

HOSPITAL EQUIPMENT AND HEALTHCARE TECHNOLOGY SECTOR IN SPAIN AND VALENCIA'S REGION_



THE SECTOR

Hospital equipment and medical equipment sector comprises the following subsectors:

1. - **Medical Tool unexpendable:** stethoscopes, speculums, forceps, scalpels, scissors...
- 2.- **Expendable medical and surgical equipment:** needles, syringes, masks, cotton, catheters, gloves, bandages, tapes...
- 3.- **Electromedical equipment for both diagnosis and therapy:** electrocardiographs, scanners, audiometers, blood pressure, radiography and radiotherapy equipment, incubators...
4. - **Furnishing and equipping of hospitals:** articulated beds, instrument trolleys, examination tables...
5. - **Orthopedic prostheses and implants:** bone substitute, osteosynthesis, silicon templates, fixers...



THE SECTOR IN FIGURES

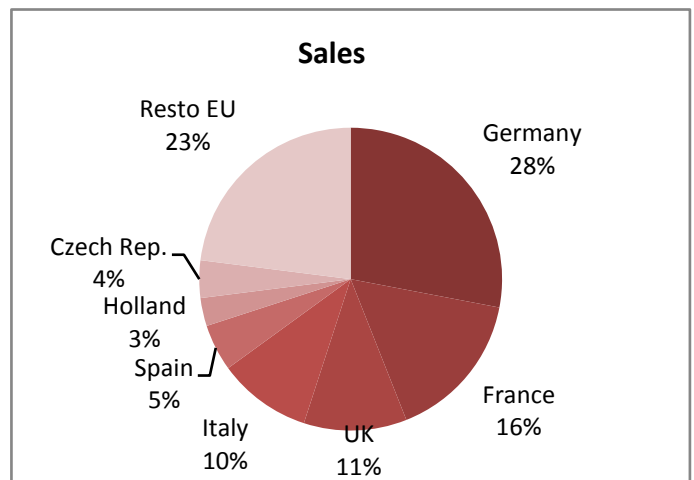
According to EUCOMED (European Medical Technology Association) data, the European health technology industry was composed in 2013 of about 25.000 companies, 95% of them were SME (less than 250 workers) employing about 575.000 people.

In Spain, the number of companies totaled 4.872 which provide direct and indirect employment to 2.000 people.

Sales volume of this industry in the European Union is about EUR 100.000 million, which a 5% belongs to Spanish market. Spain with Germany, UK, France and Italy is part of those 5 countries that represent the 75% of the global European market.

According to data of DIRCE, the industry of manufacturing instruments and supplies of medical and dental in Spain is composed of 4.870 companies, which 530 are placed in Valencian Community. Only 3 firms in Spain are big companies (more than 250 workers), even though they absorb half the Spanish market.

Cataluña, Madrid, Andalucía and Valencian Community account for about 64% of investments in healthcare technology.



The Valencian Community occupies a very important place in the medical equipment and healthcare technology industry with an 11% of Spanish companies. In the Valencian Community, is located 90% of national production of implants for orthopedic surgery and traumatology; most of it are destined to export.

Some of the products destined for hospital equipment, are health products (which includes electromedical equipment, techniques of in vitro diagnostics, products for nephrology and hepatology, cardiovascular surgery, neurosurgery and pain treatment, implants for orthopedic surgery and traumatology, sanitary single-use products, dental products, optical and ophthalmology ...).

The subsector of technical orthopedics, join the manufacturing activity of orthotics and external prostheses and the provision of information, advice, adaptation and setting all kinds of technical aids. In the Valencian Community, it is estimated in 80.000 people the volume of population which benefits of the use of orthopedic products which are adapted (orthotic and prosthesis trunk, upper and lower limb, and others), which rises to 250.000 when considering the activity and service provided in orthopedic establishments.



STRENGTHS OF THE SECTOR IN SPAIN

The strengths of the sector are:

- The growing trend associative of companies.
- Medium-high technological level of Spanish companies, with an opportunity to be in international markets. Increase in R&D.
- Increase in international demand: growing demand for medical devices due to: aging population in developed countries, increase in health spending and increase in population with higher purchasing power – and greater access to healthcare in emerging countries.
- Development of new non-vital medical care.

- More competitive prices.
- Incorporation of new technologies in equipment and materials: introduction of ICT (Information and Communication) to implement the e-health (interconnection centers, unique medical history of the patient, electronic prescriptions, remote monitoring of chronic patients or dependents ...) research new materials (multifunctional polymeric materials), new biotechnological advances ...
- Higher expectations from citizens demanding more and better healthcare services
- Renewed involvement of Public Organisations promoting R&D and innovation, the interconnection of health centers, homogenization methods and standards, and new forms of public-private partnerships in the provision of health services.



FOREIGN TRADE OF MEDICAL EQUIPMENT AND PHARMACEUTICAL PRODUCTS

Spain has become the fifth European country within the exporters of healthcare technology. The most Spanish products traded are single-use items (catheter, surgical equipment, etc.), material related with the in-vitro diagnosis (study sample) or electromedicine (ray apparatus, ECG, Holter ...). Also robotics, telemedicine and eHealth, are among the main areas for Spanish companies.

Exports of Valencia's Region 2014

Tariff	Products	Thousands of €
9021	Articles and orthopedic appliances	65.112
30	Pharmaceutical products	57.155
9018	Medical devices	13.729
9019	Mechanotherapy devices	5.517
9022	X-ray machines and radiography	2.436
9402	Medicine furniture	2.290
Total exports		146.240

Foreign trade of equipment and medical furniture

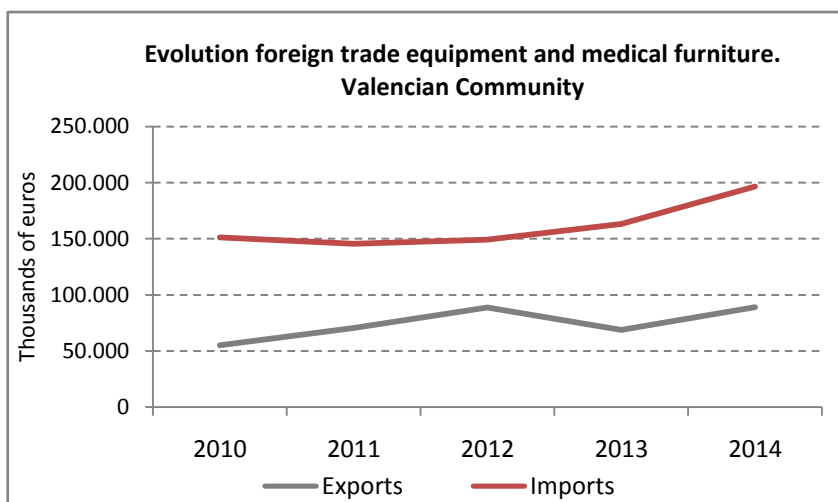
Between 2010 and 2014, exports of medical equipment and medicine furniture of Valencian companies registered a progressive growth path. In 2014 sales of these products in foreign markets raised EUR 89 million, a 62% more than four years before.

The Valencian Community is the fourth Spanish region which exports these products.

The most dynamic products in foreign markets are the ones related to X-ray and radiation, growing by 411% in the last four years, and instruments and appliances used in medical, surgical and dental, which has doubled its sales in the same period.

On the contrary, sales of breathing appliances and medical furniture and surgery, have registered a decline since 2010.

The countries of the European Union are the main customers, which monopolize two thirds of total exports of these Valencian products, with an increase of 67% between 2010 and 2014. The Netherlands and France are the two main markets.



Outside the European Union, it is highlighted the US market, which stands at 2014 third main client in the market, with an increase of 1,22% in 2010-2014. Similar growth recorded exports to Russia.

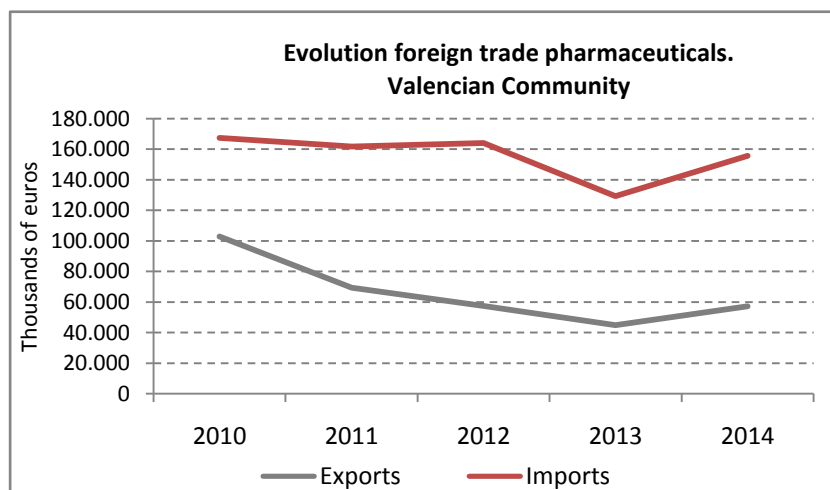
Other rising markets are Latin Americans (Cuba, Panama, Ecuador, and Mexico) Saudi Arabia, Asia (Hong-Kong and Japan) and North Africa (Algeria and Morocco). Exports to Japan amounted in 2014 to EUR 335.080, compared with EUR 77.000 sold four years before.

Foreign trade of pharmaceutical products

In contrast to above headings, the Valencian pharmaceutical exports have shown a downward trend over the past four years, except for the year 2014.

In 2014, markets of the European Union had been the recipient of 55% of Valencian pharmaceutical exports (EUR 31,4 million), especially Belgium and Germany.

By contrast, there has been a notable increase in exports to non-European countries as diverse as: United Arab



Emirates, Australia, Taiwan, Latin America (Brazil, Mexico, Panama, Chile, Argentina...), Poland and the Philippines, among others.



TECHNOLOGY IN VALENCIAN COMMUNITY

Small and Medium Enterprises (SMEs) play a key role in world economies, especially in the Spanish and Valencia Production Sectors, which are composed mainly by Family SMEs. Globalisation offers opportunities as well as threats to SMEs competitiveness. In particular it widens the innovation and technology gap between the scientific and technology sector and the production sector.

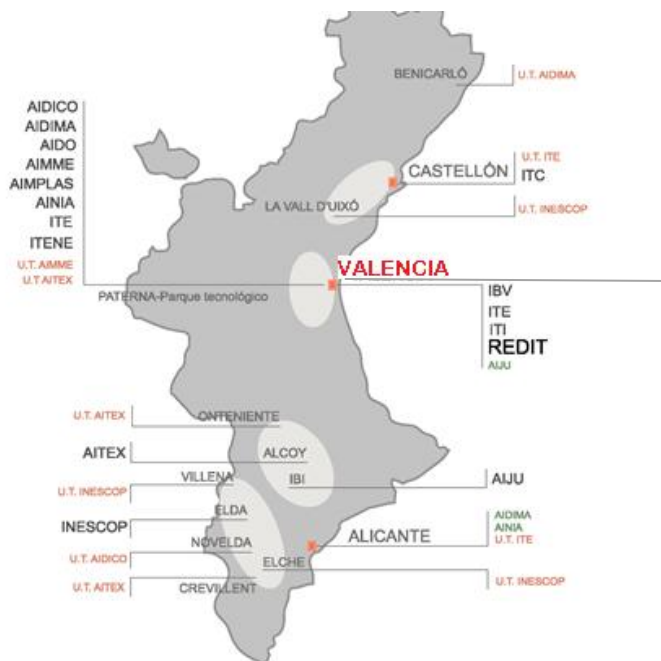
In order to bridge this gap, better access to financing, information, services and knowledge & technology transfer that facilitate the R&D and Innovation processes has to be provided through specialised intermediaries. Value added for enhancing SMEs competitiveness is created by fostering the networking and integration of intermediaries, as well as extending their networks at international and regional level.

Embodying these considerations and thanks to the support of the Valencian Region Government, the Technological Centres have since early 70's consolidated their position as key agents in the Regional System of Science- Technology- Enterprise.

Furthermore, considering that technology is more and more complex and that the most advanced innovation systems have become extraordinarily sophisticated, **REDIT**- Network of Technological Centres in the Valencian Region-, was created in April 2001, through the Regional Department for Industry, Commerce and Innovation, aimed at encouraging the development of synergies, alliances and collaborations between its Technological Centres members:

AIDIMA – Wood, Furniture , Related Products	AITEX – Textile
AIDO – Optical, Colour and Image	IBV – Biomechanics
AIJU – Children ‘s Products and Leisure	ITC– Ceramics
AIMME – Metal-mechanic	ITE – Energy
AIMPLAS – Plastic	ITENE – Packaging, Transport and Logistic
AINIA – Agrofood	INESCOP –Shoes, Leather and Related Products
	ITI – ICT

Currently, the Technological Centres integrated in REDIT account for 5.961 associated firms and more than 12.000 corporate clients. Among the latter, 40% are located in the rest of Spain. In consequence, the Technological Centres of REDIT stand out for their proximity to the Valencian Region production system, especially to Family SMEs.



PRESENTATION OF THE MISSION SECTOR AND ITS ADDED VALUE

The particular characteristics of Valencia's productive structure and its environmental perspectives provide a view to identify the HEALTHCARE as one of the major economic sectors that favor the region, and place it in an internationally advantageous position.

The health sector in Valencian Region is a capital area in which to invest, due to its innovative character, exporting and attracting international capital and talent. In this regard, it should be noted that this sector is not limited to activities related to the portfolio of health system services but encompasses segments as relevant as biotechnology or the pharmaceutical industry.

Today, Valencia is the fourth region in Spain for export, and the fourth Spanish region with the highest density of companies.

The public network of health and socio-sanitary centres in Valencian Region is composed of:

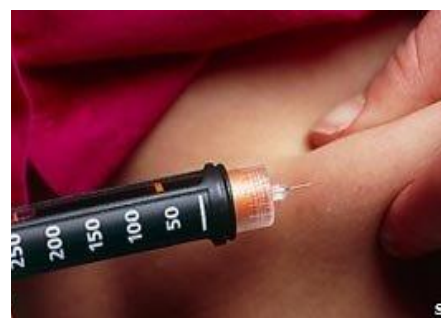
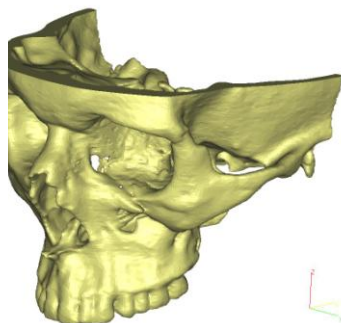
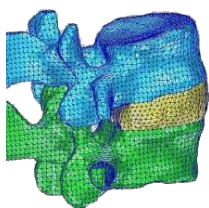
- 33 hospitals
- Blood transfusion centres
- Primary assistance services
- Public health centres
- Services and departments of the regional government on health

Furthermore, there are 5 Foundations for Research acting as managers of the R&D and innovation in the mentioned hospitals (Instituto de Investigación Sanitaria de La Fe, INCLIVA, FISABIO, Fundación del Hospital General Universitario de Valencia, Fundación del Hospital Provincial de Castellón).

The Technological Centres integrated in REDIT, and Cámara Valencia are strongly related and collaborate with these entities and other private organizations, as they share solid infrastructures for supporting the innovation process transfer to SMEs and end-users, personnel with high qualified competencies in R&D& Innovation, and a complete supply of high added valued services in many disciplines (biotechnology, nanotechnology, materials, environment, design and processes, ICT) applied to different sectors such as healthcare and quality of life.

Among the technological lines directly related to health and socio-sanitary sector on which REDIT centres work and have capabilities, the following ones must be highlighted:

- 1) BIOMATERIALS: biomaterials; films development; tissue engineering
- 2) BIOMECHANICS: biomechanical models; movements analysis; ergonomical, functional and comfort evaluation of products
- 3) REHABILITATION TECHNIQUES: functional rehabilitation; smart materials for rehabilitation; labour return; implants
- 4) TELEMEDICINE: telerehabilitation; surgical planification; smart textiles for telemedicine
- 5) DIAGNOSIS, VALORATION AND HEALTH TREATMENT: food safety; bioavailability studies; microencapsulation of drugs; functional valoration; textiles for health; equipments and medical instrumentation; sensory insoles; implants; therapeutical leisure
- 6) TECHNOLOGIES AND RESOURCES FOR QUALITY OF LIFE: ageing and resouces for the elderly; diets addressed to population with special requirements such as diabetics, coeliacs, elderly, allergics, ...; dependence and resources for disabled people; inner environmental quality



OBJECTIVES OF THE MISSION

The mission is aimed to exchange the status of the health sector in Japan and Spain in order to:

- Establish strategic links between Japanese companies and organisations and Valencian companies and Technological Centres.
- Detect business opportunities to initiate collaborations.

- Get to know technologies, innovations and services to accomplish their transfer between regions.
- Identify R&D projects ideas to be carried out jointly by the participants in appropriate consortia.
- Search of distribution channels for Spanish manufactures of Health Care materials, products, etc..



PRESENTATION OF THE PLANNED ACTIVITIES

The mission will consist of:

- **B2B meetings** to offer the possibility to Japanese participants to have a pre-scheduled agenda with all the Valencian companies and technological centres participating in the mission that fit with their collaboration interests.
- **Visits to companies and technological centres** related to the healthcare sector in order to show and share the most highlighted technologies, research interests and business opportunities in the region.