D4.3.2: APPLICATION/ SOFTWARE DEVELOPMENT
(Business analyst)
«Feasibility Report of the Healthcare Monitoring system»

Reporting Period: 20/09/2018 - 30/08/2020

WP 4 Joint Monitoring

Systemproject

IMPROVING HEALTHCARE ACCESS TROUGH A PERSONAL HEALTH MONITORING SYSTEM

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August 2020

Summary

The deliverable «Feasibility Report of the Healthcare Monitoring system» is part of the project APPLICATION/ SOFTWARE DEVELOPMENT in the frame of WP 4 Joint Monitoring System of the overall project IMPROVING HEALTHCARE ACCESS TROUGH A PERSONAL HEALTH MONITORING SYSTEM, according to the contract (14/09/2018, Ref. No: 44957) that is being implemented under the INTERREG V-A Greece – Boulgaria 2014-2020 Programme.

This deliverable refers to the period 20/09/2018 - 30/08/2020 and presents the results of the three phases of the feasibility study of the developed system and the relevant research. Following the first phase, in which the expected benefits were analyzed, as well as the market to which the Health Monitoring System implemented by the project is addressed, and the second phase, in which examples of good practices in the digitization of health services were examined and In Europe, the third phase of the study analyzes the proposed market transition strategy and value chain. The elaboration of this study resulted in useful guidelines for the formulation of the requirements and specifications of the Health Monitoring System, but also for its implementation, both in the context of the pilot tests of the project and in its subsequent utilization.

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1 Introduction

The eHealth Monitoring project aims to provide a reference infrastructure for the provision of healthcare services to population groups that lacked access under the traditional systems, through the development and pilot implementation of a digital solution that enables remote health monitoring. The main objective of the provided services is to improve the quality of life of patients with chronic conditions, such as diabetes, hypertension, cardiovascular disease or COPD, and to enhance their well-being and ability of self-management. The ultimate goal is to create substantial benefits for society and the public healthcare system.

The system offers a plethora of benefits, both for end users and their families, but most importantly for society:

- Improved quality of life for seniors and people living in remote areas
- Improved quality of life for individuals with disabilities and mobility problems
- Remote care delivery to seniors with reduced income
- Prevention, early intervention and effective emergency management
- Reduced hospitalization rates
- Enhanced patient adherence
- Prolonged life expectancy and independent living
- Προσφορά αισθήματος ασφάλειας στους ηλικιωμένους και τους οικείους τους
- Peace of mind to patients and their families

Specifically, for the various stakeholders:

For the end user:

- Extended independent living
- Continuous health monitoring
- Timely response to acute episodes and emergencies
- Prevention of hospital admissions

For their families:

- Increased free time
- Easy communication
- Reduced care costs
- Prolonged independence for seniors

For providers:

- Continuous and effective patient monitoring

- Increased patient satisfaction and loyalty
- Provision of added-value services
- Competitive advantage
- Higher prestige
- Elimination of distance

In addition, to better understand the potential of the system, the needs it can meet and the target audience, but also for its placement in the market of e-health services and the evaluation of its expected value, an extensive market analysis was performed, with regard to:

- The categories of respective applications and the services they offer
- The size of the domestic market and important international markets
- The size of the various target audiences, based on population data.

During the first phase of this study, an extensive analysis of the expected benefits of the Health Monitoring System for each of the relevant stakeholders (providers, patients, relatives, etc.), which can be summarised in the following:

- Improved quality of life for seniors and chronic patients, as well as people with special needs and impaired mobility, especially those residing in remote and rural areas.
- Prevention, timely diagnosis and support, as well as improved emergency management (e.g., falls, acute episodes, etc.).
- Reduction of hospitalisation rates and hospitalisation time, resulting in reduction of costs and burden on the healthcare system.
- Encouragement of patient adherence and comprehensive monitoring, improving results and creating a sense of safety for patients and their relatives.

In the second phase of the Feasibility Study, examples were sought mainly from the European area, with a review of relevant literature and the results of related research projects. Particular emphasis was placed on the collection of examples highlighting new business models and new service delivery models, which can be adopted for future commercial exploitation of the project results.

The third phase of the Feasibility Study lists the best practices and existing business models in the field of tele-care and e-health. In addition, different market segments are analyzed according to best practices models of market forecasting. Attention is paid to the long-term potential of the market, based on the experience gained from the pilot tests, which is enhanced by the ability to easily and successfully reproduce new service models to support different scenarios with similar operational needs and profiles.

The study includes an analysis of stakeholders that identifies their needs for future services that will be formed based on the Health Monitoring System of the project. In addition, drawing on the pilot's experience, the long-term market potential for new business and service models was identified.

The final result of the study is this deliverable, which is the Go-To-Market Strategy. The Go-To-Market Strategy is a strategic course that shows how an entity providing services based on the Health Monitoring System developed by the project will reach customers and achieve competitive advantages and unique sales proposals.

2   First Phase of Feasibility Study

2.1   Market Analysis

According to a report by Beg Insight (2014), the Mobile Health & Homecare services market can be segmented, 3 million patients use connected health monitoring devices worldwide. The study estimated that by 2018 the number of patients using connected monitoring devices would increase at a rate of 44.4%, reaching 19.1 million users. Therefore, the dynamic of the field, as well as the need for investments, is evident.

Connected health and care delivery allows for the provision of new services in the field of Homecare. Wireless technologies offer advanced capabilities for care delivery and health monitoring at home. The study by Berg Insight (2014) identifies 4 sectors in the connected care delivery chain: Suppliers of Sensors and medical devices, Suppliers of mHealth services, Suppliers of Care Delivery platforms and Suppliers of health monitoring services. The system under development falls under the Care Delivery platforms category.

Care Delivery platforms are software solutions capable of remote care provision, connecting patients with healthcare professionals and other involved stakeholders (e.g. family members). These platforms are usually based on economies of scale.

Common and prevalent chronic conditions, such as hypertension, diabetes, asthma and COPD induce major costs and reduce life expectancy and quality of life. Such conditions require the use of monitoring equipment at home, for effective treatment. The report by Berg Insight (2014) estimates there are more than 200 million suffering from at least one chronic condition, in Europe and the USA, and who can benefit for such a platform

2.2   Greek Market

2.2.1   Barriers to Entry

Barrier to entry in the Greek market stem from:

- Issues with the nature of the market (e.g. low awareness of eHealth services)
- Issues with the nature of the services (e.g. privacy concerns).

The envisioned innovation lies in the provision of services which are not currently available in the Greek market, with respect to Homecare and Patient Monitoring.

2.2.2 Target Audience

According to EU statistics, 54,8% of people aged 65 or older suffer from at least one chronic condition. Based on the Greek census, the corresponding target group size is 1.16 million people. Therefore, piloting activities will include seniors, without excluding younger participants.

2.3 External Market

2.3.1 Barriers to Entry

Barrier to entry in the international market stem from:

- Issues with the nature of the market (e.g. low awareness of eHealth services, with few exceptions)
- Issues with the nature of the services (e.g. privacy concerns).

2.3.2 Target Audience

A. Europe

With respect to the European market, both epidemiological and eHealth services market penetration data have been examined. It has been concluded that countries such as Italy, Spain and Portugal, as well as Balkan countries, are excellent candidates for the promotion of the developed services.

2.4 Promotion Plan

The promotion plan for the services is based on the following:

- Market and competition analysis

- Assessment of:

  o Strengths and weaknesses.

  o Opportunities and threats.

- Definition of key factors regarding the success of the promotion strategy

Attracting audiences

The developed high-tech services are targeted to individuals who may be not tech savvy. Therefore, communication will play an important role in future market penetration of the services. An aggressive promotion strategy is required and should include the following:

- Strategic partnerships

- Pilot trials (Hands-on experience)

- UX/UI design targeted to senior users

- Social media and online presence

- Demonstrations

Steps required to expand internationally

- Translation of UI
- Translation of manuals, portal
- Establishment of a tech support network
- Adaptation of the system to local requirements

2.5 Description of Application

The developed platform will offer communication and health monitoring services, through accurate recording and transmission of vital signs and other critical information, serving the constantly changing needs of vulnerable user groups. The offered services will address the needs of seniors, improving their living conditions and offering peace of mind to their families.

The user can access the platform from a tablet of smartphone and use wireless medical devices (e.g. blood pressure meter) and wearables (e.g. activity tracker) to record their vital signs, while their attending doctor will be able to view recorded measurements, in order to monitor the patient more effectively, as well as set thresholds for each type of measurement. The system will automatically detect threshold violations In addition, the system will include communication capabilities, allow the user to contact their loved ones.

The services include communication of the user with their family, as well as their attending doctor. Furthermore, monitoring the user's activity levels allow for detection of potentially dangerous situations.

More specifically, the system will be able to monitor the following parameters:

- Blood glucose levels
- Oxygen saturation (SpO2)
- **Heart rate**
- **Blood pressure**
- **Physical activity** (steps and sleep)

Overall, the services are first and foremost targeted to chronic patients, patients recovering post surgery or in rehabilitation, and in general people (mainly seniors) living alone and in need of communication and support.

3 Second Phase of Feasibility Study

3.1 Best practices

A best practice is a technique or method that, through experience and research, has proven to reliably lead to a desired result. A commitment to using the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success. [1].

3.1.1 France

Title	Health services delivery transformations
Clinical or policy priorities addressed	- Designing care; - Healthcare services; - Change management in primary care.
Challenges / problem identified	- Large proportion of population without coverage for basic health services under privatized insurance system; - Absence of guidelines and protocols for disease management in primary care; weak implementation of limited guidelines in place; - Majority of health providers salaried by privately owned health facilities, with the exception of rural practitioners who are individual fund holders; overabundance of physicians and acute shortage of nurses; weak gatekeeping ability of primary care providers; geographic access to providers is fair, but financial barriers exist; - Ongoing investment in health infrastructure; private sector responsible for services delivery with only limited oversight and regulation from the government; - Lack of continuing education for providers; absence of monitoring and regulation threatens care quality and patient safety.
Goals and activities	Growing concerns regarding the organization and availability of general practitioners, particularly in rural areas, triggered action to work towards a new model for the organization of primary care providers. Starting in 2007, regional and national government actions were taken to encourage the development of multiprofessional group

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[1] Margaret Rouse, The essential guide to supply chain management best practices, http://searchsoftwarequality.techtarget.com/definition/best-practice

practices, known in French as "maisons de santé pluriprofessionelle" (MSPs). As a result of these efforts, approximately 700 MSPs are now operational across the country, with a target of reaching 1000 by 2017.

In 2007, in response to anticipated declines and regional disparities in the number of general practitioners working in France, particularly in rural areas, a number of regional and national efforts have been directed towards supporting the reorganization of primary care providers into multiprofessional group practices (MSPs). MSPs are designed to co-locate a minimum of two general practitioners with at least one additional health professional in primary care. MSPs were positioned to contribute to the development of a new model for the delivery of primary care and increasingly awarded funding to support establishment in underserved areas.

In 2009, to encourage the establishment of MSPs, Regional Health Agencies established to expand local authority over provision of care; Regional Health Agencies begin offering financial incentives to support MSPs.

2010 – 2014, Regional successes stimulated a national government initiative to co-finance the start-up costs for MSPs and experiment with new methods of paying providers by payment-for-performance. Under direction from the Department of Social Security, Regional Health Agencies were responsible for managing the initiative and recruiting MSPs to participate.

In 2015, the evaluation of national government initiative completed; results show increased access to care, increased productivity and delivery of better quality services, notably around diabetic monitoring, vaccination screenings and prescribing efficiency.

Present time - MSPs continue to operate across the country and increase in popularity.

Best practice description	Description of transformations: *Selecting services*. In addition to the comprehensive package of primary care services offered by all general practitioners in France, MSPs provide a wider scope of services through other health professionals co-located in the practice. Complementary services that could be offered include prenatal care, physiotherapy, mental health

services and dental care.

Designing care. MSPs have been incentivized through government subsidies to develop protocols to improve the coordination of services. However, development and implementation of protocols is at the discretion of MSPs, which are free to organize care as they see fit.

Organizing providers. The majority of general practitioners now work in group practices, with MSPs being one form of these. MSPs are distinct from other group practices in that they collocate a minimum of two general practitioners with at least one other health professional such as a nurse, physiotherapist or dietician.

Managing services. As private practices, MSPs are primarily financed by primary care providers. However, unlike independent private practices, initial financial investments are divided among multiple partners, thus decreasing individual financial risk. Furthermore, MSPs have received considerable financial assistance with start-up costs through government channels, particularly in underserved areas. MSPs are each responsible for attracting professionals and organizing the services they provide. Health professionals within MSPs are individually contracted to provide services by Regional Health Agencies, but do so in cooperation with other providers working within the practice.

On average, MSPs are open more days a week (5.5 days) for longer periods of time per day (11.5 hours) than other practices, increasing patients' access to care. Despite this, general practitioners in MSPs do not typically work more hours than peers in other practice settings, as scheduling flexibility allows sharing of patient rosters and distribution of work hours as needed. "The idea is that it is not only in the same place, but working together."

Improving performance. The initiative is monitored through claims data as reported to the national insurance fund. This information, in addition to a survey designed to report on the structure and organization of MSPs, formed the basis for the evaluation completed in 2015.

New legislation approved by the National Assembly in April 2015 aims to restrain spending growth through reforms focused on three

	broad areas: improved preventative healthcare, a larger role for general practitioners and stronger patient rights. This new piece of legislation is based on three pillars:
	1. Anticipating loss of autonomy, which comprises financing action on prevention and combating isolation among elderly people (185 million euro according to the estimated budget, see Dossier de press of March 2015);
	2. Adapting society to ageing, which includes the launch of a plan to adapt 80,000 private housing solutions by 2017; renovate residence accommodation, renamed "autonomy residences"; and create civil volunteering for seniors (these measures amount to 84 million euro);
	3. Support for older people facing loss of autonomy, which focuses on home based care. Key to this support is a reform of the "personal allowance for autonomy" (Allocation personnalisée d'autonomie - APA), which was created in 2002 to finance home care services and residential care. The intention is to make it easier for elderly people to stay at home if they want to, by increasing the amount of the benefit, and by providing funding for introducing new technologies in their daily lives and for training social care workers. Furthermore, it includes measures in favour of informal carers.
	Yet even though official policy is more focused on reducing costs, many elements of the VBHC agenda are represented. The French authorities are increasingly reviewing patient outcomes (in an effort to assess the utility of drugs compared with cheaper alternatives) and at rationalising the myriad providers (with a view to boosting efficiency), as well as experimenting with different pricing strategies. Despite the fact that there is no official government-led push towards VBHC, data-collection services by the authorities are effective and could potentially be harnessed if the authorities shifted to a more specific value-based agenda.
Impact/outcomes	• Since their introduction, approximately 700 MSPs have been set up across France, predominantly in rural areas. These practices give a more comprehensive range of services and increased access to care for patients; • Entire population provided access to a basic package of services including primary and emergency medical care,

	elective surgery, oncology and obstetrics; increased emphasis on health promotion and disease prevention services; • New evidence-based guidelines, protocols, and tools for primary care in development; guidelines based on World Bank recommendations; • Initiative plans to strengthen gatekeeping by primary care providers and improve referral systems; reductions in physician numbers are planned with corresponding increases in the number of nurses; • Increased government oversight of services delivery; increased role for district-level public health centres in managing services delivery under discussion • Planned training for providers on new guidelines and protocols once finalized; planned implementation of monitoring systems with performance incentives.
Results/Lessons learned	The French healthcare system is lauded as one of the best in the world. France's universal public-private system is characterised by high levels of user satisfaction and comparatively low costs as a share of GDP. The Agence national d'accréditiation et d'évaluation en santé (ANAES) has a solid track record of collecting and testing evidence for this. Virtually the entire population is covered by public health insurance, which provides reimbursement for most medical costs. The level of reimbursement varies, depending on the drug or service, but most people also have supplemental private healthcare insurance policies that reimburse any costs not covered by public coverage. France has made no official push towards value-based healthcare. Instead, government policy is focused on containing costs and reducing the large healthcare deficit. Articulating a clear government vision ensured reforms had a strong foundation on which to build. Learning from earlier experiences and international partners helped avoid potential difficulties. Inclusion of stakeholders in the design process helped build local consensus for change. Following strategy development, detailed plans were drawn up to

	guide proposed reforms.
Background information	The French health care system is one of universal health care largely financed by government national health insurance. In its 2000 assessment of world health care systems, the World Health Organization found that France provided the "close to best overall health care" in the world.
References	1. WHO, Lessons from transforming health services delivery: compendium of initiatives in the WHO European Region, 2016 2. Country snapshot, Value-based healthcare: A global assessment, France, The Economist Intelligence Unit Limited 2016

3.1.2   Italy

Title	Health promotion and primary prevention – The Mattone Internazionale Programme
Clinical or policy priorities addressed	• Care and quality; • Health promotion; • Prevention.
Challenges	• Harmonising the national health system in line with the principles of the European Union; • Strengthen the cooperation at EU level in key sectors where there is an EU added value; • Ensure greater understanding of health at EU and international level; • Dedicate major attention to health affairs.
Goals and activities	The general objective of the Progetto Mattone Internazionale" (PMI) consist of: "Bringing the health system and policies of the Italian regions in Europe and Europe in the health systems of the Italian Regions". PMI has played a role in providing opportunities for networking and sharing good practices. Furthermore, the regions identified reference persons for internationalization, who are key figures in ensuring the connection between specific commitments and regional priorities/activities and the establishment of Italian RS. PMI supported the interactions between Italian partners of the European Innovation Partnership on Active and Healthy Ageing

	(EIP-AHA). Due to its interregional and national dimension, this initiative represents a horizontal good practice that spans the dimensions of ageing pursued by Italian applicants with their commitments, considering various aspects: frailty, cognitive decline, functional decline, dependency, nutrition, physical exercise, health and social care renewal. In this perspective, the good practices presented by Italian regions might be considered a read-out of how PMI worked to disseminate and foster Italian participation in the EIP-AHA initiatives, thus contributing to stimulate the coherence with EU planning. PMI provides a platform that supports networking activities (www.promisalute.it) Throughout its platform, PMI has been at the core of a system of partnerships and networks. In summary, PMI represented an innovative governance method for supra-regional interest, aimed at accessing the European direct and indirect funds. The impact analysis of the whole activities showed the positive influence on the internationalization of the National Healthcare System (SSN) policies. The project is now having a new governance and promotion through a new initiative called Pro.MIS (Programma Mattone Internazionale Salute). Starting from lesson learned from PMI, the following figure identifies the tasks that characterize the new model to ensure proper planning, the continuity and the response to the common needs.
Best practice description	To promote the internationalization of regional health systems, the MoH, in close cooperation with the State-Regions Conference, founded the Mattone Internazionale Project. This project aims to increase the role of the regional health systems and policies in Europe by strengthening their ability to investigate opportunities offered by the European Union and other international organisations. The project oversees the implementation of educational and information activities addressed to ministry organisations, Italian regions, local social health authorities, hospitals, as well as other stakeholders involved in health topics, in order to promote the dissemination of EU policies and opportunities to access EU financed programmes in the framework of health, research and innovation in the national territory. In addition, the project activates

	specific mechanisms for the promotion of qualified stakeholders to participate in European and international health policies.
Impact/outcomes	Italian regions joined forces through the "Progetto Mattone Internazionale" (PMI) of the Ministry of Health developing several national and international collaborations. Activities from all five Italian reference sites are presented with different good practices and scale-up approaches for improving health in ageing population. A database has been developed for the collection of good practices that the Italian regions and autonomous provinces have presented at the European level in the context of the European Innovation Partnership on Active and Healthy Ageing. The database is aimed at collecting regional good practices but does not intend to examine internal evaluation procedures and related validation as each Italian region has developed an internal evaluation system for good practices assessment.
Background information	Ageing population implies an increasing demand for health care services and resources, unsustainable according to current previsions. The European Commission is tackling this challenge throughout initiatives such as the EIP-AHA with three main purposes: to improve health and quality of life of older adults; to improve the efficiency and sustainability of health systems; to strengthen the competitiveness of European industry by investing in innovative products and services in the field of health and ageing. To promote the internationalization of regional health systems, the MoH, in close cooperation with the State-Regions Conference, founded the Mattone Internazionale Project. This project aims to increase the role of the regional health systems and policies in Europe by strengthening their ability to investigate opportunities offered by the European Union and other international organisations. Veneto Region, through the ULSS 10 Veneto Orientale – the regional health unit – coordinated all the operational activities.
References	1. The Ministry of Health and the Istituto Superiore di Sanità of Italy Joint Action Chrodis[2]

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[2] The Ministry of Health and the Istituto Superiore di Sanità of Italy, Good practice in the field of health promotion and primary prevention, Italy Country Review, Joint Action Chrodis, URL: https://ec.europa.eu/eip/ageing/sites/eipaha/files/practices/italy_country_review_ ja_chrodis.pdf

	2. Maddalena Illario, Vincenzo De Luca, Giovanni Tramontano, Enrica Menditto, Guido Iaccarino, Lorenzo Bertorello, Ernesto Palummeri, Valeria Romano, Giuliana Moda, Marcello Maggio, Mirca Barbolini, Lisa Leonardini and Antonio Addis for the Italian EIP-AHA Working Group, The Italian reference sites of the European innovation partnership on active and healthy ageing: Progetto Mattone Internazionale as an enabling factor, Ann Ist Super Sanità 2017| Vol. 53, No. 1: 60-69 3. Good practice in the field of health promotion and primary prevention, Italy Country Review, developed by EuroHealthNet, as part of Work Package 5, Task 1 of JACHRODIS[3]

3.1.3   European Network of Living Labs

Title	Healthcare Living Labs
Clinical or policy priorities addressed	• Care and quality; • Research; • Value generation.
Challenges	Through the user engagement methodologies and tools the aim is to deliver better health care to the ageing population, furthermore products and services validated in real life scenarios by the key user groups. The innovative holistic solutions address social and emotional goals enhancing the quality of life and wellbeing of the ageing population and enable independent living for longer.
Goals and activities	• Active participation in Ambient and Assistive Living Programmes; • Working on Innovative, socio-technical systems and design solutions for health and wellbeing; • Pilot and interaction driven new Active and Healthy Aging products and services; • User driven innovation and evidence-based research in the AHA domain; • Collaborations with nursing homes, daily care centres, elderly homes etc.;

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[3] Good practice in the field of health promotion and primary prevention, Italy Country Review, developed by EuroHealthNet, as part of Work Package 5, Task 1 of JACHRODIS, URL: http://chrodis.eu/wpcontent/uploads/2016/01/Dissemination_brochure_02_WEB.pdf

	• Active user validation of wearables on the health domain.
Best practice description	Living Labs (LLs) are defined as user-centred, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings. LLs are both practice-driven organisations that facilitate and foster open, collaborative innovation, as well as real-life environments or arenas where both open innovation and user innovation processes can be studied and subject to experiments and where new solutions are developed. LLs operate as intermediaries among citizens, research organisations, companied, cities and regions for joint value cocreation, rapid prototyping or validation to scale up innovation and businesses. LLs have common elements but multiple different implementations.
Impact and outcomes	ENoLL counts today over 150 active Living Labs members worldwide (409 historically recognised over 11 years), including active members in 20 of the 28 EU Member States, 2 of the candidates and it is present in 5 continents in addition to Europe. Directly, as well as through its active members, ENoLL provides co-creation, user engagement, test and experimentation facilities targeting innovation in many different domains such as energy, media, mobility, healthcare, agrifood, etc. As such, ENoLL is well placed to act as a platform for best practice exchange, learning and support, and Living Lab international project development.
References	http://www.openlivinglabs.eu/

3.1.4 Germany

Title	High potential of eHealth
Goals	New ground to be developed that helps keep people healthy and make people happy.
Beneficial opportunities and good influence factors	The health care industry as a whole offer some of the best prospects of any of the future-oriented industries - provision of health & fitness facilities, health tourism and eHealth; new and holistic health care services; medical technology and biotechnology.

| | In Lübeck, it goes a step further - in this location's is situated the strongest Healthcare industry cluster in Germany with more than 100 years of local history. It includes globally active, internationally renowned companies who owe a great deal of their success to their outstanding geographical location with its superb industrial and transport infrastructure, and they are actively shaping the future, today.
There are three main branches and the essential resources. The health care industry in Lübeck encompasses medical technology from Dräger Medical to ESKA Implants; biotechnology and life sciences from BCP AG to EUROIMMUN; health care services from the doctor's practice and the University Hospital to the provision of housing and care for senior citizens. Over 1.1 billion euros is generated each year by Lübeck companies employing 16,000 people in these three branches of the health care industry. In addition, the trend is upward. In the fields of medical technology, biotechnology and health care services, this Hanseatic City is the number one location in North Germany's health care industry.
A concentration of scientific and research facilities is a further and vital factor. The internationally renowned universities, institutes and clinics all actively underpin the health care industry in Lübeck. As do the numerous, well-qualified young career starters pouring into the jobs market every year. |
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| **Recommendations and lessons learned** | The city of Lübeck is a great example of what a best practice should look like. The successful environment in the area is the result not only of the efforts of the municipality but also of the support of the private sector, many beneficial synergies, the international clusters and the reputable companies, which find place in Lübeck. However, the strategic geographic location of the city undoubtedly plays a key role in the development of the area, but it is not a vital prerequisite for success.
It can easily be concluded that many factors should be taken into consideration when it comes to developing a successful healthcare-oriented region and to boosting the local economy, but what still is unchanged are the core principles. When every institution, private organisation and even the population have the same goal it is a |

	matter of time to create such a success of national and international significance.
References	Technologies for Good Health, Gesundheitswirtschaft health care, URL: https://luebeck.org/file/branchenbroschuere_gesundheit.pdf

3.1.5 Bulgaria

Title	Integrated medical grade monitoring and prevention - Checkpoint Cardio
Clinical/policy priorities addressed	- Care and quality; - Diagnostics; - Medication management; - High-grade prevention.
Goals and activities	- Creating a research network (open source) with as much as possible research institutes and university partners to reach fast deployments of scientific tools in a lifesaving decision support system; - Locate partners and deploy reference telemedical centres in most of the EU countries; - Establish strong telemedical network, which to become part of the healthcare system; - Start pilot sales through partner hospitals to end consumers; - Full deployment of reference tele medical centres in EU; - Strong and operating research environment with decision support system deployed and evolving; - Creating a patient portal, where the end consumers can choose among wide list of medical professionals throughout Europe where to get second and more opinions about their health files and records; - Reduce the identified risk by allowing all patients in need to be monitored and alerted; - Bring the healthcare service in every home; - Connect the patients from anywhere with dedicated medical team 24/7; - Provide affordable medical service for all patients in need everywhere at any time; - Change of therapy, to new conditions of ambulatory care and to life saving applying a disruptive healthcare workflow; - Supply with professional medical help instantly.
Best practice	Considering the identified problem and its numbers, the company targets not

description	only individuals but also medical facilities of all kind. Checkpoint Cardio is providing affordable medical service for hospitals and care homes as following: • 24 hours medical observation in real time; • Diagnoses and prescriptions; • Medical plan management; • Alert support – Call response; • Sophisticated decision support system in real time for the medical team following every heart beat and improving the efficiency and productivity. In parallel, the company replace the old-fashioned Holter systems with innovative wearable medical devices: 3-12 lead ECG, SPO2, Respiration rate, Blood pressure, Body temperature, Activity, GPS positioning. They are highly accurate, online and with multiple parameters. CheckPoint Cardio produces the hardware, the software and provides medical service with highly motivated team. By providing 24/7 monitoring, they reduce the risk of fatal events and lower the number of premature deaths.
Impact/outcomes	Strong financial upside: proven business model generating rapid sales growth. Establishing a reference tele medical centres and strategic partnerships. Progress so far: • University clinic Kepler Linz (negotiations) offer requested and approved, awaiting from management signature • Institute for Preventive and Rehabilitative Sports Medicine; • Sports Medicine of the Olympic Centre Salzburg; • University clinic in Innsbruck; • Cardiology rehabilitation hospital in Linz; • Cardiovascular surgery department in Keppler university clinic in Lin. Checkpoint Cardio have implemented trial tests in 19 Bulgarian hospitals and have sold to customers in 4 different European countries.
Recommendations and lessons learned	The company's team consist of dedicated professionals within the health industry who, by working together, are able to develop a modern technology, responding to the latest needs of the market. Not only do they develop their own patented products, but they also target the solution of a disease of world significance. By responding to the specific needs of the patients and doctors, and developing unique solutions for identified global problems in healthcare, they bring value in the society and to every individual in need.

References	http://checkpointcardio.com

3.2 Conclusions

Following the described cases in this deiverable, lessons from the gained experiences have been learned. The reference case will only benefit the future market exploitation of the project's outcomes. It will also contribute to other eHealth actors to share experience and knowledge, thus contributing to the integrated healthcare activities and a value-orientated health services delivery.

Key lessons learned:

- Countries with successful healthcare services delivery reforms and restructured practice environment (France) are preferred for the initial market positioning of the Health Monitoring System as innovative technological solution as well as innovative service enabler.

- Working together with patient-oriented and value-oriented shared goals enhance the added support for the people in need of care. Moreover, the society shall benefit from this kind of collaboration. A new culture for co-creation of healthcare process enhances care on a new level, and as a result, more collaborative practices are developed that allow the people to benefit according their individual needs.

- Collaboration plays essential role for facilitating regular communication within the triangle relations patient-doctor-relatives (or caregivers), as well as between the different players along the value-chains in the relevant ecosystems.

- In many cases, combining and merging different disciplines encourage the creation of patient-oriented care. Therefore, patients and their needs should be on the first place forming the basis of the Health Monitoring System's value proposition to the market. This has to be considered in eHealth business planning accordingly.

- Establishing partnerships within the healthcare sector is an important activity for the future vendor of the Health Monitoring System, its products and services. Partnerships will leverage the value of the offered products and services and at the same time will decrease the "production costs" and time for delivery, thus increasing efficiency in eHealth delivery scenarios.

- The motivation and skills of the internal future vendor's team and future partners are key factors for success. Therefore, skills for network management and team management oriented to the human resources needs is essential for building the intellectual capital that will drive the innovative system on the market.

- Moreover, the national and the European decision makers are key factors to foster the development of innovative practices in eHealth, or just the opposite – can destroy the efforts.

Therefore, strategically the commercial uptake of the Health Monitoring System should begin in one of the most stable and healthcare supportive countries: France, Germany, Italy, or in the Nordic countries. Unstable political situation or not supportive policies are barriers for successful market positioning.

4 Third Phase of Feasibility Study

4.1 Framework to define the Go-To-Market Strategy

4.1.1 Problem Description

The demographic changes in society is leading to a fast aging population. Today one eleventh of the world population (809 million) is older than 60, due to rise to one fifth of the world population (2 billion) in 2050. According to official figures, age distribution in the EU27 area will change dramatically over the next few decades, with the average age set to increase from 40.4 years in 2008 to 47.9 years in 2060. By 2060, average life expectancy will increase by almost 8 years (passing from 76.7 to 84.6) while, by the same year, life expectancy at 65 will increase by more than 5 years, reaching 22.4 years for man and 25.6 years for women.

One result of an aging population is that the increasing number of people who need care will lead to increasing the prices of the care homes services. The care homes can become more expensive and impersonal, leaving many elderly people with strong reservations about going into care homes. Another result is that the current healthcare system will not be able to cope with the future demographic expansion. The best possible solution will be to keep people at home as long as possible. In particular, a strong market driver is being generated by the increasing share of old population including those defined as "dependent", that is those who, for some cognitive or physical impairment, need to be supported while carrying on activities of daily living (ADL). While the majority of elderly people is in good physical and cognitive conditions, a non-negligible share of the population is regarded as dependent, with percentages increasing with age.

In this regard, many new services and innovative technologies appear on the market helping people in their long-term care activities. However, these services and solutions are split between different individual providers and organizational clusters such as health, social care, housing and others, each in most settings individually organised, delivered and recorded by organisations and their staff who are separately funded, managed, and regulated. As a result, uncoordinated "Islands of Excellence" surround the patients, while what is needed is coordinated long-term care. It is important to highlight that the growth of the Long-Term Care (LTC) market (e.g. nursing homes and hospices) will be substantial since it is scientifically well acknowledged that impairment (especially at cognitive level) and fragility become increasingly significant with age.

Such a profound demographic change is destabilising the so called "dependency factor", which is the rate between the productive and unproductive share of the population, calling for new care and assistance paradigms. Since present care systems will clearly not be sustainable at both economic and societal norms, the described increase in care demand will bring new ways of delivering care - in part by applying the power of information technology. Slowly, the focus of innovation will shift from the

product arena to healthcare delivery. New market opportunities are opening in the eCare market, specifically in the Long-Term Care market, for smart systems and platforms delivering services from different technology providers in an integrated and coordinated way. The critical question for companies will be how they can evolve their business model and thrive in a world of shifting profit pools by focusing on delivering better outputs, rather than by simply generating more inputs—more products, more procedures and ultimately more cost to the payers and users. Consequently, it will be extremely important to deploy new modes for delivering assistance by leveraging on technologies that can "re-engineer" the care processes by letting people stay healthy and safely in their homes as long as possible. The underlying principle can be that users need to be empowered to not simply participate in their own care but also to support delivering their own care.

4.2   Addressing Market Challenges

The main purpose of the project is to ensure the provision of health services to people who do not have access so far, through the development and pilot testing of a digital system that allows remote health monitoring. This system will therefore be able to meet the need for continuous health monitoring of patients suffering from chronic diseases, in order to prevent and timely treatment of their deteriorating health, contributing to their independent living, while enhancing the quality of life of people living in isolated areas. The development of the system and its pilot test, through the cooperation of institutions of the two countries, is expected to yield an innovative, reliable and scalable e-health system, which will be immediately (commercially or not) exploitable after the end of the project, to create positive socio-economic impact on citizens and especially on vulnerable groups.

The main goal of the services provided is to improve the standard of living of the chronically ill with diseases such as diabetes, hypertension, heart disease and chronic obstructive pulmonary disease, but also to enhance the well-being and self-management of citizens' health, with the ultimate goal of positive benefits. for society as a whole, but also the Public Health System.

This system can be a sustainable e-health solution, which will help reduce the cost of care in the country, a cost that is constantly increasing.

Having as a fundamental point of reflection the above, the strategic aspirations of the project, without order of importance or priority, are the following:

1. Technological excellence, which will set the conditions for the consolidation of the system under design in the current growing market of eHealth and Health Monitoring services.
2. Consolidation of Mobile Health & Homecare technologies in the consciousness of citizens through the validation of their benefits through pilot trials.
3. Improving the provided health services in order to successfully meet the existing, but mainly the future needs and requirements of the population.

The prospect of the services provided by the planned system is particularly tempting for both the recipients themselves and their relatives, who can feel more secure. However, the benefits for society as a whole are even greater and of particular importance.

The main advantages of implementing these services can be summarized as follows:

- Improving the quality of life of the elderly and especially those living in areas far from urban centers where there is a lack of specialized staff and the provision of appropriate care services
- Improving the quality of life of people with disabilities and mobility problems as they can receive the necessary care services without additional travel from their place of residence
- Ability to receive remote care services from elderly people with reduced incomes who do not allow them to be cared for in nursing homes with specialized staff
- Prevention, immediate perception, timely intervention and treatment of emergencies (eg falls, diabetes, cardiovascular events, etc.) resulting in a reduction of their effects
- Easier diagnosis and treatment of an emergency due to the knowledge of the individual's health history by the health institution, as well as due to the collection and analysis of statistics arising from the recording of problems and habits
- Significant reduction of hospital admissions as well as Intensive Care Units (ICUs)
- Reduction of the length of stay of the elderly in hospitals and consequently reduction of the cost of hospitalization
- Ensuring the consistency of adherence to the treatment of the elderly through reminder services
- Ability to continuously and thoroughly monitor the elderly / patient (eg postoperatively)
- Increasing the life expectancy of older people while improving its quality
- Offering a sense of security to the elderly and their relatives
- Ability for the family to communicate with their loved one without the need for physical presence

Environmental benefits arising from reduced rates of carbon dioxide emissions due to reduced travel of patients and the elderly to and from hospitals, care centers, etc.

Based on the above, the Health Monitoring System of the project offers the basis for the creation of new business models in the entire value chain from logistics, personal services and the provision of assistance and care. As a result, innovative care providers will receive immediate and indirect support to find their place in the entire health care system and related value chains. The system can also be used to identify potential risks that could trigger appropriate insurance procedures, e.g. Insurance companies that cover loss of self-sufficiency can use this information to create a prevention plan. At the level of health and welfare systems, telecommunications and tele-health services have been shown to have the potential to reduce the cost of healthcare (eg in the event of avoiding hospitalization), can

increase the range of services that can be provided, but also to improve the quality and efficiency of the services provided

The Health Monitoring System can be the basis for scalable value-added services, which will either be cloud-based or provided in care facilities. These services are based on interoperable platforms for health and care applications. In this context, the results of the project reflect the need to integrate many individual ICT solutions in the eCare sector. In addition, it is important to improve the competitiveness of European medical equipment and software manufacturers. The system can support effective anti-competitive business models from low-cost Asian manufacturers and large US companies that may impose an exclusive solution on the consumer market.

4.3 Strategic Goals

The Health Monitoring System can provide the basis for a variety of innovative ICT solutions and services in Europe through an open source ecosystem, creating great opportunities for recipients of health and care services to benefit from individually designed service packages, improving their quality of life, safely and autonomously in their daily activities.

The starting point for achieving these goals is to build consensus and support for electronic health and telemedicine technologies, through effective communication within the project consortium and beyond, regarding the provision of relevant services to end users and all stakeholders.

This attitude defines the main strategic goals:

- For health care delivery systems
  - o Replacing the old healthcare system (which is based on offline observation remotely) with a modern, online, intelligent multi-parameter continuous flow monitoring system
  - o Enabling health professionals to monitor their patients outside of medical facilities and to better understand their condition
  - o Improving the efficiency of health care procedures
- For end users
  - o Enhance treatment and prevention care at home
  - o Provide every family in need of a set of smart home appliances, which give them the opportunity to monitor their health and be able to receive medical assistance at any time
- For ICT technology providers
  - o Support for strategic solutions and eCare-oriented ICT applications by integrating them with the system and expanding the possibilities for more services
  - o Bridging the gap between the healthcare system and the ICT sector

5   Definition of Stakeholders

User-based innovation is a key competitive factor for the Health Monitoring System, so a key focus for defining a go-to-market strategy is identifying stakeholders, their expectations and product acceptance, and eCare services.

The summary of the results of the analysis is based on online research as well as meetings with doctors, health care providers, medical equipment dealers and insurance companies. The eCare market involves many different stakeholders with different influences, values and expectations.

For a better overview, they can be divided into two main groups with related subgroups:

First group: Stakeholders, divided according to the influence and impact they have:

- Key Stakeholders - have the highest impact and efficiency, or large international influence.
- Primary Stakeholders - provide a medium amount of impact and efficiency, or have more national influence than international;
- Secondary Stakeholders - have the lowest impact, efficiency and have mainly regional (local) influence.

Second group: Stakeholders, divided according to their role in the value generation chain:

- Business (B) - providing products and services;
- Caregivers (C) - formal (ex. nurses) and informal (ex. relatives) caregivers;
- Government (G) - state institutions in eCare sector (hospitals, etc.);
- Administration (A) - decision makers in healthcare politics (laws, facilitation, etc.);
- Users (U) – people, who need care.

In the following table, we combine these two main groups with their subgroups into a full stakeholder overview

	Key stakeholder	Primary Stakeholder	Secondary Stakeholder
Business	Pharmacy SMEs	Private nursing insurance Private hospices	Private physiotherapy Doctors
Government	Health insurance company	Hospitals Hospices	
Caregivers	Relatives Nurses Other individuals		
Authorities	EU parliament	Municipalities	Local authorities

	National decision makers		
Users	End-users		

Table 1 Stakeholder Analysis

6   Market Segmentation

Market fragmentation is the process of dividing a broad consumer or business market, usually consisting of existing and potential customers, into consumer subgroups (known as divisions) based on some kind of common characteristics. Market fragmentation is critical to the market transition strategy for the commercialization of products and services resulting from the project.

The end user identified in the previous section is the key target segment of the market. The same user is likely to change their characteristics and needs over time along with a weakened physical or cognitive state and the corresponding increasing level of dependence. For this reason, it is possible to introduce two additional sections, including additional users (or also the same user whose needs change over time) that require progressively more complex monitoring and, consequently, adequate tools and services.

As a result, users range from those who are still independent, to those with some degree of dependency, to those with significant levels of dependency. The criteria for classifying users, in relation to the different levels of dependence, are not only related to the types of pathology nor to the different levels of severity of the physical or cognitive states of the users. In contrast, the degree of dependence depends on a number of factors where the type of pathology is not necessarily among the most important. Social factors (economic and cultural / educational level, network of relationships), comorbidity and other factors often have a greater impact than the pathology itself. The varied situation (often over time) must be strongly correlated with the selection of the most appropriate cases of use of the system, from the basic support aimed at improving social relations (through a call center periodic call and / or a simple communication tool) and providing a basic level of home security, in combination with tools and services that provide a complete package, up to integrated "connected health" packages, allowing users to become, in fact, patients (ie: users with chronic comorbidity and some social fragility).

Therefore, the system is specifically designed to be scalable and scalable across the range of changing needs of its future users. They reflect, in terms of social security, the different range of ancillary benefits, starting with a single formal transaction and the related return / payment models, which are based on the value added to each individual job (for example, a visit, a specific diagnostic test). , etc.) to a process of complete assumption of an elderly adult, covering all his needs, for a long time.

According to this vision, payment models also need to be adjusted, shifting fees (usually monthly charges) or payment schemes per use. Although it is still difficult to evaluate correctly, the latter is very interesting and very promising in terms of the market.

7   Value Generation Chain

The following is a description of the value chain that results from the services supported by the Health Monitoring System. The results of the analysis show that a new type of value chain must be built for the successful development of the system in the market.

7.1   B2B2C

In this model, business organizations are identified as target customers - SMEs, private care homes, private physiotherapy clinics, doctors.

Five different types of flows can be considered as part of the relationship between stakeholders - information, products, money, quality of life and flow of help. The basic model of the value chain describes the impact of the first three flows: information, product and money (see figure below). The flows are in columns and the stakeholders are represented in rows. There are flow directions on both sides, left from top to bottom and vice versa. Each flow can only run in one direction per side. This means, for example, information on the left, from business to customer. The information, which extends from the client to the system, is displayed on the right.
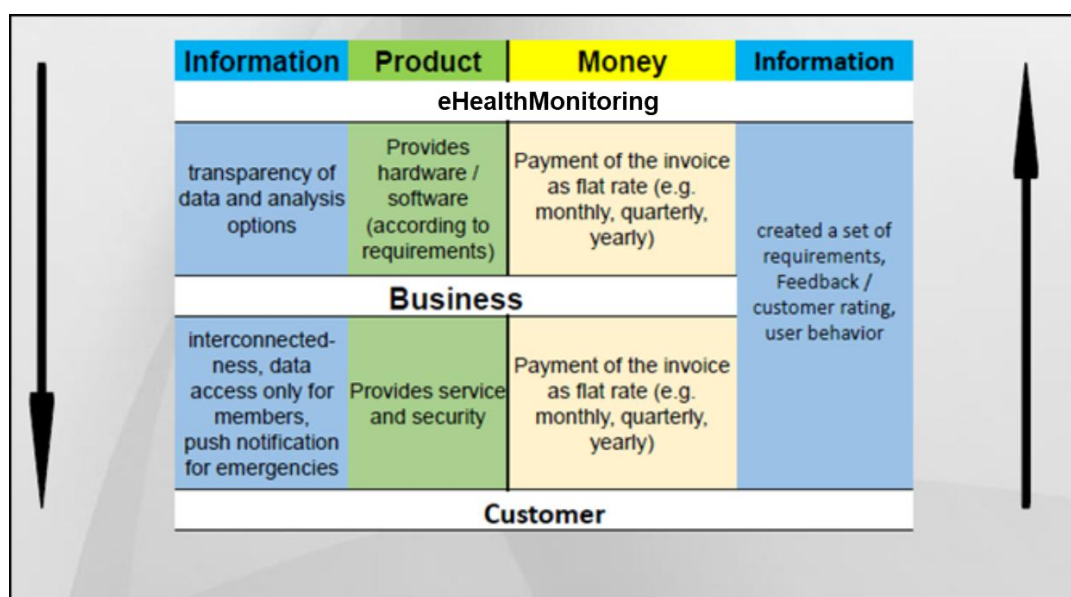

Figure 1 B2B2C Model

The diagram in the figure above explains in detail the B2C relationship between the respective stakeholder links, but the whole relationship is much more complicated. For a better understanding, there is another way to display the following figure.
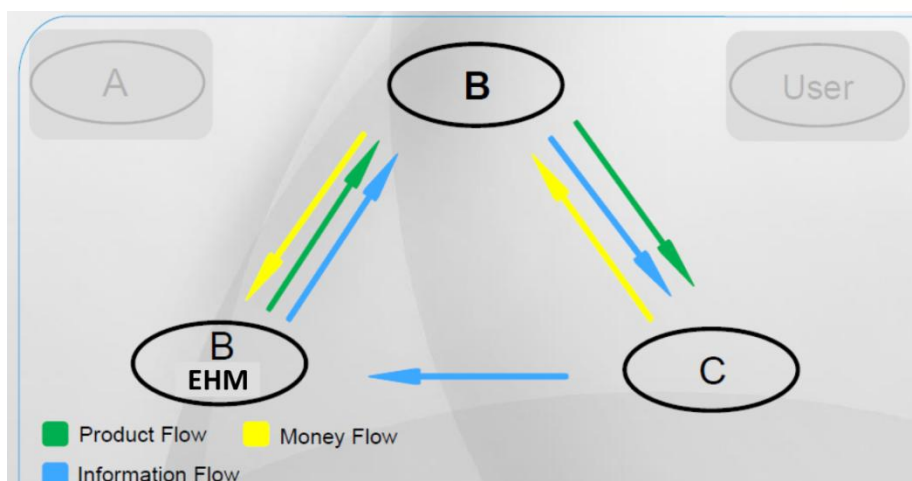
Figure 2 B2B2C Model - flow chart

There are five "bubbles", two of which are gray. Command is located in the top left corner and is abbreviated with "A". The User is in the top right corner. They are not represented in the basic model, but affect the further process.

One could recognize that there are three more bubbles. They are the main process of the value chain. The connection is B2B2C. The first "B" in the lower left corner means the steady activity that will be based on the Health Monitoring System (EHM). The second "B" is located in the middle at the top and symbolizes a choice between several similar businesses, for example pharmacy or nursing home. The last bubble with "C" describes the customer. The customer may be a relative of a user for example. All three bubbles are in a triangle and are connected by different flows.

The flows are explained at the bottom of the figure. Colors help the observer to differentiate the types of flows: green for product, blue for information and yellow for money. The arrows explain the flow direction.

Product flow goes from EHM to business and from business to customer. Thus, it is obvious that there is no direct relationship between EHM and "C" for products. It is similar to other retail models. The customer buys some food or other products there and does not contact the producer of the items. B is like an intermediate. It is important to note that the products also contain different types of services.

The information flow ranges from "C" to the EHM because the software directs the data to the EHM network. The information will be analyzed by the system. after that it will be transferred to the compatible company (EHM -> B). This could be a hospital in case of an emergency to help the user. In addition, the flow ranges from "B" to "C", because "C" must receive a push notification to be notified if something happened to the user.

Cash flow ranges from "C" to "B" and from "B" to EHM. Both flows could be reimbursed on a lump sum basis.

The extended model includes the first three flows one by one and three new flows are added. The figure on the next page shows two new streams on the left side with two new columns. On the right there is a new flow and an additional point with information. The stakeholder management is also added as an independent line, which is placed above the EHM. The gray cells mean that there is no relationship between the respective stakeholder groups in the streams.
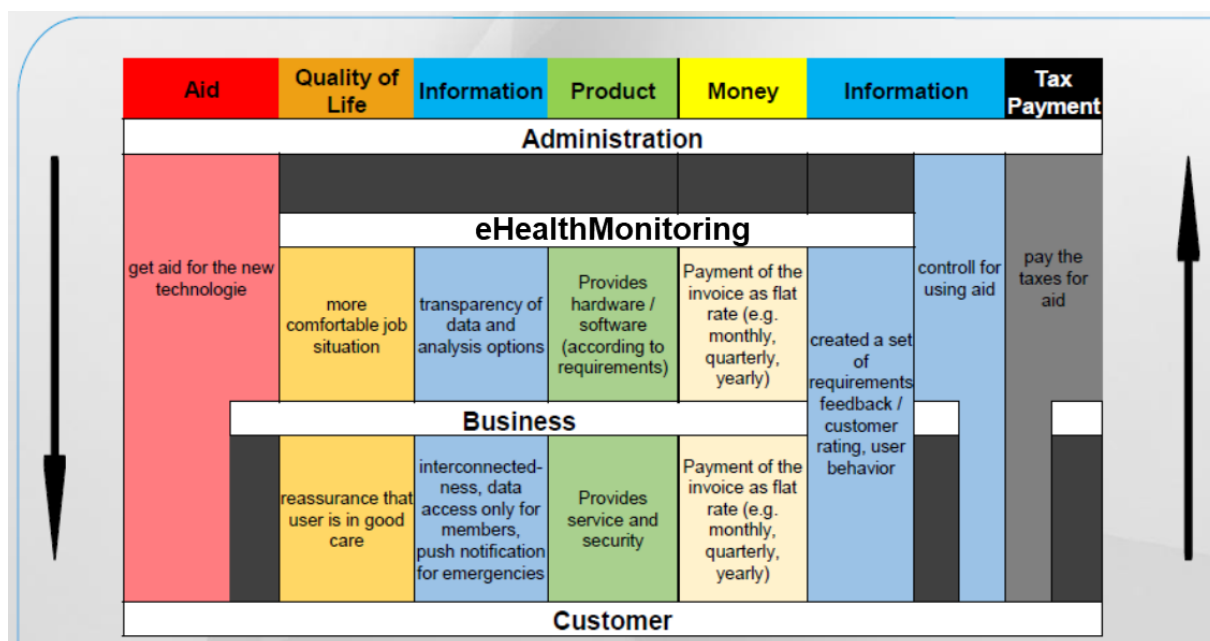

Figure 3 Extended B2B2C Model

Some columns are vertical because in this flow a stakeholder group has a specific relationship with two other stakeholder groups. However, the function is almost the same. For example, tax payment: both businesses and customers pay their taxes to the administration.
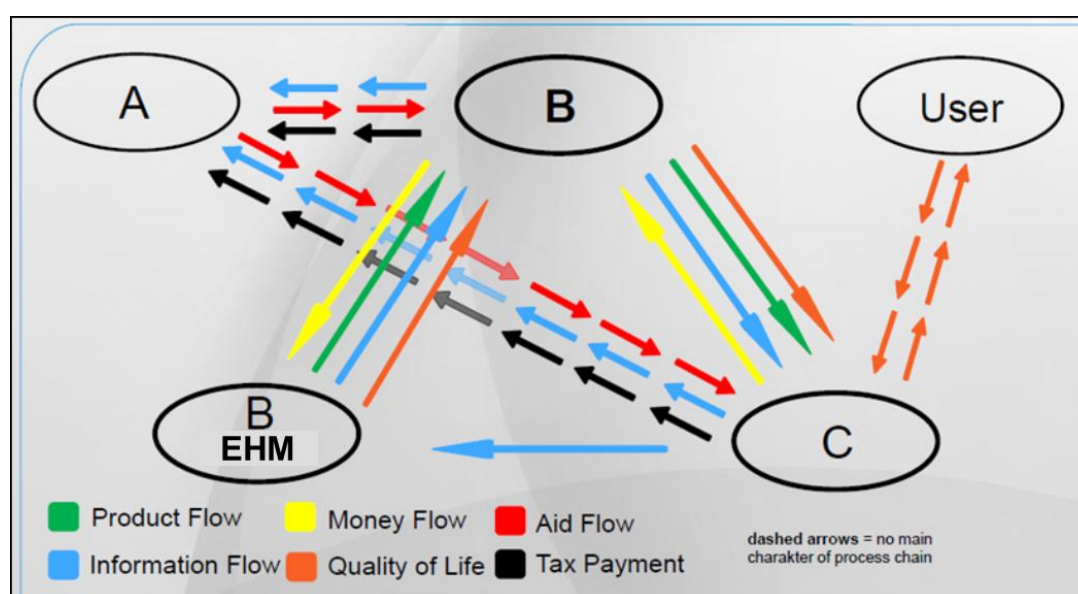

Figure 4 Extended B2B2C Model - flow chart

The figure above presents in detail the new flows of the respective stakeholders. In this shape, the "A" and "User" bubbles are no longer gray. In the extended model, they have a very important role to play in understanding the complex value chain.

The new flows are the quality of life in orange, the aid flow in red and the tax payment in black. Even the dashed arrows are new to the model. They symbolize the normal meaning of each flow color, but the relationship is at least between a stakeholder group, which is not part of the main process. In fact, it means a relationship between "A" or "User". These types of relationships are still important, but a distinction must be made between the main and the secondary process.

Quality of life ranges from EHM to "B", because eCare products and services improve working conditions for "B". Integration into the eCare network could also increase the status of the order.

The flow from "B" to "C" symbolizes the kind of quality for the customer. ECare products give "C" the assurance that the user is in good health. This relief allows the "C" to do its daily chores without worrying about the user.

Between the customer and the user, the quality of life goes in two directions. The user can still live in his usual environment and close to family. In return, "C" receives positive feedback from the user and does not need to feel bad about the application of eCare in the user's life. This positive atmosphere strengthens the relationship between "C" and the user.

The flow of help varies from management to business and coincides with the customer. The dashed arrows explain that help is a supportive flow, but also important. Without help, many people could not use the eCare system because it is too expensive for them.

The tax payment flows from the customer and the company to the administration. It is the foundation for state aid schemes or public compensation schemes. Without monetary resources, "A" could not support it. Of course, taxes are not only paid by eCare members. The administration participates in this from every tax payment "C" and "B" in the company. Like aid flow, tax payment is presented with dashed arrows because it is a support flow.

The information flow is also complete. It runs from "C" and "B" in the administration because they want to know if the help is used for eCare and not for other things.

7.2 B2G2C

In this part, the public sector should be emphasized as a stakeholder group. Replacing "B" with "G" in the value chain creates the same familiar structures. The public (which could be, for example, a public hospital or a nursing home) replaces the "B" in all influences and tasks. Thus, the public sector is no different from the basic B2B model. As shown in the graph, the decision flow is added to the image in purple. This flow ranges from administration to the public, because "A" is authorized to issue instructions. If the public sector is integrated into the eCare network, this relationship determines the interaction: it is necessary for entities providing EHM-based services to negotiate with management. Due to the authorization of the administration to the public, the EHM has to give access to "A" for the system, although "A" is not part of the main process. Thus, there is an intermittent flow of information in the model between EHM and management.
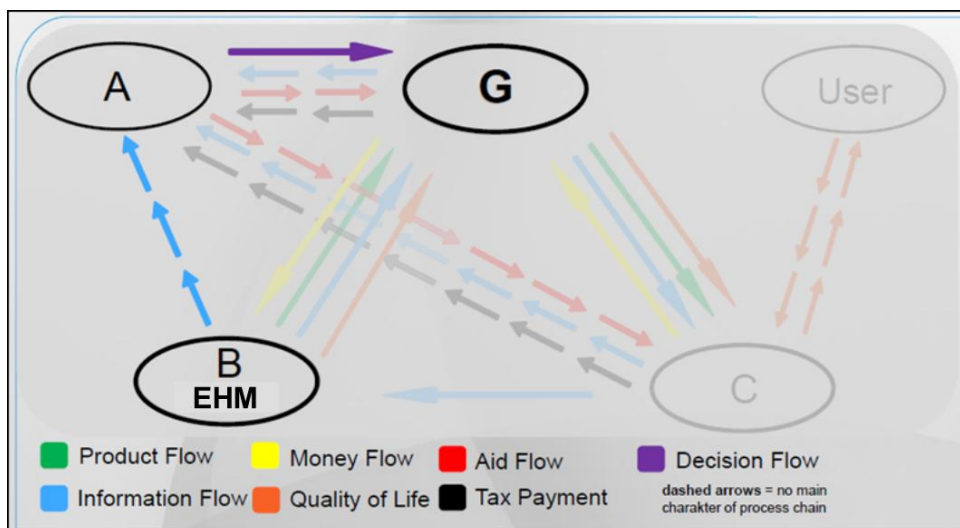

Figure 5 Extended B2G2C Model

8 Unique Selling Proposition

The USP of the Health Monitoring System is to provide vulnerable groups with a new standard of safety and access to care services, through the monitoring of health parameters and the automatic prevention of accidents and incidents in their daily activities.

The USP reflects one of the main aspects of the system, which is its ability to adapt to different requirements, in terms of health and care needs, of users throughout their lives. In fact, by supporting different health and care devices in many different application scenarios, the system can "follow" the user while its dependency level degrades over time, introducing support for more advanced monitoring that meets specific healthcare needs.

The integrated solution that the system aims to provide offers independence and ubiquitous access to health services, for elderly and chronic patients, in their homes, avoiding admissions to care units or hospitals.

9   Sales Channels

It is strategically preferable to switch to the market through a combination of different sales channels and / or partnerships. In particular, the system can be marketed either through vendor functions or through distribution functions. Both service delivery models vary in terms of promotion strategy, business model, targeted consumers, etc.

The following table describes these service elements:

	Vendor	**Distributor**
Delivery Strategy	• Leverage the business partnership to provide territorial coverage across Europe. • Involve companies and entities that have permission and/or licenses to offer relevant product and services on their country's territory.	• Uses a direct channel by developing relationships with customers and stakeholders via sales and services.
Delivery Model	B2B	B2B B2C
Target customers	• Healthcare services providers and care professionals • SMEs (CIO, CTO of companies, with infrastructure capacity, responsible for planning, infrastructure, sales, communication)	• Hospices and private doctors, nursing homes • Municipalities and governmental entities • Companies doing home care services • End users and relatives

Table 2 Service delivery elements and functions

10 Legal and regulatory service delivery requirements

The Go-To- transition strategy must ensure compliance with the following European regulations and guidelines:

- General Data Protection Regulation (GDPR)
- Directive 93/42 / EEC on medical devices
- Directive 98/79 / EC on in vitro diagnostic medical devices
- UNI EN ISO 9001: 2008 for this sector
- UNI EN ISO / IEC 27001: 2014 on the provision of ICT services in the social sector and health
- UNI EN ISO 13485: 2012 on quality management systems for medical devices
- UNI EN 15838: 2010 on call center service requirements
- UNI CEI ISO / IEC 20000/2012 on the management of IT services
- UNI EN ISO 14155: 2011 for good clinical practices

Health monitoring services generate a significant amount of data. However, this is limited by the fact that most of the available datasets are locked in different data jurisdictions, often with public sector organizations maintaining and controlling the files. E-health requires a lot of data and, consequently, some invasion of people's privacy. Therefore, this is one of the most important issues to be addressed: how to ensure that data is handled in such a way that people are willing to disclose their personal information that is necessary to enable these technologies to work.

11 Conclusions

In summary, we can conclude that the Integrated Health Monitoring System developed within the project has great potential to successfully enter European markets. Nevertheless, it is good to consider a number of courses. Information and recommendations on service delivery models may be useful in the future, as they describe cash flows, information and products in detail. Finally, different financing models may provide useful ideas to partners, distributors, suppliers and EHM service providers.