READi for Health

REGIONAL DIGITAL AGENDAS FOR HEALTHCARE

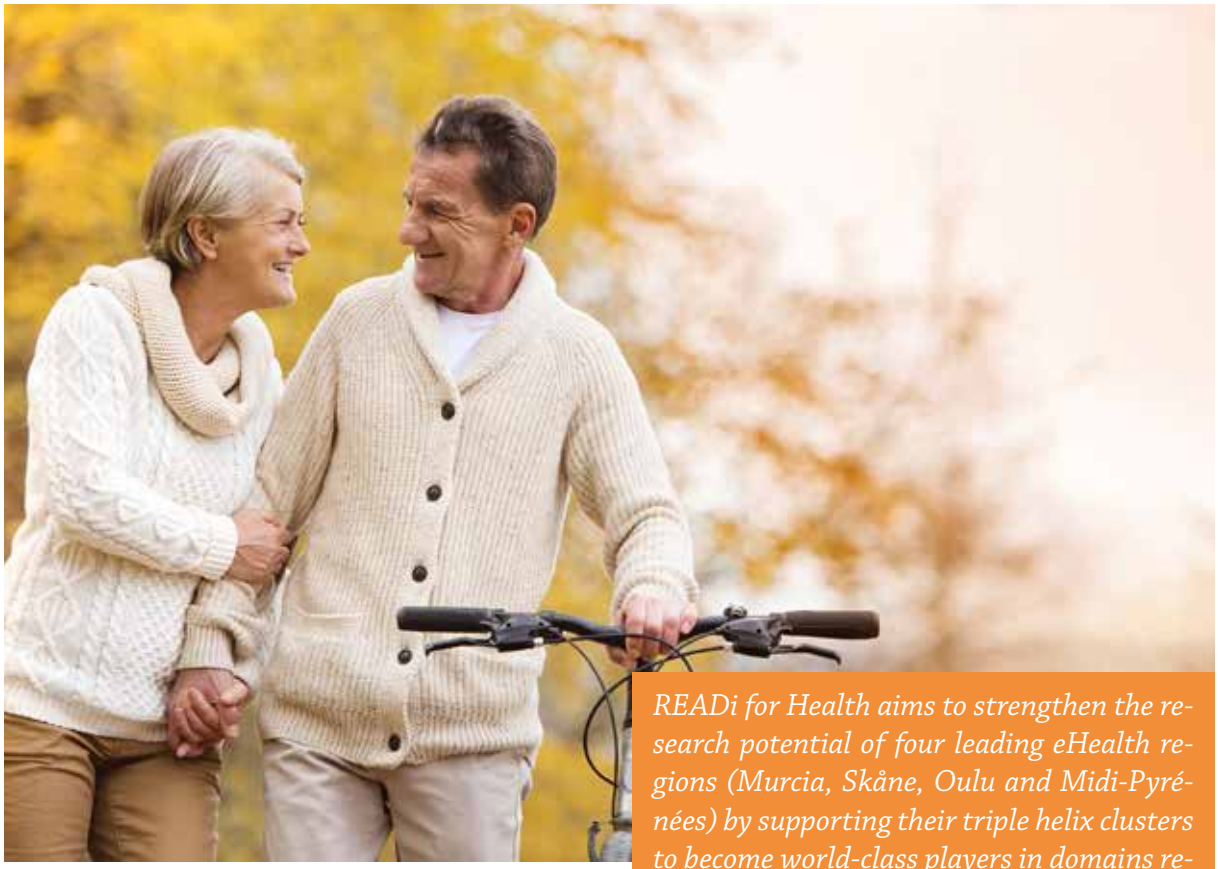
D4.4 READi for Health Joint Action Plan (JAP)

The READi for Health Project is supported by the European Commission with in the scope of the 7th Framework programe "Regions of Knowledge and Research Potential"


READi
for Health

CONTENTS

1/INTRODUCTION



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. 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.*

READi for Health

The development of an eHealth market today is not lagging because the technology is unavailable, but rather that the take-up of innovation is substantially slower than in other sectors that are not dependant on the Public Sector. However, with an aging population and finite resources, it is becoming ever more critical to exploit the potential of innovative technology to raise the efficiency and quality of healthcare delivery.

"ICT solutions for health and wellbeing opens opportunities not only to reduce costs, but to lower the burden on healthcare professionals and to empower citizens to better manage their health and quality of life..."

These aims are to be achieved through specific measures outlined in this Joint Action Plan which will be implemented until the end of READi for Health.

Our unique partnership

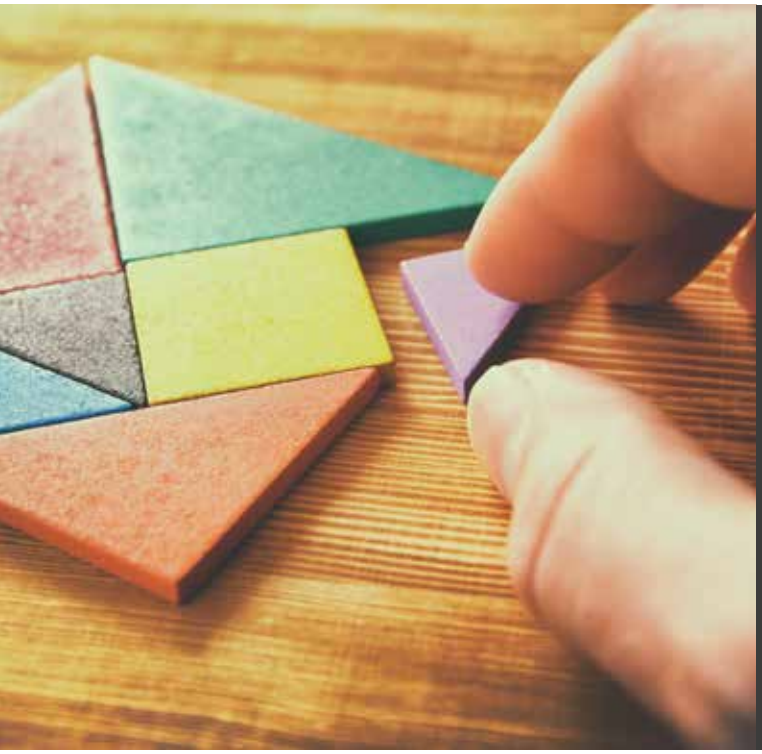
The four partner regions of the READi for Health project constitute an excellent foundation for cross-regional collaboration to promote eHealth. Together the consortium has access many of the important capabilities and frameworks required for internationally competitive eHealth development. With joint 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.

"READi for Health aims to strengthen the research potential of four leading eHealth regions by supporting their triple helix clusters to become world-class players in domains related to the EU Digital Agenda for the Healthcare market."

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).

It is also worth stressing that the contents of this Joint Action Plan (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) are being mentored. These clusters have been invited to partake and contribute, exclusively as non-READi for Health partner regions, in the actions outlined later on.



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.*

2/THE NEED

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. Public health expenditure in the EU's 27 member states was on average 5.9% of GDP in 1990, rising to 7.2% of GDP in 2010. Predictions as to future growth vary but there is widespread consensus that deep-rooted structural reforms are needed to ensure the **sustainability of the health systems** while securing access to services for all citizens.

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 reducing errors and the length of hospitalisation. It is a pre-requisite for socio-economic inclusion and equality, quality of life. But despite the clear benefits of eHealth, there are major obstacles that need to be overcome for it to yield the results expected:

- *lack of awareness and confidence in eHealth solutions among patients, citizens and healthcare professionals;*
- *lack of interoperability between eHealth solutions;*

...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 and engaged a wide variety of stakeholders in our efforts to move beyond the obvious and explore the key challenges associated with the widespread implementation of an eHealth system[2].

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

1. eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century.
2. READI for Health internal reports: Current Regional Research, Business and Policy Environment and eHealth Priorities and Proposed Actions.

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

From this work we were able to discover that healthcare leaders, politicians, and policy makers shared a common view on the 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);*

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.

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.

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.

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.

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.

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.

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.

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Knowledge and dissemination of eHealth innovations are critical if we are to address the challenges posed by an ageing population and increasing prevalence of chronic disease. Despite multiple initiatives for the implementation of Information and Communications Technology (ICT) in the health sector undertaken at national and international level, there are still gaps to overcome and significant barriers with its implementation and generalization.

Players in the healthcare sector struggled to successfully manage the myriad stakeholders, regulations, and privacy concerns required to build a fully integrated healthcare IT system. This is partly because IT adoption focused more on patient needs than processes. Mobile health for example, is a technical reality; but work is needed to shape policies to implement it at scale and coordinate mobile health systems with the existing fixed infrastructure and care pathways. There could be more emphasis on "citizen tools" that support self-management of long term conditions and put people in charge of their own data.

"The research and business environments within the READi for Health consortium comprise many of the important capabilities and frameworks required for internationally competitive eHealth development."

READi for Health has undertaken an analysis to know what are the main needs, barriers and challenges for the implementation of ICT for better healthcare and more specifically:

[1] Understand the opinions, expectations and attitudes of the main stakeholders of four regional health systems regarding the implementation of ICT to improve the care and quality of life of patients.

[2] Identify needs, barriers and challenges that may hinder the implementation of ICT in the health system.

[3] Prioritize needs identified with the participation of international experts to develop an Action Plan for the incorporation of innovative technologies in health.

32 NEEDS IDENTIFIED and **PRIORITIZED** in order to adopt the more realistic initiatives with greater chances of success and to guide decision making in the process of implementation of eHealth.

5 MAJOR THEMATIC AREAS

HEALTHCARE SYSTEM / ORGANIZATION	HEALTHCARE PROFESSIONALS	PATIENT / FAMILY	FACILITATING/ INHIBITING CONDITIONS	ICT INNOVATION / ADOPTION
Strategic planning	IT experience and knowledge	Perceived needs	Accessibility	EHealth and business process alignment
Leadership	Perceived usefulness and needs	Patient empowerment	Resources/ financial constrains	End user involvement
Interaction net	GAPs with management	Confidence	IT support	Security, robustness and confidence
Healthcare system redesign	Bottom-up	Age	Interoperability	Effort expectancy and perceived complexity of use
Administrative process	Motivation	Level of culture /technology	Legal concern	ICT processing time
Organizational and innovation resources			Joint venture / sharing risk	Result demonstrability
			Standardization	Cloud computing
			Knowledge dissemination	Innovation as a threat

The **PRIORITISED ACTIONS** to address identified needs are:

- Encourage the implementation of strategic planning with a progressive redesign with those responsible for the health systems
- Identify as a technical priority the interoperability of information systems
- Target patient intervention with methodologies that facilitates self empowerment to improve their health
- Promote the participation and integration of all stakeholders and end users involved in eHealth, through an effective eHealth ecosystem
- Include planned actions for training and dissemination of knowledge
- Ensure that technological development ensures safety, robustness and reliability of systems
- Address the needs of the stakeholders in the strategic actions
- Promote structures and resources that facilitate the innovative and entrepreneurial initiatives from the bottom up
- Design projects in response to an alignment of interests between companies and health systems strategies
- Promote the creation/development of specific innovation units in eHealth (new organizational and management models)

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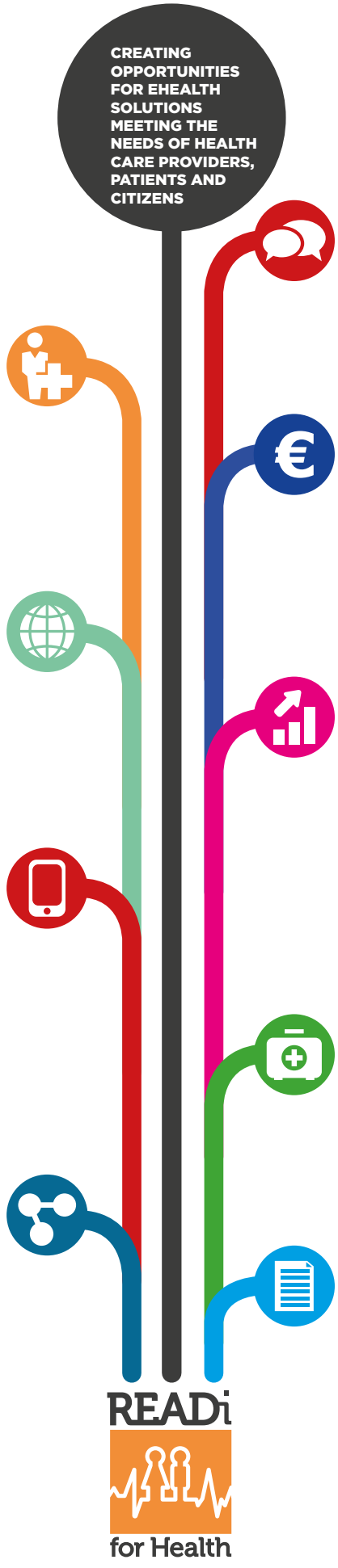
3. OUR COMMON STRATEGY

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.



ACTION 9. COMMUNICATION

This communication action is aimed 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.

ACTION 8. CAPACITY BUILDING

The READi for Health consortium will support patient empowerment on several different but complementary levels: by improving the ability of individuals to effectively self-manage chronic disease; by enhancing the capacity of intermediary organisations, such as patient groups, to participate efficiently in health policy development; by facilitating the exchange of information and skills between the different disciplines that are required to make eHealth a success.

ACTION 7. PROCUREMENT AS A TOOL FOR INNOVATION

The consortium will contribute to improved use of PCP/PPI for eHealth solutions. Procurers of healthcare solutions and decision makers, will be targeted with information from findings and best practices of successful PCP/PPI implementation and how they can be successfully used as a first step to introduce eHealth innovation.directive and coming general data protection regulation.

ACTION 6. INTERNATIONALISATION

Digital technologies have a worldwide market, using the same infrastructure core (protocols, operating systems, hardware etc.) all over the world. The READi for Health partners will develop support tools to ensure long-term profitability of eHealth SME innovations directed at international markets.

ACTION 5. 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. It is 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.

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.

ACTION 4. 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.

ACTION 3. 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, identification 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.

ACTION 2. 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, as well as end-users and healthcare organisations. It will also facilitate the process from identification of healthcare needs, 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.

ACTION 1. 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.

During the implementation of the JAP we will wotk 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.*

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.

"There is a need for clear regional visions regarding eHealth and long-term eHealth strategies communicated between sectors, as well as a need for organizations open to new ways of working."

These areas are:

1. Unmet 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. There are two steps to take. The first one 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 SME's to participate.

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.

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.

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

To lower the barriers 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

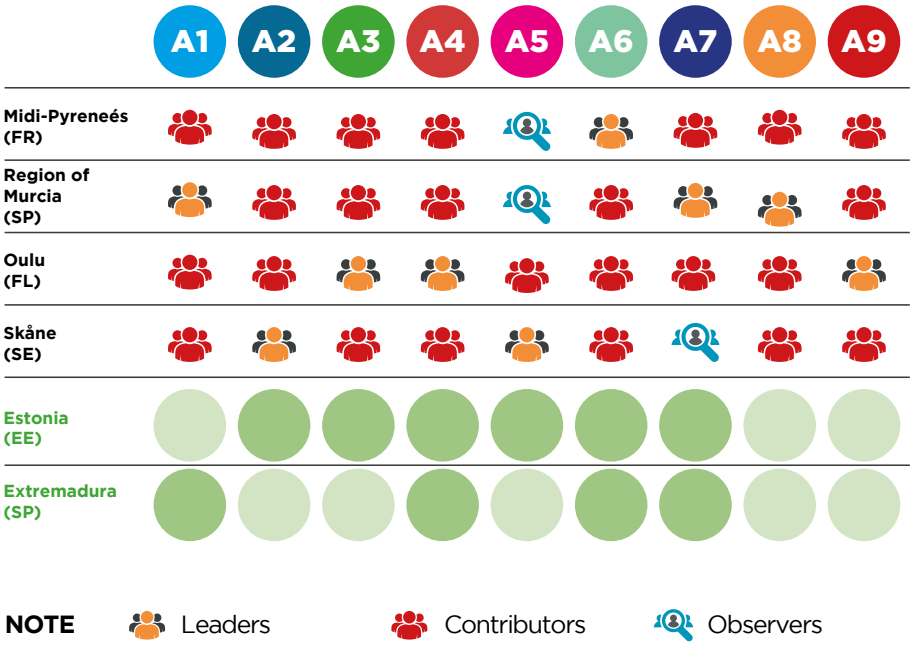
To facilitate patient empowerment via the implementation of eHealth as a mean to provide health services with high quality and safety.

To place the patient at 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.

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.

READI FOR HEALTH REGIONS AND MENTORING REGIONS INVOLVEMENT



4. DESCRIPTION OF ACTIONS

ACTION 1. 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.

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

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

ACTION 2. EHEALTH INNOVATION HUB

LEADER
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CONTRIBUTOR
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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 "Single point of entry"; a broker helping different stakeholders navigating in the infrastructure network.

RATIONALE

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

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

EXPECTED RESULTS

- A single point of entry for eHealth innovators in each region
- Network with collaborations across silos (and regions)

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ACTION 3. ADVANCED EHEALTH SERVICES

LEADER
Oulu

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Skåne, Murcia, Midi-Pyréneés

MENTORING REGIONS
Estonia

OBJECTIVES

- To increase companies' success rate in the eHealth business by creating business model for entrepreneurs and projects for innovative eHealth solutions development.
- To provide entrepreneurs with guidance to design their eHealth solutions to match real market needs with a bottom-up approach to facilitate innovation's acceptance.
- 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

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 both for entrepreneurs and the healthcare system that implementation of the eHealth services are effective, fast and as easy as possible. The eHealth service pathways need to be effective and functioning processes available

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.

EXPECTED RESULTS

- Marketing and dissemination of the eHealth service pathways and business models.
- Pathway and service execution model(s) are understood and used 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.

ACTION 4. INTEROPERABILITY

LEADER
Oulu

CONTRIBUTOR
Skåne, Midi-Pyrénées, Murcia

MENTORING REGIONS
Estonia, Extremadura

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

Interoperability is seen by our stakeholders 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 productive healthcare context through optimised information management
- 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.

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

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 platforms.

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ACTION 5. BIG DATA AND THE CLOUD

LEADER
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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

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. For this value to be realised we must clarify a number of questions that include: Who are the customers? Who owns the data and how can it be used and stored? What are the implications of using cloud solutions either to store or to act as "glue" between proprietary applications? What are the legal and regulatory constraints?

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

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

ACTION 6. INTER-NATIONALISATION

LEADER
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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 address a global market, using the same infrastructure core (protocols, operating systems, hardware etc.) all over the world. It is 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, despite the homogeneity of the technological context for business, the organisational, cultural and political frameworks can vary greatly country to country and even region to region. This makes the internationalisation process extremely complex. Helping SMEs to access international markets would be an important way to strengthen the e-health sector in Europe.

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

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

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ACTION 7. PROCUREMENT AS A TOOL FOR INNOVATION

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OBSERVER
Skåne

MENTORING REGIONS
Extremadura,
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

Horizon 2020 and the new 2014-2020 European Structural and Investment Funds (ESIF) emphasize 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.

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.

EXPECTED RESULTS

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

ACTION 8. CAPACITY BUILDING

LEADER
Murcia (Daleph)

CONTRIBUTOR
Midi-Pyrénées, Murcia, Skåne, Oulu

OBJECTIVES

- To improve the patient/carer capabilities to effectively self-manage 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) in specific eHealth requirements.

RATIONALE

Capacity building is a broad subject that ranges from patient empowerment, whether at individual or stakeholder level, to promoting interdisciplinary collaboration and understanding to breakdown silos. This requires a transition from vertical healthcare systems to learning care systems that are able to exploit ICT.

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”.

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.

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ACTION 9. COMMUNICATION PLAN DEVELOPMENT AND IMPLEMENTATION

LEADER
Oulu (ECHAlliance)

CONTRIBUTOR
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 action requires working with those stakeholders who have a high impact on eHealth strategy, innovation and uptake, and who have the authority to influence the decision makers. It will also require us to raise awareness for eHealth and support for the initiatives included in this action plan by clear communication of our key messages.

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

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

5. THE PARTNERSHIP

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.
http://mobileheights.org/

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.

http://skane.se

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.
www.daleph.com

THE EUROPEAN CONNECTED HEALTH ALLIANCE (ECHAlliance) 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.
www.echalliance.com

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).

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.
www.ticbiomed.net

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.
www.ffis.es

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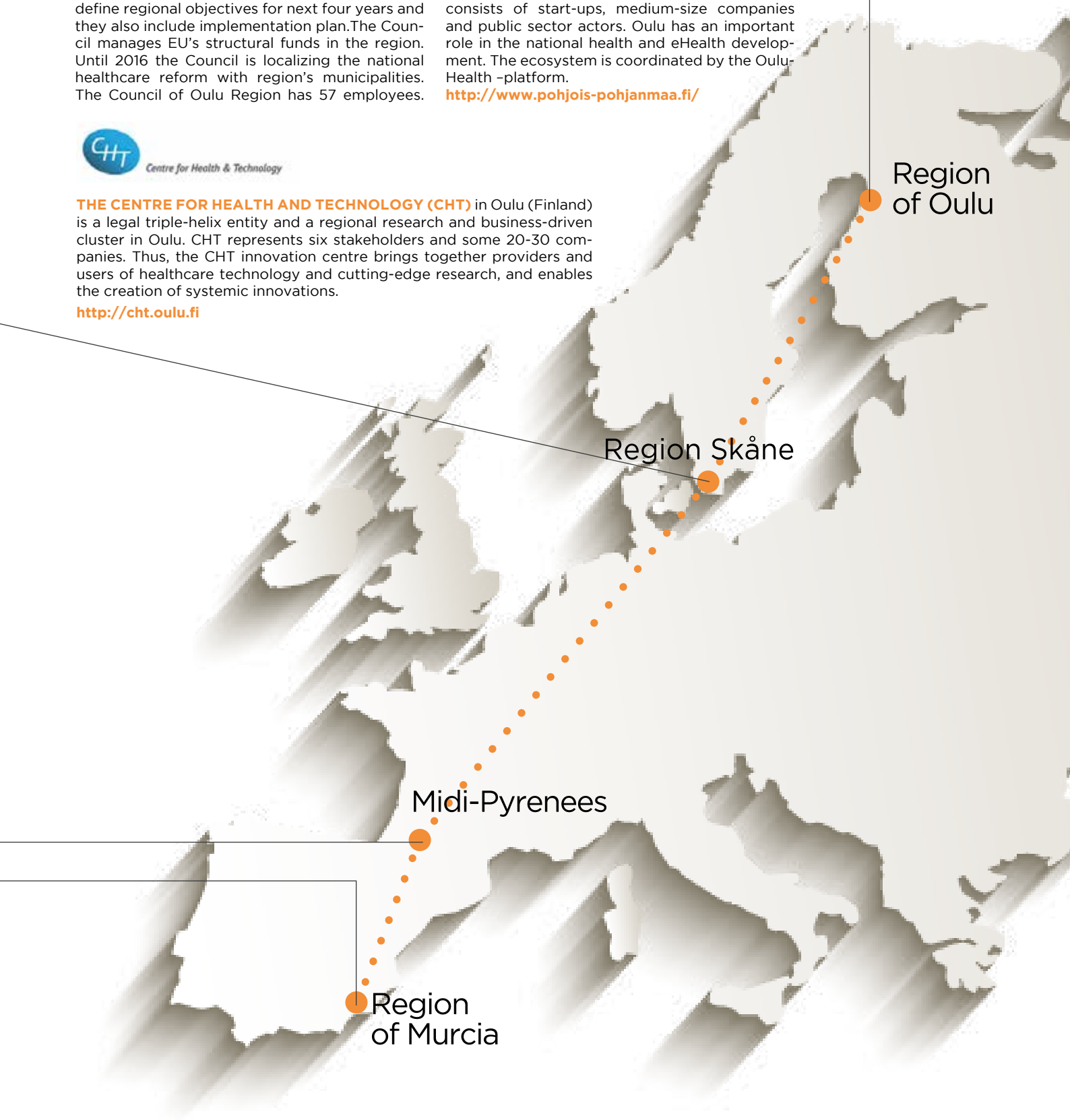
POHJOIS-POHJANMAA
Council of Oulu Region

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 Oulu-Health –platform.
http://www.pohjois-pohjanmaa.fi/

CHT *Centre for Health & Technology*

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.
http://cht.oulu.fi



REGIONAL DIGITAL AGENDAS FORM HEALTHCARE

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

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