I INTERNATIONAL MEETING
HEALTH INNOVATION IN GALICIA

Santiago de Compostela, April 28th and 29th 2014

XUNTA DE GALICIA
CONSELLERÍA DE SANIDADE

MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD

UNIÓN EUROPEA
Fondo Europeo de Desenvolvemento Rexional
"Unha maneira de facer Europa"

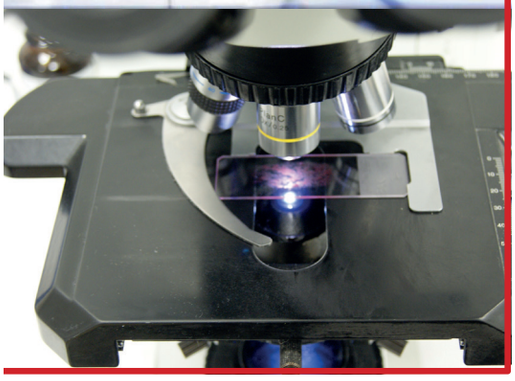
SERVIZO GALEGO de SAÚDE

FEGAS
Escola Galega de Administración Sanitaria

innova saúde

galicia

DE ASIS A COMPOSTELA
1214.2014



INDEX:

COLLABORATE:

indra

coremain

everis
an NTT DATA Company

PLEXUS

pahia
software

BALIDEA

TECHNICAL SECRETARIAT:

Trevisani
eventos | protocolo & rr.pp. | comunicación

Tel.: +34 981 935 346
E-mail: health.innovation.meeting@trevisani.es
www.trevisani.es

I INTERNATIONAL MEETING on HEALTHCARE INNOVATION in GALICIA

PROGRAMING

MONDAY APRIL 28th 2014

08:30 - 09:00 **Reception**

09:00 - 09:30 **Official Opening**

D. Alberto Núñez Feijoo
Regional President of Galicia

09:30 - 10:40 **Plenary Session.**
Health Innovation Strategies

Moderator: *Rocío Mosquera Álvarez*
Minister for Health, Galicia

09.30 – 09.55 **Opening Presentation:** ***European Innovation Partnership on Active and Healthy Ageing***
Mr Wojciech Dziworski
Senior Official of the European Commission, Unit "Innovation for Health and Consumers", Directorate General for Health and Consumers

09:55 – 10:10 ***Policy innovation in the Spanish Health System***
Mª Isabel García Fajardo
Coordinator of the Health Innovation Platform, Ministry of Health, Social Services and Equality

10:10 – 10:25 ***Smart Specialisation Strategy 2014-2020 Galicia: RIS III***
Francisco Conde López
Galician Minister for Economy and Industry

10:25 – 10:40 ***Innovation Strategy of the Public Health System of Galicia***
Rocío Mosquera Álvarez
Galician Minister for Health

Conclusions

10:45 – 11:15 **Coffee break**

11:15 – 12:30 **Innovative Approaches by European Health Systems**

Moderator: *Mr Wojciech Dziworski*
Senior Official of the European Commission, Unit "Innovation for Health and Consumers", Directorate General for Health and Consumers

11:20 – 11:35 ***Experience in Denmark: Shared Care system***
Claus Duedal Pedersen
Chief Consultant, Odense University Hospital, Denmark

11:35 – 11:50 ***Experience in Scotland: Delivering safe, effective and sustainable integrated care services through innovation***
George Crooks
Medical Director NHS 24 and Director of the Scottish Centre for Tele-health and Telecare

11:55 – 12:10 ***Experience of SUSTAINS: Empowerment of patients***
Benny Eklund
Manager for e-Government, County council of Uppsala

12:10 – 12:25 ***LifeKIC Consortium***
Sonia Martínez Arca
Director of Innovation and Management of Public Health. Galician Ministry of Health

Conclusions

12:30 – 14:00 **Innovation procurement: challenges and solutions**

*** 12:30** ***Working Group EcoQUIP*** **Closed meeting**

Moderator: *Juan Manuel Garrido Moreno*
Deputy Director for Development of the Business Innovation , Goverment of Spain

Javier Quiles del Río
Manager of Health Innovation Programs Hospital 2050 & Innova Saúde at Servizo Galego de Saúde

Angus Hunter
EcoQUIP Project manager

Carla Dekker
National Coordinator SILVER PCP

Experiences of companies in Public Procurement of Innovation through H2050 and Innova-Saúde Programs: INDRA and EVERIS

14:00 – 15:30 **Networking lunch**

15:30 – 16:30 **Demo IANUS. Galician Electronic Health Record**

16:30 – 18:00 Deploying innovation in routine care: lessons learned by the EU

Moderator: *Diane Whitehouse*
eHealth Social Scientist expert, EHTEL

- 16:40 ***Engaging stakeholders for innovation for active and health ageing: the project ENGAGED***
Mariëlle Swinkels
Strategic advisor Brabant Region of Smart Health

- 17:00 ***Building evidence for telehealth in routine care: the United4Health project***
George Crooks
Medical Director NHS 24 and Director of the Scottish Centre for Tele-health and Telecare. Scotland

- 17:20 ***Bridging the gap between telehealth projects and routine care: the Momentum project***
Marc Lange
Secretary General EHTEL

- 17:40 **Question and answer session**

18:00 – 18:30 Conclusions. *EU Round table on how to join stakeholders forces for Health Innovation*

18:30 – 18:45 Closing Session I international meeting on healthcare innovation in Galicia

Moderator: *Antonio Fernández-Campa García-Bernardo*
Secretary General. Galician Ministry for Health

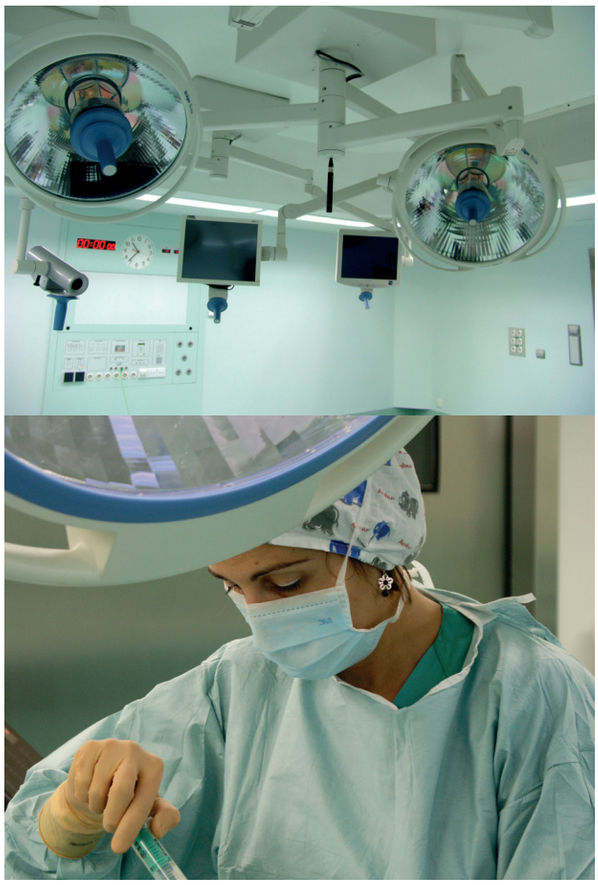
19:00 – 21.00 Social Event: Guided tour of Santiago Cathedral

Objectives

- Develop collaboration between all actors involved in the commissioning and fostering of innovation projects in the field of health and innovative public procurement in Europe.
- Share the best experiences of innovative projects in the field of health.

In order to achieve the objectives, content focus on:

- How increase relationships and collaboration between the European Commission and the European Regions involved in the European Strategy for Active and Healthy Ageing, axis of European funding in Horizon 2020.



- The overall strategy of innovation in Galicia and in particular in the field of health.
- The good practices carried out in Galicia that have become a reference region within the European Strategy initiative for Active and Healthy Ageing: Global Electronic Health Record System IANUS, and innovation initiatives and innovative public procurement.
- The state of innovation projects "Hospital2050" and "Innova Saúde" financed with ERDF – Technology Fund.
- Initiatives and innovation-related Health developed by national and regional institutions in Europe strategies.
- Advance in the modeling of common Innovative Public Procurement in Europe:
  - Presentation of the experience in Galicia in Public Procurement of Innovative Technology and ongoing initiatives on Pre-commercial Public Procurement in the field of health innovation.
  - Presentation of the experiences on innovative public procurement in Europe: Silver PCP and collaborative network project EcoQUIP.

Speakers:

On this International day I will participate in health innovation leading professionals in the field of health, project and national and international technologists. Get introduced to the stars of the meeting:

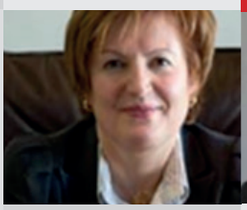
SPEAKERS

MONDAY APRIL 28th 2014

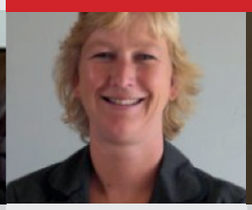
Mr Wojciech Dziworski
Senior Official of the European Commission, Unit "Innovation for Health and Consumers"

Mª Isabel García Fajardo
Coordinator of the Health Innovation Platform, Ministry of Health, Social Services and Equality

Francisco Conde López
Galician Minister for Economy and Industry



Rocío Mosquera Álvarez
Conselleira. Galician Minister for Health



Mariëlle Swinkels
Strategic advisor Brabant Region of Smart Health. Holland

Marc Lange
Secretary General EHTEL since 2005's. Manager / partner in European ICT projects for the public sector since 1992

Claus Duedal Pedersen
Chief Consultant, Odense University Hospital, Denmark

George Crooks
Medical Director NHS 24 and Director of the Scottish Centre for Telehealth and Telecare. Scotland

Benny Eklund
Manager e-Government, County council of Uppsala. Sweden

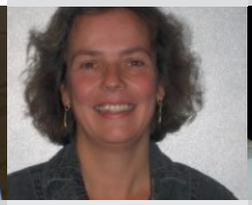
Sonia Martínez Arca
Director of Innovation and Management of Public Health. Galician Ministry of Health

Diana Whitehouse
eHealth Social Scientist expert, EHTEL

Antonio Fernández - Campa García - Bernardo
Secretary General. Galician Ministry of Health

Javier Quiles del Río
Manager of Health Innovation Programs Hospital 2050 & Innova Saúde at Servizo Galego de Saúde

Angus Hunter
EcoQUIP Project Manager. Improving the efficiency, quality & sustainability of healthcare through innovation procurement



Carla Dekker
National Coordinator SILVER PCP Supporting Independent Living for the Elderly through Robotics

Juan Manuel Garrido Moreno
Deputy Director for Development of the Business Innovation, Goverment of Spain

1st MEETING ON HEALTHCARE INNOVATION

PROGRAMING

TUESDAY 29th APRIL 2014

08:45 - 09:30 **Registration**

09:00 - 09:30 **Opening.** *Mª Nieves Domínguez González*
Manager of SERGAS (Galician Healthcare Service), Government of Galicia

09:45 – 11:45 **Cycle on Innovation: inspiration and creativity for healthcare innovation** ***Life KIC internal meeting***

09:45 – 11:45 ***Can we change the system through innovation?***

Services design from the user's standpoint
Asier Pérez
Founder and director of Funky Projects. Associate lecturer at the Innovandis Programme for Innovation and Entrepreneurship, University of Deusto

Innovating from within
Jorge Juan Fernández
Director of E-Health and Health 2.0 of the San Joan de Déu Hospital, Barcelona

Julio Mayol
Director of the Innovation Unit of the San Carlos Teaching Hospital, Madrid

Carlos Peña
Coordinator of "Espacios Innovación" of Innova-Saúde; cardiologist at the University Hostipal of Santiago de Compostela

Rodrigo Gómez
Coordinator of the Healthcare Innovation Platform, Healthcare Department of the Galician government and Galician Healthcare Service

Problems and solutions
Antonia González
Innovator. Healthcare Innovation Platform, Healthcare Department of the Galician government and Galician Healthcare Service

Q&A

11:45 – 12:15 **Coffee break**

12:15 – 14:30 **Technical workshop on Innovative Public Purchase: innovation in plans H2050-Innova Saúde**

Moderator: *Benigno Rosón*
General vice-director of Information Technologies and Systems, Healthcare Department of the Galician government

The experience of companies in the IPP editions of plans H2050-Innova Saúde: COREMAIN, PLEXUS, BAHIA y BALIDEA

14:30 – 16:00 **Lunch**

16:00 – 17:30 **Opportunities for innovation in healthcare services**

Moderators: *Miguel Blanco*
Coordinator of the Innovation Node at the Integrated Management Area of Santiago de Compostela; neurologist at the University Hospital of Santiago de Compostela

Alberto Fernández
Head of the Pulmonology Department at the University Hospital of Vigo

The user's experience
Patrick Berry
Vice-president of Communication and Marketing, Premium Blendhub

Innovation experiences in projects H2050 and Innova Saúde

Tele-visits
Francisco Calvo
Head of the Cardiology Department at the University Hospital of Vigo

An innovation project: Digital Home
Emilio Casariego
Head of the General Medicine Service at the Lugo Integrated Management Area; co-ordinator of the Digital Home sub-project, Innova Saúde

Process improvement through innovation: the traceability project in Hospital 2050
Maria Jesús Perez Taboada
Director of Nursing Processes at the Lugo, Cervo and Monforte de Lemos Integrated Management; co-ordinator of the Traceability sub-project, Hospital 2050

Challenges for innovation: Platform for Innovation in medicine and healthcare technologies
Manuel Desco
Head of the Unit of Support for Innovation of the Gregorio Marañón Institute of Health Research. Madrid

- ***PRIS Project. Project for the pre-commercial development of the research findings of the Galician Public Healthcare System***

Competences for innovation: Gradschool, leadership in action, supervisor masterclass
Javier López
General director of the Barrié de la Maza Foundation, A Coruña

17:45 – 18:15 **Conclusions**

18:15 – 18:30 **Closure of the meeting**

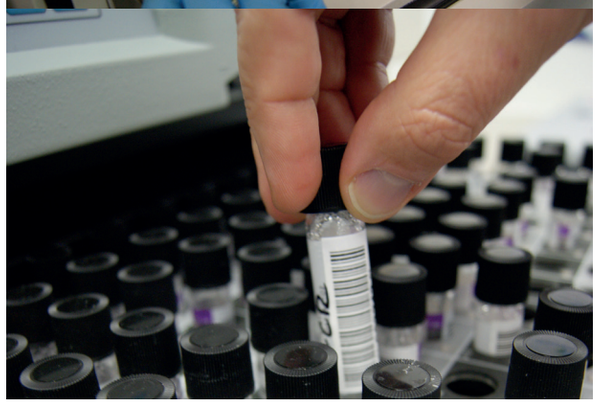
Modera: *Félix Rubial Bernárdez*
General director of Medical Assistance, SERGAS
(Galician Healthcare Service)

Objectives

Now more than ever, work on such highly complex environments as healthcare requires rethinking the performance of assistance services. Many of those services were designed decades ago, when the needs and demands of the population were different.

In some cases there is a disproportion between the resources they consume and the net benefits for the users' health. In short, we have many assistance services that can be improved; sometimes, they only need some tweaking to start working more efficiently.

It is in this realm that innovation must be a lever for change. It must contribute to the supply of safer, better, more sustainable services for the users. To achieve this, we must encourage professionals to identify with the organization for which they work, so that they are more participative in the design and start-up of improvements to processes whose true protagonists they are.



In this meeting we want to appraise innovative service models and initiatives from an open and collaborative point of view. Ideally, these models and initiatives would serve as inspiration and they would be replicated and introduced into other environments.

What will we be doing?

- We will be analyzing, from a critical perspective, the difficulties of implementing innovation in healthcare
- We will be presenting the point of view of the companies that participate in the competition for projects H2050 and Innova Saúde, backed by ERDF-Technology Fund.
- We will be analizing the provision of healthcare services from the user's standpoint.
- We will be analyzing, from the professional's standpoint, the innovation process and its impact upon service provision and healthcare products manufacturing.
- We will be appraising the need to work in new professional competences related to innovation.
- We will be analyzing the medium-term perspectives and challenges in the context of collaboration towards innovation.

Speakers:

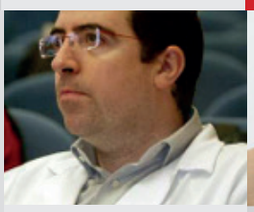
SPEAKERS

TUESDAY 29th APRIL 2014

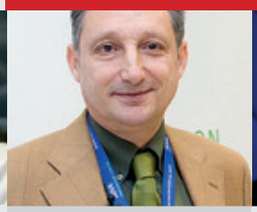
Mª Nieves Domínguez González
Manager of SERGAS (Galician Healthcare Service), Xunta de Galicia

Asier Pérez
Founder and director of Funky Projects (innovation consultancy)

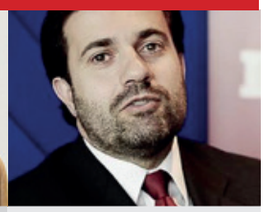
Jorge Juan Fernández
Director of E-Health and Health 2.0 of the San Joan de Déu Hospital, Barcelona



Félix Rubial Bernárdez
General director of Medical Assistance, SERGAS (Galician Healthcare Service)



Manuel Desco
Head of the Unit of Support for Innovation of the Gregorio Marañón Institute of Health Research, Madrid

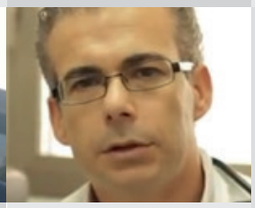


Javier López
General director of the Barrié de la Maza Foundation, A Coruña

Julio Mayol
Director of the Innovation. Unit of the San Carlos Teaching Hospital, Madrid

Carlos Peña
Coordinator of "Espacios Innovación" of Innova-Saúde; cardiologist at the University Hostipal of Santiago de Compostela

Rodrigo Gómez
Co-ordinator of the Healthcare Innovation Platform, Healthcare Department of the Galician government and Galician Healthcare Service



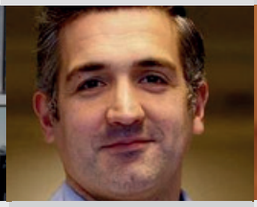
Alberto Fernández
Head of the Pulmonology Department at the University Hospital of Vigo

Benigno Rosón
General vice-director of Information Technologies and Systems, Healthcare Department of the Galician government

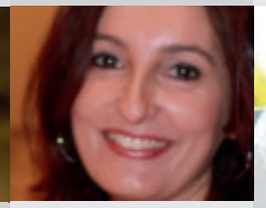
Patrick Berry
Vice-president of Communication and Marketing, Premium Blendhub

Francisco Calvo Iglesias
Head of the Cardiology Department at the University Hospital of Vigo

Antonia González
Innovator. Healthcare Innovation Platform, Healthcare Department of the Galician government and Galician Healthcare Service



Miguel Blanco
Coordinator of the Innovation Node at the Integrated Management Area of Santiago de Compostela; neurologist at the University Hospital of Santiago de Compostela



Maria Jesús Perez Taboada
Director of Nursing Processes at the Lugo, Cervo and Monforte de Lemos Integrated Management; co-ordinator of the Traceability sub-project, Hospital 2050

Emilio Casariego
Head of the General Medicine Service at the Lugo Integrated Management Area; co-ordinator of the Digital Home sub-project, Innova Saúde

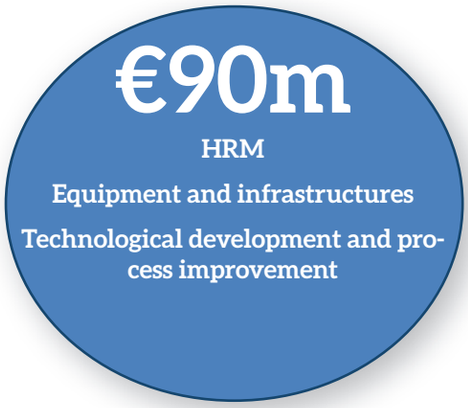
GENERAL PRESENTATION OF THE H2050 AND INNOVA SAÚDE PROJECTS

Scope

Hospital 2050 and Innova Saúde are two Healthcare Innovation plans with an investment of more than €45,000,000 each, whose chronological frame is 2012-2015, co-funded by ERDF Funds within the **"RTDI Operational Plan for the benefit of businesses, Technology fund 2007-2013."**

The mission of the H2050 and Innova Saúde Innovation Plans **is creating the future model for Galician public healthcare, which in turn can be a national and international reference.**

The novelty of these projects is that **healthcare professionals and patients** will be the protagonists and will partake of the plans' definition, development and appraisal.



Both projects are based on an agreement with the former Ministry of Science and Innovation (MICINN), currently known as Ministry of Economy and Competitiveness (MINECO), which made SERGAS the recipient of an investment funded by ERDF-Technology.

Both projects are funded by **ERDF (80%) and SERGAS (20%)**.

The main aims of both projects are:

- To establish a **model of open innovation** between the different agents of the healthcare sector in the Autonomous Community of Galicia, so that their knowledge, ability and potential can be turned into value.
- To seek, in a systematic and planned manner, for **innovative solutions that meet the present and future needs and challenges of healthcare systems.**
- To promote **Public Procurement of Innovation**, a tool of innovation policy whose ultimate aim is to dynamize innovation and internationalization through the arrangement and strengthening of technological demand.
- To develop **business models to utilize the products and services** generated within the framework of future collaborative projects.
- To **group complementary businesses**, from different sectors, in the environment of tractional high-value healthcare projects that foster the opening of **new lines of business** and penetration into new markets, thus favouring the growth of the sector in the Autonomous Community of Galicia and Spain.
- To establish a new relationship model allowing for swift and durable synergies between the **different agents of the healthcare ecosystem**: Galician Healthcare System (SERGAS), different administrations such as the Ministry of Economy and Competitiveness, businesses and knowledge centres.

HOSPITAL 2050

The final result of Project **H2050** is the physical demonstration to scale of the premises of the hospital of the future, which will be physically carried out in the new area of the Ourense Hospital Complex, belonging to the Galician Healthcare System. The design's conception will not lose sight of a new patient-centred functional model, based on an open and participative approach to assistance. H2050 will facilitate the implementation of this model and will provide it with innovative technological resources that will foster a more efficient and secure management of services, of the performance of healthcare professionals and of natural resources.

- **The hospital of the future shall be a safe hospital.** The patient's safety, a key component of the quality of assistance, has become very relevant in the last few years: for patients and their families, who wish to feel safe and trust the healthcare assistance they receive; and for managers and professionals, who wish to offer a safe, effective and efficient healthcare assistance.
- **The hospital of the future shall be a green hospital**. It shall include programmes for the efficient use of water and energy, for the integral management of solid and liquid waste and for the adequate handling of chemical substances, amongst others, as well as complying with current environmental and healthcare regulations. It will set a standard for the implementation of cleaner production strategies, improving environmental performance in healthcare, resulting in immediate economic and environmental benefits.
- **The hospital of the future shall be a sustainable and efficient hospital**. This implies that it must be integrated in the environment on which it impacts, which nourishes and supports it. These relationships must therefore be taken into account, as though they were an ecosystem. The benefits of this sustainable approach will be apparent in different areas: reduction of environmental and occupational hazards; environmental education; safety and health; quality of attention to patients; cost cutting; energy expenditure cutting; improvement of logistics and productivity.
- **Finally, the hospital of the future shall be open to the rational and appraising use of new technologies:** a meeting place, a space for innovation where all the agents shall converge around users. Hospitals will be the entry-point and the place where many healthcare and non-healthcare related technologies consolidate, assuming the fundamental responsibility of their integration in the National Healthcare System.

INNOVA SAÚDE

INNOVA-Saúde is an innovation plan whose main aims are:

- **PATIENT-CENTRED healthcare assistance**: in the last few decades, the healthcare model focused on acute patients has been subsituted with a model focused on chronic patients who require continual care. INNOVA-Saúde assistance services will move in this direction, developing new delocalized tools (tele-assistance, tele-monitoring, web 2.0 portals for patients, etc.) that can prevent those illnesses from becoming acute. In this way, the need for services based on hospitalization is reduced and communication and accessibility on the part of the patients are increased.
- **SAFE AND PROMPT healthcare assistance**: that healthcare assistance is safe which applies new technological solutions to minimize, to the greatest possible extent, the professional's human error. Thus, the patient's safety will be increased through the development of intelligent information and communication and the integration of new processes. At the same time, INNOVA-Saúde aims to design and fulfil a secure environment for healthcare professionals through the future development of new projects.
- **INTELLIGENT healthcare assistance**: the conventional model needs to improve its efficiency when it comes to satisfying the needs of hospitalized patients. It is therefore crucial to implement a structural change of assistance services that can warrant an excellent services performance as far as quality and security are concerned.

DEVELOPMENT PROJECTS
INNOVA SAUDE AND H2050

HCEPRO

Electronic clinical record oriented to comprehensive monitoring patient around the continuous care, to facilitate patient care chronic

Indra is a global consulting, technology, innovation and talent company. It is at the cutting edge of high value-added solutions and services for the Transport and Traffic, Energy and Industry, Public Administration and Healthcare, Financial Services, Security and Defence and Telecom and Media sectors. **Represenrative data:** 3.000M€ Sales; 42.000 Profesionals; 138 Countries ; 195 M€ R&D&i

¿What is "HCEPRO"?

Project description, construction of an electronic health record (EHR) process-oriented and directed by clinical practice guidelines and / or protocols, extending the scope to other actors, including the patient. This system aims at, the traceability of information about a health problem, which should be understood as a way to facilitate continuity of care. And secondly, standardize protocols in the course of disease care. Protocols include activities to be performed by different types of professionals and procedures not covered so far, such as tele-assistance and monitoring from the patient's own home..

Looking at the future

Innovative aspects of the solution:

- Inference engine knowledge to clinical pathways (SHIP). It will suggest possible actions to perform on status of clinical variability based on two sources: the scientific society reference and historical performances in Sergas community.
- Stratification. Generates the classification of patients in the Kaiser model and the probability of evolution to design and plan the necessary healthcare resources in the region.
- Support functions in situations of mobility: handwriting recognition on touch devices and geolocation of patients in home care.
- Process Map: Gantt chart on ongoing health problems, showing the duration and type of assistance received (primary, emergency, specialized ...)
- Multi-patient Desktop: have more than one history open and navigate simultaneously..

User Benefits

- Facilitate better coordination in health systems to ensure integrated patient-centered care.
- Create an enabling environment for citizens making healthy choices.
- Take into account the particular characteristics of every citizen, including their socio-economic circumstances in both health promotion and health care.
- Find innovative ways of profitably preventing common risk factors.
- Create a framework for integrated health promotion, primary prevention, secondary prevention (including early diagnosis), treatment and care of chronic disease research..

System Highlights

- Oriented processes EHR
- Nursing station
- Medical orders manager
- Repository of clinical variables
- Module evaluation scales
- Mobile EHR (HCEMOV). 83
- Assistance protocols manager (SHIP)
- Stratification system for patients

innova saúde

HDA
Digital home care

indra

Telefónica

Indra is a global consulting, technology, innovation and talent company with solutions and services for the Transport and Traffic, Energy and Industry, Public Administration and Healthcare, Financial Services, Security and Defence and Telecom and Media fields.
Telefónica is one of the integrated operators worldwide leader in providing solutions for communication, information and entertainment that has spent years promoting the development of technological solutions for diverse sectors including the Health telecommunications.

¿What is "HDA"?

It is a Technology Platform for Home Care which aims to unite health centers with the patient's home so that health professionals can remotely and continuously monitor the patient while maintaining their quality of life, avoiding preventable hospital admissions and decreasing classroom activity and unnecessary visits.
It is a scalable system in both services and clinical processes whose management has the objective of moving towards a preventive and proactive model that maximizes the non-contact activities and would reduce assistance load.

Looking at the future

Using Sofia2 - Platform IoT (Internet of Things) to health care settings: middleware service integration with SemanticWeb technologies, BigData, Hadoop and management of complex events and alarms.

International standards:
PAN and LAN Interfaces: USB, Bluetooth HDP, ZigBee Health Care and WAN Interfaces: based on IP.
Use X73/IEEE11073/HL7 **communication standards** on these interfaces: for exchange of confidential health information as guides CHA.
SOA Approach to Integration..

Physical telerehabilitation, Cardio-respiratory and Cognitive: comprehensive rehabilitation system in both the motor field and cardiopulmonary programs. .

Includes mobility management and Smart TV.

Information integration of social services.

User Benefits

Benefits for the patient:
- Patient stays in his environment.
- Anticipation and early detection of worsening health.
- Greater participation and responsibility in the clinical process and the management of their health.
- Improved accessibility to health services
- Patient-centered care and their needs

Benefits for the health system:
* Improving its ability to provide an integrated and continuous care through the use of new models of consultation (videoconferencing and teleconferencing) that will reduce the number of home and office visits in professional staff..

System Highlights

- Digital Home Healthcare Portal
- Care services, monitoring platform, module and general telecare services.
- Core Healthcare System
- Core System Services Generalists
- Integration with CETIR, IANUS, HIS (SIHGA, SIGAP / Insis) XESIT, LDAP. TS

TRACEABILITY

Development service concentrator location platform and events within the subproject gs1-sh2050
Integral traceability of patients and resources

Coremain is an ICT consulting company with wide experience in solutions development for business, strategy, deployment and maintenance of information systems in healthcare organizations.
COTESA is a leader in the design and development of services and applications based on ICT in order to apply them to all disciplines related to management and spatial analysis.

¿What is Traceability?

Project description: The objective of this project is to develop a traceability system focused on improving quality and efficiency of the services offered to patients and professionals, into three main areas of scope: Patients, Resources and Professionals. The system will be able to identify, locate and manage patients in real time, having a single centralized system, equiped with spatial capabilities. Resources may be inventoried in a numerical or spatial way, thus achieving a more efficient use and higher levels of security into the resource management process. On the other side, professionals will be able to improve daily management, by making use of task optimization techniques and obtaining a system that guarantees their physical and logical security.

Looking to the future

As a main commercial product, there will be obtained a Location and Events Concentrator Platform that will be able to integrate information related to patients, resources and professionals, through services that may be invoked by any other subsystem. The location system will generate data and events that will be integrated with such information. This is a main difference between this solution compared to those already available on the market, which are mainly focused into indoor/ outdoor location management, and generally limited to a specific location technology. It is in fact an innovative product that will improve the efficiency of the Health System, contributing to its sustainability and giving more quality into the health assistance processes. The whole system is based upon the latest technologies in every involved field. The technologies used are robust, reliable and well tested in multiple production projects in many sectors of Information Technology and Telecommunications.

User Benefits

It helps to optimize the allocation of professional staff, providing to the Servizo Galego de Saúde a mean to adapt constantly to the actual workload needs.
It increases health care efficiency, because waiting times will be reduced, and performing changes and improving actions over the different processes and procedures will be possible, in a fast and effective way.
It increases quality and reduces decision taking times, because of being based upon global and real-time information.
It involves and commits professional staff to be the driver of change, by making easy to manage resources and planning the activities that conform the health assistance process.

System Highlights

- RTLS Location Component.
- Persistence Component.
- Process Definition Component.
- Process Control Component.
- Event Subscriptioin Module.
- Event Parametrization Module.
- Query and Operation Module. Big Data.
- Visualization interfaces.

InnovaSIS

Integrated Patient Management System

everis
an NTT DATA Company

coremain

everis is a multinational consulting firm committed to internal talent in order to offer their clients customized solutions. In health scope has participated in high-impact projects in diverse health organizations.
Coremain is an ICT consulting company with wide experience in solutions development for business, strategy, deployment and maintenance of information systems in healthcare organizations.

What is InnovaSIS?

Innovasis is a comprehensive solution of patients management. Supports the new healthcare processes by showing a unique and cross view of healthcare. It facilitates professionals and managers in healthcare with access to all patient information when needed, supporting decision making.

It is created to be a strategic asset for healthcare organizations which will allow an integrated care management and centralize the planning of clinical services at all levels within the health system.

Looking to the future

Current information systems and most commercial software were developed in an environment where needs were focused on health care of acute processes. They were based on organizational structures as Specialty Care and Primary Care.

Innovasis is designed in a new health context, adding new functional features such as adaptability to different organizational models, support for chronic processes or management by processes.

Provides an innovative approach based on the most important strategic guidelines of the Servizo Galego de Saúde. Therefore it guarantees the match between the solution and current and future needs.

User Benefits

It will permit a quick response to any healthcare need, reducing time for bureaucratic affairs and improving patients' quality of life.

For professionals it will lead to a qualitative leap in functionality that will be reflected in the information total accessibility, including mobility scenarios.

It will allow to establish an innovative healthcare model, focused on citizens and ensuring the commitment from professionals.

System Highlights

- Care request registration
- Programming and Planning manager
- Care Protocols and Processes manager
- Hospitalization manager
- Ambulatory \ Surgical manager
- Ambulatory Hospitalization manager
- Home Hospitalization manager
- Communication to patient manager

SIGUR

Smart system for Emergency Department management

everis
an NTT DATA Company

everis is a multinational consulting firm committed to internal talent in order to offer their clients customized solutions. In health scope has participated in high-impact projects in diverse health organizations. ehCOS Suite is a set of world-class products that encapsulates everis expertise in eHealth projects.

What is SIGUR ?

SIGUR is an ICT platform for integrated health emergency management which enables straightforward and ubiquitous access to accurate patient information, assuring continuous care throughout ambulances, primary care and hospital emergency departments.

It is based on technologies supporting proactive and real time management of care information, natural user interfaces and advanced mobile solutions. SIGUR simplifies care activity in emergency departments working under changing and heterogeneous conditions lacking of standardized communication channels.

Looking to the future

Health Systems strategies empower the role of ICT solutions in Emergency Care in order to move towards process standardization and reduce variation of clinical practice.

Mobility, usability and real time access to meaningful information are key factors for a system endowed with smart interfaces and innovative technologies to reduce impact on working environment.

User Benefits

SIGUR increases professional autonomy at both primary care and emergency medical transportation levels enabling a comprehensive view of care process. System deployment will help workflow optimization and clinical decision support which will turn into improve quality of care and patient safety in emergency department.

System Highlights

Clinical worksation supporting care activity at:

- *Hospital emergency department*
- *Emergency coordination centre*
- *Continuous care unit*

Service management software allowing and integrated vision at the different care levels.

On line information desk for patients and relatives providing:

- *General information about emergency department*
- *Information about patient care process*

XESAC

Service development and implementation of a activity control system within the sub-project GSi-H2050-2-complete traceability of patients and resources

PLEXUS

Plexus is **an Information and Communications Technology**(ICT) firm specialized in providing high added-value services in the areas of telecommunications, computer application development, IT systems and computing infrastructures.

¿What is "XESAC"?

XESAC is a new activity control system (Activity management) that offers centralized management and planning of an organization's personnel shifts, including medical and non-medical staff.
In a general sense, staff allocation is divided into three sections:
Workforce management: This is the main component of the system responsible for managing data and information (workforce, managers, resources), and presenting it in an intuitive way, enabling the user to manage schedules and patient demand.
Allocation engine: Used for planning and assigning shifts.
Integration engine: Eases the task of interoperability between different subsystems.

Looking to the future

XESAC is a leap forward regarding other current planning systems.
The use of intelligent analytic components brings important advantages in management strategies, thanks to its scheduling and resource planning algorithms. These algorithms relate a set of constraints (collective agreements, holidays, shifts) and a set of collectives (doctors, nurses, office workers) to calculate an optimal allocation of professional time slots.
These features are achieved by using open source technologies and tools that facilitate scalability and robustness of the system, with no need to pay for license acquisition.
.

User Benefits

→ Reduction of waiting times caused by service saturation. This is achieved through the anticipation of situations where there will be more demand than supply of resources and through the mobilization of resources from other areas where there is less work load.
→ Improved assistance thanks to the optimization of available resources based on demand, thus avoiding the creation of deficit and professional excesses: less waits, more professionals tending to the patients, more consultation time, etc…
→ Anticipation of possible conflicts with clinics or unavailability, thus drastically reducing the need to reprogram patient appointments.
→ Early detection of conflicts with programmed activities and greater anticipation prior to sending patient modification/cancelation alerts.
.

System Highlights

Based on multilayer architecture:
1. First layer, users interact with the application via web browsers.
2. Second layer, formed by Java EE application pool servers where the applicaction will be deployed.
3. Third layer, Necessary persistence and data systems for correct function (SGBD, LDAP)

SIEDOC

Centralized system for the import, export, and DICOM format conversion of medical imaging and clinical records

BAHIA SOFTWARE, founded in 1999, is a technology company that specializes in consulting, development, and the integration of systems within the healthcare field. Expertise and a commitment to innovation and excellence have become the key technological partners in effectively addressing the challenges and innovative initiatives in an environment as critical and complex as healthcare.

What is "SIEDOC"?

SIEDOC is a solution that offers healthcare organizations a centralized system to depend on for the import, export, and DICOM format conversion of medical imaging and clinical records.

SIEDOC is developed over a previous system called 'BayDICOM', a contrasted solution with more than 50 installations in several community services of health and private organizations.

Looking Forward

Healthcare centers should be able to depend on tools that allow their Patients access to their personal information in order to get a **second opinion**, or for online use by personnel in the same manner, or to be provided in different formats such as CD/DVD, USB, memory cards, etc. Health centers are receiving increasing numbers of clinical records and imaging tests in this format, resulting in a need to count on the effectiveness of DICOM import tests, external to the organization, performing the necessary **consolidation of patient/study information accurately integrated into the corporate system**. It is also essential to have tools for conversion to the DICOM format (*dicomization*) for imaging, video and biometric signals like ECG's in order to incorporate these types of studies into the Electronic Health Record (HCE) in a flexible and coherent manner.

User Benefits

Patient access to personal health records through efficient standardized formats.

External records are incorporated into the corporate system with the appropriate **translation of patient data and action**.

More information is available through electronic health records by converting to the DICOM format, especially for use with medical media tools such as ECG's, videos, image stills, etc.

System Components

- The export of medical imaging
- The import of clinical records
- DICOM format conversion
- Online access for patients to their clinical information

CIM
Medical Imaging Center

BAHIA SOFTWARE, founded in 1999, is a technology company that specializes in consulting, development, and the integration of systems within the healthcare field. Expertise and a commitment to innovation and excellence have become the key technological partners in effectively addressing the challenges and innovative initiatives in an environment as critical and complex as healthcare.

What is the "CIM"?

The **Central de Imagen Médica** is a platform that will offer the availability of diagnostic quality medical imaging to all professionals within a healthcare organization, regardless of where the image was generated. The strategic objectives to be achieved within a healthcare organization with the inclusion of CIM are:
i) Access to diagnostic quality imaging from anywhere. ii) Post-processing of remote tests and storage of original results. iii) Comparative tests from different centers. iv) Reporting support from other centers in case of overloads. v) Improved average time and quality of reports. vi) Increased availability of specialists and recommended professionals. vii) Reduction of the number of patient tests performed as well as fewer repetitions.

Looking Forward

The CIM provides professionals with access to all archived patient imaging, with improved quality, and facilitates diagnostic tests.

The CIM provides **adjustment of workloads** among hospitals, as well as attention to possible incidents and work overloads.

With CIM healthcare facilities **take advantage of the full potential of each professional** within the organization by identifying recommended personnel for assistance with diagnoses fordifferent types of tests.

This model encourages the recognition of professionals and increases the quality of care with the appropriate assignment of each patient case.

User Benefits

Professionals can access any medical imaging of any patient, **anytime, anywhere**.
Increased **safety for patients**.
Improved efficiency and effectiveness, leading to the **reduction of time** associated with the processes.
By offering reporting systems at different locations and with varied devices, it provides healthcare with a greater availability of resources.
Professionals appreciate that all the information needed is available in a fast, simple and transparent manner.
The fact that the examination and diagnosis of a patient can be done by a recommended specialist within a healthcare organization, regardless of location, **will provide better patient care regardless of where a diagnosis was obtained.**

System Components

- Information System for Central Medical Imaging
- The Exchange of Medical Tools
- Viewing Platform

SAVAQ

Advanced surgical system

bahia software

everis
an NTT DATA Company

BAHIA SOFTWARE, founded in 1999, is a technology company that specializes in consulting, development, and the integration of systems within the healthcare field. Expertise and a commitment to innovation and excellence have become the key technological partners in effectively addressing the challenges and innovative initiatives in an environment as critical and complex as healthcare.

What is the"SAVAQ PROJECT"?

SAVAQ is an innovative **solution for the management of surgical processes** that works to support the major phases of such procedures: preoperative, intraoperative and postoperative. It allows the integration and analysis of all information channels that are developed within the surgical process, with the aim of offering clinicians a tool to **aid and support the decision-making process**. This facilitates the improved security, efficiency and quality of the process.

Looking Forward

SAVAQ offers management personnel a **comprehensive and integrated vision** of the development of surgical procedures, which facilitates and supports strategic and operational decision-making. The system allows the storage of data generated by the electromedical equipment during the surgical process. Thanks to a strategy application based on **artificial intelligence**, information **analysis** can be used to improve both medical procedures and surgery logistics. SAVAQ incorporates **intelligent scheduling algorithms** for optimizing the use of materials and human resources involved in the development of surgical procedures.

User Benefits

Professionals will have a **new user interface**, adapted to the special conditions (mobility, sterile environments...) of each of the profiles involved in the development of a surgical procedure.
The **expert system** that includes SAVAQ will analyze data generated during surgical processes, having the ability to infer new knowledge, identify patterns and provide information in real time to medical professionals, assisting them in clinical decisions.
SAVAQ to clinicians in **Clinical Guidelines and Protocols** during all the critical phases of surgical procedures to increase its safety.

System Components

- Information System for the management of surgical procedures
- Expert System
- Clinical surgical station
- Integration module for electromedical equipment

CETIR
SERGAS Real Time Communication System

Balidea Consulting & Programming is an ICT company whose e-Health department is specialized in Communication. Communication with citizens and professionals in the areas of professional 3.0 and expert-patient (Website, Intranet), communication with patients and their families and communication with/among health professionals.

¿What is "CETIR"?

The **CETIR platform** enables the efficient management of the **SERGAS** communications systems, acting as an **all purpose intercom** among business management systems (electronic health record EHR, Human Resources management tools...), corporate communication systems (telephone, chat, videoconference,...), and devices (IP phones, softphones, videoconference equipment, mobile devices...)

Looking to the future

ICT has revolutionized the way people communicate

The Galician Public Health Service (**SERGAS**) is no stranger to this revolution and tries to offer new communication solutions
BALIDEA has always played an important role in the communication between the Galician Public Health Service and its users (Web, Intranet, collaborative portals, Professional 3.0, cloud-mobile e-learning, ARCO rights management...)
The e-Health area of Balidea has successfully participated in the H2050 and Innovasaúde programmes, as a result of an strategy focused in R&D&Innovation and in the creation of competitive consortiums
In the future Balidea will keep investing a great effort in innovation under a strategy of smart specialization and internationalization

User Benefits

Benefits for professionals and patients:

- Accessibility: they will be able to communicate over multiple devices: Smart TV, mobile phone, tablet, computer, land line...
- Versatility: they will be able to communicate over IM, phone, videoconference, e-mail...
- Robust, secure and accessible system (W3C)

Benefits for the SERGAS:

- It takes advantage of corporate communication systems already in operation
- It incorporates new communication systems (medical video-appointments...)
- It provides information for management and evaluation: traceability, data mining, usage information...
- Free software, modular and scalable solution

System Highlights

- Access interface
- Communication systems
- Configuration module
- Connection module with business corporate systems
- Data mining module

OTHER PROJETCS OF INNOVA SAUDE

InnovaSaúde

Innova Saúde is a Healthcare Innovation Plan with an investment of more than €45m that will take place until 2015, co-financed by ERDF funds within the RTDI Operational Plan for the Benefit of Businesses, Technology Fund 2007-2013.

HEXIN
Platform for the exploitation of information and management of clinical and epidemiological data

Project description. Platform for the exploitation of all the clinical information available in electronic clinical histories, aiming to facilitate decision-making in the areas of clinical, management and support in the identification of epidemiology cases.
The platform will implement the introduction, transformation and normalization of clinical information in non- and semi-structured formats with anonymization and access-control functions. The solution will also provide a search engine for information and information analysis in order to find correlations and statistical values in the data thus obtained.
.

GMV

ADICAD
Cross-specialty platform of advanced processing of medical digital imaging to help diagnosis

Project description. CAD (computer-assisted diagnosis) services platform on medical imaging for accessing self-made or commercial algorithms of different typologies, with the aim of improving the productivity and quality of the specialists' diagnostic work. The system will allow professionals to securely receive cases and run the relevant CAD analysis, then generate results and return them to the system of origin.

Dominion

XEDOSE
Patient dosage control system

Project description. Dosimetry management system incorporating the information of radiodiagnosis, nuclear medicine, radiotherapy and hæmodynamics / interventional radiology. The system will have a repository of information and processing, with algorithms enabling the normalization and aggregation of received dosage information. This will allow radiophysicists, radiologists and healthcare staff to view the information through electronic clinical histories.

General Electric

XEDOC
Integrated system for the digitalization, indexing, custody and management of clinical information

Project description. Development of a platform for the digitalization of documents in printed form, enabling the identification of clinical documents, their digitalization, indexing and insertion in the systems of documental management, integrating the use of this information into the centres' clinical information management systems.

QUERES

Public Procurement of Innovation in H2050 and Innova Saúde

In projects Hospital 2050 and Innova Saúde, SERGAS has developed a new model for contracting and developing innovation projects by means of public procurement of innovation (PPI), relying on consulting services provided by the Idom Consulting company. These services focus on the design of public policies for fostering competitiveness:
Benchmarking of best practices and successful international cases of public procurement of innovation.
Definition of the PPI model for projects H2050 and IS.
Procedure for the management of the open call regarding proposals for innovative solutions in the framework of projects Hospital 2050 and Innova Saúde. This is intended to be a mechanism for technical dialogue with the market, within the SERGAS model of PPI and open innovation.
Publication of the results of the open call regarding proposals for innovative solutions and national and international promotion of PPI.

IDOM

XUNTA DE GALICIA
CONSELLERÍA DE SANIDADE

MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD

UNIÓN EUROPEA
Fondo Europeo de
Desenvolvemento Rexional
"Unha maneira de facer Europa"

SERVIZO
GALEGO
de SAÚDE

FEGAS
Escola Galega de
Administración Sanitaria

innova
saúde

galicia

DE ASÍS A COMPOSTELA
1214.2014

HEALTH INNOVATION PLATFORM

Tel.: +34 881 540 054

E-mail: Plataforma.Innovacion@sergas.es

http://www.sergas.es/plataforma.innovacion