



MINISTERIO  
DE CIENCIA  
E INNOVACIÓN

*isc*  
Instituto  
de Salud  
Carlos III

Telemedicine and e-Health Research Unit (TEHRU)

# Telemedicine and eHealth Research Unit

## Activities

March 2015

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- 01 National Institute of Health Carlos III
- 02 Telemedicine and eHealth Research Unit
- 03 Enviromental Intelligence Technologies and Radiofrequency Lab

# 01 National Institute of Health CarlosIII



The Institute of Health Carlos III (ISCIII) is and Research Public Institute belonging to the Ministry of Economy and Competitiveness

- The objective of the Institute's activity, mainly focused on public health service, is to provide advisory services in all matters pertaining to health and disease processes, health monitoring, and, particularly, contagious diseases including, among other, epidemiological monitoring, diagnostic and control of same, the study of outbreaks, epidemics, or other infectious, environmental, health emergencies, or non-widespread diseases.

- The ISCIII participates actively in the coordination and promotion of the RTD programmes of the European Union in Spain, particularly those related with e-Health. The Institute collaborated largely with the Commission of the European Union in the preparation of working plans of the Telematics Applications Programmes of the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, and H2020 Framework Programmes.
- The Institute has a sound experience on requirements analysis, standards, usability, risk analysis, and evaluation on Information Technology Systems in Health Care.
- Experts from the Institute has been actively involved in workshops and consultative meetings dealing with AAL and ILS.

### Main lines

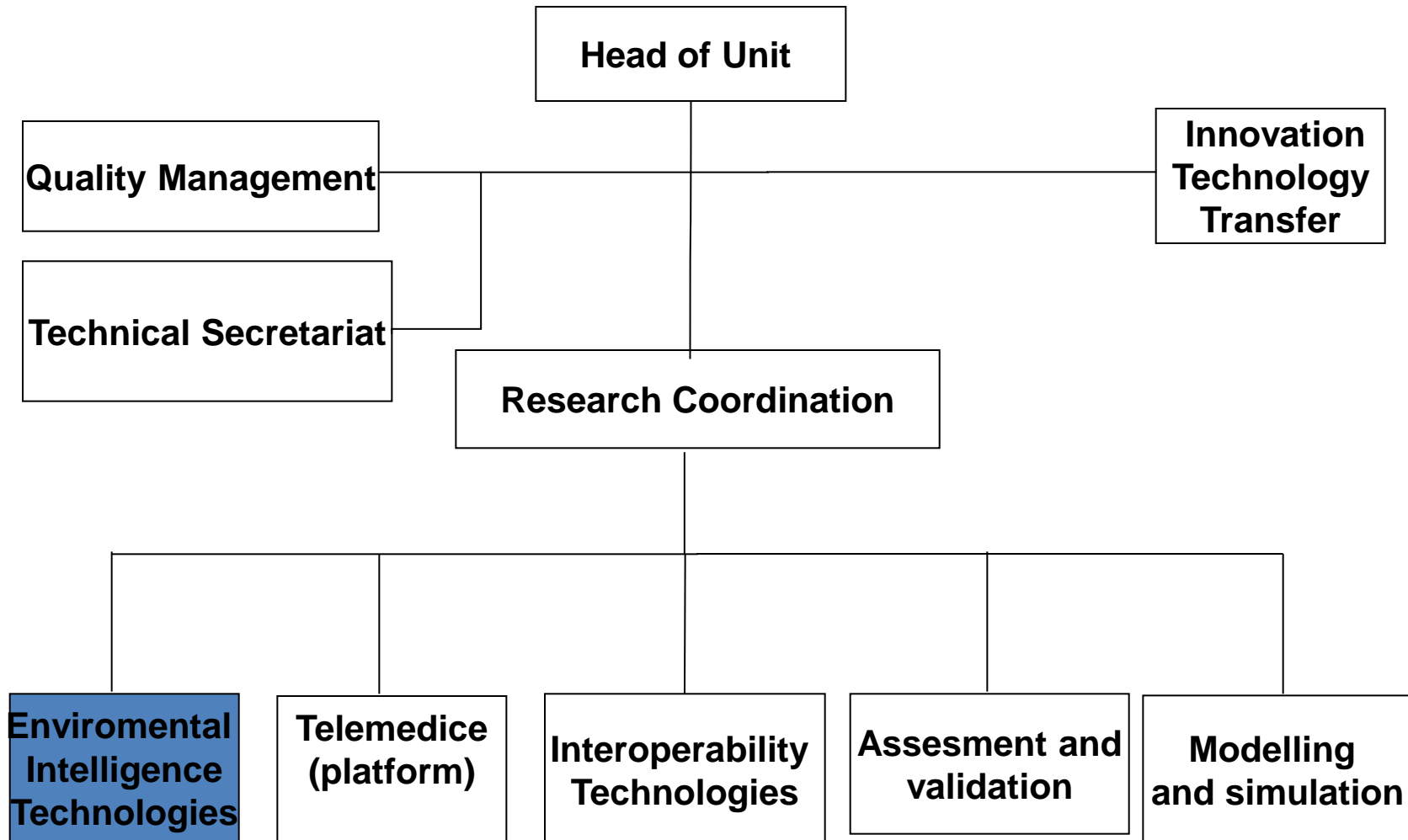
- Mobile personal Telemedicine for tracking, control and promoting health in chronic patients
- Integration in healthcare services of the new models of care based in Telemedicine
- AAL: Ambient Assisted Living

## 02 Telemedicine and eHealth Research Unit

- The function of the Telemedicine and e-Health Research Unit is to carry out research and development projects and as well as innovation and technology transfer projects in the field of application of new healthcare information and communication technology according to the guidelines established by the National Research Plans in Telemedicine, and the H2020 European Union Framework Program
- The Mission is Research, Development and Innovation about methods, systems and services for a better health and wellbeing using Communication and Information Technologies

# 02 Telemedicine and e-Health Research Unit

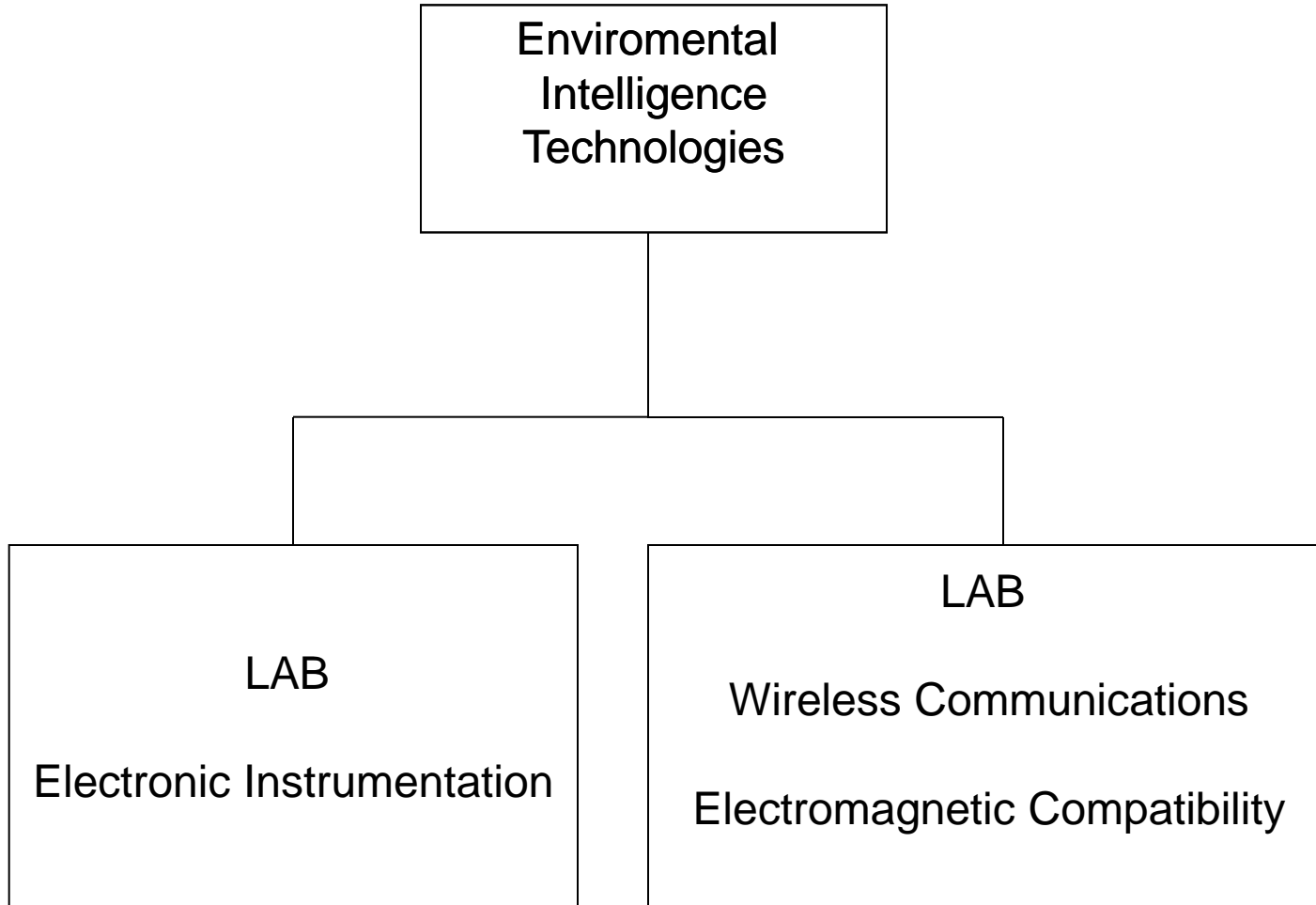
## Organization chart





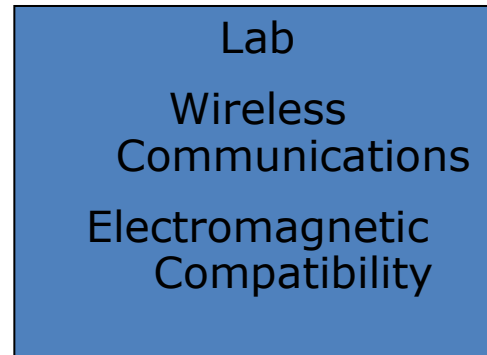
# 02 Telemedicine and e-Health Research Unit

## Organization chart



# 03 Environmental Intelligence Technologies and Radiofrequency Lab

## Environmental Intelligence Technologies

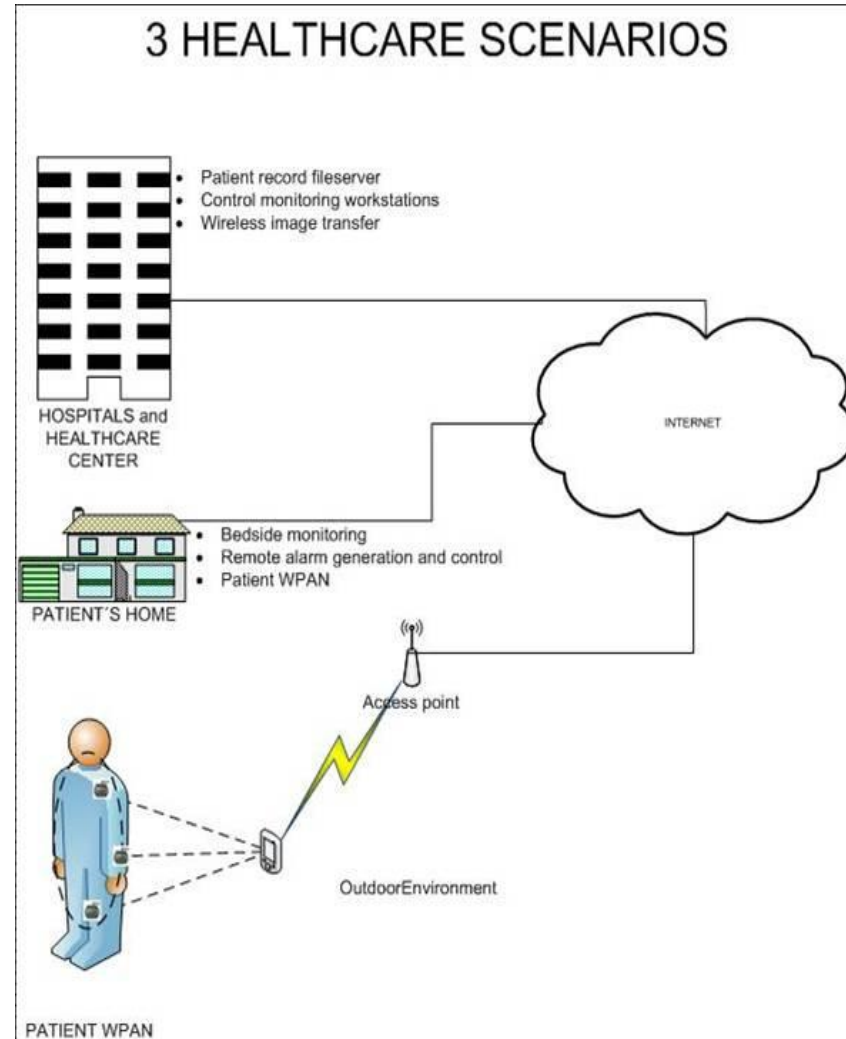


- Evaluation of standards, and national and international legislation that regulate the applications of new health services based on Information and Communication Technologies
- Study, assessment, and application of the regulation
- People protection against electromagnetic emission
- Electromagnetic compatibility of wireless personal networks

# 03 Environmental Intelligence Technologies and Radiofrequency Lab

## Activities

- Electromagnetic Compatibility (EMC) in healthcare environments
  - Hospitals and healthcare environments
  - Home
  - Outdoor environments



# 03 Environmental Intelligence Technologies and Radiofrequency Lab

## Activities

- In 2014-2015 our main activities have been centered in the following topics:
  - Experimental and numerical dosimetry in bio-electromagnetics,
  - Electromagnetic compatibility, radio-frequency electromagnetic fields,
  - Assessment of exposure to no-ionizing radiations.
  - Characterize the electromagnetic environment produced by smart meters

# 03 Environmental Intelligence Technologies and Radiofrequency Lab

## Activities

- Our activities in close relation to COST EMF-MED are centered in the following topics:
  - Biomedical telemetry based on wearable, implantable and ingestible radio-sensors for bodycentric applications;
  - Monitoring of vital signs, autonomous body sensors
  - Radio-frequency identification (RFID), Short-Range-Device systems in healthcare
  - Wireless EMF-based technologies related to medical telemetry and other medical uses
  - Develop appropriate measurement tools for EMF dosimetry as well as optimal exposure and application setups
  - Interaction with low-levels EMFs

# Thanks for your attention

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