



ACTION PLAN

Partner: Instituto de Investigación Sanitaria Marqués de Valdecilla (IDIVAL)

Region: Cantabria (ES)

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INTENCIVE
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1. Introduction

IDIVAL is the Health Research Institute of Cantabria. It was created as a place for biomedical research, knowledge generation and socioeconomic tractor for the region, whose patrons and founders are the Ministry of Health and the University of Cantabria. IDIVAL has been entrusted as the institution managing all research, development and innovation in the regional public healthcare sector.

On March 2015, IDIVAL became an accredited institution by the National Agency “Health Institute Carlos III (ISCIII)”, and was reaccredited on June 2020 for a 5 years period, meaning that the work performed at IDIVAL meets the highest standards of quality.

Thanks to the impulse from the Government of Cantabria and the University of Cantabria, the Marqués de Valdecilla Health Research Institute (IDIVAL) promotes and develops research and innovation in the biomedical environment of our region.

IDIVAL holds an Innovation Support Unit (UAI) that works to facilitate innovation and the adoption of new technologies.

IDIVAL has a Human Factors Engineering (HFE) team, EValTec[®], as part of its Innovation Support Unit. The Research Group EValTec is a multi-professional group of experts in Human Factors Engineering and healthcare organizations, constituted by engineers, clinicians, biotechnologists, managers and educators. EValTec was born in 2014 as a synergistic interest of the Hospital Universitario Marqués de Valdecilla (HUMV), the Marqués de Valdecilla Research Institute (IDIVAL) and Valdecilla Virtual Hospital (HvV) with the mission of introducing and applying HFE as a strategic approach to improve the understanding and interaction of the user/clinician with technology, their environment, and the optimization of health processes, with the aim of generating a more efficient, effective and safe system.

The research team participating in the INTENCIVE project is led by IDIVAL’s Managing Director and several members of the UAI-EValTec[®] at IDIVAL.

1.1. Policies addressed:

The policy context is common for both Actions presented in this document: LINUX-E and APP Salud SCS, and therefore a common introduction is included.

The Ministry of Health of the government of Cantabria, developed the “*Cantabrian Health Plan 2014-2019*” (“Plan de Salud Cantabria 2014-2019”), the strategic policy framework for the region, focusing on health- and social care. It defines the health policy approved by the Government of Cantabria, a region in the north of Spain with a population of around 500.000 inhabitants, and a high-level Hospital (University Hospital Marqués de Valdecilla) for a six-year period, in order to approach health problems of its citizens. It proposes effective and feasible intervention measures. It is conceived as a policy instrument of foresight, direction, strategic planning and management.



In the analysis of the Cantabria Healthcare system situation performed by the “Plan de Salud de Cantabria 2014-2019” some of the most relevant issues detected and considered that should be afforded by the plan were: patient safety, quality assistance, inadequacy of the use of resources, cost effectiveness, waiting lists, continuity of healthcare among hospitals and primary care, nosocomial infections, and pharmaceutical expenditure. One of its strategic actions was “Organization and operation of the healthcare system-Improving Information systems”.

In 2019, the “Cantabrian Health Plan 2014-2019” evolved into the “Strategy for the Digital Transformation of the regional healthcare system” (*Plan de Transformación Digital para el Servicio Cántabro de Salud*) developed by the Directorate General for Digital Transformation and User Relations of the Ministry of Health of the Government of Cantabria. *Servicio Cantabro de Salud* (SCS) is the regional healthcare service provider, depending directly from the Ministry of Health of the Government of Cantabria.

https://www.cantabria.es/web/gobierno/detalle/-/journal_content/56_INSTANCE_DETALLE/16413/18107572

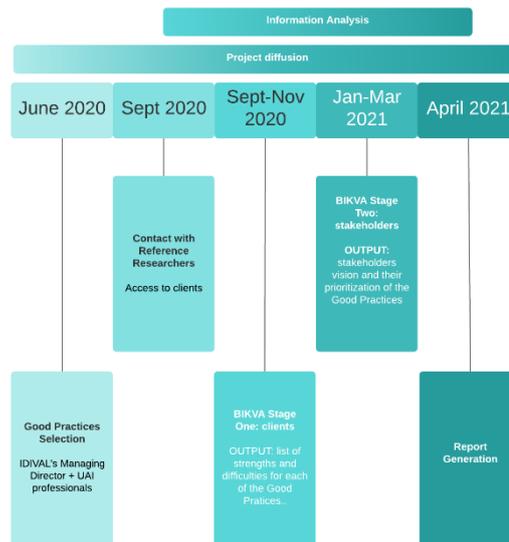
The policy change proposed by IDIVAL is addressing this policy instrument with the aim of financing two new and innovative projects (see details of Action 1 and Action 2).

The Directorate General for Digital Transformation and User Relations, for the implementation of this Plan, has allocated in 2022 a large part of its budget, 1,585,701 euros, to continuing the development of the Digital Transformation Plan for the SCS. Precisely 60.000€ of the budget of this policy are directly dedicated to the LINUX-E, and 100.000€ are directly dedicated to the development of the APP SCSalud (Funding officially approved by the Parliament of Cantabria in the month of December).

Thus, work continues on a common corporate strategy, to which these two actions align and will impact, which includes improving the usability and services included in the electronic health folder available on the web and App on mobile devices, consolidating all the progress made during the COVID crisis. The other major line of work of this Directorate General is the improvement of the integration of Primary Care and Hospital Care Clinical History applications to facilitate "greater usability" for professionals, as well as investment in hardware and applications to promote telemedicine and collaboration between professionals.

All these points are focused by INTENCIVE in relation with active ageing and the use of new technologies. Three pillars are the bases for it: 1) technology systems and mobile systems platforms for telemedicine, 2) new organizational integrative models that coordinate different medical disciplines and assistance levels (primary care level, home healthcare level and hospital level), and 3) hospital-based coordination empowerment. This new approach for elderly patient requires investment for new technology and the experts and technician dedicated to its coordination and development that are expected to be supported by this LINUX-E.

Both Actions of this Action Plan have been inspired by the participation of IDIVAL in the INTENCIVE project. This has been achieved after several meetings of IDIVAL’s INTENCIVE research team and the stakeholders, specially the DGTDRU, not only Stakeholder but also a Managing Authority.



2. Action 1: Laboratory for innovation and usability with a focus on the elderly population (IDIVAL LINUX-E)

2.1. Introduction

The good practice to be transferred is: **“Showrooms for wellbeing technology”** of Seinäjoki University of Applied Sciences (SeAMK), South Ostrobothnia, which offers eHealth and telemedicine expertise and services to **health and social care professionals, citizens and companies** in the South Ostrobothnia region, Finland. Currently the showroom serves especially SeAMK social and healthcare education actions and solutions are also presented regularly to various companies. Workshops for local companies are organized to increase their knowledge about the possibilities of technological solutions. Local companies can also test the equipment and develop their services. The showroom demonstrates intelligent future home for elderly individuals with modern equipment and services that advance possibilities to high quality, safe and active living at home.

The idea of this action came from the learning process in the INTENCIVE project. Learning started with the Identification of Good Practices process that generated an extense document with the Good Practices identified by each partner and shared with the other partners, and continued with the BIKVA analysis related to the good practices at regional level. After that, we attended the study visit and thematic workshop hosted by Seinäjoki University of Applied Sciences (SeAMK), in which the Good Practice called “Showrooms to demonstrate technological solutions related to health and wellbeing” was presented and showcased, and

the INTENCIVE team at IDIVAL and its stakeholders, identified the opportunity of including all this generated expertise into the design and construction of the new LINUX-E.

The Managing Authority, actively involved in this process, decided to finance this new project and funding was already approved in December 2021, during phase 1 activities (policy change already achieved).

From January 2022 the implementation of the project started, with the concrete development of the LINUX-E.

The Laboratory for innovation and usability with a focus on the elderly population (LINUX-E) is conceived as a multifunctional workspace for the development of innovation projects at the service of the regional healthcare system, and healthcare professionals in Cantabria, with the ultimate goal of improving patient care and a special focus on the elderly population.

The LINUX-E aims to be an environment for developing, demonstrating, testing, disseminating and researching in the area of healthcare technologies, with a special focus on designing and implementing technology (software, devices, APPs, etc.) easier for its users to use, specially referring to senior users: both patients and clinicians.

The LINUX-E will be a test bed for technology, allowing our healthcare system, society and industry to design and develop technology (identify user needs, user centered design, usability assessment, etc.), demonstrate how a technology might adapt to its end-users and use environment, test its impact after implementing, and allow research and exchange of experiences among users and developers. LINUX-E activity will be based on the participation of patients, healthcare professionals, human factor and design thinking experts, patient experience analysis and usability testing tools.

Given our experience in Human Factors and Ergonomics, IDIVAL and its main stakeholder, the Directorate General for Digital Transformation and User Relations (DGTDRU), identified the need to test and validate eHealth and Telemedicine technologies.

2.2. Relevance to the project and Implementation

The Good Practice has not been implemented identically as it was originally conceived, as it will mainly serve the regional healthcare service professionals (clinicians, information technology professionals) and patients (not companies); we will not incorporate state-of-the-art technology for demonstration purposes, only on the cases related to an existing or foreseen project; and we will focus on creating an environment in which different stakeholders (healthcare, information technology, quality and safety and human factors professionals, as well as patients, companies and the healthcare system) can come together for assessing needs and developing new technology that will be tested in the LINUX-E and then implemented in the system.

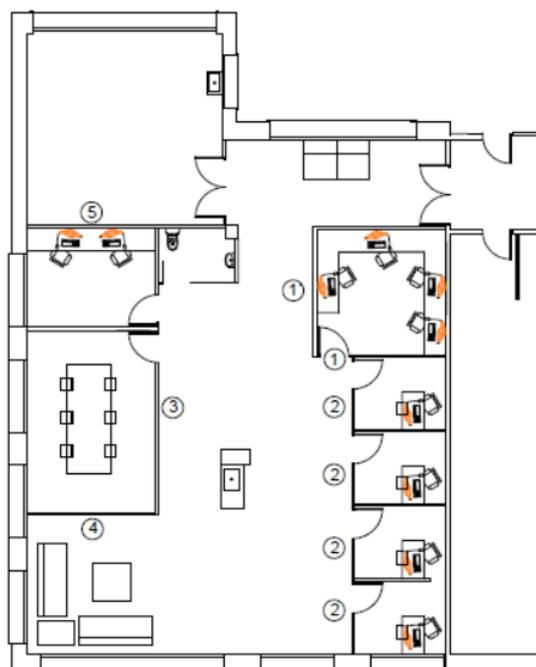
LINUX-E will be an innovation and usability lab that will integrate a high-level expertise and knowledge in areas such as Human Factors Engineering and Design Thinking, innovation management and medical devices

prototyping, serving the regional healthcare system and its professionals, as well as external institutions under specific agreements. The objectives of the LINUX-E will be to foster the design, development, assessment, procurement and implementation of IT technology, with a main focus on the elderly.

IDIVAL is currently working on the design and development of the LINUX-E. IDIVAL will dedicate a space on the 2nd floor of the biomedical research institute building, of around 300sq m, with the following spaces: simulation room, control room, demonstration space, prototype and 3D printing area, 4 “hot desk offices”, design-thinking area and living-lab.

The spaces are conceived with the following functions:

- a. **Prototyping and design laboratory.** Its function is to generate basic designs and prototypes for the conceptualization and testing of equipment as part of the development of new devices.
- b. **Usability laboratory.** Its function is to evaluate the usability of technology, software, processes and spaces through observation and testing using specific methodologies that include observation, heuristics, usability tests and testing technology such as eye tracking systems. All this with special focus on e-Health systems in general and telemedicine in particular.
- c. **Creativity Laboratory.** Its function is to raise awareness, research, experimentation, creation and launching of new ideas that are generated from the creative abilities of people, in order to develop innovation as a strategic variable to overcome other management paradigms. The core methodology is Design Thinking. This space will be one of the support axes for the development of intra-entrepreneurship programs that are currently being designed to be implemented throughout the health system.



The spaces are conceptualized as multifunctional with the main functions defined above and based on a movable and modular furniture design with part of the spaces partially open, their use is adaptable depending on the needs.

The entire space has secure Wi-Fi access with high-capacity internet access and there are multiple network accesses. It has been equipped with computer equipment that can be used on demand.

It has also been equipped as a service element and bathroom and a waiting-room; the latter located at the entrance of the building.



Pictures of some examples of the facilities of the Linnux-E: Main entrance, offices, prototyping lab and creativity space.

The direct beneficiaries of this action will be:

1. **citizens:** seniors, their families and caregivers, by giving them opportunity to learn about and try the available technologies, and also as an impulse to have more elderly-friendly technologies
2. **healthcare system:** healthcare professionals: managers, physicians, nurses, IT specialists, as the LUX-E will serve as an ecosystem for developing more usable technology (non-dependent on the age of the user), implementing safer technology that best adapts to the system and users, and testing

different options, versions, etc in the test-bed. In our region there is also a big expertise in using simulation-based training, which can have at the LUX-E a new environment.

3. **Universities:** Allowing students and professors a place to interact with healthcare professionals, incorporate the latest technologies of other areas into healthcare, develop grade and master thesis, etc.
4. **Businesses:** we aim to provide companies, especially regional SMEs a test bed for their products, so that they can test, demonstrate and present prototypes during the design and development cycle.
5. **Stakeholders:** policy makers and decision-making professionals, by offering a feedback analysis.

2.3. Participants

IDIVAL leads the development of the LINNEX-E, as the institution designated by the Ministry of Health and the Servicio Cántabro de Salud to manage R&D in the regional healthcare system; aligned with the assignment of the DGTDRU, involving other regional stakeholders of INTENCIVE and Cantabria (Servicio Cántabro de Salud, Primary Care and Hospital care management roles).

The participants of implementing the LINNEX-E action are:

- Directorate General for the Digital transformation and User Relations of the Ministry of Health of Cantabria (DGDTRU)
 - Main assignment: funding of the LINNEX-E (via “Strategy for the Digital Transformation of the regional healthcare system”) and supporting the launching and functioning of the laboratory.
- Valdecilla Biomedical Research Institute (IDIVAL)
 - Main assignment: Leading the conceptualization, construction and operations of the LINNEX-E, as well as managing its operations providing human and technical resources.
- Servicio Cántabro de Salud
 - Hospital Universitario Marqués de Valdecilla
 - Hospital Comarcal Sierrallana
 - Hospital Laredo
 - Primary care network

- Main assignment: Providing human and technical resources, facilitating the participation of healthcare professionals in the activities conducted by or in LINNUX-E.

Our main stakeholder, the DGTDRU, is leading this action by its funding, and assigning IDIVAL the implementation. IDIVAL will adapt this good practice as it will not consist at first on incorporating intelligent future home for elderly individuals with modern equipment for demonstration purposes, but to have a space and expertise with the aim of including different stakeholders (healthcare professionals, patients, companies and the healthcare system).

2.4. Finance

Thanks to the work conducted by IDIVAL in the INTENCIVE project, and after several meetings and working together presenting the progress of the project, in 2021, the Regional Ministry of Health of the Government of Cantabria, approved a monetary contribution of sixty thousand euros (60. 000.00 €) in favor of the Marqués de Valdecilla Research Institute Foundation (IDIVAL), through the Directorate General for Digital Transformation and User Relations (as seen in the image below), Managing Authority of the “Strategy for the Digital Transformation of the regional healthcare system, to promote the creation of the LINNUX-E, within its competence for the management and development of healthcare planning policies, evaluation of healthcare technologies and digital transformation, e-health and m-health developments and artificial intelligence applications in healthcare, exclusively within the functional scope of the Cantabrian Health Service.

IDIVAL supported the construction and provision of the laboratory with its own funding (15.000€), regional (INNVAL18/16, 5.000€) and international (20.000€) funds.



		CÓDIGO	DENOMINACIÓN	
SECCIÓN		10	SANIDAD	
SERVICIO		05	DIRECCIÓN GENERAL DE TRANSFORMACIÓN DIGITAL Y RELACIONES CON LOS USUARIOS	
PROGRAMA		311.A	TRANSFORMACIÓN DIGITAL Y RELACIONES CON LAS PERSONAS USUARIAS	

CARTILLO	ARTÍCULO	CONCEPTO	SUBCONCEPTO	EXPLICACIÓN DEL GASTO	IMPORTE TOTAL (en miles de euros)			
					SUBCONCEPTO	CONCEPTO	ARTÍCULO	CARTILLO
				GASTOS DE PERSONAL				796.201
	10			ALTOS CARGOS			65.739	
	12			FUNCIONARIOS Y ESTATUTARIOS			609.374	
	16			CUOTAS, PRESTACIONES Y GASTOS SOCIALES A CARGO DEL EMPLEADOR			121.088	
		160	00	Seguridad Social	121.088			
	2			GASTOS CORRIENTES EN BIENES Y SERVICIOS				284.500
	20			ARRENDAMIENTOS Y CÁNONES			3.500	
	21			REPARACIONES, MANTENIMIENTO Y CONSERVACIÓN			1.500	
	22			MATERIAL, SUMINISTROS Y OTROS			234.500	
		227	06	Estudios y trabajos técnicos	70.000			
		227	99	Otros	10.000			
	23			INDEMNIZACIONES POR RAZÓN DEL SERVICIO			10.000	
	24			GASTOS DE PUBLICACIONES			15.000	
	4			TRANSFERENCIAS CORRIENTES				180.000
	44			A SOCIEDADES PÚBLICAS, ENTIDADES PÚBLICAS EMPRESARIALES, FUNDACIONES Y RESTO DE ENTES DEL SECTOR PÚBLICO AUTONÓMICO.			120.000	
		442		A FUNDACIONES PÚBLICAS AUTONÓMICAS				
		442	01	Fundación Marqués de Valdecilla	60.000			
		442	09	Fundación Instituto de Investigación Marqués de Valdecilla	60.000			
	48			A FAMILIAS E INSTITUCIONES SIN FINES DE LUCRO			40.000	
		481		AYUDAS PARA ASOCIACIONES DE PACIENTES QUE PROMUEVAN ACTIVIDADES DE INTERÉS SANITARIO		60.000		



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2.5. Timetable

IDIVAL has already started its implementation following this timetable

- Mar21-Jul21: Identification of the Good Practice
- Jul21-Sep21: Conceptualisation and design
- Sep21: Approval of the DGTDRU
- Sep21-Dec21: Design and construction of the Laboratory
- Dec 21: Funding officially approved by the Parliament of Cantabria
- Jan22-Feb22: Deployment and provision
- Feb22-Jul22: Definition and implementation
- Jul22: Launching the LINUX
- Aug122-Jul23: Monitoring

2.6. Monitoring

It is considered an important aspect of the transfer of the Good Practice, to implement a series of monitoring activities to assess the good evolution of the LINUX-E.

One relevant aspect is the final study and identification of the potential participants of the LINUX-E. One indicator will be to complete the following relation of lists:

- Users among the regional healthcare system (Servicio Cántabro de Salud)
- Users from other regional and national public research institutions (University of Cantabria, Instituto de Biotecnología y Biomedicina de Cantabria-IBBTEC, Biomedical Research Institutes, IHCantabria (Institute of Environmental Hydraulics of Cantabria, etc.)
- Users from companies of the medical field: medical devices, software, user experience, etc.

LINUX-E has been integrated in the operation, services and competencies of the Innovation Support Unit and the Human Factors Engineering team at IDIVAL, being these professionals the managers and promoters of the LINUX. The Innovation support Unit at IDIVAL is certified in the ISO 9001(Quality Management System) and UNE 166002(Innovation Management System) standards. One indicator of this integration is the inclusion of the LINUX processes within the whole organization system processes.

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In terms of the financial aspects of the laboratory, the LINUX-E has needed initial funding for the design, deployment and provision of the facilities, but operational costs will be covered annually by IDIVAL's own funds and budget, as IDIVAL provides human resources for managing the site, and all other costs have been integrated in the functioning costs of the building.

LINUX will provide services to healthcare professionals, IT professionals, companies, other research institutions, etc. These services may vary from prototyping, usability, creativity, design thinking, etc. There will be different rates depending on the service and user (varying from internal and external users). One indicator will be the development and approval by the board of trustees of the foundation. Other indicator will be the number of users of each user group accessing the laboratory, as well as number of collaborations, prototypes and projects during the monitoring period.

3. Action 2: Mobile APP for the Servicio Cántabro de Salud

3.1. Introduction

Since the Covid-19 pandemic began, the need to improve and adapt our communication systems for professionals and patients has become even more evident. Each person's circumstances are different, so designing tools with a focus on end users is the most effective strategy to achieve safe and effective use of healthcare solutions.

The DGTDRU is redesigning the mobile application that serves citizens in Cantabria to access several services of the regional healthcare system.

During our participation in the INTENCIVE project, accessing information on the best practices shared by other regions and attending online study visits, we have learned about other mobile applications and web-based services presented by the participating regions, that have led us to identify functionalities and services that we want to implement in the new regional application.

IDIVAL's main stakeholder, the Director General for Digital Transformation and User Relations (Managing Authority – MA), has attended some of the online study visits and the study visit in Gozo. This has served as a mechanism to impact the new design, development and implementation of the mobile APP and web services, by incorporating ideas and functionalities of the following best practices shared during the INTENCIVE project.

The MA has already decided to finance this new and innovative project (funding approval in the month of December of 2020 – during phase 1 activities). The next steps will imply the concrete development of the project and its monitoring during phase 2.

The good practices to be transferred are the following, which will be detailed in the following section:

- **“Personal health portal (myHealth)”**. Gozo, Malta
- **“myGozo mobile application”**. Gozo, Malta
- **“Szombathely Point mobile application – “Health” section”**. Szombathely, Hungary
- **“E-Kermed”**. Bretagne, France
- **“GWALENN portal for health & care professionals”**. Bretagne, France

3.2. Relevance to the project and Implementation

After several months working with the INTENCIVE partners, we have identified some digital tool features that we want to replicate. Given that there may be important differences in the profile of our users, such

as age, geographic location or type of technology use, among others, we will analyze and adapt the solutions from the user's point of view.

In addition to that, during the BIKVA rounds our users pointed out some desirable functionalities for our corporate healthcare tool. These indications will also be prioritized and included in the design of the new mobile application and web service.

The multidisciplinary team responsible for the design and implementation of the new tool is composed of staff from DGTRU, SCS, IDIVAL and an external company that develops digital solutions.

We have also had the opportunity to collaborate with patients and evaluate the tool that has been used in Cantabria in the past few years.

This work carried out during phase 1 led to several meetings and open debate with the Managing Authority (DGTRU) on the possibility of financing a project for a Mobile APP for the Servicio Cántabro de Salud, under the *Plan de Transformación Digital para el Servicio Cántabro de Salud*. This led to the approval (in December) of a monetary designation of 100.000 € from the budget of the Plan to finance the development of the APP SCSalud, thus allowing IDIVAL **to achieve an important policy change with the financing of this new project under the policy instrument addressed**, and thanks to the learning of the INTENCIVE project.

This Action Plan gathers a list of the tools and functionalities found in different applications analyzed by INTENCIVE partners. Understanding how these solutions work has boosted the improvement for the Cantabria mobile APP.

The good practices and functionalities to be transferred are:

- **“Personal health portal (myHealth)”**. Gozo, Malta

This portal allows citizens and private medical doctors to access and view patients’ medical records by the Maltese public healthcare system. The portal provides patients’ continuity of care across the health sector, and better and faster service for all citizens. It is designed using responsive web technologies, which allows an easy access from computers, smartphones and tablets. It provides access to medical appointments, medical image reports & laboratory results, electronic case summaries, and notifications to patients and doctors via email and/or SMS messages, as well as pharmacy information and location-based services.

Functionality to be incorporated: we want to replicate how the tool allows citizens and medical doctors to access and view their medical records maintained in the public healthcare system, having a responsive design to be accessed by different devices, include access to hospital and primary care appointments, electronic medical records in brief, location-based services.

- **“myGozo mobile application”**. Gozo, Malta



This is a mobile application that allows the elderly living on the rural island of Gozo to apply for services offered by the Ministry for Gozo. This mobile application can be used in cases where elderly persons living at home require assistance and or services offered by the Government. A section dedicated to the Elderly is available. Through this section, citizens can apply for a range of elderly services offered by the Government.

Functionality to be incorporated: the idea behind transferring this best practice, is not offering the same services, but the inclusion of a dedicated specific part of the SCS APP to the elderly, including information and services specially conceived for the elderly, such as information on age-related chronic diseases.

- **“Szombathely Point mobile application – “Health” section”.** Szombathely, Hungary

SzombathelyPoint is a smartphone application which lets citizens stay informed about the most important cultural, tourist and sporting events as well as other useful information in the city of Szombathely. There is a “Health” section which contains useful information related to medical care, where users can access information regarding doctors, consulting hours of certain institutions and useful locations.

The health section consists of 156 items in 8 different topics, which are the following: GPs, pediatricians, dental care, hospital, pharmacies, available defibrillator, sports doctors and on-duty medical health care services.

Functionality to be incorporated: a specific section containing information related to medical care, such as GPs, pediatricians, dental care, hospital, pharmacies, available defibrillator, sports doctors and on-duty medical health care services.

- **“E-Kermed”.** Bretagne, France

E-Kermed is a regional portal for telemedicine services in Bretagne for Health professionals (teleconsultation/teleexpertise).

Functionality to be incorporated: With the experience of the COVID-19 pandemic, the Ministry of Health, DGTDRU and the SCS want to foster teleconsultation services both to communicate patients and clinicians and also to improve interconsultation among professionals, using information and communication technologies. We believe applying the experience of this best practice, can contribute to improve the integration of telemedicine service offers (teleconsultation/teleexpertise).

- **“GWALENN portal for health & care professionals”.** Bretagne, France

GWALENN is a regional tool for the coordination of healthcare professionals around a patient pathway, which is made up of 3 modules:

- Orientation desk: it is the entry point where a professional can alert (detection of the need), evaluate and ask for support for the orientation of the patient;

- Coordination file: shared patient individual file, with administrative data, list of involved health and care professionals, coordination file, follow-up forms;
- Organization file (own file for each organization member of the coordination action who can extract its own activity report for example).

The GWALENN includes a functionality for healthcare professionals to be accessed by a smartphone: Mobil'eTY by Globule enables secure communication (to avoid the use of texts, whatsapp, etc.) and gives access to the orientation desk and to a summary of the coordination file.

Functionality to be incorporated: Through INTENCIVE Bikva rounds with clients and stakeholders, we have identified the need to improve communication among healthcare professionals via corporate tool, and the best practice adapts and solves the need identified.

We are currently working on the final analysis and adaptation of the functionalities and tools, with a special focus on the user's perspective.

3.3. Participants

- **Directorate General for Digital Transformation and User Relations (DGTDRU)**
 - Main assignment: As a leading participant. Leading the design, testing, validation and implementation of the solution
- **Servicio Cántabro de Salud (SCS) (Cantabria Regional Healthcare Service)**
 - Main assignment: To ensure and support the healthcare and IT professionals involved in tool development, implementation and evaluation
- **IDIVAL**
 - Main assignment: As a supporting participant. Contributing to the Human Factors considerations and leading the usability assessments. Maintaining contact with intencive's partners in order to follow the development of their tools and plans for the implementation of improvements to be effective
- **Software development company (Vitesia-Valnera)**
 - Main assignment: Development of the solutions and adaptation to the systems in use
- **Citizens of Cantabria and patients of the Regional Healthcare System (SCS)**
 - Assignment: Main users of the tool. Collaborate with IDIVAL's Human Factors team through their participation in the different activities planned for the correct adaptation of the tool.

3.4. Finance

The estimated budget for the development of the mobile application and web service is 100.000€ plus reuse of several digital services developed during COVID.

The DGTDRU of the Regional Ministry of Health of the Government of Cantabria, as the Managing Authority of the "Strategy for the Digital Transformation of the regional healthcare system, had a monetary designation of 100.000€ from the budget of the DGTDRU's Plan, approved by the Parliament of Cantabria to finance the development of the APP SCSalud, serving to continuing the development of the Digital Transformation Plan for the SCS, that includes the development of the mobile application and web service, improving the usability and services included in the electronic health folder available on the web and App on mobile devices, and improving the integration of Primary Care and Hospital Care Clinical History applications to facilitate "greater usability" for professionals, as well as investment in hardware and applications to promote telemedicine and collaboration between professionals.

The DGTDRU, IDIVAL and SCS will provide other resources such as human resources: healthcare professionals, Information Technology professionals, Human Factors Engineers for the conceptualization, design, usability assessment, validation and implementation.

3.5. Timetable

The DGTDRU, SCS and IDIVAL have already started its implementation following this timetable

- Mar21-Jul21: Identification of the need and the different applicable good practices
- Jul21-Sep21: Software development company identified and hired
- Sep21-Dec21: User Needs Assessment, conceptualisation and design
- Dec 21: Funding officially approved by the Parliament of Cantabria
- Oct21-Mar22: Development of the mobile application
- Apr22-Jun22: Usability assessment and redesign, if needed
- Jul22-Dec22: Deployment of the solution
- Jan23- Jul23: Monitoring

3.6. Monitoring

It is considered an important aspect of the transfer of the Good Practice, to implement a series of monitoring activities to assess the good evolution of the APP SCSalud.

The main objectives for the redesign and improvement of the APP SCSalud are to include more functionalities and improve the usability of the technology, in order to making healthcare services and information more accessible and usable to our patients, as well as improving integration of the healthcare information among the system (primary, secondary and tertiary care).

Some indicators of the well going of this action are:

- User Needs Assessment completed
- APP SCSalud designed and developed
- Usability evaluation of the technology completed
- Implementation of the APP SCSalud as a corporate APP
- Dissemination to patients, citizens and healthcare professionals conducted
- Number of citizens using the new APP SCSalud increased