A Word from the Chairman

—TECNALIA Research & Innovation is a private non-profit foundation, which aims to transform knowledge into GDP in order to improve people’s quality of life, generating business opportunities for companies.

In 2014 financial year we put an end to the first four-year strategic cycle which has led to a robust organisation based on five strategic pillars - research excellence, economic-financial sustainability, economic and social impact, international relevance and committed people.

Based on the above pillars I will only summarise data I consider significant.

On the one hand, our contribution towards improving the competitiveness of our industrial network, with 55% of the companies we have co-operated with in R&D&I launching new products, reducing their lead times and development costs, and accessing new markets.

On the other hand, 2,430 jobs have been maintained (1,434 direct employment) which is also significant.

With 2015, we have started a period defined by a new macroeconomic scenario, Europe Strategy 2020 and the re-organisation of the Basque Science Technology and Innovation Network, as main highlights.

In this context we are designing TECNALIA 2020 Strategy which will be launched throughout the year to reinforce our positioning as one of the leading Applied Research and Technological Development Centres in Europe and a key factor for the Basque Country economic and social development.

Finally, I would like to thank everybody at TECNALIA, companies, administrations, members and our Patrons for their support and commitment. Thank you very much.

—JAVIER ORMAZABAL
CHAIRMAN OF TECNALIA
A Word from the Managing Director

—2014 was a demanding year where the key factor was to adapt to a changing and challenging context.

We ended the financial year with a turnover of 99.4 million euros and a positive cash flow of 1.7 million, allowing us to continue to invest up to 2.4 million euros to strengthen our scientific-technological infrastructure and equipment, in order to provide higher added value to the Companies and Institutions with which we work, and to Society in general.

In 2014 we applied for 29 new patents, which means we now have a portfolio of 308 active patents, distributed into 88 families.

We transform knowledge into GDP. Based on our belief in this principle, we created 2 new technology-based companies, thanks to the accelerating role of the incubation process played by TECNALIA Ventures, which has led to 16 TECNALIA promoted firms being active, creating jobs for 159 people (in contrast to 112 jobs in 2013).

We believe in public-private co-operation with companies, other stakeholders and researchers. In this context I would like to highlight that in the first year of the HORIZON 2020 Programme we have won 42 projects, led 7 and hired 15.1 million euros. We co-operate in projects with 34 firms nationwide and almost half from the Basque Country. Results according to our Programme Participation Strategy are determined by the technological challenges faced by our Business Divisions to achieve higher Specialisation and to the projections of accompanying our Companies.

Within this context, we face 2015 with an expected change in the macroeconomic scenario and to TECNALIA own path which we already feel in the first few months of the year. Nevertheless, we approach it with caution and the responsibility of our commitment to people and companies which are part of TECNALIA who are the pillars of our work.

We are a committed organisation. We would like society to be proud of the work carried out by TECNALIA and continue putting our skills at the service of the developing Smart Specialisation Strategies within the framework of Industrial and Technological policies in the Basque Country.

—JOSEBA JAUREGIZAR
MANAGING DIRECTOR OF TECNALIA
## Patrons

### Patrons of Fundación TECNALIA Research & Innovation

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We innovate so your business grows

TECNALIA, INSPIRING BUSINESS

—TECNALIA Research & Innovation is the first applied research and technological development centre in Spain and one of the leading such centres in Europe. A combination of technology, tenacity, efficiency, courage and imagination.

Inspiring Business, from technology to market.

TECNALIA is a private non-profit foundation whose mission is to develop technological solutions capable of improving your business competitiveness while contributing to society and people’s welfare.

Our motto, Inspiring Business, covers, brings together and merges two realities - technology and market.

At TECNALIA we anticipate future challenges to view, identify and implement technological, imaginative and creative solutions providing added value and producing real results. We transform knowledge into GDP to improve people’s quality of life, by creating business opportunities for companies.
Our People

—TECNALIA’s best asset is our team, made up of more than 1,400 experts who work to transform knowledge into GDP in order to improve People’s quality of life by generating business opportunities for Companies.

Experts from 29 different countries are divided into 22 locations around the world; they are responsible for visualising, identifying and developing comprehensive technological solutions with creativity and imagination for over 4,000 clients, paying personalised and multi-disciplinary attention to each one of them.

1. Commitment to the Future
2. Business Perspective
3. Research Tenacity
4. Efficient Creativity
5. Flexibility
6. Connectivity

- People on staff: 1,434
- Men: 56%
- Women: 44%
- Average age: 41
- Number of PhDs: 202
- People in NTBCS: 159
- Different nationalities: 29
- Our team values: 6

159 people in NTBCS
Why TECNALIA?

Because we transform your business through technology

We offer a different business perspective: because we create solutions in co-operation with companies to provide value through technology. Competitive solutions which transform and help businesses grow, while at the same time improve the future of our companies and society.

Because we provide value through technology

Our work is supported by experience and expertise through research excellence and offering comprehensive solutions. We research to overcome challenges faced by mankind, connected to the world and with global presence.

Due to our differentiated and innovative offer

TECNALIA VALUE is our business offer, oriented to the needs of companies. An offer allowing us to face challenges and complex issues, developing with our customers personalised solutions so that they can deploy their full potential, be more competitive and cost-effective.

1st national private organisation in hiring, participation and leadership for the EU 7th Framework Programme.
According to the “Seventh FP7 Monitoring Report 2013” published by the European Commission, TECNALIA occupies the 23rd place among over 32,000 European organisations participating in the Seventh Framework Programme.

In this ranking, TECNALIA is 11th regarding European Research Centres (such as Fraunhofer, CEA or VTT) and 2nd in Spain, after CSIC. All of the aforementioned organisations are bigger than TECNALIA in size.

TECNALIA contracted a total of 377 projects, leading 81 of them, for a sum of 131 million euros, which represents almost 30% of the contracts obtained by the Basque Country and over 4% of contracts obtained by Spain.

TECNALIA has taken part in joint projects with 2,890 European organisations - 146 from the Basque Country and 424 from the rest of Spain.

Within the FP7, TECNALIA has worked with 109 Basque companies and 297 firms from the rest of Spain. It is the best Research Centre in Europe in terms of collaboration with Companies.

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**PARTICIPATION IN FP7 (2007-2013)**

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<th>Body</th>
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* REC: RESEARCH ORGANISATION
* HES: HIGHER OR SECONDARY EDUCATION ORGANISATION

SOURCE: FP7 MONITORING REPORT 2013 (EUROPEAN COMMISSION)
A European benchmark

SOME KEYS TO SUCCESS

One of the keys to the success of TECNALIA lies in its positioning in over 60 significant European public-private initiatives.

TECNALIA is also present on the Boards of Directors of European Technology Platforms such as: Manufuture, Artemisia or SmartGrids and Public-Private Partnerships such as Factories of the Future, SPIRE or Energy-efficient Building.

It is also a member of InnoEnergy and Raw MatTERS KICs (Knowledge and Innovation Communities), already underway, and is involved in the launching of others such as Added Value Manufacturing (2016), major Basque commitment, Food4Future (2016), in co-operation with AZTI-Tecnalia, and Urban Mobility (2018).

KICs are strategic initiatives of the EIT (European Institute of Innovation & Technology).

TECNALIA is also part of the Board of Directors of EARTO, which represents over 350 European Research Centres and is a member of Eurotech.

Another success factor to increase its collaboration with companies is the Participation in the Framework Programme Support Office: a new Office Model which covers everything from the detection of an opportunity to the exploitation of results, including the preparation of the proposal, contract negotiation and project development.

FIRST YEAR OF HORIZON 2020

During the first year of HORIZON 2020, TECNALIA has already won 42 Projects, leading 7 of them with contracts worth 15.1 million Euros.

As well as H2020, within the frame of other European programmes, TECNALIA has also won 18 Projects in 2014 which involve contracts worth an additional sum on 2.2 million Euros.

One of the highlights regarding achievements in 2014 is the taking part in KIC RawMatTERS with Mondragón Corporation and the University of the Basque Country UPV/EHU and companies such as Indumental, Gerdau or Calcinor.
The future is being built now.

Are you ready?

Based on these needs, at TECNALIA we strive to generate differential and success advantages for your business through technology and thanks to an operating model based on 7 fully self-integrated Business Divisions. We research to develop technology-based projects capable of addressing future challenges.
—TECNALIA VALUE is our cross-cutting service offer pivoting around companies and their specific needs. A well-differentiated and innovative offer enables us to provide personalised technical solutions for our customers, addressing all project stages: from inspiration, development and accompaniment to implementation throughout the process, in collaboration with them. This is how we help each business to unleash their full potential, improve competitiveness and achieve profitability.
Consultancy on technology-based innovation strategies, pursuing business growth and diversification. Our technological and business management know-how allows us to help our clients identify and develop new business ideas, spotting opportunities and transforming them into results.
ELKARBERRI, a joint initiative of ADEGI and TECNALIA with participation and funding from Gipuzkoa Provincial Council, is aimed at facilitating innovation and diversification of the Basque SMEs through inter-business cooperation.

The purpose of this project is to identify possible business opportunities to be implemented through co-operation, based on the definition of the business model once a market study is carried out. Moreover, people are qualified to implement a shared-project identification and management methodology. The idea is to work on a business opportunity at product, technology or market level with three groups and a maximum of 20 companies developing it throughout the first half of 2015.

On the other hand, in 2014, Bizkaia Provincial Council launched Coolab initiative with TECNALIA technological support to foster co-operation among companies and promote internationalisation through the joint creation of a product or service.

A total number of 34 companies have taken part in this initiative where 10 action scopes were identified. Based on that information, three teams were formed by 10 companies which developed 3 co-operation projects: a new product based on user experience for promotional and strategic marketing development; a product based on ICT integration to improve the user experience in children playgrounds; and a predictive maintenance service.
—TECNALIA is a strategic partner for the development of new products and processes or for the improvement of existing ones. Flexible R&D&I projects that adapt to the needs of each organisation, with a clear focus towards the generation of value and the market, promoting the competitive future of businesses and society at large. TECNALIA provides privately funded R&D&I projects in some of the most relevant fields of technological implementation.
Industry 4.0 strategy is more human and people friendly at every level and its key feature is the employees’ safety. A good example of this is the solution applied at Petronor refinery oriented at ensuring safety at work for operators who carry out maintenance and assembly tasks for the facilities. This is a pilot pioneering scheme developed by TECNALIA which collects information regarding the location of employees in large facilities and confined spaces.

The device identifies the location of employees if they fail to respond to an emergency call or to the evacuation plan.

It includes two functionalities using communication technologies: on the one hand, it controls accesses through cards informing on entry and exit of operators in and out of confined spaces; and on the other hand it determines the geopositioning of people through wireless markers.

To reveal their position, operators wear as part as their personal protection equipment miniatuised devices (industrial wearables) which emit information regarding their location to the central control system. Tests carried out and the created equipment operation had very positive results both at technological level and by feedback from users involved in opening the door to the use of this solution and technology in other cases with similar issues.

We defy Industry 4.0 challenges developing technology to contribute to the safety of employees at factories of the future.
A LOOK INTO THE FUTURE OF ADVANCED MULTIMATERIAL STRUCTURES IN THE AUTOMOTIVE SECTOR.

Progressing in electrification, reducing manufacture costs and increasing the safety of passengers, are areas where these structures play a key role.

The first industrial revolution was based on iron and coal. Later other metals (aluminium, magnesium, titanium, etc.) and new alloys (Invar) have been introduced into our environment improving the properties of products and making them lighter and more manageable.

TECNALIA addresses this part of society evolution providing knowledge both in the definition and design of new materials, and in the development of viable industrial processes for use, from new steel grades to composites.

For the purpose of practical use in the Automotive sector, by lightening the total weight, saving energy for movement without compromising safety and comfort, TECNALIA has launched DYNACELL, an automated laboratory and cell, where manufacture technologies combining materials and processes under a new integrated concept are applied.

Hot-stamping alloys along with automated manufacture of composite parts, applying new joining processes of dissimilar materials such as laser or adhesive techniques, are some examples of the technology used and will be applied in the factory of the future to produce the next generation of vehicles.

One of the projects using DYNACELL is “BEHICLE”, an European project where structural multimaterials guarantee the safety of new vehicles.
SAGER IS AN ENERGY STORAGE SYSTEM AIMED AT REDUCING THE COSTS OF ELECTRICITY STORAGE.

Safe and low-cost cost SAGER is an energy storage system installed at the Archimedes Transformation Centre, owned by IBERDROLA and located in Jundiz, Vitoria. Developed by AEG, IBERDROLA and TECNALIA, the project started in 2012 and over the past 3 years has led to the design, installation and connection to the distribution grid of this system.

SAGER has faced major technological challenges such as: the development of highly-efficient large converters; flexible and efficient energy management; and the development of energy storage technologies.

The project envisages the design, development, installation, integration and validation of a field facility where several innovative components are integrated.

Beyond the technological side, this project demonstrates short-term financial feasibility, sidestepping the high costs related to stationary storage. To do so, SAGER uses advanced lead-acid batteries because they maintain conventional lead robustness and moderate cost, while presenting a longer life cycle due to the base technology and to the innovative control system based on wireless communications.

The Basque Government backing via the Basque Business Development Agency (SPRI) and the Vitoria City Council via the Economic Development Department have been crucial for the project success.

Energy storage will be vital to improve energy quality, ensuring the supply stability and reliability and allowing greater and easier integration in renewable source energy network.
We embrace the challenge of living longer and better lives thanks to the development of devices boasting major advantages compared to existing solutions in the market.

Thus, within the FIK initiative framework, TECNALIA has developed and patented a new functional electrical stimulation concept called FES-a, which has materialised into two devices for neuromuscular rehabilitation and treatment of upper and lower limbs in stroke patients.

These devices poise major advantages over existing solutions available on the market as they increase functional performance and enhance stimulation results.

They offer greater motor control selectivity in improving the selection of muscles to be stimulated and generating reduced muscle fatigue. Furthermore, the devices are wireless, easy to use and can be worn almost under any garment.

TECNALIA expects to launch a new technology-based company in 2015 launch devices fitted with technology based on functional electrical stimulation on the market.
TECNALIA has developed the **QING SOLUTIONS** platform to help companies, particularly in the hotel industry, offering new services to their customers by means of a **smart bracelet** (wearable device).

The platform provides consumers with a better experience offering safety and convenience when making payments, accessing spaces, interacting with social networks or even acquiring customised services at a hotel.

This technological development enabling safe and controlled access to different suites means that **Onity**, leading supplier of a wide range of hotel management solutions, can extend its range of solutions and services and becomes much more than a simple manufacturer of electronic locks.

Moreover, it facilitates the design of customised experiences generating **new income models** and increasing customer knowledge as it was demonstrated in two success cases where the wearable technology was used in the summer campaign 2014: Ushuaïa Ibiza Beach Hotel and Hard Rock Hotel Ibiza.

These positive approaches from TECNALIA to manufacturing (Onity) and service companies (hotels) are examples of new business models in a digital hyperconnected world.

**TECHNOLOGY FOR SAFER AND MORE COMFORTABLE LOCKS.**

The company Onity integrates TECNALIA technology for locks to be fitted with NFC technology.
Organisations and companies which have been involved in this Model creation are: Euspen, S.A., Sukia Eraikuntzak, S.A., Aislamientos Arellano, S.L., Ulma Hormigón Polimero, S.Coop., Beissier, S.A., Guardian Llodio, S.L, Giroa, S.A., Eraikune - Clúster de Construcción de Euskadi (Construction Cluster) and TECNALIA.

This Model, called ZERO BASQUETXEA - ZeBe, developed within ETORGAI programme framework of SPRI, covers all relevant aspects of the Energy Retrofitting process, enabling overcoming hurdles preventing the massive deployment of energy retrofitting actions in buildings, integrally addressing technological issues and solutions, social issues, management and financing.

The aim of maximum primary energy consumption set for restored buildings is 70 kWh/ m² per year. The application of ZeBe Model entails 70% - 75% reduction in relation to original consumption with an additional cost not exceeding 5% in relation to traditional retrofitting solutions.

The Model eases the way for construction companies to follow the foregoing criteria: raising awareness among the population through information and examples to be implemented, offering payment mechanisms which can be undertaken by users, creating an action example to be used as a guide in many cases and using solutions as optimised as possible regarding price and performance features.

The ZeBe Model envisages six different restoration scenarios: buildings dated from the beginning of the century, workers’ housing and city expansion housing both on the Atlantic coast and the central area of the Basque Country. On the basis of initial study cases of each neighbour, potential savings from heating can be estimated in each case.

The application of this type of integrated model facilitates reconversion of construction sector agents towards rehabilitation and employment generation clearly aligned with economic recovery policies aimed at encouraging alternative activities to new construction and contributing to the challenge of the Cities of the Future through Urban Planning and Regeneration.
Hydro-electrical plants such as Delsitanisagua, Coca Codo Sinclair, Quijos and Toachi-Pilatón in Ecuador were analysed to determine their vulnerability to climate change impact. TECNALIA and CIAT (International Centre for Tropical Agriculture) carried out this study for the National Directorate for Climate Change Adaptation which co-ordinates the project and is part of the Climate Change Sub-Secretariat of the Ministry for the Environment of Ecuador.

The study, under the framework of the Ecuador Climate Change National Strategy and Plan, aims to characterise current and future climates in seven river sub-basins in Ecuador where these plants are located, developing flow and sediment projections for each one of them. This information is the basis for power and energy production projections which will in turn enable the determination of climate change economic impact. The ultimate aim of the study is to define a series of adaptation measures for each plant studied. Most of them will be focused on integrated management of river basins.

The method to be applied to these studies was presented in a workshop with the participation of: the Ministry of Electricity and Renewable Energy (MEER), National Institute of Energy Efficiency and Renewable Energies (INER), National Electricity Council (CONELEC), CELEC-ENERNORTE, HIDROTOAPI, COCA CODO SINCLAIR EP, SENAGUA, National Institute of Meteorology and Hydrology (INAMHI), as well as representatives from the Ministry for the Environment, German Cooperation and Andean Development Corporation (CAF).
ADVANCED TECHNOLOGICAL SERVICES

— Over 50 years of experience providing technological services specialised in the evaluation and diagnosis of products, materials and processes. We have a highly-qualified technical staff with access to extensive laboratory facilities, always focusing on the improvement of industrial competitiveness. Several accreditations and national and international recognition awards certify the reliability of our services.
TECNALIA work in the CE Marking process certifying their thermal insulation systems has facilitated BEISSIER SAU a unique spokesperson throughout the process enabling co-ordination between product assessment tasks, laboratory tests and tasks associated with the Notified Body.

The systems, developed entirely by the Beissier Technical Office based on their experience in these types of products, have been subjected at the TECNALIA laboratories to the demanding tests established by ETAG 004 “External Thermal Insulation Composite Systems with Rendering”. The obtained results have been the basis for the product assessment, which has been included in the aforementioned ETAs as well as in the Performance Declarations drafted by BEISSIER SAU. As with every ETA, the documents have been provided to all the members of the European Organisation for Technical Assessment (EOTA), prior to their approval. Prior to CE Marking, as Notified Body No. 1292, TECNALIA carried out the Factory Production Control (FPC) to test both systems at BEISSIER SAU facilities in Rentería, and issued the corresponding FPC Conformity Certificate.
—TECNALIA is the essential bridge between R&D&I and competitive business reality. We develop technological assets for business generation in the form of industrial property, know-how and investment in technology-based companies. To do so, we have: IBF, a business club where TECNALIA systematically and preferentially offers business opportunities; and TECNALIA Ventures, S.L., a company adding value to proprietary R&D and managing the life-cycle of innovative technological assets.
NEW TECHNOLOGY-BASED COMPANY: ILT PLASMA TECHNOLOGIES, S.L.

Improving foundry quality, energy efficiency and productivity of facilities thanks to a high-power thermal plasma heating system.

ILT Plasma Technologies, S.L. is a company established by TECNALIA, INSERTEC and LORAMENDI to promote the Foundry sector. These two TECNALIA industrial partners both have wide experience in the iron foundry sector which in Europe alone generates an annual turnover exceeding 10,000 million Euros.

The technology developed by TECNALIA, which has been called PLASMAPOUR®, is a casting unit heating system based on High Power Thermal Plasma technology (HPTP).

After 15 years of research, it is one of the main innovations in the iron foundry sector worldwide.

The activity of ILT Plasma Technologies, S.L. will focus on the manufacturing, adaptation, commercialisation and implementation of plasma facilities in the foundry sector, with an estimated global potential market of 1,600 million Euros.

The new company will be located in Basauri (Bizkaia) and foresees an annual turnover of 2.4 million Euros from the fourth year since it was established. BEAZ, a Public Company belonging to the Economic Development Department of the Bizkaia Provincial Council, participated in its start-up.
—TECNALIA Ventures, S.L. is a 100% TECNALIA owned company set up in 2013 with the objective of evaluating in-house R&D and integrally managing the life cycle of innovative technological assets in order to maximise their impact. Therefore, TECNALIA becomes the essential bridge between R&D&I and competitive business reality. Turning bright ideas into attractive investments, protecting assets under intellectual property rights, transferring knowledge or taking part in the set-up of new technology-based companies.

TECNALIA Ventures has an Incubation Acceleration Programme with the aim of turning technologies into technology-based business opportunities. In 2014, this Programme identified and analysed 36 new business opportunities selected according to investment criteria, i.e.: cost-effective technological projects targeting to solve an actual issue, with market positioning potential, industrial property protection options and backing of an entrepreneurial team in case the valuation method is the creation of a new technology-based company (NTBC).

From 36 opportunities, 26 were considered investable in 2014 which in addition to 24 opportunities identified in 2013, make a grand total of 50 active opportunities in the programme. In addition, 39 opportunities are still in the pipeline to be recovered in 2015.

All this activity has contributed to TECNALIA income during 2014 as revenue from the Sale of Intellectual Property amounting to 2,428 million euros.

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**TECNALIA Ventures**

**Portfolio of Patent Families**

<table>
<thead>
<tr>
<th>Active Patents Contained in These Families</th>
<th>Patents Requested in 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>308</td>
<td>88</td>
</tr>
<tr>
<td>29</td>
<td>29</td>
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TECNALIA has promoted numerous New Technology-Based Companies, of which 16 are still operating today, maintaining a stake in 11 of them on 31st December 2014. These 16 NTBCs employed 159 people in 2014 and generated income of 9.5 million Euros.

2 New Technology-Based Companies that have emerged in 2014:

- **ILT Plasma Technologies, S.L.**
  Set-up by INSERTEC and LORAMENDI to promote the Foundry sector, improving foundry quality, energy performance and productivity of the facilities through an innovative heating system.

- **TEXTIA Innovative Solutions, S.L.**
  Company dedicated to marketing VARSTIFF® textile technology developed within the FIK initiative framework.

IBF is the leading corporate investment forum in the Basque Country made up of trailblazing companies capable of innovation and diversification and to which TECNALIA systematically and preferentially offers business opportunities arising from its own R&D&I activities and from its technological partners.

IBF has presented over 65 business opportunities on the private member-only portal and a further 35 at in-person events.

85% of IBF members have expressed an interest in one of the opportunities presented, whereby the companies have received numerous expressions of interest to participate in these opportunities.

Total investment has exceeded 3 million Euros, facilitating the creation of new collaborations and various NTBCs (for example DIGIMET, NAUTILUS and TEXTIA).

In 2014, two events were hosted at the premises of IBF (Fagor Ederlan y ZIV) members to improve networking through deeper knowledge of host companies and their innovation strategies.

TECNALIA Ventures launched the “Entrepreneurship Club” on 10th June 2014. Under the name “Inspiring people for inspiring business” this initiative encourages the development of an entrepreneurial ecosystem through different specific activities, to connect entrepreneurs who which to turn disruptive technologies into business opportunities with an impact on the market and on society.

The aim of this Club is to develop Entrepreneurial Culture and new skills, connect ideas and entrepreneurs and promote Mentoring.

In 2014 the Club was visited by international experts who shared their experiences, including Paloma Cabello, MIT Enterprise Forum; Hussein Kanji, Hoxton Ventures (Venture capital in London); Javier García Sedano, CEO of OPTIMITIVE; Iñaki Bartolomé, Euskal Valley; and Keith Willey, Business Advisor and Professor at London Business School.
GEIs are teams made up of over 15 members who have focused their activity on Scientific-Technological specialisation, achieving and obtaining accreditation in technology at excellence levels with international recognition. Therefore, these are reduced selective research teams.

To be part of a GEI, the team of researchers must prove quality and excellent results at Innovation and Business level; at Scientific-Technological level and Notoriety; and Relational-Contact network.

TECNALIA GEIs are well integrated in RIS-3 Smart Specialisation Strategy in Euskadi: Advanced Manufacturing, Energy and Biosciences/Health. Furthermore, they are integrated in EUSKAMPUS Knowledge Poles (International Campus of Excellence of the University of the Basque Country UPV/EHU).

GEIs CURRENTLY IN OPERATION
- Marine Energy
- Green Concrete Design
- Neurorehabilitation
- Advanced Surfaces
- Robotics

GEIs CANDIDATES BEING ASSESSED TO ACHIEVE THE “EXCELLENCE STAMP”
- Big Data
- Computer Vision
- Ingredients - Bioprocesses
- Cybersecurity and Safety
Technology **Clusters**

—Technology Clusters are teams including all TECNALIA skills in KETs (Key Enabling Technologies).

Two Technology Clusters are currently in place:

- **NANOTECHNOLOGY:**
  Over 110 specialists developing new applications based on nanotechnology for the following sectors: Industry, Construction, Energy, the Environment, Transport or Health.

- **ICT:**
  Over 310 experts with the mission of maximising and increasing TECNALIA ICT potential at the service of business efficiently and effectively.

Nanotechnology can be considered a change lever to enable solving industrial problems unsolved to date.

ICTs are renowned cross-disciplinary KETs.
TECNALIA PERSPECTIVES 2014

“INDUSTRY AND TECHNOLOGY: THE KEY RELATIONSHIP FOR PROGRESS”

TECNALIA PERSPECTIVES 2014 WAS HELD ON 25TH JUNE WITHIN THE FRAMEWORK OF FUNDACIÓN TECNALIA RESEARCH & INNOVATION PATRONS’ GENERAL MEETING.
The second anniversary of TECNALIA PERSPECTIVES, attended by over 200 people, has consolidated this event as the leading forum to address R&D&I now and in the future. The relationship between Industry and Technology and the need to promote strategic alliances that combine Knowledge and Industry has been debated in 2014.

These strategic alliances with companies, administrations, universities and other research centres are one of the keys to progress.

The forum took place in the Iberdrola Tower, Bilbao, after TECNALIA Research & Innovation Foundation’s Patrons’ General Meeting, and started with a speech by Javier Ormazabal, Chairman of TECNALIA.

Then, César Molinas, mathematician, economist, consultant and financier, gave a conference, “Technological progress – your son’s foe but your grandson’s friend?”; and the Managing Director of TECNALIA, Joseba Jauregizar, talked about the challenges faced by the society of the future and the keys to successfully tackle them from the technological standpoint.

A Ceremony of Recognition also took place to thank former Trustees (serving between 2011 and 2014) for their work and commitment.

The event was brought to a close by the Regional Minister of Economic Development and Competitiveness of the Basque Government, Arantxa Tapia.
NEW TECNALIA LABORATORIES FOR SMART GRIDS

On 16th February, an event was chaired by the Basque premier Iñigo Urkullu and attended by the General Bizkaia Councillor, José Luis Bilbao, the Councillor for Economic Development and Competitiveness of the Basque Government, Arantxa Tapia, other authorities and over one hundred business directors, where the new TECNALIA laboratories for Smart Grids were inaugurated. With 14 million Euro investment, this project has consolidated TECNALIA as a leading research centre in Europe regarding Smart Grids at the service of electrical capital goods manufacturers and utilities.

VII TECNALIA JOURNALISM AWARDS

The award ceremony took place at an event hosted on 2nd February at AZTI-TECNALIA headquarters in Derio (Bizkaia) which was attended by the Chairman of the Jury, Pedro Luis Uriarte, Jury members, Directors of collaborating companies (Batz, Estanda, Ingeteam and Hiperbaric) and award winners: Elena Arrieta (Expansión), Manolo H.H. (Radio Nacional de España), Elhuyar for TEKNOPOLIS (ETB), Angelo Attanasio and Jerónimo Giorgi (www.elperiodico.com); with special mention for Antonio Villarreal (Vocento), Andrés Goñi (Radio Euskadi), the team behind the “Mujeres de la Luz” feature (TVE) and Marta Palomo de Udaeta (www.agenciasinc.es).

CYBERSECURITY STUDY FOR THE EUROPEAN PARLIAMENT

In December, Stefan Schuster, researcher at TECNALIA, presented a report before the European Parliament positioning TECNALIA as European Cybersecurity “consultant”. The study identifies data violation risks for public Internet access services, highlights the latest technological breakthroughs allowing data analysis and proposes possible policy options to support mitigating measures addressing the risks identified. STOA’s report “Mass surveillance of IT Users.” was also presented before the European Parliament Committee on Civil Liberties in April 2015.

STRATEGIC ALLIANCE TO COMPETE IN THE GLOBAL ELECTRICAL MARKET

The Alliance between Ormazabal, Arteche, Alkargo and TECNALIA promoted by the Bizkaia Provincial Council to boost competition in the electrical network technological services market with international scope, focuses on shared activity around the operation of test infrastructures both currently in place and to be built in the future. TECNALIA offers the Alliance experimental infrastructure for Smart Grids (InGRID).
EARTO acknowledges TECNALIA's research work

Chairs at the universities of Córdoba and Cádiz

Transfer network between Europe and Latin America

Ander Ramos - Best Young Researcher in Germany

**EARTO ACKNOWLEDGES TECNALIA’s RESEARCH WORK**

TECNALIA received the 2014 Innovation Award for the Biosimil project, a search engine for biological and medical samples which helps to improve the diagnosis and treatment of diseases. The Award, considered to be the “Oscar” for Innovation, was presented in Brussels on 15th October 2014 in the presence of Joaquín Almunia. Biosimil, framed within the Biopool healthcare project led by the Basque Biobank for Research, has been carried out by TECNALIA’s Computer Vision Team.

**CHAIRS AT THE UNIVERSITIES OF CÓRDOBA AND CÁDIZ**

In order to reinforce co-operation with Universities, TECNALIA has promoted two more Chairs - a Chair with the University of Córdoba oriented towards Technology applied to improve quality of life and will carry out different activities in the fields of health and agrifood; the Chair with the University of Cádiz will arrange training, research and dissemination activities related to boosting the manufacture industry every year. For over 13 years, TECNALIA has maintained Technology Classrooms at the Universities of the Basque Country (UPV/EHU) and Deusto to carry out joint R&D activities.

**TRANSFER NETWORK BETWEEN EUROPE AND LATIN AMERICA**

TECNALIA is spearheading the biggest network of Knowledge and Innovation Centres in Europe and Latin America for the exchange of knowledge and technology transfer, focused on areas offering particular potential for Europe: renewable energy, biotechnology, the environment, health and ICTs. One of the main aims of this Network called ELAN is facilitating access for European SMEs to the Latin American market (Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru), in favour of co-operation among companies from both continents.

**ANDER RAMOS BEST YOUNG RESEARCHER IN GERMANY**

This 33 year old from San Sebastian, Ander, has gained this recognition granted by the German Academy of Science and Humanities for his efforts in the rehabilitation of patients suffering from the after-effects of stroke through brain-machine interfaces. This is the first time that a non-German researcher is granted this award. Ander holds a PhD in Neuroscience and a Masters Degree in Biomedicine and Industrial Engineering. After gaining his PhD, he leads a research group at the Institute for Medical Psychology and Behavioural Neurobiology of the University of Tübingen (Germany), in close collaboration with TECNALIA.

**Social Recognition**

TECNALIA received the 2014 Innovation Award for the Biosimil project, a search engine for biological and medical samples which helps to improve the diagnosis and treatment of diseases. The Award, considered to be the “Oscar” for Innovation, was presented in Brussels on 15th October 2014 in the presence of Joaquín Almunia. Biosimil, framed within the Biopool healthcare project led by the Basque Biobank for Research, has been carried out by TECNALIA’s Computer Vision Team.
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