioritize a global view. This is particularly harmful to SMEs, limiting the size of market opportunities they can access. This is further exacerbated by the fact that different markets have different regulations, which affects the applicability market strategies.

Business models for eHealth

There is a need for clear business and reimbursement models to create attractive markets for eHealth. In most of the consortium regions, current reimbursement models are based on "fee for service". This model does not reward progress in quality or preventative care, but rather the number of patients met and treated. As a result healthcare professionals are often reluctant to develop or try new care models, as there is formal way to recognise the results obtained.

Different funding mechanisms for eHealth innovation and product development need to be explored. There few "off the shelf" solutions available matching the traditional public procurement processes. Therefore development and uptake of innovative eHealth solutions will be dependent on the new procurement mechanisms Public Procurement of Innovation (PPI) and PCP.

Another issue that needs to be considered in this context is the time to market. Many entrepreneurs and SMEs do not have the financial strengths to endure long product development, regulatory approval phases, and public procurement processes. There is also a risk that the technology is out of date when it finally is implemented. Thus, more flexible and iterative processes are needed.

Interoperability, security and cloud technology

The regional public healthcare systems needs modern, modular and flexible ICT platforms, which enable product- and care development, secure information exchange within the whole care chain (promoting improvements in patient safety), and connection of mobile eHealth solutions. Mobile solutions can move healthcare closer to patients and improve healthcare services and patient empowerment. Interoperability will facilitate free movement of patients between caregivers, regions and nations.

Interoperability standards are prerequisites for implementation of eHealth on a large scale. However, our analyses show that the knowledge of standards is low within the regional research and business environments of the consortium.

Cloud technology offers new possibilities, such as easy and ubiquitous access to medical data, and opportunities for new opportunities for new ways to monitor patients. But it also brings new challenges with respect to legal aspects on data security and privacy.

Care delivery: patient empowerment, safety and end-user involvement

End-user involvement (healthcare professionals and patients/citizens) is crucial for the successful implementation of sustainable eHealth solutions as well as to strengthen patient empowerment.

Once again, effective, personalised eHealth solutions can be best developed with the involvement of the full eHealth ecosystem e.g. payers, health- and social care, business, academia, and end-users (patients/patient organisations, citizens, healthcare professionals).

Patient empowerment is also related to providing opportunities for patients to move between caregivers, regions and nations to get the best possible healthcare services to meet his/her needs. This may be especially important when it comes to treatment of rare or highly specialized diseases and conditions. In this respect, communication and training activities can be important ways to empower patients to take responsibility for their own health and wellbeing and actively participate in their treatment.

3 OUR COMMON STRATEGY

3.1 Vision of the future and purpose

Each of our regions has a unique set of competences and resources that we deploy to within our own health ecosystems for the purpose of offering the health and wellbeing services that improve the lives of our stakeholders. By working together, we can be more ambitious in what we hope to achieve. We can benefit from greater economies of scale, we can work towards setting common standards that are the precursor for stimulating innovation and we can reach our vision of "becoming leading regions in which eHealth innovations can be developed and taken up quickly and seamlessly".

To reach this vision we must use the regions unique competence in ICT and healthcare to develop and upscale eHealth solutions creating value for caregivers, patients and citizens. We will refer back to this mission whenever we are at a crossroads that requires us to decide on which course of action to pursue.

3.2 Shared aims

Our shared aims are the result of the work we have undertaken in each of our eHealth ecosystems and reflect specific areas in which we can benefit from synergies, scale and skills. Over the next 18 month period we will work to:

- ensure that eHealth products and services developed meet the needs of the ecosystem stakeholders, in terms of the value they deliver to caregivers, patients and citizens, as well as their ability to be integrated into the healthcare system
- provide an environment in which eHealth businesses can be created, grow and thrive
- encourage acceptance and take-up of eHealth by all members of the ecosystem through clear and ongoing, multi-directional communication that can feed into future strategies
- pave the way for widespread use of eHealth -as a mean to ensure efficient use of resources, and to support sustainability of the healthcare organizations
- facilitate patient empowerment via the implementation of eHealth as a mean to provide health services with high quality and safety.

Figure 2.   READi JAP aims

1. Addressing ecosystem needs

To ensure that eHealth products and services developed meet the needs of the ecosystem stakeholders, in terms of the value they deliver to caregivers, patients and citizens, as well as their ability to be integrated into the healthcare system.

To ensure successful implementation and sustainability of eHealth products and services, they should meet real customer needs, demonstrate additional clinical value, be interoperable, and be compliant with legislation and regulations regarding e.g. data security and integrity as well as regulatory requirements.

2. Business environment tailored for eHealth

To provide an environment in which eHealth businesses can be created, grow and thrive.

For eHealth to be a tool for improvement of healthcare services, innovations need to happen. Innovation is when inventions are commercialised and a market is created, which happens through businesses. There are two steps to take. The first is to find and communicate perceived needs from the healthcare to be translated into solutions; the second is to make it possible for innovations to be tested, validated and evaluated with regards to clinical value (evidence). The healthcare organisation needs to provide an environment and infrastructure that enables new solutions to be added, in order for it to make it worthwhile for companies to invest in this sector. An additional important piece in this environment is that there exist a customer and a procurement process (PPI/PCP) that makes it possible for innovators and SMEs to participate.

To stimulate business development in eHealth, the healthcare organizations need to communicate/ be transparent regarding their needs and priorities, and their long term-strategy for eHealth.

3. Promote communication and eHealth strategy

To encourage acceptance and take-up of eHealth by all members of the ecosystem through clear and ongoing, multi-directional communication that can feed into future strategies.

Strategies help define which road to follow and are the foundation for selecting the actions to take. They indicate how to distribute resources and can transform managers into more effective leaders.

For a strategy to bear fruit, it must take into account how new solutions for improvement can be introduced to the healthcare organisations. Since the consortium does not consist of policy makers, or healthcare management, we need to be able to disseminate and promote our findings to the right stakeholders, to make an impact. Communication is one of the most powerful tools to spread information and results, and a clear, targeted message increases the likelihood of the message being received and understood.

4. eHealth – as a tool for sustainable healthcare

To pave the way for widespread use of eHealth -as a mean to ensure efficient use of resources, and to support sustainability of the healthcare organizations

Both healthcare leaders and politicians/policy makers share the same view regarding the three main drivers for implementing eHealth solutions: to provide better service to patients/citizens, to improve patient safety and to save resources. The current situation however, as indicated in previous reports, shows several barriers for implementation of new solutions. Evidence-based solutions that meet the [urgent] needs in healthcare, as well as showing financial improvements may be the key to change attitudes towards eHealth. This will not only require an innovation system that can pick up relevant needs from healthcare and support the innovators, but also a strong leadership in healthcare that can make the right priorities and manage change in healthcare routines and clinical practice in combination with new innovative ways of procuring eHealth solutions.

5. Promote patient empowerment

To facilitate patient empowerment via the implementation of eHealth as a mean to provide health services with high quality and safety

Patient empowerment puts the patient in the heart of services. It is about designing and delivering health and social care services in a way, which is inclusive and enables citizens to take control of their health care needs.

We believe that an empowered patient:

- understands their health condition and its effect on their body
- feels able to participate in decision-making with their healthcare professionals
- feels able to make informed choices about treatment
- understands the need to make necessary changes to their lifestyle for managing their condition
- often gets better outcome of treatment/ faster recovery
- is able to challenge and ask questions of the healthcare professionals providing their care

- takes responsibility for their health and actively seeks care only when necessary

- actively searches, evaluates and makes use of information

- compares care givers and seeks care the best available health care services (may involve movement between care givers, regions and across borders)

Empowered patients will better understand how to navigate between the many players in the healthcare system including family, physicians, health insurers, healthcare regulators, and pharmacists. When unsure about where to go or what to do next, the empowered patient will feel confident to ask for the information they need.

3.3 Actions

The nine actions identified achieve READi for Health common aims by working on a range of actions that are executed on consortium level and/or are regional actions that can be scaled into the other regions within the project, realisable with the resources available the project or lead able to be implemented by accessing funding opportunities, implemented within a specific timeframe and based on the strengths and capabilities of at least one region-

Figure 3.   READi for Health actions
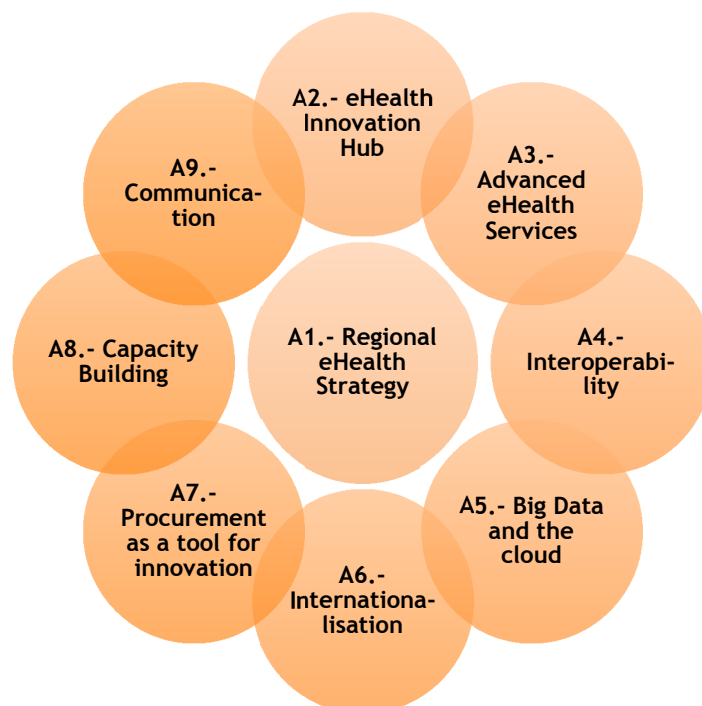
Action1.   Regional eHealth Strategies

The implementation of eHealth solutions require a sound and clear framework that sets priorities and enables eHealth stakeholders, of vary different natures to work towards common goals and understand the resource base available to reach them. The partners will lobby for regional eHealth Strategies to be developed so that these goals can be agreed and communicated, policy priorities are set and resources allocated.

Ultimately, the eHealth strategies must act as a roadmap for innovation, avoid the duplication of efforts and inconsistencies between policies and practices and lead to more effective deployment and optimisation of eHealth solutions in the partner regions.

Action2.   eHealth Innovation Hub

The Innovation hub will simplify eHealth innovation by lowering the barriers to access the eHealth market and connecting innovators to existing capabilities (incubators, business developers, test beds in a live setting, etc.) as well as end-users (including patients) and healthcare organisations.

It will also facilitate the process from identification of healthcare needs (end-users), innovation of solutions, and product development, validation and testing in a live setting. This requires access to a wide range of specific infrastructure and skills such as living labs, test beds, legal and regulatory science, as well as capabilities to perform clinical and health economic studies.

This new approach will connect the traditional silos, in which the different support mechanisms from the regional innovation system is divided, and activate the different elements that can make eHealth business potential be fully realised.

Action3.   Advanced eHealth Services

This action will identify and develop services to provide the appropriate support to go from an unmet need to successful implementation of the eHealth solutions. The services will facilitate identification of healthcare/customer needs and communication to innovators, access to test facilities within health care, definition of customers and business models as well as definition of revenue streams. The approach is bottom-up: the implementation of any eHealth service starts from needs in health care or customer needs related with health, wellness or care. Thus, pathways starting from customer needs through research projects and pilots to successful products development should be facilitated.

It is important for entrepreneurs that implementation of the eHealth services can be made effective, fast and as easy as possible. The advantages of the service development models for maximizing the business and success rate are evident. SMEs need effective ways for go-to-market strategies, regionally, nationally and internationally.

The health care requirements and regulatory information is also an important part of product development, and thus access to this expertise needs to be available and supported. Similarly, the integration pathways of new eHealth products or services are not always well-known and firms may require support in this field.

Action4.   Interoperability

Partners will develop regional programmes to accelerate interoperability in eHealth, to improve patient and healthcare professional access to data. An interoperable ICT infrastructure will enable business development, especially for new innovative services, by enhanced higher level of integration across the healthcare system's ICT solutions. But it will also lead to the sustainability of the healthcare system, by separating applications and data to eliminate the risk of data being lost when updating the applications.

An interoperable ICT infrastructure will allow data exchange between healthcare professionals and organisations, but also between citizen and healthcare professionals, and enable real time and up-to-date health monitoring.

The current lack of interoperability, which also has an impact on patient safety, has a negative impact on the expense, speed and effectiveness of the development of an eHealth service. We will strive for a future in which public and private services can share information standards and use the same platforms, thus ensuring interoperability across the whole care chain.

The approach will be iterative, underpinned by other activities that will work on developing an ecosystem that is based on more open and standardised systems and working processes.

Action5.   Big Data and the Cloud

Big data initiatives have the potential to innovate and transform health care, starting with the vastly increased supply of information. In parallel, recent technical advances have made it easier to collect and analyse information from multiple sources, a major benefit in health care since data for a single patient may come from various purchasers, hospitals, laboratories, clinics, as well as patient-captured health data.

The partners will put forward regional project proposals, including a demonstration or first implementation of a requested solution (preferably a solution applicable in different scenarios) as well as validation of the solution. The solution will meet requirements from the customer's perspective (healthcare organisations) taking data security and privacy into consideration. The projects shall be presented to and debated with regional decision makers/politicians, regional policy makers, regional healthcare leaders and data owners.

In parallel, the partners will look at the challenges to using cloud-based solutions in healthcare and publish a cookbook for "eHealth Data Officers" with recommendations how they can be addressed, e.g. how to handle and relate to the data protection directive and coming general data protection regulation.

Action6.   Internationalisation

Digital technologies have a worldwide market, using the same infrastructure core (protocols, operating systems, hardware etc.) all over the world. At the same time, it appears that the few profitable companies involved in the eHealth business are targeting niche markets, which tend to quickly get saturated.

The READi for Health partners will develop support tools to ensure long-term profitability of eHealth innovations emerging from SMEs on international markets. This would be an

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important way to strengthen the eHealth sector in Europe, taking in consideration concrete features of the healthcare sector which include delivery, funding of the healthcare activities, regulatory constraints specific for every single country. All of these contribute to a highly complex internationalisation process.

Action7.   Procurement as a tool for innovation

The procurement of innovation is designed to steer the development of solutions towards concrete public sector needs and involves different suppliers competing through different phases of development.

The consortium will contribute to improved use of PCP/PPI for eHealth solutions, as one of the main barriers so far is that there is no or little experience in this arena. This is in spite of the fact that all READi for Health regions are conscious that it is crucial mechanism to allow for the development of eHealth. The procurers of healthcare solutions, as well as the decision makers, will be targeted with information from findings and best practices of successful PCP/PPI implementation and how to they can be successfully as a first step to introduce eHealth innovation.

The second step is to identify a concrete public sector need. This can be addressed in several ways which will be explored over the next few months. One possibility is that procurers organise an initial open dialogue with the supply side in order to develop a better understanding of the available options. Such a dialogue would clarify market gaps with respect to actual needs.

Action8.   Capacity Building

The READi for Health consortium will support patient empowerment in two different but complementary dimensions, on one hand the improvement of a person's ability to effectively self-manage chronic disease and to enhance patient groups' capacity to participate efficiently in health policy development. In both cases, civic organisations, which include self-help groups, associations of patients with a chronic disease, networks and umbrella organisations, play an essential role.

On the other hand, from the business point of view, most of the ehealth innovators consider eHealth as "diversification" and thus lack specific knowledge related to this area, as well as professionals that usually refers to the complexity of the domain and the fact that they lack knowledge in specific areas. Linked to this, the consortium will consult leaders/experts with as much interdisciplinary knowledge as possible what are the required skills to mobilise to produce efficient and useful eHealth tools.

Action9.   Communication

This communication action aims at clearly defining key stakeholders with high impact on eHealth strategy, innovation and uptake, and who have the authority to influence the decision makers, as well as to tailor specific messages, based on READi for Health results, to raise awareness for eHealth and support for the suggested actions in this action plan. It will provide the READi for Health partners with custom-made communication plans to the targeted key stakeholders.

Regarding the aims described in the previous section, there is a matching between them and the actions identified to ensure the fulfilment of the JAP mission defined as shown in the next figure

Figure 4. Aims and actions

	A1. Regional eHealth strategy	A2. eHealth innovation hub	A3. Advanced eHealth services	A4. interoperability	A5. Big data & the cloud	A6. Internationalisation	A7. Procurement as a tool for innovation	A8. Capacity building	A9. Communication
Aim1. Address ecosystem needs	■	■	■	■	■	■	■	■	
Aim2. Business environment	■	■	■	■	■	■	■	■	
Aim3. Comms & eHealth strategy	■								■
Aim4. Sustainable healthcare	■			■	■				
Aim5. Patient empowerment				■	■			■	

4 IMPLEMENTATION

4.1 Regional Involvement

All actions can be considered to be small individual projects within the READi for Health project, and will be implemented during the remainder of the project and sustainable after. A *leader* has been identified for each action, based on the interests and relevant experience of the region. The leader should: coordinate the work within the action, make sure that best practices are shared between the regions, as well as use the strengths of the leader region in combination with knowledge and experience in the area to help the other regions deliver the action.

In addition, the rest of the partners will be divided into *contributors* and *observers* in the actions. A contributor will take an active part in the action, and gain results from it. An observer, on the other hand, will learn from what the other partners are doing, have the possibility to take part in some tasks in the action, but will not have an active role.

It is also important the role of the mentoring regions in the JAP implementation. There are different areas in which the mentoring regions will be involved in order to improve their knowledge and accelerate the implementation procedure.

Figure 5. READi for Health regions and mentoring regions involvement

Note: dark boxes in orange shows the leaders, soft orange boxes shows the contributors and soft grey are the observers

The Regional eHealth Strategies action (A1) is central for the JAP, and the READi for Health project. However, the possibility for the partners to actually enforce a strategy varies between the regions, therefore, when working with the action, each region will have to adopt the action to its conditions. ECHAlliance will support the action with input from their eHealth strategy work in 19 different regions globally. Murcia (FFIS-CARM) will be the leader as there is an important need to coordinate all regional initiatives dealing with eHealth and regional government is willing to foster collaboration in this area.

Oulu and Skåne have relatively similar eHealth environments, and prerequisites, as well as interests. The eHealth innovation hub (A2) and advanced eHealth services (A3) are closely linked, and the two regions have decided to share the leadership in close collaboration. As Skåne (Region Skåne) probably have the best-developed current innovation system of the regions, they will take lead on the eHealth Innovation Hub (A2), while Oulu (University of Oulu-CHT) will be leaders for the advanced eHealth Services action (A3). Murcia hasn't got a mature ecosystem yet but will set the basis with the implementation of an innovation unit and will support the eHealth services definition and development.

Regarding ICT priorities, there are many synergies between interoperability (A4) and big data and the cloud (A5) and Oulu (Council of Oulu)) and Skåne (Mobile Heights) will have leadership for these two actions. Oulu will lead the interoperability (A4) action as there are ongoing national projects to make electronic medical records interoperable over the country. At the same time Skåne have a good starting point for Big data and the cloud (A5) with the partners close relations with MAPCI, the institute for pervasive and cloud computing. Murcia has a clear strategy defined on interoperability and will share knowledge and experiences with the READi partners.

Internationalisation (A6) will be led by Midi-Pyréneés (eSanté+) as they have strong links with the regional agency for internationalisation and have a wide experience defining internationalisation strategies.

The use of procurement as a tool for innovation (PCP and PPI) (A7) is a central for Murcia (TICBioMed), with the assignment to launch a call for PCP, as there is a strong interest in the matter at a regional and national level.

Capacity building (A8) is a key element in the success of the JAP implementation, and Murcia (Daleph) will take on the leadership for this action.

Oulu (ECHAlliance) will lead the action Communications (A9) and coach and support the regions. However, it is the partners that will perform the specific tasks required.

4.2 Timeframe

Implementation of this JAP will commence in March 2015 and will carry on even after August 2016, when the READi for Health project ends. Actions that are ongoing after that point will need to find funding from other sources.

The tasks identified for the different actions are general, and work breakdown structures needs to be developed for the implementation project planning. Financial resources given in this report are merely indicative and need to be further investigated and negotiated during implementation of the actions.

5 ACTIONS DESCRIPTION

Action1.   Regional eHealth Strategies

Leader: Murcia

Contributor: Midi-Pyréneés, Skåne, Oulu

Mentoring regions: Extremadura

Objectives

- To encourage the development and implementation of a Regional Strategic Plan that addresses both the changing health needs and incorporation of ICT in healthcare delivery.
- To establish links to any supra-regional eHealth strategies that may be appropriate, as well as the organisations responsible for them.

Rationale

The work undertaken in previous stages has revealed a clear need to draft a strategic plan for the development of eHealth, which sets policy priorities and allocates resources to the implementation of the innovation agenda.

Practitioners, patients and policy makers have expressed an interest in understanding how technology can be harnessed for the purposes for providing/accessing better, more efficient health services. But to avoid duplication of efforts and inconsistencies, the implementation of eHealth solutions require a sound and clear collaboration framework that sets priorities and allocates resources to them.

Approach

Any public sector strategy must be led by the organisation that has a legal remit not only to draft it but to **drive its implementation**. The first step is to find the right regional champion/s in these organisations for developing the strategy and taking it forward. Once this has been achieved, it will be necessary to:

- encourage the participation of other stakeholders in the process
- secure a role of the stakeholders in the strategy development process to ensure that the needs and priorities that have been unearthed in the READi for Health project are addressed

Stakeholders involved

- Public sector (Health, IT and innovation policy makers)
- eHealth clusters and other industry bodies that can channel the views of healthcare managers, clinicians, businesses looking to provide Technology or technology-based services to the Health ecosystem
- Patient and citizen representatives

Key success factors

- identification of who has the legal policy remit to develop a strategy that can access resources and be implemented
- ability to involve a wide range of stakeholders (i.e. not just policy makers and public sector institutions)
- capacity to link actions outlined in the strategy to sources of funding, such as the Regional Innovation Strategies
- take into account the need to manage change and build communication channels between stakeholders

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Identify eHealth strategy and related existing strategies, and a champion (policy maker or eq. that can lead drafting and implementation process)	03/2015	06/2015
	Use ecosystem map performed in "D2.2 Current regional research, business and policy environment" report together with any information gained through the development of the RIS+ (Regional Innovation Strategies) and S3 (Smart Specialisation strategies) process (Murcia, Midi-Pyrénées, Skåne)		
2	Research national/regional initiatives that can be linked/act as an incentive to a Regional eHealth Strategy	03/2015	06/2015
	Use ecosystem map performed in "D2.2 Current regional research, business and policy environment" together, how outcomes can be fed into the strategy. (Murcia, Midi-Pyrénées, Skåne)		
3	Discuss and agree scope and the roles of the strategy with champion	04/2015	05/2015
	Scope includes providing guidance on key areas to be included e.g. outcomes from other actions, needs and time frame, but also consider particularly how to give a voice to stakeholders that are not usually involved in this process (Murcia, Midi-Pyrénées, Skåne)		

4	Discuss and agree own role in strategy implementation or monitoring	05/2015	06/2015
	Ensure channels exist to provide feedback to the stakeholders that you have involved in the process (Murcia, Midi-Pyrénées, Skåne)		
5	Develop eHealth strategy (including monitoring process)	11/2015?	12/2016
	This date will be dependent on the Champions own planning process and is likely to vary in each of the Regions. Must take into account planning process finally agreed in regions (Murcia, Midi-Pyrénées, Skåne)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Actions dealing with ICT priorities: **Interoperability (A4)** and **big data and the cloud (A5)**
- Actions dealing with improvement of competitiveness and efficiency: **eHealth innovation hub (A2), advanced eHealth services (A3), internationalisation (A6)** and **capacity building (A8)**
- Actions dealing with innovation in procedures: **procurement as a tool for innovation (A7)**
- Actions dealing with dissemination and involvement: **Communication (A9)**

Expected results

- Clear commitment to developing a strategy that pulls in the resources required for successfully implementing an eHealth agenda
- Open and transparent channels for ongoing communication between the stakeholders

KPI

- 3 Regional eHealth strategy development processes launched
- 4 Regional eHealth strategy monitoring systems formally established to review implementation

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date	Call	Budget (000)	Date
			Midi-Pyréneés: Midi-Pyrenees Regional Development Agency	€30	

| | | | Murcia: Healthcare Regional Ministry (own funds) | | |
| | | | Oulu: Sustainable growth and jobs 2014-2020 – Finland's structural funds programme, regional section/call | | |

Action2.   eHealth Innovation Hub

Leader: Skåne

Contributor: Oulu, Midi-Pyréneés, Murcia

Mentoring regions: Estonia

Objectives

- To facilitate the access to regional innovation support systems including test beds/centres.
- To set up a network based on existing capabilities for innovation, testing and validation for eHealth.
- To create a "One point of entry"; a broker helping different stakeholders navigating in the infrastructure network.

Rationale

In previous work in READi for Health it has been established that many of the important steps, to go from a need to successful implementation of the solutions, lacks, or is difficult to find, the appropriate support. E.g. needs identified in healthcare does not reach the innovators, access to test facilities, to reach evidence is costly or non-existing, and the customer is difficult to define which leads to unclear business models and revenue streams.

The innovation support system already consists of different support mechanisms, but is usually divided into the traditional silos. For new business areas, it can therefore be difficult to find the right and appropriate support such as business developers, legal/regulatory advice and/or access to test facilities.

With this prerequisite, the common picture is that the barriers to enter the eHealth market are too high and at the same time the need for new innovative solutions in health are huge. It is also important that the product and services solving the previously identified end-user and healthcare organisation needs are scientifically validated in vitro and possibly in vivo before being launched on the market. This requires access to a wide range of specific infrastructure and skills such as living labs and test beds and capabilities to perform clinical or medico-economic studies.

Approach

The innovation hub simplifies eHealth innovation by lowering these barriers. It will connect innovators to existing capabilities (incubators, business developers, test beds in a live setting, etc.) as well as end users and healthcare organisations.

In order to do so it will be needed a first mapping of eHealth infrastructure and service providers committed to facilitate eHealth solutions creation, testing, validation and quick uptake in the market. We will have a specific focus on involving end users and healthcare

organisations to make sure that their needs are taken into account when designing and developing an eHealth solution.

Once all capabilities willing to contribute have been identified the one-entry-point organisation will be selected and a working collaborative methodology will be designed. Our approach will be iterative, i.e. we learn as you go.

Stakeholders involved

- Incubator(-s)/business developers
- Healthcare organisations
- Innovation Health service providers
- End-users
- Regional policy makers

Key success factors

- Openness for collaboration across traditional silos
- Curiosity and courage to leave comfort zone to find support/customers in new ways
- Political willingness to support the hub, financially as well as with resources

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Identification and review of existing resources, capacities and testing facilities.	03/2015	06/2015
	Use mapping from previous work package and complete with parts that have been missed to create a map of which actors and existing support organizations exist in each region, and if there is a need for anything to be developed.(Skåne, Oulu, Midi-Pyréneés)		
2	Define a working collaboration methodology	04/2015	08/2016
	Approach the actors found in task #1 to make them aware of what the other actors in the infrastructure do, so that innovators and entrepreneurs easily can get directed to the right kind of support that they need.(Skåne, Oulu)		
3	Creation of one point of entry	08/2015	08/2016
	Find an organisation/unit that will be the "One point of entry", in dialogue with all partners of the network and get it up and running. Iterative process that will end up in a sustainable structure.(Skåne, Murcia, Oulu)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- The involvement of the stakeholders identifies in **regional eHealth Strategy (A1)** will have and important impact in the development of the eHealth innovation hub.
- Very closely aligned with **eHealth hub services (A3)**
- This action will provide an excellent framework for the implementation of the actions regarding **interoperability (A4)** and **big data and the cloud (A5)**

Expected results

- A one-point of entry in each region
- Establish a network with collaborations across silos (and regions)

KPI

- 1 entry point per region
- 1 network established of, at least, 4 members

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
Fast Track to Innovation Pilot (FTIPilot-1-2015)	€ 100.000	01/12/15	Murcia: Healthcare Regional Ministry (own funds)	€ 30	
			Skåne: Vinnova FRÖN - För ökad innovation i offentligt finansierad verksamhet	SEK 20.000	20/07/15
			Skåne: Vinnova VINNVÄXT 2016	SEK 10.000	06/09/15
			Skåne: Vinnova Makers	SEK 250	25/08/15
			Skåne: Almi Innovationscheckar (for SMEs)	SEK 100	ongoing

Action3.   Advanced eHealth Services

Leader: Oulu

Contributor: Skåne, Murcia, Midi-Pyréneés

Mentoring regions: Estonia

Objectives

- To increase companies' success rate in the eHealth business.

- To create business creation model for entrepreneurs and projects for innovative eHealth product and service development.

- To provide entrepreneurs with guidance to design their eHealth service or product to match real market needs with a bottom-up approach to facilitate innovation's acceptability.

- To strengthen the communication channels between public healthcare, related research organisations and entrepreneurs, including information about public procurement processes of the regional healthcare organisations.

- To advise eHealth innovators with a consolidated vision on how to implement their solutions and services.

- To advise product testing and validation (clinical or not) in TestBed & LivingLab environments to comply with regulatory issues, especially regarding data privacy and medical devices.

Rationale

In previous work in READi for Health it has been established that many of the important steps, to go from a need to successful implementation of the solutions, lacks or is difficult to find the appropriate support e.g. needs identified in healthcare does not reach the innovators, access to test facilities to reach evidence is costly or non-existent, and the customer is difficult to define which leads to unclear business models and revenue streams.

The implementation of any eHealth service starts from needs in health care or customer needs related with health, wellness or care. Pathways starting from needs through research projects and pilots to real successful products should be easier.

The eHealth sector is still relatively young. We are just starting to see examples, mainly in the US, of successful investments and exits. Investors in Europe observe this movement overseas and are just starting now to seriously look into eHealth and make their first investments.

It is important for entrepreneurs that implementation of the eHealth services are effective, fast and as easy as possible. The advantages of the service development models for maximizing the business and success is evident, the eHealth technology area is not very old and service processes are useful for young companies and start up's. SMEs need effective ways for go to market strategies regionally, nationally as well as internationally. To do this

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they gain from supported and effective service processes that are offered by public organisations. Global service portfolios are essential in regional and national level, and useful for internationalisation purposes as well. The health requirements and regulatory information is important part of development and access to them is needed to be available and supported. The eHealth service pathways need to be effective and functioning processes available and lessons learned from organizations that are surrounding them are useful. Integration ways of new eHealth products or services are not always known well and all the help is needed to make it easy as possible for successful business.

Approach

The aim of the action is to develop and promote services for SMEs and start-up companies, especially via business incubators by applying a twofold strategy:

- Figure out the optimal eHealth product/services development process, from idea to market, by identifying the key milestones and how to achieve them through:

    - End-users input for a bottom-up product design strategy

    - Business model development specific for eHealth

    - Support and facilitate the access to public health procurement (related to A7)

    - Provide guidance on regulatory aspects

    - Promote health labs and test centres for testing and development.

    - Fund raising

- Leverage all existing resources supporting business creation to tailor the services to eHealth initiatives.

Stakeholders involved

- Business development organizations both regional and national, including business incubators
- Hospital and/or healthcare management
- Public procurers
- Patients organisations and end-users
- Venture capital and other private funding

Key success factors

- Mobilise the appropriate high-level expertise to figure out the optimal eHealth product/services development process (possibly successful entrepreneur or generalist experts involved in healthcare and innovation).
- Commitment from business development organisations to implement the specific service offer to support eHealth innovators.

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Identify key milestones in eHealth solution development	07/2015	08/2015
	Figure out the optimal eHealth product/services development process, from idea to market, by identifying the key milestones and how to achieve them through (Oulu, Skåne)		
2	Identify the gaps between existing service offer and process requirements	07/2015	10/2015
	Leverage all existing resources supporting business creation to tailor the services to eHealth initiatives (Oulu, Skåne, Murcia, Midi-Pyréneés)		
3	Process and release business model paths from needs identification and usability of health services for entrepreneurs	09/2015	04/2016
	Document eHealth models that describe issues from needs identification to the service solutions. Roll out the models with co-operation with business incubators, so that the models shall be promoted and supported for SMEs and start-up companies. Release materials for use (Oulu, Skåne ,Murcia, Midi-Pyréneés)		
4	Product testing and requirements information together with Test Lab facilities to be available for use for product testing.	11/2015	08/2016
	Gather information about product testing requirements and regulatory issues. Make information available in region and organize support to be available in region. Test Laboratory information needs to be available and contacts known openly. Clear out pathways from research projects and pilots to real successful products. (Oulu, Skåne, Murcia, Midi-Pyréneés)		
5	Fund raising in the eHealth sector	04/2016	08/2016
	Develop a framework for gauging digital health solutions (Oulu, Skåne, Murcia, Midi-Pyréneés)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**
- The implementation of the advances services will be done mainly through the **eHealth Innovation Hub (A2)**
- It will have a close link with the implementation of the action dealing with **interoperability (A4)** and **big data and the cloud (A5)**
- The services dealing with PCP/PPI are linked to **Procurement as a tool for innovation (A7)**

- **Capacity building (A8)** facilitates the adoption of new innovations and to better take advantage of the services.

Expected results

- Marketing and dissemination of the eHealth service pathways and business models in region and internationally.
- Pathway and service execution model(s) are understood and used in practice by entrepreneurs.
- Shorten the time to market of the service solutions and eHealth applications.
- Information on e-health project pathways made available on regional website/-s.
- Identification of common private funding, including crowdfunding, platform.

KPI

- 3 experts recruited per region to asses on the definition of the new services
- 1 business incubators per region willing to implement the services (or part of)

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
			Murcia: 2014-2020 European Structural and Investment Funds (ESIF): ICT solutions addressing the AHA challenge and e-Health services and applications	€1.291	
			Oulu: Sustainable growth and jobs 2014-2020 – Finland's structural funds programme, regional section/call, TEKES (The Finnish Funding Agency for Technology and Innovation)		
			Skåne: Vinnova FRÖN - För ökad innovation i offentligt finansierad verksamhet	SEK 20,000	20/07/15
			Skåne: Vinnova VINNVÄXT 2016	SEK 10.000	06/09/15
			Skåne: Vinnova Makers	SEK 250	25/08/15

Action4.   Interoperability

Objectives

- To develop regional program to accelerate interoperability in eHealth
- To promote uptake of program
- To create a cookbook for sustainable platform for interoperability
- To support modernisation of technical infrastructure for platform

Rationale

In the READi for Health survey (spring 2014), interoperability was seen as one of the most important issues to be solved. Interoperability is crucial to healthcare (both on organizational and information system level) to meet the societal need for improving medicine with the right information, from the right patient at the right time in the relevant application.

Successful interoperability will facilitate:

- Patient safety, i.e. by accessing the right information, at the right time
- Patient and healthcare professionals empowerment, e.g. increase ICT solutions usability in a productive healthcare context through an optimised information management
- Compatible ICT systems and standardised service architecture, by consolidating information we can reduce the need for double input of data and risk for errors/mistakes. This will lead to improved patient and healthcare professional trust in the data.
- Business development, especially in new innovative services, i.e. by enhanced higher level of integration across the healthcare system's ICT solutions.
- Health research and development (academia + business)
- Sustainability of the healthcare system, i.e. will separate applications and data to eliminate the risk of data being lost when updating the applications.

Incompatible systems do not allow data exchange between healthcare professionals and between citizen and healthcare professionals, but also prevent access to real time health data. Current situation is expensive, slow and difficult for service development. In the future public and private services are based on same standards and they are used from same platforms. In the future majority of stored data is interoperable.

Most of existing registers, databases and interfaces are old and have been developed even decades ago. It is not possible nor reasonable to try to change all functional systems at once. In our work we recommend an iterative approach, in combination with activities to influence attitudes for more open and standardised systems as well as working processes.

Approach

The key in future interoperability is to define the core services or service paths which are mostly used and at the moment are suffering from incompatible systems. Traditionally services has been produced from organizations' perspective. With public private partnerships it is possible to make process more agile and user centred.

Platform definition

- identification of key stakeholders: meeting with platform owners
- common objectives in interoperability: steps in removing the barriers of using personal data and creating new services

Service definition

- Analysis of the demand of new services: Activation of services developers and provides
- Implementing new services

Stakeholders involved

- Companies experienced with interoperability platforms
- SMEs
- Municipalities
- End user
- Customer: Hospitals/hospital organisations
- Other regional organisations, such as IT departments, policy makers
- Healthcare legal departments
- Research teams

Key success factors

- Involvement and commitment of actors for interoperability program and objectives.
- Development of innovative services
- Acceptable and feasible service architecture
- National and international collaboration in standardization

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Regional/national state in interoperability	03/2015	05/2015
	Mapping of current trends and situation in interoperability and standards (e.g. EPSOS) (Oulu, Skåne)		
2	Service architecture	05/2015	09/2015
	Dependency and collaboration between national architecture and regional platforms (Oulu)		
3	Platform evolution	09/2015	04/2016
	Support and affect on platform development. Platforms should be more compatible and usable (Oulu, Skåne)		
4	Personal data services creation	05/2016	09/2016
	Activating new services for personal data. Promoting pilots using platforms (Oulu, Skåne)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**
- The eHealth Innovation Hub (A2) and advanced eHealth services (A3) will provide the framework for the development of the initiative,
- The **big Data and Cloud (A5)** is closely link with this action

Expected results

- Interoperability becomes one of the prioritised topics in healthcare reform.
- Strategy for interoperable platforms for existing and new services
- New services developed which use commonly accepted (or according to the strategy) platforms.

KPI

- 1 Regional study of interoperability state in each region involved
- 1 pilot project in each region
- 1 interregional project

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
Digital representation of health data to improve disease diagnosis and treatment (PHC-30-2015)	€104.500	21-04-15	Oulu: Sustainable growth and jobs 2014-2020 – Finland's structural funds programme, regional section/call, TEKES (the Finnish Funding Agency for Technology and Innovation).		
			Skåne: Vinnova Strategiska Innovationsprogrammet för folksjukdomar (SWElife)	SEK 2.000	4/03/15
			Skåne: Vinnova Utmaningsdriven innovation, steg 1 - framtidens hälsa och sjukvård	SEK 500	27-08-15

Action5.   Big Data and the Cloud

Leader: Skåne

Contributor: Oulu

Observer: Murcia, Midi-Pyrénées

Mentoring regions: Estonia

Objectives

- To identify and engage a customer (per region) with requirements (operational and technical) that can be solved with Big Data and Cloud technology.
- To promote/initiate a real regional projects based on customer requirements
  - To describe/position big data and cloud in the context of eHealth, resulting in a cookbook
  - To define/develop semi-automated validation "protocols" for cloud solutions to be used in healthcare.

Rationale[3]

One huge societal value from access to "big" data is all new innovative eHealth opportunities to develop diagnostics and treatments to complement solutions (eHealth) to provide better healthcare services for patients.

Although the outcome from previous work packages clearly show a common understanding of the potential of better access to data in a mobile environment, few successful applications were found. Therefore, obstacles in realising these societal values has to be addressed if our regions shall continue to evolve as leaders in eHealth. We need clarification of e.g.

- **Who** are the customers?
- Accessibility and ownership of personal data/information (healthcare and "personal health accounts"),
- How data can be used,

- [3] *Data Driven: Creating a Data Culture*, By Hilary Mason, DJ Patil, Publisher: O'Reilly, Released: January 2015 (http://www.oreilly.com/data/free/data-driven.csp)
- *Joint Nordic Registers and Biobanks - A goldmine for health and welfare research* LINK: http://www.nordforsk.org/no/publikasjoner/publications_container/joint-nordic-registers-and-biobanks-a-goldmine-for-health-and-welfare-research/view
- *The big-data revolution in US health care: Accelerating value and innovation*: By Basel Kayyali, David Knott, and Steve Van Kuiken, McKinsey & Company, April 2013 (http://www.mckinsey.com/insights/health_systems_and_services/the_big-data_revolution_in_us_health_care)

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- How data can be stored,

- Commercial use of data i.e. how to address licensing, IPR etc.

- Secure cloud solutions,

- Feasibility to cloud as a glue between proprietary applications, i.e. mirror data from proprietary applications into well-structured data repository using cloud technology.

- Legal and regulatory constraints.

Approach

Develop regional project proposals, including a demonstration or first implementation of a requested solution (preferably a solution applicable in different scenarios) as well as validation of the solution. The solution should be in line with the requirements from the customer (healthcare organisations). The project shall involve relevant regional stakeholders and be presented for and scrutinized with regional decision makers/politicians, regional policy makers, regional healthcare leaders and data owners.

In parallel with developing the project proposal, challenges (obstacles) with using cloud-based solutions in healthcare will be captured in a cookbook for "eHealth Data Officers" with recommendations how they can be addressed. E.g. how to handle and relate to, the data protection directive and coming general data protection regulation.

Our approach will be iterative, i.e. we learn as we go.

Stakeholders involved

- Hospitals, management (preferred customer)

- IT department

- Entrepreneurs / Companies

- Researchers

- Politicians and Policy makers

- Regulatory Science experts and Legal counsel at hospitals

- Patients/Citizens

Key success factors

- Engage customers (healthcare organisations) that are willing to participate and be part of trials

- Data providers willing to make data available

- Cloud "provider" with required legal and regulatory solutions

- Pragmatism in how laws are interpreted

- Multifunctional skills to reach a common understanding regarding potential benefits of "open data"/ available data in improvement of healthcare services in favour for caregivers, patients and citizens

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Requirement description and compilation of cloud/big data "state of the art"	03/2015	08/2016
	What does the laws and regulations say, that needs to be taken into account for cloud-based eHealth solutions. Gather, structure and make state of the art articles and activities available that meets the needs and requirements (Skåne, Oulu)		
2	Identify a relevant project for each participating region.	03/2015	06/2015
	Each participating region select one regional project for use in this action. Identify and engage customer/-s and key stakeholders (Skåne, Oulu)		
3	Raise awareness and gain support for innovative use of data	06/2015	12/2015
	Based on the findings from task 1 applied to the selected project, build up a case to gain approval from regional decision makers, policy makers, healthcare leaders and data owners (Skåne, Oulu)		
4	Develop cookbook	03/2015	08/2016
	Document work and develop the mentioned cookbook (Skåne)		
5	Identify and enrol partners.	04/2015	08/2015
	Identify experts, researchers and companies with suitable skills and interests to contribute. Contract? (Skåne, Oulu)		
6	Project Proposal	09/2015	06/2016
	Iterative process to development submitable project proposal and if possible demonstrator (Skåne, Oulu)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**
- The **eHealth Innovation Hub (A2)** and **advanced eHealth services (A3)** will provide the framework for the development of the initiative,
- The **interoperability (A4)** is closely link with this action

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Expected results

- Awareness and support for innovative use of health data
- Initiated one project per participating region
- Compilation of up-to-date use of cloud/big data for eHealth

KPI

- 1 project proposal written per participating region.
- 1 cookbook for use of Big Data and the Cloud in eHealth
- 1 validation "protocol" for cloud applications in eHealth.

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
Advanced ICT systems and services for integrated care (PHC-25-2015)	€104.500	21-04-15	Oulu: TEKES (the Finnish Funding Agency for Technology and Innovation).		
Self-management of health and disease and patient empowerment supported by ICT (PHC-27-2015)	€104.500	21-04-15	Vinnova Strategiska Innovationsprogrammet för folksjukdommar (SWElife)	SEK 2.000	4-3-15
Digital representation of health data to improve disease diagnosis and treatment (PHC-30-2015)	€104.500	21-04-15	Skåne: Vinnova Utmaningsdriven innovation, Steg 1	SEK 500	27-8-15
			Skåne: Öppna datakällor	SEK 100	25-08-15

Action6.   Internationalisation

Leader: Midi-Pyrénées

Contributor: Murcia, Skåne, Oulu

Mentoring regions: Extremadura, Estonia

Objectives

- To raise awareness and provide intelligent information on some high potential markets for eHealth products and services

- To develop a worldwide network of eHealth clusters initiated by the core partners of READi for Health

- To provide an internationalisation cookbook to support SMEs in their pathway to international markets

Rationale

Digital technologies is a worldwide market, using the same infrastructure core (protocols, operating systems, hardware etc.) all over the world. At the same time, it appears that the few profitable companies involved in the eHealth business are targeting niche markets, which tend to quickly get saturated.

It is highly important for companies, regardless of size or maturity, to be able to develop their business in other countries to enable and secure their long term growth. However, even if digital technologies are a worldwide market with a limited need to implement local features, the situation for healthcare solution is different: care delivery organisation, funding of the healthcare activity and regulatory constraints are country specific, making the internationalisation process more complex.

Support tools ensuring long term profitability of eHealth innovation emerging from SMEs on international markets would be an important asset to develop a strong e-health sector in Europe.

Approach

The action will be implemented through a 4-steps strategy:

- initiate contacts with identified eHealth clusters around the world using different incentives such as mutualising the "eHealth market study" documents or submitting common proposals for European Projects

- gather specific feedback (return on experience, useful support resources and needs) from SMEs and eHealth companies about internationalisation by using the multifunctional working groups and deep interviews

- produce an "internationalisation cookbook" integrating support resources, methodological approach, contact list and specific market data bridging the needs of companies with the feedbacks gathered in step 2
- leverage existing networks such as foreign trade organisations or existing eHealth networks as a dissemination channel

Stakeholders involved

- Clusters to develop the worldwide eHealth cluster network
- eHealth SMEs
- Project managers in support organisation, specialising on internationalisation of companies
- Foreign trade organisations

Key success factors

- SMEs willingness to collaborate in the action
- Clusters openness to share important information about local markets (give information at the same quality level than the one you got)
- Capacity of READi For Health partners to properly understand SMEs needs and expected scope usage of the resources produced during the action

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Develop the worldwide eHealth clusters network	04/2015	07/2016
	Build on existing networks and identify new potential partners for the network (Midi-Pyréneés, Skåne, Oulu, Murcia, ECHAlliance)		
2	Gather SMEs needs and return on experience	04/2015	06/2015
	Needs and return on experience will be gathered through the multifunctional working groups and individual interviews (Midi-Pyréneés, Skåne, Oulu, Murcia)		
3	Produce internationalisation cookbook	07/2015	06/2016
	Includes methodological guidelines and support resource such as self-assessment toolkit, market studies (some can be outsourced), list of funding opportunities tailored upon the identified needs in task #2 (Midi-Pyréneés, Skåne, Oulu, Murcia)		

4	Dissemination of the internationalisation cookbook	05/2016	12/2017
	Deliverables will be shared to all partnering clusters involved in the worldwide eHealth cluster (Midi-Pyréneés, Skåne, Oulu, Murcia)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**
- **Capacity building (A8)** facilitates the adoption of new innovations and to better take advantage of the services.

Expected results

- Provide companies with highly operational resources to facilitate their internationalisation strategy on a methodological point of view and through the access to an international network of partners
- Obtain market information through the network of partners and available data for each of the identified target market

KPI

- 10 clusters contacted outside of the partner regions to develop the worldwide eHealth clusters network
- Gather return on experience and needs from 5 companies per region
- 3 internationalisation events organised (multifunctional working group) within each region
- 1 "internationalisation cookbook" produced per region (potentially same cookbook but translated to local languages)

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
COS-Cluster (http://ec.europa.eu/easme/en/cos-cluster-2014-3-03-cluster-go-international)	€187,500	01-04-15	Midi-Pyréneés: Public, regional council	Up to €30,00	2015

			Oulu: Sustainable growth and jobs 2014-2020 – Finland's structural funds programme, regional section/call, TEKES (the Finnish Funding Agency, for Technology and Innovation)		
			Skåne: Almi Internationaliseringschecker (for companies)	SEK 250	ongoing
			Murcia: 2014-2020 European Structural and Investment Funds (ESIF): 3d - Supporting the capacity of SMEs to grow in regional, national and international markets, and to engage in innovation processes	€20.323	

Action7.   Procurement as an tool for innovation

Leader: Murcia

Contributor: Oulu, Midi-Pyrénées

Observer: Skåne

Mentored regions participants: Extremadura and Estonia

Objectives

- To clearly identify the key stakeholder dealing with innovation procurement in Health.

- To design and implement awareness-raising campaigns addressed to procurers and SMEs to highlight the added value of innovative procurement in the introduction of new health product and services

- To provide information to policy makers and public procurers who want to start testing Pre-Commercial Procurement (PCP) or Public Procurement of Innovation (PPI), and need a reference framework with practical guidance on how to establish and conduct a call for PCP and/or PPI

- To cooperate on identifying opportunities and preparing for future PCPs / PPIs

- To lobby for a PCP/PPI to be implemented

- To prepare and undertake a joint PCP or PPI procurement

Rationale

PCP/PPI has been identified in both the "D2.2 Current regional research, business and policy environment" and "D3.3 eHealth priorities and proposed actions" reports as a key component among the consortium regions in order to facilitate the uptake of innovative solutions matching the real needs by encouraging cooperation between procurers from across READi for Health regions, either by supporting networks of procurers (to prepare joint PPIs) or by co-funding the initial call for tender.

These needs are captured in the conclusions from the first report; where healthcare stakeholders have identified a gap between needs identification and the actual procurement process, and business stakeholders complained about time to market and that the asymmetry between buyers and sellers is really at the innovators disadvantage (business models).

Horizon 2020 reinforces the co-financing for public procurers around Europe that collaboratively address common challenges by undertaking PCP's or PPI's jointly, with financial incentives such as the PCP co-fund actions available for consortia of public procurers working together on joint PCP's within the domain of research and innovation defined under each different programme as well as co-funding groups of procurers to undertake joint PPI procurements in order to have a single joint PPI call for tender and a single joint evaluation of offers. [E.g. PHC-29: eHealth services]

The new 2014-2020 European Structural and Investment Funds (ESIF) emphasize ever more innovation, and encourage public procurers to use ESIF funds to undertake more PCP and PPI projects.

PCP is designed to steer the development of solutions towards concrete public sector needs and involves different suppliers competing through different phases of development. The risks and benefits are shared between the procurers and the suppliers under market conditions. For PCP's, risk-benefit sharing under market conditions is when procurers share the benefits and risks related to the Intellectual Property Rights (IPR) resulting from the research and development (R&D) with suppliers at market price.

There is an ambition in the regions to do this, but there is a lack of knowledge on the process and there is the need to support the regions on the definition process and the management.

Approach

On one hand, the READi for Health consortium will create a **better understanding for how to make use of PCP/PPI for eHealth** as one of the main barriers. So far there is no or little experience how to address this, although all READi for Health regions are conscious that it is crucial for the development of eHealth. The procurers of healthcare solutions, as well as the decision makers, will be targeted to inform with findings and best practices of successful PCP/PPI implementation and how to use them successfully.

The second step will be to identify a **concrete healthcare sector need**. The best way to address it is unclear, but public purchasers can organise an initial open dialogue with the supply side in order to develop a better understanding of the available options. Such a dialogue would clarify market gaps with respect to actual needs. In addition **potential funding sources** will be analysed in order to select the most suitable one.

Finally, by developing a **forward-looking innovation procurement** using PCP and PPI in a complementary way, public procurers will be able to drive innovation from the demand side. This enables the public healthcare sector to modernise public services faster while creating opportunities for companies in Europe to gain leadership in new markets.

Stakeholders involved

- Procurement organisations (healthcare organisations)
  - Policymakers and Public Health Management teams (local, regional and national level)
  - Healthcare professionals
- Companies from the eHealth sector (ICT, Health, Pharma, Life Sciences, etc.)
- Consulting companies specialised in procurement

Key success factors

- Identify PPI actions and new procurement for eHealth happening with PPI/PCP in region.

- Identify a common subject of interest to launch a joint PCP action.

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Information gathering	03/2015	04/2015
	Relevant information to use for promotion. The aim is to provide guidelines to decision makers be able to use to create PCP/PPI processes (Murcia, Midi-Pyréneés, Oulu)		
2	Awareness raising	05/2015	10/2015
	Information campaign for procurers and companies on how they benefit from it (Murcia, Midi-Pyréneés, Oulu, ECHAlliance)		
3	Identify an EU joint proposal to submit	04/2015	12/2016
	Find relevant call and write project application with the partners that are interested (Murcia, Midi-Pyréneés, Oulu)		
4	Lobby for regional authorities	05/2015	08/2016
	Meeting with relevant key stakeholders. Lobby for getting a regional PCP/PPI call for eHealth (Murcia, Midi-Pyréneés, Oulu)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**
- The **advanced eHealth services (A3)** will provide the framework for the development of the initiative,

Expected results

- Best practises for implementation of PCP/PPI identified, guidance how to implement regional processes for PCP/PPI written and communicated.

KPI

- 10 stakeholders dealing with procurement process per region approached in meetings
- 1 launch of a call/region before 08/16

Funding sources

<table>
<tr><th colspan="3">EU FUNDING</th><th colspan="3">NATIONAL FUNDING/REGIONAL FUNDING</th></tr>
<tr><th>Call</th><th>Budget (000)</th><th>Date (D/M/Y)</th><th>Call</th><th>Budget (000)</th><th>Date</th></tr>
<tr>
<td>Self-management of health and disease and patient empowerment supported by ICT (PHC-27-2015)</td>
<td>€104.500</td>
<td>21-4-15</td>
<td>Murcia: 2014-2020 European Structural and Investment Funds (ESIF): e-Government services and applications (including e-Procurement, ICT measures supporting the reform of public administration, cyber-security, trust and privacy measures, e-Justice and e-Democracy)</td>
<td>€ 5.165</td>
<td></td>
</tr>
<tr>
<td>Public procurement of innovative eHealth services (PHC-29-2015)</td>
<td>€104,500 (€10M total, €1-5M propos)</td>
<td>21-4-15</td>
<td>Oulu: Sustainable growth and jobs 2014-2020 – Finland's structural funds programme, regional section/call, TEKES (the Finnish Agency for Technology and Innovation).</td>
<td></td>
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Action8. Capacity building

Leader: Murcia (Daleph)

Contributors: Midi-Pyrénées, Murcia

Observers: Skåne. Oulu

Objectives

- To improve the patient/carer capabilities to effectively self-manage his/her chronic disease.

- To clearly identify the required knowledge to ease the introduction and implementation of innovative solutions within the healthcare system

- To create substantial commitment for current healthcare systems and health professional practices to become learning care systems utilizing information and communications technology (ICT)

- To provide eHealth innovation enabling knowledge to innovators stakeholders (healthcare workforce, SMEs, , entrepreneurs, researchers) in the specific eHealth requirements

Rationale

Patient empowerment does have two different but complementary dimensions, on one hand the improvement of a person's capabilities to effectively self-manage his/her chronic disease; and, secondly, enhance patient groups' capacities to participate efficiently in health policies. In both cases, citizens' organisations – which include self-help groups, associations of patients with a chronic disease, networks and umbrella organisations - play an essential role. Patients' organisations educate and support individual patients and their families, while networks and umbrella organisations contribute to build their capacities to participate in the policy-making.

Acceptance by physicians of eHealth solution/services will be guaranteed not only if health professional accept the benefits they bring to the patient care but also have confidence using them. Therefore, eHealth should be included in the continuous professional development programmes.

Also, from the business point of view, most of the ehealth innovators consider eHealth as "diversification" and thus lack specific knowledge related to this area and, within this framework, the complexity of the eHealth domain and the fact they lack knowledge in specific areas are important barriers in the development and implementation of new solutions.

It would be important to count with substantial commitment for current healthcare systems and health professional practices to become learning care systems utilizing information and communications technology (ICT)

Approach

First of all, READi for health partners will consult leaders/experts with as much interdisciplinary knowledge as possible what are the required skills to mobilize to produce efficient and useful eHealth tools. The previously identified potential experts are regulatory science specialists (CES+), project managers (CES+/FFIS), clinicians (FFIS-SMS) and entrepreneurs in e-health, including ICT experts (TBM, CES+).

Once the knowledge gaps are identified, capacity building will be implemented through a three-fold strategy:

- Define training programmes combining evidence-based illness education with skills training in communication and shared decision-making, a process whereby patients are equal partners in determining their treatment plans.

- Through a wide range of capacity strengthening activities, READi for Health partners seeks to set the basis to develop a cadre of public health professionals who are well-versed in ICT technologies, taking a blended learning approach to capacity strengthening: formal training, combined with hands-on opportunities, provide the richest and most sustainable path to health communication capacity.

- Design training activities for innovators to cover the required skills to successfully develop eHealth innovation. We will contact academic organizations in charge of delivering education in those fields to properly assess:

  - the level of knowledge required to implement eHealth innovation,

  - the level of complexity to design courses to disseminate that knowledge,

  - Their willingness to support a project that will implement operational tools to disseminate that knowledge.

Stakeholders involved

- Experts and opinion leaders (clinical, business, regulatory, elite project managers)
- Academics (pedagogic leaders and thematic experts)
- Patients and patients associations
- Healthcare professional
- Innovators

Key success factors

- Precise identification of the intended users of the capacity building material
- Experts and opinion leaders targeting: need to interview people with a strong strategic vision of eHealth (possibly people with interdisciplinary curricula)
- Willingness and openness by interviewed experts and academics to collaborate in the design of innovative education tools tailored for lifelong learning.
- Quality of the scientific methodology to translate deep interviews into "list of skills".

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Identification of experts and opinion leaders	03/2015	04/2015
	Target generalist experts, successful entrepreneurs or project managers in the eHealth field, clinicians fostering innovation and renowned consultants involved in eHealth (Each region)		
2	Identification of required knowledge areas for proper eHealth innovation implementation	04/2015	11/2015
	Organize meetings with the experts include de definition of clear answers that are needed to be answered. Scientific methodology applied in READi WP3 to come up with a list of key skills will be use to determinate if the knowledge areas are "local" to each region or "global" (FFIS SMS)		
3	Mobilize academics to develop a sustainable learning programme suitable for their regions	12/2015	05/2016
	Identify academics responsible for disseminating knowledge in the identified fields and contact and explain them the objectives of the action. Assess the complexity and the feasibility of the objectives. (Each region))		
4	Submit European Projects to implement an innovative education tool to strengthen e-health innovation capacity within the European Union	06/2016	12/2017
	Capitalize on the process initiated in task 4 to submit European projects to strengthen the ties between the regions initiated during READi for Health. Find opportunities in different European projects and develop proposals (Murcia)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Closely linked with the **regional eHealth Strategy (A1)**

- Actions dealing with the **advanced eHealth services (A3)** implementation and the **internationalisation (A6)**

- Actions dealing with innovation in procedures **procurement as a tool for innovation (A7)**

Expected results

- Empower patients to take a more active role with their physician in making decisions about their health care, by effectively communicating their treatment preferences and addressing barriers to shared decision-making.

- Support professional to overcome the challenges of implementation of eHealth solutions and the opportunities to move hospitals from traditional and reactive medicine to a more preventative and predictive approach.
- To offer a MOOC in the field of e-health building bridges between medicine and technology and making information management in health and social care both safe and effective. The idea of the course is to offer innovators from all over the world an introduction to the field of e-health and its opportunities and challenges from different perspectives.

KPI

- 4 expert/opinion leaders mobilized to identify the required skillset per region
- 1 training course for patient empowerment
- 1 training course for professionals to better understand the eHealth benefits
- Solicitude 4 academic organizations per region to develop the knowledge-building programme to provide eHealth innovators with increased project success rate

Funding sources

EU FUNDING			NATIONAL FUNDING/REGIONAL FUNDING		
Call	Budget (000)	Date (D/M/Y)	Call	Budget (000)	Date
			Murcia: 2014-2020 European Structural and Investment Funds (ESIF): 2c - Strengthening ICT applications for e-government, e-learning, e-inclusion, e-culture and e-health	€3.874	
			Murcia: 2014-2020 European Structural and Investment Funds (ESIF): 10 Investing in education, training and vocational training for skills and lifelong learning by developing education and training infrastructure	€12.915	

Action9.   Communication Plan Development and Implementation

Leader: Oulu (ECHAlliance)

Contributors: Murcia, Midi-Pyrénées, Skåne, Oulu

Objectives

- To map key stakeholders with high impact on eHealth innovation and uptake

- To develop detailed communication plan for the READi for Health project results in the regions. Map communication routes and tailor specific messages for each key stakeholder within eHealth ecosystem.

- To produce "eHealth for healthcare professionals" presentation for hospitals/healthcare sector managers and professionals.

Rationale

This communication action is an addition to the communication work package, which is defined in the project plan for the READi for Health project. This action aims at clearly defining key stakeholders with high impact on eHealth strategy, innovation and uptake, and who have the authority to influence the decision makers, as well as to tailor specific messages (based on READi for Health results) to raise awareness for eHealth and support for the suggested actions in this action plan.

The rationale for this action is two-fold:

- Making clear to READi for Health stakeholders the results of each region as well the consolidated results at the consortium level, in order to facilitate continued engagement and also to provide a feedback loop following stakeholders' initial engagement providing insights regarding identified barriers, weaknesses, strengths and opportunities to eHealth innovation uptake, business development and academic research.

- Providing an easy to understand presentation for healthcare stakeholders regarding what eHealth is (including clarification regarding use of terms) and the benefits it can bring to healthcare services and patients/citizens.

Approach

A communication plan template will be developed at a consortium level, which will then be completed at regional level. The plans should specify what, to whom, when and how specific contents should be delivered. Key messages should be tailored to target/ stakeholder groups on regional, national and European level as needed. The communication plan will be coordinated with other awareness raising activities in the other actions of the JAP.

The communications working group will develop an "eHealth for healthcare professionals" presentation, drawing on existing sources of information. This will be translated locally. (This activity will be coordinated with the action regarding capacity building.)

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Stakeholders involved

- Politicians and Policy makers
- Healthcare leaders
- Companies
- Academia
- Investors

Key success factors

- Cross-disciplinary communication capabilities to provide information to targeted stakeholders
- Completed and agreed regional communication packages including presentation material tailored for specifically identified stakeholders and eHealth events aimed at disseminating gathered knowledge and raising awareness on eHealth opportunities for innovators.
- Finalised and translated "eHealth for healthcare professionals" presentation

Planning execution

Task #	Task name (& task description)	Start date (m/y)	End date (m/y)
1	Map key stakeholders with major impact on regional eHealth innovation and uptake	03/2015	07/2015
	Mapping should be done in collaboration with eHealth Strategy action team (A1) (ECHAlliance, Skåne, Oulu, Murcia, Midi-Pyréneés)		
2	Develop template for and regional communication plans x 4	08/2015	10/2015
	The template should include information on when and to whom to communicate results from the READi for Health project. (ECHAlliance, Skåne, Oulu, Murcia, Midi-Pyréneés)		
3	Develop communication packages tailored to target groups	08/2015	10/2015
	Tailored messages based on the target groups of the outcomes. (ECHAlliance, Skåne, Oulu, Murcia, Midi-Pyréneés)		
4	Perform awareness raising/ communication sessions	08/2015	08/2016
	Collect feedback and share knowledge with eHealth Strategy action team (ECHAlliance, Skåne, Oulu, Murcia, Midi-Pyréneés)		

5	Develop "eHealth for healthcare professionals" presentation	08/2015	12/2015
	Develop a presentation to be used for healthcare professionals on what eHealth is. (ECHAlliance, Skåne, Oulu, Murcia, Midi-Pyréneés)		

INTERDEPENDENCIES WITH OTHER ACTIONS

- Needs to be closely related to **eHealth Strategy (A1)**

Expected results

- Completed and agreed regional communication plans and communication packages
- Awareness around key challenges for eHealth as a tool to improve healthcare services.
- Awareness and regional dialogues around proposed regional eHealth action plans
- Finalised and translated 'eHealth for healthcare professionals ' presentation

KPI

- 1 dissemination event per region
- 1 awareness raising session per identified key stakeholder group

Funding sources

This action will be implemented with READi for Health resources

6 THE PARTNERSHIP

TICBioMed is Murcia's (Spain) research driven eHealth cluster. As a young triple helix organization created in 2009 that brings together local authorities, research institutions and business organizations, together with financial actors and other entities. Public Administration representatives include the Directorate-General for Universities and Science Policy, responsible for the regional Science, Research and Innovation Plan; and the Regional Agency for Economic Development, as well as the regional Ministry of Healthcare. The Servicio Murciano de Salud (SMS), directly depending on the Ministry, manages a budget 2.085 M€ (figures from 2011), employs about 19,000 professionals and managers and includes a network of 10 hospitals and 508 primary care facilities.

The Foundation for Healthcare Training and Research of the Murcia Region (FFIS) is a public non-profit organization, with competences in the promotion, development, management and dissemination of biomedical research programs and management structures of regional research, so Institutions and Health Centres.

Mobile Heights in Skåne (Sweden), is a triple-helix mobile communication cluster and covers the entire value chain in hardware, software and mobile services. The cluster is comprised of world-class mobile communications companies, renowned academic institutions accounting for the collected regional knowledge infrastructure in ICT, and the regional public administration. The initiators and founding members are Sony Ericsson, ST Ericsson, Telia Sonera, Region Skåne, Ericsson, Lund University, Malmö University and Blekinge Institute of Technology. All members have established operations in the region and since 2010 the cluster has contributed to some 35-40 spin-off and start-up companies.

Region Skåne is the County Council of Skåne and has the collective responsibility of both healthcare and regional development and growth. In Region Skåne there are nine hospitals, among those the Skåne University Hospital (SUS) in Malmö and Lund. SUS is the third largest university hospital in Sweden. Region Skåne is at the forefront in using and further developing e-government. The READi for Health project is coordinated by R&D Centre Skåne, an organization specializing in clinical trials and with expertise in the development of drugs and medical devices. R&D Centre Skåne is located at SUS in Lund.

Council of Oulu Region is the leading regional development organization, which creates the regional Smart Specialization Strategy and the Regional Development Plan. These programs define regional objectives for next four years and they also include implementation plan. The Council manages EU's structural funds in the region. Until 2016 the Council is localizing the national healthcare reform with region's municipalities. The Council of Oulu Region has 57 employees. **Oulu Region** has a lively ecosystem in eHealth. After severe structural changes in ICT, regional focus turned to utilize ICT expertize in health and wellness technologies. The eHealth ecosystem consists of start-ups, medium-size companies and public sector actors. Oulu has an important role in the national health and eHealth development. The ecosystem is coordinated by the OuluHealth –platform.

The Centre for Health and Technology (CHT) in Oulu (Finland) is a legal triple-helix entity and a regional research and business-driven cluster in Oulu. CHT represents six stakeholders and some 20-30 companies. Thus, the CHT innovation centre brings together providers and users of healthcare technology and cutting-edge research, and enables the creation of systemic innovations.

Centre e-santé eHealth cluster in Toulouse (France), was created in March 2010. Since then, it has been involved in some 20 eHealth RTDI collaborative projects, for regional, national or European calls, bringing its expertise to health institutions, industry actors and patients. It is nationally recognized as an expert centre for care organizations and their changes related to the use of ICT, and it has been designated as the regional reference organization in eHealth. **Midi-Pyrénées** (France) has a lot of actors somehow involved or interested in the eHealth sector. Midi-Pyrénées is the place where eHealth started in France in the late 1960s with the creation of the first official emergency response squad (SAMU for Service d'Assistance Médicale d'Urgence) that directly took patients telephone calls in the late 1970s. It is also a pioneering region for telemedicine as it handles all the remote consultations for the French naval fleet worldwide, as well as the support for telemedicine activities for the European Space Agencies through the MEDES, a joint venture of the Toulouse University Hospital and the CNES (French Space Agency).

Daleph has been helping the public sector develop and implement appropriate policies and instruments to support SMEs for over 25 years. The team's knowledge of the challenges that SMEs face to innovate successfully and remain competitive has been transferred to the specificities of the healthcare sector, on the one hand, as well as those related to European cooperation on a policy level, will continue to be put to the service of the READi for Health consortium.

The European Connected Health Alliance is a "not-for-profit" organisation with offices in Finland and Northern Ireland. Its members represent health-care providers, research entities, patient groups, educators, public organisations, industry and international alliances which are operating in equivalent thematic areas. The strategic focus is on the need to transform healthcare delivery. ECHAlliance also works to develop the "Connected and mHealth Economy", thus enabling innovation and sustainable investment in the expansion of healthcare.