

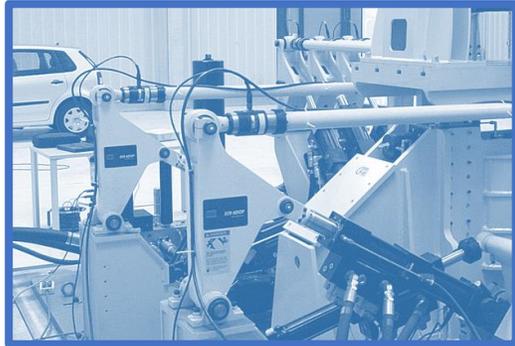
**Nafarroako
Gobernua**

Bruselako Ordezkaritza



**Gobierno
de Navarra**

Delegación en Bruselas

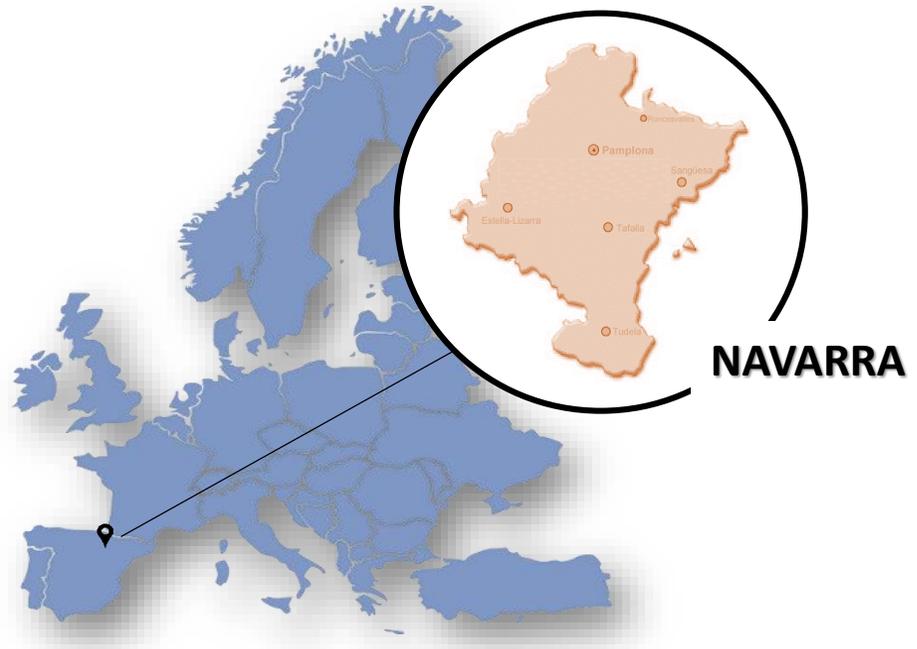


Navarra Innovation System

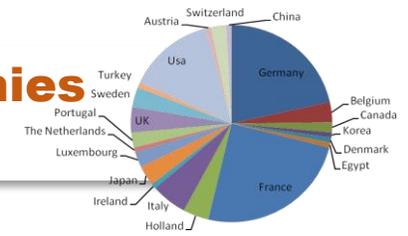


NAVARRA/NAFARROA IN EUROPE

The **Comunidad Foral de Navarra**, is located in the North of Spain. It is bordered, to the east, by the regions of Aragon and La Rioja, and to the northwest by the Basque Country.



Over 125 multinational companies from 20 different countries



Pamplona/Iruña is the capital of the region.

NAVARRA IS IN:

19TH

PLACE AMONG THE 271 EUROPEAN REGIONS, WITH THE HIGHEST LEVELS OF QUALIFIED PEOPLE IN SCIENCE AND TECHNOLOGY

MORE THAN 125
Foreign multinational companies located in Navarra

640.000
People live in Navarra

197.000
People are resident in Pamplona

10.391
Square kilometres of territory

GENERAL OVERVIEW – INFRASTRUCTURES and LOCATION



Automotion and Mechatronics

- Noáin
- Pamplona
- Estella
- Cordovilla
- Los Arcos

Food Chain

- San Adrián
- Villava
- Mutilva

Renewable Energy and Resources

- Sarriguren
- Sangüesa
- Aoiz

Health

- Pamplona

Universities

- Pamplona
- Tudela

Technology Corporation

Navarra Innovation System



- **6 TECHNOLOGICAL CENTRES**

Non profit innovative institutions focused on development of technology to be deployed in industry.

- **3 RESEARCH CENTRES**

Non profit R&D institutions focused on generating new knowledge.

- **2 UNIVERSITIES**

High level academic institutions focused on teaching but also on basic scientific research activity.



Automotion and Mechatronics



Food Chain



Renewable Energy and Resources



Health





















Automotion and Mechatronics



Food Chain



Renewable Energy and Resources



Health



At the forefront of the Industry

- Non-profit private organization, founded on 1963
- 120 members from all sectors (large multinationals and SME 's)
- Accredited as Technology Center & Industrial Transformation Cluster
- Most innovative technologies to increase the competitiveness of the companies



ADVANCED SURFACE ENGINEERING

- Advanced tribology
- Coatings and intelligent materials
- Biomaterials
- New sources of energy
- Nanoparticles and nanocomposites

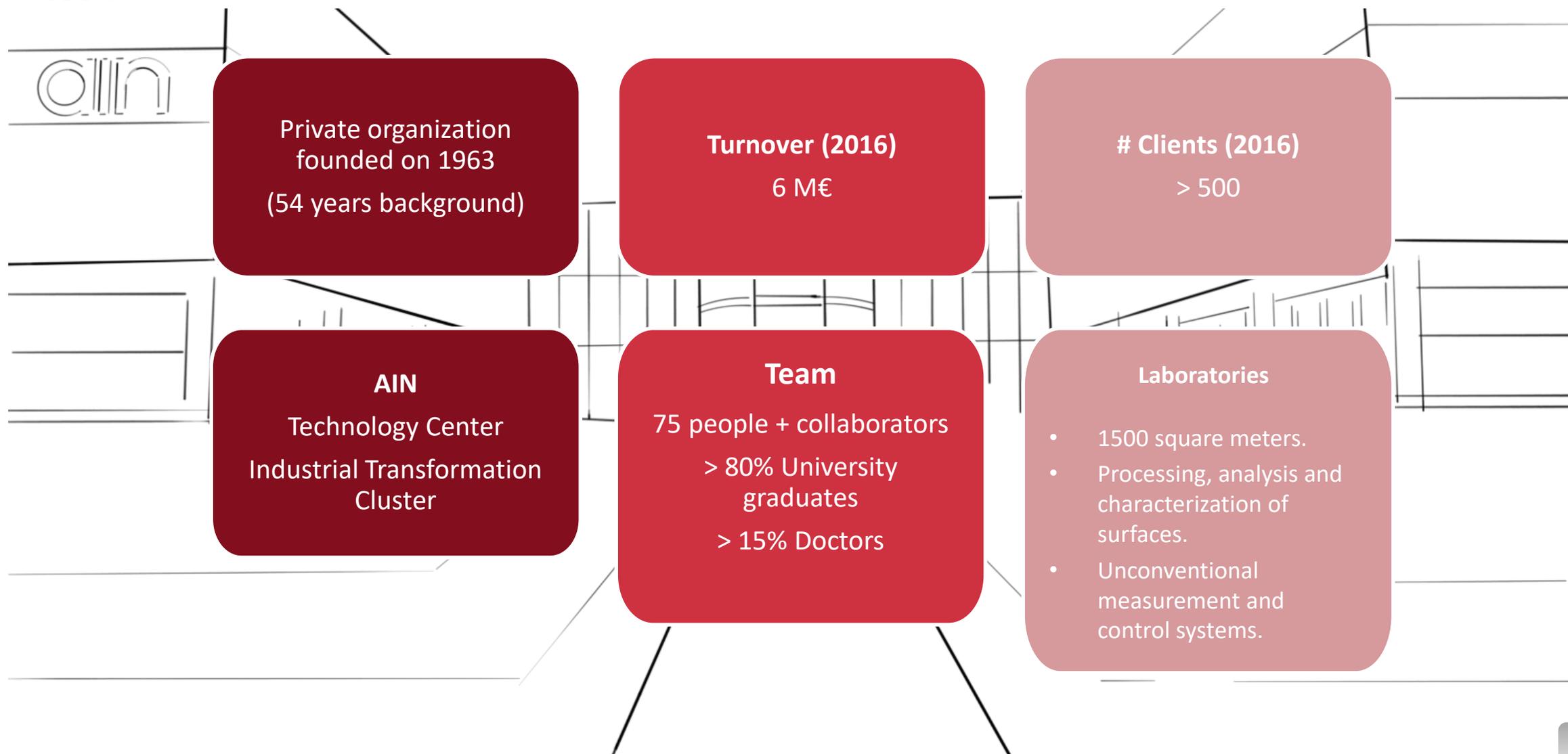
ICT – MECHATRONICS

- Vision and intelligent systems
- Predictive Maintenance
- Systems for measurement, control and communications, remote sensing

ADVANCED ENGINEERING

- Integrated project management (turnkey)
- Industrial plant projects
- Environmental technical assistance
- Audits and energy efficiency studies
- Studies on renewable energy and cogeneration





ADitech



Need of reducing environmental impact related to water management in the subsectors with highest water consumption through effective demonstration.

Modelling, Measurement and Improvement of the water management environmental impact in the food industry.

Reduction of water consumption.

Objectives:

- 30% at meat industry
- 26% at juice industry
- 25% at canned vegetables industry



LIFE MCUBO
 LIFE15
 ENV/ES/000379



Developing an **energy-friendly climate-control system** for electric vehicles capable of reducing of at least 50% the energy used.



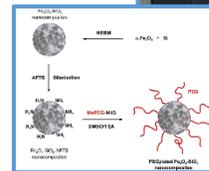
This hybrid combination is possible thanks to an innovative and highly compact **three-fluid-combined membrane contactor** that works simultaneously with air, desiccant solution and refrigerant.

EC Call: H2020-GV-2014 | Budget: 4,6M€



Heat DDeliver

Heat and Drug Delivery nanosystem with active tumour targeting features.



Objective:

Development of a "drug delivery" system based on magnetothermic properties of superparamagnetic nanoparticles for tumour treatment.



LoCoLite

An industry system enabling the use of a patented materials processing technology for Low Cost forming of Light Weight structures for transportation industries.

This has been achieved by exploiting a new patented thermo-mechanical processing technology (HFQ) for sheet aluminium alloy that enables, for the first time, parts in heat treatable alloys to be produced to net-shape with maximum attainable mechanical properties.



Multidisciplinary Centre of Technologies for Industry
(www.cemitec.com)

Our knowledge and expertise continuously adapt to market needs



MISSION

Competitiveness enhancement by developing R&D projects, technological services and other innovation encouraging activities for companies.

TECHNOLOGY TRANSFER

Projects and Technological services to clients, privately funded.

KNOWLEDGE GATHERING

Projects that allow us to be at the vanguard of new emergent technologies and to define our own research lines. Besides, they are the ground for further product development, commercialised via ITBCs.

Projects funded by regional, national and European administrations.



1. Electronic product development

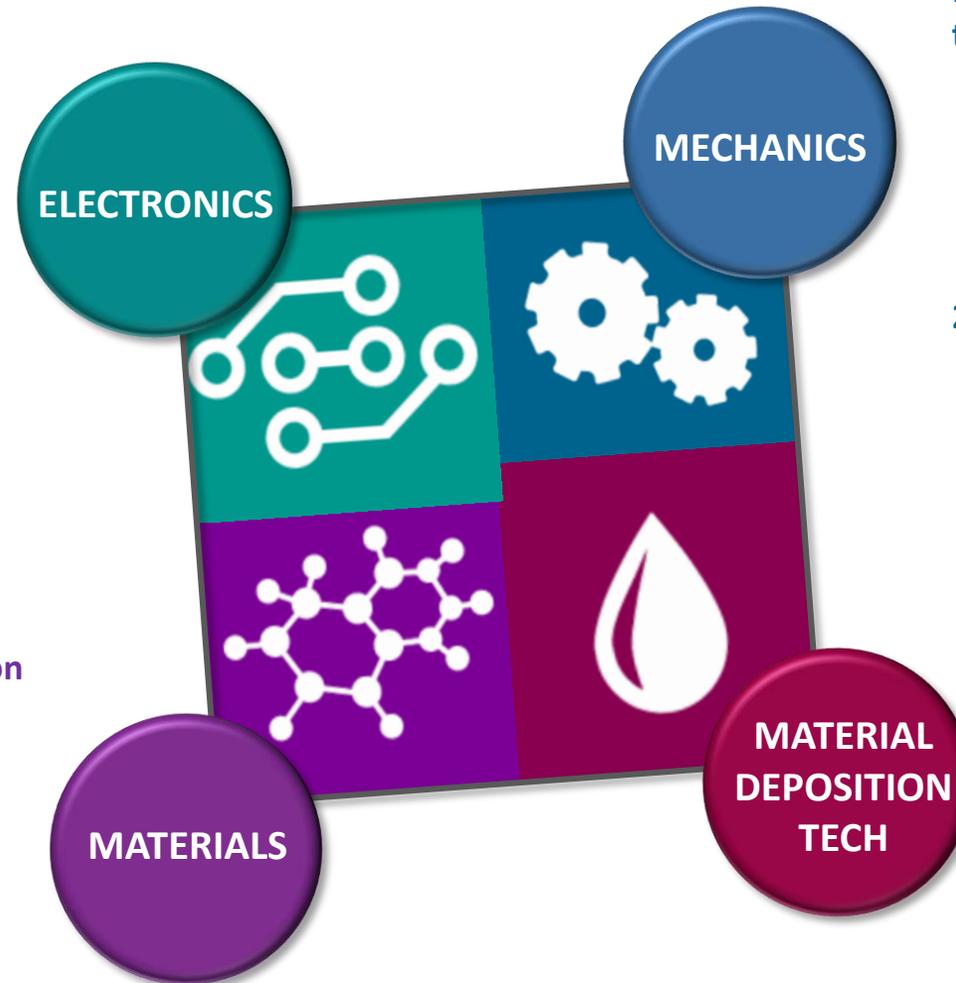
Hardware
Software
Control

2. Testing and assessment for electronic product CE Marking

1. Assessment and technological services on materials (metallic, polymeric, coatings...)

2. Development of functional materials:

Functional inks.
Nanocelluloses and other nanomaterials.
Functional paints and coatings.
Functional polymers and composites.



1. Design, analysis & optimisation of structural and thermo-fluid components/ systems

Structural components and systems
Heat & Cold transfer technologies
Chemical Engineering
Fluids & Micro-fluids
Predictive analysis

2. Structural tests/ NVH

Structural tests (fatigue and durability)
NVH tests
Environmental tests

1. Functional printing:

Printed electronics.
Intelligent packaging.
Printed biosensors.

2. Nanofabrication:

Periodic nanostructures.
Continuous nanoimprint.
Optical biosensors.

BUDGET

➤ **5.1 Million Euro (2017)**

TEAM

➤ **75 professionals**

INFRASTRUCTURES

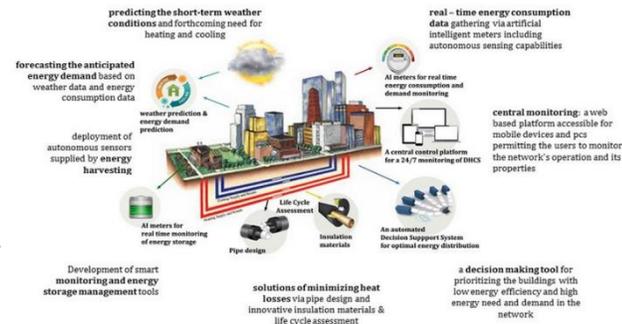
- **Electronic product development Laboratory**
- **Testing and assessment for electronic product CE Marking Laboratory**
- **Computer facilities and test benches for Design, analysis & optimisation of structural and thermo-fluid components/ systems**
- **Structural tests/ NVH test benches**
- **Laboratories for assessment and technological services on materials**
- **Laboratory for the development of functional materials based on nanotechnology**
- **Functional printing laboratories and pilot plant**
- **Nanofabrication laboratory**

InDeal

Innovative Technology for District Heating and Cooling

InDeal Offers a hollistic solution.

The target of InDeal is to automate current District Heating and Cooling Systems in order to achieve increase of the overall energy efficiency of the system and fairly distribution of heating and cooling based on energy demand of each building and their energy efficiency level by prioritizing the distribution of heating or cooling to buildings with low energy efficiency and maximum energy demand.



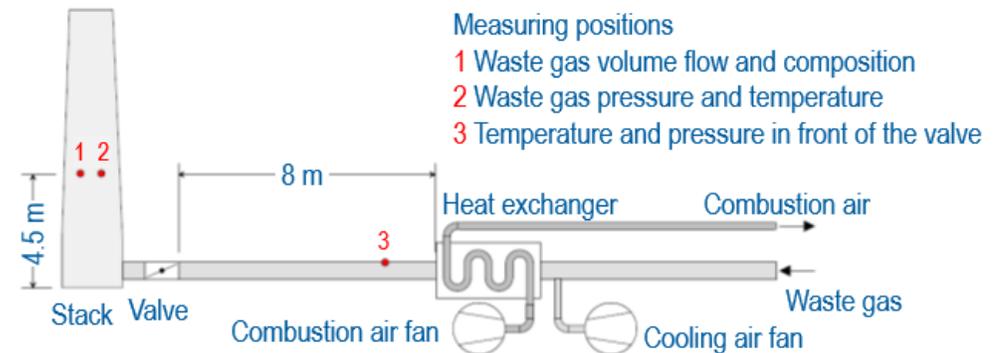
EU Call: EE-13-2015



PowGETEG

Power generation from hot waste gases using thermoelectrics.

The possibilities of thermoelectric (TE) power generation using industrial gaseous waste heat at temperatures well above 550 °C will be determined in the PowGETEG project.



EU Call: RFSR-CT-2015



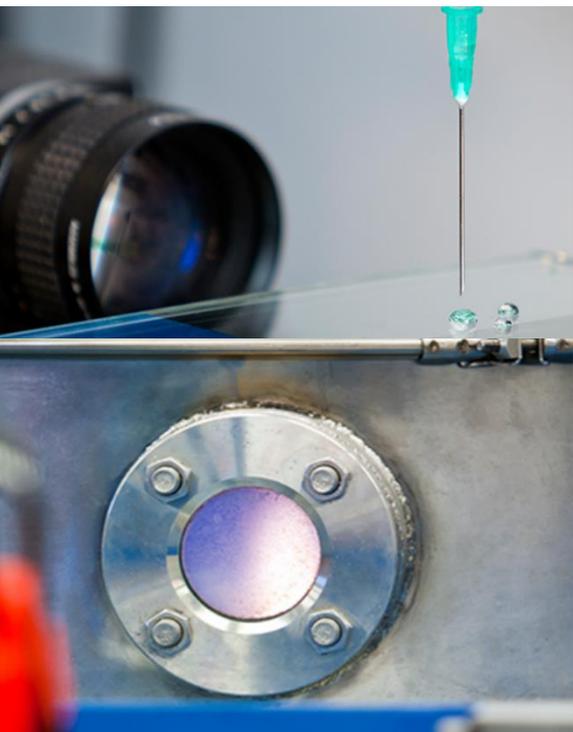
Lurederra Technological Centre (www.lurederra.es)

L´Urederra is a technological center that carries out research and applied technological development activities in the fields of nanotechnology, new materials and advanced environment.

- ✓ Commitment
- ✓ Innovation
- ✓ Professionalism
- ✓ Confidentiality

“Making Future”





Research Areas

- **Nanotechnologies** focused on the design of their own technology to manufacture totally synthetic nanoparticles.
- **New materials** for improvement of their features, looking for solutions to improve, among others, their mechanical properties (abrasion, breaking load, fireproofing), to improve procedurability by means of substituting some materials by others.
- **Management and recovery of waste** and it presents his work in this line focused on waste minimization, proper management of waste generated as well as the development of new proposals for recovery and use thereof.





(34) Researchers

(>40) Projects
with companies

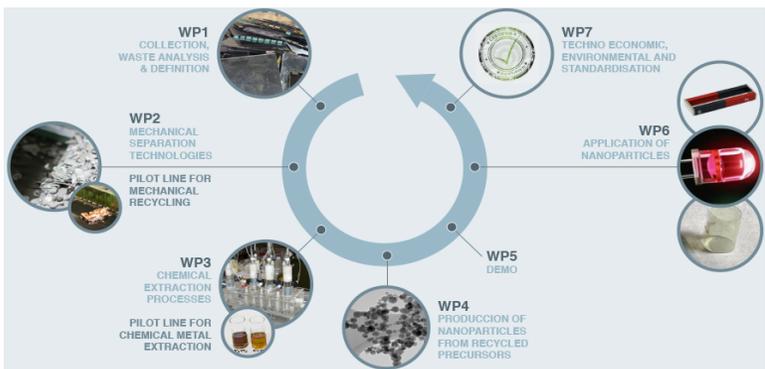
(12/3) EU projects/
coordinating

SPIN OFF (3/12) Patents/
new products

(860k€) Invoicing



Development of recovery processes for recycling of valuable components from Flat Panels Displays (In, Y, Nd) for the production of high added value NPs.

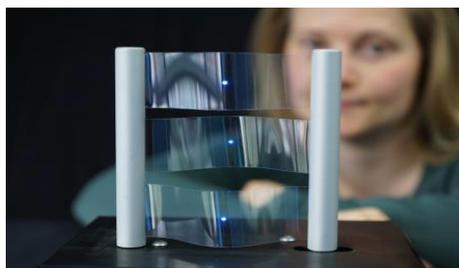


Coordinator entity: LUREDERRA

<http://www.recyval-nano.eu>



INFINITY will develop an inorganic alternative to a scarce and high cost material, indium tin oxide (ITO), currently used as a Transparent Conductive Coating (TCC) for display electrodes on glass and plastic substrates.

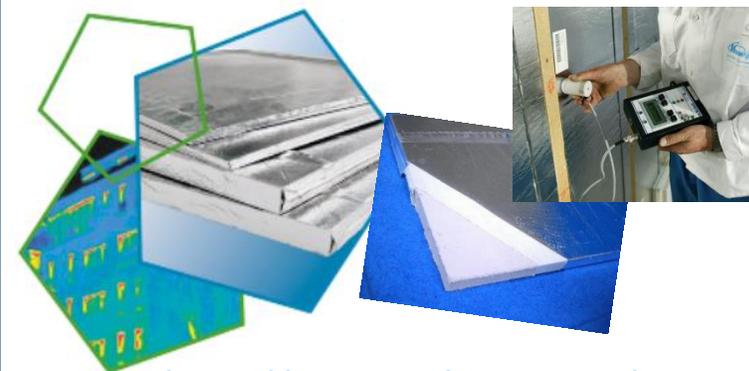


Flexible display technology is growing rapidly with great interest in TCO based coatings.

<https://infinity-h2020.eu>



INNOVIP Consortium will reinvent the top-of-the-line insulating material vacuum-insulation-panels (VIP) by improving their thermal performance over the entire lifetime by at least 25 % and making VIPs adjustable, mountable and machineable.



<http://innovip-h2020.eu/>





Automotion and
Mechatronics



Food Chain



Renewable Energy
and Resources



Health

ain
ADitech

cemitec
ADitech

Lurederra
centro tecnológico
ADitech

CNTA®
ADitech

INTIA
Tecnologías e Infraestructuras Agroalimentarias

IdAB
Instituto de Agrobiotecnología
Agrobioteknologiako Institutua

CENER
ADitech

cima
UNIVERSIDAD DE NAVARRA
ADitech

NAVARRABIOMED
FUNDACIÓN MIGUEL SERVET
ADitech

upna
Universidad
Pública de Navarra
Nafarroako
Unibertsitate Publikoa

Universidad
de Navarra

The Institute of Agrobiotechnology (www.idab.es)

IdAB is a mix center between the National Scientific Research Council of Spain/Consejo Superior de Investigaciones Científicas (CSIC), the Public University of Navarra (UPNa), and the Government of Navarra. The research deals with aspects related to biotechnology applied to agronomy, agrofood and infectious diseases.

To generate and develop basic cutting-edge knowledge within a universal scope which may eventually **meet social demands in the field of agricultural science** through the use of biotechnological tools.

Terms such as “molecular biology”, “microbiology”, “immunology”, “biochemistry” and “-omics techniques” are closely tied in with our mission.

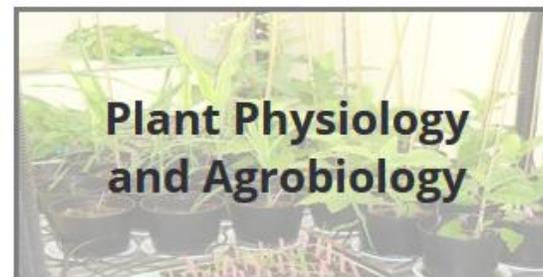
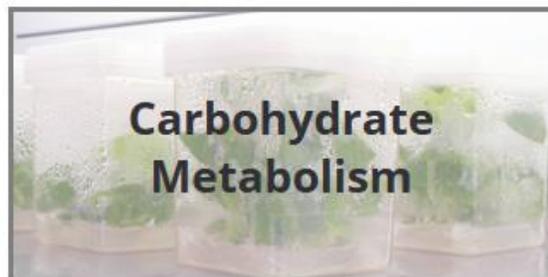
“Agrobiotechnology” is our hallmark.



Microbial Biotechnology



Plant Biotechnology



76
44% PhD

Researchers

45

Contracts

> 2M€

EU projects revenue

4 spin offs

iden
biotechnology

RECOMBINA
BIOTECH

BRUCELLA
GREEN VAC

Bioinsectis

ReguloBac-3UTR

High-throughput in vivo studies on post-transcriptional regulatory mechanisms mediated by bacterial 3'-UTRs.

Examples of 3'UTRs belonging to physiologically important genes will be selected to deeply study regulatory mechanisms at the molecular and single cell levels.



New breeding criteria applied to durum lines within a Climate Change context.

Funded by:
AGL2016-79868-R



Adaptive evolution, pathogenesis and host subversion by *Haemophilus influenzae* in the COPD lung: identification, characterization and evaluation of antimicrobial therapeutics.

Funded by:
SAF2015-66520-R



POISE

Phytopathogens: a good opportunity to improve crop yields and quality under changing environmental conditions.

IRUEC

Towards a multi-approach study focused on Improving Resource Use Efficiency in Cereals under Climate Change.



Agro technologies and infrastructures (www.intiasa.es)

INTIA is a public company, attached to the Department of Rural Development, Environment and Local Administration, integrated in the Corporación Pública Empresarial de Navarra (CPEN).



Mission: transfer and innovation in the agro sector to help improve both viability and sustainability, maintain a lively rural environment while respecting the environment and offering quality food to society.



Activities

- Direct technical assistance to companies, farms and professionals in the agri-food sector
- Services tailored to the client's needs
- Experience and deep knowledge of the reality of the sector
- Advanced, realistic and cost-effective solutions
- Advice with the guarantee that relies on a powerful network of experimentation and own innovation
- Professional services specialized in all agri-food sectors
- Multidisciplinary work teams that allow to approach the complete and integral projects
- Access to a powerful network of national and international alliances and partnerships





in 2017

- **39** researchers
10% PhD
- **>70** contracts
with companies
- **597k€** EU
Revenue
- **5,6M€**
Turnover

www.intiasa.es

SME ORGANICS

Interreg Europe

EC proposal for an Action Plan for Organic Food and Farming encourages regions to find the most adequate policy and funding mix to support the development of the regional organic sectors.

Enhancing SME competitiveness and sustainability in the organic sector

The overall objective of SME-ORGANICS is to improve policies and programmes under the Investment for Growth and Jobs goal in order to enhance the competitiveness and sustainability of SMEs in the organic sector



AGROintegra

LIFE AGROintegra brings to the agri-food sector the most innovative IPM techniques through practical demonstrations that allow farmers to see first hand their technical and economic feasibility.

Pests monitoring and warning system

Pests risks alerts

Development of the DST (Decision Support Tool)

Advising Tool on Integrated Pest Management

Culture guides

Culture and Integrated Pests Management Guides

AGROintegra will provide its tools and the protocols of action.



smart AKIS

Smart Farming Thematic Network

Smart Farming represents the application of modern Information and Communication Technologies (ICT) into agriculture, leading to what can be called a Third Green Revolution.

3 interconnected technology fields addressed by Smart AKIS Network:

- ✓ Management Information Systems
- ✓ Precision Agriculture, including Decision Support Systems
- ✓ Agricultural automation and robotics



LifeRegen Farming

An alternative for sustainable agro-livestock management and soil improvement.



The main objective of the project is to demonstrate, under different agroclimatic and livestock systems conditions, the viability of an innovative pasture management system based on the regenerative agriculture principles and its environmental effectiveness, as well as to dissemination and transfer the obtained results.



National Centre for Technology and Food Safety (www.cnta.es)

Private non-profit association established by 272 companies*

**Our purpose is to
improve the
competitiveness and
quality of the food
industry**



LINE 1. Food Ingredients:

Value-added fractions and compounds. Micro-nano-encapsulation. Bioactive ingredients

LINE 2. Development of new products, processes and packaging.

Starting from design to industrial processing and packing.

LINE 3. Novel food processing:

Application of novel technologies for developing new products or improving the quality of the existing ones (HPP, PEF, RF, etc).

LINE 4. Industrial Microbiology:

Fermented foods, microorganisms as biofactories (Food systems and bioreactors). Microbial ecosystems optimization.

LINE 5. Sustainable Food Production:

Strategies to minimise food waste and/or limit losses. Valorization of by-products.



1,9 M € Return of 6 UE projects in last 4 years

20 Knowledge gathering Projects

53 R&D Project with companies

66 Training activities

56.800 Technical reports to companies

272 + **591** = **863** companies
members customers trusting in CNTA

Headquarters in Navarra, Spain Branch in Peru

2016 data



120
professionals
70%
women



hipster-project.eu

Combined **high pressures processing with temperature** to achieve more sustainable food, safer, with a longer shelf life and with better sensory and nutritional **quality**.



resfood.eu

Maximise resource productivity and **recycling and re-use of valuable materials** by research and demonstration of the proposed green solutions.



BIOSEA

Validation and scale-up a complete production process of **ingredients from** the lipid, protein, carbohydrates and minority compounds fractions from **algae**, using cascading biorefinery approach.





Automation and
Mechatronics



Food Chain



Renewable Energy
and Resources



Health



National Renewable Energy Centre of Spain (www.cener.com)

CENER is a centre of excellence in the renewable energies field with international outreach.

INFRASTRUCTURES



Built in 2004 in line with bioclimatic and environmental criteria. They contain testing and characterization laboratories for several research areas.

CENER Headquarters



A unique infrastructure in the world both in terms of size and the power of the machinery it is capable of testing, as well as in terms of the extensive variety of technological services it offers.

Wind Turbine Test Laboratory



Infrastructure aimed at the installation of prototypes of wind machines. It is suitable for certification tests in complex terrain conditions and with high wind levels.

Experimental Wind Farm



Designed as a demonstration pilot plant and as a test bench for different technologies: power generation, energy storage and control systems.

Microgrid



México and Sevilla Offices



Its main objective is to be a semi-industrial pilot scale test facility able to develop 2nd generation biofuel production processes.

Biorefinery Center





CENER

ADItch

ACTIVITIES

Nafarroako
Gobernua
Bruselako Ordezkaritza



Gobierno
de Navarra
Delegación en Bruselas

www.cener.com





CENER

ADItch

CENER IN A SNAPSHOT

Nafarroako
Gobernua
Bruselako Ordezkaritza



Gobierno
de Navarra
Delegación en Bruselas

www.cener.com

WELCOME TO THE ENERGY OF KNOWLEDGE

148

12% PhD
Researchers

6,2

M€ Invoicing

10

Patents

24,1

M€ EU Revenue

74

European Projects

9

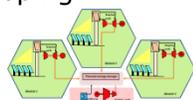
Coordinated
EU Projects

ADitech

www.cener.com



Competitive Solar Power Towers (CAPTure) project is to increase plant efficiencies and reduce levelized cost of electricity by developing all relevant components that allow implementing an **innovative plant configuration**.



Leader CENER. Partners: Bluebox Energy, CEA, EDF, EUREC, FCT, Fraunhofer, IK4-Tekniker, PSA, TSK-Flagsol, SAMSON, QuerDenkFabrik, HAVEN& BOECKER.

Call H2020-LCE-2014-1. <http://capture-solar-energy.eu/>



EU-GUGLE aims to demonstrate the feasibility of nearly-zero energy building renovation models in 6 pilot cities in view of triggering large-scale, Europe-wide replication in smart cities and communities by 2020.

Leader CENER. Partners: Cities of Milan, Tampere, Aachen, Vienna, Sestao, Bratislava, Gothenburg, Gaziantep and Plovdiv. VTT, Politecnico Milano, Greenovate, BOKU, EVE, Gegowe, EnergyKomm, TSUS

Call H2020-LCE-2014-1. <http://capture-solar-energy.eu/>



Closed Loop Wind Farm Control (CL-Windcon) project works on new innovative solutions based on wind farm advanced control algorithms which will enable to treat the entire **wind farm as a unique integrated optimization problem**.

New European Wind Atlas project intends to update the state of the art in wind atlas using the best model chain, validation dataset and computational resources.

www.clwindcon.eu

www.neweuropeanwindatlas.eu



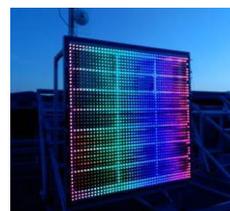
Next Generation Bio-butanol will develop highly efficient production processes and convert sustainable feedstocks for the next generation of biobutanol.

Leader GreenBiologics. Partners: Técnicas Reunidas, CENER, Zabala Innovation Consulting, Universidad de Castilla-La Mancha, Dyadic Nederland BV, C-TECH Innovation Limited, E4tech, VITO, Greenovate! Europe

www.butanext.eu/



Development and demonstration of flexible multifunctional ETFE module for architectural façade lighting. The aim is to provide a PV module + LED integration to be used in ETFE textile architecture for BIPV applications.



Leader ITMA. Partners: CENER, Acciona Infraestructuras, Greenovate!, Belectric OPV, Taiyo Europe.

<http://etfe-mfm.eu/>



STORY

Added value of storage in distribution systems is an European project demonstrating new energy storage technologies and their benefits in distribution systems. It consists of 8 different demonstration cases each with different local/small-scale storage concepts and technologies, covering industrial and residential environments.

Leader VTT. Partners: Actility, B9Energy, Basen, Beneens, CENER, Elektro Gorenjska, EnerSys, ExKal, Joanneum Research, Loptafilm, Prospex Institute, UC Leuven, Think E, University of Ljubljana, Viessmann, Vito, Vlerick School.

Call H2020-LCE8-2014. <http://horizon2020-story.eu/>



Automation and Mechatronics

ain
ADitech

cemitec
ADitech

Lurederra
centro tecnológico
ADitech



Food Chain

CNTA
ADitech

INTIA
Tecnologías e Infraestructuras Agroalimentarias

IdAB
Instituto de Agrobiotecnología
Agrobioteknologiako Institutua



Renewable Energy and Resources

CENER
ADitech



Health

cima
UNIVERSIDAD DE NAVARRA
ADitech

NAVARRABIOMED
FUNDACIÓN MIGUEL SERVET
ADitech

upna
Universidad Pública de Navarra
Nafarroako Unibertsitate Publikoa

Universidad de Navarra

Center for Applied Medical Research (www.cima.unav.edu)

CIMA (Center for Applied Medical Research) is the result of fifty years' research experience in the **University of Navarra**. CIMA brings together the expertise of the School of Medicine and the University Hospital (Clinica Universidad de Navarra), as well as the Schools of Science and Pharmacy and the Center for Research in Applied Pharmacobiology. CIMA's strategic linkage with the University Hospital provides a unique synergistic effect for translational research with a focus on **solving unmet medical needs**.

Around 300 professionals from over 20 countries in Europe, Africa, America and Asia work in CIMA in cooperation with other international centers.

As a result, over a hundred articles are published each year in specialized journals.





VERTICAL PROGRAMS

- **Hepatology**
Director, Dr. Matías Ávila Zaragoza
- **Solid Tumors and Biomarkers**
Director, Dr. Rubén Pío
- **Hematology-Oncology**
Director, Dr. Felipe Prósper
- **Neuroscience**
Director, Dra. Isabel Pérez-Otaño
- **Cardiovascular Disease**
Director, Dr. Javier Díez



INTERDISCIPLINARY PROGRAMS

- **Immunology and Immunotherapy**
Director, Dr. Juan José Lasarte
- **Gene Therapy and Regulation of Gene Expression**
Director, Dra. Gloria González
- **Cell Therapy**
Director, Dr. Felipe Prósper
- **Molecular Therapies**
Director, Dr. Julen Oyarzabal



TECHNOLOGICAL PLATFORMS

- **Genomics**
Manager, Dra. Lourdes Ortiz Hernández
- **Proteomics**
Director, Dr. Fernando José Corrales Izquierdo
- **Bioinformatics**
Director, Dr. Fernando José Corrales Izquierdo
- **Imaging**
Director, Dr. Carlos Ortiz de Solórzano Aarusa
- **Cytometry**
Manager, Dr. Bruno David Lourenco Paiva
- **Biobank**
Director, Dra. María Antonia Fortuño Cebamano
- **Animal Production and Experimentation**
Director, Dra. Elena Ciordia

In order to promote patient-centered biomedical research, coordinate all the agents involved in the research projects and optimize the unique opportunities that the biomedical campus of the University of Navarra offers, CIMA and Clínica Universidad de Navarra have established the

MULTIDISCIPLINARY TRANSLATIONAL RESEARCH TEAMS (EMIT).

One of the functions of CIMA is to contribute **knowledge to society and of encouraging innovation and development**, in order to find solutions to medical problems that currently have no satisfactory treatment. To this end, CIMA works together with biopharmaceutical companies and other institutions to link skills and resources.

Products

4 products in
clinical
research

Spin-off

5 spin-off
companies

Patents

88

Registered worldwide

Diagnostic	16
Small molecules	27
Other	4
Therapeutic proteins	23
Cell therapy	2
Gene therapy	16

{912}

- Around **300** research scientists
- **44%** PhD holders
- Turnover: **21.4M€**

2016 metrics

- **21** Int'l projects active
- **€1.2M** in active **H2020** projects
- **€0.4M** in Int'l non-EU projects
- **€10.8M** in active Nat'l projects
- **€8.6M** in **contract research**

ADItch

CANCERLINC

Functional and Mechanistic Roles of Large Intergenic Non-coding RNAs in Cancer.

Objective: The goal of CANCERLINC is to decipher the functional and biological roles of lincRNAs in the context of oncogenic pathways to better understand the cellular mechanisms of gene regulation at the epigenetic and non-epigenetic levels, and be able to implement lincRNA use for diagnostics and therapies.

www.cima.unav.edu



Professional cross-priming for ovary and prostate cancer.

Objective: PROCROP aims to develop in three pilot clinical trials a suitable individualized cancer vaccine technology for castration resistant prostate cancer and metastatic cancer of the ovary that would complement currently available therapies to increase efficacy.



Augmenting PBGD expression in the liver as a Novel Gene therapy for Acute Intermittent Porphyria.

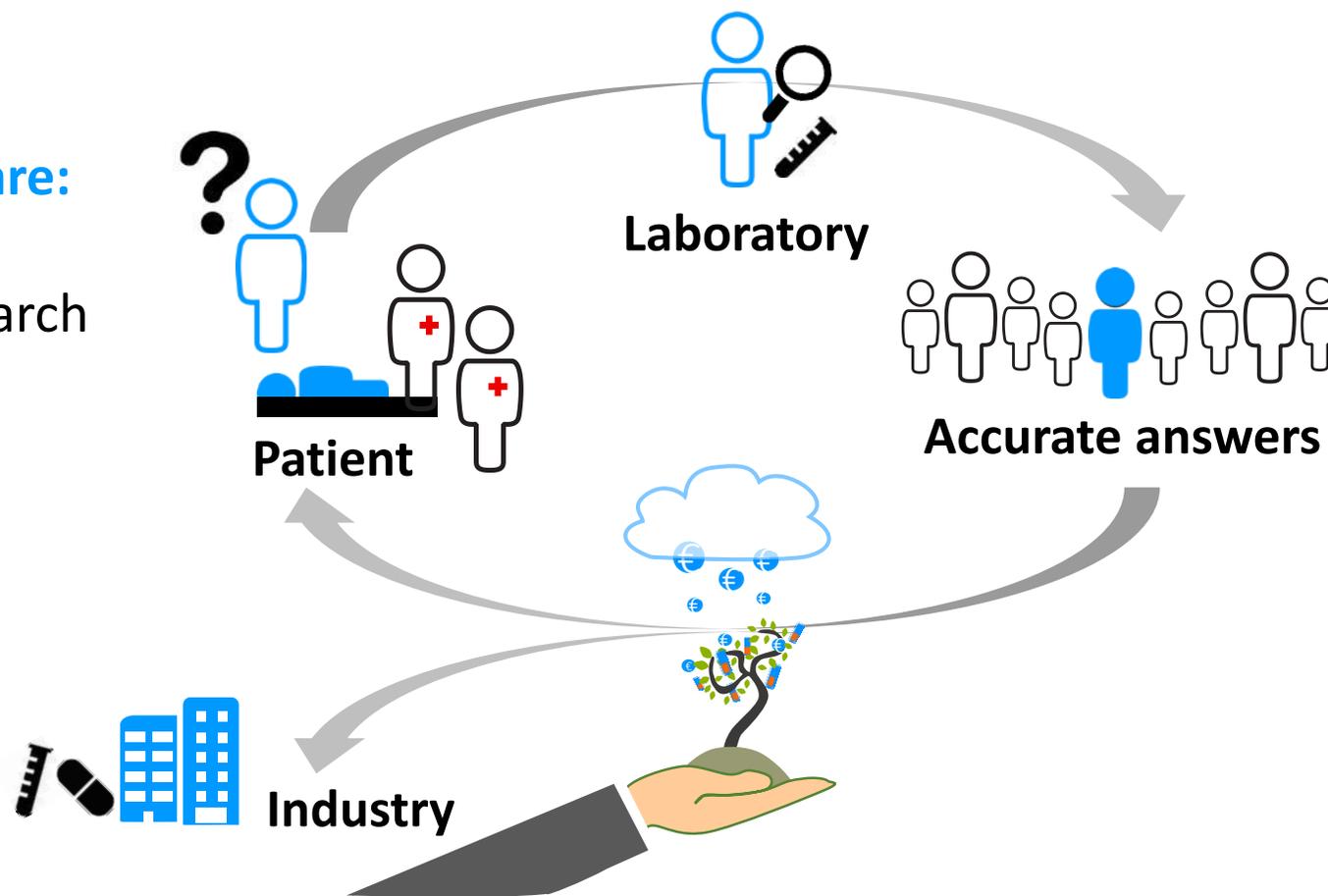
Objective: Acute intermittent porphyria (AIP) is a rare genetic disease. AIPGENE will develop a GMP-compliant process to produce AAV5-AAT-PBGD. The project will determine the clinical criteria to select patients for gene therapy. Finally, its safety and efficacy will be tested in a clinical phase I/II trial.

Biomedical Research Centre of the Health Service of the Government of Navarre
(www.navarrabiomed.es)

Navarrabiomed is a biomedical research centre, created in 2013, whose mission is to discover and advance knowledge for sustaining a public health service of excellence and translating basic science into economic prosperity for Navarre.

The Centre's other main strategic goals are:

- to engage medical practitioners in research
- to provide advanced training to young scientists and practitioners
- to attract talent to our region



- Research at Navarrabiomed is dedicated to a broad range of fundamental problems in biomedicine such as **oncology, neurology, cardiology, immunology, infectious diseases, frail elderly and human genome disorders.**
- Navarrabiomed provides internal core facilities to the researches in **Proteomics, Bioinformatics and Tissue Bank.** It also provides administrative support (human resources, project management, finance, communication) to proactively support the internal researches and also all the researches of the Public Health System of Navarra.
- The center gathers **more than 50 young motivated and creative scientist** at the end of 2016. The objective is to double the number of scientist in the next two years.



CURRENT DATA OF THE ENTITY (2016):



Researchers

>50



PhD

28

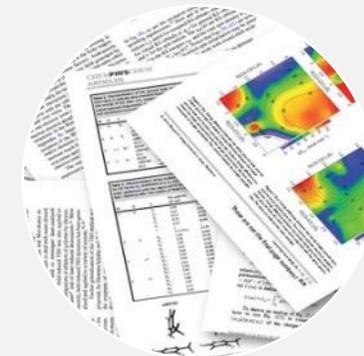


EU Projects

INTERREG

FP7

H2020



Papers

395



www.navarrabiomed.es

Refbio II

2016
2018
PYRENEES BIOMEDICAL NETWORK

PROJECT : 2nd Phase of a collaborative Trans-Pyrenean Research network in Biomedicine between Regions in Spain and France.

ROLE : Leading Partner of a Project Consortium with 9 Partners.

BUDGET : 554.108 €, whereas 65% is financed by ERDF (EU-INTERREG-POCTEFA).

DURATION : 36 Months.
Starting date 01/07/2016



Interreg Sudoe

ONCONET SUDOE

PROJECT : Research Network for Translational Oncology between Regions in France, Spain and Portugal.

ROLE : Beneficiary in a Consortium with 7 Partners coordinated by Université Toulouse III Paul Sabatier.

BUDGET : 388.385 €, whereas 75% is financed by ERDF (EU-INTERREG-SUDOE).

DURATION : 36 Months with Project start 01/07/2016



FIBRO TARGETS

PROJECT : Collaborative European Transnational Project targeting cardiac fibrosis for heart failure treatment.

ROLE : Beneficiary in a Project Consortium consisting of 11 Partners coordinated by INSERM (France).

BUDGET : 358.658 € financed by European FP7.

DURATION : 48 Months with Project start 01/09/2013

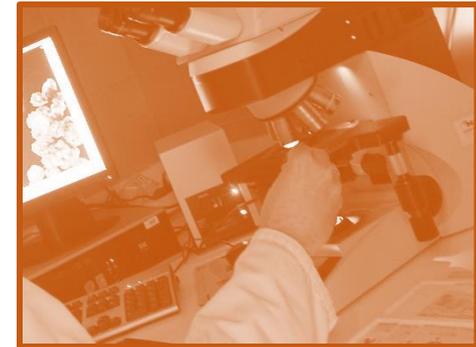
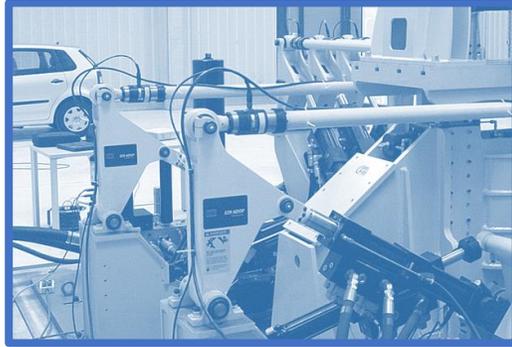


NAGEN

PROJECT : The *Navarra Genome Project* is a new initiative under preparation, that aims to sequence complete genomes from patients with rare diseases or cancer derived from possible genetic origin.

ROLE : Leading Partner with supporting partners *Centro Nacional de Análisis Genómico* and the *Clinical Bioinformatics Research Area* of the *Andalucia Health and Progress Foundation*.

Strategic proposal to be launched.



UNIVERSITIES



Automotion and Mechatronics

ain
ADitech

cemitec
ADitech

Lurederra
centro tecnológico
ADitech



Food Chain

CNTA[®]
ADitech

INTIA
Tecnologías e Infraestructuras Agroalimentarias

IdAB
Instituto de Agrobiotecnología
Agrobioteknologiako Institutua



Renewable Energy and Resources

CENER
ADitech



Health

cima
UNIVERSIDAD DE NAVARRA
ADitech

NAVARRABIOMED
FUNDACIÓN MIGUEL SERVET
ADitech

upna
Universidad
Pública de Navarra
Nafarroako
Unibertsitate Publikoa

Universidad
de Navarra

The Public University of Navarre was set up in 1987 by the Parliament of Navarre.

2 CAMPUSES

ACADEMIC COURSES

- **18 official degrees + 3 double degrees**
- 9 International programmes
- 30 Master degrees adapted to the EEES
- 13 Doctorate programmes
- 12 Own degrees



Pamplona
(capital of Navarre)



Tudela
(2th city of Navarre)

INTERNATIONAL ACTIVITIES

- **300 bilateral agreements** with international institutions of more than 50 countries
- First position among Spanish Universities offering degrees in English
- EBRoS (European Bioregion of Science) Western Pyrenees.

HUMAN RESOURCES

- Students: 8,200
- Teaching staff: 900
- Administration & services staff: 450
- **Graduates: 32,000**



Research, Innovation and Knowledge Transfer is based on the foundations of Research Institutes, Research Groups and Collaborative Research Centres



- Sensors and sensor networks
- Information technology and communications
- Energy
- Big data
- Enabling systems



- Analysis of organizations and business strategy
- Economic analysis of markets
- Analysis of Public Policies



- Consumer: the challenge of food in the 21st century
- Sustainable production and food quality
- Agri-food innovation



Synthesis and preparation of new materials and study of their properties in macroscopic dimensions, thin films and nanometric structures, applied to:
 Energy / Health / Environment

RESEARCH INSTITUTES

**COLLABORATIVE
 RESEARCH CENTRES**



**RESEARCH
 GROUPS**

- Basic & Health Sciences: 32 groups
- Social & Human Sciences: 27 groups
- Engineering & Technology: 26 groups
- Economics & Law: 21 groups

www.unavarra.es

in 2016

66 new publicly funded projects
valued at **4,4 M€**

Has signed **142 research contracts**
valued at **1,7 M€**

Has applied for **16 new patents**
(1 in Spain y 15 international patents)

excellence



campus
iberus

CAMPUS DE EXCELENCIA
INTERNACIONAL
DEL VALLE DEL EBRO

independent rankings

- ✓ Scientific production **Top 10**
- ✓ Innovation & Technology Development **6th** out of 48
- ✓ Teaching quality **2th** out of 48
- ✓ Capacity to attract new students **9th** out of 48

knowledge transfer collaborations

Publicly funded projects: European calls (H2020, POCTEFA, LIFE+, SUDOE...), National calls and Regional calls.
Research and Knowledge Transfer Contracts
Industrial Doctorates
Industrial Research Chairs
Technology co-development and licensing
Promotion and participation in new Technology Based Companies



PhotoVoltaic Cost
 r€duction, Reliability,
 Operational performance,
 Prediction and Simulation

Objectives: Improve the
 performance, reliability
 and lifetime of PV
 systems, reduce their
 cost and enhance their
 integration into the
 electrical grid.



From Street-to-Home

Objectives: Support needs of
 vulnerable women: develop
 an evidence base, collect
 examples of best practice
 and formulate
 recommendations to inform
 policy and practice, in order
 to help facilitate the
 establishment of specialised
 housing and support
 services, to divert women
 from the threat of violence
 and abuse.



BIOCOMES

New biological control products
 for sustainable farming and forestry

Developmet of new
 biological control agents
 (BCAs) for key markets in
 European agriculture and
 forestry.

The role of integrated
 pest management is an
 important approach to
 reduce dependency on
 pesticides use in EU.



HONEST History of Nuclear
 Energy and Society

Understanding how
 societies have engaged
 with nuclear energy, and
 how the nuclear energy
 sector has engaged with
 societies, and how this
 has changed over the
 course of the past 60
 years.

INTERDISCIPLINARY ANALYSIS OF THE EXPERIENCE OF
 NUCLEAR DEVELOPMENTS AND ITS
 RELATIONSHIP TO CONTEMPORARY SOCIETY

Funded by: H2020- Euratom





GLOBAL UNIVERSITY

RESEARCH UNIVERSITY

UNAV

United States
New York

Spain
Pamplona
San Sebastian
Madrid
Barcelona

Germany
Münich

6 campus
3 countries



Research is a cornerstone of the University of Navarra's mission.

Research that is interdisciplinary, international and committed to social development.



Food Chain



Renewable Energy and Resources



Health



RESEARCH UNIVERSITY

RESEARCH CENTERS

UNAV

HUMAN, LEGAL AND SOCIAL SCIENCES



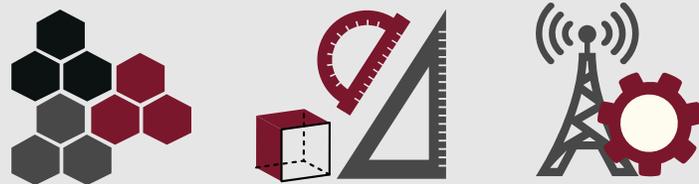
Business | Philosophy | Philology | Law | Communication

BIOMEDICAL SCIENCES

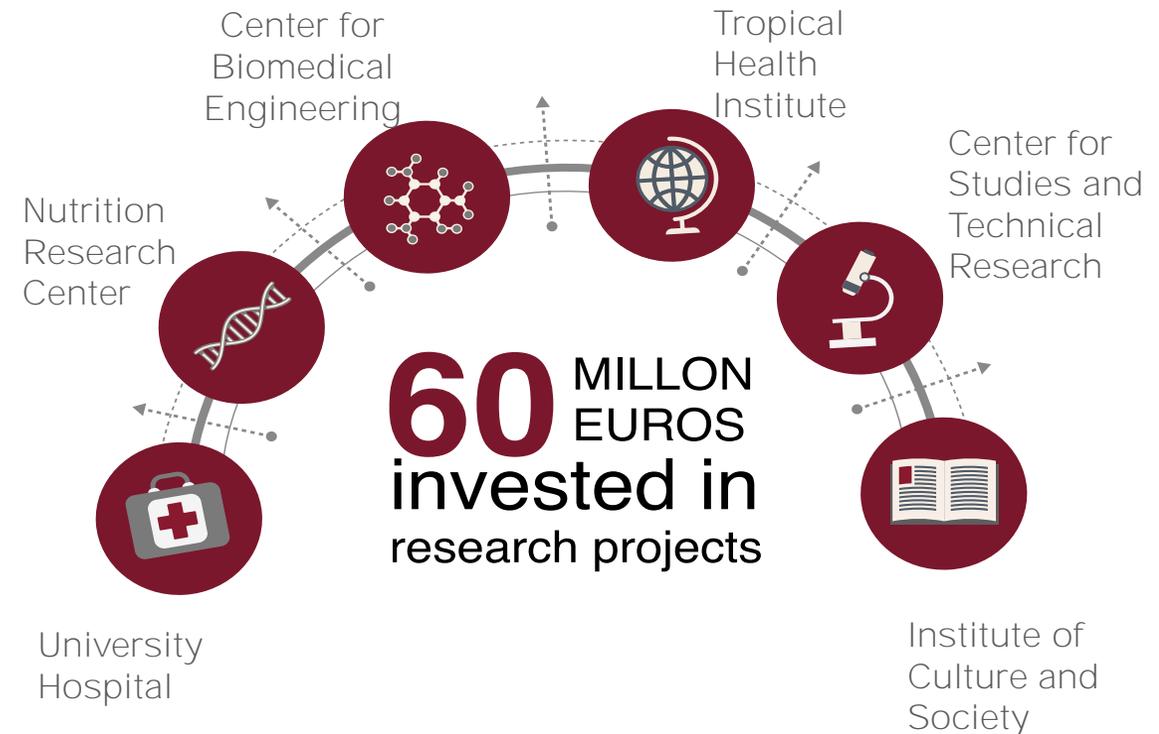


Nutrition & Dietetics | Pharmacy | Medicine | Nursing

EXPERIMENTAL AND TECHNICAL SCIENCES



Biology | Chemistry | Architecture | Engineering





RESEARCH
UNIVERSITY

INTERNATIONAL
PRESENCE

UNAV

717

Current projects*

83M€

Budget for all
Research Centres*

980

New PhD*

New International PhD*

50

1,241

Total Publications in
2016

QS Graduate
Employability Ranking

37



589

1Q Publications in
2016

>150,000 alumni in 151 countries

* During the last academic year 2015-16



RESPINE
H2020



5,5 M€

RESPINE aims to develop the world's first rigorously proven, effective treatment of DDD, to assess, via a multicenter phase 2b clinical trial the efficacy of an allogenic intervertebral mesenchymal stem cell (MSC)-based therapy.

MYELOMANEXT
ERC STARTING GRANT



1,4 M€

MYELOMANEXT aims to integrate next-generation flow cytometry and sequencing to define i) the signature of CTCs and ultrachemoresistant MRD cells, ii) the hierarchical place of putative CSCs, iii) the genomic landscape of benign vs. malignant clones; and iv) the role of immune surveillance to achieve functional cures.

SABINA
H2020



4,6 M€

The aim of SABINA is to introduce at buildings level a smart and efficient technology to manage the variability of renewable energy by means of the thermal inertia in buildings and the coupling between heat and electricity it enables.

LIFE RESPIRA
LIFE



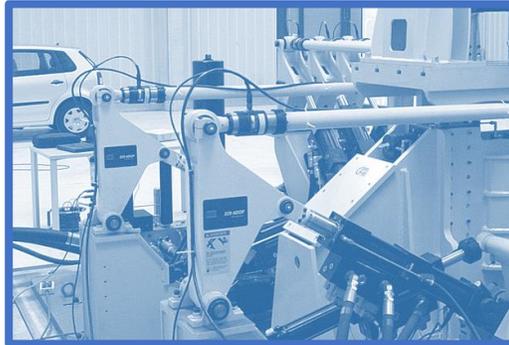
1,1 M€

The aim of LIFE RESPIRA is to prove that urban air pollution that cyclists and pedestrians breathe in Pamplona can be reduced by introducing measures of urban design and planning, sustainable mobility management and the use of new technologies.

**Nafarroako
Gobernua**
Bruselako Ordezkaritza



**Gobierno
de Navarra**
Delegación en Bruselas



COORDINATOR ENTITY

ADitech Technology Corporation (www.aditechcorp.com)

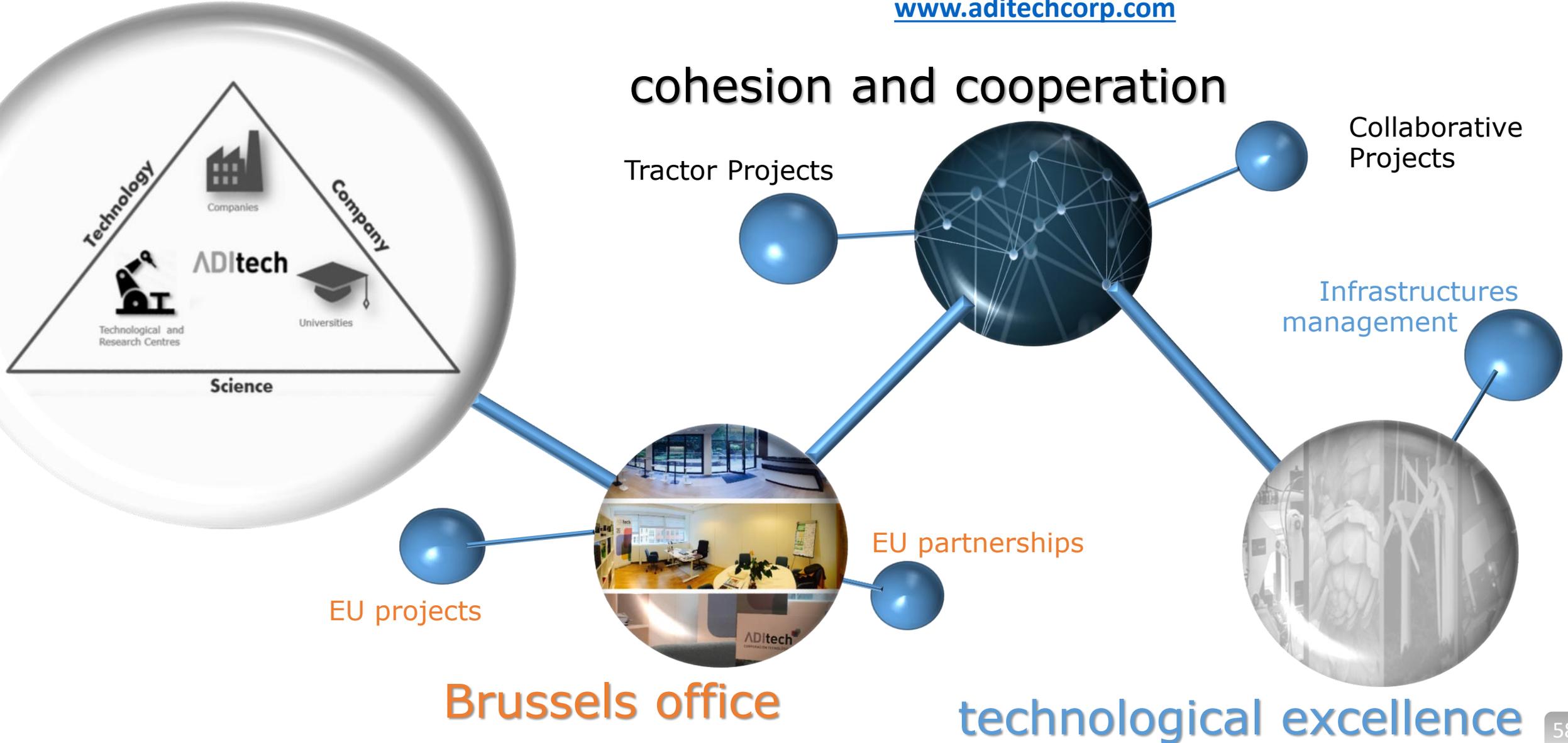
Coordinating and connecting all mentioned innovative institutions ...
... is ADitech Technology Corporation



ADitech is a private foundation to connect **science, technology** and **industry** in Navarra, with the aim of contributing value to society, developing new products that incorporate the latest knowledge on technology and innovation and R&D, generating jobs and economic development in the region.

www.aditechcorp.com

cohesion and cooperation

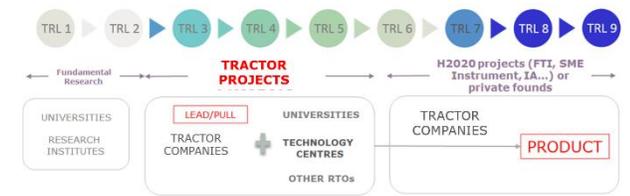


Tractor Projects

New strategy for R&D results exploitation

Definition: These innovation projects, promoted and coordinated by ADitech, are a successful funding scheme of the management of R&D regional funds with a focus on approaching to market needs, seeking tangible and exploitable R&D results that solve real industrial technological challenges.

Concept: Entities of **Navarra Innovation System** will make an investment to develop a technology / service / product that will be transferred to a Tractor Company.



>35 COMPANIES ENGAGED

>45 PROJECTS IN PROGRESS

TECHNICAL SUCCESS RATIO >75%

REVENUES GENERATED in 2016 2,6 M€

Supported by:

Coordinator entity:

Beneficiaries:

Navarra Innovation System

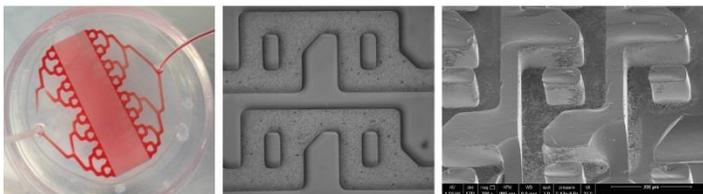
www.aditechcorp.com



NET-MARKET-FLUIDICS

www.netmarketfluidics.eu

It is a **market approach project** for tackling the bottlenecks preventing the deployment of micro and nanofluidics in Europe.



The creation of a European network with the main research groups working on these lines will allow researchers to better analyze the main **challenges for micro & nanofluidics applications**.



INKREASE
Interreg Europe

INKREASE aims at mainstreaming policies and tools **improving the capacities of innovation ecosystems**, the collaboration between research and business communities and the economic valorisation of research results into the regional strategy.



www.interregurope.eu/inkrease



BE in CPPS
Regional Manufacturing Digital Innovation Hubs

NAVARDMI-HUB

This Innovation Action is improving the adoption of Cyber-Physical Production Systems (CPPS) in manufacturing SMEs by providing regional innovation ecosystems made of competence centres, manufacturing enterprises and IT SMEs.

BUSINESS EXPERIMENTS IN CYBER PHYSICAL PRODUCTION SYSTEMS

ADitech leads one of these REGIONAL INNOVATION ECOSYSTEMS in Navarra focused on Cyber-Physical Systems and Internet of Things in manufacturing.

<http://www.beincpps.eu>

<http://i4ms.eu>





Automotion and Mechatronics



Food Chain



Renewable Energy and Resources



Health



















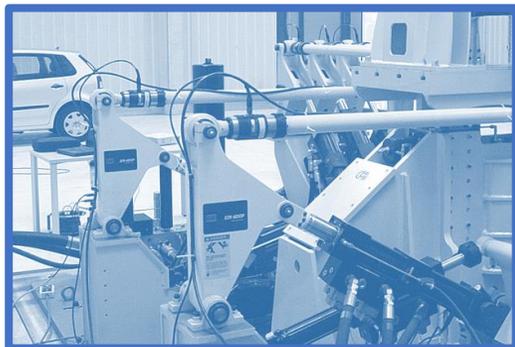
**Nafarroako
Gobernua**

Bruselako Ordezkaritza



**Gobierno
de Navarra**

Delegación en Bruselas



Navarra Innovation System

Mr. Mikel Irujo

Delegate Government of Navarre in Brussels

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