### Invest in HEALTH CARE in Emilia-Romagna

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The **health care industry** in our region is made up of specialized sectors and its competitiveness is based on high quality products and services.

Research plays a strategic role, especially in the life science sectors, and is supported by the regional network that connects companies, laboratories, universities and public services.

Health also reflects quality of life, hospitals and clinics in our region are leaders in their field and renowned for their high quality of service.





#### **LEADING FACTORS**

- From 2004 to 2012 exports from this cluster rose by 71% and those of pharmaceutical industry by 142%
- 'Life Science' Platform of the regional High Technology Network and Specialized degree courses
- Leading centres for the production of prostheses; biomedical and pharmaceutical clusters; widespread presence of spas
- Eight international trade fairs
- Renowned healthcare system

#### **Invest in R&D**

The region has some **important leading centres** when it comes to the manufacture of orthopaedic prostheses: the Centro Protesi INAIL is the largest in its sector in Europe. The biomedical and pharmaceutical companies in our region also have the benefit of the support of the regional **High Technology Network**. In addition, there are numerous specific degree courses which represent yet another advantage for those investing in the sector who require the availability of qualified human resources and want to establish collaborative projects with universities in the region.

#### The cluster on an international level

It's well worth investing in the life sciences. The **strong growth of the sector can be seen in the data on export trends** from our region: between 2004 and 2012 exports from the pharmaceutical sector rose by 141,6%. There are eight international trade fairs in the region (including Exposanità, Sana, Rimini Wellness, Cosmoprof) that promote the products and services of regional companies and also act as a meeting point for investors and international operators from the field.

#### **Local specializations**

The business structure is made up of **more than 42 thousand companies**. The highest concentration of those working in the sector are to be found in Bologna and Parma. There are also **several relevant districts and specializations**: the biomedical cluster in the area around Mirandola (Modena); Budrio (Bologna) has a large concentration of companies from the prosthesis sector; the province of Parma is specialized in the production of medicines and pharmaceutical preparations. There is also a widespread range of spas all over the region.

#### **Healthcare system**

The public regional sanitary system has a very good reputation both at national and international level. Emilia-Romagna ranks third in Europe for the **quality of the health services**, after Holland and Switzerland (source: Fond. Economica Rosselli, 2014). The region boasts the **highest attractiveness index in Italy** (measuring the relation between patients from other regions and residents that choose hospital outside the region), together with Lombardy. Moreover, Emilia-Romagna is first in Italy with respect to: resources assigned to the fund for long-term care; assistance to terminally ill patients at home; spread and effectiveness of early diagnosis with cancer screening.

The regional public hospitals are 61. The total number of hospital beds is 20thousand (77% of which is in public hospitals), equal to 3.62 places for acute patients per 1,000 inhabitants.

# SOME COMPANIES FROM THE REGION

#### **BIOMEDICAL**













#### **PHARMACEUTICAL**



#### **WELLBEING**





#### **PACKAGING**











#### The regional health care cluster

The health care industry can be divided into two main sub-clusters: biomedical, pharmaceutical and a third one linked to wellbeing which also has a good impact on tourist attractiveness to the region. The health care cluster is also connected to the national health care service in the region: hospitals are renowned for their high quality of service and performance.

#### Health care value chain

# PRODUCTION AND REPAIRING

# WHOLESALE TRADE AND

#### **BIOMEDICAL**

#### **PHARMACEUTICAL**

#### **WELL-BEING** Fitness - Beauty&Spa - Food

**HEALTH CARE & SOCIAL ASSISTANCE** 

Electro-medical apparatus, medical-surgical, veterinary and odontological materials

Dental prostheses

Wholesale trade of medical and

orthoapedic items

Retail of medical and

orthoapedic items in specialized

shops

Basic pharmaceutical products, medicines, pharmaceutical preparations, glassware pharmacy Soaps, perfumes and cosmetics

Sport items

Functional food, supplements, organic products

Equipment for beauty salons and wellness centers

Orthopaedic prostheses

Intermediary companies in the trade of pharmaceutical products and cosmetics

Wholesale trade of medicines and botanical products for pharmaceutical use

Pharmacies and retail of medicines in other specialized shops

Wholesale perfumery and Cosmetics

Wholesale of equipment for hairdressers, gyms and beauty centers

Retail of sports items and bycicles

Retail of perfumery and personal hygiene items

Herbalist's shops

Sports equipment rental

Hairdressers, wellness centers and spas

Sports activities and management of sports facilities and clubs

Health care

Residential and non-residential social work

E-Health

#### Companies and the number employed

The health care cluster and sub-clusters: local units and the number employed (absolute values and %) – Source: Istat-Asia 2010

Health Care sectors	Companies (Local Units)	% of Local Units of the entire cluster	Number employed	% of number employed of the entire cluster	Average dimension LU
Electromedical apparatus	246	0.6	5.657	4,2	23,0
Dental prostheses	1,203	2.9	2.596	1,9	2,2
Orthopaedic prostheses	72	0.2	700	0,5	9,7
Total Biomedical	1,521	3.6	<i>8.952</i>	6,7	5,9
Pharmaceutical products	52	0.1	3.176	2,4	61,1
Well-being products	256	0.6	3.790	2,8	14,8
Total health care industry	1,829	4.3	15.918	11,9	8,7
Wholesale trade	2,381	5.7	5.639	4,2	2,4
Retail trade	4,140	9.8	14.135	10,6	3,4
Total trade	6,521	15.5	19.774	14,8	3,0
Sports activities and operation of sport facilities	1,413	3.4	3.549	2,7	2,5
Beauty treatments	10,055	23.9	20.816	15,6	2,1
Health clubs and spas	613	1.5	2.672	2,0	4,4
Total services	12,081	28.7	27.037	20,2	2,2
Health care	20,206	48.0	37.187	27,8	1,8
Residential and non-residential social work	1,461	3.5	33.791	25,3	23,1
Health	21,667	51.5	70.978	53,1	3,3
TOTAL HEALTH CARE	42,098	100	133.707	100	3





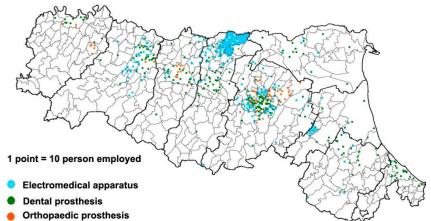




#### The regional health care cluster

The number employed and local units are equally split between the two main sub-clusters: biomedical and pharmaceutical.

#### Health care cluster – Number employed in the biomedical sector in 2010



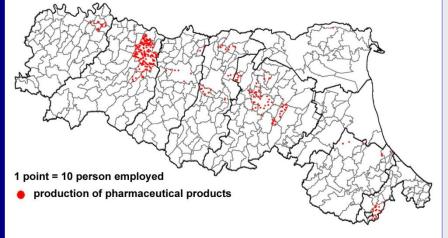
## Districts and areas with higher concentrations of number employed

#### **Biomedical**

Sub-Cluster

- The Mirandola District (also comprises Medolla, Concordia, Cavezzo)
- Followed by Bologna, Imola and Parma
- In **Budrio** (BO) the largest centres for the production of orthopaedic prostheses

#### Health care cluster – Number employed in the pharmaceutical sector in 2010

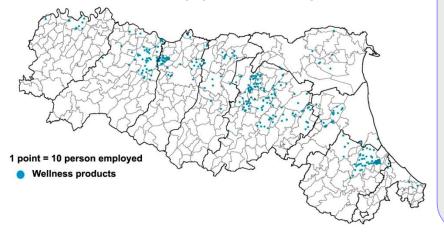


#### **Pharmaceutical**

Sub-Cluster

 High concentration in the province of Parma, specialized in the production of medicines and pharmaceutical preparations

#### Health care cluster - Number employed in the "wellbeing" sector in 2010



#### Wellbeing

Sub-Cluster

- Thermal spas concentrated in Salsomaggiore
- Widespread presence of wellbeing centres and spas
- Manufacturing of perfumes and cosmetics concentrated in Parma followed by the province of Bologna and Piacenza.









#### The health care cluster on an international level

#### **Exports**

In 2012, the health care industry in the region exported over <u>2 billion Euro of goods</u> (7.5% of the national total). Exports from the cluster in our region amounted to 4.0% of the regional total (Databank: Istat - Coeweb).

#### Where we export to

Peso % export per aree di destinazione – 2012				
EU 27	Other European countries	East Asia	North America	
57,8	7,2	12,2	7,2	
Centre-South America	Middle East	North Africa	Other countries	
4,9	4,1	2,1%	4,5	

The main destination of regional exports is Europe.

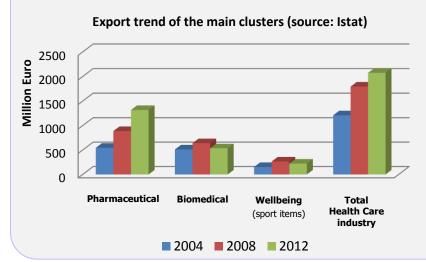
In East Asia, export is mainly concentrated in Japan and China.

Exports to North America are particularly concentrated on the USA.

The top ten importing countries in 2012 and variations in percentage terms compared with 2000				
Country	Export 2012 (Euro)	Variation % (2012-2000)		
Germany	255,812,773	129.1%		
UK	213,008,449	130.2%		
France	209,108,351	209.6%		
USA	109,018,095	70.3%		
Spain	106,563,713	82.1%		
Japan	100,836,852	317.8%		
The Netherlands	79,608,083	59.4%		
Austria	60,669,333	396.5%		
Poland	54,312,793	255.2%		
Belgium	47,687,090	53.1%		
World	2,076,578,386	143.8%		

#### **Export trends**

The variations over the long and short period show a strong growth in general of exports from the sector. In 2012, the pre-crisis level have been largely overcome. Particularly positive and notable is the growth trend in the pharmaceutical cluster.



2012- 2004
2007
141.6%
4.5%
44.1%
71.3%









#### The Health Care Cluster on an International Level

#### **Trade Fairs**



#### **EXPOSANITA'** www.senaf.it/exposanita

International exhibition of health and health care services, held at the Bologna Trade Fair site, with around 29,000 visitors of which 2,000 from abroad, with an exhibition space of over 25,470 square metres and a presence of 713 companies (2014).



#### SANA www.sana.it

International exhibition for food, health and the environment, held at the Bologna Trade Fair site. It boasts 45,000 square meters of exhibition space, and gathers around 550 exhibitors and 43,500 visitors (1.500 from abroad) in 2014. Amongst the exhibitors: individual firms, consortiums, agricultural companies and thermal facilities, with products such as organic food, herbal products, cosmetics and pieces of furniture.



#### **PHARMINTECH**

A trade fair that acts as a reference point for the pharmaceutical and para-pharmaceutical industry. It's held at the Bologna Trade Fair site every three years, with about 4,000 visitors, 315



#### www.pharmintech.com

exhibitors of which 34% are from abroad (last edition 2013).



#### **COSMOPROF** www.cosmoprof.it

International exhibition for perfumery and cosmetics with a total exhibition space of 90,000 square metres, around 2,254 exhibitors and 207,238 visitors of which more than 50,000 are foreign in 2014.



#### **COSMOFARMA** www.cosmofarma.com

International exhibition of health, wellbeing and beauty products and services for pharmacies, held at the Bologna Trade Fair site. It numbers 357 exhibitors from 20 countries and around 27,566 visitors on 30,200 square meter of exhibition space.



#### RIMINIWELLNESS// RIMINIWELLNESS riminiwellness.com

Exhibition dedicated to the world of sport (fitness, wellbeing and sport on stage), held every year at the Rimini Trade Fair, with almost 253,000 visitors and around 400 exhibitors (in 2014). Among the sectors of goods covered: sports and beauty equipment, clothing, footwear, sports medicine and nutrition.



**NATURALEXPO** www.naturalexpo.it Exhibition held at the Forlì Trade Fair, which presents products, therapies and information connected to the field of nutrition, wellbeing, environment, tourism. An exhibition space of 10,000 square metres with 14,000 visitors and 200 exhibitors (2014).



HANDImatica 2010 HANDImatica www.handimatica.it Exhibition-convention on information and telematic technology to assist the integration of people with disabilities, held in Bologna, directed at companies and institutions with the aim of developing on the theme of adapting the environment for people.

#### **Top Investors**

Some important foreign investors in the health care industry in Emilia-Romagna

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Companies	Investors	Country of Origin	Type of business
GAMBRO DASCO SPA GAMBRO SPA - HOSPAL SPA	GAMBRO AB	Sweden	Appliances for hemoanalysis/Dialysis equipment/Trading in dialysis filters/
FRESENIUS HEMOCARE ITALIA SRL	FRESENIUS AG	Germany	Filters to separate white globules in blood samples
AFM SPA	CELESIO AG	Germany	Wholesale trading of pharmaceutical products; the running of pharmacies
MALLINCKRODT DAR SRL	TYCO INTERNATIONAL INC.	United States	Diagnostic products, catheters, anaesthetic products and special sanitary healthcare products
COLOPLAST SPA	COLOPLAST A/S	Denmark	Wholesale trading of products for use in hospitals (incontinence and colostomy bags)
GENZYME SRL	SANOFI	France	Wholesale trading of biotechnical products for pharmaceutical, chemical, biological and zootechnical use
OTTO BOCK ITALIA SRL	OTTO BOCK HOLDING GMBH & CO. KG	Germany	Orthopaedic, sanitary healthcare and pharmaceutical items
LAERDAL ITALIA	LAERDAL MEDICAL	Norway	Products for training and assisting patients, therapeutic







#### Facilities available to health care businesses in Emilia-Romagna

#### **Innovation Centres**

The **Life Science Platform** aims at transferring advanced scientific research results towards personalized medicine <a href="http://www.aster.it/tiki-index.php?page=ScienzeVita\_en">http://www.aster.it/tiki-index.php?page=ScienzeVita\_en</a>

**CIDSTEM** Stem cells and regenerative medicine Interdepartmental Centre - University of Modena and Reggio Emilia <a href="http://www.cidstem.unimore.it">http://www.cidstem.unimore.it</a>

#### CIRI Health Sciences & Technologies (HST) -

Interdepartmental Centre of Industrial Research - University of Bologna www.health-tech.unibo.it/

**COMT -** Interdepartmental Centre for Molecular Oncology and Translational - University of Parma <a href="www.comt.unipr.it">www.comt.unipr.it</a>

**BioPharmaNet\_TEC Laboratory** — Interdepartmental centre for Health Products Innovation, Univ. of Parma biopharmanet-tec.it

**CIM LABORATORY** - Measurement Interdepartmental centre - University of Parma - <a href="www.cim.unipr.it">www.cim.unipr.it</a>

**LTTA**- Laboratory for Technologies of Advanced Therapies, Biotechnology applied to medicine - University of Ferrara <a href="http://ltta.tecnopoloferrara.it/">http://ltta.tecnopoloferrara.it/</a>

**Rizzoli RIT Department** - Research Innovation & Technology-Istituto Ortopedico Rizzoli, Bologna (Bo) <a href="https://www.aster.it/tiki-index.php?page=RizzoliRit\_en">www.aster.it/tiki-index.php?page=RizzoliRit\_en</a>

**PROMETEO** - Somatic cell therapy products, gene therapy, tissue engineering, cancer therapy

BITTA - Biomedical; Chemical-pharmaceutical Industry; Health

**RAMSES** - Preclinical studies for regenerative medicine of the musculoskeletal system

**NABI** - Nanostructured biomaterials for regenerative medicine

**BIC** - Biocomputing technologies

**CLIBI** - Clinical Bioinformatics

Centre for Regenerative Medicine "Stefano Ferrari" -University of Modena and Reggio Emilia www.cmr.unimore.it/en/home.html

#### Consortiums and Associations in the Sector

#### **Dbm - Biomedical Districts of Mirandola (Modena)**

Association of companies operating in the biomedical sector http://www.distrettobiomedicale.it/en/

# Invest in health care in Emilia-Romagna

#### For further information:



www.investinemiliaromagna.eu investinemiliaromagna@ervet.it

#### University

#### **Degree Courses**

- Course in Quality control of health care products (Rimini branch)
- Course in Applied Pharmaceutical Sciences (Imola branch)
- Course in Pharmaceutical Biotechnologies
- Course in Life Sciences

At the Pharmacy Faculty at the University of Bologna www.farmacia.unibo.it

- Course in Biomedical laboratory techniques
- Course in Orthopaedic Techniques
- Course in Dietetics and Physiotherapy
- Magistral degree on Medical Biotechnologies
- Post graduate European specialist course in Dentistry and Dental Prosthesis

At the Faculty of Medicine and Surgery at the University of Bologna - www.medicina.unibo.it

• Post graduate specialist course in Biomedical Engineering (technical management of equipment, biomedical systems, development, designing methods of acquisition and the elaboration of biomedical data)

At the Faculty of Engineering at the University of Bologna, Department of Electronics, Information Technology and Systems Theory (Cesena branch) - www.ing2.unibo.it

- Magistral degree in medical and pharmaceutical biotechnology (Faculty of Bioscience and Biotechnologies)
- Three year course in herbal science and technologies (faculty of Pharmacy)
- Magistral degree in Chemistry and pharmaceutical technologies (faculty of Pharmacy)
- Magistral degree in Pharmacy (faculty of Pharmacy)
- Three year course in Dietetics and Physiotherapy (faculty of medicine and surgery)
- Three year course in Biomedical laboratory techniques (faculty of medicine and surgery)

At the University of Modena and Reggio Emilia www.unimore.it

- Magistral degree in Medical, veterinary and pharmaceutica Biotechnology (Faculty of Medicine and surgery, Pharmacy adn Veterinary medicine)
- Degree course of Health Professions: Biomedical Laboratory Techniques

At the University of Parma- www.unipr.it

- Course in Pharmacy
- Course in Chemistry and Pharmaceutical technologies
- · Course in Biotechnology
- Course in Life Sciences

At the University of Ferrara - www.unife.it

#### The Hub & Spoke Network - www.geneter.it

The Hub (highly specialized centres) & Spoke (hospitals in the region) network carries out different functions in the field of assistance to patients and their families. They also work with communication and integration structured systems between the Centres, which cover the following disciplines: cardiac surgery and cardiology, neuroscience, transplants, large burns, perinatal and paediatric intensive therapies, highly specialized rehabilitation, emergency systems, transfusion systems and blood schemes, rare diseases, genetics.





