

research & innovation in medicine



Project co-financed by the European Regional Development Fund



Beneficiary

inn  med



Innomed is an Italian start up limited company born in March 2011, highly specialized in software development and ICT services for healthcare.

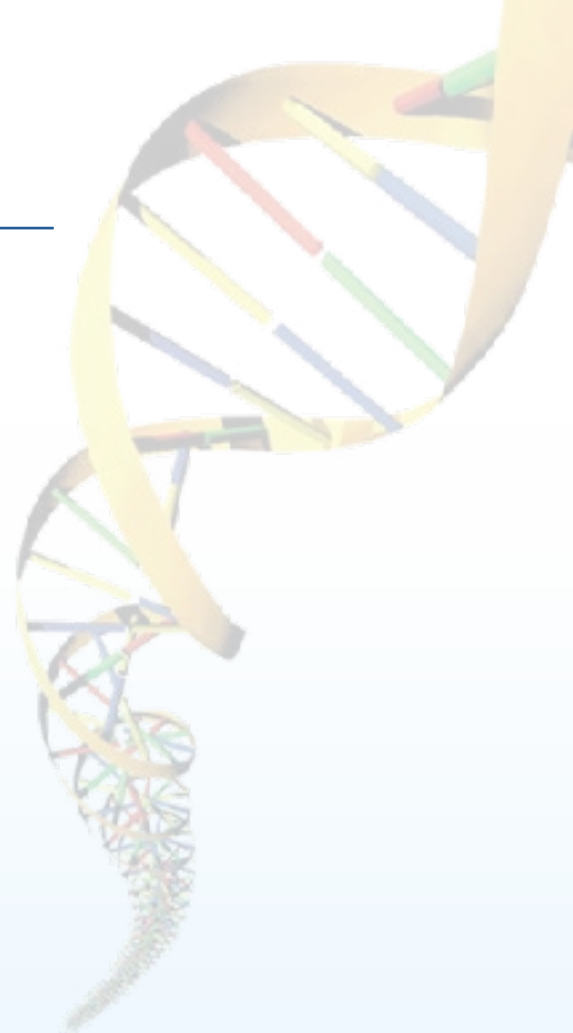
Runned by a young team, Innomed develops products and services for diagnostic, neurology, neurosurgery and for clinical engineering.

Innomed can provide to its customers:

- Secure and an efficient management of biomedical and clinical equipment;
- Integration of different medical systems and digitization of medical data and processes;
- Assistance during equipment acquisition process and during all their life cycle;
- Development of highly specialized hardware and software for biomedical applications;
- Network and data management in healthcare.

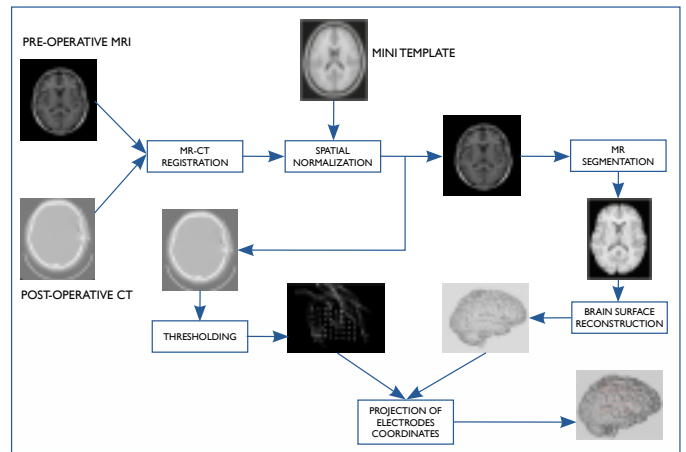
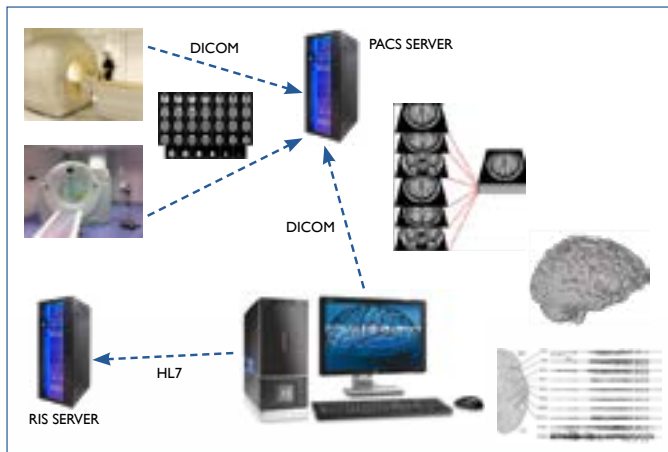
Main focus is neuroscience, thanks to its strong relationship with the Neurological Research Hospital Neuromed located in Pozzilli (IS).

Innomed offers products that work or interact with DICOM (Digital Image and COmmunication in Medicine) or HL7 (Health Level Seven) standards.



advanced brain imaging
health technology assessment
functional brain mapping
biomedical engineering
pre-surgical mapping
biosignal processing
brain navigation

Another key skill of INNOMED is to provide consultancy in “Health Technology Assessment” (HTA) to hospitals and medical institutions, to help them in the evaluation of properties, effects, and/or impacts of health technology. INNOMED offers to its customer a multidisciplinary approach to evaluate the social, economic, organizational and ethical issues of a health intervention or health technology. From 2014, Innomed has been partner of “Cyber Brain”, a neurocybernetic research center in Caserta, whose aim is developing neuroprosthetics and robotic devices to help people with motor and cognitive disabilities to improve their quality of life.



SPEL (Software Platform for Electrodes Localization)

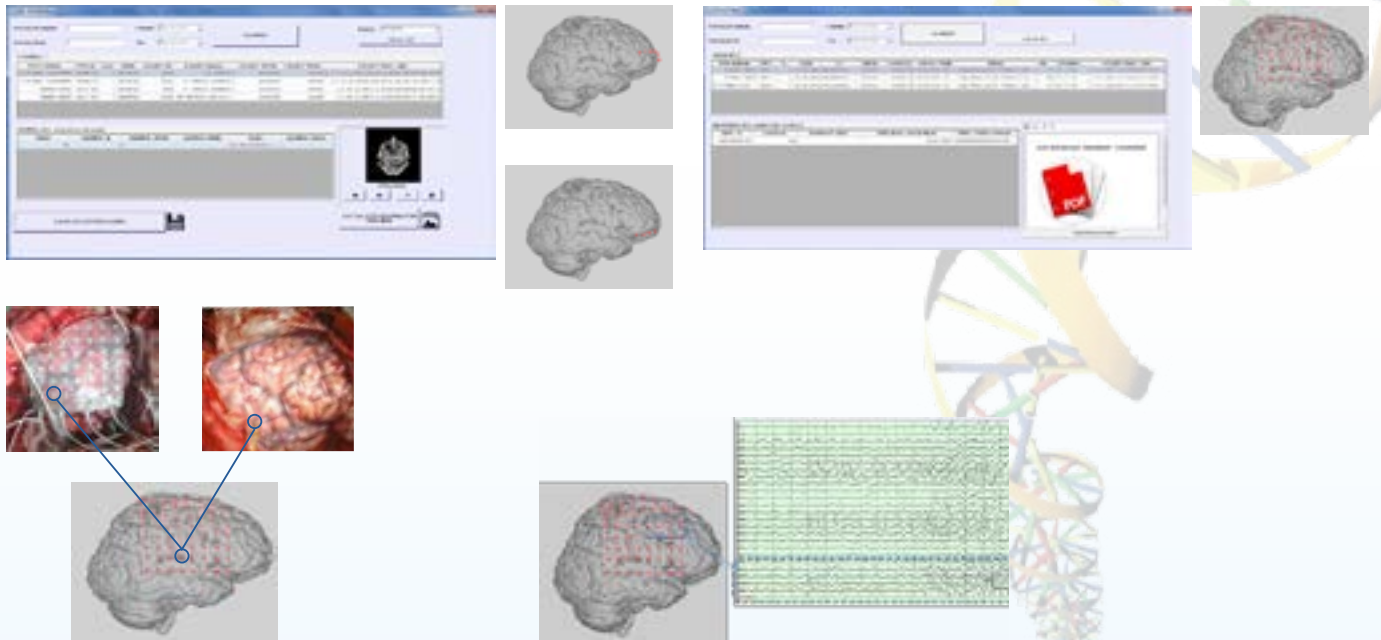
SPEL is intended for monitoring of brain signals in the pre-surgical evaluation of patients investigated with subdural or deep electrodes and to help neurologists and neurosurgeons during pre-surgical functional brain mapping and during surgery.

SPEL provides a fully automated method to plan grid and strip electrodes placement and localization on a 3D rendering of the individual cortex using pre-operative MRI (Magnetic Resonance Image) and post-operative CT (Computed Tomography).

The software allows to retrieve medical images in DICOM (Digital Image and COmmunication in Medicine) format from PACS (Picture Archive and COmmunication System) systems and also to retrieve other information about the patient from RIS (Radiology Information System) systems.

All the processed data (images, objects,...) can be exported in DICOM format to use them with most of Surgical Navigation Systems.

It's the first and the only one commercial software that allows to automatically localize electrodes on patient-specific brain model in few minutes, starting from DICOM datasets.



Highlights

- Completely automated localization on patient-specific brain rendering of all implanted electrodes;
- Export of results in different formats (DICOM, JPEG, PNG,...);
- Connection and retrieve data from PACS and RIS systems;
- Highly accurate results;
- Integration with most of Surgical Navigation Systems;
- Manual extraction and visualization of subsets of electrodes (strips, grid,...);
- Electrodes Tailarach/MNI coordinates and anatomical localization.

Clinical applications

- Multimodal Image Coregistration;
- Grid and Strip Electrode locations and placement planning;
- Processed images in DICOM format for using in the surgical operations;
- Correlation between neurophysiological, anatomical and functional data;
- Epilepsy monitoring and surgery;
- Neurosurgery.

PROJECTS

POR CAMPANIA FESR 2014-2020

Specific Objective 3.4 “Increase in the level of internationalization of production systems” - Action 3.4.2 “Incentives to purchase support services for internationalization in favor of SMEs”.

Innomed Digital Health In China”

BioInItaly

Investment Forum 2016 & Intesa Sanpaolo Start-Up Initiative:

Italiacamp

Technology Transfer in Health and Biomedical Research

PhD ITalents

Ministry of Education University and Research

Method of localization of electrodes for monitoring bioelectric signals from the patient’s brain

Italian Patent (Patent n° 0001419459)

European Patent application (Patent n° WO 2014155203 A1)

Partnership with industrial partners and Academia

- Istituto Neurologico Mediterraneo NEUROMED, Pozzilli (Is)
- Engineering & Consulting Group srl, Pozzilli (Is)
- Istituto Clinico Mediterraneo, Agropoli (Sa)
- Malzoni Radiosurgery Center, Agropoli (Sa)
- Clinica Villa del Sole, Salerno (Sa)
- Diagnostica Medica, Mercogliano (Av)
- Casa di Cura Trusso, Ottaviano (Na)
- Casa di Cura Malzoni Villa dei Platani, (Av)
- Polo di Innovazione Neurobiotech, Caserta (Ce)
- Centro Italiano Ricerca Aerospaziale CIRA, Capua (Ce)
- Cyber Brain
- Itab
- Sapienza University
- Tor Vergata University

INNOMED DIGITAL HEALTH IN CHINA



In the context of the **POR CAMPANIA FESR 2014/2020** - Public Notice for the financing of grants for the internationalization programs for Campania SMEs, the internationalization strategy proposed by INNOMED is aimed at identifying paths that can foster the growth of international relations from a systemic perspective that allows the strengthening of the presence on foreign markets with particular reference to the Chinese area.

In fact, China presents numerous opportunities for the ICT sector in the biomedical field, which represents the company's core business.

The program was designed taking into account the expected prospects both as a research provider and as a provider of ICT services in the biomedical field, increasing the competitive advantage both in Italy and in other countries.

The strategy proposed with the project Innomed Digital Health in Cina CUPB25F19000920007, therefore, provided the implementation of different actions aimed not only at opening up to new markets but also, from an innovative point of view, the process of industrialization of the results of research activities, attracting capital and investments.

The actions will be concentrated in the **Hubei area**, the province where the **University of Science and Technology of Wuhan** is located, an area with a high concentration of various actors from the research and innovation system.

The program aims to achieve the following goals:


- participation in the accompanying actions of the companies on the Chinese market;
- consolidation of strategic agreements with international partners, with a strong vocation for technology transfer;
- start of operational plans for attracting investments from foreign operators.

The objectives to be pursued can be summarized through a double line of action for the promotion of research activities and services offered by INNOMED abroad:

- promotion of research activities in the health and biomedical sector;
- promotion of highly innovative services in the ICT sectors in the biomedical field.

The project

The proposal provides for a term of 18 months and is divided into two phases:

- the first, connected to the organization of missions abroad for the definition of strategic agreements with the aim of generating productive growth processes, as well as the promotion, cooperation and international partnership as interchange and integration with other strategic areas and sectors for the development of business innovation activities with an impact on the territory;
 - the second, focused on a subsequent incoming action in Campania of selected Chinese operators in the ICT and digital health sector.
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MOLISE Region - Pozzilli (Is) - Italy



CAMPANIA Region - Caserta - Italy

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