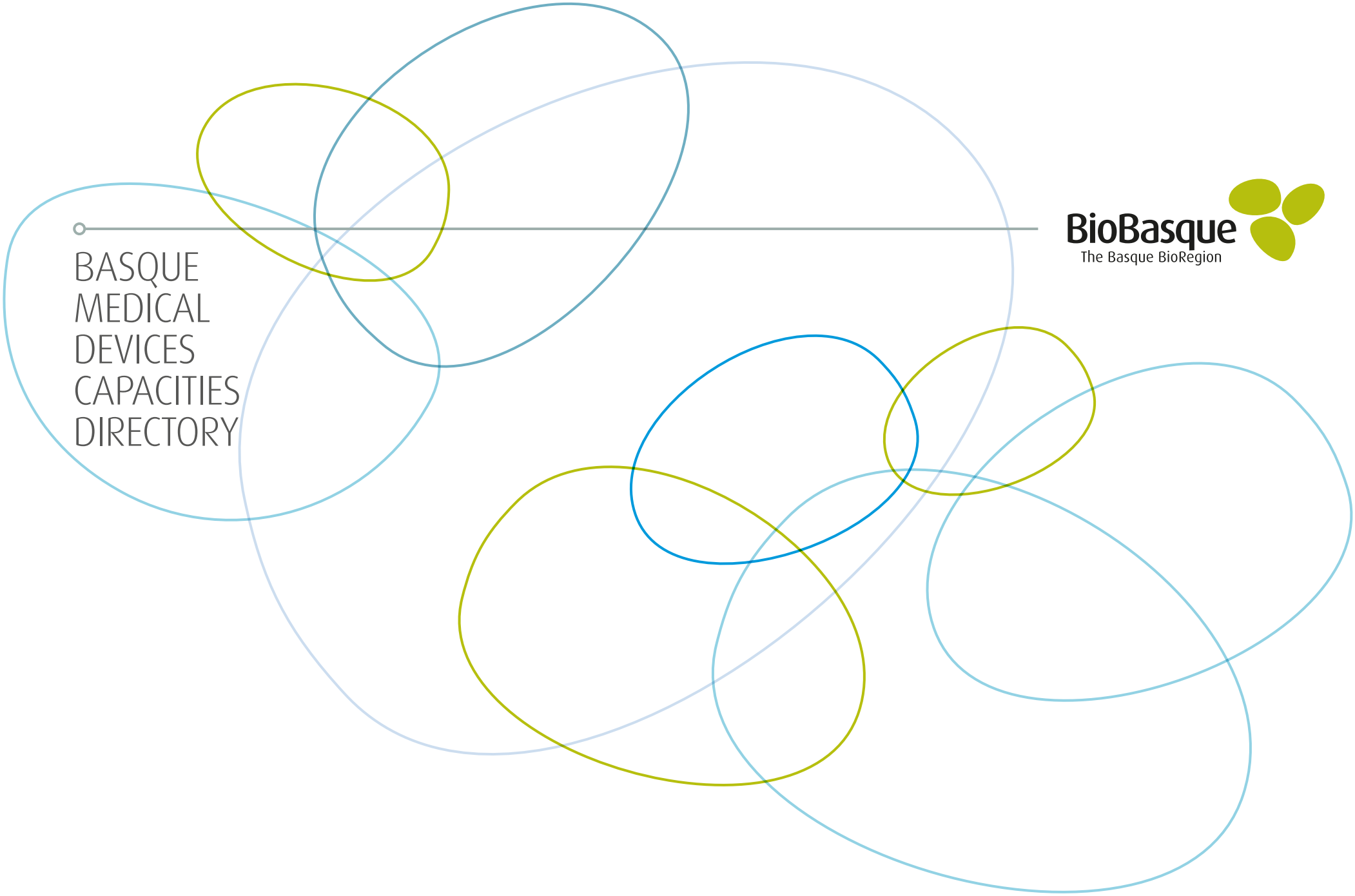
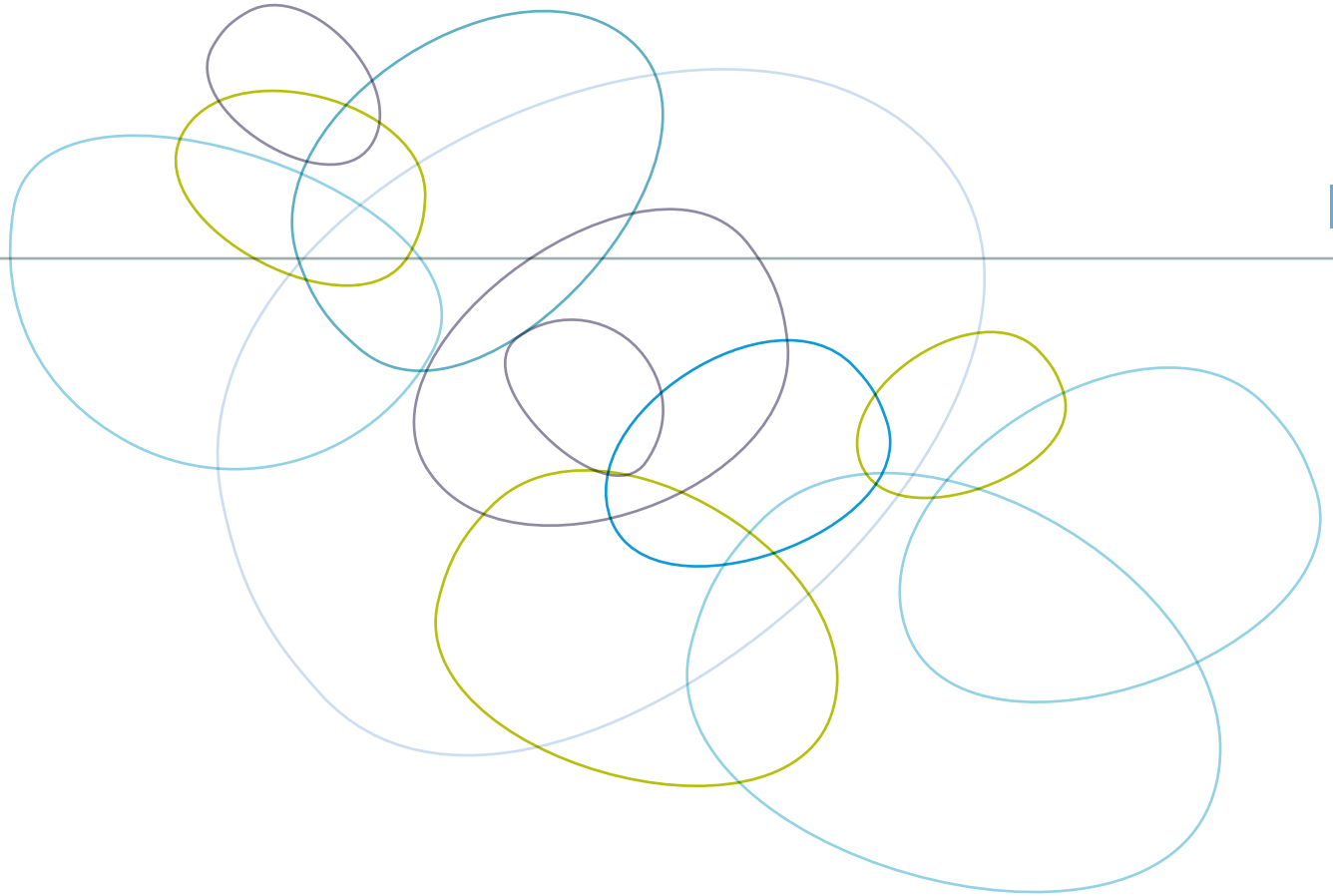
BASQUE MEDICAL DEVICES CAPACITIES DIRECTORY

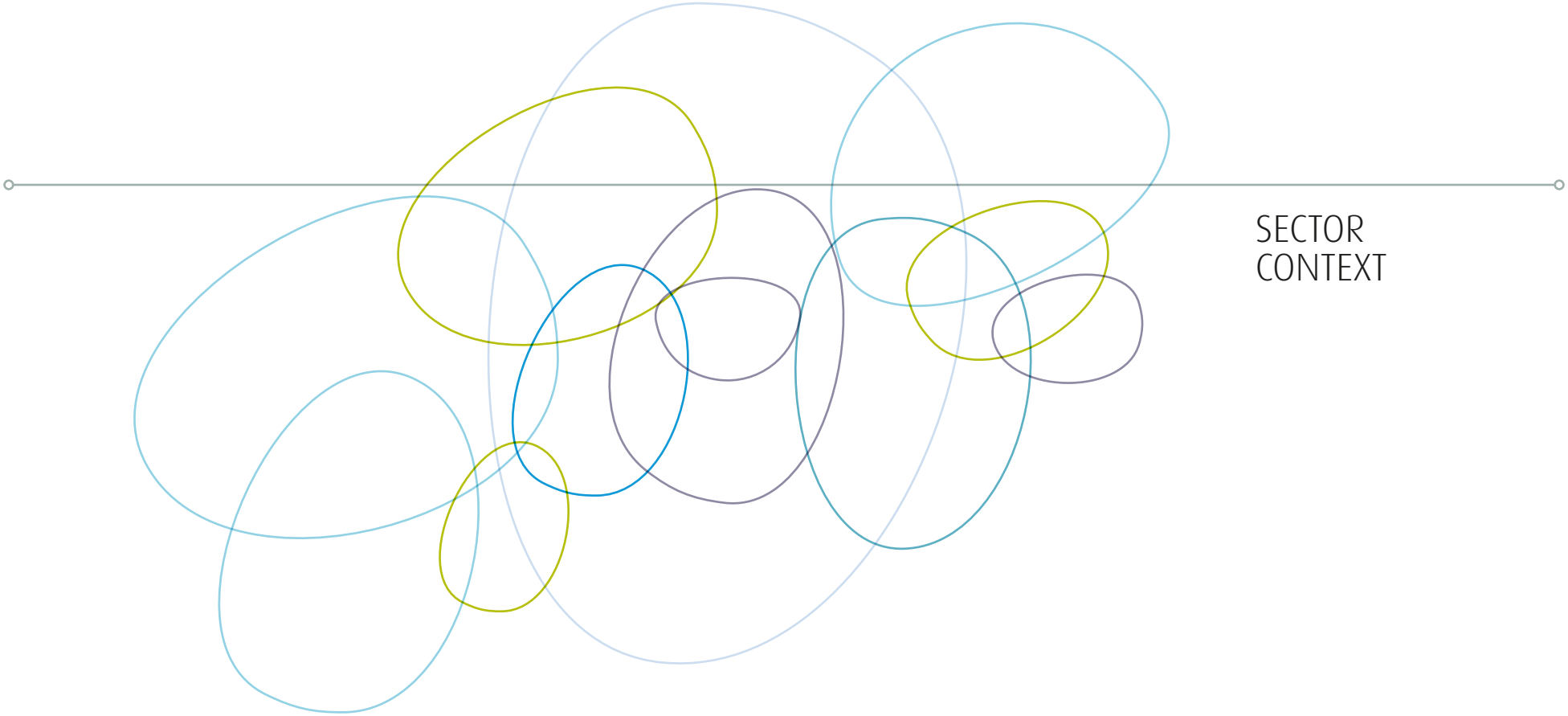
BioBasque
The Basque BioRegion



INTRODUCTION

BASQUE
MEDICAL
DEVICES
CAPACITIES
DIRECTORY





SECTOR CONTEXT

The medical device sector is one of the biggest industries in healthcare, driven by innovation and the development of original and new technologies. This sector has great potential due to the demographic changes that are taking place worldwide. For example, ageing of global population, increased health awareness and rampant growing of healthcare costs, present a great challenge for the countries, which must guarantee a favorable environment for people, and ensure that it has a decent quality of life.

The importance of medical devices & digital health has grown over the years, due to the number of technological innovations that have been in continuous development.

The role of medical devices & digital health has become an essential element in the healthcare of citizens around the world. The diversity, technology and innovation of this sector contribute significantly to improving the safety, quality and effectiveness of health care.

Medical devices & digital health are essential for safe and effective prevention, diagnosis, treatment and rehabilitation of illness and disease. The fulfillment, under favorable conditions, of all these goals, on proper manufacturing, regulation, planning, assessment, quality, accessibility, acquisition, management and use of medical devices & digital health which are of good quality, safe and compatible with the settings in which they are used.

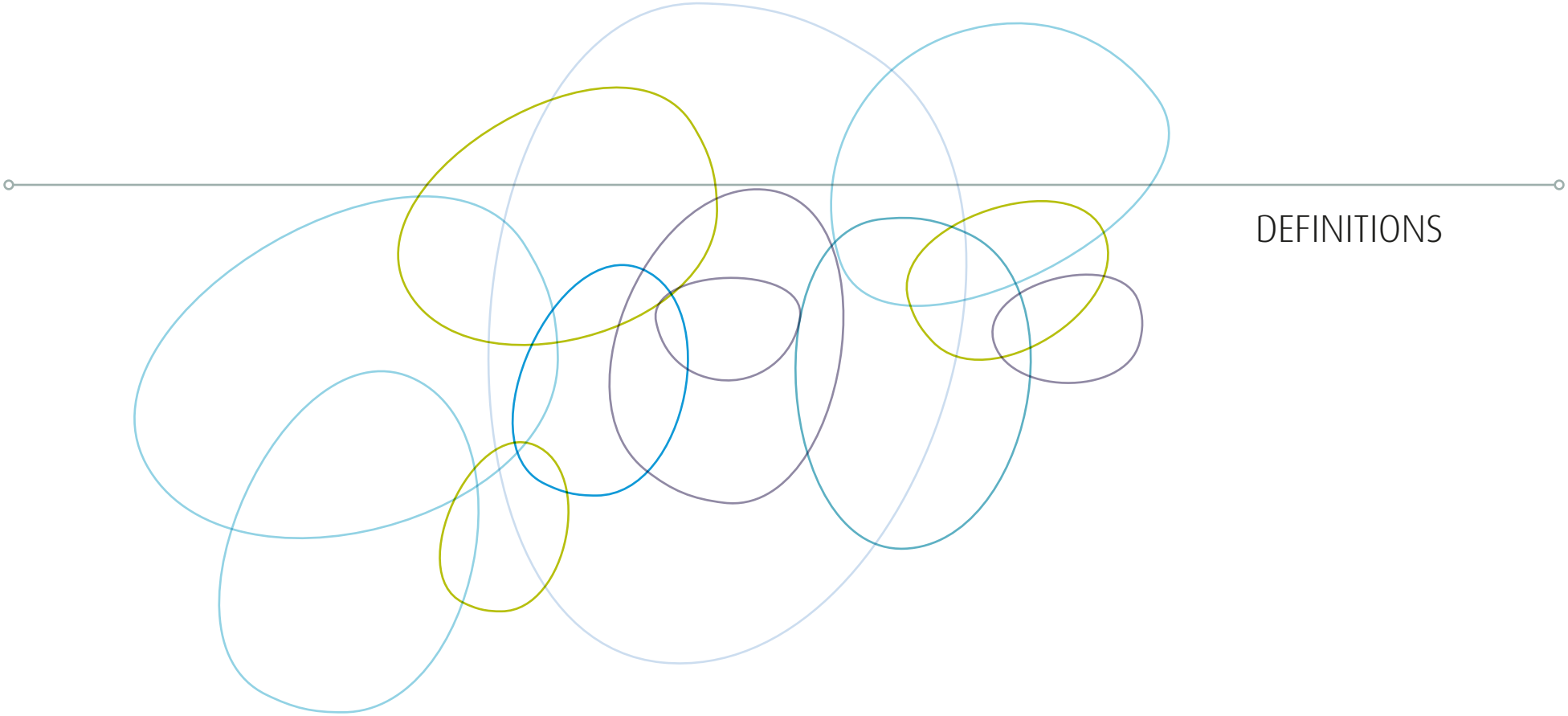
There are more than 500,000 medical devices & digital health technologies currently available around the world and they all share a common purpose: improving, extending and transforming the quality of peoples' lives, with the beneficial impact on health, quality of life and society.

Innovative technology in medical device is the only way the healthcare industry can deliver improved patient outcomes at lower costs.

THE IMPORTANCE OF THE MEDICAL DEVICES & DIGITAL HEALTH SECTOR

The medical devices & digital health sector helps save lives by providing innovative health care solutions regarding diagnosis, prevention, monitoring, treatment and alleviation of disease. The sector has become increasingly important for the healthcare of citizens worldwide and an influencer of expenditure.

- Medical devices & digital health are widely used in all branches of medicine, surgery and community care.
- The devices industry is a major one, with worldwide sales.
- The medical devices & digital health industry is a major employer.
- International Standards play an important role in allowing the rapid introduction of new medical device technologies while meeting the expectations of the public and regulators that medical devices & digital health are safe to use, perform as intended and offer benefits to patients that outweigh the risks.



DEFINITIONS

The World Health Organization defines medical devices as:

MEDICAL DEVICES

Means any instrument, apparatus, implement, machine, appliance, implant, reagent for in vitro use, software, material or other similar or related article, intended by the manufacturer to be used, alone or in combination, for human beings, for one or more of the specific medical purpose(s) of:

- diagnosis, prevention, monitoring, treatment or alleviation of disease,
- diagnosis, monitoring, treatment, alleviation of or compensation for an injury,
- investigation, replacement, modification, or support of the anatomy or of a physiological process,
- supporting or sustaining life,
- control of conception,
- disinfection of medical devices
- providing information by means of in vitro examination of specimens derived from the human body;

and does not achieve its primary intended action by pharmacological, immunological or metabolic means, in or on the human body, but which may be assisted in its intended function by such means[1].

These medical devices contribute to living longer and better, and empower citizens to contribute to society for longer. In so doing, they improve the quality of care and efficacy, efficiency and sustainability of healthcare systems.

Innovative technologies serve to fill existing gaps in the availability of health technologies to vulnerable populations through the provision of new solutions to health problems, the adaptation of existing technologies to a particular setting or for a new use.

According to the European Commission, digital health or eHealth are defined as follows:

DIGITAL HEALTH (DH) OR EHEALTH

• Refers to tools and services using information and communication technologies (ICTs) that can improve prevention, diagnosis, treatment, monitoring and management.

• Can benefit the entire community by improving access to care and quality of care and by making the health sector more efficient.

• Includes information and data sharing between patients and health service providers, hospitals, health professionals and health information networks; electronic health records; telemedicine services; portable patient-monitoring devices, operating room scheduling software, robotized surgery and blue-sky research on the virtual physiological human[2].

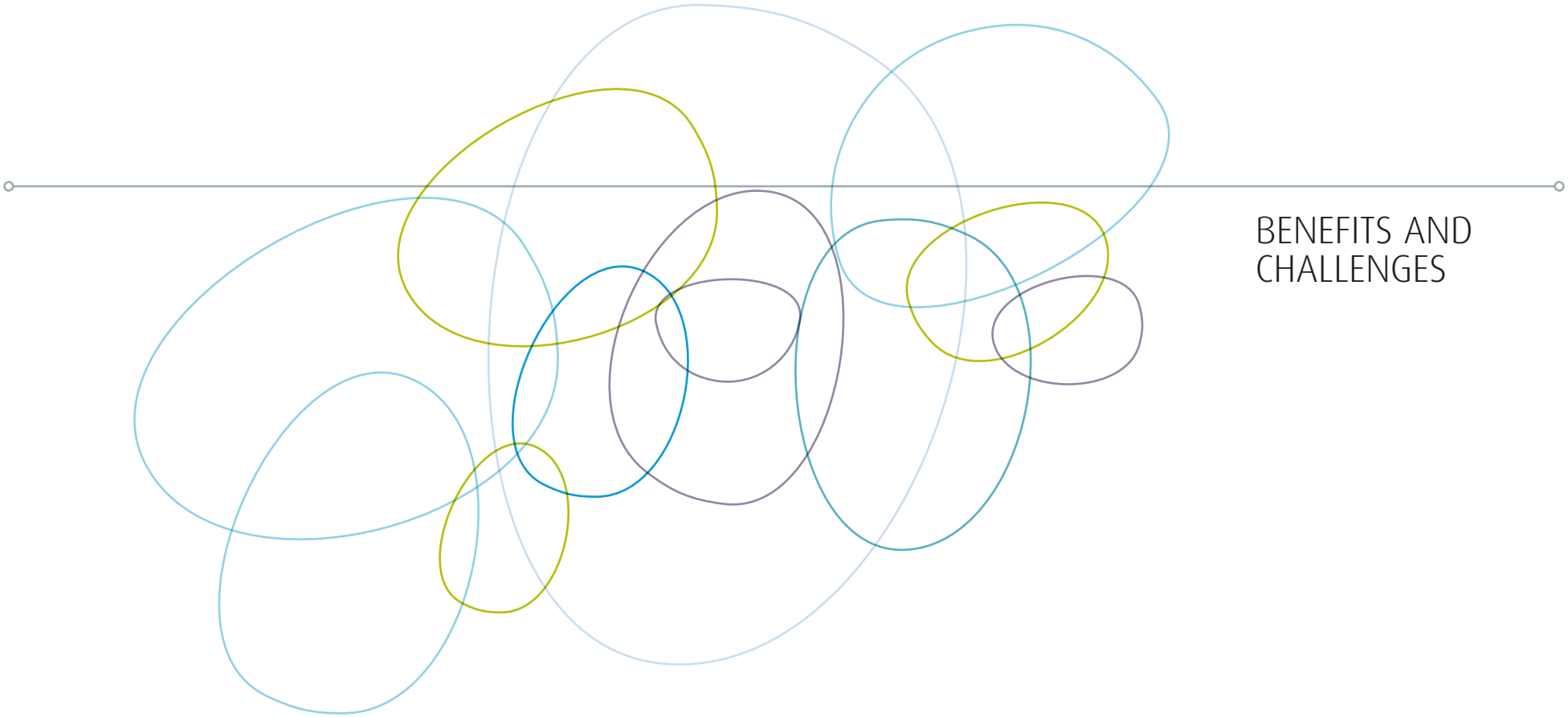
GOALS OF THE EU IN EHEALTH

• To improve citizens' health by making life-saving information available – between countries when necessary – using eHealth tools

• To increase healthcare quality and access by making eHealth part of health policy and coordinating EU countries' political, financial and technical strategies

• To make eHealth tools more effective, user-friendly and widely accepted by involving professionals and patients in strategy, design and implementation.

In the medical device and digital health sector the term ¨Innovative technologies¨ refers to novel medical device solutions developed to address health problems and improve quality of life.



BENEFITS AND CHALLENGES

BENEFITS

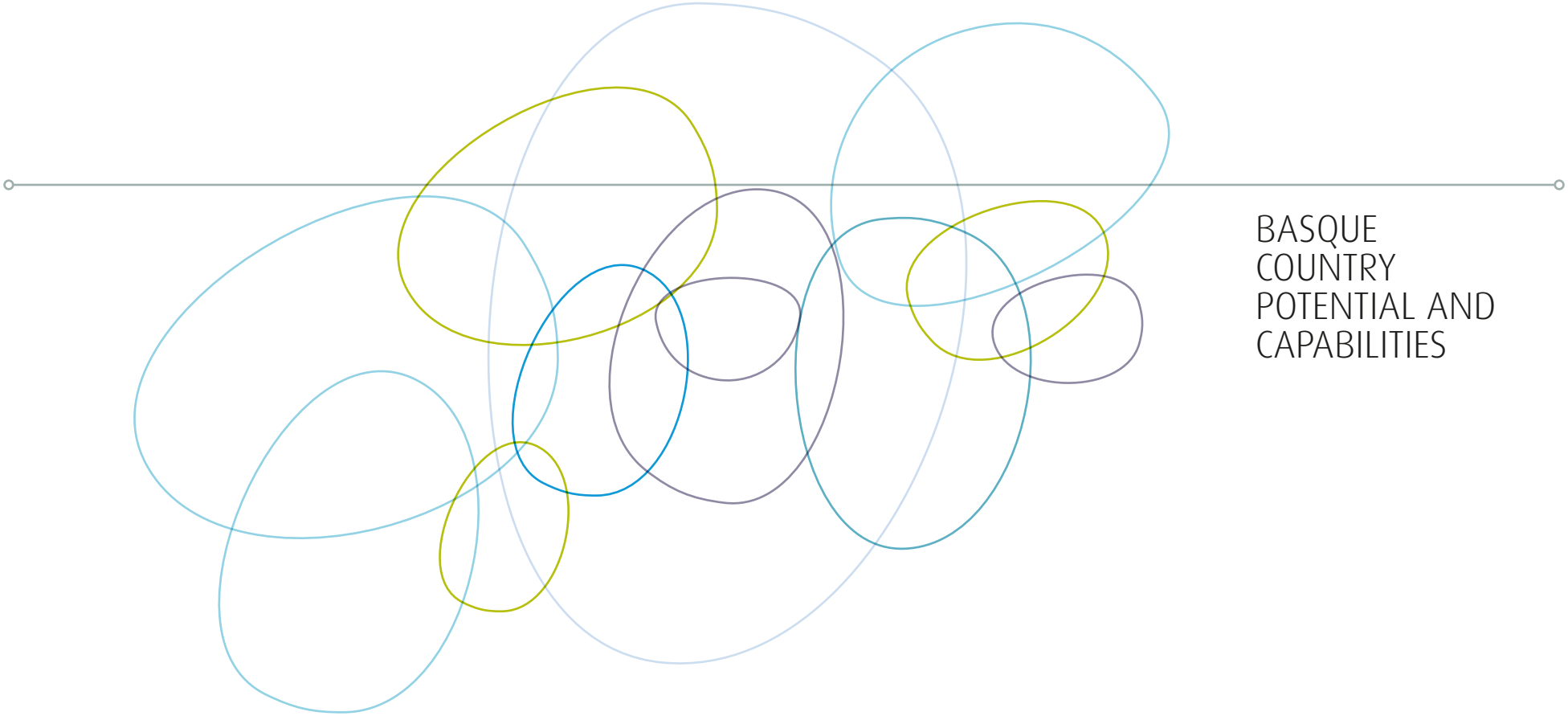
The development of medical devices & digital health has improved the quality of life of patients worldwide and improved the delivery of medical services, generating the following benefits:

- Reducing costs through technology investment
- Improving systems for prevention and patient monitoring in hospitals and at home.
- Increasing productivity, which in turn makes for more cost-efficient healthcare delivery.
- Tackling chronic and neurodegenerative diseases.
- Playing an increasingly important role in eliminating the huge variation in healthcare provision which still exists, thereby improving patient care.
- Driving better patient outcomes.
- Focusing on value, not cost.
- These advancements also yield savings across the health care system by replacing more expensive procedures, reducing hospital stays and allowing people to return to work more quickly.

CHALLENGES

The medical devices & digital health sector faces many challenges at national, European and international level, which may have an impact on their innovation capacity and overall competitiveness. Some of the key challenges for the development of this sector are:

- Patient experience: medical developers are looking to integrate marketing and sales with engineering, design and manufacturing to deliver value to their customers by understanding how well their medical products are being used in practice.
- Remote and virtual healthcare: expanding software / IT opportunities on the medical device market.
- Public Health Systems: emerging needs such as developing a shared understanding of healthcare goals, overcoming health inequalities, an ageing society and exploiting the potential of eHealth technologies.
- Managing data and mobile devices.
- Finding the balance between patient's needs and financial sustainability.
- Ensuring that the sector can enhance better access for patients.
- Competitiveness and innovation: Challenges related to R&D, emerging technologies and the green economy, as well as issues related to the EU's trade and regulatory cooperation globally.
- Reduction of operating costs through the application of medical devices & digital health: collecting, managing and analyzing big data.
- Reliability, safety, quality control and satisfaction of users' needs
- Increasing R&D expenses: Increased complexity and sophistication of medical equipment/devices.
- More demanding and diverse customer base.
- Strict legal provisions and regulation of assemblies and materials must be adhered to.



BASQUE COUNTRY POTENTIAL AND CAPABILITIES

INTRODUCTION

Medical Devices and Digital Health sectors are multidisciplinary areas that need, for their development, many different capabilities and a high level of knowledge and expertise in diverse disciplines, as well as the convergence of appropriate resources in an environment able to foster innovation.

Indeed, Medical Devices and Digital Health sectors cannot prosper without an appropriate ecosystem in which biomedical and health sciences meet technologies such as Electronics, Mechatronics, ICTs (Information and Communication Technologies) or Advanced Manufacturing, among others. The sector is extremely demanding of innovative high technology, that needs close collaboration among industry, technology platforms, R&D centers and Healthcare centers.

In this context, the Basque Country presents an attractive scenario with great potential for the development of the Medical Devices and Digital Health sectors, due to the following strengths:

- A strong regional specialization and promotion of Biosciences and Health, merging industry, scientific and technological agents and clinical centers.
- Powerful and highly competitive capabilities in Advanced Manufacturing, as a result of the transfer of innovations in technologies such as nanotechnology or ICTs to the traditional industrial sectors.
- A dynamic and strong ICT and Electronic sector with multiple links with Health and Biosciences.
- A highly integrated network of Healthcare providers, able to give a powerful traction to multiple developments related to biomedicine, e-health or medical devices.
- A dense network of scientific and technological centers with top-level capabilities in areas connected with Medical Devices and Digital Health, and with a culture of innovation and collaboration with industry.
- A high and sustained commitment of the Regional Government with innovation, that has led to the creation of a strongly effective ecosystem of innovation that provides support and resources and facilitates collaboration among private and public entities and among agents through the whole innovation value chain.

REGIONAL SPECIALIZATION IN BIOSCIENCES AND HEALTH

From 2014, the region has deployed an innovation and regional development strategy, aiming to favor the concentration of resources and investments in areas of technological and industrial development where there are clear synergies with the existing and potential productive capacities of the region. This strategy, called Smart Specialization Strategy (RIS3), defined three priorities of specialization in the Basque Country: Advanced Manufacturing, Energy and Biosciences / Health, and a series of opportunity niches linked to the territory.

The Biosciences sector has an increasing weight in the Basque economy and in its industrial and scientific network. Its development has been partly driven by a strong commitment of the Regional Government, which has promoted the establishment of a scientific and technological network with strong capabilities and has contributed to strengthen industrial and commercial resources in the area.

BUSINESS MEDICAL DEVICES AND DIGITAL HEALTH SECTORS IN THE BASQUE COUNTRY

This ecosystem is helping to create a new sector of Medical Devices and Digital Health in the Basque Country, which comprises around 60 companies in the region and generates more than 1,100 direct jobs. It is estimated that these companies generate a total turnover of more than 185 million euros per year in activities directly related to Biomedical Devices and Digital Health.

The main segments within the sectors of Medical Devices and Digital Health in terms of number of companies are Orthopedic and Rehabilitation Technology, Electromedical Devices, Digital Health and Biomedical Consumables. In terms of turnover, the largest segments are Digital Health (~ 67.5 M €), Orthopedic and Rehabilitation Technology (~ 48 M €) and Biomedical Consumables (~ 25 M €). These three segments represent more than 75% of the global turnover of the sector. In terms of employment, the segments that generate more direct jobs are Orthopedic and Rehabilitation Technology, In-vitro Diagnostics and Biomedical Consumables, representing together more than 70% of the jobs in the sector.

About half of the companies that are active in this sector distribute and/or develop products to the end user. The rest of the companies provide technology and services to other companies in different parts of the value chain of the Medical Devices and Digital Health sectors, some of them combining these activities with the development and commercialization of their own products. It is estimated that more than 60% of the sector's turnover is generated by the commercialization of final products, while about 40% is generated by the provision of services and components to other companies in the sector.

Regarding the position in the value chain of the companies that provide technology and services to other companies, the supply of ICT services and sustaining engineering services for device development stand out: these two segments together represent more than 90% of the turnover and around 65% of the jobs (not directly related to the development and commercialization of products to the end user).

Most of the companies in the sector are SMEs, accounting less than ten companies with more than 250 employees. Most of these large companies are multisector companies that develop only part of their activity in Medical Devices and Digital Health sectors. Most of them are specialized in computing and ICT or the supply of sustaining engineering and component manufacturing services.

Among the many SMEs that compose the sector, more than half are micro-SMEs (less than 10 employees), and less than 15% of them have more than 50 employees.

SCIENTIFIC AND TECHNOLOGICAL AGENTS IN THE MEDICAL DEVICES AND DIGITAL HEALTH SECTORS IN THE BASQUE COUNTRY

The strength and the potential of Medical Devices and Digital Health sectors in the Basque Country is completed by a number of powerful scientific and technological agents promoted by the Regional Administration.

The Basque Country Innovation System is well known for its Technology Centers (TC), which are merged into two networks, IK4 and Tecnalia; they are among the best TC in Spain and have international scope. Both Technology Centers have intensive activity in Medical Devices and Digital Health sectors and provide a wide range of scientific and technological capacities and platforms to be used both by public and private R&D agents, covering biology (biochemistry, molecular biology, microbiology, proteomics etc.), nanomedicine, biomaterials, sensors, e-health, assisted living, medical imaging or robotics, among others.

The scientific and technological ecosystem for Medical Devices and Digital Health in the Basque Country is completed by several R&D centers that provide high-level knowledge and expertise in specific areas, such as Biomaterials (CIC biomaGUNE and Polymat), Biotechnology (CIC bioGUNE), Nanosciences (CIC nanoGUNE), Neuroscience (Achucarro), applied Mathematics (BCAM), Cognition, Brain and Language (BCBL) and ICT (DeustoTech).

Besides, the powerful Basque Public Health system and its entities linked to the promotion of health research and innovation, with BIOEF as the main reference along with the health research institutes Biocruces, Biodonostia and Bioaraba, represent added potential to the Medical Devices and Digital Health sectors in the region, providing additional R&D capabilities along with clinical expertise.

Finally, from the academic side, the University of the Basque Country and Mondragon University's Faculty of Engineering provide higher education, research activities, open access to research infrastructures, clinical services, and business support instruments to the Medical Devices and Digital Health sectors in the Basque Country.

ELECTROMEDICAL DEVICES

ACTIVE IMPLANTABLE DEVICES
MONITORING DEVICES
SURGICAL INSTRUMENTS AND SYSTEMS
CRITICAL CARE DEVICES AND SYSTEMS
OTHER

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

IMPLANTS
TRAUMA FIXATION DEVICES
ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS
REHABILITATION SYSTEMS
OTHER

IN-VITRO DIAGNOSTICS

BIOCHEMISTRY SURFACES
MICROBIOLOGY
MICROFLUIDICS
MICROFABRICATION TECHNIQUES
IMMUNOCHEMISTRY
MOLECULAR DIAGNOSIS (GENOMICS)
OTHER

LABORATORY EQUIPMENT

ELECTROMECHANICAL TECHNIQUES
ELECTROCHEMICAL TECHNIQUES
OPTICAL TECHNIQUES
OTHER

MEDICAL IMAGE

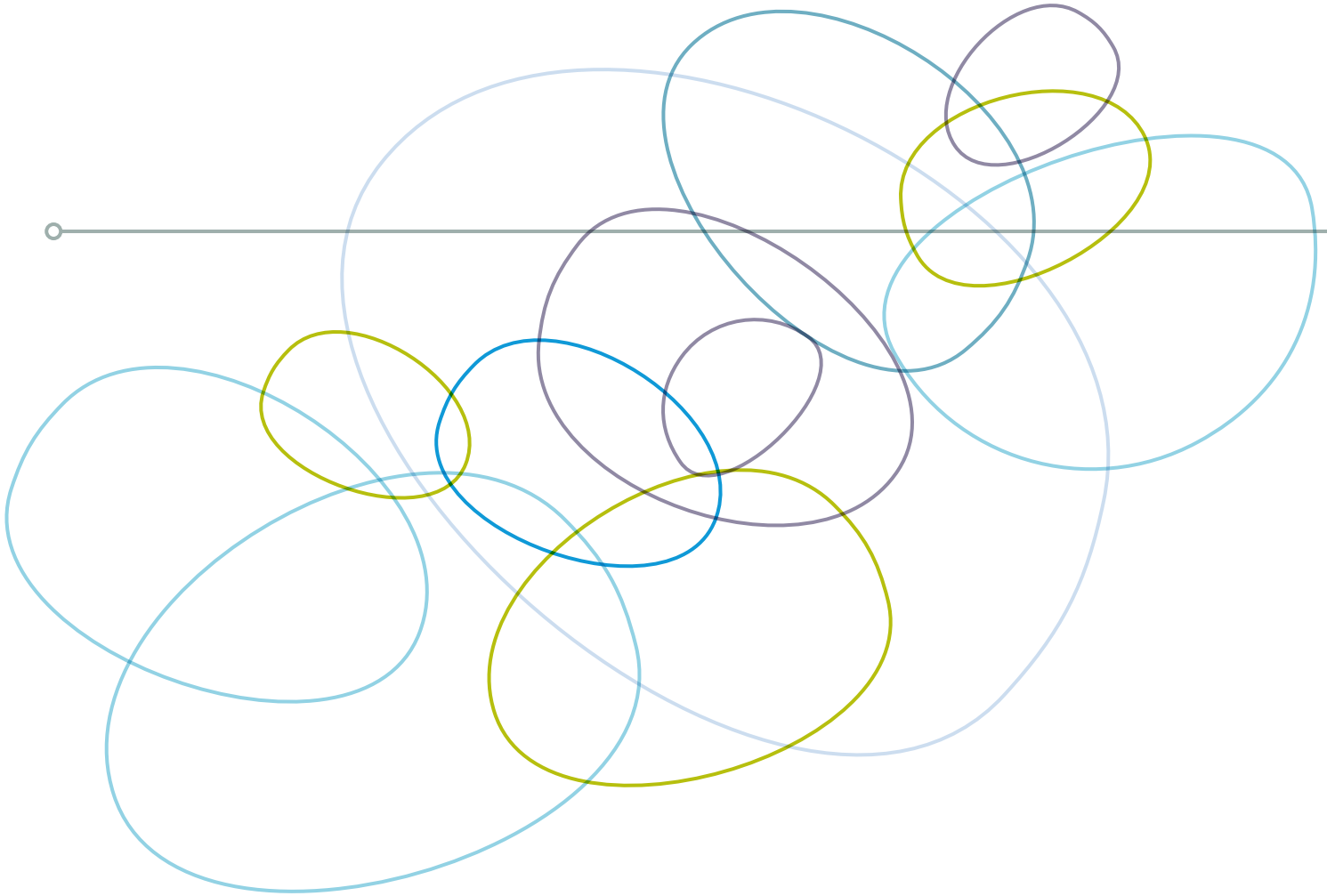
MEDICAL IMAGE SYSTEMS: X-RAYS, CT SCANNERS, ULTRASOUND, MRI, DIAGNOSTIC NUCLEAR IMAGE SYSTEMS (PET, SPECT)
MEDICAL IMAGE ANALYSIS SOFTWARE
OTHER

DIGITAL HEALTH

INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS
TELEHEALTH
MOBILE HEALTH
INTEROPERABILITY
CLOUD
OTHER

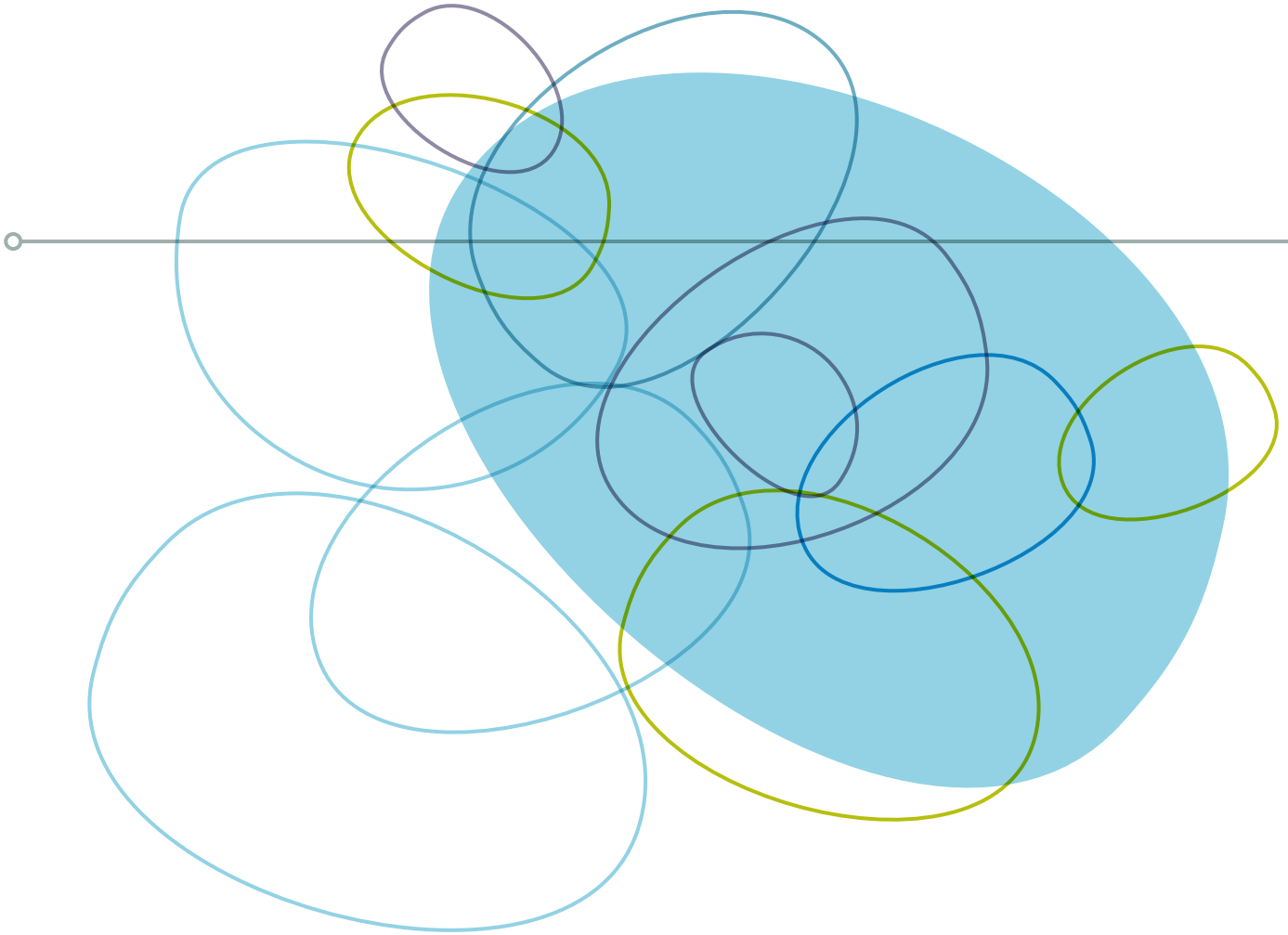
BIOMEDICAL CONSUMABLES

NON-ACTIVE IMPLANTABLE DEVICES
SURGICAL INSTRUMENTS AND CONSUMABLES
ADVANCED WOUND MANAGEMENT
OTHER



ACTIVITY SECTORS

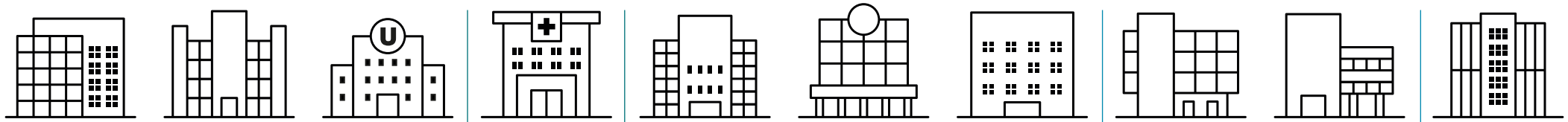
MEDICAL DEVICES & DIGITAL HEALTH

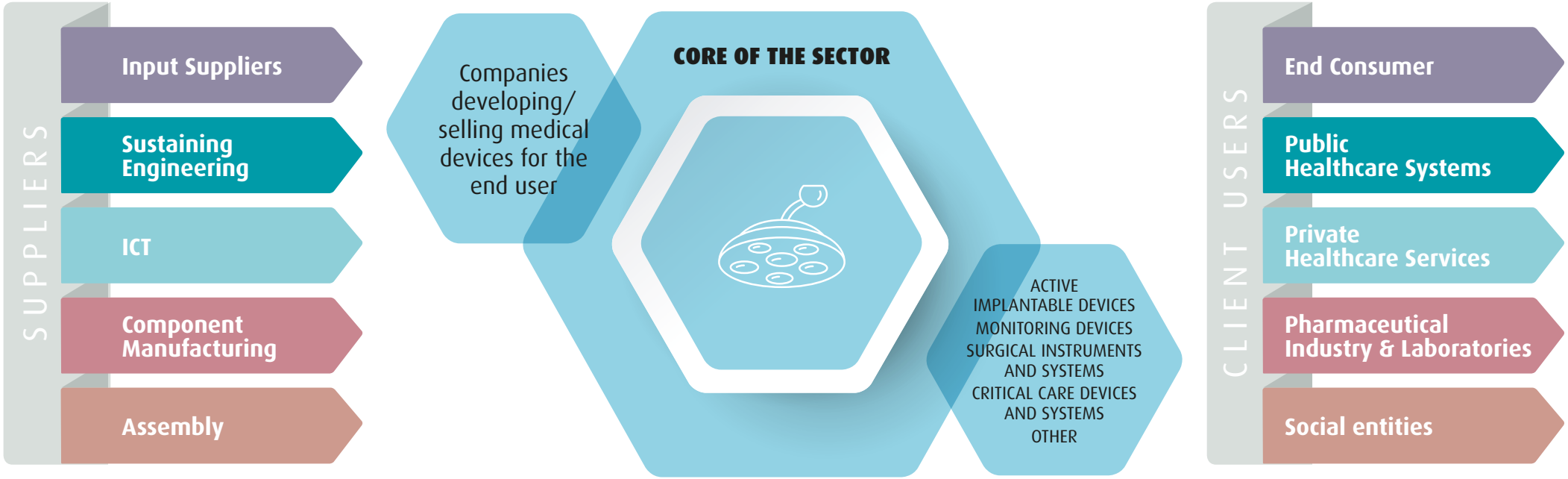


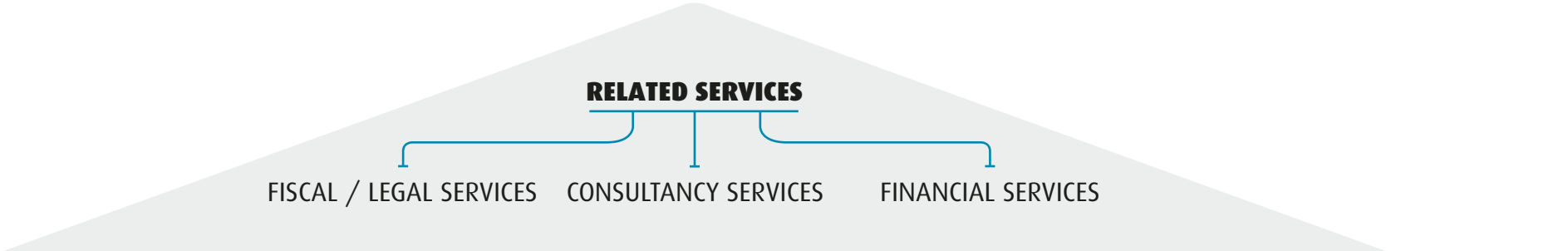
ACTIVITY SECTOR

ELECTROMEDICAL
DEVICES

ELECTROMEDICAL DEVICES







ELECTROMEDICAL DEVICES

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations

TECNALIA
CEIT-IK4
CIDETEC-IK4
GAIKER-IK4
IK4-TEKNIKER

Research Institutions

BCAM
DEUSTOTECH
POLYMAT
CIC BIOMAGUNE
CIC NANOGUNE
BIOEF

Universities

MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

Public Administrations

Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

Input Suppliers
GUREAK

Sustaining Engineering
BIOMEDICAL
HEALTH SYSTEM
IKOR TECHNOLOGY
MICROLIQUID
ONE WAY LIVER
ENKOA
IRISBOND
GUREAK
PRODOLMED
HERMES

ICT
BILBOMATICA
INIT HEALTH
ONE WAY LIVER

Component Manufacturing
IKOR
TECHNOLOGY
MICROLIQUID
GUREAK
PRODOLMED
OPTIMUS 3D
HERMES

Assembly, Packaging & Sterilization
GUREAK
ULMA PACKAGING

CORE OF THE SECTOR

DENEB MEDICAL
FM CONTROL
NGS HEALTH AND MIND
OIARSO
OSATU
OSASEN SENSORES
INIT HEALTH
MARTIMEDIC
ONE WAY LIVER
BIOTECHNOLOGY INSTITUTE
ESKUA HEALTH TECHNOLOGIES
IRISBOND
PRODOLMED
SUMISAN
HERMES
INNOPRICK

CLIENT USERS

End Consumer

Public Healthcare Systems

Private Healthcare Services

Pharmaceutical Industry & Laboratories

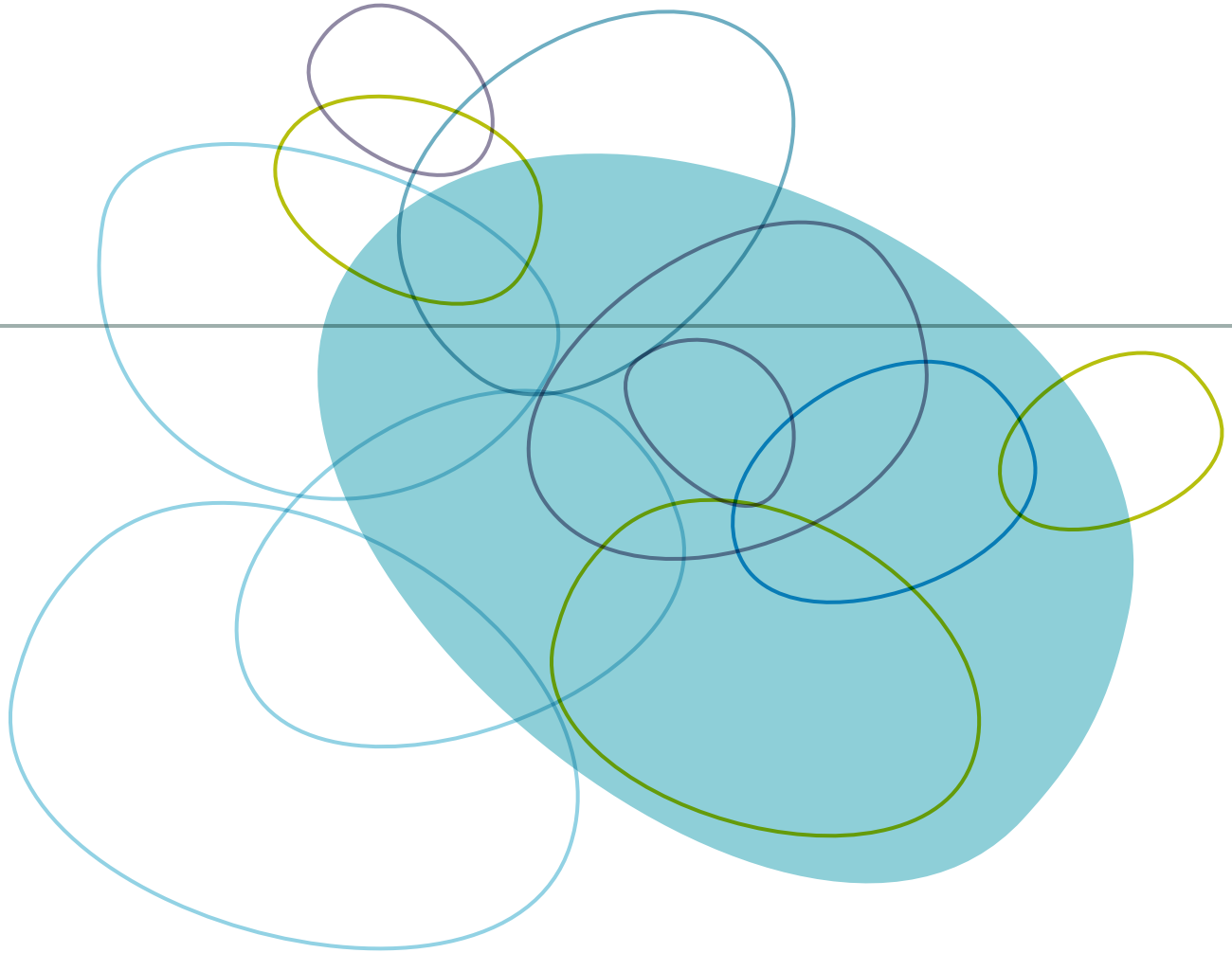
Social entities

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

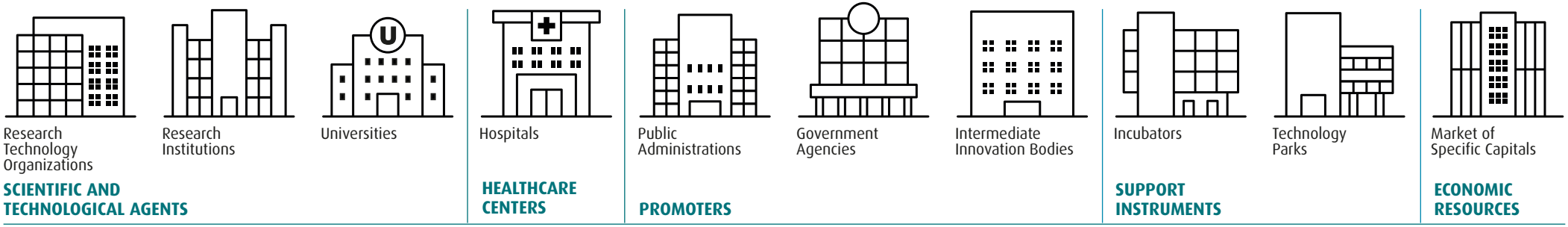
FINANCIAL SERVICES

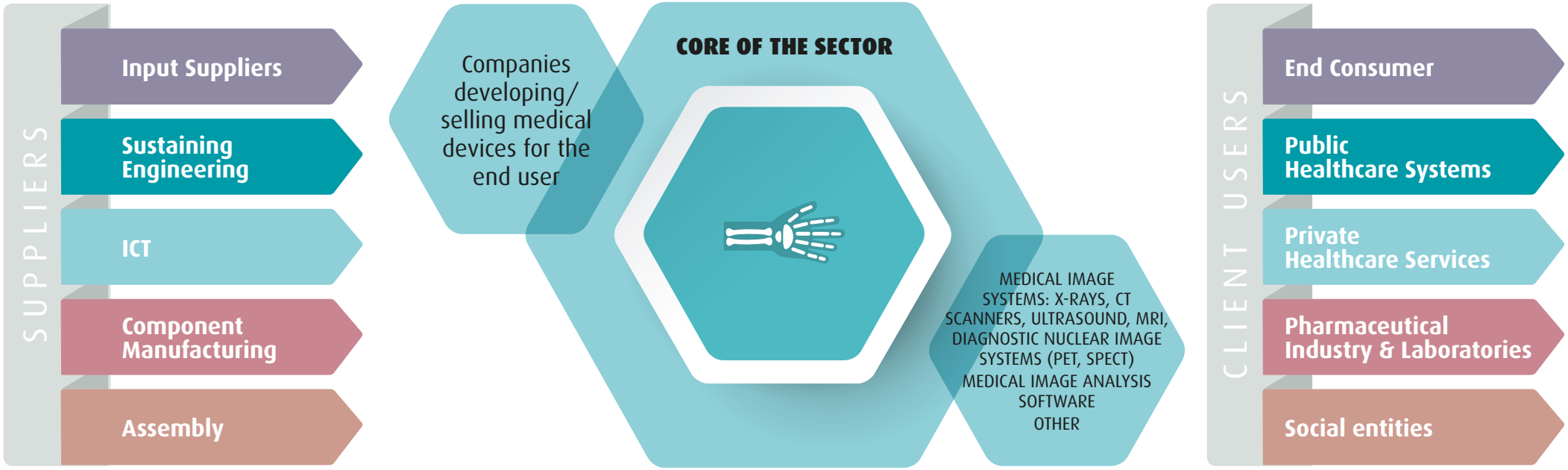


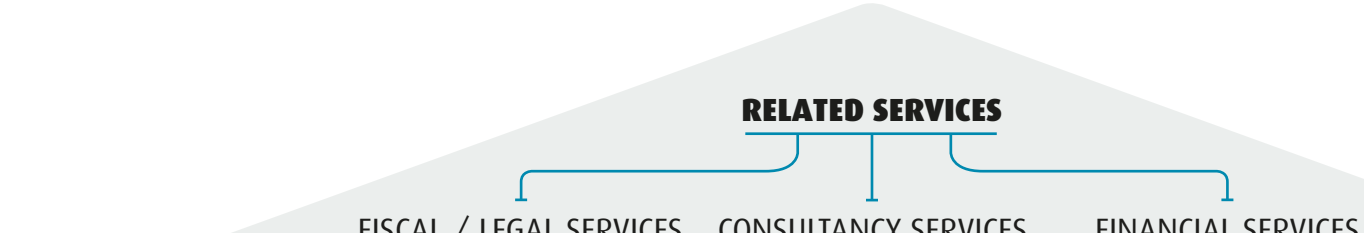
ACTIVITY SECTOR

MEDICAL
IMAGE

MEDICAL IMAGE







MEDICAL IMAGE

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations

TECNALIA
CEIT-IK4
CIDETEC-IK4
VICOMTECH-IK4

Research Institutions

ACHUCARRO
BCAM
BCBL

DEUSTOTECH
CIC BIOMAGUNE
BIOEF

Universities

MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

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Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

Input Suppliers	BIOMEDICAL HEALTH SYSTEM GUREAK
Sustaining Engineering	BIOMEDICAL HEALTH SYSTEM IKOR TECHNOLOGY BIZINTEK INNOVA GUREAK
ICT	BILBOMATICA ULMA INNOVATION
Component Manufacturing	IKOR TECHNOLOGY GUREAK
Assembly, Packaging & Sterilization	GUREAK

CORE OF THE SECTOR

BIOMEDICAL HEALTH SYSTEM
INNOPRICK
MARTIMEDIC
ULMA INNOVATION
SUMISAN
GALENIC APP

CLIENT USERS

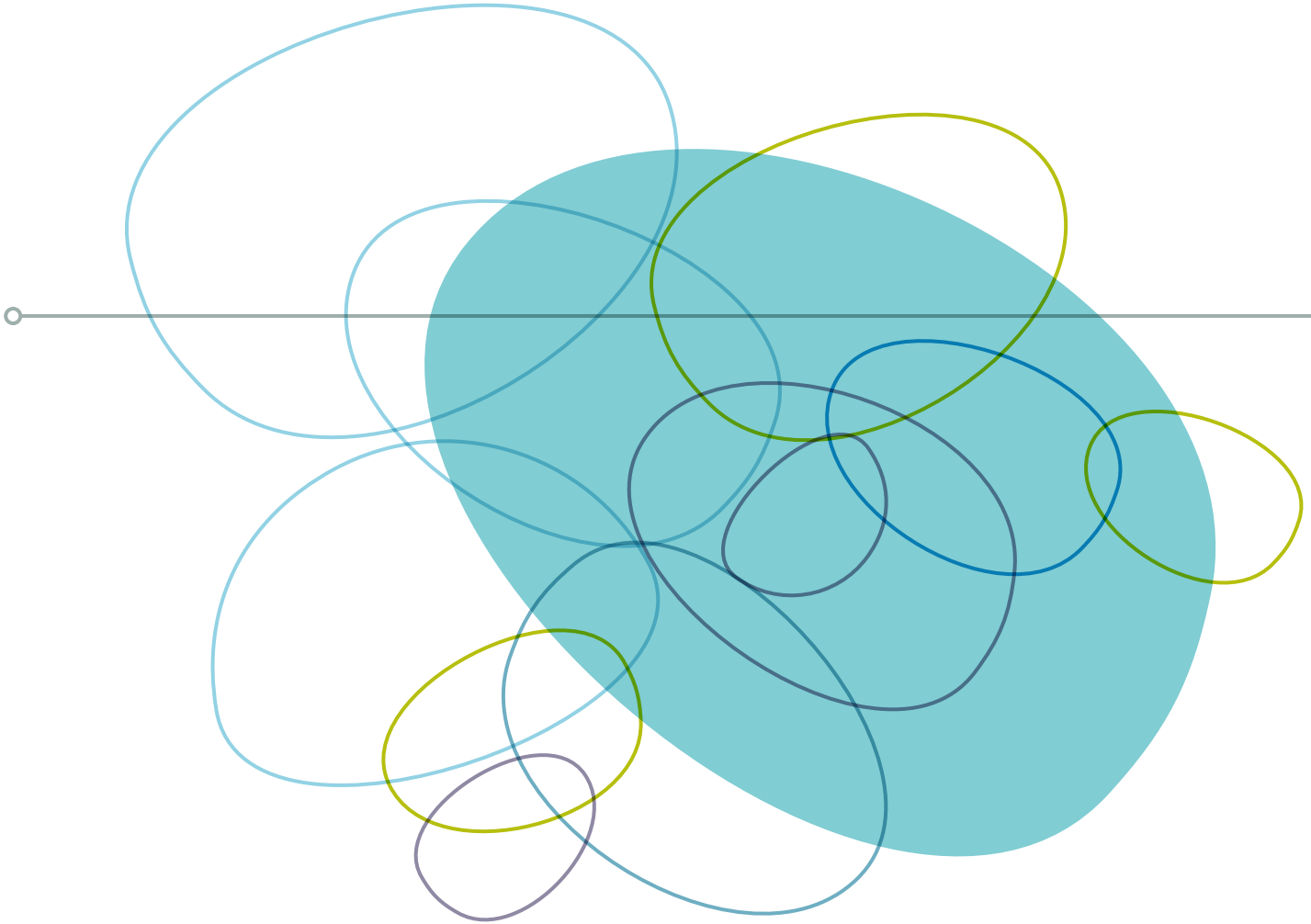
- **End Consumer**
- **Public Healthcare Systems**
- **Private Healthcare Services**
- **Pharmaceutical Industry & Laboratories**
- **Social entities**

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

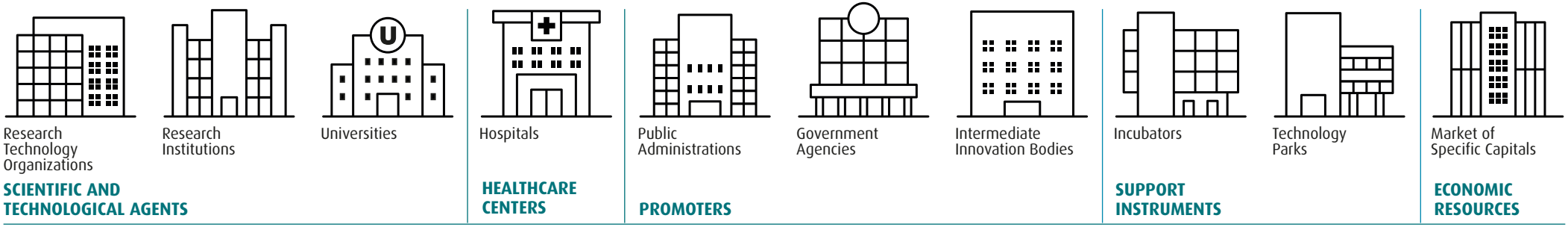
FINANCIAL SERVICES

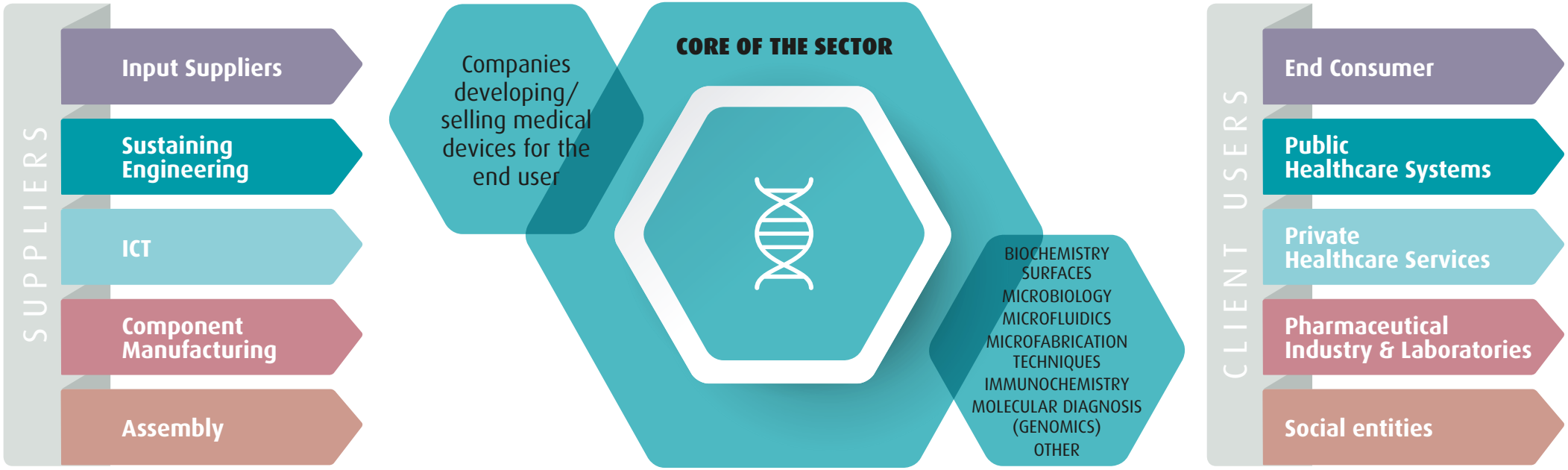


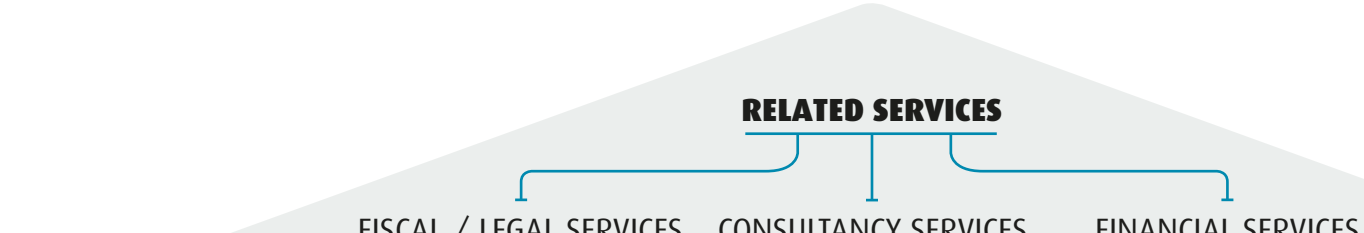
ACTIVITY SECTOR

IN-VITRO DIAGNOSTICS

IN-VITRO DIAGNOSTICS







IN-VITRO DIAGNOSTICS

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations
TECNALIA
CEIT-IK4
CIDETEC-IK4
GAIKER-IK4
IK4-TEKNIKER
VICOMTECH-IK4

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CIC BIOGUNE
CIC NANOGUNE
BIOEF

Universities
MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

Public Administrations

Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

- **Input Suppliers**: IKERLAT
- **Sustaining Engineering**: MICROLIQUID, ONE WAY LIVER, PROSPERO BIOSCIENCES, IKERLAT
- **ICT**: ONE WAY LIVER
- **Component Manufacturing**: PROGENIKA BIOPHARMA, MICROLIQUID
- **Assembly, Packaging & Sterilization**

CORE OF THE SECTOR

GEROA DIAGNOSTICS
OSASEN SENSORES
PATIA EUROPE
PROGENIKA BIOPHARMA
ONE WAY LIVER
BIOTECHNOLOGY INSTITUTE
ILINE MICROSYSTEMS
K-DNA GENOMICS
PROSPERO BIOSCIENCES
BIOKILAB
VACUNEK

CLIENT USERS

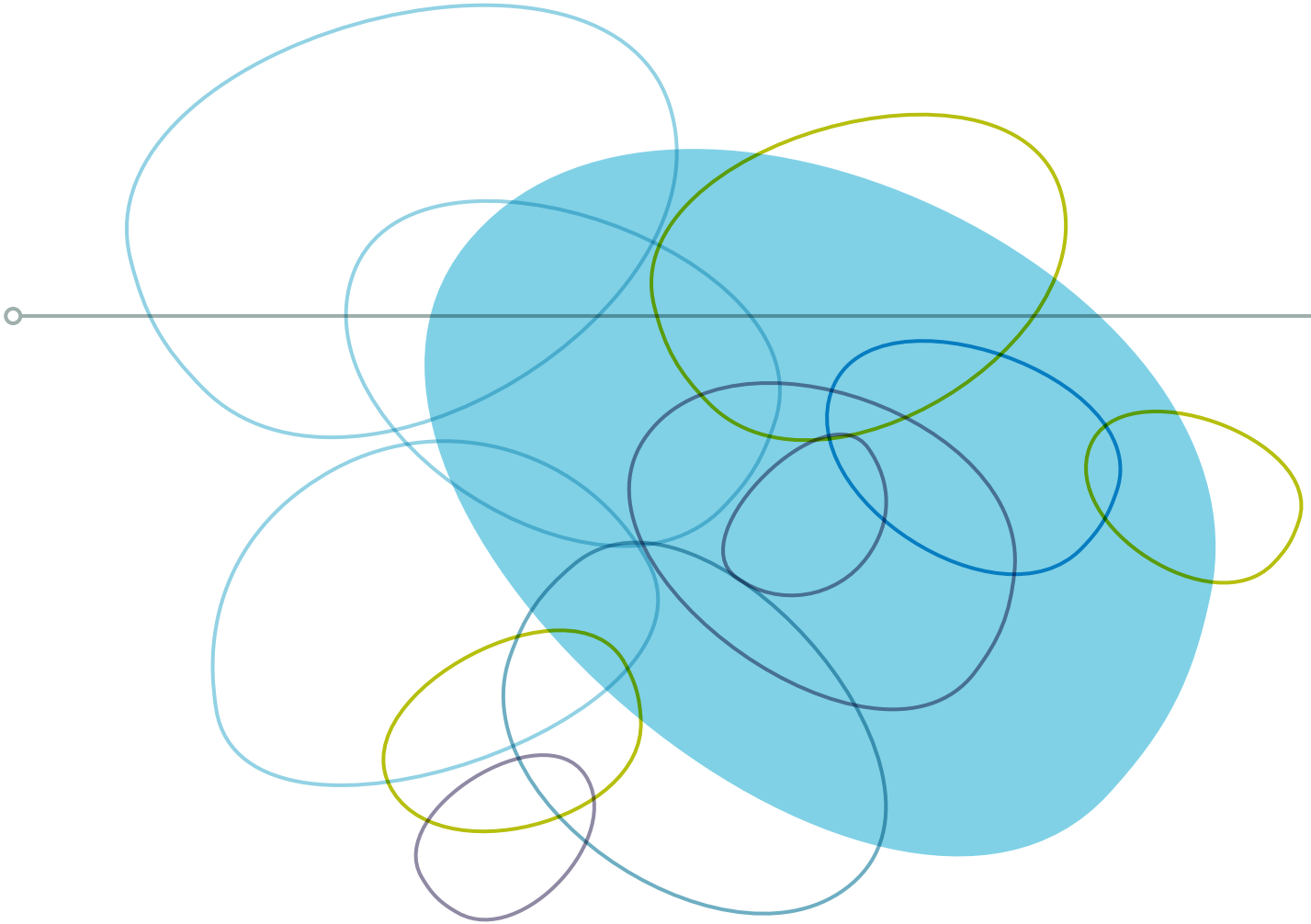
- **End Consumer**
- **Public Healthcare Systems**
- **Private Healthcare Services**
- **Pharmaceutical Industry & Laboratories**
- **Social entities**

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

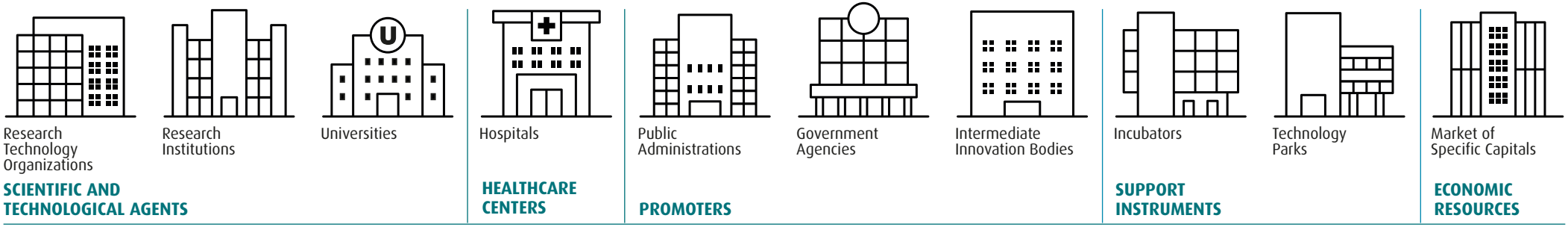
FINANCIAL SERVICES

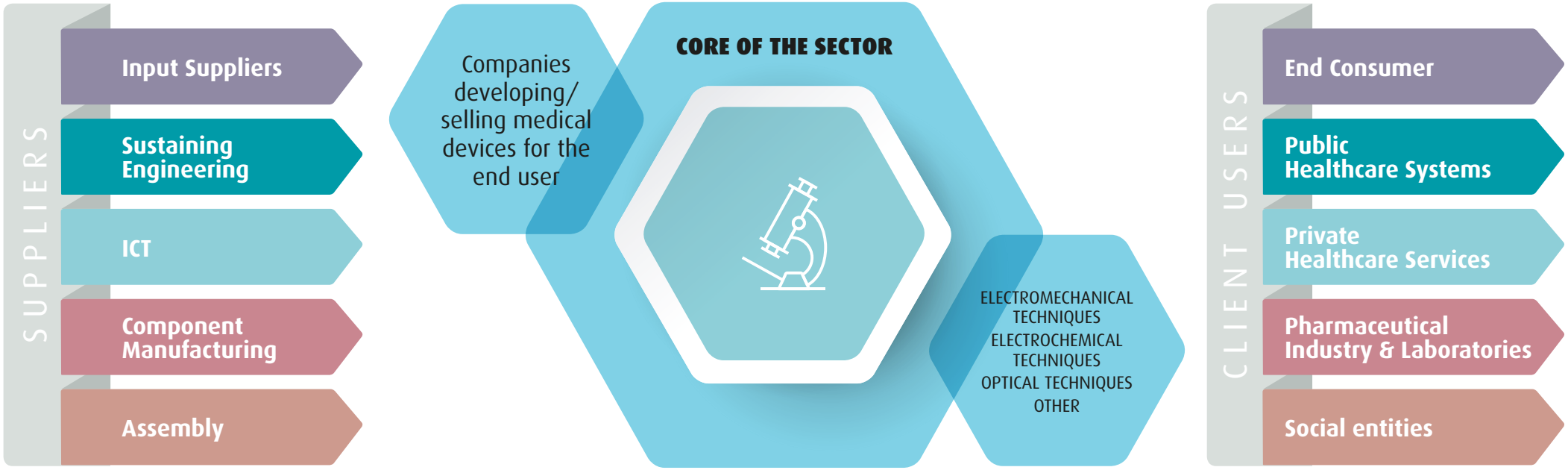


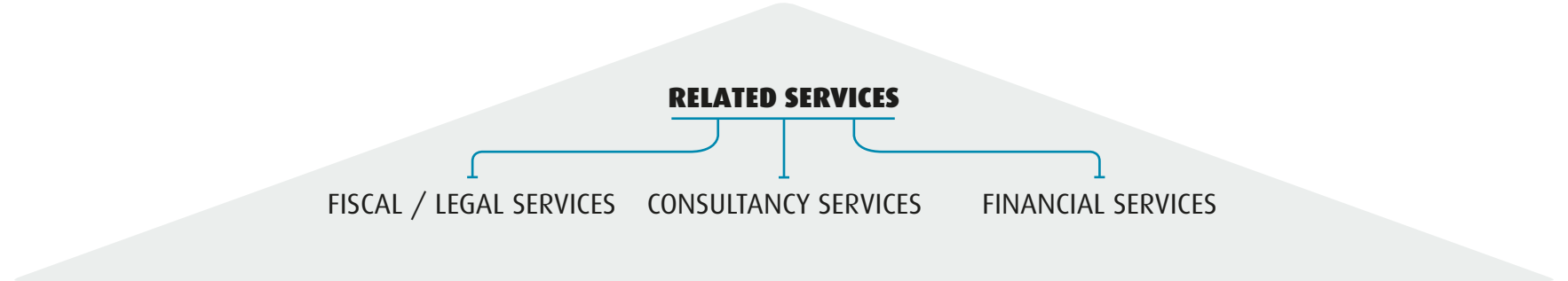
ACTIVITY SECTOR

LABORATORY
EQUIPMENT

LABORATORY EQUIPMENT







LABORATORY EQUIPMENT

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations

CEIT-IK4
CIDETEC-IK4
IK4-TEKNIKER
VICOMTECH-IK4

Research Institutions

ACHUCARRO
BCBL
CIC BIOMAGUNE
CIC NANOGUNE
BIOEF

Universities

MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

Public Administrations

Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

- **Input Suppliers** — GUREAK
- **Sustaining Engineering** — GUREAK
- **ICT**
- **Component Manufacturing** — GUREAK
- **Assembly, Packaging & Sterilization** — GUREAK, ULMA PACKAGING

CORE OF THE SECTOR

KIRO GRIFOLS
FAGOR HEALTHCARE

CLIENT USERS

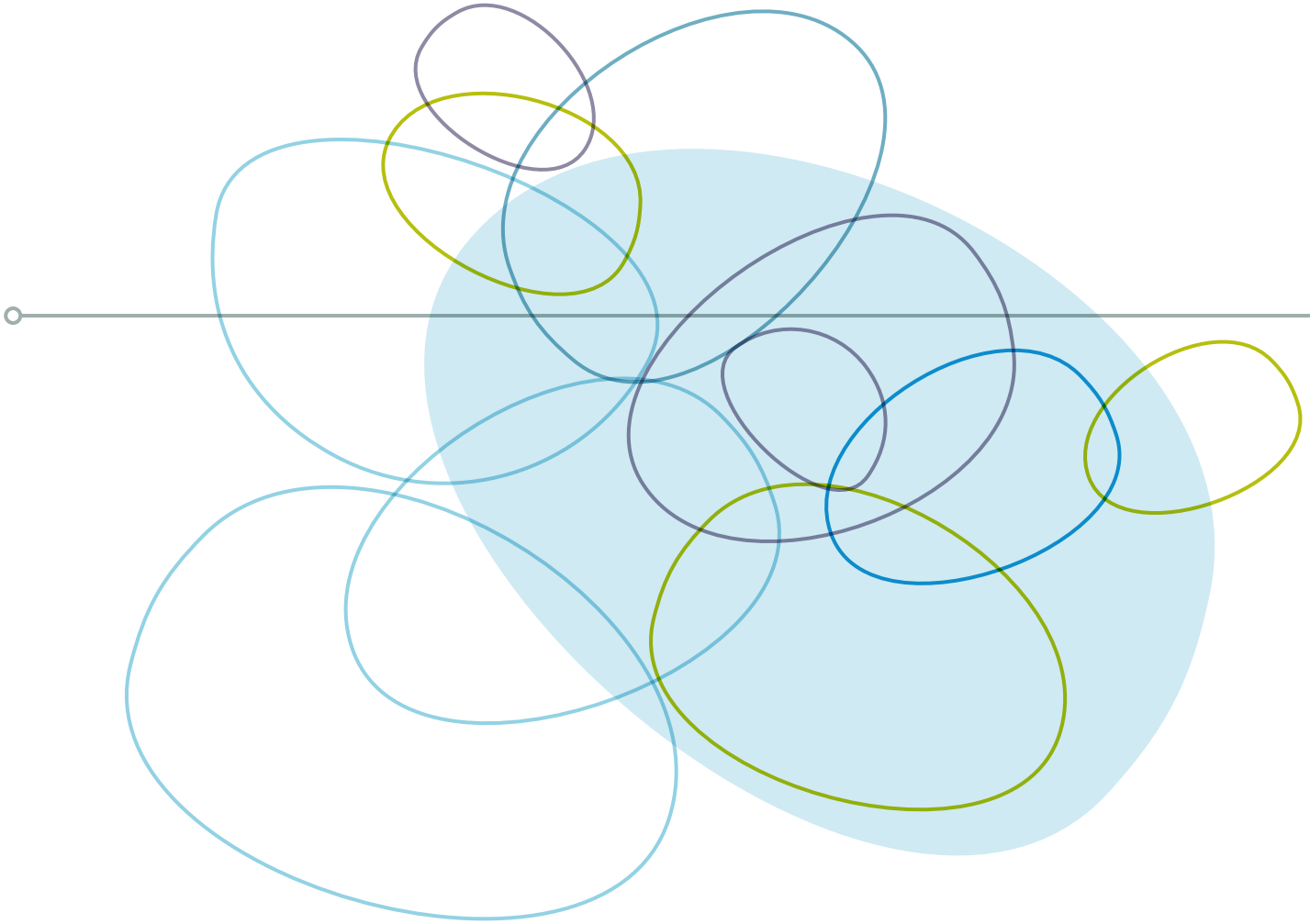
- **End Consumer**
- **Public Healthcare Systems**
- **Private Healthcare Services**
- **Pharmaceutical Industry & Laboratories**
- **Social entities**

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

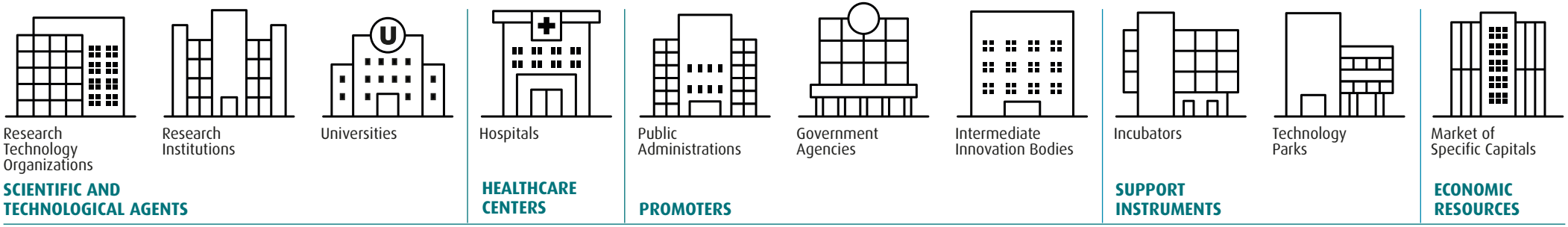
FINANCIAL SERVICES

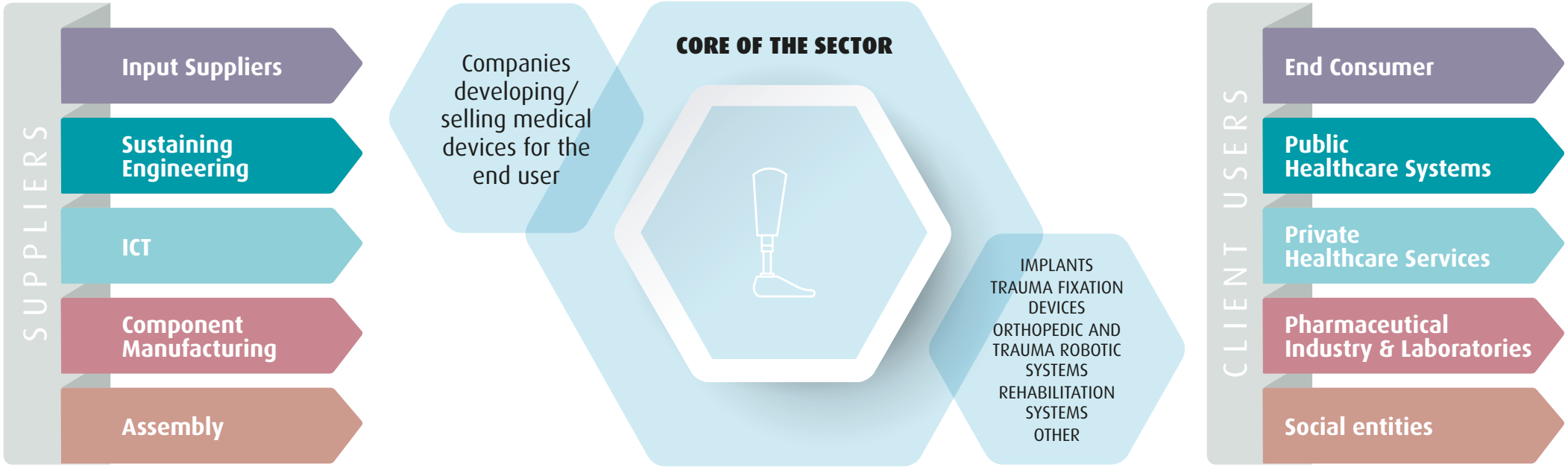


ACTIVITY SECTOR

ORTHOPEDIC AND
REHABILITATION
TECHNOLOGY

ORTHOPEDIC AND REHABILITATION TECHNOLOGY





ORTHOPEDIC AND REHABILITATION TECHNOLOGY

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations
TECNALIA
CEIT-IK4
CIDETEC-IK4
IK4-TEKNIKER
VICOMTECH-IK4

Research Institutions
DEUSTOTECH
POLYMAT
CIC BIOMAGUNE
BIOEF

Universities
MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

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Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

Input Suppliers
GUREAK

Sustaining Engineering
OSTEOPHOENIX
IKOR TECHNOLOGY
BIZINTEK INNOVA
CREATECH MEDICAL
ENKOA
I+MED
GUREAK
VIRTUALWARE
MIZAR
OPTIMUS 3D
POLIMERBIO

ICT
INIT HEALTH
VIRTUALWARE

Component Manufacturing
IKOR TECHNOLOGY
I+MED
REINER MEDICAL
GUREAK
MIZAR
POLIMERBIO
OPTIMUS 3D

Assembly, Packaging & Sterilization
I+MED
GUREAK
ULMA PACKAGING

CORE OF THE SECTOR

FM CONTROL
FESIA TECHNOLOGY
GOGOA MOBILITY ROBOTS
INIT HEALTH
NEOS SURGERY
BIOTECHNOLOGY INSTITUTE
CREATECH MEDICAL
ESKUA HEALTH TECHNOLOGIES
I+MED
REINER MEDICAL
VITIA
VIRTUALWARE
MARTIMEDIC
MIZAR
SUMISAN
SUPRESU

CLIENT USERS

End Consumer

Public Healthcare Systems

Private Healthcare Services

Pharmaceutical Industry & Laboratories

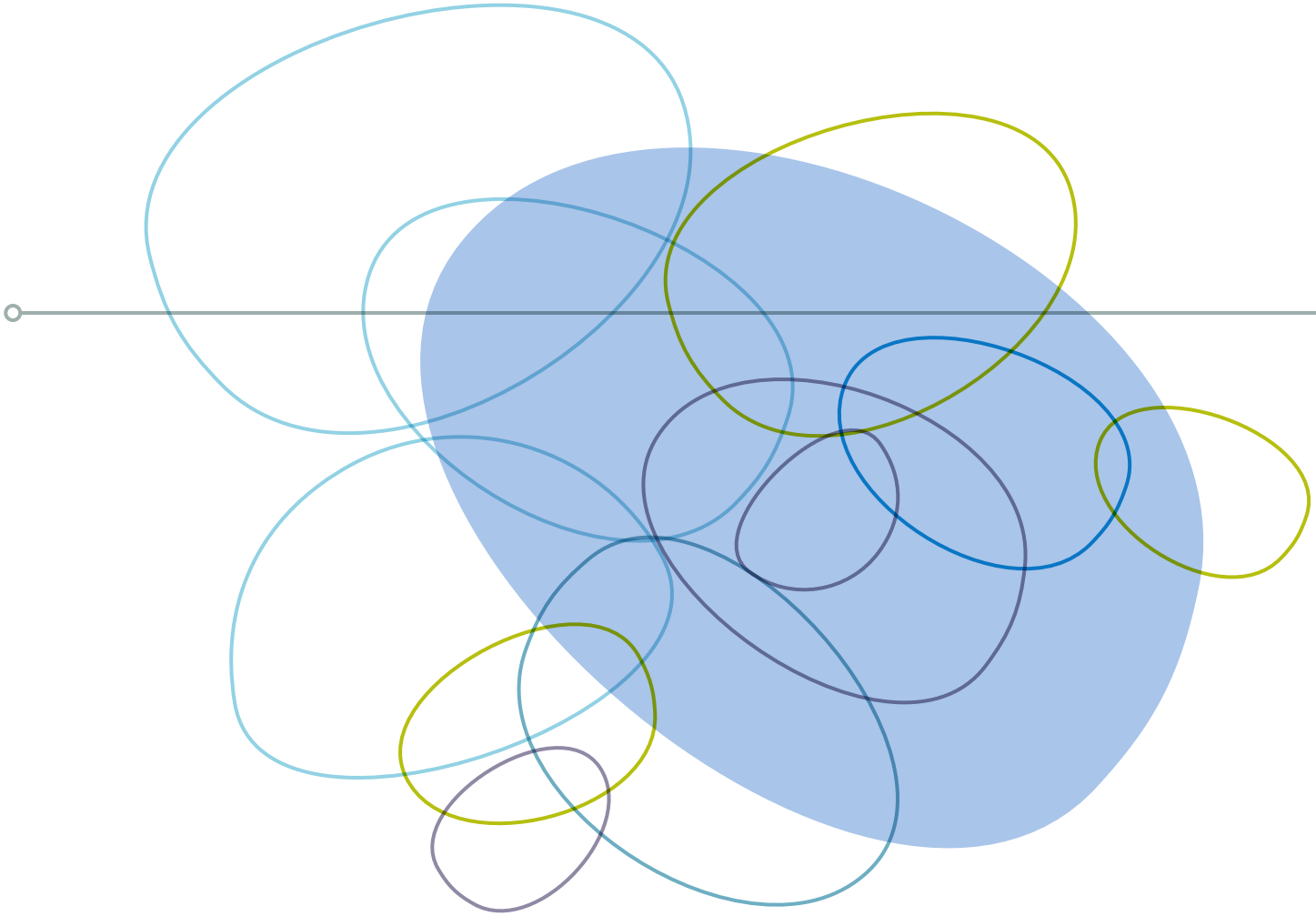
Social entities

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

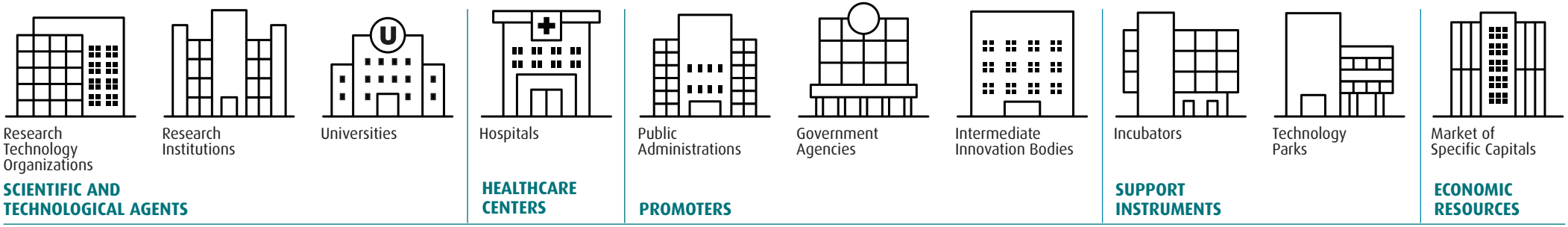
FINANCIAL SERVICES

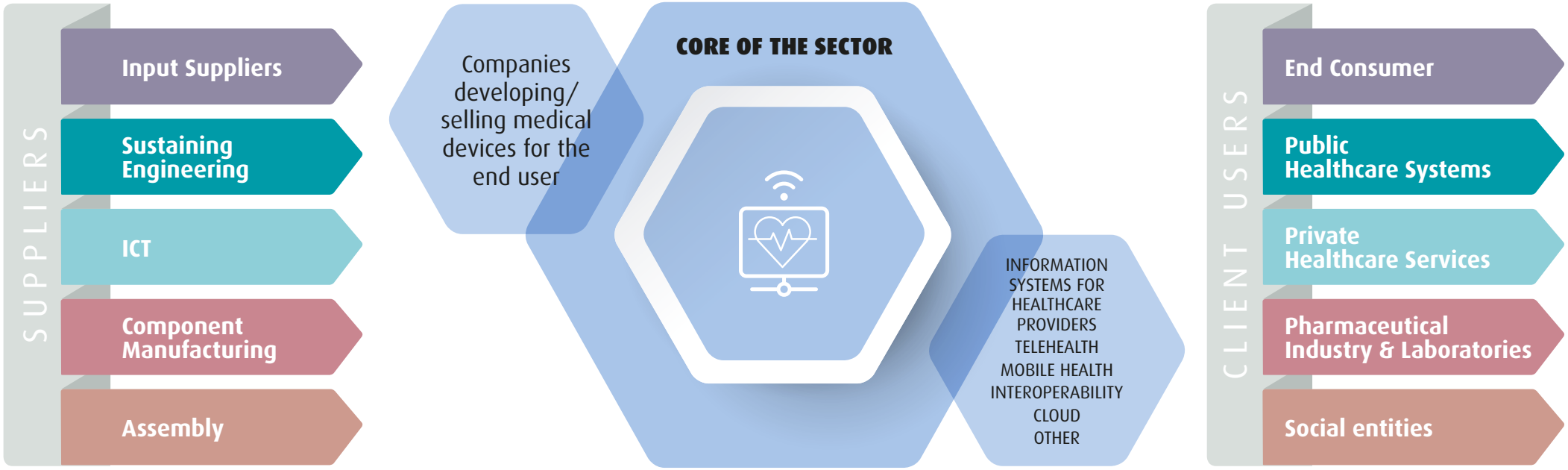


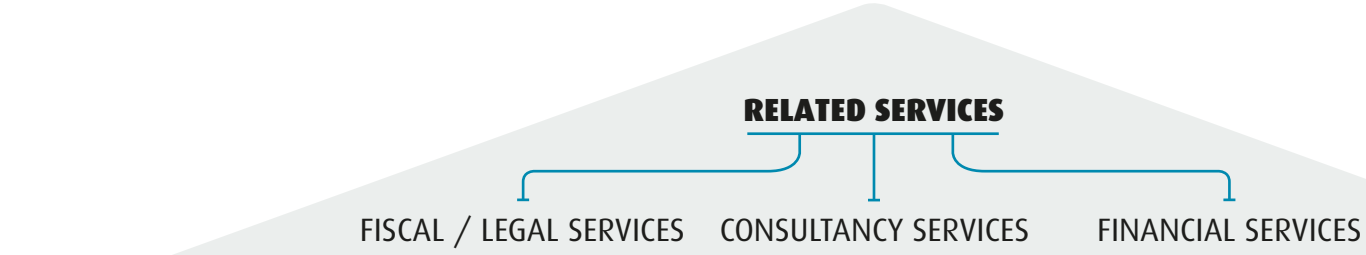
ACTIVITY SECTOR

DIGITAL
HEALTH

DIGITAL HEALTH







DIGITAL HEALTH

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations
TECNALIA
CEIT-IK4
IK4-TEKNIKER
VICOMTECH-IK4

Research Institutions
BCAM
DEUSTOTECH
BIOEF

Universities
MONDRAGON UNIBERTSITATEA
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

Public Administrations

Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

Input Suppliers
GUREAK

Sustaining Engineering
IKOR TECHNOLOGY
ONE WAY LIVER
BIZINTEK INNOVA
IRISBOND
GUREAK
VIRTUALWARE
MIZAR

ICT
BILBOMATICA
IBERMATICA
INIT HEALTH
ONE WAY LIVER
DOMINION
EMEDICA
SALUDNOVA SOLUTIONS
VIRTUALWARE
NARU INTELLIGENCE
ULMA INNOVATION

Component Manufacturing
IKOR TECHNOLOGY
GUREAK
MIZAR

Assembly, Packaging & Sterilization
GUREAK

CORE OF THE SECTOR

BIOMEDICAL HEALTH SYSTEM
INIT HEALTH
NESPLORA
ONE WAY LIVER
BIOTECHNOLOGY INSTITUTE
DOMINION
FAGOR HEALTHCARE
IDEABLE SOLUTIONS
IRISBOND
K-DNA GENOMICS
SALUDNOVA SOLUTIONS
ULMA INNOVATION
VIRTUALWARE
MIZAR
NARU INTELLIGENCE

CLIENT USERS

End Consumer

Public Healthcare Systems

Private Healthcare Services

Pharmaceutical Industry & Laboratories

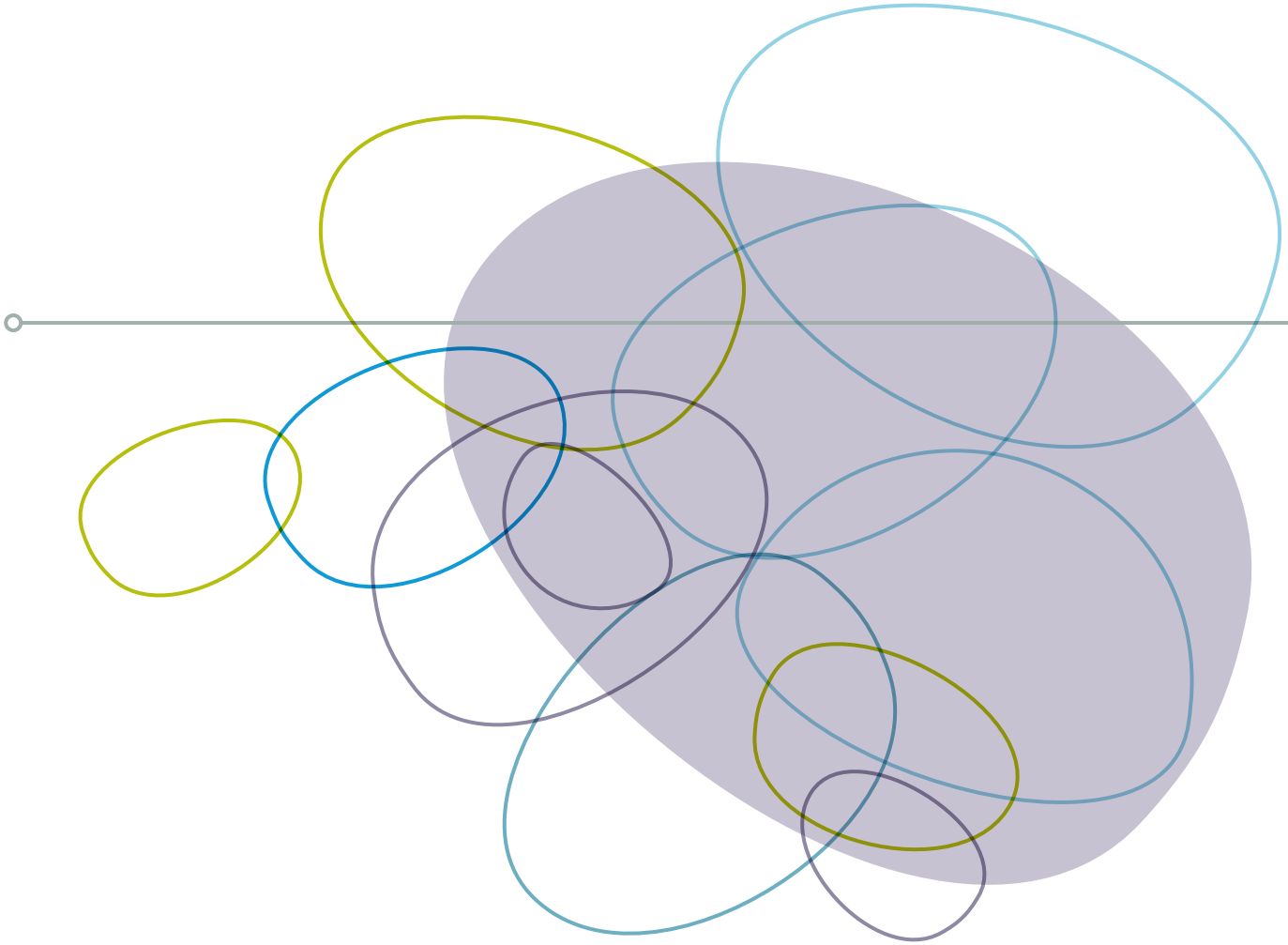
Social entities

RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

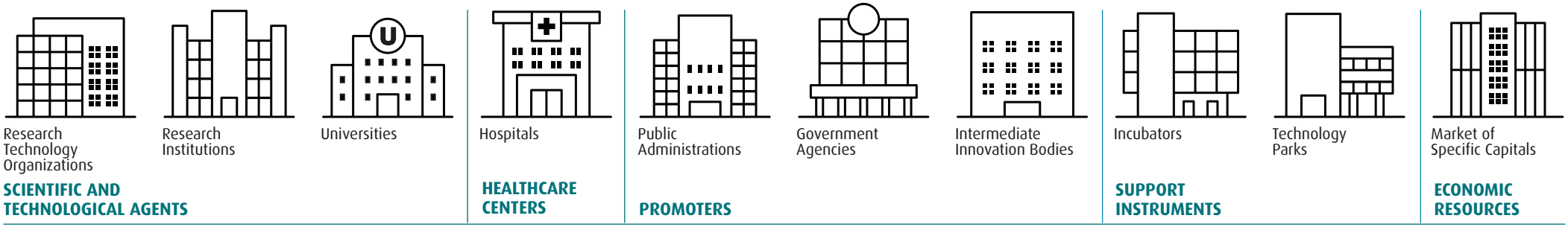
FINANCIAL SERVICES

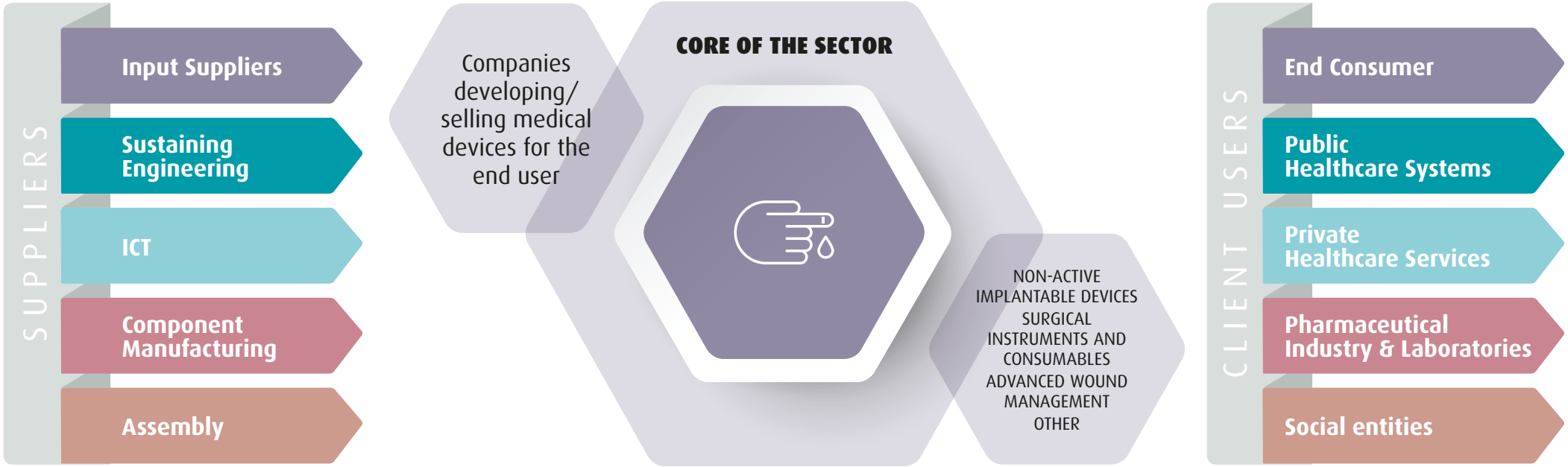


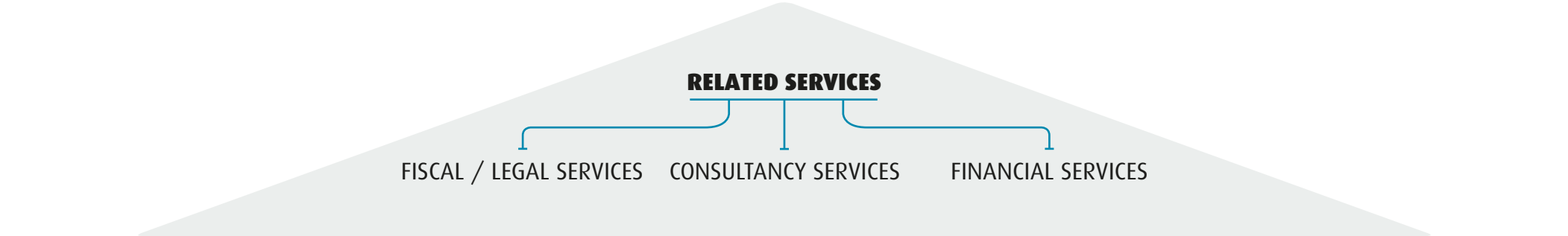
ACTIVITY SECTOR

BIOMEDICAL CONSUMABLES

BIOMEDICAL CONSUMABLES







BIOMEDICAL CONSUMABLES

SCIENTIFIC AND TECHNOLOGICAL AGENTS

Research Technology Organizations
TECNALIA
CEIT-IK4
CIDETEC-IK4
GAIKER-IK4
IK4-TEKNIKER

Research Institutions
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POLYMAT
CIC BIOMAGUNE
CIC NANOGUNE
BIOEF

Universities
UPV/EHU

HEALTHCARE CENTERS

Hospitals

PROMOTERS

Public Administrations

Government Agencies

Intermediate Innovation Bodies

SUPPORT INSTRUMENTS

Incubators

Technology Parks

ECONOMIC RESOURCES

Market of Specific Capitals

SUPPLIERS

Input Suppliers
CIKAUTXO
GUREAK

Sustaining Engineering
OSTEOPHOENIX
IKOR TECHNOLOGY
I+MED
GUREAK
MIZAR
OPTIMUS 3D
POLIMERBIO

ICT

Component Manufacturing
CIKAUTXO
PROGENIKA BIOPHARMA
IKOR
TECHNOLOGY I+MED
REINER MEDICAL
GUREAK
MIZAR
POLIMERBIO
OPTIMUS 3D

Assembly, Packaging & Sterilization
CIKAUTXO
ULMA PACKAGING
GUREAK
I+MED

CORE OF THE SECTOR

AJL OPHTHALMIC
FM CONTROL
CIKAUTXO
HISTOCELL
OIARSO
BIOTECHNOLOGY INSTITUTE
I+MED
REINER MEDICAL
APOSBUC
MARTIMEDIC
MIZAR
SUMISAN

CLIENT USERS

End Consumer

Public Healthcare Systems

Private Healthcare Services

Pharmaceutical Industry & Laboratories

Social entities

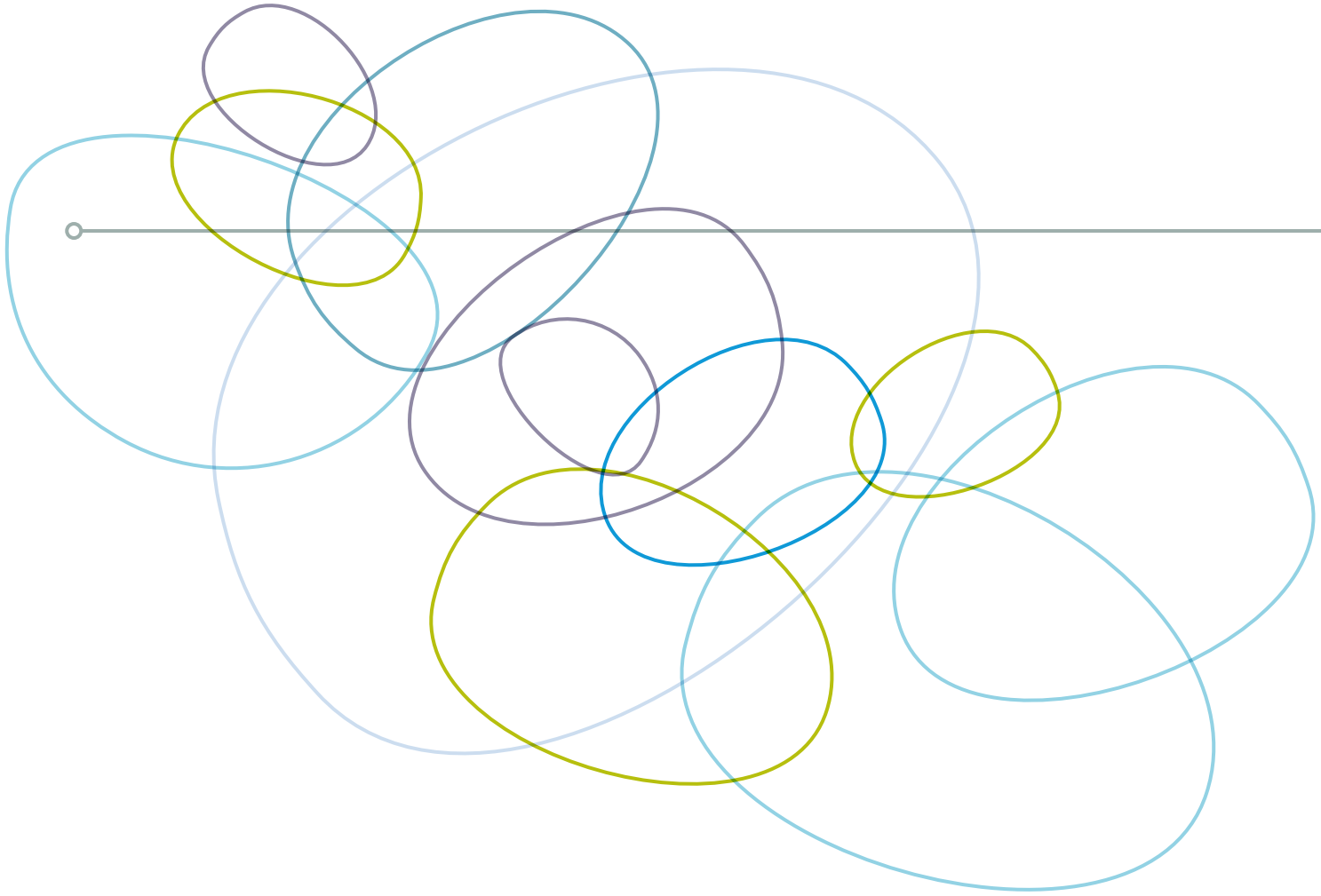
RELATED SERVICES

FISCAL / LEGAL SERVICES
AIK GROUP

CONSULTANCY SERVICES

FINANCIAL SERVICES

MEDICAL DEVICES COMPANY MAP




AIK GROUP
HERMES medical engineering
sumisan
PRODOL
CIKAUTXO MEDICAL
Ibermática
Reiner MEDICAL
POLIMERBIO
SUPRESU, S.L.
Bilbomática
MARTIMEDIC suministros médico quirúrgicos
iKOR SPAIN MEXICO CHINA
iLine
bizintek Ingeniería y Diseño de Producto
innoprick
VITIA
NEOS
Prospero BioSciences
inithealth
OSTEOPHOENIX
IKERLAT polymers
INYBI Suboccipital Muscle Inhibitor
GUREAK
densb
DOMINION
owl Metabolomics Products&Services
Naru
ULMA
nesplora
emedica
ideable.
createch medical
IRISBOND
histocell NoraxBG
Bexen cardio
fesia
HS
KirolDNA ANÁLISIS GENÉTICOS DEPORTIVOS
VIRTUALWARE
OSASEN
Bexen medical
vacunek
Progenika Biopharma GRIFOLS
saludnova
patia
neas global
FAGOR Healthcare
GOGOA
Kiro GRIFOLS
FMCONTROL IMAGING SYSTEMS
microLIQUID experts in microfluidics
Geroa
AJL ophthalmic
bti Human Technology
optimus3D
enkoa
i+Med BIOTECHNOLOGY FOR HEALTH
mizar Additive Manufacturing
GalenicApp
Aposbuc®
BIOKILAB

INDEX

CONSULTING OF MEDICAL DEVICES

AIK GROUP BNII

www.aikgroup.es

— CONTACT PERSON
ALBERTO PRIETO
MANAGER
+34 665 718 664
alberto@aik-group.net

— HQ
AIK GROUP BNII SL

— FOUNDING YEAR
2010

— ANNUAL TURNOVER (M€)
<5 5-50 >50

— DESCRIPTION OF THE COMPANY
AIK GROUP is a company that offers services of legal advice in the field of medical devices. It implements and develops technical files for obtaining CE marking according to the requirements defined in the European directives.

— SPECIFIC THERAPEUTIC AREA
All areas of health

— PRODUCT PIPELINE

No.1

REGULATORY ADVICE
Regulatory advice on compliance with European directives to obtain CE marking.

AJL OPHTHALMIC

www.ajlsa.com

CONTACT PERSON

EVA LARRA
CEO
+34 945 298 256
evalarra@ajlsa.com

HQ

AJL OPHTHALMIC, S.A.
Ferdinand Zeppelin, 1
E01510 Miñano
Araba

AFFILIATE 1

ADDITION TECHNOLOGY
Lombard, Chicago
EEUU

FOUNDING YEAR

1992

EMPLOYEES

60

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Europe (All)
LatAm
Rest of Asia

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

DESCRIPTION OF THE COMPANY

AJL OPHTHALMIC S.A. is a Spanish leader company in vision care that develops and manufactures innovative quality products to address world's eye care challenges and support ophthalmic professionals to enhance patient's quality of vision. It is focused on the development of a full range of intraocular implants and other ophthalmic products for intraocular surgery. As a global leader in vision care, AJL OPHTHALMIC offers a complete range of products intended for eye care professionals to handle vision disorders and, therefore, improve the patient's quality of life.

SPECIFIC THERAPEUTIC AREA

Ophthalmology
Veterinary
Maxilofacial implants

PRODUCT PIPELINE

No.1

INTRAOCULAR LENSES

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
IOL one piece design indicated for cataract treatment. Posterior and anterior chamber.

No.2

GLAUCOMA IMPLANTS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Scleral implants indicated for non-penetrating deep sclerectomy (NPDS) in open-angle glaucoma surgery.

No.3

MAXILOFACIAL IMPLANTS

CURRENT DEVELOPMENT PHASE
In development

No.4

INTRASTROMAL CORNEAL IMPLANTS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
It consists of a semicircular segment with an arc of variable length and a fixed triangular section. It is indicated for keratoconus treatment.

No.5

VISCOELASTIC SOLUTIONS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Non-absorbable viscoelastic solution, highly purified an noninflammatory, isotonic, sterile and non-pyrogenic, for intraocular injection. Indicated for cataract treatment.

No.6

CAPSULAR TENSION RINGS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Indicated in cases of weak zonules that pose a risk of capsular retraction. The purpose of these implants is to expand the capsule in which the crystalline is located so that an intraocular lens can be inserted.

No.7

EYELID IMPLANTS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Eyelid implants are designed for lagophtalmos functional defect treatment.

No.8

VETERINARY PREMIUM LINE

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Products are designed for different ophthalmoloy treatement in dogs.

APOSBUC

www.aposbuc.com

CONTACT PERSON

MARIAN BARANDA
TECHNICAL DIRECTOR
+34 945 330 203
marian.baranda@aposbuc.com

HQ

APOSBUC, S.L.
Mendigorritxu 138, Pabellón 2B
E01015 Vitoria - Gasteiz
Araba

FOUNDING YEAR

2014

EMPLOYEES

3

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Euskadi
Europe (All)
Spain
NorthAm

DESCRIPTION OF THE COMPANY

Company dedicated to the manufacture of a sanitary product to avoid snoring and hypoapnea.

PRODUCT PIPELINE

No.1

APOSBUC
Buconal Sealant, Self-Adhesive and Disposable.

CURRENT DEVELOPMENT PHASE

In market

ELECTROMEDICAL DEVICES	MEDICAL IMAGE				DIGITAL HEALTH	
MONITORING DEVICES	CO-DEVELOPMENT MEDICAL IMAGE ANALYSIS SOFTWARE DIAGNOSTIC NUCLEAR IMAGE SYSTEM (PET, SPECT) MRI				INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS MOBILE HEALTH INTEROPERABILITY TELEHEALTH DSS (DECISIÓN SUPPORT SYSTEM) BIGDATA	

BILBOMÁTICA

www.bilbomatica.es

CONTACT PERSON

OSKAR RUEDA
ACCOUNT MANAGER
+34 94 427 63 08
oskar@bilbomatica.es

HQ

BILBOMÁTICA
Santiago de Compostela, 12 - 4ºA
E48003 Bilbao
Bizkaia

FOUNDING YEAR

1988

EMPLOYEES

360

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Euskadi
Europe (All)
Spain

DESCRIPTION OF THE COMPANY

BILBOMÁTICA is a consulting and services company with 27 years of experience in information technology services. Its activities are highly focused on government and public organizations and they include:

- ICT analysis and consultancy; managed services; ICT support and technical assistance; development and maintenance of software systems.

SPECIFIC THERAPEUTIC AREA

- Cardiology
- Medical imaging
- Functional Breast Cancer Unit
- Bipolar disorder
- Nursing care
- Epilepsy
- Anticoagulated patients

PRODUCT PIPELINE

No.1

MBIZI

Mbizi - integral defiance to breast cancer is a software platform for supporting the breast functional unit with assistive technologies in medical decision making.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Platform for Functional Breast Cancer Unit.

No.2

RADMOVE PLATFORM

The RADMOVE platform can be considered as the "Dropbox" for radiology, with advanced and specific capabilities for management and visualization via web and mobile technologies.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Solution for radiology image exchange for professionals who need visualization, reporting, remote diagnosis, ...

No.3

CARDIO

Is designed for cardiac rehabilitation for people who have suffered cardiovascular diseases such as acute coronary syndrome and others.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Make cardiac rehabilitation comfortably from outside the Hospital.

ESTIMATED TIME TO MARKET (YEARS)
1

No.4

BIPOLAR

Telemedicine application to manage the treatment of bipolar disorder. It is a multi-device application allowing patients with bipolar disorder to become actively involved in managing their condition.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Telemedicine application to manage the treatment of bipolar disorder.

ESTIMATED TIME TO MARKET (YEARS)
1

No.5

EPILEPSY

- Developing an advanced navigation system that will provide neurosurgeons support tools for operations.
- Treatment and follow-up of epileptic patients.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
The follow-up and treatment of epileptic patients.

No.6

COAGUTEK

Follow-up of the Pharmacological Treatment of Patients with Oral Anticoagulation.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Follow-up of of Patients with Oral Anticoagulation.

No.7

ODEI

Multidisclipinary Treatment of Alzheimer. The fulfilment of the multidisciplinary medical studies and diagnose help systems through tools based on ontologies.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Software platform for multidisciplinary approach to Alzheimer's disease.

No.8

NAIA HEALTHCARE

Comes to fill a gap in the market of software health management for nursing care in all its fields of work, hospital general and day, primary care, specialized hospitalization, telemedicine, etc.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
NAIA Healthcare as a tool for innovation in nursing care.

IN-VITRO DIAGNOSTIC

BIOCHEMISTRY SURFACES
MICROBIOLOGY
IMMUNOCHEMISTRY
MOLECULAR DIAGNOSIS (GENOMICS)

BIOKILAB

www.okilab.es

BIOKILAB

CONTACT PERSON
ENRIQUE OQUIÑENA
OWNER/MANAGER
+34 635 720 599
okilab@okilab.es

HQ
BIOKILAB
Ferdinand Zeppelin, 5
Araba Technology Park
E01510 Miñano
Araba

FOUNDING YEAR
1939

EMPLOYEES
40

FOOTPRINT
Europe (All)
LatAm

DESCRIPTION OF THE COMPANY
Biokilab is a family business that has grown day by day until becoming the business group of the health sector that it is today. Family tradition and proximity, a single constant search for excellence and innovation, which lowers the patent on the three legs of the group: Biokilab, Biokibank and HSO. Three generations with the same goal and vocation.

SPECIFIC THERAPEUTIC AREA
Infertility IVD

SERVICE
Development of new kits that are used in the diagnosis, prognosis and treatment of juman diseases.

ASSOCIATED COMPANY
BASQUE HEALTHCLUSTER

BIOMEDICAL HEALTH SYSTEM

www.biohesy.com

CONTACT PERSON
SEBASTIAN RECAJ IBÁNEZ
CEO - MANAGING DIRECTOR
+34 667 380 523
gerencia@biohesy.com

HQ
BIOMEDICAL HEALTH SYSTEM
Portuetxe, 59
E20018 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR
2015

EMPLOYEES
1

ANNUAL TURNOVER (M€)
<5 5-50 >50

DESCRIPTION OF THE COMPANY
BIOMEDICAL HEALTH SYSTEM is a European Research and Development Company focused on bioengineering products used in the field of health and safety. The company is mainly dedicated to the design and production of portable products, based in the latest market updates in health technologies, to meet the needs of groups with high demands in health and safety. Professionals working at BIOMEDICAL HEALTH SYSTEM are mainly health and telecommunications experts, with extensive experience in health services.

Their main researches are focused in WEARABLES, adapting them to control health and comfort of individuals. The company is continuously evolving their products, in contact with researchers and new developments of vital sensors. Their goal is a proactive health system that provides health coverage to many people at a small cost and giving the user high security in his health.

SPECIFIC THERAPEUTIC AREA
Alzheimer's disease, senile dementia, slight motor disability, blindness.

MAIN ALLIANCES
No.1

PARTNER NAME
ARCELOR MITTAL

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Dead person system

PRODUCT PIPELINE
No.1

CONNECTION SAFETY

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Detection of risk situations, monitoring of vital signs of the worker, GPS positioning and SOS button, are some of the characteristics that we can offer through our platform Biohesy. Indicated for workers in jobs with high risk, away from distress points, jobs with bad location and situations of sanitary emergency. We can monitor the employee, monitor their activity, locate it on maps and speak directly through our wearable device.

No.2

CONNECT HEALTH

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Immediate detection of vital signs, falls, blood pressure, GPS position. Prevent, control and locate. Automatic sending of alarms.

	MEDICAL IMAGE			ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	
	DIGITAL PORTABLE LARYNGOSCOPE (CAMERA, VIDEO RECORDING, WIFI STREAMING..)			TECHNOLOGICAL BED (REGULATES THE FIRMNESS OF EACH OF THE 24 COMFORT ZONES)	TRACKING WEARABLE (ELDERLY)	

BIZINTEK INNOVA

www. bizintek.es

bizintek
Ingeniería y Diseño de Producto

CONTACT PERSON

DANIEL DEL RÍO
CEO
+34 944 372 696
d.delrio@bizintekinnova.com

HQ

BIZINTEK INNOVA S.L.
Nemesio Mogrobejo, 9A
E48015 Bilbao
Bizkaia

FOUNDING YEAR

2005

EMPLOYEES

25

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)

DESCRIPTION OF THE COMPANY

BIZINTEK is an engineering company based in Bilbao, made up of more than twenty engineers and designers whose goal is to transform ideas into innovative products.

We offer an integral service, We develop all phases of the product and we are 100% involved with the customer; from the get go inorder to achieve an innovative, efficient and competitive product.

In these years we have grown together with our customers, developing innovative products for multiple sectors: electromedical, energy, technology, sports ... or for consumption in general.

PRODUCT PIPELINE

No.1

LARYNGOSCOPE CAMERA
We decided to attach a camera to the laryngoscope to make the doctor's work easier and so that more than one person could see the intubation procedure.
The main challenge faced in this project was the space restrictions in order to ensure a handy and light system but which could still be used for the extensive processing needed to capture, compress, video recording and streaming.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Developed for Prodol Meditec S.A.

No.2

NGMATT T SERIES BED
The bed NGMATT T SERIES regulates the firmness of each of the 24 comfort zones – 12 per side – independently for each user. These points change according to the ergonomic needs of each one to provide a correct alignment of the spine.
The bed can be controlled with a mobile App, which also gives the possibility to talk with a supervisor who recommends how to configure it. The bed helps to alleviate many of the sleep-related disorders and in the future will it be able to detect them in time.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Developed for NGMATT

ESTIMATED TIME TO MARKET (YEARS)
1

No.3

ACTIOHEALTH
ActioHealth is a tracking wearable to allow control system of patients in geriatric and residences, day centers or hospitals. These devices allow us to monitor the position in environments or critical areas, such as exits.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Developed for Geoactio

ELECTROMEDICAL DEVICES	IN-VITRO DIAGNOSTIC	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES SURGICAL INSTRUMENTS AND SYSTEMS OTHER (ELECTRONIC EQUIPMENT FOR OUR ENDORET®-PRGF® TECHNOLOGY THROUGH THE USE OF THE PATIENT'S OWN GROWTH FACTOR-RICH PLASMA (PERSONALIZED MEDICINE)	BIOCHEMISTRY SURFACES OTHER: IN OUR LABORATORY OF RESEARCH OF OUR TECHNOLOGY ENDORET® - PRGF® WE HAVE AN APARATOLOGÍA FOR THE DEVELOPMENT OF THIS INVESTIGATION	OTHER	OTHER: WE HAVE DEVELOPED DIAGNOSTIC SOFTWARE FOR ORAL IMPLANTOLOGY	OTHER: WITHIN OUR ENDORET® - PRGF® TECHNOLOGY WE HAVE DEVELOPED A SERIES OF KITS SPECIFICALLY DESIGNED FOR THE TREATMENT OF CERTAIN PATHOLOGIES)

BIOTECHNOLOGY INSTITUTE, BTI

www.bti-biotechnologyinstitute.com

bti Biotechnology Institute

CONTACT PERSON

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HQ

BIOTECHNOLOGY INSTITUTE, S.L.
San Antonio, 15 - 5º
E01005 Vitoria - Gasteiz
Araba

FOUNDING YEAR

1999

EMPLOYEES

295

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Europe (All)
Japan
LatAm
NorthAm
Australia

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

AFFILIATE 1

Comercial BTI Institute España S.L.
Vitoria - Gasteiz · SPAIN

AFFILIATE 2

BIOTECHNOLOGY INSTITUTE I MAS D S.L.
Vitoria - Gasteiz · SPAIN

AFFILIATE 3

TEAMWORK MEDIA SPAIN S.L.
Vitoria - Gasteiz · SPAIN

AFFILIATE 4

HTL CAD-CAM LAB S.L.
Vitoria - Gasteiz · SPAIN

AFFILIATE 5

BTI Biotechnology Institute Deutschland Gmbh
Pforzheim · GERMANY

AFFILIATE 6

BTI Biotechnology Institute Italia
Milan · ITALY

AFFILIATE 7

BTI Biotechnology Institute Portugal
Porto · Portugal

AFFILIATE 8

BTI Biotechnology Institute UK LTD
Colchester. Essex · UK
Pforzheim · GERMANY

AFFILIATE 9

BTI of North America
Blue Bell, Pensylvania · USA

AFFILIATE 10

BTI Biotechnology Institute México, S.A. de C.V
Mexico DF · MEXICO

AFFILIATE 11

BTI Biotechnology Institute France
Bordeaux · FRANCE

DESCRIPTION OF THE COMPANY

BTI develops clinical solutions in Oral Implantology and Regenerative Medicine in search of excellence. BTI's main products are: dental implants, prosthetic components for oral implantology, electronic equipment for the use of BTI's Endoret® - PRGF® technology at the same time that BTI has a training center in Vitoria that each year offers training to more than 2,000 professionals from the different medical areas (of which more than 60% come from abroad).

SPECIFIC THERAPEUTIC AREA

BTI develops clinical solutions in Oral Implantology and Regenerative Medicine in search of excellence. BTI's main products are: dental implants, prosthetic components for oral implantology, electronic equipment for the use of BTI's Endoret® - PRGF® technology at the same time that BTI has a training center in Vitoria that each year offers training to more than 2,000 professionals from the different medical areas (of which more than 60% come from abroad).

PRODUCT PIPELINE

No.1

TITANIUM DENTAL IMPLANTS
Titanium dental implants with different diameters and lengths. Typology: Narrow, wide platform. Internal or external connection. Including short, extra-short implants.

CURRENT DEVELOPMENT PHASE
In market

No.2

PROSTHETIC FITTINGS
Line of prosthetic fittings to solve cemented and screwed prostheses.

CURRENT DEVELOPMENT PHASE
In market

No.3

PROSTHESIS KITS
BTI prosthesis kits, torque wrenches, torque wrench tips.

CURRENT DEVELOPMENT PHASE
In market

No.4

ENDORET® (PRGF®)
Biomedical technology developed which stimulates the regeneration of tissues by concentrating growth factors and other proteins present in the patient's own blood plasma.

CURRENT DEVELOPMENT PHASE
In market

No.5

ATRAUMATIC IMPLANT EXTRACTION SYSTEM

CURRENT DEVELOPMENT PHASE
In market

No.6

SURGICAL INSTRUMENTS

CURRENT DEVELOPMENT PHASE
In market

No.7

BTI SCAN® Diagnostic Software

CURRENT DEVELOPMENT PHASE
In market

No.8

APNEA®
Diagnostic and treatment system for sleep apnea and snoring.

CURRENT DEVELOPMENT PHASE
In market

No.9

TRAINING CENTER

CURRENT DEVELOPMENT PHASE
In market

CIKAUTXO

www.cikautxomedical.com

MEDICAL
CIKAUTXO
ADVANCED POLYMER DEVICES

CONTACT PERSON
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CIKAUTXO, S.COOP.
Magdalena Auzoa, 2B
E48710 Berriatua
Bizkaia

AFFILIATE 1
CIKAUTXO CZ
Czech Republic

AFFILIATE 2
CIKAUTXO SK
Slovakia

AFFILIATE 3
CIKAUTXO CN
China

AFFILIATE 4
CIKAUTXO IN
India

AFFILIATE 5
CIKAUTXO RU
Romania

AFFILIATE 6
CIKAUTXO MX
Mexico

FOUNDING YEAR
1971

EMPLOYEES
3100

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Europe (All)
ROW
Euskadi

DESCRIPTION OF THE COMPANY
CIKAUTXO MEDICAL is the medical division of CIKAUTXO GROUP and is committed to the innovation, design, manufacturing and supply of polymeric single use devices. Devices are divided into two main groups:
· CATHETERS: OEM products in vascular access, enteral feeding and urology.
· SILICONE SINGLE USE DEVICES: Contract manufacturing of mass production silicone devices.
Cikautxo Medical offers also complete in-house capabilities from design assistance, compound development, laboratory testing, tool construction, sub-assembly and full service quality assurance.
Cikautxo medical is ISO 13.485 certified and operates under ISO 7 & 8 levels in its 600 square meters clean rooms.

SPECIFIC THERAPEUTIC AREA
- Cardiology
- Enteral feeding
- Urology
- Neurology
- Gynaecology
- Fluid control

PRODUCT PIPELINE

No.1
VASCULAR ACCESS CATHETERS (PICC, CVC, MIDLINES)

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Peripherically inserted central catheters, central venous catheters, midline catheters and similar type catheters, including introducers, drug ports, neurology drainages, others. All minimally invasive solutions, made out of thermoplastic high performance materials, valid for class III applications, manufactured under ISO 13.485 and GMP standards.

No.2
ENTERAL FEEDING CATHETERS (BUTTON, ...)

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Enteral feeding catheters, G-tubes, Nasogastric catheters, Buttons, Vent catheters, others, made out of silicone high performance materials, valid for class II and III applications, manufactured under ISO 13.485 and GMP standards.

No.3
UROLOGY CATHETERS (TURP,...)

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
TURP catheters, gynaecology catheters, rectal catheters, optionally with temperature sensor or lubricious performances, made out of silicone high performance materials, valid for class II applications, manufactured under ISO 13.485 and GMP standards.

No.4
SILICONE VALVES

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Mass production of silicone valves, microvalves, membranes, septums, baloons for catheters, others, made out of silicone high performance materials, valid for class I, II and III applications, manufactured under ISO 13.485 and GMP standards.

No.5
SILICONE JOINTS AND OTHER SILICONE COMPONENTS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Joints, stoppers, plugs, anaesthesia and respiratory components, others, made out of silicone high performance materials, valid for class I, II and III applications, manufactured under ISO 13.485 and GMP standards.

No.6
SINGLE USE TUBING KITS FOR PHARMA MACHINES

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Tubing for single use kits for pharma machinery, tubing for peristaltic pumps, others, made out of silicone high performance materials, valid for pharma applications, manufactured under ISO 13.485 and GMP standards.

No.7
ANTIMICROBIAL & ANTITHROMBOGENIC CATHETER TREATMENTS

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Antimicrobial and antithrombogenic catheters produced in different process technologies like coated, compounded and having different biofilm attack strategies.

ESTIMATED TIME TO MARKET (YEARS)
1

CREATECH MEDICAL

www.createchmedical.com

— CONTACT PERSON
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— HQ
CREATECH MEDICAL, S.L.
Pol. Ind. Kurutz-Gain, P3b
E20850 Mendaro
Gipuzkoa

— FOUNDING YEAR
2006

— EMPLOYEES
47

— FOOTPRINT
Europe (All)
Euskadi
Spain

— DESCRIPTION OF THE COMPANY
CREATECH MEDICAL S.L. is a high technology based company. The activity is focused on the design and manufacturing of dental structures in Titanium, Chrome Cobalt and Zirconia that are screw retained on dental implants.

— SPECIFIC THERAPEUTIC AREA
Dental and maxillofacial

— PRODUCT PIPELINE

No.1

PRODUCT, SERVICE OR TECHNOLOGY
Dental framework

CURRENT DEVELOPMENT PHASE
In market

DENEB MEDICAL

www.denebmedical.com

CONTACT PERSON

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HQ

DENEB MEDICAL, S.L.
Pº Mikeletegi, 83
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2014

EMPLOYEES

5

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe
USA

DESCRIPTION OF THE COMPANY

DENEB MEDICAL is a start-up focused on the development of disruptive surgical systems. Its first product is a laser-based surgical CoBot able to perform selective ablation.

SPECIFIC THERAPEUTIC AREA

Medical device for spinal surgery and neurosurgery.

PRODUCT PIPELINE

No.1

LASER-BASED COLLABORATIVE ROBOT FOR SELECTIVE TISSUE ABLATION

CURRENT DEVELOPMENT PHASE

In development

ESTIMATED TIME TO MARKET (YEARS)

3

DOMINION

www.dominion-global.com

CONTACT PERSON

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HQ

DOMINION
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E48009 Bilbao
Bizkaia

AFFILIATE 1

DOMINION
Josefa Valcárcel, 3-5
E28027 Madrid

FOUNDING YEAR

1999

EMPLOYEES

5146

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (W)
LatAm

DESCRIPTION OF THE COMPANY

Dominion is a global provider of multitechnology services and specialised engineering solutions. It combines nowhow, technology and innovation to help its customers make their productive processes more efficient, either by fully outsourcing them ("Services") or by implementing solutions underpinned by specialised technology and platforms ("Solutions").

SPECIFIC THERAPEUTIC AREA

Dominion's health area specializes in ICT systems in hospital environments.

MAIN ALLIANCES

No.1

PARTNER NAME
FUNDACIÓN ONKOLOGIKOA FUNDAZIOA

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.2

PARTNER NAME
FUNDACIÓN VICOMTECH-IK4

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.3

PARTNER NAME
SOUTHERN TECHNOLOGY GROUP

COUNTRY OF PARTNER'S HQ
CHILE

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.4

PARTNER NAME
GRUPO EMPRESARIAL ELETROMÉDICO IBERMANSA

COUNTRY OF PARTNER'S HQ
PERÚ

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.5

PARTNER NAME
AUTOMATIZA S.A.

COUNTRY OF PARTNER'S HQ
ARGENTINA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

PRODUCT PIPELINE

No.1

FARMATOOLS
Comprehensive management tool for hospital pharmacies which facilitates the management of pharmacy requirements, assists in decision-making and improves safety in medicine use. It provides high-level clinical tools to control the use of medicines and facilitates the management of storerooms, prescriptions, mixing medicines, cytostatic drugs and other pharmacy tasks.

CURRENT DEVELOPMENT PHASE
In market

No.2

DIETTOOLS
A diet and kitchen management solution which enables quality control and tracking of the food consumed by patients in the hospital environment, providing tools to manage menus, allergies, patient preferences, menu selection and the macronutrient profile of hospitalized patients.

Simple automation in a circuit that is usually very complicated. The diet prescribed for the patient is automatically transmitted from the nursing control unit to the dietary and kitchen units.

CURRENT DEVELOPMENT PHASE
In market

No.3

ONCOTOOLS
Decision support system in medical oncology. Allows the oncologist to have a comprehensive monitoring of the cancer patient, with all the necessary information available for the follow-up of the cancer patient, throughout the different treatment cycles.

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
1

No.4

PLATFORM FOR CLINICAL AND MANAGEMENT DECISION-MAKING IN THE HOSPITAL EMERGENCY SERVICES.

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
2

EMEDICA

www.emedicahealth.com

CONTACT PERSON

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HQ

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Pº Mikeletegi, 57
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2011

EMPLOYEES

7

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (W)

DESCRIPTION OF THE COMPANY

eMedica developes software in the field of medical imaging for analysis, diagnosis and planning operations in various medical specialties, facing global market and with a disruptive distribution model.

eMedica is specialized in developing flexible and integrated technology solutions with other devices and software tools to be used by surgeons and radiologist by an ensured quality of its products and services in accordance with the requirements of UNE-EN-ISO 13485

eMedica has a leading majority shareholder, which is the Alcor Group.
The Alcor Group is an Industrial Group whose objective is the creation and development of technological companies in the Medicine, Aeronautical, Automotive and New Technologies markets.
Its objective is to create first line companies, with the aim of developing and producing innovative products in conjunction with their clients.

Vicomtech-IK4, a shareholder, is an applied research centre, specialised in Computer Graphics, Visual Computing and Multimedia technologies, with the aim of responding to the innovation needs of companies and institutions.

SPECIFIC THERAPEUTIC AREA

Vascular through eVida® Vascular (CE marked by Directive 93/42/EEC): software tool for the monitoring and analysis of Aortic Aneurysms, preoperative planning in endovascular repair (EVAR, TEVAR, FEVAR) and aid for the stent selection for both regular and fenestrated aortas.
Traumatology and Orthopedics.
Oncology.
General purpose medical image treatment and analysis.

PRODUCT PIPELINE

No.1

eVIDA® VASCULAR
Software tool, available for MAC and PC, that facilitates the monitoring and analysis of Aortic Aneurysms, preoperative planning in endovascular repair (EVAR, TEVAR, FEVAR) and permits the stent design for both regular and fenestrated aortas; EC Certificate in accordance with Directive 93/42/EEC.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Aneurism evaluation and planning

No.2

eVIDA VIEWER 3D
Module that allows to scan and process the DICOM imaging studies of any form, agile and easily;
EC certificate in accordance with Directive 93/42/EEC.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
General purpose DICOM image process

ELECTROMEDICAL DEVICES

SENSORS TO IDENTIFY THE POSITION OF PEOPLE WITH SPINAL PROBLEMS

SENSORS TO IDENTIFY PARAMETERS OF PERSONAL HABITS IN RESIDENCES

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

REHABILITATION OF PEOPLE WITH MULTIPLE SCLEROSIS

ENKOA SYSTEM

www.enkoa.com

CONTACT PERSON

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HQ

ENKOA SYSTEM, S.L.
Poligono Erramone, 45
E20850 Mendaro
Gipuzkoa

FOUNDING YEAR

1998

EMPLOYEES

18

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain (CAPV)

DESCRIPTION OF THE COMPANY

ENKOA System is a technologically-based company created in 1998 specialized in the application of electronic technologies, orientated towards the development and manufacture of high value-added electronic and mechatronic products. Enkoa strategy combines the application of best business practices with their commitment to social business responsibility.

ENKOA's concept of business is based on specialization and expert Know-How in hardware and software. ENKOA has the capacity to advise its clients from the first stage of a project on, with later supply of products and systems of the best available technology for each situation. Furthermore, ENKOA has an efficient after-sale technical service.

PRODUCT PIPELINE

No.1

ERREMEDU

CURRENT DEVELOPMENT PHASE

In market

INDICATION / PROPERTIES

Use of pressure sensors with wireless communications to control the position of people with spinal cord problems.

No.2

TUTOR

INDICATION / PROPERTIES

Locating people with intellectual disabilities in open environments

No.3

SMARTXA

INDICATION / PROPERTIES

Control of rehabilitation of people with multiple sclerosis, through accelerometers

No.4

SILVER4ICT

INDICATION / PROPERTIES

Wireless sensors to control people's habits in the residential environment

R+D+I ACTIVITY

R+D+i activity is the basic cornerstone of the company and as such it has a highly-qualified and constantly updated team of technical personnel. Enkoa collaborates with renowned national and international Technology Centers and Universities with the aim of developing projects in partnership and capturing the latest state-of-the-art technologies.

The activity of Electronic and Mechatronic Production is the second basic cornerstone of the company.

ENKOA has participated in the development of many R&D projects and has collaborated on several projects with Tecnalia. Enkoa has expertise in the design and manufacture of wireless sensors for different sectors.

In the health sector Enkoa has developed projects for the design of sensors to identify the position of people with spinal problems and identification of certain parameters of hospital residents.

ENKOA has participated in many Spanish and international research projects in collaboration with universities, research centers and other enterprises, playing in some of them a leading role.

ELECTROMEDICAL DEVICES

OTHER

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

OTHER

ESKUA HEALTH TECHNOLOGIES

www.inybi.net

INYBI
Suboccipital Muscle Inhibitor

CONTACT PERSON

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HQ

ESKUA HEALTH TECHNOLOGIES S.L.
Alameda Boulevard, 9 - 1º
E20003 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2015

EMPLOYEES

1

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe
Latin America

DESCRIPTION OF THE COMPANY

Company incorporated in 2015, dedicated to the research, development, marketing of instruments, equipment, products and services for rehabilitation, physiotherapy, physical medicine, functional recovery and any other product or service of Health related services, which can be offered to both public and private institutions.

ESKUA HEALTH TECHNOLOGIES has designed and created its own product called INYBI, a device inspired by the so-called Manual of Inhibition of Suboccipital Diseases, which deals with habitual pathologies such as neck pain, headaches, migraines, trapezius pain or bruxism, many of them related to Stress Through this device the solution is given to the realization of the technique of the search of muscles, a technique used in the world of physiotherapy and osteopathy to treat this type of pathologies and which is currently practiced manually . The value proposition provided by the INYBI product is the possibility of performing this technique passively "non-manual", as well as the possibility of continuing the treatment in the patient's own home.

SPECIFIC THERAPEUTIC AREA

Physiotherapy
Osteopathy
Rehabilitation

PRODUCT PIPELINE

No.1

INYBI

ESKUA HEALTH TECHNOLOGIES has developed an innovative and pioneering product in Spain. It is a device designed to inhibit the suboccipital musculature with the aim of imitating the Manual Inhibition of Suboccipital in the domiciliary area and with that to alleviate the pains and the annoyances in pathologies like: Migraines, Headache, Cervicalgias, Trapezalgias, and Bruxism, as well as shortening of the posterior chain. For the accomplishment of the manual technique imitated by INYBI, the therapist sits at the head of the patient facing the feet. The occiput rests on the palms of the hands placed as a hammock. The fingertips flexed at the level of the metacarpal phalangeal contact the musculature at the level of the posterior arch of the atlas. The technique consists in pushing the atlas towards the ceiling so that C1 is suspended over the end of the fingers, this pressure must be maintained for several minutes depending on each patient. After analyzing the relationships of various anatomical structures with the suboccipital musculature, the importance of this musculature is established in different and complex pathologies, among which the following are, by their frequency and significance: Arnold's neuralgia, Cervicalgias, Trapezalgias, Headache and Migraines, Temporomandibular Joint Dysfunction (TMJ), Suboccipital Muscle Spasm.

CURRENT DEVELOPMENT PHASE

In market

INDICATION / PROPERTIES

Migraines, Headache, Cervical pain, Trapezium bone pain, and Bruxism.

LABORATORY EQUIPMENT

PACKAGING SOLUTION FOR MEDICATION DISPENSING

DIGITAL HEALTH

MOBILE HEALTH

FAGOR HEALTHCARE

www.fagorhealthcare.com

FAGOR Healthcare

CONTACT PERSON

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HQ

FAGOR HEALTHCARE
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E20500 Arrasate - Mondragon
Gipuzkoa

AFFILIATE 1

MONDRAGON CORPORATION
Arrasate - Mondragon
Spain

FOUNDING YEAR

2012

EMPLOYEES

10

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain
France
Portugal

DESCRIPTION OF THE COMPANY

Fagor Healthcare manufactures its own proprietary products, dedicated to improve chronic patients medication adherence. Our system, Medical Dispenser, offers an integral solution for pharmacists and patients. Currently working on new developments to complete our product portfolio, with the aim to improve people's lives.

MAIN ALLIANCES

No.1

PARTNER NAME
Laboratorios CINFA

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Laboratorios Cinfa commercialises our products in exclusivity in Spain

PRODUCT PIPELINE

No.1

MEDICAL DISPENSER
Medical Dispenser is a semi-automatic machine to improve compliance to treatments in patients, allowing pharmacists to offer a high value professional service by helping chronic patients.

CURRENT DEVELOPMENT PHASE
In market

No.2

BLISTER PACKS
Blister packs to be filled in our machine. Easy to used by the patients.

CURRENT DEVELOPMENT PHASE
In market

No.3

SOFTWARE
Software to manage the MDS (monitored dosage system) in the pharmacy.

CURRENT DEVELOPMENT PHASE
In market

No.4

MOBILE APP
Mobile APP for patients. The application set alarms to remind the patients when to take their meds.

CURRENT DEVELOPMENT PHASE
In market

No.5

MD COMPLIANCE
Home use device for patients. Allows storing meds and fully follow the treatment to improve adherence.

ESTIMATED TIME TO MARKET (YEARS)
2

FESIA

www.fesiatechnology.com

CONTACT PERSON

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HQ

FESIA TECHNOLOGY, S.L.
Gipuzkoa Technology Park
Pº Miketelegi, 1
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Gipuzkoa

FOUNDING YEAR

2016

EMPLOYEES

2

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (W)

DESCRIPTION OF THE COMPANY

FESIA is a technology-based company devoted to the development and commercialization of functional electrical stimulation devices for rehabilitation. The FESIA technology is protected by a patent and two patent applications at international level and we have materialized it in several therapeutic and neuroprosthetic devices for people affected by neurological diseases.
It consists in a single electrodes pad (up to 32) which enables controlling each electrode independently or in groups.
The main ADVANTAGES of the Fesia Technology are:

- Gives higher muscle selectivity during the stimulation. This way muscle selectivity and functional performance are improved and muscle fatigue is reduced.
- Automatic calibration: the automated algorithm uses a sensor feedback network as a reference for automatic calibration.
- Easy integration: FESIA technology based systems are capable for rapid hybrid system development.
- Real-time adaptation: Having a high number of controllable stimulation parameters, the FESIA technology is able to modify active stimulation patterns and location of 'virtual electrodes' for maintaining or improving the quality of artificially induced movement.

SPECIFIC THERAPEUTIC AREA

- Medical devices
- Functional electrical stimulation devices for rehabilitation

MAIN ALLIANCES

No.1

PARTNER NAME
TECNALIA RESEARCH FOUNDATION

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

FESIA WALK
Fesia Walk system is a lower limb neuroprosthesis to improuve the quality of gait in patients with varus equine foot or fallen foot caused by diseases or injuries in the Central Nervous System (CNS). The Fesia Walk system emits electrical pulses by means of superficial electrodes, which excite the peroneal and tibial nerves, generating a dorsal and plantar flexion of the ankle in a coordinated way to improve the user's gait.

CURRENT DEVELOPMENT PHASE
In market

FM CONTROL

www.fmcontrol.com

CONTACT PERSON

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E01015 Vitoria - Gasteiz
Araba

EMPLOYEES

14

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)

DESCRIPTION OF THE COMPANY

FM Control, is dedicated to the manufacture and marketing of systems capable of broadcasting images of the human body to reveal, diagnose and examine diseases becoming more effective treatments of lesions detected. This company is a reference in the field of orthopedic surgery at the European level and specializes in portable fluoroscopy systems and distribution of medical equipment.

SPECIFIC THERAPEUTIC AREA

Traumatology

PRODUCT PIPELINE

No.1

PORTABLE FLUOROSCOPY SYSTEMS
Portable fluoroscopy systems (mini C-arms) designed for the detection and treatment of extremity injuries.

CURRENT DEVELOPMENT PHASE
In market

No.2

FOOT AND ANKLE OSTEOSYNTHESIS SOLUTIONS
Distribution of foot and ankle osteosynthesis solutions.

CURRENT DEVELOPMENT PHASE
In market

No.3

SURGICAL INSTRUMENTAL AND CONSUMABLES
Distribution of surgical instrumental and consumables.

CURRENT DEVELOPMENT PHASE
In market

No.4

ORTHOTIC FABRICATION SYSTEMS
Distribution of orthotic fabrication systems

CURRENT DEVELOPMENT PHASE
In market

No.5

FOOT ANALYSYS PLATFORMS
Distribution of foot analysys platforms

CURRENT DEVELOPMENT PHASE
In market

No.6

ORTHOPEDIC DEVICES AND SHOES
Distribution of orthopedic devices and shoes.

CURRENT DEVELOPMENT PHASE
In market

GALENIC APP

www.capstesia.com

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HQ
GALENIC APP SL.
Calle San Prudencio, 22 - 1 izda
E01005 Vitoria - Gasteiz
Araba

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PEDRO BERRAONDO LÓPEZ
Spain

AFFILIATE 2
BORJA BARRACHINA LARRAZA
Spain

AFFILIATE 3
OSKAR ALVAREZ GUERRAS
Spain

AFFILIATE 4
PEDRO SALAZAR
Spain

FOUNDING YEAR
2014

FOOTPRINT
Worldwide distribution of the app Capstesia

DESCRIPTION OF THE COMPANY
Design and development of medical APPs in the area of anesthesiology and critical care.

SPECIFIC THERAPEUTIC AREA
Anesthesiology and critical care.

MAIN ALLIANCES

No.1

PARTNER NAME
AJL Ophtalmic

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

PRODUCT PIPELINE

No.1

CAPSTESIA APP
This APP provides advanced hemodynamic parameters through digitizing a photograph of patient bedside monitor screen.

CURRENT DEVELOPMENT PHASE
In market

GEROA

www.geroa.net

— CONTACT PERSON
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— HQ
GEROA DIAGNOSTICS, S.L.
Avda. Budapest, 50
E1003 Vitoria - Gasteiz
Araba

— FOUNDING YEAR
2015

— FOOTPRINT
Europe (W)

— DESCRIPTION OF THE COMPANY
Geroa Diagnostics is a biotechnological company whose mission is to improve the health, the life-quality and medical care of patients suffering from Alzheimer's disease. We accomplish this mission by developing innovative technologies and tools and by discovering new biomarkers for the diagnosis and early prediction of Alzheimer´s Disease as well as for exploring new therapeutic strategies and diagnostic biomarkers for this and other CNS diseases.

— SPECIFIC THERAPEUTIC AREA
CNS. Neurodegenerative diseases

— PRODUCT PIPELINE

No.1

DIAGNOSIS OF NEURODEGENERATIVE DISEASES

CURRENT DEVELOPMENT PHASE
In market

GOGOA

www.gogoa.eu

CONTACT PERSON

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HQ

GOGOA MOBILITY ROBOTS, S.L.
Pol. Ind. Mugitegi, Vial C, nº 17-18
E20700 Urretxu
Gipuzkoa

FOUNDING YEAR

2015

EMPLOYEES

8

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)
Japan
China

DESCRIPTION OF THE COMPANY

GOGOA Mobility Robots, S.L. is a company created for developing and supplying solutions to the emerging market of Robotic Assisted Rehabilitation (RAR) services, using the most advanced technology in their robotic devices, integrating electronics, mechatronics, informatics and telecommunication technologies. GOGOA is constituted by a qualified and multidisciplinary team integrating mechanical, electronics and informatics engineers, business graduated and psychologists.

At the present, the company has three products in the market. All thes products are on the edge of the technology for robotic rehabilitation of the upper extremities (hand) and lower extremities (legs). The company strategy is to become a world leader in RAR systems.
GOGOA has been awarded as the most innovative eHealth company in Spain in 2016 by the Spanish Federation of Health companies.
GOGOA is officially registered as manufacturer of medical devices in the AEMPS (Spanish Agency of Medicaments and Sanitary Products – License 7037-PS)

SPECIFIC THERAPEUTIC AREA

Rehabilitation of gait in Adquired Brain Damage (ABD), stroke, NDD (Neuro-Degenerative Diseases) and Spinal Cord (complete and incomplete) injuries. Our devices are also designed for mobility assistance and rehab for post-interventions.

MAIN ALLIANCES

No.1

PARTNER NAME
Instituto Cajal - CSIC

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

ROBOTIC REHABILITATION DEVICES
Robotic rehabilitation devices (exoskeletons, knee and hand rehabilitation devices)
• HANK, a lower limbs exoskeleton, produced and commercialized by GOGOA.
• BELK, a robotic device for knee rehabilitation, produced and commercialized by GOGOA.
• Hand of Hope, a robotic device for hand rehabilitation, produced by the company Rehab-Robotics (located in Honk Kong), and commercialized by GOGOA for the Spanish, Portuguese and South-American markets.

CURRENT DEVELOPMENT PHASE
In market

ELECTROMEDICAL DEVICES
- MONITORING DEVICES
- SURGICAL INSTRUMENTS AND SYSTEMS
- CRITICAL CARE DEVICES AND SYSTEMS

MEDICAL IMAGE
- X-RAY
- CT SCANNERS
- ULTRASOUND
- MRI
- DIAGNOSTIC NUCLEAR IMAGE SYSTEM (PET, SPECT)

LABORATORY EQUIPMENT
- ELECTROMECHANICAL TECHNIQUES
- ELECTROCHEMICAL TECHNIQUES
- OPTICAL TECHNIQUES

ORTHOPEDIC AND REHABILITATION TECHNOLOGY
- IMPLANTS
- TRAUMA FIXATION DEVICES
- ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS
- REHABILITATION SYSTEMS

DIGITAL HEALTH
- INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS
- TELEHEALTH
- MOBILE HEALTH

BIOMEDICAL CONSUMABLES
- NON-ACTIVE IMPLANTABLE DEVICES
- SURGICAL INSTRUMENTS AND CONSUMABLES
- ADVANCED WOUND MANAGEMENT

GUREAK

www.gureak.com

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HQ
T.P. GUREAK, S.A.
Illarra Bidea, 4
20018 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR
1975

EMPLOYEES
5.200

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Euskadi
Spain
France
Europe (All)

DESCRIPTION OF THE COMPANY
Business group spezialized on creating job opportunities for disabled. Integral industrial supplier that designs, manages and develops all the necessary processes of the value chain, including product industrialisation and engineering, purchasing, production and logistics.
GUREAK is committed to internationalisation and is a global supplier which offers its product lines to different production plants in multinational companies all over the world. GUREAK offers multi-technological solutions: plastic injection, electronics, processing of cables, assemblies and dismantling operations, machining and logistics services.
In medical devices / health sector, GUREAK is working on two business lines:
OEM manufacturers of medical devices thanks to technical capabilities, plastic injection, electronics manufacturing, wire processing and assembling of devices.
Picking and packaging of disposables kits, consumables kits and pharma products, in a cleanroom.

SPECIFIC THERAPEUTIC AREA
Transversal technology provider for many kind of devices, and we can do picking of many kind of consumables.

PRODUCT PIPELINE

No.1
ASSEMBLY OF MEDICAL DEVICES.
Assembling of almost any kind of device thanks to assembling capabilities. As an OEM manufacurer, we can add our technologies (plastic injection, electronics manufacturing, wire processing) in order to offer a full product, and so our client can manage a unique provider (we manage purchasing of components we can not manufacture) to obtain a finished and tested product.

CURRENT DEVELOPMENT PHASE
In market

No.2
PLASTIC INJECTION.
Plastic injection technology for the manufacturing of pieces and components for the health industry. From 8 Tonnes (microinjection) machines to 480 Tonnes mahines, we have a wide range of plastic injection capabilities. We also have vertical axe machines in order to overmould pieces.

CURRENT DEVELOPMENT PHASE
In market

No.3
ELECTRONICS MANUFACTURING.
Assembly any kind of electronics circuit, in both THT and SMD technologies. High level manufacturing technologies, with automatic lines (SPI, AOI in line, also X-Ray inspection).

CURRENT DEVELOPMENT PHASE
In market

No.4
WIRE PROCESSING.
Wires cutting, peeling and crimping area is one of the strongest arguments in our strategy of having a complementary and multi-technological offering. Well equipped for processing wires with cross-sections of between 0.22 and 6 sq mm in one section, and from 6 sq mm to 300 sq mm in other section

CURRENT DEVELOPMENT PHASE
In market

No.5
PICKING/ PACKAGING/ DISTRIBUTION.
Picking capabilities in cleanroom (ISO 7, 300 sq. m) of kits of medical consumables, disposable products, even pharma product. We can make distribution of product with our own shipping.

CURRENT DEVELOPMENT PHASE
In market

No.6
ETO STERILIZATION.
Thanks to strategic partnership, we offer our clients the possibility to provide them their product sterilized, so we can offer them the whole value chain in some specific sectors: i.e. we can manufacture components, do the assembly and picking of them in a clenaroom, sterilize (EtO) and ship them to the client's facilities.

CURRENT DEVELOPMENT PHASE
In market

MEDICAL GRADE VAPORIZERS FOR THERMOCOUPLE COMPOUNDS

HERMES MEDICAL ENGINEERING

www.hermesmedical.es

CONTACT PERSON

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HQ

HERMES MEDICAL ENGINEERING SL.

FOUNDING YEAR

2008

EMPLOYEES

3

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe
Australia
New Zeland

DESCRIPTION OF THE COMPANY

R&D company, focused on developing technology for vaporization of drugs and their administration in vapor phase by inhalation. Design and manufacturing of vaporizers. Research on setting the best conditions for improving the dose control, user confortability/ usability.

SPECIFIC THERAPEUTIC AREA

Cancer
Epilepsy
Inflammatory bowel diseases
Parkinson's disease
Psychiatric disorders.

MAIN ALLIANCES

No.1

PARTNER NAME
BEDROCAN INTERNACIONAL

COUNTRY OF PARTNER'S HQ
Holland

PURPUSE OF AGREEMNET W/PARTNER
Developing technology for administering bedrocan's herbal material in a medical vaporizer

PRODUCT PIPELINE

No.1

PRODUCT MANUFACTURING UNDER MEDICAL DEVICE CONDITIONS. Acompaning to the pharmaceutical company in the process of researching and defining the software and hardware parameters of the medical device to evaporate the active compounds. Clinical trials procedure writing and technics of dosing the actives for human administration by inhalation.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Preseries, patience's testing, clinical trial phase iv & medical device certification

ESTIMATED TIME TO MARKET (YEARS)
End of 2017

HISTOCELL

www.histocell.com

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HQ

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AFFILIATE 1

ARTINVET INNOVATIVE THERAPIES S.L.
Spain

FOUNDING YEAR

2004

EMPLOYEES

25

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

China
Europe (All)
Euskadi
SouthAm

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

DESCRIPTION OF THE COMPANY

HISTOCELL is a biopharmaceutical company focused on the development of new products and medical devices for regenerative medicine ande cell therapy. Histocell has become a preferred R&D partner for de pharma industry due to a unique market oriented approach and an outstanding ability to collaborate efficiently with third parties.

SPECIFIC THERAPEUTIC AREA

Dermatology, Wound Care, Aesthetics and Traumatology, among others.

PRODUCT PIPELINE

No.1

REOXCARE
Antioxidant advanced wound care solution. Novel wound dressing with unique antioxidant properties that promotes the natural wound healing process in hard to heal wounds.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Wound healing

No.2

WHARTON GEL COMPLEX
Cosmetic ingredient. New and unique active cosmetic ingredient with outstanding properties to recruit skin repair cells and protect them againt oxidative damage.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cosmetics

No.3

HISTOGEL
Device for dermal tissue aesthetics. It has excellent revitalization properties acting as a filler and with antiageing properties.

CURRENT DEVELOPMENT PHASE
CE mark registration

INDICATION / PROPERTIES
Aesthetics

ESTIMATED TIME TO MARKET (YEARS)
1

I+MED

www.imasmed.com

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HQ

I+MED S.COOP.
Araba Technology Park
Albert Einstein, 15 - nave 15
E01510 Miñano Menor
Araba

FOUNDING YEAR

2014

EMPLOYEES

13

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain

DESCRIPTION OF THE COMPANY

i+Med, is a biomedical biotechnology company formed by highly qualified people, focused in the field of applied engineering. i+Med has the capability to design and manufacture new products in this advanced technological area of expertise. The team has a deep knowledge and experience in product development, manufacture processes, quality assessment, and certification of Health Care Products. These capabilities allow i+Med to offer an integral engineering service to third parties, going from product viability and design studies to its industrialization and certification.

i+Med possess broad experience working with different regulatory organisms and technology centers and fulfils the specific European normative. i+Med develops Industrialization Master Plans for other enterprises on the field, supporting them on the product certification.

SPECIFIC THERAPEUTIC AREA

Ophtalmic
Traumatology

PRODUCT PIPELINE

No.1

MEDICAL DEVICES BASED ON HYDROGELS

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Medical devices for ophtalmic and traumatology

ESTIMATED TIME TO MARKET (YEARS)
1

No.2

ENGINEERING SERVICES
Engineering services for third parts

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Process management and Regulatory accompaniment

No.3

R&D SERVICES
Research and development services for third parts

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
R&D in chemistry

DIGITAL HEALTH

INFORMATION SYSTEM FOR HEALTHCARE PROVIDERS
TELEHEALTH
MOBILE HEALTH
INTEROPERABILITY
CLOUD

IBERMATICA

www.ibermatica.com

Ibermática

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HQ

IBERMÁTICA
Pº Mikeletegi, 5
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

1973

EMPLOYEES

60

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Europe
Latin America

DESCRIPTION OF THE COMPANY

Ibermatica is one of the main IT service companies in the Spanish market. After 40 years in the ICT sector, Ibermatica has consolidated its position as one of the top Spanish ICT companies. Ibermatica's business development has always been characterized by its renowned financial solvency and the solidity of its shares. Its main shareholders are ProA Capital, ONCE, Kutxabank and the company's management. At present, it brings together 3,100 professionals, distributed around 24 offices in different countries, and has a turnover of 225 million euros.

Ibermatica has excellent knowledge and provides specific solutions for different sectors and markets: Finance, Insurance, Public Administration, Health, Education, Services, Industry and Telecommunications. Ibermatica completes its offer with technological solutions such as Business Intelligence, ERP&CRM, business process management (BPM), portals and digital business, document management, Social Business, human capital management (HCM), mobility, accessibility, security and artificial intelligence, as well as Cloud Computing services.

The investments policy that Ibermatica has carried out the last years has had repercussion in the ICT market. The company has been consolidated among the five first Information Technologies services companies with Spanish capital. Innovation like competitiveness guarantee, innovation, growth and international development are some of the main topics on which the Ibermatica evolution will turn in the next three years. Since its foundation, Ibermatica has always firmly bet for innovation, assuming a strong commitment with Research, Development, Innovation (I+D+i) and Quality.

SPECIFIC THERAPEUTIC AREA

IT consultancy
Infrastructure services
Information systems integration
Outsourcing
Integrated solutions for business management

SERVICES

Consultancy
Infrastructures
Applications - Software life cycle
BPO - Business Processes Outsourcing

IDEABLE SOLUTIONS

www.ideable.net

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— HQ
IDEABLE SOLUTIONS, S.L.
La Virtud, 1
E48901 Barakaldo
Bizkaia

— FOUNDING YEAR
2011

— EMPLOYEES
18

— ANNUAL TURNOVER (M€)
<5 5-50 >50

— FOOTPRINT
Europe (All)

— DESCRIPTION OF THE COMPANY

Software company specialized on web, cloud and mobile solutions for users with accessibility and usability specific needs in the eHealth and eldercare sector. Ideable is not only a software company focused on research and innovation for eldercare sector, but also a company interested on the market exploitation and dissemination of the solutions in which we participate. Has a broad knowledge of European and Latam eldercare market.
IDEABLE, in Kwido and other projects, is always focused on accessible and usable IT designs for elderly people. In fact, is a member on the AAL Zocaalo project that is building an international certification program for creating an IT marketplace for accessible apps for elderly people and different Hazitek (Basque country) research projects for the Silver Economy. IDEABLE is also participating in a new AAL project, PETAL, that aims at offering guidance to people with dementia in their daily activities by exploiting a number of different devices and modalities, with particular attention to the lighting system. Ideable has already been supported by a Horizon 2020 SME Instrument Phase 1 for its new version of Kwido, Kwido Telecare and was also accelerated by FICHe Fiware eHealth accelerator, in fact, was selected as one of the best 20 eHealth companies in Europe.

— PRODUCT PIPELINE

No.1

KWIDO
The international cloud platform for caring elderly and disabled people by accessible and usable mobile devices. It both works in promoting independent living at home, social connection, health monitoring, etc. Kwido also includes a rehabilitation platform for cognitive impairment based on serious games and teleconsultation features.
(see more at www.kwido.com)

CURRENT DEVELOPMENT PHASE
In market

POLYMERIC DISPERSIONS FOR IVD DIAGNOSTIC TESTS
MAGNETIC PARTICLES FOR DNA/RNA PURIFICATION
MAGNETIC PARTICLES FOR PROTEIN PURIFICATION
MAGNETIC PARTICLES FOR CHEMILUMINESCENCE

IKERLAT POLYMERS

www.ikerlatpolymers.es

CONTACT PERSON

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HQ

IKERLAT POLYMERS S.L
Zirkuitu Ibilbidea, 2 - Local 28
E20160 Lasarte-Oria
Gipuzkoa

FOUNDING YEAR

2000

EMPLOYEES

4

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)
NorthAm
LatAm
Rest of Asia
China
Spain

DESCRIPTION OF THE COMPANY

IKERLAT Polymers is a specialized company in the microspheres world.

Nowadays, with a backgrounfd of 17 years, the company has been consolidated as a reference in the market of polymeric dispersions. The wide experience of IKERLAT staff in the field of emulsion polymerisation allows us to offer you a complete range of services including good polymer beads and excellent technical service.

The aim of IKERLAT Polymers is to offer a personalized support to the customer including the development of new diagnostic kits.

The products of IKERLAT Polymers stand out due to the high reproducibility lot to lot offering our clients accurate process and final products characteristics control. IKERLAT Polymers, SL is certified with ISO 9001 and ISO 14.001 since 2008.

SPECIFIC THERAPEUTIC AREA

Our products are directed to Diagnostics and protein purification processes.

PRODUCT PIPELINE

No.1

IVD DIAGNOSTIC DEVICES
Polymeric dispersion for IVD diagnostic devices.

CURRENT DEVELOPMENT PHASE
In market

No.2

MAGNETIC PARTICLES
Magnetic particles for DNA/RNA purification.
Magnetic particles for protein purification.
Magnetic particles for chemiluminescence.

CURRENT DEVELOPMENT PHASE
In market

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

ELECTROMEDICAL DEVICES	MEDICAL IMAGE			ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
MONITORING DEVICES SURGICAL INSTRUMENTS AND SYSTEMS CRITICAL CARE DEVICES AND SYSTEMS	CO-DEVELOPMENT CT SCANNERS MEDICAL IMAGE ANALYSIS SOFTWARE			ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS REHABILITATION SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS TELEHEALTH MOBILE HEALTH INTEROPERABILITY CLOUD	NON-ACTIVE IMPLANTABLE DEVICES SURGICAL INSTRUMENTS AND CONSUMABLES

IKOR

www.ikor.es

SPAIN
MEXICO
CHINA

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HQ

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Francisco Grandmontagne, 4
E20018 Donostia - San Sebastián
Gipuzkoa

AFFILIATE 1

IKOR MEXICO
Jalisco · Mexico

AFFILIATE 2

IKOR CHINA
Suzhou · China

FOUNDING YEAR

1981

EMPLOYEES

744

FOOTPRINT

Euskadi
Latin America
China

DESCRIPTION OF THE COMPANY

IKOR is a global enterprise committed with innovation, that offers comprehensive services focused on electronic circuit design and manufacturing (EMS). Additionally, It offers complete supply chain solutions to worldwide leading industrial and technology companies.
It offers solutions along the product life cycle, thanks to the collaboration of its R & D & I Unit, IKOR Technology Center.

Furthermore, IKOR has an important product portfolio, including important control and display systems for electromedicine.

Medical Quality Certifications:

-IKOR TECHNOLOGIY CENTRE.
ISO 13485: Quality manangement system for Medical Devices.

-IKOR SPAIN: ISO 13485:
Quality manangement system for Medical Devices.

PRODUCT PIPELINE

No.1

EMBEDDED CIRCUITS

CURRENT DEVELOPMENT PHASE

In market

ILINE

www.ilinemicrosystems.com

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HQ

LINE MICROSYSTEMS S.L.
Pº Mikeletegi, 69
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2007

EMPLOYEES

82

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Euskadi
Spain
Europe
Rest of Asia

DESCRIPTION OF THE COMPANY

iLine Microsystems is a company dedicated to the development and fabrication of Point-of-Care devices in In-vitro diagnostics. The main area of expertise is haemostasis and developed products are portable blood coagulation analyzers, such as microINR®, a product internationally used to monitor Oral Anticiagulation Treatment. The Core Technology is based on microfluidic and Lab-on-a-Chip technology. This technology provides means to perform a biological test comprising: sample application, reagent storage, mixing, detection and QC, embedded in a miniaturized chip using a minute blood sample.

SPECIFIC THERAPEUTIC AREA

Hemostasia

PRODUCT PIPELINE

No.1

MICROINR SYSTEM

The microINR system is intended for the monitoring of vitamin K antagonist Oral Anticoagulation Therapy (OAT). The microINR Chip and Meter have been developed to fulfill the needs of all the existing OAT monitoring models, and have received the CE mark for patient self-testing and for use by healthcare providers making it suitable for both intended uses.

CURRENT DEVELOPMENT PHASE

In market

No.2

POC IVD

A new POC IVD device in the field of blood coagulation. This new product will qualitatively measure the anticoagulation status of the patient in order to reduce significantly hemorrhagic or thrombotic events related to all kinds of Oral Anticoagulant Therapies (OATs) currently in use.

CURRENT DEVELOPMENT PHASE

In development

ESTIMATED TIME TO MARKET (YEARS)

2

INIT HEALTH

www.inithealth.com

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HQ
INIT HEALTH
Uribitarte, 6 - 2ª
E48001 Bilbao
Bizkaia

FOUNDING YEAR
2006

EMPLOYEES
55

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Europe (W)
Spain
LatAm
NorthAm

DESCRIPTION OF THE COMPANY
The social objective of inithealth is the design, development and commercialisation of applications and technical solutions specifically designed for the areas of health, wellbeing and sport.
At inithealth, init Group's health branch, we promote the development and use of innovative digital tools that allow the people to personally manage their health and to adopt healthy life habits.
Init Group was created in 2006 with a clear vocation: promote and accelerate new business initiatives, not only supporting their development, but also creating the corporate structures and conditions that make their future feasible.
It aspires to create business projects with the capacity to grow and contribute to a balanced impact in economic, social and environmental terms.
Init Group's mission is to link society's challenges to entrepreneurs and business-minded organisations who want to search for ideas and solutions to those challenges, using all tangible, or intangible, resources that make it possible to carry this out. Throughout this, great innovative ability and the latest advances in technology are applied.

Init Group develops activity in four strategic cores: the health branch (Init Health), technological innovation branch (Init Services), the underwater cellar (Bodega Crusoe Treasure) and business ventures branch (Init Land).

SPECIFIC THERAPEUTIC AREA
- Wellness
- Chronicities like Diabetes
- EPOC
- Cardiovascular Diseases
- ...

MAIN ALLIANCES
No.1

PARTNER NAME
TELEFONICA

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

PRODUCT PIPELINE
No.1

PLATFORM FOR INSURANCE AND FINANCE COMPANIES
Our platform is intended for insurance and finance companies, the health sector, corporations and large organisations in general.
With the help of prestigious and renowned medical advice, the inithealth platform provides all the necessary tools for the user to personally and safely manage the fundamental aspects of their health and to easily and enjoyably foster healthy living habits.
Inithealth incorporates wearables and medical devices. Through a gamification engine, inithealth fosters healthy living habits by getting the user to associate values such as health, wellbeing and innovation with the body or organisations that count on our platform, notably incrementing their degree of loyalty. Additionally, it includes a QR code system so that in case of emergency, medical staff can access any information that the user has posted: Allergies, illnesses and current treatments, contact information...

CURRENT DEVELOPMENT PHASE
In market

PRICK TEST AUTOMATION AND ANALYSIS SOFTWARE

INNOPRICK

www.innoprick.com

innoprick

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HQ

INNOPRICK
Pº Mikeletegi, 83 - 3º Of. 4
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2016

EMPLOYEES

1

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe

DESCRIPTION OF THE COMPANY

INNOPRICK develops and distrbutes technology solutions for the allergy/immunology professionals. Its first product is a medical device that automates the skin prick allergy test. The device allows to measure the results of the allergy price test in a precise, reproducible and fast way.

SPECIFIC THERAPEUTIC AREA

Allergy, Immunology

PRODUCT PIPELINE

No.1

MEDICAL DEVICE FOR PRICK TEST AUTOMATION

Medical device for prick test automation

CURRENT DEVELOPMENT PHASE

In development

INDICATION / PROPERTIES

Allergy diagnosis and follow-up

ESTIMATED TIME TO MARKET (YEARS)

1

ELECTROMEDICAL DEVICES

ASSISTIVE COMUNICATION TECHNOLOGIES

DIGITAL HEALTH

MOBILE HEALTH

IRISBOND

www.irisbond.com

IRISBOND

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HQ

IRISBOND CROWDBONDING, S.L.
Pº Mikeletegi, 56
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2013

EMPLOYEES

8

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe
Latin America

DESCRIPTION OF THE COMPANY

IRISBOND is a Hi-Tech company based in Basque Country founded in 2013 together with its technology partner Vicomtech-IK4 Research Center leader in natural Human Computer Interface using the gaze. The direct application of eye-tracking technology for disabled people, and more specifically for those with reduced mobility, is the starting point of a journey that seeks to explore new development opportunities for aided communication. Irisbond focuses on the development of eye-tracking systems and their application around the world in various sectors such as assistive technology, industrial integrations and scientific use.

SPECIFIC THERAPEUTIC AREA

AAC (Assistive and Alternative Communication) for several diseases such as ALS, Cerebral Palsy, i.e and also for proffesionals (for example surgeons) to access to computer information with the gaze while they have their hands busy.

MAIN ALLIANCES

No.1

PARTNER NAME
VICOMTECH - IK4

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.2

PARTNER NAME
ASOCIACION ELA ARGENTINA

COUNTRY OF PARTNER'S HQ
ARGENTINA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.3

PARTNER NAME
CSIC

COUNTRY OF PARTNER'S HQ
SPAIN

No.4

PARTNER NAME
FUNDACION ONCE

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.5

PARTNER NAME
ADELA

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.6

PARTNER NAME
HOSPITAL PARAPLEJICOS DE TOLEDO

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.7

PARTNER NAME
ACELA

COUNTRY OF PARTNER'S HQ
COLOMBIA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.8

PARTNER NAME
CORPORACION ELA CHILE

COUNTRY OF PARTNER'S HQ
CHILE

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

PRODUCT PIPELINE

No.1

IRISBOND PRIMMA
Is a system whereby a simple and intuitive interface allows users to access any Windows computer application accurately through eye movement. With just the use of their eyes, those who are disabled with limited movility and have slurred speech (as affected by ALS, multiple sclerosis, paralysis, or brain damage) can access the usual functions of a computer, such as surfing the Internet, writing texts, sending an email, etc. They can communicate by themselves

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Accurate and affordable alternative communication technology

No.2

WAY TO INTERACT
WITH THE ENVIRONMENT
New and natural way to interact with the environment using the gaze by means of downloading and APP on standard devices. Disruptive technology based on face and eye-tracking algorithms combined with deep learning technincs

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Revolutionary technology to control any mobile device with the gaze

ESTIMATED TIME TO MARKET (YEARS)
1

K-DNA GENOMICS (KIROLDNA)

www.kiroldna.com

KirolDNA
ANÁLISIS GENÉTICOS DEPORTIVOS

CONTACT PERSON

ADRIAN ODRIOZOLA
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HQ

K-DNA GENOMICS (KIROLDNA S.L)
Pº Mikeletegi, 83
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2016

EMPLOYEES

1

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain

DESCRIPTION OF THE COMPANY

Development of Bio-technological solutions for Sport Sciences, in three interconnected areas:

- Sport specific Genetic Analysis and Online Apps.
- Interactive R & D, Applied to the Genetics and Nutrition.
- Education in Nutrition and Sport Genetics.
- Kiroldna focuses in sustaining innovation and practical applications in Nutrition and Sport Genetics, improving the performance, health and quality of life of athletes and the general population. The company also promotes science culture in society, opening a new channel of technology transfer, communication and cooperation between researchers, sports professionals and athletes

SPECIFIC THERAPEUTIC AREA

Individualization of sport and nutrition planning. Injury risk determination.

PRODUCT PIPELINE

No.1

NUTRITION AND SPORT GENETIC ANALYSIS

Genetic Analysis and Online Apps Applied to Nutrition and Sport are characterized by: its maximum scientific quality, confidentiality, flexibility and adaptability to demand, and permanent updating based on interactive R & D.
We have developed a Genetic Analysis specific or each sport (RUNNING and CYCLISM).
This is recommended for the individualization of sport and nutritional planning, and injury prevention. This Genetic Analysis provides unique genetic information to each person, analyzing 70 genetic characteristics grouped in Injuries, Nutrition, Training, Fatigue and Recovery, Analytical Parameters, Supplementation and Performance.

CURRENT DEVELOPMENT PHASE
Second phase

ESTIMATED TIME TO MARKET (YEARS)
September of 2017 (2nd Phase)

No.2

GENETIC APP

App to visualize results of Genetic. Apps provide a way to visualizar results of Genetic Analysis and to do interactive R & D, where the participating athletes collaborate directly with researchers and sports professionals, and invest in the improvement and permanent updating of the products and services developed by KirolDNA, which they themselves enjoy.

CURRENT DEVELOPMENT PHASE
Second phase

ESTIMATED TIME TO MARKET (YEARS)
September of 2017 (2nd Version)

CYTOTOXIC COMPOUNDING ROBOT

KIRO GRIFOLS

www.kirogrifols.com

CONTACT PERSON

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FINANCIAL MANAGER
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acalvoecheaga@kirogrifols.com

HQ

KIRO GRIFOLS, S.L.
Polo de Innovación Garaia
Goiru kalea, 1 - Ed. B - Planta 2
E20500 Arrasate - Mondragon
Gipuzkoa

FOUNDING YEAR

2011

EMPLOYEES

56

FOOTPRINT

Europe

DESCRIPTION OF THE COMPANY

KIRO is a GRIFOLS S.A. and MONDRAGON CORPORATION joint venture, and develops and manufactures technologies that improve the efficiency, safety and service quality in the compounding of intravenous medication in hospital pharmacies. KIRO Oncology, a cytotoxic compounding robot, is the company´s first product.

SPECIFIC THERAPEUTIC AREA

Oncology
Compounding Robot

PRODUCT PIPELINE

No.1

KIRO® ONCOLOGY
Automated compounding for intravenous chemotherapy.
KIRO® Oncology is the next-generation system for automated compounding of intravenous treatments, including cytotoxics and biologicals.
It is a unique product with user-friendly design and flexible funtionality

CURRENT DEVELOPMENT PHASE

In market

ELECTROMEDICAL DEVICES

SURGICAL INSTRUMENTS AND SYSTEMS

ACTUAL DISTRIBUTOR AND FUTURE MANUFACTURER OF EXTERNAL MEDICAL DEVICES CLASS I

MEDICAL IMAGE

ULTRASOUND

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

DISTRIBUTOR OF CONSUMABLES AND DEVICES FOR PELVIC FLOOR REHABILITATION AND URINARY FEMALE INCONTINENCE

BIOMEDICAL CONSUMABLES

SURGICAL INSTRUMENTS AND CONSUMABLES

MARTIMEDIC

www.martimedic.com

MARTIMEDIC
suministros médico quirúrgicos

CONTACT PERSON

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HQ

MARTIMEDIC, SUMINISTROS MÉDICO-QUIRÚRGICOS, S.L.
Polígono Txalaka-Araneder
Troia Ibilbidea, 18 - Pabellon 6A5
E20115 Astigarraga
Gipuzkoa

FOUNDING YEAR

1994

EMPLOYEES

5

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain
Europe (All)
LatAm
Other

DESCRIPTION OF THE COMPANY

MARTIMEDIC, S.L. is a privately - owned Spanish company founded in 1994 with the vision to fulfil the needs of medical professionals. Martimedic's principal business lines are, Endoscopy Digestive, Gynecology, Pelvic Floor, Urinary Incontinency, Erectil Disfuntion, Otolaryngology and Physiotherapy. Additionally, we are a distributors of other products such as, electro-medical equipment for laser therapy, digital images and disposable products.

We search the world market to find the most innovative and cost-efficient, high quality medical products. The products we distribute come from the most prestigious brands in the market.

SPECIFIC THERAPEUTIC AREA

Endoscopy Digestive, Gynecology, Pelvic Floor, Urinary Incontinency, Erectil Disfuntion, Otolaryngology and Physiotherapy. Additionally, we are a supplier of other products such as, electro- medical equipment for laser therapy, digital images and disposable products.

MAIN ALLIANCES

No.1

PARTNER NAME
MTW ENDOSKOPIE

COUNTRY OF PARTNER'S HQ
SPAIN-GERMANY

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.2

PARTNER NAME
EUROGINE

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.3

PARTNER NAME
KESSEL MEDINTIM GMBH

COUNTRY OF PARTNER'S HQ
GERMANY

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.4

PARTNER NAME
RENNICH INDUSTRIES LTD.

COUNTRY OF PARTNER'S HQ
CANADA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.5

PARTNER NAME
TRAWAX ADVANCING MEDICAL TECHNOLOGYPTY LIMITED

COUNTRY OF PARTNER'S HQ
AUSTRALIA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

No.3

PARTNER NAME
ALTON MEDICAL INSTRUMENTS CO., LTD.

COUNTRY OF PARTNER'S HQ
CHINA

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing

PRODUCT PIPELINE

No.1

Medical Supplies and Devices for Digestive System Specialists

CURRENT DEVELOPMENT PHASE
In market

No.2

Medical Supplies and Devices for Gynecology System Specialists

CURRENT DEVELOPMENT PHASE
In market

No.3

Medical Device for Urinary Male Incontinence

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
1

No.4

Medical Devices for Male Erectil Disfuntion

CURRENT DEVELOPMENT PHASE
In market

MICROLIQUID

www.microliquid.com

microLIQUID
experts in microfluidics

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MICROLIQUID S.L.
Goiru, 9
E20500 Arrasate - Mondragon
Gipuzkoa

FOUNDING YEAR
2008

FOOTPRINT
Europe (All)
Spain
NorthAm

DESCRIPTION OF THE COMPANY
microLIQUID is a company that designs, prototypes and manufactures disposable microfluidic cartridges for the IVD, VET and Point of Care industries.

microLIQUID has also developed a range of devices to adapt Elisa-style tests perform in the lab to point of care analysis, opening a window for the commercialization of the tests in environments where immediate availability and fast results is necessary.

microLIQUID does not enter the IVD, VET or POC markets, microLIQUID is offering a new tool to those companies in this markets that can be used with a range of samples (serum, salive, urine) to obtain quantitative or qualitative assays in non-laboratory locations.

PRODUCT PIPELINE
From Microfluidic molds or Microfluidic chips of many kinds to lab on a chip development and Microfluidic services. microLIQUID is able to work with its customers in order to deliver the best microfluidic chip or medical device.

No.1
MICROFLUIDIC CHIP AND MICROFLUIDIC PROTOTYPING

CURRENT DEVELOPMENT PHASE
In market

No.2
MICROFLUIDIC CONNECTORS & MICROFLUIDIC RESEARCH SETUPS

CURRENT DEVELOPMENT PHASE
In market

No.3
SU8 MOLDS FOR MICROFLUIDICS

CURRENT DEVELOPMENT PHASE
In market

No.4
MICROFLUIDIC CHIP MASS MANUFACTURING

CURRENT DEVELOPMENT PHASE
In market

No.5
MICROFLUIDIC CHIP MASS MANUFACTURING

CURRENT DEVELOPMENT PHASE
In market

No.6
MICROFLUIDIC PLATFORM INTEGRATION
ELISA, PCR or other detection

CURRENT DEVELOPMENT PHASE
In market

No.7
MICROFLUIDIC R&D
Experience developers of Point of Care and Microfluidic Chip

CURRENT DEVELOPMENT PHASE
In market

No.8
MICROFLUIDIC NEURAL FPROBES BY MICROLIQUID

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Microfluidic Neural microprobes for simultaneous recording and local drug delivery dispensing. Microliquid is able to design, manufacture and encapsulate multi-site probes for simultaneous neuronal recording and drug delivery using exclusively, the polymer SU-8 as structural material. fProbes (fluidic probes) integrates a single and double fluidic microchannel for independent drug delivery.

MIZAR ADDITIVE MANUFACTURING

www.mizaradditive.com

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MIZAR Additive Manufacturing S.L.U.
Portal de Gamarra, 1
Edificio Deba - Of 402
E01013 Vitoria - Gasteiz
Araba

AFFILIATE 1
MIZAR FRANCE
France

FOUNDING YEAR
2014

EMPLOYEES
10

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Euskadi
France

DESCRIPTION OF THE COMPANY
MIZAR is an ENDtoEND partner in the complete design and manufacturing process, based on additive technology, of biomodels, guides and surgical instruments and customized implant implants.

SPECIFIC THERAPEUTIC AREA
All the specialties and pathologies in which the manufacture of a replicate of the human anatomy can be used to support the diagnosis or the surgical planning. More specifically, traumotological or maxillofacial applications in which a surgical guide must be defined and / or a static repair plate made to measure for the patient and his pathology must be implanted.

PRODUCT PIPELINE

No.1

BIOMODELS
Specific biomodels of the patient's anatomy for the diagnosis, planning and dissemination of results Or techniques.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Pathologies prescribed by doctors.

No2

GUIDELINES/SURGICAL INSTRUMENTS
Guidelines and surgical instruments for the planning and execution of specific surgeries planned by the doctor.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Pathologies prescribed by doctors: traumatology and maxillofacial.

No.3

TITANIUM IMPLANTS
Titanium repair implants made of medical grade.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Treatment of fractures or final fixation of surgical interventions.

NARU INTELLIGENCE

www.naruintelligence.com

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Gipuzkoa

FOUNDING YEAR
2017

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Spain
Euskadi
Europe (All)

DESCRIPTION OF THE COMPANY
Naru Intelligence is specialized in Big Data Solutions for Personalized Medicine. We develop software systems for the integration, analysis and visualization of large amounts and heterogeneous data.

SPECIFIC THERAPEUTIC AREA
Cancer

PRODUCT PIPELINE

No.1

STEP

The Step product is a system to personalize the care of cancer patients. Step analyzes data to identify patient profiles in which cancer treatments have been effective or not. Currently the context in which treatments fail is not saved nor analyzed, and precisely this is the value that Step provides. Step integrates clinical information with patient reported follow-up information that is not gathered currently. Such new information is collected using the Step App, a mobile application for the patient.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Cancer

ESTIMATED TIME TO MARKET (YEARS)
1

NEOS SURGERY

www.neossurgery.com

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HQ

NEOS SURGERY, S.L.
Pº Mikeletegi, 2
E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2003

EMPLOYEES

15

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

NorthAm
China
LatAm
Europe (All)
Row

DESCRIPTION OF THE COMPANY

NEOS is a technology-based company founded by neurosurgeons and two technology centres.We specialise in creating new solutions for neurosurgical challenges; applying new materials, new designs and innovative thinking. Our products address needs on all levels of the value chain, improving: patient safety, surgeon handling, patient follow-up, sterilisation and logistical costs, etc. NEOS launched its first product in 2006; the first cranial closure device made of Nitinol. Learning and growing from this first market experience, NEOS launched the Cranial Loop product in 2009 ; a 100% polymeric cranial closure family and has been selling internationally since then. Our R&D product pipe-line is fuelled by market needs and complemented by our clinical committee.

SPECIFIC THERAPEUTIC AREA

Neurosurgery

MAIN ALLIANCES

No.1

PARTNER NAME
KLS MARTIN LP

COUNTRY OF PARTNER'S HQ
USA

PURPUSE OF AGREEMNET W/PARTNER
Other

No.2

PARTNER NAME
GEBRUDER MARTIN GmbH

COUNTRY OF PARTNER'S HQ
Germany

PURPUSE OF AGREEMNET W/PARTNER
Other

No.3

PARTNER NAME
TECNALIA

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

CRANIAL LOOP
Is a cranial bone flap fixation system. Its function is to fix the bone flap in its anatomical position after a craniotomy. It is available in three sizes. It is instrument-free, thus allowing a fast & easy application. It is made of PEEK-Optima®, a biocompatible polymer with two key advantages: it is artifact-free in medical imaging and shows great 3D adaptability to bone, thus offering a minimal profile.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Post-craniotomy bone flap fixation.

No.2

CRANIAL COVER
Is intended for use to cover burr holes resulting from cranial surgery, and thus avoid postoperative skin concavities. With the two available sizes, burr holes with diameter between 10 and 14 mm can be covered. It is a novel device which, based on the proven Cranial LOOP concept, provides a reliable solution to a common neurosurgical problem.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Covering of burr holes resulting from cranial surgery.

No.3

RA01
Is a new annulus repair device aimed at repairing the intervertebral disc after a disc herniation, thus preventing re-herniations. It is based on medical textiles and innovative materials, and it will contribute to restoring patients' quality of life and offering a cost-effective solution for a common surgical problem.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Treatment of intravertebral disc herniations.

ESTIMATED TIME TO MARKET (YEARS)
2

No.4

INNOCLIP
Is a project aimed at developing a polymer-based solution for the surgical treatment of intracranial aneurysms.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Surgical management of intracranial aneurysms.

ESTIMATED TIME TO MARKET (YEARS)
4

No.5

SC01
Development of a new solution for the fixation of the sternum after a medium sternotomy.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Fixation of the sternum after a medium sternotomy.

ESTIMATED TIME TO MARKET (YEARS)
2

NESPLORA NEUROSCIENCE SUPPORT SYSTEMS

www.nesplora.com

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E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR
2008

EMPLOYEES
18

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Euskadi
LatAm
Europe (All)

DESCRIPTION OF THE COMPANY
NESPLORA is a company created in 2008 in San Sebastián which develops virtual reality software tools for the assessment of several neurological pathologies. The mission that defines the activity of NESPLORA is to be able to objectify and to maximize the cognitive state of a person, so as to facilitate their clients (psychologists, psychiatrists, neurologists and pediatricians) the diagnosis and subsequent follow-up of the treatments proposed for each person.

The company designs and develops innovative tools to improve the diagnosis and treatment of patients with far-reaching and wide-spread problems, such as Alzheimer's disease, hyperactivity, mental illnesses, strokes, autism and other disorders. They can evaluate a disorder such as an attention deficit, a complex process such as a decision making, a cognitive function such as memory in all its variants, or a specific skill for a particular job.

PRODUCT PIPELINE

No.1

NESPLORA AULA
Is in the market since May 2016 in its new implementation on Samsung's virtual reality platform, and has sales of 105 units. It has a very noticeable scientific support, with more than 50 articles written and publications in several books. Previously, between 2009 and 2014, it was commercialized on a Carl Zeiss Virtual Reality platform, whose production was discontinued, obtaining more than 300 clients. NESPLORA AULA, which measures the quality of the attentional processes in children between 6 and 16 years.

CURRENT DEVELOPMENT PHASE
In market

ESTIMATED TIME TO MARKET (YEARS)
2

No.2

NESPLORA AQUARIUM
The second tool, will be launched in July 2017, after the 6th World Congress on ADHD in Vancouver, and measures attentional processes, working memory and executive functions in adults.

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
1

No.3

Nesplora is developing more tools thanks to a grant obtained through the European Economic Community's SME support program, which exceeds 1,400,000 euros. There is already a roadmap that will cover the next two years. The strategy to define these products supports the commercial and internationalization activity, for which they are seeking investors.

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
2

No.4

Nesplora has advanced the market by developing products based on Virtual Reality. This technology allows to define, describe and provide unbiased and concise information on multivariate cognitive and behavioral processes in simulated environments.

They design and develop innovative tools to improve the diagnosis and treatment of patients with far-reaching and wide-spread problems, such as Alzheimer's disease, hyperactivity, mental illnesses, strokes, autism and other disorders. They can evaluate a disorder such as an attention deficit, a complex process such as a decision making, a cognitive function such as memory in all its variants, or a specific skill for a particular job.

Their products are scientific tests, all of them barred, tested and validated. They bring to the discipline of psychology the level of precision that a blood or urine test (measurement of cholesterol levels, platelets, red blood cells, etc.) contributes to traditional medicine.

CURRENT DEVELOPMENT PHASE
In development

NGS HEALTH AND MIND

www.neas.es

CONTACT PERSON

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HQ

NGS HEALTH AND MIND, S.L.
Parque Empresarial Zuatzu
Edificio 4 - local 1
E20018 Donostia - San Sebastián
Gipuzkoa

EMPLOYEES

6

ANNUAL TURNOVER (M€)

<5 5-50 >50

DESCRIPTION OF THE COMPANY

We fabricate, sell and make formations, of the NEAS technique, we are specialized in the benefit of the quality of the sleeping, reduction of pain and improvement of the sport activitites. We have the mision to help and formate all the maximum people of the health world to help the people to improve their health.

SPECIFIC THERAPEUTIC AREA

Sleep, pain and sport.

PRODUCT PIPELINE

No.1

NEURO ESTIMULATION
Neuro estimulation of low frecuencia located topologicaly in the main periferical nerves. Making influence in the autonom nerve system.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Benefits in pain reduction, sleep improvement and sport action.

ESTIMATED TIME TO MARKET (YEARS)
3

OIARSO

www.bexenmedical.com

Bexen medical

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HQ
OIARSO S.COOP.
Pol. Ind. Ibarluze
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Gipuzkoa

AFFILIATE 1
OIARSO MEDICAL KUNSHAN
China

FOUNDING YEAR
1978

EMPLOYEES
70

ANNUAL TURNOVER (M€)
<5 **5-50** >50

FOOTPRINT
LatAm
Europe (All)
China
Africa
Central America
UAE

DESCRIPTION OF THE COMPANY
OIARSO S. Coop. (Bexen Medical) is a company focused on the healthcare area with 3 business area: Bexen medical: Development and manufacturing of disposable medical material; Bexen bioservices: Consulting, management and storage of biosanitary samples; Bexen diagnostics: Development and manufacturing of POC medical devices.

SPECIFIC THERAPEUTIC AREA
Cardiology for the Emergency Medical Services.

MAIN ALLIANCES

No.1

PARTNER NAME
MONDRAGON CORPORATION

COUNTRY OF PARTNER'S HQ
SPAIN

PRODUCT PIPELINE

No.1

SINGLE USE MEDICAL DEVICES FOR HOSPITAL USE

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Parenteral and enteral nutrition, infusión and transfusión, ginecology, urology and ophtalmology.

No.2

BEXEN BIOSERVICES
Global solutions for preserving and guarding the biological samples of hospitals, blood and tissue banks and technology centers.
Single use medical devices for hospital use in the following areas: parenteral nutrition, enteral nutrition, infusion / transfusion, gynecology, urology, ophthalmology.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Bexen Bioservices includes at its offer a complete range of services related to sample storing, from the customer situation diagnostic to a complete externalization of the bio-sampling preservation.

No.3

SINGLE USE MEDICAL DEVICES FOR OZONE THERAPY

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Autoblood transfusión set and accesories for ozone treatments. Addition to oncological treatment, arteriosclerosis and therefore all pathologies derived from the reduction in oxygen provision to tissues. Delayed scarring. Migraines. Osteoporosis, rheumatic fibromialgia and chronic fatigue síndrome, tendinitis, accelerated aging, etc...

No.4

POINT OF CARE DIAGNOSTIC DEVICES

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Bexen Bioservices: Organic liquids and blood gases analysis.

ELECTROMEDICAL DEVICES		IN-VITRO DIAGNOSTIC			DIGITAL HEALTH	
MONITORING DEVICES OTHER		OTHER			CLOUD	

ONE WAY LIVER

www.owlmetabolomics.com

owl Metabolomics Products&Services

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HQ

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Bizkaia Technology Park
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E48160 Derio
Bizkaia

AFFILIATE 1

OWL HEALTH, S.A. DE C.V.
Mexico

FOUNDING YEAR

2002

EMPLOYEES

20

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Spain
Europe (W)
NorthAm

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

DESCRIPTION OF THE COMPANY

The activity of the company is centered in the area of health and its objective is to identify, validate, patent and commercialize early diagnostic and/or prognostic systems, as well as therapeutic targets of hepatic diseases and other great prevalence complex pathologies. To accomplish this we use, metabolomics and bioinformatics and have established a complete and highly productive platform which supports the advance of our developments.

The company develops both diagnostic products and metabolomics services to medical, pharmaceutical, food-nutrition and cosmetics research. They are focused on being the best-in class performer in metabolomics and its application in both R&D services and the development of diagnostic systems for highly prevalent complex diseases.

SPECIFIC THERAPEUTIC AREA

In vitro serum based diagnosis products with our OWLiver test, the first serum based test to be used for Steatosis and NASH diagnosis. It is an innovative non-invasive method that allows the diagnosis through the identification and validation of metabolomic biomarkers applying its know-how in metabolomic technology to other diseases with complex diagnostics with a personalized medicine approach including metabolomics Services to external organizations.

PRODUCT PIPELINE

No.1

METABOLOBIC PLATTFORM TECHNOLOGY

Metabolobic plattform technology with cloud data management in the area of diagnostics.

CURRENT DEVELOPMENT PHASE
In market

ESTIMATED TIME TO MARKET (YEARS)
Liver diseases

No.2

TEST OWLIVER AND OWLIVER CARE

CURRENT DEVELOPMENT PHASE
In market

ESTIMATED TIME TO MARKET (YEARS)
NASH/NAFLD DIAGNOSTIC

No.3

TEST OWLFIBER

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Liver diseases

ESTIMATED TIME TO MARKET (YEARS)
1

No.4

METABOLOMICS SERVICES

Metabolomics services to medical, pharmaceutical, food-nutrition and cosmetics research

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Metabolomic biomarkers discovery

OPTIMUS 3D

www.optimus3d.es

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OPTIMUS 3D
Edificio BIC ARABA
Araba Technology Park
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Araba

FOUNDING YEAR

2014

EMPLOYEES

6

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)
LatAm

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

DESCRIPTION OF THE COMPANY

Optimus 3D S.L. emerged on Feb. 2014 from the union of the know how and business expertise of its two promoters, aided by new technologies of the Basque Government development programs.
With the Mission of creating value in industrial "Hi Tec" and medical environments, using the most innovative manufacturing technologies 3D to reduce time and costs.
Optimus 3D has its facilities in the hotbed of companies of the Basque Government, BIC ARABA, located in the technology park of Álava and machinery, software, and media professionals to work with the most advanced technologies of additive manufacturing (3D Printing). Optimus 3d has a own park of 3d printing machines of the maximum level besides having a highly experienced team of engineers in Additive Manufacturing focused on biosanitary projects.
Optimus 3D is certified under ISO 9001 QA norms and we expect to be also certified by ISO 13485 norm at the end of 2017.
Optimus 3D is supported as an innovative firm in the sector of the additive manufacturing by various institutions and projects.
Optimus 3D is also member of the Spanish Association of additive manufacturing: ADDIMAT.

SPECIFIC THERAPEUTIC AREA

Traumathology, Maxilo and other Medical areas
Orthopedics

MAIN ALLIANCES

No.1

PARTNER NAME
NANOCELL BASQUE INVESTIGATION CENTER

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.2

PARTNER NAME
RPK GROUP

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

TAC OR RM SEGMENTATION+CAD MODEL+3D PRINTING MANUFACTURING
TAC or RM segmentation+cad model+3d printing manufacturing of real surgery cases for Traumathology, Maxilo and other Medical areas.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Trainning, reduce Surgery time, reduce surgery risks and improve the quality service to the patients.

No.2

CUSTOMIZED SURGERY GUIDES
Design and manufacturing of customized surgery guides.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Trainning, reduce Surgery time, reduce surgery risks.

No.3

CUSTOMIZED BIOPHERULES
Customized biopherules for chronic phatologies as "Rizartrosis" or "Tunel carpiano". Orthopedic services.

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Better and more confortable customized orthoses than actual products in market.

ESTIMATED TIME TO MARKET (YEARS)
0,5

OSASEN SENSORES

www.osasen.com

OSASEN

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E48160 Derio
Bizkaia

FOUNDING YEAR
2014

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Europe (W)
NorthAm
LatAm

DESCRIPTION OF THE COMPANY
OSASEN develops cost-effective healthcare solutions, for marker monitoring and detection.
OSASEN addresses the development of a new generation of biosensors. Point of Care (POC) devices based on advanced detection systems, high sensitivity, specificity, reliability, simplicity and high speed metabolite/ protein detection, for healthcare and specially to monitor chronic patients, drug and therapy adherence.
Enzymatic amperometric biosensors, based on screen-printed electrodes with capillary refill and immunosensors developed on low cost basis, with integrated microfluidics and electrochemical detection, optics and immunoassays, which make up the concept of Lab on a Chip (LOC).

SPECIFIC THERAPEUTIC AREA
Gastroenterology

PRODUCT PIPELINE
No.1
POC FOR HYPOLACTASIA DIAGNOSIS

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Lactose intolerance diagnosis

ESTIMATED TIME TO MARKET (YEARS)
1

MULTIPARAMETER MONITOR DEFIBRILLATOR FOR EMERGENCY MEDICAL SERVICES
MONITOR DEFIBRILLATOR FOR HOSPITALS

OSATU

www.bexencardio.com

Bexen cardio

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AFFILIATE 1

BEXEN CARDIO ITALIA SRL
Italy

AFFILIATE 2

SUZHOU BEXEN CARDIO EQUIPMENT CO. LTD.
China

FOUNDING YEAR

1980

DESCRIPTION OF THE COMPANY

More than 37 years of experience in the cardiology field for the manufacture of electromedical equipment.
Since the origins, BEXEN Cardio has been engaged in the development, manufacture and marketing of electromedical equipment in the cardiology field. Thus, in the past our company was manufacturer of electrocardiographs, monitors and defibrillators.
At present the company is absorbed in an accelerated specialization process in the defibrillation field, and as a result Osatu S. Coop. only manufactures monitor defibrillators, defibrillators and AEDs.
Nowadays BEXEN Cardio is a deeply internationalized company, with presence in 5 continents and more than 100 countries. Part of the workforce is engaged in this project for more than 25 years, adding great know how as a key asset for the company.

SPECIFIC THERAPEUTIC AREA

Bexen Cardio is specilized in Cardiology for the Emergency Medical Services

PRODUCT PIPELINE

No.1

REANIBEX 200
Automatic External Defibrillator for Public AED

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.2

REANIBEX 300
Automatic External defibrillator with amnual override for AED Public and Primary centers

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.3

REANIBEX 500
Monitor Defibrillator for Primary and Hospitals with SpO2 and Pacemaker options

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.4

REANIBEX 500 EMS
Compact Multiparameter Monitor Defibrillator for Emergency Medical Services with Data Transmission

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.5

REANIBEX 700
Monitor Defibrillator for Hospitals and EMS, manual and AED mode

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.6

REANIBEX 800
Multiparameter Monitor Defibrillator for Hospitals with SpO2, EtCo2, NIBP, IBT, tºC, 12 ECG, Interpretation, AED Mode and Pacemaker

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

No.7

DATA LINK / DATA CLOUD.
Communication service between Devices and PC or Tablets and between devices and web server with estándar protocols DICOM, HL7

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cardiology

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

REHABILITATION SYSTEMS
IMPLANTS
TRAUMA FIXATION DEVICES
OTHER
RECONSTRUCTIVE SURGERY

BIOMEDICAL CONSUMABLES

NON-ACTIVE IMPLANTABLE DEVICES

OSTEOPHOENIX

www.osteophoenix.com

OSTEOPHOENIX

CONTACT PERSON

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AFFILIATE 1

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E48002 Bilbao, Bizkaia

AFFILIATE 2

LUZ ÁNGELA PERTÚZ CRISPÍN
Bentazarra 4, 5ºB
E48002 Bilbao, Bizkaia

FOUNDING YEAR

2012

EMPLOYEES

7

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Euskadi
Spain
LatAm
NorthAm
EUROPE (Portugal and Italy)

DESCRIPTION OF THE COMPANY

Osteophoenix S.L. is a biotechnology company focused on the development of new systems and procedures for organ and tissue regeneration.

OSTEOPHOENIX S.L. is committed to research and development of new medical solutions and technologies that would represent an advance and a benefit for patients that do not have hope on recovery and a remarkable improvement for already existing treatments contributing innovation and development to them. Also, these new developments are aimed to increase the efficiency of existing procedures, achieving less invasive interventions for the patient and a plausible reduction of time in surgery . All these benefits significantly decrease the risk of complex interventions, contribute to the reduction of patient stay in intensive care units and furthermore cut down costs per intervention. Osteophoenix S.L. focuses on the medical field using leading technologies including 3D printing in medical grade titanium, plastic (PLA) and gypsum. Osteophoenix has an important dedication to R & D activities which are reflected in the nature of its current projects.

SPECIFIC THERAPEUTIC AREA

Medical practicioners specialized in Orthopedics, maxillofacial surgery, neurosurgery, reconstructive surgery, regenerative medicine, diagnosis (biomodels), traumatology, dentistry.

MAIN ALLIANCES

No.1

PARTNER NAME
TITANIUM AND TISSUE ENGINEERING

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Other

No.2

PARTNER NAME
MAFFINTER

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Other

No.3

PARTNER NAME
DENTAL SERVICES SAS

COUNTRY OF PARTNER'S HQ
Colombia

PURPUSE OF AGREEMNET W/PARTNER
Other

No.4

PARTNER NAME
INSTITUTO DE GENERACIÓN DE TEJIDOS POWERED BY PROCAPS

COUNTRY OF PARTNER'S HQ
Colombia

PURPUSE OF AGREEMNET W/PARTNER
Other

No.5

PARTNER NAME
LINEAS HOSPITALARIAS

COUNTRY OF PARTNER'S HQ
Colombia

PURPUSE OF AGREEMNET W/PARTNER
Other

No.6

PARTNER NAME
SURGICAL PLANNING

COUNTRY OF PARTNER'S HQ
Colombia

PURPUSE OF AGREEMNET W/PARTNER
Other

No.7

PARTNER NAME
BIOCCLUDE

COUNTRY OF PARTNER'S HQ
EEUU

PURPUSE OF AGREEMNET W/PARTNER
Other

PRODUCT PIPELINE

No.1

IOCCLUSIVE BARRIER

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Bone regeneration

No.2

CUSTOMIZED (PATIENT SPECIFIC) CRANEO MAXILOFACIAL DEVICES

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Reconstruction

No.3

CUSTOMIZED (PATIENT SPECIFIC) BACK DEVICES

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Reconstruction

ESTIMATED TIME TO MARKET (YEARS)
1

No.4

CUSTOMIZED (PATIENT SPECIFIC) BREAST RECONSTRUCTION

CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Reconstruction of mastectomized patients

ESTIMATED TIME TO MARKET (YEARS)
3

PATIA

www.patiadiabetes.com

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PATIA EUROPE S.L.
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E20009 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

2015

EMPLOYEES

10

FOOTPRINT

Spain
Europe (All)
LatAm
Middle East

DESCRIPTION OF THE COMPANY

Patia is a public health company that integrates genetic, metabolomic and digital tools to facilitate the prevention and control of type 2 diabetes. Patia combines genomics with digital tools to prevent and control diabetes. Patia works to reduce the number of cases of diabetes in the world and improve the quality of life of people with, developing tools for prevention and intervention in a behavior change.

Patia staff have extensive experience in the field of molecular biology and genomic medicine. Their knowledge is complemented by top-level alliances with prestigious research centres in Europe and the Americas to make the most advanced genomic and technological tools available to the population in the most accessible way. Patia's diabetes prevention projects, like Diabetes Prevent, are endorsed by a scientific committee with a long trajectory and extensive experience in the field of prevention and treatment of diabetes.

SPECIFIC THERAPEUTIC AREA

TYPE 2 DIABETES and GESTATIONAL DIABETES prevention & intervention.

MAIN ALLIANCES

No.1

PARTNER NAME
UNILABS

COUNTRY OF PARTNER'S HQ
X Middle East

PURPUSE OF AGREEMNET W/PARTNER
Co-marketing
Merchandising Patia's products in Arab Region

PRODUCT PIPELINE

No.1

DIABETES PREVENT
Diabetes prevention programme developed by Patia which allows you to discover your genetic predisposition and that of your family to suffer from type 2 diabetes and motivates a behavior intervention.

CURRENT DEVELOPMENT PHASE
In market

No.2

APP
A friendly platform where you can receive the result of your Patia genetic test and take healthy life challenges such us counting the calories you eat at each meal or measuring the steps you walk every day. It helps you to track your medical treatment and share the evolution of your measurements with your doctor.

CURRENT DEVELOPMENT PHASE
In market

No.3

GDMPREDICT
Genetic risk test to prevent gestational diabetes

CURRENT DEVELOPMENT PHASE
In development

PRODOL MEDITEC

www.airtraq.com

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— AFFILIATE 1
AIRTRAQ LLC
USA

— AFFILIATE 2
PRODOL MEDITEC LIMITED
China

— AFFILIATE 3
AIRTRAQ, S.A.
Spain

— AFFILIATE 4
AIRTRAQ CHINA
China

— FOUNDING YEAR
2003

— EMPLOYEES
7

— ANNUAL TURNOVER (M€)
<5 5-50 >50

— FOOTPRINT
France
Euskadi
Europe (All)
ROW

— DESCRIPTION OF THE COMPANY
PRODOL MEDITEC, S.A. SME Vizcaya, was established on January 17, 2003, its main activity is the design, manufacture and marketing of innovative medical products. Currently PRODOL focuses its activity on a line of products for the management of the airway specifically for endotracheal intubation and fit into the generic category of Video Laryngoscopes. The products it designs and commercializes have patents registered in the name of the company.

— SPECIFIC THERAPEUTIC AREA
Anesthesia: video laryngoscopy

— PRODUCT PIPELINE

No.1
SP
The Airtraq makes intubation possible in cases of difficult airway, allowing to solve critical situations in which the integrity of the patient is at risk.

CURRENT DEVELOPMENT PHASE
In market

No.2
AIRTRAQ AVANT
A new semi-disposable laryngoscope video, whose commercial name is "Airtraq Avant", which offers users the same clinical advantages as the totally disposable product but whose cost per use is five times lower and also does not require investment by hospitals. This new product represents a very important growth opportunity for Prodol, since the potential market goes from being exclusively that of difficult intubations (4% of the total) to that of routine intubations.

CURRENT DEVELOPMENT PHASE
In market

No.3
ADAPTORS AND APP
An adapter and an application that allow visualizing and recording the endotracheal intubation process in any mobile phone.

CURRENT DEVELOPMENT PHASE
In market

No.4
CAMERA
Has developed a new camera that will significantly improve the competitive position of the Airtraq product. It is a new technology that allows at half the cost to offer the same functionalities and reduce the size and weight of the device.

CURRENT DEVELOPMENT PHASE
In market

PROGENIKA

www.progenika.com

Progenika Biopharma
GRIFOLS

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E48160 Derio
Bizkaia

FOUNDING YEAR

2000

EMPLOYEES

71

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Europe (All)
Euskadi
NorthAm
Spain
Progenika's products are sold worldwide

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

DESCRIPTION OF THE COMPANY

Progenika Biopharma is a Grifols Company, leading the field of Personalized Medicine that designs, produces and commercializes in vitro diagnostics tests. Progenika's portfolio covers a broad range of clinical needs from the diagnosis and prognosis of complex diseases, to the prediction of response and monitoring of effectiveness for different treatments. Progenika is a global pioneer in the development of molecular biology tests for blood group genotyping to ensure transfusion compatibility and in the monitoring of thetreatment of biological drugs in autoimmunity.

SPECIFIC THERAPEUTIC AREA

Progenika devotes most of its R&D resources to the development of new products and services for in vitro diagnostic focused on different therapeutic areas, including immunohematology, autoimmunity and cardiovascular, the three main areas of activity of the company.

PRODUCT PIPELINE

No.1

ID CORE XT
Blood Group Genotyping Test, from human genomic DNA, which permits simultaneous identification of multiple allelic variants of the most important red cell antigens of Rh, Kell, Kidd, Duffy, MNS, Diego, Dombrock, Colton, Cartwright and Lutheran systems. CE Mark Test, designed for use in a Luminex 100/200 equipment.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Red Blood Cells Group Genotyping

No.2

ID HPA XT
Blood Group Genotyping Test, from human genomic DNA, allowing simultaneous identification of multiple allelic variants from the major platelet antigens (HPA) from HPA 1 to HPA11 and HPA 15 systems. CE Mark Test, designed for use in a Luminex 100/200 equipment.

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Platelet Group Genotyping

No.3

SEQPRO LIPO IS
CE Mark. Is Progenika' solution for Familial Hypercholesterolemia genetic diagnosis for Next Generation Sequencing ILLUMINA® MiSeq equipment. It allow simultaneous detection of all possible FH mutations in 6 FH related genes (LDLR, APOB, PCSK9, APOE, STAP1 and LDLRAP1).

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Genetic Diagnosis of Familial Hypercholesterolemia.

No.4

PROMONITOR
Elisa tests to monitor the treatment with main biological drugs through quantification of the serum levels of drugs and/or the antibodies againts drugs. It includes also a rapid immunochromatography test for the qualitative detection of anti-infliximab antibodies in human whole blood or serum.

CURRENT DEVELOPMENT PHASE
In the market & In development

INDICATION / PROPERTIES
Monitoring treatment with biological drugs.

PROSPERO BIOSCIENCES

www.prospero-biosciences.com

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FOUNDING YEAR

2015

EMPLOYEES

3

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)
NorthAm
Japan

DESCRIPTION OF THE COMPANY

PROSPERO BIOSCIENCES strives to improve the way scientists and clinicians analyze high mass molecules. Prospero's primary focus is to provide an ultra-high mass detector system with unprecedented resolution.
As a result, this leads to quantitative analysis in the life sciences sector, which will generate a wealth of information that would otherwise have taken years to obtain with traditional approaches.

SPECIFIC THERAPEUTIC AREA

All. Neurological diseases

PRODUCT PIPELINE

No.1

NANOMEMBRANE
The nanomembrane is encapsulated within a detection mechatronics, Micro Channel Plate (MCP), that allows it to be integrated easily into a diverse range of mass spectrometrometers.

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
End of the year

No.2

MASS SPECTROMETRY ANALYSIS FOR HIGH MASS MOLECULES

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
End of the year

POLIMERBIO

www.polimerbio.com

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FOUNDING YEAR
2017

EMPLOYEES
1

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Euskadi
Spain

DESCRIPTION OF THE COMPANY
POLIMERBIO was founded in 2017 and is a spin-off tied to the University of the Basque Country (UPV-EHU). The company is active in a variety of markets, with a focus on biodegradable materials for the medical and the tissue engineering fields. Its challenge is to improve well-being and quality of life, contributing to medicine in its effort to create a healthier world. The mission of the company is to offer solutions to ensure customer success through the best service.

Biomaterials are being employed in surgical instruments, permanent implants or temporary applications inside the human body. Those which are polymeric and bioabsorbable have found great success in sutures, controlled release devices, coronary stents and for the reduction and internal fixation of bone fractures. At POLIMERBIO we are committed to the development of novel bioabsorbable products which could replace non biodegradable devices or open new possibilities.

POLIMERBIO provides a full range of services that cover: custom synthesis of bioabsorbable polyesters; bioactive, radiopaque and antimicrobial biodegradable polymer composites; fabrication under clean room conditions; in vitro biodegradation and/or drug release studies; scaffold design by electrospinning; likewise, we offer contract research services to provide biomaterials and prototypes to meet specific applications.

SPECIFIC THERAPEUTIC AREA
- Input suppliers: plastics.
- Sustaining Engineering: Bio-engineering.
- Components manufacturing: Plastic.

MAIN ALLIANCES

No.1
PARTNER NAME
ZIBIO Group (University of the Basque Country)
COUNTRY OF PARTNER'S HQ
SPAIN
PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.2
PARTNER NAME
POLYMAT (University of the Basque Country)
COUNTRY OF PARTNER'S HQ
SPAIN
PURPUSE OF AGREEMNET W/PARTNER
Co-development

No.3
PARTNER NAME
GRADOCELL
COUNTRY OF PARTNER'S HQ
SPAIN
PURPUSE OF AGREEMNET W/PARTNER
Other

No.4
PARTNER NAME
BIC Gipuzkoa
COUNTRY OF PARTNER'S HQ
SPAIN
PURPUSE OF AGREEMNET W/PARTNER
Other

PRODUCT PIPELINE

No.1
URETERAL STENT: BIOABSORBABLE CATHETER WITH DOUBLE PIGTAIL FOR URINARY TRACT DISEASES
CURRENT DEVELOPMENT PHASE
In development
INDICATION / PROPERTIES
Urological

No.2
URETHRAL CATHETER: BIOABSORBABLE TUBE FOR HYPOSPADIAS TREATMENT AND URETHRA RECONSTRUCTION
CURRENT DEVELOPMENT PHASE
In development
INDICATION / PROPERTIES
Urological

No.3
CUSTOM SYNTHESIS OF BIOABSORBABLE POLYESTERS.
CURRENT DEVELOPMENT PHASE
In market

No.4
SCAFFOLD DESIGN BY ELECTROSPINNING
CURRENT DEVELOPMENT PHASE
In market

No.5
IN VITRO BIODEGRADATION AND/OR DRUG RELEASE STUDIES
CURRENT DEVELOPMENT PHASE
In market

No.6
BIOACTIVE, RADIOPAQUE AND ANTIMICROBIAL BIODEGRADABLE POLYMER COMPOSITES
CURRENT DEVELOPMENT PHASE
In market

REINER

www.reiner.es / www.reinerdental.com

Reiner / MEDICAL

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FOUNDING YEAR

2008

EMPLOYEES

25

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Euskadi
Europe (All)
LatinAm
China
Resto of Asia

DESCRIPTION OF THE COMPANY

REINER Medical is focused in the design and manufacturing of medical devices, by the injection molding technology. Our know-how and expertise include biocompatible implants, syringes for special applications, and development of hundreds of dental products (under our own brand: reiner dental)

SPECIFIC THERAPEUTIC AREA

- Medical devices
- Dental products

PRODUCT PIPELINE

No.1
DENTAL IMPLANT ABUTMENTS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Compatible products

No.2
INNOJECT

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Medical devices for oftalmology

No.3
DOSIVENT

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Medical devices for asthma

No.4
CRANIAL LOOPS

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Cranial loops for brain surgery operation

No.5
COLON BAG

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Colon bag to keep wastes

No.6
PEE RETAINER

CURRENT DEVELOPMENT PHASE
In market

INDICATION / PROPERTIES
Pee retainer (Uriclak)

SALUDNOVA SOLUTIONS

www.saludnova.com

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Gipuzkoa

FOUNDING YEAR

2008

EMPLOYEES

5

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (W)

DESCRIPTION OF THE COMPANY

Saludnova Solutions is a technology-based company that develops software in order to provide personalised and ubiquitous services in the e-health and chronicity environment. Saludnova services contribute to increase the quality of life of users while providing cost-effective solutions for the management of chronic patients.

Saludnova has developed and implemented a management collaborative platform which makes it possible to monitor one or more pathologies by a multidisciplinary and multilevel group.

SPECIFIC THERAPEUTIC AREA

Monitorization
Mobile health

MAIN ALLIANCES

No.1

PARTNER NAME
Tunstall Iberica S.L.

COUNTRY OF PARTNER'S HQ
SPAIN

PURPUSE OF AGREEMNET W/PARTNER
Tunstall develops some of its e-Health projects through Saludnova solutions.

PRODUCT PIPELINE

No.1

CARELINE
A telehealth platform that enables telemonitoring of chronics patients.

CURRENT DEVELOPMENT PHASE
In market

No.2

CARELINE REHAB
A telehealth platform that allows to increase the adherence of rehabilitation treatments by telemonitoring them.

CURRENT DEVELOPMENT PHASE
In market

No.2

CARELINE SPORT
A platform that allows telemonitoring people who want to practice sports having behind them a health professional

CURRENT DEVELOPMENT PHASE
In development

ESTIMATED TIME TO MARKET (YEARS)
2

ELECTROMEDICAL DEVICES	MEDICAL IMAGE			ORTHOPEDIC AND REHABILITATION TECHNOLOGY		BIOMEDICAL CONSUMABLES
SURGICAL INSTRUMENTS AND SYSTEMS	ENDOSCOPY			IMPLANTS TRAUMA FIXATION DEVICES ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS ARTHROSCOPY		NON-ACTIVE IMPLANTABLE DEVICES SURGICAL INSTRUMENTS AND CONSUMABLES ADVANCED WOUND MANAGEMENT BIOLOGICAL THERAPIES

SUMISAN

www.sumisan.biz

CONTACT PERSON

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HQ

ESTABLECIMIENTOS SUMISAN, S.A.
Avda. Errekalde, 59
E20018 Donostia - San Sebastián
Gipuzkoa

FOUNDING YEAR

1979

EMPLOYEES

46

ANNUAL TURNOVER (M€)

<5 **5-50** >50

FOOTPRINT

Europe (All)
Euskadi
Rest of Asia
Japan

DESCRIPTION OF THE COMPANY

Sale of surgical, medical, orthopedic appliances. repairs. manufacture articles. finishes. plastic materials

SPECIFIC THERAPEUTIC AREA

Orthopedics
Arthroscopy
Surgery
Urology
Gynecology

MAIN ALLIANCES

No.1

PARTNER NAME
CIKAUTXO

COUNTRY OF PARTNER'S HQ
EUSKADI

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

FLUID MANAGEMENT SURGICAL ROOM
Surgical table coverage

CURRENT DEVELOPMENT PHASE
In market

No.2

ENDOSCOPY COVER
Infection control

CURRENT DEVELOPMENT PHASE
In development

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

IMPLANTS
TRAUMA FIXATION DEVICES
PARTS OF REHABILITATION AND ORTHOPEDIC SYSTEMS

SUPRESU

www.supresu.com

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— HQ
SUPRESU, S.L.
Donosti Ibilbidea, 120 - nave 1
E20115 Astigarraga
Gipuzkoa

— FOUNDING YEAR
1972

— EMPLOYEES
8

— ANNUAL TURNOVER (M€)
<5 5-50 >50

— FOOTPRINT
France
Euskadi
Spain
Europe (W)

— DESCRIPTION OF THE COMPANY
Manufacture of medical device instruments and parts and components of pharmaceutical and medical machines. Manufacture of dental implants and screws of traumatology.Our organization is governed and controlled according to quality and environment standards ISO 9001:2008, ISO 14001:2004 and ISO 13485:2004 from TUV Rheinland.

— SPECIFIC THERAPEUTIC AREA
Dental Implants
Regenerative Medicine
Medical Devices

ULMA INNOVATION

www.ulma.com/somos-ulma/promocion-e-innovacion/

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Gipuzkoa

AFFILIATE 1
ULMA Innovación, S.L.
Bº Garagaltza, 51
E20560 Oñati
Gipuzkoa

FOUNDING YEAR
2006

EMPLOYEES
15

ANNUAL TURNOVER (M€)
<5 5-50 >50

FOOTPRINT
Euskadi
Spain
Europe (All)

DESCRIPTION OF THE COMPANY
The main ULMA Innovation objective is to promote and facilitate the development of new business activities in the area of its businesses and the Group ULMA itself to give rise to new areas of action.

SPECIFIC THERAPEUTIC AREA
Ophthalmology

MAIN ALLIANCES

No.1

PARTNER NAME
ULMA GROUP

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Pooling/exchange of Portfolios/ Markets

No.2

PARTNER NAME
MONDRAGON CORPORATION

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Pooling/exchange of Portfolios/ Markets

No.3

PARTNER NAME
BASQUE HEALTH SERVICE-OSAKIDETZA

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Co-development

PRODUCT PIPELINE

No.1

Retinal image analysis software for diabetic retinopathy screening.

CURRENT DEVELOPMENT PHASE
In development

No.2

On-Premise integration of the software in healthcare institutions
Post-selling maintenance and technical assistance services.

CURRENT DEVELOPMENT PHASE
In development

ULMA PACKAGING

www.ulmapackaging.com

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E20560 Oñati
Gipuzkoa

— AFFILIATE 1
ULMA PACKAGING S.A.
Buenos Aires
Argentina

— AFFILIATE 2
ULMA PACKAGING PTY LTD.
Brisbane Airport
Australia

— AFFILIATE 3
GH N.V.
Schelle
Belgium

— AFFILIATE 4
ULMA PACKAGING LTDA.
SÃO PAULO
Brasil

— AFFILIATE 5
ULMA PACKAGING GMBH.
Illertissen
Germany

— AFFILIATE 6
ULMA PACKAGING S.A.R.L.
Meyzieu
France

— AFFILIATE 7
ULMA PACKAGING SRL
Gragnano Trebbiense PC
Italy

— AFFILIATE 8
ULMA PACKAGING, S.A. DE C.V.
México D.F., Edo. de México
México

— AFFILIATE 9
ULMA PACKAGING B.V.
HW Leerdam
The Netherlands

— AFFILIATE 10
ULMA PACKAGING POLSKA SP. Z.O.O.
Legionowo
Poland

— AFFILIATE 11
ULMA PACKAGING LDA.
Benavente
Portugal

— AFFILIATE 12
ULMA PACKAGING SRL ROMANIA
Bucuresti
Romania

— AFFILIATE 13
ULMA PACKAGING RUSSIA
Moscow
Russia

— FOUNDING YEAR
1961

— EMPLOYEES
880

— ANNUAL TURNOVER (M€)
<5 5-50 >50

— DESCRIPTION OF THE COMPANY
ULMA Packaging is specialised in the design and production of packaging equipment, systems and services. ULMA Packaging is structured in six business units tailored to the requirements and needs of customers and is committed to innovation through the continuous strengthening of its R&D and applications engineering departments, and in its search for new systems and services that anticipate the requirements of a market in constant evolution.

ULMA offers packaging solutions for medical and pharma industries fulfilling all of the standards required. Using plastic films, Tyvek®, medicalgrade paper, aluminized materials, to protect products against microorganisms and moisture.

ULMA has a wide packaging solutions portfolio, suitable for the Medical and Pharmaceutical industries, with seven different packaging technologies: Flow Pack (HFFS), Thermoforming (Form, Fill and Seal), Vertical (VFFS), Traysealing, Blister, Shrink and Sleeve Wrapping.

Easily covered from product handling, boxing and palletizing after the packaging process.

— PRODUCT PIPELINE

No.1

ULMA has a wide packaging solutions portfolio, suitable for the Medical and Pharmaceutical industries, with seven different packaging technologies: Flow Pack (HFFS), Thermoforming (Form, Fill and Seal), Vertical (VFFS), Traysealing, Blister, Shrink and Sleeve Wrapping. Easily covered from product handling, boxing and palletizing after the packaging process. technical assistance services.

VACUNEK

www.vacunek.com

CONTACT PERSON

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VACUNEK SL
Bizkaia Technology and Scientific Park
Astondo bidea, 612 - 1rst. floor
E48160 Derio
Bizkaia

FOUNDING YEAR

2006

EMPLOYEES

3

ANNUAL TURNOVER (M€)

<5 5-50 >50

DESCRIPTION OF THE COMPANY

VACUNEK is a spin off of Neiker-Tecnalia established in 2006. Its objective is to apply the advances in research carried out in the field of biosciences to animal health.
Business lines:

- Development of recombinant vaccines for paratuberculosis in bovine.
- Manufacture and commercialization of PCR kits for the diagnosis of animal and plant diseases.

The products and services that VACUNEK produces are destined to the agri-food sector or the public health sector.

SPECIFIC THERAPEUTIC AREA

Vaccine
Diagnosis

MAIN ALLIANCES

No.1

PARTNER NAME
BIOX DIAGNOSTICS

COUNTRY OF PARTNER'S HQ
Bélgica

No.2

PARTNER NAME
LINODEE

COUNTRY OF PARTNER'S HQ
Irlanda

No.3

PARTNER NAME
SHANGHAI ZJ BIO-TECH CO., LTD. (LIFERIVER)

COUNTRY OF PARTNER'S HQ
China

No.4

PARTNER NAME
THERMOFISHER

COUNTRY OF PARTNER'S HQ
EEUU

No.5

PARTNER NAME
INGENASA

COUNTRY OF PARTNER'S HQ
España

PRODUCT PIPELINE

No.1

PARATBKUANTI-VK
Real-time PCR kit for detection of Mycobacterium avium paratuberculosis.

CURRENT DEVELOPMENT PHASE
In market

No.2

BEHIBVD/BD-VK
Real-time PCR-Retrotranscription kit for detection of BVD/BD virus in bovine and ovine.

CURRENT DEVELOPMENT PHASE
In market

No.3

PATSRUM-VK
Real-time PCR kit for detection simultaneous of Mycobacterium avium and Mycobacterium genus, and internal control.

CURRENT DEVELOPMENT PHASE
In market

No.4

TB ELISA-VK
Indirect Elisa Kit for detection of Antibodies to Mycobacterium bovis in serum and plasma.

CURRENT DEVELOPMENT PHASE
In market

No.5

MAPTB-VK
Real-time PCR kit for detection simultaneous of Mycobacterium avium subsp. paratuberculosis y M.tuberculosis complex, and internal control.

CURRENT DEVELOPMENT PHASE
In market

No.6

MYC3AIUM-VK
Triplex real-time PCR kit (3 targets) for simultaneous detection of Mycobacterium avium subspecies and Mycobacterium genus, in addition to the internal control.

CURRENT DEVELOPMENT PHASE
In market

ASSOCIATED COMPANY

BASQUE HEALTHCLUSTER

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

REHABILITATION SYSTEM

DIGITAL HEALTH

TELEHEALTH

INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS

CLOUD

VIRTUALWARE

www.virtuawaregroup.com

VIRTUALWARE

CONTACT PERSON

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dfried@virtualwaregroup.com

HQ

VIRTUALWARE LABS
Usausuaga, 7
E48970 Basauri
Bizkaia

FOUNDING YEAR

2003

EMPLOYEES

31

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)

DESCRIPTION OF THE COMPANY

Virtualware is a Spanish Creative SME involved in spreading the use of Graphical& Interactive Technologies facing eHealth and Smart Industry challenges mainly. Founded by three IT engineers, Virtualware is the Spanish pioneer SME dedicated to developing solutions using Virtual Reality technology. Virtualware still remains with equity capital since it was established.

The company provides on-demand solutions according to client needs and commercialize innovative products based on their strong background in Virtual Reality (VR), 3D interactive applications, simulators, serious games gamification & User Experience (UX). In the eHealth area, Virtualware provides a successful product for physical rehabilitation, Virtualrehab, an innovative physical rehabilitation system which uses videogame technology and allows monitoring the progress of patients both at home or Hospital in a seamless way.

SPECIFIC THERAPEUTIC AREA

Neuroimpairment
Virtual reality tecnology

PRODUCT PIPELINE

No.1

VIRTUAL REHAB
An innovative physical rehabilitation system which uses videogame technology and allows monitoring the progress of patients both at home or Hospital in a seamless way.

CURRENT DEVELOPMENT PHASE
In market

VITIA

www.vitia.es

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HQ

VITIA
Pº Mikeletegi, 56 - 308
20009 Donostia - San Sebastián
Gipuzkoa

EMPLOYEES

5

ANNUAL TURNOVER (M€)

<5 5-50 >50

FOOTPRINT

Europe (All)

DESCRIPTION OF THE COMPANY

VITIA offers rehabilitation systems and enhances sport performance.

The company's' rehabilitation systems are tested and supported by prestigious international centers as Kennedy Krieger Institute of Baltimore, the Robert Bosch Hospital of Stuttgart, the Royal Free Hospital of London or Reuth Hospital in Israel.

Also, the systems to enhance sport performance have been developed in Finland and they are being used in centers as Red Bull High Performance Team, Liverpool Football Club, Football Club Barcelona, Sporting Club of Portugal or the IAM (Swiss Professional Cycling Team).

SPECIFIC THERAPEUTIC AREA

Rehabilitation

MAIN ALLIANCES

No.1

PARTNER NAME
MYONTEC

COUNTRY OF PARTNER'S HQ
FINLAND

PURPUSE OF AGREEMNET W/PARTNER
Co-development

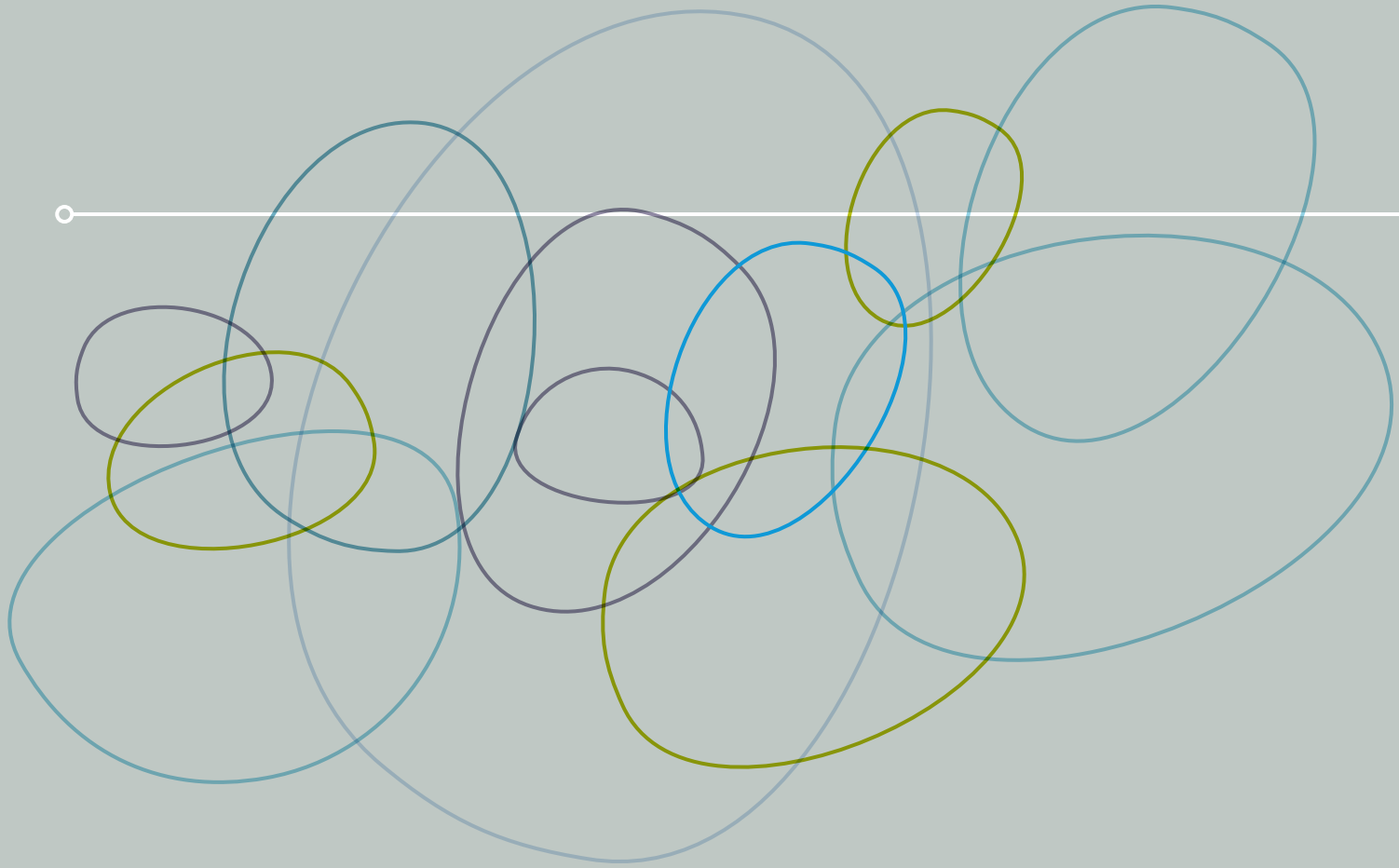
PRODUCT PIPELINE

No.1

REHABILITATION SYSTEMS FOR UPPER EXTREMITIES

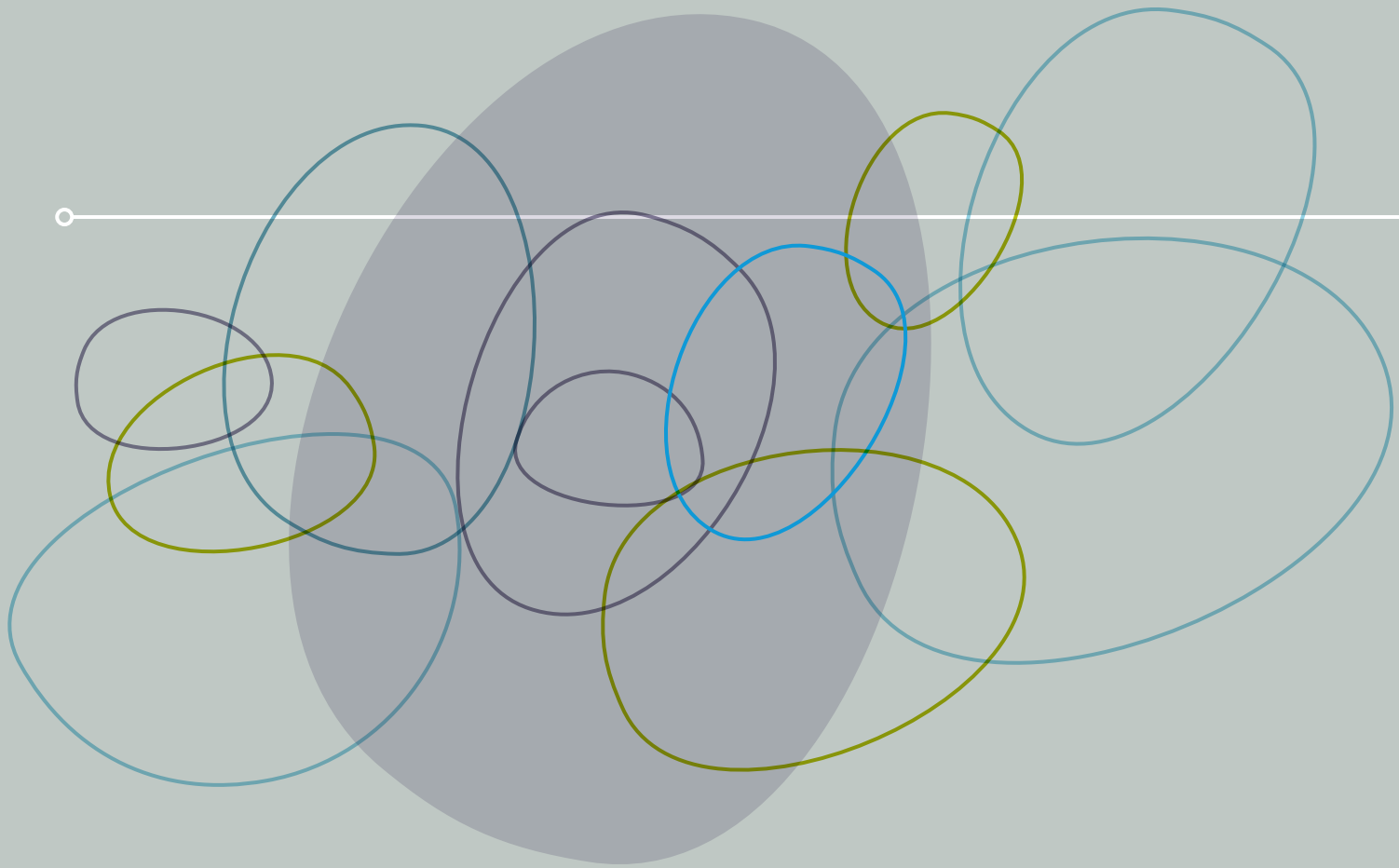
CURRENT DEVELOPMENT PHASE
In development

INDICATION / PROPERTIES
Accurate and affordable alternative communication technology



SCIENTIFIC TECHNOLOGICAL AGENTS

INDEX



RESEARCH
TECHNOLOGY
ORGANIZATIONS

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	BIOCHEMISTRY SURFACES	ELECTROMECHANICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	SURGICAL INSTRUMENTS AND CONSUMABLES
MONITORING DEVICES	X-RAYS	MICROBIOLOGY		REHABILITATION SYSTEMS	TELEHEALTH	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
SURGICAL INSTRUMENTS AND SYSTEMS	CT SCANNERS	MICROFLUIDICS			MOBILE HEALTH	
	MRI	MICROFABRICATION TECHNIQUES			CLOUD	

CEIT-IK4

www.ceit.es

IK4 Research Alliance

— CONTACT PERSON

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— INSTITUTION / HQ

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Gipuzkoa Technology Park
Pº Mikeletegi, 48
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Gipuzkoa

— CENTER / FACULTY 1

CEIT-IK4 IBAETA
Paseo de Manuel Lardizabal, 15
E20018 Donostia - San Sebastián
Gipuzkoa

— PERSONNEL (FTE)

15

— SCIENTIFIC PUBLICATIONS

29

— EPO & PCT PATENT APPLICATIONS

3

— DOCTORAL THESIS

17

— DESCRIPTION OF THE INSTITUTION

CEIT-IK4 has intensive activity in both Medical Devices and Digital Health.

In Medical Devices, the institution has proven experience in the development of integral solutions based on bioMEMS including all the required sample supply/handling, electronics and communication systems. Technology is offered as a tool for improving current diagnostics as well as for novel monitoring systems in the medical field. Targeted parameters cover a wide range: from molecular events to immunologic reactions, microbiology or cell and tissue engineering. The institution has also the capability of characterising the mechanical behavior of cells and tissues and its relation to different diseases.

In Digital Health, activity focuses on ambient assistant living and e-health solutions entailing competences sweeping from embedded system development to connectivity. Long range passive RFID sensing systems, wearable wireless devices, intelligent monitoring systems or support to active aging constitute the core of the work.

The Vision and Robotics group is focused on medical image processing and the design and construction of mechatronic tools that can help sugeons and/or physioterapists to improve their patient treatment protocols, this focus also includes low-cost home-care devices. The activity of the group started the research on the biomedical engineering about 2006, previously this group had activities on industrial applications as well. In the Vision and Robotics group is able to deal with the mechanics, electronics, control, programming, imaging software and simulation of the robotic systems.

CEIT-IK4 has also strong background in mechanical properties of biomaterials to design ad-hoc medical devices for tissue engineering or medical implants.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	BIOCHEMISTRY SURFACES	ELECTROMECHANICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	SURGICAL INSTRUMENTS AND CONSUMABLES
MONITORING DEVICES	X-RAYS	MICROBIOLOGY		REHABILITATION SYSTEMS	TELEHEALTH	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
SURGICAL INSTRUMENTS AND SYSTEMS	CT SCANNERS	MICROFLUIDICS			MOBILE HEALTH	
	MRI	MICROFABRICATION TECHNIQUES			CLOUD	

CEIT-IK4

www.ceit.es

R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES AND/OR DIGITAL HEALTH

No.1

BIODEVICES AND MEMS

Development of lab-on-a-chip devices, biosensors and/or bioMEMS for diagnosis and monitoring purposes, improving both, the sensitivity and the selectivity of the standard methods used nowadays. The scope of detection strategies covers from enzymatic sensors, electrochemical detection, immunomagnetic devices or impedimetric analyisis among others and target analytes can be as varied as DNA, enzimes, pathogens, bacteria, yeasts, biofilms or cells. Devices are supported with the use of microfluidics, where plastic and polymeric materials are integrated within the standard techniques of micro and nanofabrication in silicon, glass or ceramic substrates. Microfluidic devices include also cell analysis tools such as single-cell separation modules, 3D cell migration platforms or multipurpose microchambers for dynamic drug testing.

No.2

DATA ANALYSIS AND INFORMATION MANAGEMENT

Development of ambient assistant living and e-health solutions entailing competences sweeping from embedded system development to connectivity. Previous activity and ongoing projects deal with long range passive RFID sensing systems for biomedical applications, wearable wireless device for the observation and modelling of gait in Parkinson Disease patients, intelligent systems for monitoring neurodegenerative disease evolution through the employment of a wide range of wearable micro-sensors or adaptation and customizing of homes to promote active aging.

No.3

VISION AND ROBOTICS

Development of robotic assistant devices for surgery and rehabilitation. Regarding surgical applications, at this moment there are open projects on robotic devices for transpedicular fixation of vertebrae and maxillo-facial surgery. Regarding rehabilitation, the main projects are about an exoexqueleton for knee rehabilitation after accidents that reduce its mobility but without side effects on the cognitive skills, and home rehabilitation by means of serious games.

No.4

MECHANICAL ASSESSMENT

Measurement of the mechanical properties of cells and extracellular matrix using a combination of AFM and inmunofluorescence. Development of a 3D platform to study the effect of the mechanical properties of the microenvironment on cell behaviour. Evaluation of the mechanical properties of implants for regenerative medicine in the orthopedic field.

MAIN ALLIANCES

No.1

PARTNER NAME
Tecnun - Universidad de Navarra
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
To teach courses and to develop research projects

No.2

PARTNER NAME
IK4 Research Alliance
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Coordination of scientific and technological partnerships and drives the alliance to meets its goals as set out in its strategic plan

No.3

PARTNER NAME
European Bioengineering Alliance (EBA)
COUNTRY OF PARTNER'S HQ
Sweden, Germany, Spain
PURPUSE OF AGREEMNET W/PARTNER
To improve European cooperation in the Bioengineering field with a special focus on improving conditions for the elderly and to create change in the healthcare industry

No.4

PARTNER NAME
Innobasque (Basque Agency for Innovation)
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
To coordinate and stimulate innovation in the Basque Country, and to encourage entrepreneurial spirit and creativity

No.5

PARTNER NAME
Ikerbasque (Basque Science Foundation)
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
To reinforce the local system of science by attracting researchers with international experience

No.6

PARTNER NAME
Donostia Smart Energy (Cluster of Renewable Energies and Energy Efficiency)
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Economic development of the San Sebastian and the improvement of the life quality for its citizens

No.7

PARTNER NAME
Clínica Universidad de Navarra
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
R&D + Innovation projects with Clínica Universidad de Navarra

No.8

PARTNER NAME
Biodonostia and Hospital Universitario Donostia
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Biomedical Engineering projects

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY		BIOMEDICAL CONSUMABLES
MONITORING DEVICES	DIAGNOSTIC NUCLEAR IMAGE SYSTEMS (PET, SPECT) NANOMATERIALS AS CONTRAST AGENTS FOR IN VIVO IMAGING	BIOCHEMISTRY SURFACES MICROBIOLOGY MICROFLUIDICS IMMUNOCHEMISTRY GENOMIC & GENETIC DIAGNOSTICS	ELECTROCHEMICAL TECHNIQUES OPTICAL TECHNIQUES	IMPLANTS REHABILITATION SYSTEMS		NON-ACTIVE IMPLANTABLE DEVICES

CIDETEC-IK4

www.cidetec.es

cidetec
IK4 Research Alliance

— CONTACT PERSON

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— INSTITUTION / HQ

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Gipuzkoa

— PERSONNEL (FTE)

21

— SCIENTIFIC PUBLICATIONS

18

— EPO & PCT PATENT APPLICATIONS

5

— DOCTORAL THESIS

2

— SPIN-OFF CREATED

1

— DESCRIPTION OF THE INSTITUTION

IK4-CIDETEC is a member of IK4 Research Alliance, and expert in the generation and transfer of knowledge and technology in the fields of energy storage, surface engineering and nanomedicine.

CIDETEC Nanomedicine brings together all the capabilities and research activities in Medical devices and Pharmaceutical sector. The center develops cutting-edge technology in this field to transform it into advanced products. Four pillars support this activity:

1) A highly qualified team expert in technology transfer (66% of the researchers in the team are doctors); 2) Strategic collaborations that help us building the whole value chain for the development of products; 3) Differentiating facilities for the translation of nanomedicine; 4) Direct contact with the industry and clinicians to detect real needs.

600 m^2 labs are dedicated to translational research in the biomedical field. R&D laboratories are fully equipped for the production and characterisation of biomaterials and biosensors. These facilities include 165 m2 of a pilot plant dedicated to the manufacturing of investigational medicinal products and medical devices and operate under GMP.

In the field of Medical devices, the research activity focusses on: Development of electrochemical biosensors for health monitoring/ clinical diagnostics, nano and micro formulation for drug delivery and release of active ingredients and in vivo diagnosis, hydrogels for the development of medical devices, multifunctional bioactive coatings for medical devices.

Due to this activity, the center has published a number of scientific publications and is owner of 5 families of patents.

- Highly hydrophilic coatings for the reduction of wear. This technology is able to reduce un 80% the wear of polyethylene in a hip prosthesis.
- Self-healing dynamic hydrogels. The group has recently published a work where it is described the use of this material to regenerate mechanical properties of nucleous pulposus.
- Screen printed platform for electrochemical biosensors - Based on this technology and in collaboration with a Basque company the center has developed various biosensors for the biomedical and agro-food sector.
- Large-area pressure sensors based on plastic electronics that can be easily integrated into rehabilitation systems.
- Single chain polymer nanoparticles for drug delivery and imaging with very small size have a high diffusion capability.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY		BIOMEDICAL CONSUMABLES
MONITORING DEVICES	DIAGNOSTIC NUCLEAR IMAGE SYSTEMS (PET, SPECT) NANOMATERIALS AS CONTRAST AGENTS FOR IN VIVO IMAGING	BIOCHEMISTRY SURFACES MICROBIOLOGY MICROFLUIDICS IMMUNOCHEMISTRY GENOMIC & GENETIC DIAGNOSTICS	ELECTROCHEMICAL TECHNIQUES OPTICAL TECHNIQUES	IMPLANTS REHABILITATION SYSTEMS		NON-ACTIVE IMPLANTABLE DEVICES

CIDETEC-IK4

www.cidetec.es

cidetec
IK4 Research Alliance

— R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES AND/OR DIGITAL HEALTH

No.1

BIOMATERIALS UNIT

Synthesis and characterization of biomaterials. GMP manufacturing.

No.2

SENSOR UNIT

The Sensors Unit of IK4-CIDETEC is specialized in the design and development of low-cost and mass-manufacturable sensors and biosensors based on screen-printing technology for its application in health (disease diagnosis, monitoring and rehabilitation) and food industry (food safety and quality monitoring).

— SCIENTIFIC & TECHNOLOGICAL PLATFORMS

GMP PILOT PLANT

Pilot plant that will operate in campaign. It will have the capability for the production of lyiphilizates and liquids including aseptic filling.

IN-VITRO DIAGNOSTIC

MICROBIOLOGY
IMMUNOCHEMISTRY
BIOCHEMISTRY SURFACES
GENOMIC & GENETIC DIAGNOSTICS
LATERAL FLOW TEST, MOLECULAR DIAGNOSIS

BIOMEDICAL CONSUMABLES

IN VITRO COMPATIBILITY TEST

GAIKER-IK4

www.gaiker.es

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— INSTITUTION / HQ

GAIKER-IK4
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E48170 Zamudio
Bizkaia

— PERSONNEL (FTE)

14

— SCIENTIFIC PUBLICATIONS

17

— EPO & PCT PATENT APPLICATIONS

2

— DOCTORAL THESIS

3

— SPIN-OFF) CREATED

1

— DESCRIPTION OF THE INSTITUTION

GAIKER-IK4 is expert in biochemistry, molecular biology, microbiology, proteomics and develops technologies to detect biological targets (protein markers, microorganisms, etc.) based on recognised biological mechanisms (biosensors) for applications in human health.

GAIKER-IK4 adapts methods such as PCR and its variants (RT-qPCR, NASBA, HRM, etc.) to detect specific analytes. With respect to technologies based on antibodies, its work ranges from obtaining the antigen and developing the antibody to immunochemical tools like ELISA, immunofluorescence and Immuno-qPCR.

GAIKER-IK4 also works on their immobilisation on different kinds of surfaces (chips, particles, etc.) for their subsequent application in biosensors. GAIKER-IK4 adapts these biological tests to portable/ miniaturised systems, such as immunochromatographic stripes and systems of the Point-of-Care or Point-of-Test type for their use as analytical tools.

In other R&D line, GAIKER-IK4 works with cells from multiple organs and numerous species and can therefore reproduce in the laboratory fast and reliable predictive systems to study the behaviour of drugs, cosmetics, food ingredients, nanoparticles and any product likely to have an effect on human health. GAIKER-IK4 is expert in evaluating toxicity and effectiveness in cell systems and tissue (ex vivo). GAIKER-IK4 undertakes customised studies of the mechanisms of action of an active substance and studies based on conventional protocols according to international guidelines in the field of toxicity and genotoxicity.

GAIKER-IK4 also evaluates and predicts the pharmakinetic behaviour of in vitro systems: absorption, metabolism, drug interaction and protein binding.

GAIKER-IK4 develops its in vitro activity under the Good Laboratory Practices (GLP) certificate granted by the Ministry of Health and Social Policy.

IN-VITRO DIAGNOSTIC

MICROBIOLOGY
IMMUNOCHEMISTRY
BIOCHEMISTRY SURFACES
GENOMIC & GENETIC DIAGNOSTICS
LATERAL FLOW TEST, MOLECULAR DIAGNOSIS

BIOMEDICAL CONSUMABLES

IN VITRO COMPATIBILITY TEST

GAIKER-IK4

www.gaiker.es

R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

BIODETECTION TECHNOLOGIES

Development of technologies to detect biological targets (protein markers, microorganisms, etc.) based on recognised biological mechanisms for applications in human health and adapt these biological tests to portable systems, such as lateral-flow stripes and Point-of-Care Test for their use as analytical tools.

No.2

DEVELOPMENT OF NOVEL IN VITRO-BASED TECHNOLOGIES TO ASSIST PRODUCT DEVELOPMENT

Study the behaviour of medical components (nanoparticles, materials, drugs, etc) with cells from multiple organs and numerous species (in vitro and ex vivo). In vitro compatibility test. Customised studies and studies based on conventional protocols according to international guidelines in the field of toxicity and genotoxicity.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

IVTIP European in vitro testing industrial platform
A platform founded in 1993. Currently it comprises 46 companies from different sectors (assay developers, technology providers, chemical, pharmaceutical and cosmetics companies), with significant in vitro testing activities.

Platform 2

European Technology Platform for NanoMedicine
An initiative led by industry and set up together with the European Commission is addressing the application of nanotechnology to achieve breakthroughs in healthcare.

Platform 3

NanoSafety Cluster
The EU NanoSafety Cluster is an initiative of the European Commission Directorate-General for Research and Innovation (DG RTD) to maximise the synergies between European-level projects addressing the safety of materials and technologies enabled by the use of nanoparticles. The studied aspects include toxicology, ecotoxicology, exposure assessment, mechanisms of interaction, risk assessment and standardisation.

Platform 4

European Technology Platform for NanoMedicine
The ETP Nanomedicine, an initiative led by industry and set up together with the European Commission is addressing the application of nanotechnology to achieve breakthroughs in healthcare.

Platform 5

EURL-ECVAM
Group of laboratories for the validation of alternative methodologies within the European Union.

Platform 6

ASEBIO
Asociación Española de Bioempresas

MAIN ALLIANCES

No.1

PARTNER NAME
CICbioGUNE
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Development of biodetection technologies for health applications

No.2

PARTNER NAME
CICbiomaGUNE
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Development of biodetection technologies for health applications

ELECTROMEDICAL DEVICES	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
MONITORING DEVICES SURGICAL INSTRUMENTS AND SYSTEMS	BIOCHEMISTRY SURFACES MICROFLUIDICS MICROFABRICATION TECHNIQUES	ELECTROMECHANICAL TECHNIQUES ELECTROCHEMICAL TECHNIQUES OPTICAL TECHNIQUES	REHABILITATION SYSTEMS IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS TELEHEALTH MOBILE HEALTH INTEROPERABILITY CLOUD	SURGICAL INSTRUMENTS AND CONSUMABLES OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES

IK4-TEKNIKER

www.tekniker.es

IK4 TEKNIKER
Research Alliance

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— PERSONNEL (FTE)

15

— SCIENTIFIC PUBLICATIONS

30

— EPO & PCT PATENT APPLICATIONS

4

— DOCTORAL THESIS

3

— DESCRIPTION OF THE INSTITUTION

IK4-TEKNIKER is a technological center integrated by people with vocation and commitment to boost the innovative capacity of its customers and increase their technological capital to improve their competitiveness in a sustainable way, through the generation and application of scientific-technological knowledge.

IK4-TEKNIKER provides a multidisciplinary approach that allows it to support its customers and collaborators in the development of partial solutions as well as complete products.

IK4-TEKNIKER's offer for the biomedical and health care sector is grouped along the following lines:

- Identification and quantification of biomarkers.
- Tissue engineering.
- Medical devices manufactured by microinjection.
- Equipment for the bio-industry.
- eHealth.
- Rehabilitation.
- Assisted living.

ELECTROMEDICAL DEVICES	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
MONITORING DEVICES	BIOCHEMISTRY SURFACES	ELECTROMECHANICAL TECHNIQUES	REHABILITATION SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	SURGICAL INSTRUMENTS AND CONSUMABLES
SURGICAL INSTRUMENTS AND SYSTEMS	MICROFLUIDICS	ELECTROCHEMICAL TECHNIQUES	IMPLANTS	TELEHEALTH	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
	MICROFABRICATION TECHNIQUES	OPTICAL TECHNIQUES		MOBILE HEALTH	
				INTEROPERABILITY	
				CLOUD	

IK4-TEKNIKER

www.tekniker.es

IK4 TEKNIKER
Research Alliance

R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1
MEDICAL DEVICES FOR DIAGNOSTIC

Easy-to-use, low-cost devices touse at home.
Rapid detection in low concentrations using micro and nanotechnology capabilities.
Capabilities for multiplexed detection made-to-measure for specific biomarkers.

No.2
BIOMAKERS DETECTION TECHNOLOGIES

For pharmaceutical and biotechnological companies interested in the control and monitoring of biomarkers in body fluids (liquid biopsies) for personalised medicine.

No.3
SURFACE ENGINEERING FOR HEALTH

For companies developing cell therapies and those requiring biofunctional surfaces such as implant manufacturers.
Development of 2D and 3D scaffolds in a variety of materials.
Geometric specific design for cell differentiation and proliferation.
Development of coatings and/or textures for biofunctional surfaces for accelerating osseointegration or biocide layers with antibacterial activity.

No.4
EQUIPMENT FOR BIO INDUSTRY

Drawing up specifications for converting laboratory processes into repeatable and reproducible ones.
Design and development of equipment under Good Manufacturing Practices (GMPs) use.
Customised solutions based on the integration of skills and know-how in mechatronics, control, robotics and automation
Development of health products in biocompatible and/or biodegradable polymers and manufactured by microinjection.
Manufacture of prototypes for feasibility studies.
Injection simulation to guarantee filling of cavities.
Design, manufacture and the setting up of moulds.
Manufacture of pre-series prior to market launch.
Monitoring of process and product for zero-defect manufacturing.

No.5
eHEALTH

Telemedicine systems (self-management support, tele-monitoring, adapted to the particular needs of patients, mainly chronic ones and the elderly, that enable them to become more involved in the self-management of their disease.
Intelligent decision-support systems, integrating technologies such as the processing of natural language, semantic technologies and automatic learning.

No.6
ASSISTED LIVING

Intelligent environments and tele-assistance integrating systems that enable collecting information from users and adapting this to their needs.
The design of technical solutions to compensate for deficiencies or disabilities that limit the mobility of persons such as the NOA smart wheelchair.
Robot assistants that incorporate capacities for autonomous navigation in spaces for persons.

No.7
REHABILITATION

Development of robotic solution supporting evaluation and rehabilitation process.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

ITEMAS
Medical Technology Innovation Platform

Platform 2

HISPAROB
HispaRob aims to promote and encourage initiatives aimed at creating robotic products and services marketable and useful to society.
It involves several working groups targetting relevant sectors such as the Medical Robotics and Assistance one. This group includes:
(1) Robots for rehabilitation: as support in the recovery processes;
(2) Clinical robots: robots that are used as a support in the treatment, intervention and care processes;
(3) Assistance robot to provide assistance to both caregivers and patients in hospitals, specialised centres or at home and (4) logistics robots in the socio-assistance sector.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH
SURGICAL INSTRUMENTS AND SYSTEMS MONITORING DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	GENOMIC & GENETIC DIAGNOSTICS SOFTWARE AND AI FOR GENETICS AND OMICS, IMAGE AND SIGNAL ANALYSIS FOR IN-VITRO DIAGNOSTICS, TRANSLATIONAL RESEARCH PLATFORMS AND BIOBANKS	OTHER	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS REHABILITATION SYSTEMS IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS MOBILE HEALTH TELEHEALTH CLINICAL DECISION SUPPORT SYSTEMS, VIRTUAL HEALTH COACH, BIG DATA FOR DECISION SUPPORT, PUBLIC HEALTH POLICIES AND PERSONALIZED MEDICINE, PREDICTIVE MODELING, EXPLOITATION OF ELECTRONIC HEALTH RECORDS....

VICOMTECH-IK4

www.vicomtech.org

vicomtech
IK4 Research Alliance

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DESCRIPTION OF THE INSTITUTION

Research and development of imaging technologies, visualization, intelligent data computing and analysis, and human-machine interaction for the clinical, health, biotechnology and pharmaceutical sectors.

The department aims to be a source of innovative technological solutions in the medical sector in general, that allow facing the challenges of medicine in the XXI century, regarding demographic change and population ageing, efficient chronic disease management, arrival of personalised medicine, and sself-management of health and disease. This department is also a source of developments focused on supporting and accelerating biomedical research, as well as biotechnological and pharmaceutical industries.

The department's activity is summarized in three main technology lines:

a) Biomedical Image Analysis and Visualization.

b) eHealth/mHealth and Bioinformatics.

c) Intervention, Rehabilitation and Independent Living Support Systems.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH
SURGICAL INSTRUMENTS AND SYSTEMS MONITORING DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	GENOMIC & GENETIC DIAGNOSTICS SOFTWARE AND AI FOR GENETICS AND OMICS, IMAGE AND SIGNAL ANALYSIS FOR IN-VITRO DIAGNOSTICS, TRANSLATIONAL RESEARCH PLATFORMS AND BIOBANKS	OTHER	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS REHABILITATION SYSTEMS IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS MOBILE HEALTH TELEHEALTH CLINICAL DECISION SUPPORT SYSTEMS, VIRTUAL HEALTH COACH, BIG DATA FOR DECISION SUPPORT, PUBLIC HEALTH POLICIES AND PERSONALIZED MEDICINE, PREDICTIVE MODELING, EXPLOITATION OF ELECTRONIC HEALTH RECORDS....

VICOMTECH-IK4

www.vicomtech.org

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IK4 Research Alliance

— R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

IMAGE AND VISUALIZATION LINE

The department has years of experience in the development of computer-aided diagnosis and intervention planning based on medical image analysis.

Medical image analysis techniques enable the evaluation of the efficiency of a therapy, which is very helpful. Regarding surgery, Vicomtech develops surgery planning systems based on the extraction of relevant information from multidimensional anatomical or functional images, 3D model generation and virtual surgical tools. There are other applications such as population studies or clinical trials based on quantitative imaging.

Another basic research line is the development of support systems for the design and development of implants or personalised implantable devices based on information extracted from medical imaging, with application in dental or maxillofacial surgery, orthopaedic surgery, intraocular devices, etc.

In the field of biotechnology Vicomtech develops advanced imaging solutions for in-vitro and high-throughput screening systems and automatic classification and quantification.

No.2

eHEALTH LINE

The eHealth emcopmpasses all clinical and researach applications for collection, harmonisation, analysis and exploitation of biomedical data of different natures. Its scenarios include telemedicie applications, remote monitoring for cronic patients, active aging and self-health management. Its technologies include data capture, standardisation, management and intelligent analysis, performed on heterogeneous data at large scales, in real time, applying Big Data and mobility (mHealth) paradygms.

No.3

BIG DATA & PERSONALISED MEDICINE LINE

Harmonization, integration and exploitation of heterogeneous large data sets.

No.4

HUMAN-COMPUTER INTERACTION LINE

The Human-Computer Interaction (HCI) line focuses on the development of technological solutions for health applications that require real-time interaction with hardware devices. Its main sectors include the computer-assisted surgery, developing planning and guidance applications employing advanced image analysis, robotics, simulation and AI technologies.

— SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

Medical Imaging Software Toolkit (MIST)
Software Development Kit (SDK) for efficient development of medical imaging applications.

Platform 2

eHEALTH SDK
eHealth SDK is a toolkit for rapid-prototyping and fast development for e-Health data analysis and decision support systems.

Applications include: a) Health data analysis & predictive modelling, b) Clinical knowledge extraction and exploitation, c) Guideline-based and Experience-base Clinical Decision Support, d) Smart Electronic Health Record systems, e) Patient advanced stratification, f) Data curation, and g) Patient empowerment & personalized guidance

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	BIOCHEMISTRY SURFACES	IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	SURGICAL INSTRUMENTS AND CONSUMABLES
MONITORING DEVICES		MICROFLUIDICS	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	TELEHEALTH	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
SURGICAL INSTRUMENTS AND SYSTEMS		IMMUNOCHEMISTRY	REHABILITATION SYSTEMS	MOBILE HEALTH	
		GENOMIC & GENETIC			
		LAB-ON-A-CHIP			

TECNALIA

www.tecnalia.com

tecnalia
Corporación Tecnológica

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Gipuzkoa

— CENTER / FACULTY 2

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Gipuzkoa

— CENTER / FACULTY 3

TECNALIA DIVISION SALUD
Geldo, Edificio 700
E48160 Derio

— CENTER / FACULTY 4

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E01510 Miñano

— DESCRIPTION OF THE INSTITUTION

TECNALIA is one the leading applied research and technology centers in Europe becoming a strategic transformation agent for the industry supporting the competitiveness and the growth of the companies with R&D&i and advanced technological services.
TECNALIA Health research and innovation program in the fields of neurorehabilitation, food and health, biomaterials and medical robotics creates solutions which significantly improve the quality of life. The research program a clear intellectual property policy to transfer the results into competitive products in the market.
The Food and Health department develops novel food ingredients and healthier foodstuffs to provide answer the challenges of the Food and beverages industry by using cutting-edge technologies such as biotechnology and encapsulation.
The Biomaterials department develops advanced biomaterials for biofunctional implants and regenerative medicine, particularly in bone and dermis, as well as new compact in-vitro diagnostic and lab-on-a-chip technology systems.
The Neuro-Engineering department designs and develops advanced medical devices to treat neurological diseases to enable the elderly and disabled as well as the chronically ill or injured persons to compensate or accelerate the recovery of their lost functions (such as mobility) and facilitate personal autonomy while improving their quality of life.
The Medical Robotics department designs and develops robotic devices that assist the surgeon in surgical procedures, and wearable robotics, intelligent exoskeletons and prosthesis in order to restore mobility and functionality of upper and lower extremities.
Internationally recognized, TECNALIA Health has a world class applied research group in Functional Electrical Stimulation. With more than 10 years of experience, the group has developed proprietary patented technologies successfully transferred to several products in the market. The international multidisciplinary research team from all departments is composed of 70 researchers with expertise in the following fields: Biomechanics and human motor control; Electrotherapy (functional electrical stimulation, EMG and EEG technology); Mechatronics and Robotic technology; Prostheses and orthopaedic devices for rehabilitation; Wearable and haptic biofeedback systems; Design, organisation, co-ordination and management of clinical trials in the field of (non-invasive and implantable) neural interfaces; Biomaterials synthesis and processing; Materials surface modification, characterization and manufacture; Hybrid materials systems and biomedical devices; Biological assessment and CE Marking technological services; Biotechnological processes; Physic-chemical processes, purification and analytical techniques; Micro/Nano-encapsulation; Films and coatings.
Equipment and Laboratories: Biomechanical laboratory for the study of the human motion; Physiological signal analysis laboratory for for biopotential measurements and physological parameters; HomeLab for usuability testing; Cell culture laboratory with a fully equipped cleanroom for biological testing; Biotechnology and microbiology centre for biological testing essays; Ingredients laboratory fully equipped to obtain ingredients and/or bioactive compounds; Micro- & nano-encapsulation laboratory with advanced equipment to carry out the stabilization and protection of active ingredients and the immobilization of microorganisms for fermentative processes; Preservation and packaging laboratory for new foodstuff essays; Oneology laboratory for specific studies on wine product; Bioprocess and microbiology laboratory.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC		ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES MONITORING DEVICES SURGICAL INSTRUMENTS AND SYSTEMS	MEDICAL IMAGE ANALYSIS SOFTWARE	BIOCHEMISTRY SURFACES MICROFLUIDICS IMMUNOCHEMISTRY GENOMIC & GENETIC LAB-ON-A-CHIP		IMPLANTS ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS REHABILITATION SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS TELEHEALTH MOBILE HEALTH	SURGICAL INSTRUMENTS AND CONSUMABLES OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES

TECNALIA

www.tecnalia.com

— R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

NEUROENGINEERING

- Functional electrical stimulation. Design and development selective transcutaneous FES standalone devices or in combination with wearable robotic devices. Development of multi-pad electrodes.
- Upper limb rehabilitation robotics. Design and development of actuated and non-actuated robotic devices for the rehabilitation process, therapy, assessment and assistance.
- NeuroEngineering applied to rehabilitation by developing implantable devices, brain-machine interfaces and neuroprosthesis.

No.2

BIOMATERIALS

- Synthesis, processing and characterization of biomaterials. Main focus is in polymer synthesis and processing of nano to macro porous PEEK, UHMWPE, as well as Polymerisation and crosslinking of hydrogel polymers used in drug delivery.
- Biosurfaces modification and characterization. Main focus is in surface modification and functionalization of metallic and polymeric surfaces, where biofilms of antibiotics, biopolymers and inorganic antimicrobial materials coatings are developed.
- Biosensors and hybrid devices. Main focus is in transdermal drug delivery, electrodes for biomedical sensing and stimulation, system for electroporation HV Stimulation system and also functionalized biosensor surfaces and their integration to lab-on-a-chip concepts.

No.3

MEDICAL ROBOTICS

- Wearable robotics, intelligent exoskeletons and prosthesis in order to restore mobility and functionality of upper and lower extremities.
- Robotic devices that assist the surgeon in surgical procedures.

No.4

BIOLOGICAL ASSESSMENT SERVICES FOR CERTIFICATION

- Biocompatibility tests, biological evaluation and other services offered to companies for supporting CE marking in medical products.
- Biocompatibility and biomaterials characterization ISO-10993 essays.
- Micro-biology essays.
- Cellular essays.
- Nano-safety essays.

No.5

MEDICAL IMAGING

Machine-learning visual search platform for the medical community.

No.6

GENETIC DIAGNOSTIC SERVICES

New genetic diagnostics services development in the fields of hereditary syndromes, neoplastic diseases and pre-implantation genetic diagnosis.

— SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

ELECTRICAL STIMULATION PLATFORM
Functional electrical stimulation and assessment platform based on multi-pad electrodes and proprietary patented technologies.

Platform 2

MEDICAL ROBOTICS PLATFORM
Modular robotic platform for minimally invasive surgery applications.

Platform 3

BRAIN COMPUTER INTERFACES PLATFORM
Intracranial rehabilitation platform with real-time processing and decoding motor cortex signals.

— MAIN ALLIANCES

No.1

PARTNER NAME
IFESS and IISART societies
COUNTRY OF PARTNER'S HQ
International association
PURPUSE OF AGREEMNET W/PARTNER
Lead FES and advanced rehabilitation technologies networking and education.

No.2

PARTNER NAME
Imperial College London
COUNTRY OF PARTNER'S HQ
United kingdom
PURPUSE OF AGREEMNET W/PARTNER
Generate new knowledge and technologies in HMI and Musculoskeletal research.

No.3

PARTNER NAME
CEA LIST
COUNTRY OF PARTNER'S HQ
France
PURPUSE OF AGREEMNET W/PARTNER
Design and development of wearable robots and exoskeletons.

No.4

PARTNER NAME
Belgrade Unversity
COUNTRY OF PARTNER'S HQ
Serbia
PURPUSE OF AGREEMNET W/PARTNER
Acceleration of clinical pilots of FES and robotic assets development.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC		ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	BIOCHEMISTRY SURFACES		IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	SURGICAL INSTRUMENTS AND CONSUMABLES
MONITORING DEVICES		MICROFLUIDICS		ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	TELEHEALTH	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
SURGICAL INSTRUMENTS AND SYSTEMS		IMMUNOCHEMISTRY		REHABILITATION SYSTEMS	MOBILE HEALTH	
		GENOMIC & GENETIC				
		LAB-ON-A-CHIP				

TECNALIA

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tecnalia
Corporación Tecnológica

No.5

PARTNER NAME
University of Tübingen
COUNTRY OF PARTNER'S HQ
Germany
PURPUSE OF AGREEMNET W/PARTNER
Design and development of neuroprosthetics for cognitive or motor impairments restoration.

No.6

PARTNER NAME
Centro de Cirugía de Mínima Invasión Jesús Usón
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Development and validation of medical solutions.

No.7

PARTNER NAME
University of California-Berkeley
COUNTRY OF PARTNER'S HQ
USA
PURPUSE OF AGREEMNET W/PARTNER
New technologies development in Brain-machine interfaces and Neuroprosthetics.

No.8

PARTNER NAME
University of Toronto
COUNTRY OF PARTNER'S HQ
Canada
PURPUSE OF AGREEMNET W/PARTNER
Design and development of neurorehabilitation systems.

No.9

PARTNER NAME
CIC Biomagune
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
CoDevelopment of medical technologies for IVD.

No.10

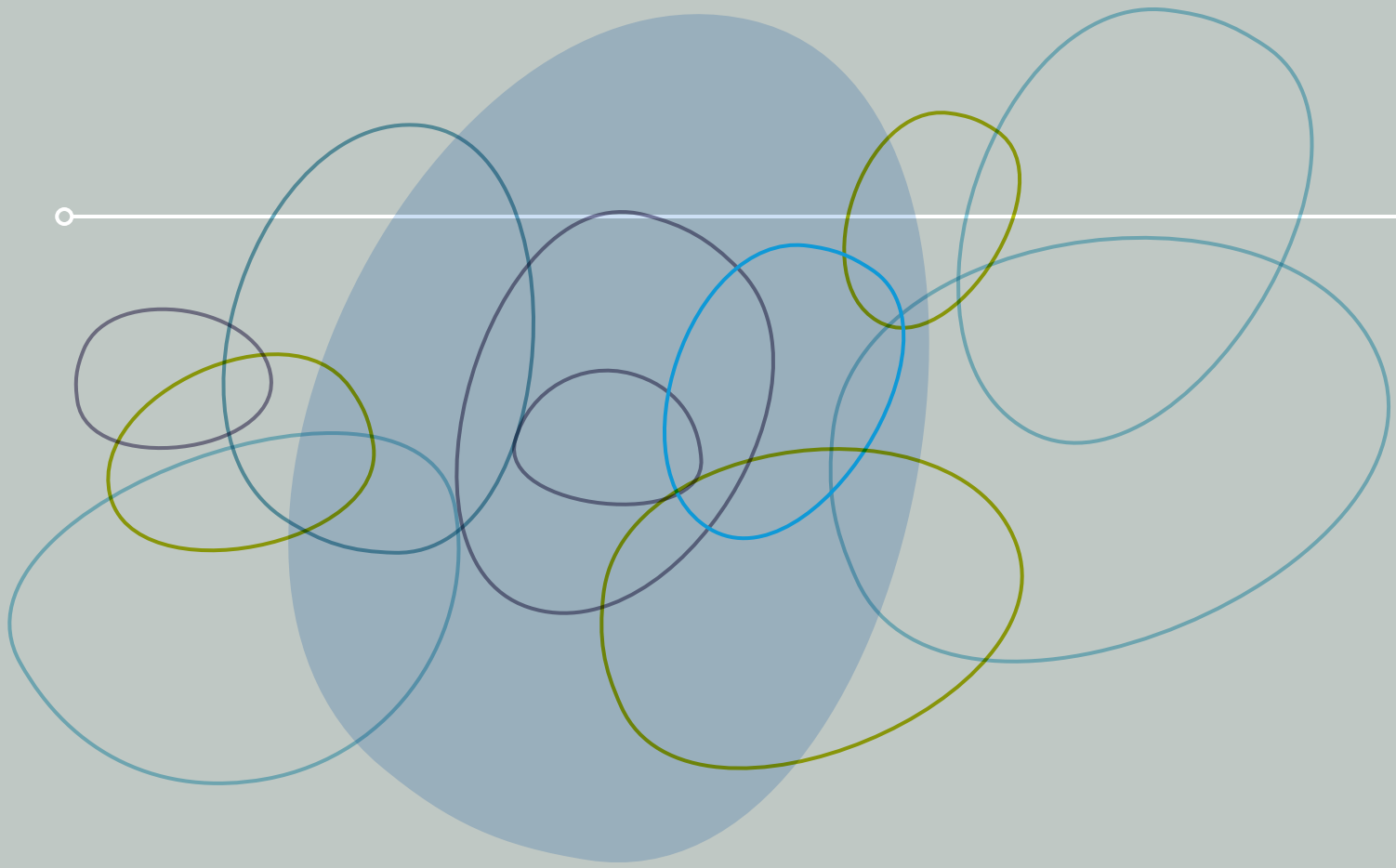
PARTNER NAME
Biodonostia
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Clinical trials medical devices.

No.11

PARTNER NAME
Biocruces
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Clinical trials medical devices.

No.12

PARTNER NAME
Aita Menni Hospital
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Clinical trials rehabilitation systems.



UNIVERSITIES

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH
MONITORING DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	MICROFLUIDICS	ELECTROMECHANICAL TECHNIQUES	IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS
CRITICAL CARE DEVICES AND SYSTEMS		MICROFABRICATION TECHNIQUES	OPTICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	TELEHEALTH
SURGICAL INSTRUMENTS AND SYSTEMS		BIOCHEMISTRY SURFACES		REHABILITATION SYSTEMS	MOBILE HEALTH
					INTEROPERABILITY
					CLOUD
					DATA ANALYTICS

MONDRAGON UNIBERTSITATEA

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— PERSONNEL (FTE)

15

— SCIENTIFIC PUBLICATIONS

25

— EPO & PCT PATENT APPLICATIONS

3

— DOCTORAL THESIS

6

— DESCRIPTION OF THE INSTITUTION

Mondragon Goi Eskola Politeknikoa JMA S. Coop. (Mondragon University's Faculty of Engineering) is a cooperative integrated in the Mondragon Cooperative Corporation, a business group composed of more than 250 companies and entities. The Faculty of Engineering has a relevant role in the corporation as research partner of the companies in the group.

Mondragon University has a socially-orientated initiative and vocation, and was declared a non-profit University of common public interest. Since its creation, it has been committed to the high quality of the education and practical orientation of its courses. Through its association with MONDRAGON Corporation, the university is able to maintain close ties with the business world, enabling its students to have contact with the real working world right from the start of their studies. At present, the University has around 3100 students and offers a total of 22 Bachelor's Degree courses and 16 Master's Degrees.

Currently, the University offers a Bachelor's Degree in Biomedical Engineering and a Master in Biomedical Technologies.

Mondragon University has been involved in several medical oriented research projects financed by public national and international institutions and by private corporations. The Faculty groups together its research teams in five different research groups, having manufacturing, materials sciences, informatics and electronics as main research areas.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH
MONITORING DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	MICROFLUIDICS	ELECTROMECHANICAL TECHNIQUES	IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS
CRITICAL CARE DEVICES AND SYSTEMS		MICROFABRICATION TECHNIQUES	OPTICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	TELEHEALTH
SURGICAL INSTRUMENTS AND SYSTEMS		BIOCHEMISTRY SURFACES		REHABILITATION SYSTEMS	MOBILE HEALTH
					INTEROPERABILITY
					CLOUD
					DATA ANALYTICS

MONDRAGON UNIBERTSITATEA

www.mondragon.edu

MONDRAGON UNIBERTSITATEA

R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

MECHANICAL BEHAVIOUR AND PRODUCT DESIGN

Advanced Multiphysics Modeling.
Thermofluidic, aerodynamics and complex fluids analysis.
Advanced surface characterization through 3D topography.

No.2

MATERIALS SCIENCE, TECHNOLOGY AND MANUFACTURING PROCESSES

Generation of knowledge about medical machining techniques.
Mechanical and thermo-physical properties characterization of materials.
Advanced Multiphysics Modeling.

No.3

EMBEDDED SYSTEMS, INTELLIGENT SYSTEMS FOR INDUSTRIAL SYSTEMS AND INFORMATION SYSTEMS

Robotics and automation
Embedded system and Distributed Real Time Systems development.
Data Analytics to help decision-making.
Medical signal and image processing for classification and characterization.

No.4

ORGANIZATION AND INDUSTRIAL MANAGEMENT

Medical devices certification
Resources and supplies management

No.3

ELECTRIC ENERGY

Energy Harvesting
Energy Storage
Power Electronics for Medical applications
Sensor Signal Conditioners

MAIN ALLIANCES

No.1

PARTNER NAME
Osakidetza
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Hosting the students of the degree and master in Biomedical Engineering in their visits to the hospitals, provide professional collaborators who collaborate in teaching, provide professional collaborators who give presentations, seminars, courses..., welcoming and tutoring students who are doing a project and need help from health professionals.

No.2

PARTNER NAME
Mondragon Corporation
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
This alliance offers MU direct contact with several companies in the health sector (KIRO Grifols, Bexen Medical, Bexen Cardio, Cikautxo...).

No.3

PARTNER NAME
Hospital Virtual de Valdecilla
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Hosting the studentes of the degree and master in Biomedical Engineering.

No.4

PARTNER NAME
Universidad de Vic
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Hosting the studentes of the degree and master in Biomedical Engineering.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE SYSTEMS: X-RAYS, CT SCANNERS, ULTRASOUND, MRI, DIAGNOSTIC NUCLEAR IMAGE SYSTEMS (PET, SPECT)	BIOCHEMISTRY OF SURFACES	ELECTROMECHANICAL TECHNIQUES	IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	NON-ACTIVE IMPLANTABLE DEVICES
MONITORING DEVICES	MEDICAL IMAGE ANALYSIS SOFTWARE	MICROBIOLOGY	ELECTROCHEMICAL TECHNIQUES	TRAUMA FIXATION DEVICES	TELEHEALTH	SURGICAL INSTRUMENTS AND CONSUMABLES
SURGICAL INSTRUMENTS AND SYSTEMS		MICROFLUIDICS	OPTICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	MOBILE HEALTH	ADVANCED WOUND MANAGEMENT
CRITICAL CARE DEVICES AND SYSTEMS		MICROFABRICATION TECHNIQUES		REHABILITATION SYSTEMS	INTEROPERABILITY	
		IMMUNOCHEMISTRY			CLOUD	
		MOLECULAR DIAGNOSIS (GENOMICS)				

University of the Basque Country UPV/EHU

www.ehu.eus

Universidad del País Vasco — Euskal Herriko Unibertsitatea

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— **CENTER / FACULTY 1**
FACULTY OF MEDICINE AND NURSING
Bº Sarriena, s/n
E48940 Leioa
Bizkaia

— **CENTER / FACULTY 2**
FACULTY OF PHARMACY
Paseo de la Universidad, 7
E01006 Vitoria-Gazteiz
Araba

— **CENTER / FACULTY 3**
FACULTY OF SCIENCE AND TECHNOLOGY
Bº Sarriena, s/n
E48940 Leioa
Bizkaia

— **CENTER / FACULTY 4**
FACULTY OF CHEMISTRY
Pº Manuel Lardizabal, 1
E20018 Donostia - San Sebastián
Gipuzkoa

— **CENTER / FACULTY 5**
SCHOOL OF ENGINEERING OF BILBAO INGENIERO TORRES
Quevedo Plaza, 1
E48013 Bilbao
Bizkaia

— **CENTER / FACULTY 6**
SCHOOL OF ENGINEERING OF GIPUZKOA
Plaza de Europa, 1
E20018 Donostia - San Sebastián
Gipuzkoa

— **CENTER / FACULTY 7**
COMPUTER SCIENCE FACULTY
Pº Manuel Lardizabal, 1
E20018 Donostia - San Sebastián
Gipuzkoa

— **CENTER / FACULTY 8**
FACULTY OF EDUCATION AND SPORT
Portal de Lasarte, 71
E01007 Vitoria-Gazteiz
Araba

— **CENTER / FACULTY 9**
FACULTY OF SOCIAL SCIENCES AND COMMUNICATION
Bº Sarriena, s/n
E48940 Leioa
Bizkaia

— **CENTER / FACULTY 10**
LAW SCHOOL
Pº Manuel Lardizabal, 2
E20018 Donostia - San Sebastián
Gipuzkoa

— **DESCRIPTION OF THE INSTITUTION**

THE UNIVERSITY OF THE BASQUE COUNTRY is a science and technology oriented generalist university. The scientific performance of our more than 3.000 faculty members and 2.500 researchers provides around 70% of the contribution of our region to the international science community. Compromising between being highly capillary in all areas of science and strong threaded in Life Sciences, Energy and Industry 4.0, the main areas of the regional smart specialization strategy (RIS3), the structure of faculties, departments, research groups and scientists constitutes an open gateway through which the Basque society guarantees a fast track and qualified access to each and every chapter of the universal knowledge.

Regarding Medical Devices and Digital Health, UPV/EHU combines higher education, research activities, open access to research infrastructures, clinical services, and business support instruments. Among them, the most remarkable ones are:

• Research groups in:
- Health sciences addressing the nature, biology, physics and chemistry for the diagnosis, treatment and rehabilitation of patients.
- Engineering technologies and materials for the design and implementation of medical devices.
- Data and information sciences applied to either clinical practice or health management.
- The humanistic individual and collective dimensions of health; psychology, sociology, ethics and legal implications of health.

• SGIKER, a network of Advanced Research Facilities born with the vocation to respond and provide support for research, being available to the university itself, other Public Institutions and Business.

• The Odontology Clinic, mixing education and clinical assistance services where the students of UPV/EHU acquire the clinical experience on real life situations under the supervision of professors.

• Its 7 business incubators for spin-off companies and the Scientific Park located in Leioa that offer to science and technology based companies the infrastructure for their development and proximity to our labs as a differential added value.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	MEDICAL IMAGE SYSTEMS: X-RAYS, CT SCANNERS, ULTRASOUND, MRI, DIAGNOSTIC NUCLEAR IMAGE SYSTEMS (PET, SPECT)	BIOCHEMISTRY OF SURFACES	ELECTROMECHANICAL TECHNIQUES	IMPLANTS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS	NON-ACTIVE IMPLANTABLE DEVICES
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CRITICAL CARE DEVICES AND SYSTEMS		MICROFABRICATION TECHNIQUES		REHABILITATION SYSTEMS	INTEROPERABILITY	
		IMMUNOCHEMISTRY			CLOUD	
		MOLECULAR DIAGNOSIS (GENOMICS)				

University of the Basque Country UPV/EHU

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Universidad del País Vasco · Euskal Herriko Unibertsitatea

R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1
"BIOINFOMATICS" RESEARCH GROUP
Algebraic bioinformatics and computational methods applied to medicine
Software for the design of vaccines that respond also to the potential mutations of targeted viruses

No.2
"SUSTAINABLE CATHALYSIS: METHODS AND COMPUTATIONAL" RESEARCH GROUP
Biochemistry of surfaces
Computational analysis of organo-metallic interactions
Osteoinductive surface treatments for metallic and polymer implants

No.3
"EGOKITUZ" RESEARCH GROUP
Mobile devices for health care
Orthopedic robotic systems
Information systems for healthcare of the disabled
Emotional computation

No.4
"ERABAKI" RESEARCH GROUP
Information systems for healthcare
eHealth
Software systems for medical practitioners
Management of clinical guides

No.5
"ALDAPA" RESEARCH GROUP
Mobile Health
eHealth
Automatic detection and treatment physiological signals for medical devices (Stress states detection
Brain-computer interfaces)

No.6
"GMT - MATERIALS AND TECHNOLOGIES" RESEARCH GROUP
Biomaterials. Surface treatments for surgical instrument and consumables. Advanced wound management materials

No.7
"BIOFISIKA" - BIOPHYSICS INSTITUTE
Systems biophysics and computational biology
Bionanotechnology as a tool for drug screening
Bionanotechnology as a tool for drug delivery
Design of novel diagnostic tools

No.8
"CFM" - MATERIALS PHYSICS CENTER
Nano-bio spectroscopy
Quantum phenomena on surfaces
Laser physics and photonic materials

No.9
"APG - APPLIED PHOTONICS" RESEARCH GROUP
Medical Image systems
Optic fibers and photonics for bio-sensors

No.10
"FISIOCEL - CELULAR PHYSIOLOGY" RESEARCH GROUP
Early diagnosis systems
Rehabilitation systems
Medical devices for fertility clinics

No.11
"TUMORAL BIOMARKERS AND CHEMORESITANCE" RESEARCH GROUP
Molecular diagnosis
Molecular diagnosis of skin melanoma

No.12
"FUNGAL - GENOMICS OF FUNGI AND BACTERIA" RESEARCH GROUP
Molecular microbiology
Molecular diagnosis of fungi and bacteria related maladies

No.13
"GENBIORES" RESEARCH GROUP
Population genomics
Genetic fingerprinting
Bioinformatics
Metagenomics

No.14
"ISG - INTELLIGENT SYSTEMS" RESEARCH GROUP
Machine learning for medical devices
Big data for health

No.15
"GCIS" RESEARCH GROUP
Rehabilitation systems
Telehealth
Big data for sport activity and health monitoring

No.16
"KAINAVAL" RESEARCH GROUP
Telehealth
Biomedical engineering
Materials and medical devices for inhalation

No.17
"PRODUCT DESIGN LABORATORY"
Medical image systems for dental implantology
Information systems for dental health practitioners

No.18
"METABOLOMIPS" RESERACH GROUP
Molecular diagnosis
Nanostructure based molecular biosensors for biomarkers, metabolites and related molecules

No.19
"MICROFLUIDICS CLUSTER" RESEARCH GROUP
Microfluidics
Monitoring devices
Active implantable devices
Non-active implantable devices

No.20
"NEUROPSYCHOPARMACOLOGY" RESEARCH GROUP
Molecular diagnosis
Genomic and proteomic diagnostics of psychiatric conditions

No.21
"NUTRITION AND OBESITY" RESEARCH GROUP
Information systems for healthcare providers
Interventions for the prevention of obesity in children

No.22
"QUALIKER" RESEARCH GROUP
Information systems for healthcare providers
Psycho-educative for the adherence to health treatments

No.23
"RSAIT" RESEARCH GROUP
Robotic systems for health
Human-robot interaction systems

No.24
"SPORT GENOMICS" RESEARCH GROUP
Molecular diagnosis
Genetic profiling for sports

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
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SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

GENERAL GENOMIC AND PROTEOMICS SERVICE

Fully equiped and integrated in the General Genomic and Proteomics service constitutes a back-up for basic and applied reserarch. Includes a DNA Bank, a Sequencing and genotyping unit, and a Gene expression unit.

Platform 2

ANALYTICAL AND HIGH RESOLUTION MICROSCOPY IN BIOMEDICINE

Provides equipment and technocal assistance to visually analyse the microscopics structure of biological samples.

Platform 3

GENERAL RADIOISOTOPE SERVICE

Authorized by the Nuclear Safety council for the handling of non-encapsulated radiactive sources the main aim of this service is to ensure that any educational and research entailing ionizing radiation is performed with the utmost guaratees in terms of safety and protection.

Platform 4

GENERAL X-RAY SERVICE

Aims to support basic and applied research, among others, to the different areas of expertise of Chemistry, Physics, Materials Science, Aeronautics, Pharmacy, Biochemistry and health sciences.

Platform 5

GENERAL NUCLEAR MAGNETIC RESONANCE

The main facilities consist of the structural study of organic and organometallic molecules, biomolecules, materials, additives and traces, etc. via the qualitative and quantitative determination of their components.

Platform 6

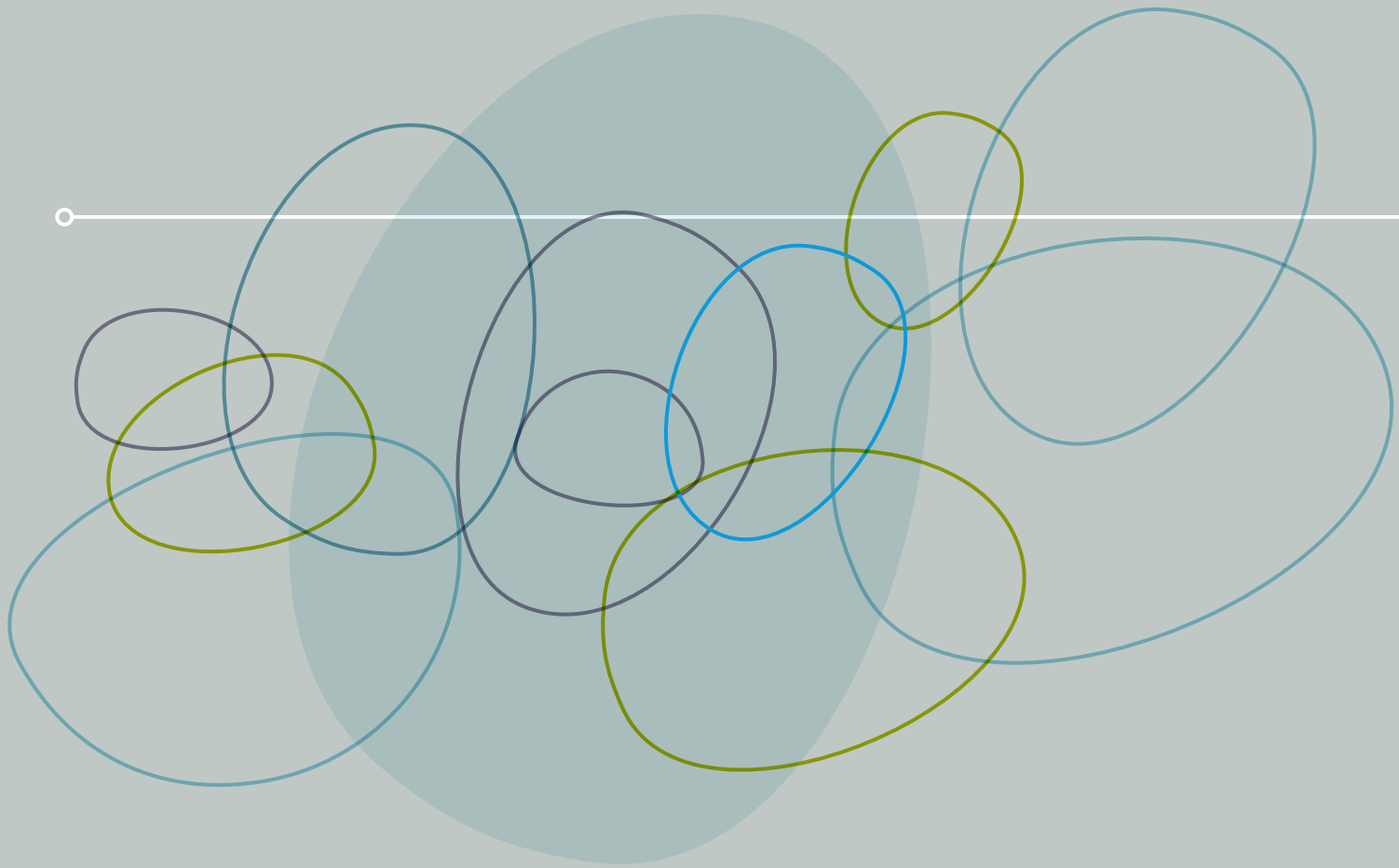
SERVICE OF ELECTRONIC MICROSCOPY AND MICROANALYSIS OF MATERIALS

Provides infrastructure necessary for the microstructural characterization of materials the TITAN microscope located in Leioa highlights.

Platform 7

ARINA AND PENDULO CLUSTERS

It is a supercomputing cluster for research.



RESEARCH INSTITUTIONS

MEDICAL IMAGE

SUPER-RESOLUTION CONFOCAL MICROSCOPY, TWO-PHOTON MICROSCOPY

LABORATORY EQUIPMENT

ELECTROCHEMICAL TECHNIQUES

OPTICAL TECHNIQUES

ACHUCARRO

www.achucarro.org

Achucarro
BASQUE CENTER FOR NEUROSCIENCE

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INSTITUTION / HQ

ACHUCARRO BASQUE
CENTER FOR NEUROSCIENCE
Scientific Park of the UPV/EHU
Sede building - 3rd floor
E-48940 Leioa
Bizkaia

DESCRIPTION OF THE INSTITUTION

ACHUCARRO Basque Center for Neuroscience, is a fundamental and translational research centre devoted to the study of neuron-glia interactions. This scientific approach, which could be defined as narrow, constitutes the competitive advance of the centre and the main feature for differentiation.

The work and expertise of ACHUCARRO is centred in these three areas:

(1) Characterization of the role of glial cells in the physiology of the nervous system;

(2) In depth characterization of structural and functional changes of neuronal-glial networking in the aged brain; and

(3) Understanding the role of neuroglia in neurodegenerative diseases and other neurological disorders.

With the final objective of being an active agent in the translation of fundamental knowledge to results that can improve the well-being of the Society.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

IMAGING FACILITY

Advanced super-resolution confocal microscopy and two-photon microscopy

CELL ANALYTICS

Cell Sorter and Analysis (FACS), Extracellular Flux Analysis, Digital PCR, Electroporation,...

PROTEOMICS

Its facility counts with a BIO-RAD Quest 10 Chromatography system that allows easy, automated and all-purpose purification of proteins and biomolecules.

MAIN ALLIANCES

No.1

PARTNER NAME
UPV/EHU

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Framework Agreement for shared growth.

No.2

PARTNER NAME
Institute of Biophysics (Biofisika)

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Development of an advanced and state-of-the-art bio-imaging node within the European ERIC Euro-BioImaging.

No.3

PARTNER NAME
CIC biomaGUNE

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Joint research area and use of equipment.

ELECTROMEDICAL DEVICES

COMPUTATIONAL MODELING TO OPTIMIZE DIAGNOSTIC DEVICES

NEXT GENERATION NEURONAL ELECTROPHYSIOLOGY AND MACHINE BRAIN INTERFACES

MEDICAL IMAGE

MEDICAL IMAGE ANALYSIS SOFTWARE

DIGITAL HEALTH

INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS

CLOUD

BIOMEDICAL CONSUMABLES

COMPUTATIONAL MODELLING FOR RADIOFREQUENCY CARDIAC ABLATION

COMPUTATIONAL MODELING TO OPTIMIZE RFA CATHETER DESIGN AND CLINICAL GUIDELINES

INNOVATIVE TARGETED NEUROMODULATION DEVICES FOR MIGRAINE

BCAM

www.bcamath.org

basque center for applied mathematics

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E48009 Bilbao
Bizkaia

— PERSONNEL

6

— SCIENTIFIC PUBLICATIONS

60

— DESCRIPTION OF THE INSTITUTION

BCAM is a world-class research center on Applied Mathematics with a focus on interdisciplinary research in the frontiers of mathematics, attraction and training of talented scientists, development of new numerical and simulation methods, interaction with industry, health and social institutions, and promotion of scientific and technological advances worldwide.

It counts with more than 80 researchers (Professors, Postdoctoral Fellows, PhD students and External Scientific Members), a high number of visiting fellows and interns, supported by a Staff team, integrating people from more than 21 different countries.

It has been designed to take place in the various spheres of Applied Mathematics, which cover a wide range of subjects from modelling and mathematical analysis to numerical simulation and the development of relevant codes for the solution of problems with an industrial application.

The objectives of M3A (Mathematical Modelling with Multidisciplinary Applications) Research Area are effective modeling and detailed simulation at different scales of extremely large and complex systems and phenomena stemming from real life problems in biology, medicine, public health and society. We are interested in both applications and methodology, to devise reliable predictive tools for biomedical applications, material science, and conservation biology. Focus is also on application of high performance computers (HPC) to problems currently beyond the capacity of existing methods.

The first main goal of DS (Data Science) Research Area is to create innovative statistical and machine learning models, inference methods, computational algorithms and visualization tools for the analysis of massive data. These models can be used to solve domain-specific problems that can be grouped into supervised classification, clustering, regression, ranking, etc. Our second aim is to develop new metaheuristic optimization algorithms able to reach good solutions in bounded computational time.

— R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

M3A - MATHEMATICAL MODELLING WITH MULTIDISCIPLINARY APPLICATIONS

- Collaborative industrial project with MedLumics
- Project with CIC bioGUNE (funded by Elkartek) in the field of breast cancer research
- Active collaboration with Achucarro and BioCruces on neuroscience
- Active collaboration with Galdakao Hospital and Bari Polyclinic (Italy) on migraine
- Active collaboration with Hospital Santa Creu i Sant Pau (Barcelona) on cardiac rfa

No.2

DS

DATA SCIENCE

- Analysis of Health Related Quality of Life in collaboration with Osakidetza (OSI Barrualde Galdakao)
- Statistical analysis of SeniorGrowth assessment tool for Quality of Life of Senior People
- Analysis of the data collected by BioCruces related with obesity

MEDICAL IMAGE

MRI
MAGNETOENCEFALOGRAPHY MEG

LABORATORY EQUIPMENT

OPTICAL TECHNIQUES

BCBL
www.bcbl.eu

BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE

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E20009 Donostia - San Sebastián
Gipuzkoa

DESCRIPTION OF THE INSTITUTION

The BCBL - Basque Center on Cognition, Brain and Language is a world-class interdisciplinary research center for the study of cognition, brain and language founded in September 2008. It is one of the centers of the BERC network (Basque Excellent Research Centers). Its mission is to provide a platform for researchers and professionals to carry out frontline research, development, innovation, training, education and knowledge and technology transfer in the area of language sciences, complemented with science dissemination and outreach.

The main goal of the center is the study of language from an experimental point of view. Language and reading are the most unique human abilities and involve complex cognitive processes. However, despite current impressive technological and scientific advances we still do not understand the complexities of the cognitive processes involved, or the causes of language disorders, or reading disabilities, or how to remedy them, or what would be the best way to learn a second language in our multilingual, globalized world. The BCBL carries out research using the most advanced techniques in these fascinating areas.

Thus, the combination of a first class center equipped with the most advanced research techniques, a unique linguistic environment, and an exceptional combination of different human resources makes this excellence research center unique in the world.

To achieve the specific aim of our research activity of understanding the neurocognitive mechanisms involved in the acquisition, comprehension and production of language, with particular emphasis on reading, multilingualism and language impairments, we designed three research lines:

1. Language, reading and developmental disorders,

2. Multilingualism and second language learning

3. Neurodegeneration, brain damage and healthy ageing: language and cognition.

In addition, BCBL is committed to education, science dissemination, and knowledge and tech- transfer, with the aim of contributing to social welfare by applying the knowledge and technology derived from our research.

R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1
LANGUAGE, READING AND DEVELOPMENTAL DISORDERS

A major enterprise is to understand how language acquisition, comprehension, production, and reading take place in the human brain. We pay special attention to language disorders and develop computerized tools for their early diagnosis and treatment.

No.2
MULTILINGUALISM AND SECOND LANGUAGE LEARNING

BCBL investigates the cognitive and brain mechanisms of language acquisition and processing in a second language, taking into consideration the age of acquisition, proficiency and usage. Special attention is being paid to multilingualism within the school system and to the development of new educational technologies for second language learning.

No.3
NEURODEGENERATION, BRAIN DAMAGE AND HEALTHY AGING: LANGUAGE AND COGNITION

BCBL investigates early cognitive and brain markers related to language for neurodegenerative diseases (Alzheimer, Parkinson). They also investigate neural plasticity and language functions through brain stimulation in the awake patient during surgical brain operations. They develop computerized diagnostic and training tools for aphasic patients and neurodegenerative diseases.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

MRI
BCBL houses a Siemens 3T MAGNETOM PRISMAfit MR scanner that allows researchers to perform functional MRI (BOLD and perfusion ASL), structural MRI, diffusion-weighted MRI and MR Spectroscopy studies. This system uses the Siemens Total Imaging Matrix (TIM) 4G technology, including the TimTX TrueForm and TimTX TrueShape technologies for parallel transmission and selective RF excitation for better B1 homogeneity, reduced Specific Absorption Rate (SAR), and enabling zoomed imaging with the ZOOMit application.

MEDICAL IMAGE

MRI
MAGNETOENCEFALOGRAPHY MEG

LABORATORY EQUIPMENT

OPTICAL TECHNIQUES

BCBL
www.bcbl.eu

BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE

Platform 2

MEG
Magnetoencephalography (MEG) provides a non-invasive method for recording cortical activity with exceptional temporal resolution and fine spatial resolution. The MEG facility at the BCBL is a 306-sensor (204 planar gradiometers and 102 magnetometers; arranged in a helmet configuration) Elekta Neuromag® device with 16 digital trigger lines and 8 auxiliary analog input channels. The setup will allow for the delivery of both auditory and visual stimuli, and recordings can be performed in either supine or sitting position. The MEG device also includes an integrated 64-channel EEG system (60 single channel and 4 differential electrodes) for simultaneous MEG and EEG recordings that can be acquired at a sampling rate of up to 8 kHz (5 kHz standard) in either AC or DC.

Platform 3

EEG
The BCBL is equipped with five EEG systems that are installed in Faraday cage soundproof chambers. Each chamber is equipped with a BrainAmp DC® amplifier. Using the recording software (Brain Recorder®) all the amplifier options, including the switch from DC to AC recording mode as well as selecting different filtering bandwidths, can be controlled.

Platform 4

EYE TRACKING
The center is equipped with the hardware and software resources to carry out and analyze a wide range of on-line reading experiments and studies using the visual world paradigm. Our Labs have four units of the latest and most complete systems for eye tracking: EyeLink 2K provides an excellent sampling rate (2000 Hz) and is especially suitable for real-time data collection. EyeLink 2K can be used for monocular as well as binocular eye tracking, and the system is perfectly compatible with most contact lenses and eyeglasses.

Platform 5

NIRS
The system, NIRScout, is an ultra-compact and scalable solution for applications where flexibility is the dominant concern. This system is ideally suited for longitudinal studies with children, combined EEG-functional/
NIRS studies and freely-moving studies. It provides a flexible methodology for measuring cortical activity during overt speech production while avoiding some of the limitations of traditional imaging technologies. The BCBL Nirscout has eight illumination points and sixteen sensors, can enlarge, is EEG-compatible, and has three caps from baby to infant studies available.

MAIN ALLIANCES

No.1

PARTNER NAME
Achucarro Basque Center for Neuroscience and the BCAM (Basque Center for Applied Mathematics)

COUNTRY OF PARTNER'S HQ
Basque Country

PURPUSE OF AGREEMNET W/PARTNER
Development of improved computational tools to investigate.

No.2

PARTNER NAME
Biodonostia

COUNTRY OF PARTNER'S HQ
Basque Country

PURPUSE OF AGREEMNET W/PARTNER
Research neurodegeneration, Parkinson and aphasia.

No.3

PARTNER NAME
Tecnalia

COUNTRY OF PARTNER'S HQ
Basque Country

PURPUSE OF AGREEMNET W/PARTNER
NEUROMOD Project.

No.4

PARTNER NAME
Severo Ochoa Centres

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Promotes excellence in scientific research. It seeks to boost Spanish science by recognizing existing cutting-edge research centres and units, and further supporting them to enhance their impact, and international scientific leadership and competiveness.

No.5

PARTNER NAME
Universidad Complutense de Madrid

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Identification of biomarkers for neuropsychiatric diseases. Functional neuroimaging can provide these biomarkers by means of non-invasive approaches.

ELECTROMEDICAL DEVICES

MONITORING DEVICES
CRITICAL CARE DEVICES AND SYSTEMS

MEDICAL IMAGE

CT SCANNERS
MRI
DIAGNOSTIC NUCLEAR IMAGE SYSTEM (PET, SPECT)
MEDICAL IMAGE ANALYSIS SOFTWARE
VIDEO AND IMAGES OBTEINED WITH CAMERA

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

REHABILITATION SYSTEMS

DIGITAL HEALTH

INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS
TELEHEALTH
MOBILE HEALTH
INTEROPERABILITY
CLOUD
OTHER
HEALTH DATA ANALYTICS.
COMPUTER GAMES AND HEALTH AND WELLBEING

FUNDACIÓN DEUSTO FUNDAZIOA

www.deustotech.eu

DeustoTech

— CONTACT PERSON

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Avda. de las Universidades, 24
E48007 Bilbao
Bizkaia

— CENTER / FACULTY 1

DEUSTOTECH
Avda. de las Universidades 24
E48007 Bilbao - Bizkaia

— PERSONNEL (FTE)

15

— SCIENTIFIC PUBLICATIONS

100

— DOCTORAL THESIS

10

— DESCRIPTION OF THE INSTITUTION

DEUSTOTECH is actively involved in both the creation of tools and methodologies that facilitate the active ageing of the elders, and designing and developing information systems for healthcare providers.

To do so, (1) DeustoTech applies the Ambient Assisted Living (AAL) approach, creating environments that promote a better ageing, using machine learning, data analysis, persuasive computing and cloud computing techniques to enhance the current methodologies. And (2) DeustoTech develops digital tools supported on seamless positioning of people in outdoor and indoor environments supporting telehealth and mobile health activities from the point of view of the treatment prescriptors (Healthcare Centers) as well as from the promoters of healthy societies point of view (Government or public administrations).

In the areas of machine learning and data analysis the main focus of its work is to analyze and understand the behavior of the users. By recognizing the activities the users perform and then analyzing the behavior variations over time. Deustotech has used this approach in several projects. In the City4Age H2020 project DeustoTech studied these behavior variations to detect risks associated with early frailty or mild cognitive impairments. In the SONOPA AAL project, it analyzed the social interactions between the elders to recommend meaningful social connections to those persons on risk of social isolation. In the Fraseware Retos project Deustotech studied how the gait is correlated to the early stages of frailty and how it can be used as an early detection mechanism.

In the area of persuasive computing the focus is promoting positive behavior changes in the users via timely and meaningful interventions. To do so DeustoTech uses psychological techniques tailored to the specific needs of the user in order to optimize the results. In the OBESITIC project Deustotech used persuasive computing to help people change their habits to prevent obesity. In the SmiWork project it combined persuasive computing techniques with a smart mirror to promote health in the workplace.

In the area of cloud computing DeustoTech works on creating scalable medical systems able to deal with large volumes of data. In the City4Age H2020 project it created an AAL cloud platform to manage the information from seven European cities. In the SONOPA AAL project, and the OSASUNLAN and ZAINET projects it created cloud and mobile modules that where the central components of the infrastructure.

Finally, in the area of seamless positioning DeustoTech has developed a tool which consist of a portable device (smartphone, smartband, smartwatch with an embbeded application/firmware) which uses the available sensors to collect the so called signals of opportunity (SoOP) that it is in charge of computing its own position by fusing those SoOP according to a localization engine. It serves a integral platform for providing seamless location based services. This can be used as well to monitoring vital signals of a person, adding or analizing sensors, and also it allows the patients to establish a 24x7 communication channel in emergency situations. or simply to set their profile, get contextual information, answer questions, and receive/send augmented reality suggestions.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH
MONITORING DEVICES CRITICAL CARE DEVICES AND SYSTEMS	CT SCANNERS MRI DIAGNOSTIC NUCLEAR IMAGE SYSTEM (PET, SPECT) MEDICAL IMAGE ANALYSIS SOFTWARE VIDEO AND IMAGES OBTEINED WITH CAMERA	REHABILITATION SYSTEMS	INFORMATION SYSTEMS FOR HEALTHCARE PROVIDERS TELEHEALTH MOBILE HEALTH INTEROPERABILITY CLOUD OTHER HEALTH DATA ANALYTICS. COMPUTER GAMES AND HEALTH AND WELLBEING

FUNDACIÓN DEUSTO FUNDAZIOA

www.deustotech.eu

DeustoTech

— R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

DEUSTOTECH - LIFE

It is committed to pursuing the innovative activities in the sphere of health (telehealth and SW tools for diagnosis and treatment) and accessibility.

No.2

DEUSTOTECH - MOBILITY

It design and develop information systems for healthcare providers. The R&D line has expertise in digital tools supported on seamless positioning of people in outdoor and indoor environments. This skills can apply to support Telehealth and Mobile health activities from the point of view of the treatment prescriptors (Healthcare Centers) as well as from the promoters of healthy societies point of view (Government or public administrations).

No.3

DEUSTOTECH - INTERNET

It is actively involved in the creation of tools and methodologies that facilitate the active ageing of the elders. To do so, it applies the Ambient Assisted Living (AAL) approach, creating environments that promote a better ageing, using machine learning, data analysis, persuasive computing and cloud computing techniques to enhance the current methodologies.

— SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

evida.deusto.es

website of DeustoTech - Life

Platform 2

research.mobility.deustotech.eu

website of DeustoTech - Mobility

Platform 3

morelab.deusto.es

website of DeustoTech - Internet

— MAIN ALLIANCES

No.1

PARTNER NAME

Universidad de Louisville

COUNTRY OF PARTNER'S HQ

USA

PURPUSE OF AGREEMNET W/PARTNER

Research and collaboration in health and wellbeing

No.2

PARTNER NAME

INRIA

COUNTRY OF PARTNER'S HQ

France

PURPUSE OF AGREEMNET W/PARTNER

Research and collaboration in health and wellbeing

No.3

PARTNER NAME

EAFIT

COUNTRY OF PARTNER'S HQ

Colombia

PURPUSE OF AGREEMNET W/PARTNER

Research and collaboration in health and wellbeing

ORTHOPEDIC AND REHABILITATION TECHNOLOGY

IMPLANTS
TRAUMA FIXATION DEVICES
REHABILITATION SYSTEMS

BIOMEDICAL CONSUMABLES

NON-ACTIVE IMPLANTABLE DEVICES
OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES

POLYMAT

www.polymat.eu

POLYMAT
Basque Center for Macromolecular Design and Engineering

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INSTITUTION / HQ

BASQUE CENTER FOR MACROMOLECULAR DESIGN AND ENGINEERING, POLYMAT FUNDAZIOA (EHU GROUP)
Avda. de Tolosa, 72
E20018 Donostia - San Sebastián
Gipuzkoa

CENTER / FACULTY 1

FACULTY OF ENGINEERING UPV/EHU
Alameda de Urquijo, s/n
E48013 Bilbao
Bizkaia

PERSONNEL (FTE)

11

SCIENTIFIC PUBLICATIONS

66

EPO & PCT PATENT APPLICATIONS

3

DOCTORAL THESIS

5

SPIN-OFF) CREATED

1

DESCRIPTION OF THE INSTITUTION

The research group in Science and Engineering of Polymeric Biomaterials (ZIBIO group, POLYMAT & UPV/EHU), is leaded by Prof. Dr. J. R. Sarasua and carries out activities at the Department of Mining Metallurgy Engineering, Faculty of Engineering of Bilbao. ZIBIO group is a group that has been recognized in the successive calls of the Basque Government-Department of Education Language Policy and Culture for consolidated research groups (ref. IT-339-07, IT-334-10, IT-632-13, IT927-16) and is at present ranked top A for the 2016-2021 period. ZIBIO is today one of the world references in the research field of polymeric biomaterials, particularly in the development of novel systems based on bioabsorbible polyesters including novel monomers for tuning the biodegradation rate, mechanical properties and release of medicaments and for their use as medical devices such as implants and scaffolds for tissue engineering.

R&D LINES/GROUPS/ DEPARTMENTS

No.1

BIOABSORBABLE POLYMERS

Synthesis and characterization of novel bioabsorbable polymers.

No.2

BIOABSORBABLE MEDICAL DEVICES

New developments as bioactive, radiopaque and antimicrobial polymer composites.

No.3

TISSUE ENGINEERING

Scaffolds design and fabrication by novel techniques (electrospinning/3D printing) for tissue engineering.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

EUROPEAN TECHNOLOGICAL PLATFORM IN NANOMEDICINE
Representation of the University of the Basque Country in ETP in Nanomedicine

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY
ACTIVE IMPLANTABLE DEVICES	CT SCANNERS	BIOCHEMISTRY SURFACES	OPTICAL TECHNIQUES	IMPLANTS
MONITORING DEVICES	MRI	MICROFABRICATION TECHNIQUES	ELECTROCHEMICAL TECHNIQUES	
	DIAGNOSTIC NUCLEAR IMAGING SYSTEM (PET, SPECT)	IMMUNOCHEMISTRY		
	MEDICAL IMAGE SYSTEMS			

CIC biomaGUNE

www.cicbiomagune.es

— CONTACT PERSON

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— INSTITUTION / HQ

ASOCIACIÓN CENTRO DE INVESTIGACIÓN COOPERATIVA EN BIOMATERIALES - CIC BIOMAGUNE
Gipuzkoa Technology Park
Paseo de Miramón, 182
E20014 Donostia - San Sebastián
Gipuzkoa

— PERSONNEL (FTE)

130

— SCIENTIFIC PUBLICATIONS

590

— EPO & PCT PATENT APPLICATIONS

7

— DOCTORAL THESIS

31

— SPIN-OFF CREATED

1

— DESCRIPTION OF THE INSTITUTION

CIC biomaGUNE is a non-profit research organization created in 2006 and located in San Sebastian (Spain), whose aim is to promote scientific research and technological innovation at the highest level in the Basque Country, in order to create a new business sector based on biosciences. Established by the Government of the Basque Country, CIC biomaGUNE constitutes one of the Centers of the CIC network, the largest Basque Country research network on specific strategic areas, having the mission to contribute to the economical and social development of the country through the generation of knowledge and speeding up the process that leads to technological innovation.

It has established a state of the art research program at the interface among chemical, biological and physical sciences, with a main emphasis on molecular scale properties and applications of biological nanostructures. The final aim of this program is to contribute to the understanding of the functioning of biological systems at the molecular and nanometer scale. The main research lines deal with the design, preparation and characterization of biofunctional nanostructures and their in vitro and in vivo biological evaluation, to be used in the study of biological processes and the development of biomedical tools such as theranostic or multitherapeutic nanoplatforms.

These research lines include the synthesis and characterization of biofunctional nanoparticles, studies on molecular self-assembly, nano-fabrication techniques toward nano-devices, bioconjugation of surfaces and study of interface processes, research on basic aspects of the interface design and the production of biologically relevant patterns at the nanometer scale for protein-surface and cell-surface interaction studies. This basic knowledge may permit, in the long run, to improve the ability to intervene at different stages of a disease by developing early diagnosis methods, “smart” treatments, as well as triggering self-healing mechanisms.

— R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1
BIONANOPLASMONICS

It is dedicated to the synthesis, assembly and applications of various types of nanoparticles with specific functionalities, in particular metal nanoparticles with novel (plasmonic) optical properties.

No.2
BIOMOLECULAR NANOTECHNOLOGY

It focuses on protein engineering toward the generation of functional nanostructures and bioinspired materials for applications in nanobiotechnology and nanomedicine. Its objective is to develop versatile platforms based on simple protein building blocks for the fabrication of multiple protein-based hybrid functional nanostructures and biomaterials.

No.3
RADIOCHEMISTRY & NUCLEAR IMAGING

It focuses its research on i) the development of new easy-to-produce radioactive precursors with application in the manufacture of complex labeled structures and ii) the design and synthesis of new PET and SPECT radiotracers with potential application in the diagnostic of neurodegenerative and ischemic diseases.

No.4
MAGNETIC RESONANCE IMAGING

The main interest of the group is the utilization of optimized MR methods to relate pathophysiology with function in various animal models.

No.5
SOFT MATTER NANOTECHNOLOGY

It focuses on nanofabrication, using elements of soft matter like synthetic polymers, biopolymers, membranes, etc. and in the phenomena associated with the nanometric scale and the physical properties resulting from the nanostructuration of a material. It is particularly interested in the design and fabrication of surfaces and complex colloidal systems with structure and properties controlled at nanometric level, and their eventual medical applications or in controlled drug delivery.

No.6
GLYCOTECHNOLOGY

It is currently developing the following lines of research: Solution-and solid-phase synthesis of biologically important oligosaccharides; Microarray-based tools for studying carbohydrate-protein interactions; Bioassays for carbohydrate processing enzymes.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY
ACTIVE IMPLANTABLE DEVICES	CT SCANNERS	BIOCHEMISTRY SURFACES	OPTICAL TECHNIQUES	IMPLANTS
MONITORING DEVICES	MRI	MICROFABRICATION TECHNIQUES	ELECTROCHEMICAL TECHNIQUES	
	DIAGNOSTIC NUCLEAR IMAGING SYSTEM (PET, SPECT)	IMMUNOCHEMISTRY		
	MEDICAL IMAGE SYSTEMS			

CIC biomaGUNE

www.cicbiomagune.es

No.7

BIOSENSING

The lab is focused on the design and the preparation of new biomaterials for biomedical applications.
It includes: Artificial complex biochemical systems; Biomedical applications of artificial biochemical systems; Bionanoengineering, functional interfaces composed of biomaterials & nano-objects, supra-molecular hybrid systems with complex molecular/biomolecular architecture; Novel biomaterials for biomedical applications.

No.8

THERANOSTIC NANOMEDICINE

It designs, makes and studies inorganic complexes and nanomaterials for a range of biological and medical applications. It wants to apply this Systems Chemistry approach to answer fundamental questions about molecular assembly and biological molecules/systems. It wishes to control assembly and properties of inorganic complexes and materials.

No.9

CARBON BIONANOTECHNOLOGY

The research of the Carbon Nanobiotechnology laboratory focuses on the development of functional carbon-based interfaces with enhanced performance in the field of biosensing and diagnostics. It also carries out basic research, studying a wide variety of methodologies for functionalization of carbon-based materials (GBMs).

No.10

BIOENGINEERED PARTICLES

Its aim is to investigate if nanoparticles change their integrity once they are inside living organisms. It also will work towards medical applications of nanoparticles. It will use magnetic nanoparticles as trigger for the release of drugs.

No.11

COMPUTATION BIOPHYSICS

The research focuses on the applications of statistical mechanics to soft-matter and complex biological systems. Its goal is to build simple models of natural complex systems, such as proteins, and in doing so learn their fundamental function and copy it into artificial systems.

No.12

HETEROGENOUS BIOCATALYSIS

It applies multi-enzyme systems to synthetic and analytical chemistry by harnessing the exquisite selectivity of enzymes (biological catalysts) for the development of more sustainable and effective chemical processes.

SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

COLLOIDAL NANOFABRICATION
The Colloidal Nanofabrication Platform aims to provide consulting service, training and experimental support in the synthesis and self-assembly of metallic, magnetic and semiconductor and oxide nanoparticles with a variety of sizes, shapes and surface functionalizations.

Platform 2

ELECTRON MICROSCOPY
It provides a TEM optimized for ultra high resolution and low electron dose studies equipped with a state of the art CMOS camera and STEM and EDXS systems, and a TEM optimized for high contrast studies equipped with a CCD camera. Also, a SEM equipped with an EDXS system, cryo-microscopy hardware for TEM and SEM, and a dedicated sample preparation infrastructure are provided.

Platform 3

MASS SPECTROMETRY
Its aim is to provide a high quality mass spectrometry. The specialized laboratory is equipped with modern instrumentation and offers different ionization techniques for the analysis of small molecules to complex biomolecules.

Platform 4

NUCLEAR MAGNETIC RESONANCE (NMR)
The Nuclear Magnetic Resonance (NMR) service is in charge of providing a spectra recording service, maintains the hard and software of the spectrometers, assists in specific problem solving and spectra interpretation, and advises on spectroscopic topics in relation to supporting research.

Platform 5

OPTICAL SPECTROSCOPY
The optical Spectroscopy platform offers a wide range of techniques to characterize physico-chemical properties of biomaterials and biosurfaces. Training, assistance for experimental procedures and data interpretation are provided to support researchers.

Platform 6

SURFACE ANALYSIS AND FABRICATION
It offers XPS measurements using a SPECS SAGE HR 100 system and the possibility of review and discuss the specific requirements of the user improving and optimizing the processes and offering data interpretation.

MAIN ALLIANCES

No.1

PARTNER NAME
Repsol

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Service Supply

No.2

PARTNER NAME
Surflay

COUNTRY OF PARTNER'S HQ
Germany

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.3

PARTNER NAME
Leipzig University

COUNTRY OF PARTNER'S HQ
Germany

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.4

PARTNER NAME
Fraunhofer-Gesellschaft

COUNTRY OF PARTNER'S HQ
Germany

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY
ACTIVE IMPLANTABLE DEVICES	CT SCANNERS	BIOCHEMISTRY SURFACES	OPTICAL TECHNIQUES	IMPLANTS
MONITORING DEVICES	MRI	MICROFABRICATION TECHNIQUES	ELECTROCHEMICAL TECHNIQUES	
	DIAGNOSTIC NUCLEAR IMAGING SYSTEM (PET, SPECT)	IMMUNOCHEMISTRY		
	MEDICAL IMAGE SYSTEMS			

CIC biomaGUNE

www.cicbiomagune.es

No.5

PARTNER NAME
Graphenea

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.6

PARTNER NAME
CNRS

COUNTRY OF PARTNER'S HQ
France

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.7

PARTNER NAME
Max Planck Gesellschaft (MPG)

COUNTRY OF PARTNER'S HQ
Germany

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.8

PARTNER NAME
Midatech

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Service Supply

No.9

PARTNER NAME
Asparia Glycomics

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Service Supply

No.10

PARTNER NAME
IBA Molecular

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Service Supply

No.11

PARTNER NAME
Manchester University

COUNTRY OF PARTNER'S HQ
United Kingdom

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Training of Researchers

No.12

PARTNER NAME
Liverpool University

COUNTRY OF PARTNER'S HQ
United Kingdom

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research and Training of Researchers

No.13

PARTNER NAME
Consejo Superior de Investigaciones Científicas (CSIC)

COUNTRY OF PARTNER'S HQ
Spain

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.14

PARTNER NAME
ETH Zürich

COUNTRY OF PARTNER'S HQ
Switzerland

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.15

PARTNER NAME
Stichting VVMC

COUNTRY OF PARTNER'S HQ
The Netherlands

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

No.16

PARTNER NAME
University of Leiden

COUNTRY OF PARTNER'S HQ
The Netherlands

PURPUSE OF AGREEMNET W/PARTNER
Strategic Research

CIC bioGUNE

www.cicbiogune.es

CIC bioGUNE

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— **INSTITUTION / HQ**
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Building 801
E20014 Derio
Bizkaia

— **PERSONNEL (FTE)**
40

— **SCIENTIFIC PUBLICATIONS**
70

— **EPO & PCT PATENT APPLICATIONS**
5

— **DOCTORAL THESIS**
6

— **SPIN-OFF) CREATED**
1

— **DESCRIPTION OF THE INSTITUTION**

CIC bioGUNE is a non-profit organization that was established to promote scientific research and technological innovation in the Basque Country following Biobasque's policy to drive a new business sector based on biosciences. By 2017, bioGUNE, with 160 scientists and technicians, positioned itself as a prestigious international Scientific Centre in the field of biosciences, being a Centre of reference in the Basque Country and Spain. This has been possible through the recruitment of nationally and internationally recognized researchers and the development and implementation of high-level training and publication and dissemination activities.

CIC bioGUNE´s mission covers diverse aspects: development of high-level Science, including fundamental research, industrial research and experimental development, high-quality training, institutional cooperation, internationalization, and dissemination. The critical mass, with 20 PIs, 5 PMs, and other 115 scientists and technicians, along with 20 additional people in maintenance, biosafety, IT, and administration, allows us to cover all these points showing our strength in the value chain of Science. In the particular area of Medical Devidces and Digital Health, bioGUNE is particularly active in disease diagnosis (in vitro), non-invasive diagnosis and metabolomics, infection diagnosis, and separation.

CIC bioGUNE

www.cicbiogune.es

CIC bioGUNE

— R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

STRUCTURAL VIROLOGY LAB

Schmallenberg virus diagnosis.

No.2

PROTEIN STABILITY AND INHERITED DISEASES LAB

Novel methods for rare disease diagnosis in newborns, novel methods for rare and prevalent disease diagnosis in adults, by magnetic resonance-based metabolomics.

No.3

PRION RESEARCH LAB

Novel methods for prion disease diagnosis, method for amplification of misfolded proteins.

No.4

EXOSOMES LAB

Non invasive diagnosis of cancer and metabolic diseases based on exosomes and metabolomics.

— SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

PROTEOMICS PLATFORM

Device for exosome separation

— MAIN ALLIANCES

No.1

PARTNER NAME

VACUNEK

COUNTRY OF PARTNER'S HQ

Spain

PURPUSE OF AGREEMNET W/PARTNER

Novel vaccine and diagnostic strategies against Schmallenberg virus

No.2

PARTNER NAME

MONDRAGON UNIBERTSITAEA-MGEP

COUNTRY OF PARTNER'S HQ

Spain

No.3

PARTNER NAME

BIOCRUCES

COUNTRY OF PARTNER'S HQ

Spain

No.4

PARTNER NAME

BIODONOSTIA

COUNTRY OF PARTNER'S HQ

Spain

No.5

PARTNER NAME

HISTOCELL

COUNTRY OF PARTNER'S HQ

Spain

ELECTROMEDICAL DEVICES

MONITORING DEVICES
CRITICAL CARE DEVICES AND SYSTEMS

IN-VITRO DIAGNOSTIC

BIOCHEMISTRY SURFACES
MICROFLUIDICS
MICROFABRICATION TECHNIQUES

LABORATORY EQUIPMENT

OPTICAL TECHNIQUES

BIOMEDICAL CONSUMABLES

OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES

CIC nanoGUNE

www.nanogune.eu

CIC nanoGUNE
nanoscience cooperative research center

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E20018 Donostia - San Sebastián
Gipuzkoa

— PERSONNEL (FTE)

2

— DESCRIPTION OF THE INSTITUTION

The Nanoengineering Group, led by Ikerbasque Research Professor Dr. Andreas Seifert,started its activity in July 2015. The group focuses on research at the interface between fundamental nanoscience and applied engineering, in particular in the area of biomedical microsystems. The aim is to bridge the gap between physical sciences and industrial as well as clinical applications by introducing nanotechnology to finally gain added value for novel medical microsystems and mesoscopic devices.For this reason, collaboration with clinical partners is essential to develop new diagnostic tools for widespread diseases, such as cardiovascular diseases, cancer or neurodegenerative diseases.
The Nanoengineering Group has an optical laboratory with high-level optical metrology and manufacturing services for solid and soft materials. The innovation of the new devices and methods to develop is based on micro and nanotechnology. To analyze microstructures, a new 3D optical profiler has been acquired, which perfectly complements the structural and morphological investigations by atomic force microscopy that are also available in nanoGUNE. This optical profiler is able to visualize small areas of the sample examined with an atomic level resolution.
The laboratory is also equipped with a new microscope to analyze samples of low contrast without causing staining by differential interference contrast microscopy and with circularly polarized light. In addition, it is possible to manipulate transparent samples, cells in liquids or many other biological samples in the laboratory.
In addition, the group has access to all nanoGUNE laboratories and equipment, including a modern white room for nano and microfabrication, as well as an electronic microscopy laboratory and other measurement techniques.
The Nanoengineering Group consists of 3 postdoctoral researchers and a technician, all supervised by Dr. Andreas Seifert.

CIC nanoGUNE

www.nanogune.eu

R&D LINES / GROUPS / DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1

NANOENGINNERING GROUP

Integration of Raman and Infrared spectroscopies: we are working on a new method for the early diagnosis of the Alzheimer´s disease. The idea is to combine physically these two methods to enhance the limit of detection of biomarkers.Thos combine system allows using the samples in a sterile environment without the need of manipulating the probe.We will implement mathematical tools as principal component analysis and support vector machines.

No.2

NANOENGINNERING GROUP

Custom made surface plasmon resonance setup for the detection of target molecules involved in diagnosis.The platform is ready to be compared with other systems present in the market. Several assays will be defined and incorporated onto the platform surface to provide a more selective adsorption of proteins.Customized microfabricated structures will aid in the detection of exosomes.

No.3

NANOENGINNERING GROUP

Continuous long-term monitoring of vital signals:we are working on a compact solution for a photoplethysmograph for pulse wave analysis and blood oxigen saturation that can be integrated with other sensors for multiparameter monitoring. Special focus lies on portability and comfortable wearability.New stable mathematical algorithms are developed against movement and other artifacts.

No.4

NANOENGINNERING GROUP

pH-lactate sensor for assiting childbirht delivery: the goal is to implement an optical system for measuring fetal lactate concentration and pH during labour in a non-invasive manner as well as in a continuous manner, allowing the obstetricians to take fast decisions.

MAIN ALLIANCES

No.1

PARTNER NAME
CITA-Alzheimer
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Development of a combined FTIR-Raman system for detecting amyloid proteins in CSF fluid

No.2

PARTNER NAME
BioDonostia
COUNTRY OF PARTNER'S HQ
Spain
PURPUSE OF AGREEMNET W/PARTNER
Development of a new optical sensor for measuring pH and lactate concentrations during birth-delivery

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
ACTIVE IMPLANTABLE DEVICES	CT SCANNERS	IMMUNOCHEMISTRY	ELECTROMECHANICAL TECHNIQUES	IMPLANTS	TELEHEALTH	NON-ACTIVE IMPLANTABLE DEVICES
MONITORING DEVICES	ULTRASOUND	GENOMIC & GENETIC DIAGNOSTICS	ELECTROCHEMICAL TECHNIQUES	TRAUMA FIXATION DEVICES	MOBILE HEALTH	SURGICAL INSTRUMENTS AND CONSUMABLES
SURGICAL INSTRUMENTS AND SYSTEMS	MRI	MICROBIOLOGY	OPTICAL TECHNIQUES	ORTHOPEDIC AND TRAUMA ROBOTIC SYSTEMS	CLOUD	OTHER THERAPEUTIC AND DIAGNOSTIC DEVICES
CRITICAL CARE DEVICES AND SYSTEM	DIAGNOSTIC NUCLEAR IMAGE SYSTEM (PET, SPECT)	MICROFLUIDICS		REHABILITATION SYSTEMS		ADVANCED WOUND MANAGEMENT
	MEDICAL IMAGE ANALYSIS SOFTWARE					
	X-RAY					

BIOEF
www.bioef.org

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biodonostia
biocruces
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CENTER / FACULTY 3
BIOARABA
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Araba

EPO & PCT PATENT APPLICATIONS
7

DESCRIPTION OF THE INSTITUTION

The Basque Foundation for Health Innovation and Research, BIOEF, set up by the Basque Government's Ministry for Health in 2002, has deployed its mission and activities in a two-fold, at the operational level and at a strategic level. BIOEF takes part into the development of plans, programs or strategic initiatives, promotes the gradual structuring of Health´s R&D&I and its professional management, diffuses disseminates the results of these activities and values them, triggers transfer and exploitation of results, and supports the Ministry for Health and Basque Public Health Service-Osakidetza in those topics that are required at all times for the continuous reinvention of health services. BIOEF is the uniquely entity which offers the joint global vision about the R&D&i activity of the Basque Public Health System and their outcomes. For this reason, acts as coordinator of the R&D&i activities of the Basque Public Health System and is a key interlocutor for the business sector attending its collaboration needs with the Health System.

The capabilities and activity in Medical Devices and Digital Health of the Basque Public Health System are centralized in the health research institutes: Biodonostia, Biocruces and Bioaraba, which promote innovation in medical and health technologies to advance in the system's sustainability:

• Biodonostia research is arranged in 7 subject areas: Neurosciences, Gastrointestinal and Liver Diseases, Infectious Diseases, Oncology, Surgery and Other Systemic Diseases, Epidemiology and Public Health Research and Bioengineering Research Area.

• Biocruces has 7 research areas: Primary Health Care, Prevention and Chronic Diseases, Endocrinology and Nutrition, Metabolism and Kidney Disease, Oncology, Autoimmune, Inflammatory and Infectious Diseases, Nervous System Diseases, Innovation in Surgery, Transplantation and Health Technologie and Maternal Child Healthcare and Assisted Reproduction.

• Bioaraba is focused in 8 research areas : Health and Mental Fragility, Cardiovascular Diseases, Sleep Disorders, Respiratory Diseases, Health Services, MAP, and BIGData, Genetics of Rare Diseases, Pharmaceutical Development and System Pathology.

ELECTROMEDICAL DEVICES	MEDICAL IMAGE	IN-VITRO DIAGNOSTIC	LABORATORY EQUIPMENT	ORTHOPEDIC AND REHABILITATION TECHNOLOGY	DIGITAL HEALTH	BIOMEDICAL CONSUMABLES
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b+ocruces
b+oaraba

R&D LINES/GROUPS/ DEPARTMENTS ACTIVE IN MEDICAL DEVICES

No.1
NERVOUS SYSTEM, NEUROLOGICAL DISEASES AND MENTAL HEALTH

New Image and Biomaterial Techniques for the Diagnosis and Treatment of Diseases of the Central Nervous System; Development and Validation of an In Vitro Molecular Diagnostic Test Of Major Depression; Robotic System Development for Passive Rehabilitation of Patients; Vehiculation of Therapeutic Molecules to the Central Nervous System; In Vitro Method and Kit for Patients Who Have Suffered First Psychotic Episode; Triazoles for Muscle Contraction Regulation; Development of a Neurorehabilitator Therapy for Patients with Severe Motor Disability.

No.2
INFECTIOUS DISEASES

Strategic Research and Technological Development in Nanomedicine: Application to Cellular Culture, Diagnosis and Therapy of Infectious Diseases and Cancer and Software Antibiotitherapy.

No.3
ONCOLOGY

Advancing Smart Optical Imaging; Early Detection of Breast Cancer; Development and Characterization of a PET/CT-Guided Biopsy Device; Digitalization of the Image of Pathological Anatomy in the Management of Biobanks; Strategic Investigation and Technological Development of Multifunctional Gold Nanoparticles; In vitro Diagnostics for Cancer Testing; Informatic tool for coordination of cancer patients; Diagnostic Prognosis For Skin Melanoma; Diagnostic Methods and Devices in Oncology; Kits for Biopsy; Development of Software Oncomed and Oncoweb.

No.4
RESPIRATORY DISEASES

Clinical Studies in Patients with Snoring with Mild Sleep Apnea; Diagnosis and Initial Treatment of Asthma in Children; Thermography Cameras; and Ultra-portable Capilar Gasometry.

No.5
LOCOMOTOR AND CONNECTIVE TISSUE DISEASES

Injectable Bone for the Treatment of Fractures; Knee Immobilizer; and Alarm System for Bedside Patients.

No.6
LIVER AND DIGESTIVE DISEASES

Evaluation of Non-Alcoholic Fatty Liver Disease Through Magnetic Resonance; and Development of Point-of-Care system for diagnosis of lactose intolerance.

No.7
CHRONIC AND INFLAMMATORY DISEASES

Development of Personalized Orthopedic Ferules with 3D Technology; Analysis, Monitoring and Optimization Of The Treatment Of Chronic Patients Through A New Bioinformatic Tool; In Vitro Test For Determination Of Drug Levels And Antibodies Against Adalimumab Levels For Monitoring Response To Treatment And Decision Making For Dose Spacing; Development And Validation Of A New Product For The Monitoring Of The Treatment Of Inflammatory Bowel Disease.

No.8
EVALUATION OF HEALTH SERVICES

Viability of Real-Time Identification of Intrarenal Structures by the Laser Technique Known as LIBS; Software Health Economic Balance Scorecard; Serious Game for Surgical CheckList; Blood products traceability device; Image Analysis in Childbirth Induction; Software Tool for Optimization of Operating Rooms Management.

No.9
EFFECTIVENESS OF INTERVENTIONS

A New Genetic Laboratory For Non-Invasive Prenatal Diagnosis; Diagnostic Imaging Strategies in Patients with Stable Angina: Comparative Effectiveness Research of Existing Technologies; Platform to Management In Urgency Services of Hospitals; Prospective Study of a New Dressing to Improve Wound Healing In Pressure Ulcers; Multimedia Triage Course: Generator Of Victims For Triage Training; Cataracts Intervention Software. Other lines: Cardiovascular diseases, Diabetes, obesity and endocrine diseases, Rare diseases and Human development and aging.

No.10
e-HEALTH

Online Platform for Treatment and Intervention In Patients With Schizophrenia; Intelligent Guiding and Monitoring System for Patients With Cardiac Insufficiency; Telematic Monitoring of Respiratory Physiology; Clinical Station Software; A new approach to look for samples across worldwide biobanks; Web Platform for Advanced Processing In Neuroradiology; Advanced Nursing Care Solution; Serious Game for Childhood Obesity.

No.11
PATIENT SAFETY

Biomedical Applications of Nanoglicotechnology and Mass Spectrometry For Clinical Diagnosis and Food Safety; Development of a Robotic Arm For Tracking By Contact Robotic Surgery.

Other lines: Cardiovascular diseases; Diabetes, Obesity and Endocrine diseases; Rare diseases; and Human Development and Aging

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SCIENTIFIC & TECHNOLOGICAL PLATFORMS

Platform 1

UNITS OF RESEARCH AND METHODOLOGICAL SUPPORT (available in most Service Organizations of Osakidetza)
Their main objective is to provide scientific and methodological support to clinical research carried out in Osakidetza. Functions: Help in the design of projects; Assistance in the design of clinical research protocols; Review of scientific reports; Statistical analysis of results; Advice on ethical aspects; and Support in the publication of results.

Platform 2

BASQUE BIOBANK
It is the platform in charge of the management and provision of biological samples and their associated clinical data for their use in research, following the current regulations.

Platform 3

CLINICAL RESEARCH UNITS (available at the three IISs and BIOEF in case of multicentric studies in Osakidetza)
It offers support for Clinical Trials, both with legal, economic and administrative management and with the design of protocol and Case Report Forms, application for authorizations and execution of the trial.

Platform 4

ANIMAL FACILITY (available at IIS Biodonostia and IIS Biocruces)
It provides an overall infrastructure for conducting experimental animal studies, offering specialized advice in the design of experimental procedures, choice of animal model, realization of surgical techniques and support in the realization of various experimental techniques.

Platform 5

CELL CULTURE ROOMS (available at IIS Biodonostia, IIS Biocruces and the Basque Center for Transfusion and Human Tissues)
It provides the facilities and equipment necessary for carrying out work with cell cultures.

Platform 6

CLEAN ROOM FOR CELL THERAPY (available at IIS Biocruces and the Basque Center for Transfusion and Human Tissues)
These rooms are created with the aim of supporting regenerative medicine research and to provide manufacturing processes.

Platform 7

ANALYSIS OF NUCLEIC ACIDS (available at the three IISs)
It offers advice and support in the use of DNA analysis techniques at the genetic and genomic level.

Platform 8

MOLECULAR DIAGNOSIS (available at IIS Biodonostia)
It focuses its services on the molecular study of a wide range of pathologies of genetic origin for patients with clinical manifestations suggestive of hereditary disease, study of carriers for relatives of patients and prenatal study in pairs carrying mutations and / or with family history.

Platform 9

BIOINFORMATIC ANALYSIS (available in IIS Biodonostia and IIS Biocruces)
They offer support in the treatment of the data generated in the research carried out in their respective centers, providing a wide range of data analytic services and tools.

Platform 10

HISTOLOGY (available at IIS Biodonostia)
It offers a wide range of histopathological techniques, including: tissue processing, paraffin and OCT inclusion, cuts of OCT blocks (cryostat), sections from paraffin blocks (microtome), fixation and decalcification, routine and special stainings, immunohistochemical (with antibody set-up) and immunofluorescences (with antibody set-up).

Platform 11

METABOLOMICS AND PROTEOMICS (available at IIS Cruces)
The objective is to provide the equipment, technical assistance and specialized training necessary to carry out the determination of markers defined in congenital errors of metabolism, as well as the search for new biomarkers.

Platform 12

FLOW CITOMETRY (available at IIS Cruces)
The platform provides advice on sample preparation, analysis, design and experimental set-up for the performance of cellular immunophenotypes, cell viability assays, apoptosis analysis, cell cycle analysis, mitochondrial function measurement or cellular proliferation assays, among others.

Platform 13

MICROSCOPY (available at IIS Cruces)
The techniques available include: microscopy with transmitted light techniques, fluorescence microscopy, confocal microscopy, live-cell imaging, microscopy for high-throughput analysis and processing, and image analysis and quantification.

Platform 14

QUANTITATIVE BIOMEDICINE (available at IIS Cruces)
It offers services of signal processing, biomedical imaging and data mining. It works with different biomedical signals / images, from one-dimensional signals (electroencephalography, electrocardiogram, etc.) to more complex signals (such as fmri, DTI, PET, etc.).


BioBasque
The Basque BioRegion

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GRUPO spri TALDEA

BASQUE HEALTHCLUSTER

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