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# INTRODUCTION\_IK4 RESEARCH ALLIANCE Letter from the Chairman



**Jesús Mª Iriondo** Chairman of the IK4 Research Alliance

I have the honour of presenting the annual report of the IK4 Alliance, but before doing so I should like to thank my predecessor for the excellent work he did and for his contribution towards strengthening the organisation model that makes us distinctive.

The partnership formula is the basic premise underpinning the management of the IK4 Alliance model. This model is designed to be effective and functional in the interests of achieving our foundational aims and what has been established in our mission. This model not only makes a close relationship with the SME possible, it also enables a strategic global positioning based on the strength of the whole to be made, by combining proximity and size from its excellence in the ambits of scientific and technological research. IK4 is positioned thus as a key element in the Basque Network for Science, Technology and Innovation and as a driving force for technological innovation.

The development of the IK4 Alliance rests on three basic pillars: its strategic plan that is in force for the period 2009-2012, the strategic committee comprising the most prominent companies, institutions, R&D centres, universities and scientific and technological players in the Basque Country, and a third pillar made up of people, without doubt IK4's most valuable asset. Aware of the framework that we find ourselves in, we also attach great importance to collaborating with the other partners in the Basque System for Science, Technology and Innovation and to a close relationship with the institutions.

The result of the IK4 Alliance represents an effective and highly competitive model in the development of scientific and technological research, with considerable activity devoted to technology transfer to companies by contributing towards their innovation and competitive improvement.

The IK4 model emerges energetic and solid, providing companies with a specialized relationship in their field of competence, affording a structure capable of combining specialization with the multi-technological offer, and contributing effectively towards improving the competitiveness of the industrial base and its strategic positioning in the international context.

In addition to our excellent know-how in science and technology, we want to transmit hope in everything that we do by spreading this feeling and sharing it with society as a whole. IK4 is at your service and, as committed collaborators, we have an important road to cover together.







# INTRODUCTION\_IK4 RESEARCH ALLIANCE Letter from the General Manager



José Miguel Erdozain General Manaker of the IK4 Research Alliance

I asserted from this very platform exactly a year ago that IK4 was characterised by its virtue of listening to companies, of approaching them so that, from that proximity, their needs could be understood and their projects shared. We were aware of the difficulty of the moment we were going through, and we were under the obligation to measure up to that responsibility. Twelve months later I am able to say that we have amply achieved this.

It is a set of circumstances in which we are called upon to move quickly; 2010 was a very intense year for IK4. We have not only given our structure a strong boost, and have inaugurated a new central office, which may be the most visible element, we have also taken a leap forward when it comes to reinforcing our synergies and achieving a larger critical mass.

In this task we have undoubtedly been reinforced by the incorporation of a new partner

into the Alliance, Lortek, which expands our specialization in bonding technologies, and we look forward to the addition of Azterlan to IK4, a move which will boost our capacities in metallurgical research.

I should also like to highlight the agreements we have reached with the various Administrations, and in particular with the Government of the Basque Autonomous Community (region), which has provided us with a stable framework for collaboration and has reinforced the role of IK4 as the top Technological Player within the Basque Network for Science, Technology and Innovation.

There is no doubt that these are significant steps that support our commitment to a federal model of sovereign centres in which the common framework that unites us, IK4, will gradually acquire and should acquire increasing importance. It is a framework brimming with

content, the content afforded by its eight R&D centres, over 1,400 professionals that work in them, and economic results that constitute about 100 million euros of income devoted to R&D.

From this solid base the moment has come to acquire more muscle in the ambit of science and technology and to position ourselves as an indispensable player to undertake any ambitious R&D project. This is our main challenge as an Alliance. That technological research of excellence in the area close to us should be synonymous with IK4



Introduction\_GAIKER

Letter from the Chairman Letter from the General Manager 02





# INTRODUCTION\_GAIKER Letter from the Chairman



Juan Miguel Retolaza
Chairman of the GAIKER Foundation

I have the honour, as usual, of presenting the new Annual Report with the results obtained during the course of 2010. The previous financial year was noted for 2 milestones of particular relevance for the Centre. On the one hand, the holding in May of our XXV Anniversary in the company of all of our Stakeholders and, on the other hand, the subsequent assignment by Iñaki Letona of the General Management. Making the most of these public words, and on behalf of everyone who makes up the Foundation, I hereby pass on to him thanks for his 18 years of fervent dedication to the Centre. Now led by Begoña Goiricelaya, it has been left in excellent hands: with good knowledge of the reality of GAIKER and outstanding among many suits and ties, she is the first pair of female hands at the helm of the Basque Technological Centre. However, we are amongst those who think that only when it does not matter who leads, the goal is genuinely common.

In 2010, with a slight increase in our total income compared to 2009, we were also crossing the equator of our 5th Strategic Plan/ Long-term Plan, and the corresponding review indicates that we are meeting the goals set, in spite of the uncertainty of modern times. This plan likewise entailed an organisational change which we also sketched out last year. Changes in a notably changing environment, but with the same hope and commitment of always. Because GAIKER is a constantly evolving Technological Centre and the capacity of adaptation of our people, our ideas and our projects is, specifically, one of our identity marks.

Last year also saw a strengthening of our participation in the IK4 Technological Alliance, which we form part of along with another 7 Technological Centres. This project is gaining strength and soundness every year that passes. Of a unique and differentiated nature, and backed by a firm collective commitment,

IK4 has found its space and, without doubt, it will continue growing in 2011. In the same way as our Foundation which received the application for admission from 3 companies in 2010.

Further support and greater strength, in short, for the GAIKER project. A project that has demonstrated a lot since its start, and which well knows the keys for continuing ahead in the future. Creative, hopeful and committed people... and people with experience, who not only know their raison d'etre, but also where they aim to go. A guarantee of success.



# INTRODUCTION\_GAIKER Letter from the General Manager



Begoña Goiricelaya General Manaker of GAIKER

In line with the current economic and social trends, the financial year 2010 was noted for its instability, and while in the economic field we ended with total income of € 11.1M and in fact, we are continuing to grow in the financial year in progress, 2010 required an added effort to adapt ourselves to the public-private scenarios. Thus, we were especially attentive to the changes that affect our financing model and we very closely followed the changes undergone in the programmes for the promotion of R&D of the different authorities. Neither we lost sight of the transfer and operation of results, given that the adaptation the technologies for fulfilling the needs of our customers, with the subsequent provision of added value is, without a doubt, one of the keys of our success.

Even so, and apart from the economic situation, we carried on working at the same pace and with the same resolve as always and we ended, for example, by giving shape to our investment in convergent technologies, with the construction of our installations and the

acquisition of leading-edge equipment. This is all in line with the terms set out in the Technological Differentiation and Specialisation and Market Forecast Plan of the Centre, which was revised and updated during the course of the year. We were likewise carrying on with our focus on results as well as making progress in the deployment and connection between the different processes of the Organisation, and in the global integration of the knowledge and expertise of the 131 of the Centre.

2010 also brought with it a fresh recognition of our already loaded showcase: we were the "medium-sized company" selected by the Basque Government first, and by the Ministry of the Environment and the Rural and Marine Environment afterwards, to represent the State in Brussels, at the EMAS Awards that the European Union gives out every year. Being the ones chosen amongst the 1.200 organisations is a reason for pride but, above all, it attests to our environmental commitment recognised by others. And of course, 2010 marked our 25 years. This was a special

anniversary that we wanted to celebrate with our Stakeholders. Those who trust in the Organisation so that are added to our Foundation, those who are working together with us in different activities or those who get up every day –or one day did- to come to work at GAIKER every morning. Thanks all for now continuing to read these lines.





# 03

### **WHO WE ARE**

# A Constantly Evolving Centre



In 2010, we celebrated our 25 Anniversary organising an event that we shared with all our Stakeholders, during which we gave a commemorative book of these 25 years. In 2010 we also crossed the mid-point in our Fifth Strategic Plan/ Long-term Plan (2009-2012). In short, we continued making progress with our twofold goal of fulfilling our Mission and we are coming closer to the Vision of what we want to be as an Organisation.

THE MISSION: our reason for being We were created for investigating and providing services for companies

Our key points:

- Contributing towards business competitiveness
- Working together with others ... to learn and support
- Acting in a key sustainable role
- Generating opportunities in emerging economic activities
- Making it possible to create new products and new businesses

We were created to innovate and OUR VISION is to be a reference point, and providers of technological knowledge

Our key points:

- A project with the commitment of everyone
- A determined investment in technological investment
- Integration of internal and external technologies
- With a strategy focused on our Stakeholders
- Management based upon continuous improvement

And we did this, as always, being geared towards the expectations of our Stakeholders:

- Trustees and Members of the Foundation
- Society and Public Administrations
- Market and Customers
- University and Research Bodies
- Competitors (Technological Partners and Competitors)
- HR and Organisation



# 03

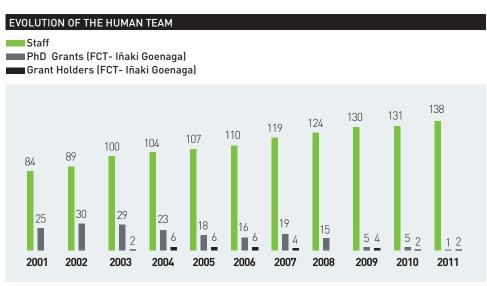
### **WHO WE ARE**

# The People Behind the GAIKER Project

The GAIKER people are the driving force of this Organisation. The drive and the embodiment of its soul. Because it is our ideas, our words and our actions that make the wheels turn. At December 31, 2010, the Centre's human team was made up of a total of 131 people on the workforce. In 2011, we expect to continue growing to reach the figure of 138 workers.

In the same way, during the course, 5 doctorate interns started with us and during the year a total of 11 people also undertook a training stay at the Centre, 2 of them with Specialisation Grants in the Centre coming from the Iñaki Goenaga Technological Centres Foundation.





If we consider the gender criteria of the people of the workforce, the proportion of men and women in 2010 was:

■ Women	53% 47%
As regards their age:  Under 30 years old	22% 51% 27%
As regards qualifications:  No. Advanced Graduates	88
<ul><li>No. Intermediate Graduates</li><li>No. Technical Staff</li><li>No. Others</li></ul>	







# OUR EXPERTISE - WHAT WE DO Gathering for Transfer

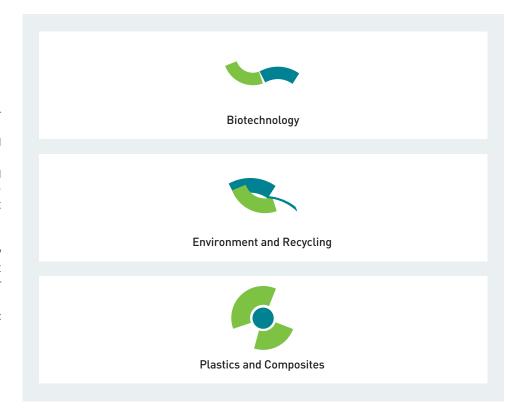


In 2010 we continued developing R&D Projects offering Advanced Technological Services, and doing Analysis and Tests, as well as Technological Training and Dissemination Activities in the context of our 3 Knowledge Areas:

- Biotechnology
- Environment and Recycling
- Plastics and Composites

We continued applying the Technological Centres' Model and striving to keep a balance between the activity of gathering and that of transferring. Only devoting half of our resources to R&D in emerging technologies, we always have a leading-edge offer to make to our clients. To put this way, thanks to our Gathering, Learning and Knowledge Generation Projects, which we are setting underway with financial support from the different Authorities, we can then develop Transfer Projects Under Contract, and offer technological solutions that are specific to our customers' needs.

Equally, in 2010, we continued making progress in the identification of new business opportunities and pressing for new technology-based initiatives, and supporting the protection of results using patents.



## **OUR EXPERTISE - WHAT WE DO**

# Our Areas of Knowledge



As was established in the 5<sup>th</sup> Strategic / Long-term Plan of the Centre (2009-2012), in the last financial year we continued orientating the gathering within the framework of 6 strategic projects groupings: Functional Materials, Bio-medicine, Bio-diagnostics, Renewable Energies, Evaluation and Treatability of Ecosystems, and Sustainable Production. In turn, R&D activity continued being organised by research teams.

### **BIOTECHNOLOGY**

- In Vitro Tests
- Genomics
- Biodetection Systems
- Biorecognition Molecules

### **ENVIRONMENT AND RECYCLING**

- Environmental Management
- Environmental Technologies
- Mechanical Recycling
- Energy Recovery

### PLASTICS AND COMPOSITES

- Smart Materials
- Nanoparticle Synthesis and Functionalisation
- Thermoplastic Materials
- Thermoset Materials

LABORATORY: Tests and Certification



### **R&D PROJECTS**

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS

In 2010 we, completely or partially, carried out 24 R&D projects for the Gathering, Learning and Knowledge Generation with the co-financing of the Biscay Regional Council, the Basque Government and the Ministry of Science and Innovation and a total budget of € 3.1M. The undertaking of these projects, in many cases, in partnership with other Technological Centres, Universities, Cooperative Research Centres (CRCs) and Public Research Bodies (PRBs). At the Basque Country level we are working with our partners from IK4 Research Alliance, as well as the Centres integrated in Tecnalia,

the University of the Basque Country (UBC/EHU) and the University of Mondragon, and in the national field we are working in partnership with CARTIF, ITENE, CIRCE, L'Urederra, LEITAT, CETEMMSA, ITE, IRTA, as well as the University of Gerona, the University of Barcelona, the Polytechnic University of Valencia, the Complutense University of Madrid and the University of Santiago.

We likewise carried on actively participating in the different programmes for Promoting R&D, of both the Regional Council of Biscay (Business Innovation

Comprehensive Plan, Innovation and Cooperation Development Plan), and the Basque Government, (EMAITEK, ETORTEK, NETS) and the General State Authority in the calls handled by the Ministry of Science and Innovation (fundamental research projects, applied research projects, singular projects and INNPACTO programme).





### **R&D PROJECTS**

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS\_BIOTECHNOLOGY

 Strategic research and technological development in gene silencing, structural biology and hepatic illnesses (2008-2010)

**Source of Financing**: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: ETORTEK.

 Strategic research and technological development in signalling and cancer, proteomics and genomics (2009-2011)
 Source of Financing: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: ETORTEK.

Strategic research and technological development in molecular imaging and bio-functional nano-particles for cellular marking and sensors. Working together with our partner from IK4 Research Alliance, Cidetec. (2009-2011) Source of Financing: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: ETORTEK.

 Strategic research and technological development in nano-security. Studies of the effects of nano-particles and nanostructured materials on health. Working together with our partner from IK4 Research Alliance: Ceit and Cidetec. (2010-2012)

**Source of Financing**: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: ETORTEK.

 Pre-industrial development of an integrated and portable analytical device for the qualitative analysis of pathogenic micro-organisms using immunology detection techniques (MICROLAB). [2009-2011]

**Source of Financing**: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: NETS.

 Development of a plasmonic nano-biosensor system in micro-nanostructured polymeric fibre optics (BIOSOP). (2010-2011)

**Source of Financing**: Regional Council of Biscay, Dept. of Economic Development.

**Programme**: Innovation and Cooperation Development Plan (centres of excellence).

Development of bio-sensors for the detection of pathogens based upon molecular and immunochemical techniques (PATSENS). Working together with our partner from IK4 Research Alliance: Ceit and Ikerlan. [2008-2011]

Source of Financing: Ministry of Science and Innovation, General Board of Technology Transfer and Business Development.

Programme: Singular and strategic projects.



### **R&D PROJECTS**

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS ENVIRONMENT AND RECYCLING

- Health of the soil and chemical contamination: development and application of technologies for identification, diagnosis and therapy (BERRILUR III). (2008-2011)
   Source of financing: Basque Government, Dept. of Industry, Trade and Tourism.
   Programme: ETORTEK.
- Research and development of technologies to increase energy efficiency, capture and valuation of CO2 (VALCAPEF). (2009-2011)

  Source of financing: Basque Government, Dept. of Industry, Trade and Tourism.

  Programme: ETORTEK.
- Development of a micro-array RNS for the diagnosis of the impact of contamination on the health of the soil (LURCHIP). (2009-2010) Source of financing: Regional Council of Biscay, Dept. of Economic Development. Programme: Comprehensive Business Innovation Plan.

- Development of techniques of encapsulation for natural (ENCAPTEC). (2009-2010)
- Source of financing: Regional Council of Biscay, Dept. of Economic Development.

Programme: Comprehensive Business Innovation Plan

 Development of a new system of bioremediation for the treatment of soils contaminated by lindane (BIOLINDANE). (2010-2011)

**Source of financing:** Regional Council of Biscay, Dept. of Economic Development.

**Programme**: Innovation and Cooperation Development Plan (centres of excellence).

 Strategic commerce research programme (MERKABILA). (2009-2011)
 Source of financing: Basque Government, Dept. of Industry, Trade and Tourism.
 Programme: ETORTEK. ■Development of technology for the recycling of waste from composites and fibre concentrate in reinforced construction elements (COMPOECO). (2009-2010)

**Source of financing**: Regional Council of Biscay, Dept. of Economic Development.

Programme: Comprehensive Business Innovation Plan

 Sustainable chemical processes for the conversion of complex polymeric waste in resources (PROQUIPOL). (2009-2011)
 Source of financing: Ministry of Science and Innovation, General Board of Technology Transfer and Business Development.

**Programme**: Applied research projects for technological centres.





### **R&D PROJECTS**

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS PLASTICS AND COMPOSITES - I

Smart materials, sensors and activators applied to smart structures and processes (ACTIMAT). Working together with our partner from IK4 Research Alliance: Cidetec and Ikerlan. (2008-2010) Source of Financing: Basque Government, Dept. of Industry, Trade and Tourism.
Programme: ETORTEK.

 New Strategic Materials: smart, functional and special compounds (ACTIMAT 2010-2012). Working together with our partner from IK4 Research Alliance: Cidetec, Ikerlan, Tekniker and Ideko. (2010-2012)

**Source of Financing**: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: ETORTEK.

 Design, modelling and simulation of mecatronic structures based upon composite materials (MECACOMP).
 Working together with our partner from IK4 Research Alliance: Ideko, Ikerlan, Tekniker and Vicomtech. (2010
 Source of Financing: Basque Government, Dept. of Industry, Trade and Tourism.
 Programme: EMAITEK.

Development of composite engineering parts of high added value based upon pre-impregnated epoxidic vinylester modable by compression or idle with temperature (PREPREG). (2010-2011) Source of Financing: Basque Government, Dept. of Industry, Trade and Tourism.

Programme: NETS.

- New materials based upon nanoparticles in cellulose and chitosan and plastic matrices from renewable sources (NANOBIOMAT). (2007-2010) Source of Financing: Ministry of Science and Innovation, General Research Board. Programme: Fundamental research projects.
- Development and processing of conductor nano-clays for the development of multi-functional conditioner polymers (ELECTROCLAY). (2008-2010)

**Source of Financing**: Ministry of Science and Innovation, General Board of Technology Transfer and Business Development.

**Programme**: Applied research projects for technological centres.



### **R&D PROJECTS**

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS\_PLASTICS Y COMPOSITES - II

 Development of light composites for the application of these in the transport sector (INNOLIGHTCOMP). (2009-2011)
 Source of financing: Ministry of Science and Innovation, General Board of Technology Transfer and Business Development.

**Programme:** Applied research projects for technological centres.

 Development of molecularly imprinted polymers for the application of these in the food products field (MIPFOOD). (2010-2013)

**Source of financing**: Ministry of Science and Innovation, General Board of Technology Transfer and Business Development.

Programme: INNPACTO.

 Research into magneto-rheological buffering systems for aircraft (ISAM-A). (2008-2011)

Source of financing: CDTI.

Programme: Aerospace research projects.





R&D PROJECTS
INTERNATIONAL PROJECTS

Our participation in the VII Framework Programme (FP) of the European Union during the financial year 2010, was ended with a total of 3 new proposals financed by the Commission. We likewise continued working on 12 projects, started in previous years.

New Projects:

- FOODSEG Safe food for Europe -Dissemination of research results of EC funded research on food safety.
- NANOINSULATE Development of nanotechnology-based high performance opaque & transparent insulation systems and biocide formulations for energy efficient buildings.
- PINVIALEG Portable microfluidicbased device for in situ of viable Legionella.

In 2010, as it has been doing since its creation in 2007, the GAIKER International Projects Office (OPIG) coordinated the activity related to the European and international projects undertaken at the Centre. The economic return obtained from fromthese projects in 2010 was over half a million Euros. Likewise, together with members of our Foundation, such as Maier Technology Centre, S. Coop., Uriarte Safybox, S.A. and Ondoan S. Coop. we took part in European projects such as Nanoclean, Eurecomp and Pinvialeq.

In 2010 we also participated in a 6 Technological Platforms, which constitute a forum of experts that enables us to learn and share our knowledge with others, as well as to identify the possible R&D needs of the industry.



### **R&D PROJECTS**

PROJECTS UNDER CONTRACT

In the last financial year 2010, we wholly or partially worked on a total of 85 transfer projects, in which we sought to offer innovative solutions to the technological needs of our clients. Under the permanent premise of confidentiality, these projects were carried out for a total of 88 companies from diverse sectors; mostly from within our nearest industrial fabric. The average of the amount contracted for project was € 148,000€.

Out of these projects, 8 were framed within the CENIT programme of the General State Administration (Adapta, Crisálida, Futural, Infinitex, Liquion, Mellius, NetOlift, and Seila) and 8 within the ETORGAI programme of the Basque Country (Bio-based Materials, CIAD XXI, Fluintel, IDECO, Innova-Sens, GAR2, Nanosegur, Smart Safety).

Total no. of Projects	85
With companies from the Basque Country	70%
With companies from the rest of the State	25%
With international companies	5%
Total no. of Client Companies (R&D)	88

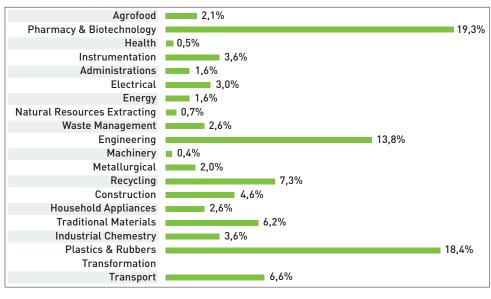
## **OUR EXPERTISE - WHAT WE DO**

## Results in 2010



As regards the origin of our Income under Contract in 2010, the activity carried on extended to a large variety of sectors, as we are a multi-disciplinary and multi-sector Technological Centre.

### **INCOME BY SECTORS IN 2010**



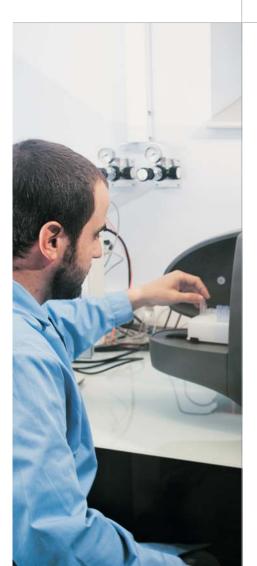




As regards the subjects in which the R&D projects undertaken in 2010 were framed, and on a confidential basis for our clients, these are set out below, being associated with the lines of research applied.

Area of Knowledge	Research Line	No. of Projects
	Molecular biology	3
BIOTECHNOLOGY	Biosensors	2
	Enzymology	2
	Industrial micro-biology	1
	Genomics	2
	ADME/Tox in Vitro	1
	Cellular cultures	3
	Proteomics	1
	Technical-environmental diagnosis and evaluation	7
ENVIRONMENT	Strategies for improving sustainability	1
AND RECYCLING	Identification and automatic separation	2
	Physical separation of materials	8
	Membranes	2
	Soil-waste technologies	2
	Water technologies	5
	Chemical recycling and energy valuation	4
	Bio-fuel technologies	1
	Materials with physical activity	7
PLASTICS	Active products	2
AND COMPOSITES	Super-critical fluids	1
	Nano-manufacturing and handling	5
	Composites	4
	Compounding using TE resins	1
	Compression of Thermoset materials	1
	Design and selection of thermo-set materials	1
	Manufacturing of pre-impregnated materials: SMC/B	MC 2
	TE Green materials (recycled, bio-degradable)	2
	Fireproofing/TE additivation	2
	Pultrusion	2
	Structural calculation and simulations	2
	Extrusion	1
	Formulation and Thermo-plastic compounding	2
	TP green materials (recycled, bio-degradable)	2
	TP injection, co-injection	1





### OTHER TECHNOLOGICAL SERVICES OF GAIKER

ADVANCED TECHNOLOGICAL SERVICES AND ANALYSIS AND TESTS

In the course of the financial year 2010, we carried out a total of 35 technological services and 2 audits or technological checks on processes and/or products, with the aim of contributing with innovative solutions for our customers, as well as with the aim of improving the knowledge of their technological needs in order to design their respective R&D and Innovation Plans. In the last financial year we participated in designing 18 of these plans, 9 of them carried out for companies belonging to our Foundation

Likewise, in 2010, we did 671 analysis and tests, for a total of 123 clients. Of the certified ones, 75 were done under ENAC accreditation.



### OTHER TECHNOLOGICAL SERVICES OF GAIKER

TECHNOLOGICAL TRAINING AND DISSEMINATION

### Technological Dissemination Service

In 2010, we organised a total of 4 technical sessions with the aim of passing on the results of the research and development of the Centre to the Society. These were attended by a total of 197 people from 117 companies.

- Session on "Bio-plastics. Present applications and future prospects".
   February 25.
- 2nd Session on "Innovation in plastic materials and technologies".
   September 28.
- "Rules and criteria in the choice of fireproofing systems". October 21.
- "R&D in a context of responsible management" within the XVI European Week on Quality and Excellence. November 21.

On the other hand, last year we presented the results of our knowledge in diverse forums. We travelled to Poland, Austria, Belgium or the United Kingdom, where we gave a total of 25 conferences and presented 25 posters at different forums and conventions: lutox 2010, 11th Joint MMM-Intermag Conference or the XIII National Chemical Engineering Convention, amongst others.

Also in our goal of disseminating technological knowledge, in 2010 we published a total of 13 papers, of which 7 appeared in the Citation Index of the Institute for Scientific Information (ISI).

# 04

# OUR EXPERTISE - WHAT WE DO Results in 2010



### OTHER TECHNOLOGICAL SERVICES OF GAIKER

TECHNOLOGICAL TRAINING AND DISSEMINATION

### Training Service

As regards the transfer of knowledge using measures of an instructive nature, in 2010 we taught 3 courses on subjects related to "Plastics and their families" or the "Component materials", amongst others, for a total of 52 people attending from 3 companies.

We also took part in two Master's courses, taught in partnership of the University of the Basque Country (UBC/EHU):

- Master's in Smart Materials (UBC-EHU).
- Master's in Waste Recovery Processes (UBC-EHU).

### Information and Documentation Service

From the GAIKER Documentation Centre, during the course of 2010, we continued offering companies information concerning their needs. We replied to a total of 7 external enquiries for 5 companies on technical matters related to patents, bibliographical searches and legislation and rules, and moreover we carried out 60 technological alerts for a total of 8 companies.

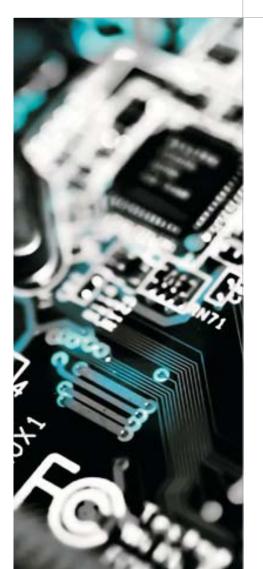
We likewise published the new editions of "Lex Alimentaria" and "Páginas Verdes", with the respective updates concerning food product and environmental legislation, the "Year Book on Articles and Technical Communications", with a list of presentations and scientific

papers prepared by our researchers, and the "Catalogue of Bibliographical Sources", with a list of new sources acquired from the Documentation Centre.

Finally, we sent a total of 13 "Informative Sheets" to 297 client companies. These documents spread information about the R+D calls and they are launched at the same time they are published.

# 04

# OUR EXPERTISE - WHAT WE DO Results in 2010



### OTHER TECHNOLOGICAL SERVICES OF GAIKER

NEW BUSINESS INITIATIVES AND PATENTS

From the perspective of the Exploitation of Results, in 2010 we continued working with the aim of supporting the start-up of New Business Initiatives of a technological nature. Special mention is made of the Agrupación para el Desarrollo, A.I.E, set up in the previous financial year in partnership with CTL-TH Packaging and ZEU Inmunotec. From our beginnings, there are 7 companies created which are still active.

Likewise, in 2010, we continued working on the protection of results deriving from some of our research work using patents. On the one hand, we requested a patent to the European Patent Office ('Polymides with piezoelectric properties'), and on the other, we we also requested an extension to the PCT (Patent Cooperation

Treaty) of a patent initially proposed at the European level. This patent falls with the Biotechnology field ("Portable enrichment, aliquoting, and testing device of micro organisms and toxins"). Since we started we have counted a total of 16 patents, 6 of which are of an international level, as well as 3 Utility Models.



# HOW WE DO IT Management in GAIKER



In 2010 we reached the mid-point of our 5th Strategic Plan / Long-term Plan, 2009-2012, and we ended the corresponding Annual Operating Plan/Management Plan with an 81% compliance rate. In addition, we carried out the two-yearly review of the Technological Differentiation and Specialisation and Market Forecast Plan, 2009-2012. The methodology that we use for the review of this technological plan, which comprehends our activity from the gathering to the transfer of technologies, the distribution or operation of results. facilities the deployment of the 6 strategic Centre projects in 15 stages and the results that emanate from the Strategic Plan from all of the processes that make up the Knowledge Management. In this way, in 2010 we tackled a full analysis of our technological investments and of

their evolution as compared to the market and moreover, we promoted investments in equipment and installations.

On the other hand, in 2010 our Organisation model continued assisting and promoting cooperation, the usage of the multi-disciplinary aspects of our people, and the integration of technological and non-technological "differences", always with the final goal of offering integrated and innovative solutions to our clients. In line with this Organisation model, the different Work Groups continued going into depth in their respective fields of action and several new groups were created -including, the one for Training and the one for Recognition- in order to increase the participation of the people in the

decisions of the Organisation related to these matters.

Likewise, in 2010, there was a reconfiguration of the Board of Directors, which entailed changes associated with the coordination of the different processes in the areas/spheres of influence. As always, it was a year with actions focused on all of our Stakeholders, with particular relevance of those actions aimed at Members of our Foundation and Trustees, with the goal set for year of increasing the number of companies belonging to the GAIKER Foundation.

As regards the Management Model, in 2010 we continued supporting the EFQM Model, and with the aim of continuing to learn, we continued sharing good practices and results with other

# How WE DO IT Management in GAIKER



Technological Centres such as Azti-Tecnalia or Cemitec, with Foundations such as the EFQM itself or Euskalit, or with organisations like Osakidetza (Ekialde County). The latter was awarded the "Finalist" prize in the 2010 edition. In the same way, we offered our experience in the application of the EFQM Model in diverse forums such as the "EFQM Learning Edge 2010", held in Glasgow (GB), or the European Week of Quality and Excellence, held in Bilbao.

On the other hand, last year we completed the development of an Intranet system, with the start-up of a centralised information system, geared not only towards converting it into the main depositary of information in electronic formats, but also to attaining a collaborative and communicative environment.

Likewise, further work was done on the requirements that the new ERP (Enterprise Resource Planning) system of the Organisation should comply with, whose implementation at the Centre is established for the financial years 2011 y 2012. Moreover it was carried out the fibre optic interconnection of the two DPCs (Data Process Centre) that we have; this will enable new mechanisms to replicate and back-up the information, as well as improving the times and capacity of the Centre's Computing Contingencies Plan.











# HOW WE DO IT Quality in GAIKER



In 2010, we continued with the external audits and inspections that enable us to substantiate that we are carrying on our activity following the most demanding standards. Thus, after the audit carried out AENOR (Spanish Association of Standardisation and Certification), the following certificates were renewed:

- Registration of company ER-0986/1998, in accordance with the new review of the UNE EN ISO 9001:2008 norm
- Environmental Management, in accordance with the UNE EN ISO 14001:2004 norm
- Validation of our 2009 Environmental Declaration, in accordance with the new European Regulation 1221/2009 (EMAS III)

In this way, we have ensured that the certificates of the three management systems have the same validity period (from April 2010 until April 2013).

Likewise, following the audit carried out by ENAC (National Accreditation Entity), in accordance with the UNE EN ISO 17025:2005 norm, the following changes were made in the accreditations of the laboratory:

- Incorporation of the specific migration tests into the accreditation 72/LE 272.
   (Tests in plastic materials: traction, bending and migration in aqueous and greasy simulations)
- Elimination of the radiant panel test in the accreditation 72/LE 187 (Fire Reaction tests)

- Elimination of the TOC (Total Organic Carbon) tests in the accreditation 72/LE 1408 (Liquid environmental samples tests)
- Voluntary abandonment of the accreditation 72/1408 (Trails of PCBs in insulating liquids)

The ultimate goal in all of these changes is to go into further depth in our policy of adapting the total number of our laboratory accreditations to the evolution of our customers' needs of our.









## **HOW WE DO IT**

# Commitment to Sustainability



In 2010, we travelled to Brussels in as finalists for the European EMAS 2010 Prize, after a selection made by the Ministry of the Environment and Rural and Marine Affairs amongst 1,200 organisations of the State selected for their efficiency in the management of resources and their commitment to the environment. We had previously been selected by the Environmental Planning Management of the Basque Government from amongst a total of 53 entities to represent the Basque Country in Madrid.

Since 2004, our environmental behaviour has been set out in the EMAS Environmental Declaration which AENOR annually validates. In 2010, we managed to achieve three of the four minimisation targets set.

INDICATORS ESTABLISHED BY THE EMAS III REGULATION	COMPARED TO 2009
Total direct energy consumption	Reduction of 7%
Total renewable energy consumption	Increase of 81%
Annual mass flow cost of materials used	Reduction of 36%
Water consumption	Reduction of 33 %
Total waste generation	Reduction of 39%
Annual generation of hazardous waste	Reduction of 33%
Land occupation	Increase of 3%
Annual emissions of greenhouse gases	Reduction of 4%
Total annual air emissions	Not evaluated

### **HOW WE DO IT**

# Commitment to Sustainability



The positive trend of most of the basic indicators shows the continuing investment of the Organisation in Environmental Management and how we consider that this assists our environment and in turn the optimisation of own resources.

On the other hand, in November 2010, we signed up for the "Eco-efficiency Programme of Basque Businesses 2010-2014" of the Department of the Environment, Territorial Planning, Agriculture and Fisheries of the Basque Government. The aim of this programme is to act with the companies of the Basque Country in order to assist with the transformation of the Basque production business network and make it more efficient, innovative and sustainable.

Likewise, in 2010, we continued our participation –along with other companies and organisations located in the Biscay Technological Park (BTP) –in the Sustainability Forum, which this entity has supported since 2007. The goal of this forum, which is voluntary to participate in, is to facilitate the exchange of ideas and support the sustainable development of the Park.

As regards the Council for the Implementation of Guidelines of Sustainable Development in GAIKER, the 2010 activity was focused on reinforcing the actions of spreading awareness and dissemination of Good Environmental Practices, on evaluating the noise pollution of the activities of the Centre and on the development of a methodology and a

tool for the evaluation of the sustainability of the technologies applied in R&D projects.





# WHO WE LEARN FROM AND WORK WITH Our Partners



The partnerships with Technological Centres, Universities, Public Research Bodies (PRBs) and other entities of the Science-Technology System, in both our nearest area and at the international level, are of great importance for us. Working with others within the framework of European Projects or of the Projects of Gathering, Learning and the Generation of Knowledge that we take part in enables us to learn and share knowledge. It enables us, in short, to make progress more quickly.

In 2010, in the area of the Basque Country, we can note the partnerships within the strategic research projects of the ETORTEK Programme of the Basque Government (ACTIMAT, BERRILUR III, BIOGUNE 2009, BIOMAGUNE 2009, BIOMAGUNE 2010, VALCAPEF and MERKABILA). We especially collaborated with some of our partners in the IK4

Research Alliance (Ceit, Cidetec, Ideko, Ikerlan, Tekniker and Vicomtech), as well as Technological Centres of the Tecnalia Corporation (Robotiker, Inasmet, Fatronik, Neiker, Azti, Labein and Leia) and with other entities such as the Basque Foundation of Health Research and Innovation (BIO Foundation) or the SRCs bioGUNE and biomaGUNE. Similarly, in the university field we are working together with the University of the Basque Country (UBC/EHU) and the University of Mondragon.

At the national level and within the framework of projects financed by the Ministry of Science and Innovation we can note our partnership with other technological centres such as ITENE, CARTIF, CIRCE, L'UREDERRA, ITE and LEITAT, public R&D centres such as the IRTA of Catalonia, and Universities such as the University of Gerona, the

Polytechnic of Valencia, the University of Santiago de Compostela, the Complutense University of Madrid and the Autonomous University of Barcelona.

In the international field, in addition to the partnerships maintained through projects financed both in the VII Framework R&D Programme and in other frameworks for supporting research, development and innovation in Europe, during the course of 2010 we held meetings and maintained contact with technological institutes such as IMEC, VIB and VITO in Flanders and with companies such as Hach Lange in Germany. Equally, we took part in a commercial mission to Israel in which we had the opportunity to visit, amongst others, the University of Jerusalem, the University of Tel Aviv, the Weizmann Institute of Science and Technion (Israel Institute of Technology).

### WHO WE LEARN FROM AND WORK WITH

# Associations that We Belong to



At GAIKER, beyond the network of relations associated with our technological activity, we are connected to Associations, Institutions or Clusters of diverse topics. This context includes our membership of a total of 25 forums related to the business field, management, quality or culture, amongst others, which enable us to learn, contribute and relate to others.























































### **FOR WHOM**

# The Companies of Our Foundation



















































INSTITUTIONS









# FOR WHOM Our Customers



In 2010, we placed confidence in the technological innovation needs of a total of 243 customers. According to data from the Client Satisfaction Survey (CSS) of the year, annually sent to all of our customers, their satisfaction index was placed in 2010 -in line with previous financial years- at a very satisfactory level: over 3 on a scale of 0 to 4. The best parameter assessed by those who chose our services was that of "accessibility and attention to enquiries", followed by "clarity and understanding of the results and technical quality". This result was completed with the absence of complaints or claims.

As a result of the commercial activity undertaken, the growth in income from activity under contract as compared to the previous financial year was 6%. The causes of this evolution were positive, being the result of a commercial policy

aligned with the goals of a clientorientated Organisation, as well as making a commitment to continuous improvement.

On the other hand, in 2010, we were present at a total of 4 trade fairs, with the aim of spreading awareness about our technological offer to clients and potential clients. Thus, we were present at Construlan, Construction, Equipment and Installations Room, held at the BEC (Bilbao Exhibition Centre) of Barakaldo (Biscay) in April, and in Construtec, Construction Room held in Madrid in the month of October. We were also present at Tecma, the International Trade Fair on Town Planning and the Environment that was held in Madrid in June, and at Biospain, the 5th International Biotechnology Meeting held on this occasion in Pamplona between September 29 and October 1.



# FOR WHOM The Society



In line with our intention to transfer the results of our activity to the Society, in 2010 we continued to make an effort to report on these to the mass media and the specialist press. The results of our activity affect areas of extensive social interest such as Health, the Quality of Life or Safety, and so the information released was presented in the printed mass media on a total of 133 occasions. Amongst the generalist media that published news about us were the newspapers Deia, El Mundo and El Diario Vasco, and amongst the economics media: Estrategia Empresarial, Empresa XXI and Gestión. As regards audiovisual media, we had a total of 18 appearances in the past year: 5 appearances on television, and 13 features on radio. We similarly had published a total of 13 papersin publications of a technical nature: more specialised and targeted at the world of technology and business.

As in every year, we published 4 editions of our magazine, "Oldartu", where we showed news related to our business and interviews with known personalities from oursurrounding environment such as: Bernabé Unda, Regional Minister for Industry, Innovation, Trade and Tourism; José María Fernández Sousa-Faro. Chairman of the Zeltia Group; Juan Miguel Retolaza and Iñaki Letona, Chairman and ex-General Manager of the GAIKER Foundation, respectively, and Guillermo Dorronsoro. Executive Deputy Chairman of IK4 Research Alliance and General Manager of Informática de Euskadi

In line with previous financial years, in November we joined in with the events annually arranged by Euskalit (Basque Foundation for Excellence), organising a session at the Centre on "The R&D in a context of responsible management".

Likewise, coinciding with the Open Doors session that is organised every year by the Biscay Technological Park in the context of the European Week of Science, Technology and Innovation, on Sunday November 21 we opened our doors to about six hundred people. On this occasion, we spread information about the activity that we carry on from the Biotechnology Knowledge Area. Amongst the organised activities, children had the chance to observe different cells being cultivated using a microscope and they received a gift of a puzzle with the DNA double helix. The adults, in turn, got to know us better through the usual guided tours. This year, the event was arranged in cooperation with the Adecco Foundation –which we have had an agreement with since 2008 - and activities were carried out that were aimed at spreading awareness amongst young people about the problems of



# FOR WHOM The Society



accessibility that are faced by people with disabilities.

It is also worth noting our participation in the organisation of the "First Lego League, 2010", a competition in which schoolchildren from all over the world had to explore the vanguard of biomedical engineering, discovering innovative ways of repairing injuries. overcoming genetic predispositions and maximising the body's potential with the aim of leading a healthier life. Our goal, as an expert Technological Centre in Biotechnology, and by means of 25 training sessions with Basque participants and visits to our laboratories, was to explain to the young people participating in our environment what are the main applications of biotechnology in bio-medicine and bio-engineering.

On the other hand, we counted over 1,000 visits to the Centre from very different fields. In addition to welcoming customers and suppliers, as well as delegations from Sweden, Poland or Holland, and in general, all those who wanted to find out about us at close hand and the work of a Technological Centre. Finally, we also continued making the labour market dynamic, contracting and transferring staff from the industry, as well as welcoming students from different organisations in order to carry out their training spells with us.





## Economic Data from the Financial Year



The financial year 2010 was a year of continuity for GAIKER as far as the economic and business results were concerned. Total income reached 11.11 million Euros. As far as the forecast for 2011 was concerned, this indicates that the total income will reach 11.66 million Euros.

As regards investments (fixed assets) in 2010, we committed 3.26 million Euros to this entry and in 2011, this figure will reach 2.98 million Euros

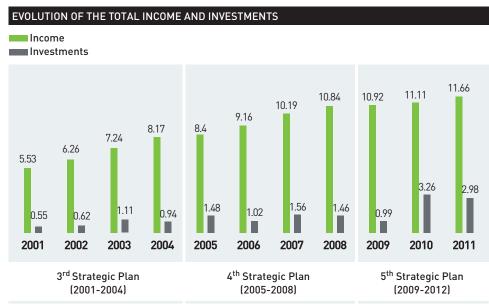
OPERATING ACCOUNT	
Income from Non-Competitive Public Financing	€ 1,700 K
Income from Contracts and Tenders	€ 9,301 K
Other Income	€ 112 K
Application to Self-financing	€ 452 K

BALANCE SHEET	
Non-current Assets	€ 11,721K
Shareholder Equity	€ 7,456 K
Cash Flow	€ 1,909 K
Working Capital	€ 8,059 K
Total Assets	€ 26,856 K



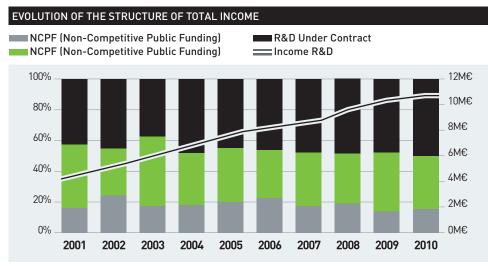
Economic Data from the Financial Year





Economic Data from the Financial Year



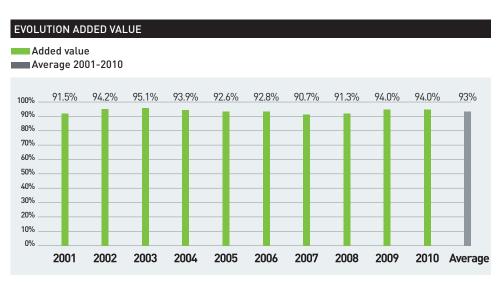






Economic Data from the Financial Year





# Technological Results of Our Activity



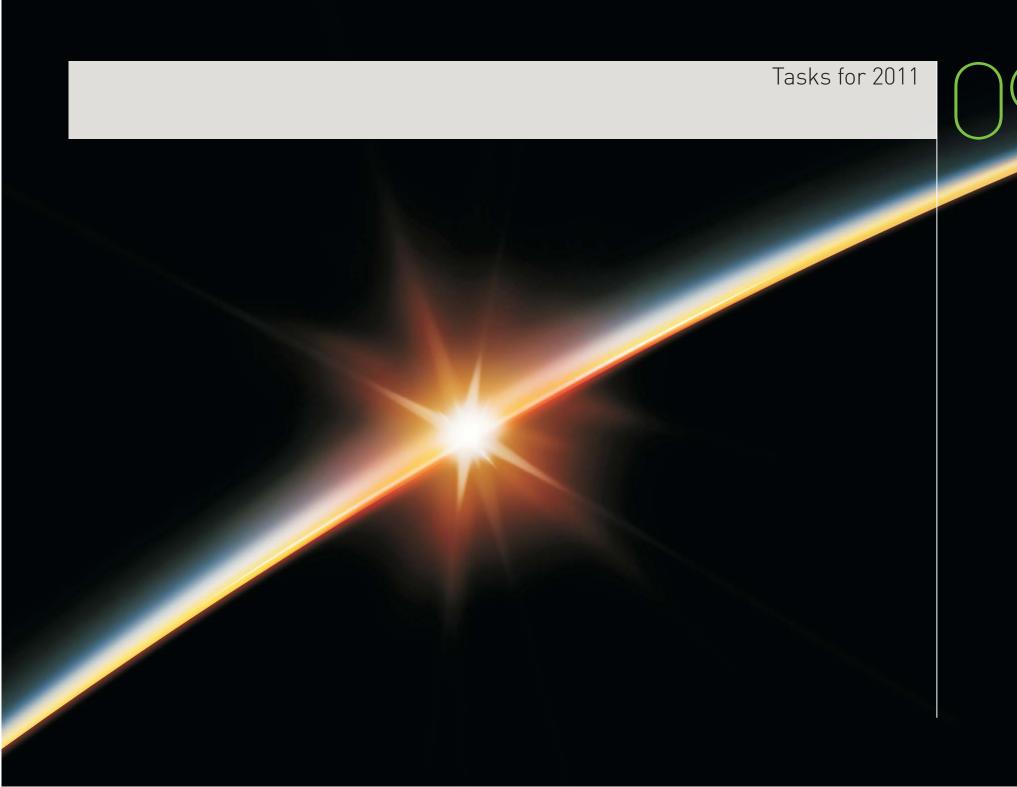
TECHNOLOGICAL RESULTS OF OUR ACTIVITY	2010	PERIOD 2001-2010 ACCUMULATED TOTALS
"Embryo" technologies incorporated into the Centre	0	19
New products for companies	16	196
New processes for companies	12	101
Patents granted (Inventors/Own)	0/1	6/10
Patents applied for by request	2	31
Ideas of NBIs (New Business Initiatives)	1	34
NBIs (Spin Off) created (ACTIVE)	0	6 (5)
NBI developers arising from the Centre	0	6
Partnerships with CRO/RTO (CC.TT.). R+D Projects	4	52
Partnerships with Universities, R&D Projects: Total/	4/3	56/38
Partnerships with SRC. R&D Projects	1	8
Spanish companies participating in approved European Projects	2	59
Grant holders incorporated into industry	2	72
Staff from the Centre incorporated into the industry	2	42
R&D Projects Under Contract. Companies	14	274
R&D Projects Under Contract. Members of the Foundation	3	82
Innovation schemes for companies	19	108



# Technological Results of Our Activity



TECHNOLOGICAL RESULTS OF OUR ACTIVITY	2010	PERIOD 2001-2010 ACCUMULATED TOTALS
Collaborations in R&D with Engineers	19	55
Technology Surveillance and Prospective Services	178	856
"Audits" or Technological Services for processes and/or products	37	175
Certificates of Analysis and Tests	671	6935
Products' certifications (ENAC-National Accreditation Entity)	75	1197
Technical Information Sessions	4	60
Companies attending the Sessions	117	1404
Training Courses taught	3	64
Spokespeople at National (N) and International (I) Conventions	14/11	124/97
Articles in National (N) and International (I) magazines published	2/11	94/46
Posters presented to National (N) and International (I) Conventions	4/21	32/95
Participation in European Platforms. Mirror (VIIFP)	6	13
European Projects (VII FP) initiated	3	17
International Transfer Agreements	0	12
International Knowledge Generation Agreements	0	9





### TASKS FOR 2011



- Deployment of the new organisational structure profiled in the financial year 2010.
- Set up of the new facilities at the Automotive Intelligence Centre for the development of paintings and decorative and functional finishing for the automotive industry. Investment in mixed technologies, integration of multi-disciplinary knowledge of the Centre and Support for Strategic Projects of the Centre.
- Offer of a bigger and better service with the inauguration and start-up of the new technological technology and fire laboratories.

- Support for actions and agreements aimed at the "Clients" Interest Group, with the aim of orientating and optimising our technologies capture to their technological needs.
- Attraction and acquisition of the knowledge necessary in order to achieve the technological and nontechnological goals sought.
- Investment in sustained growth from the economic, social and environmental viewpoint: development of the Corporate Responsibility of the Centre.
- Focus and deployment of the Internationalisation actions of the

- Centre, within the context of the Technological Centre model.
- Strategic positioning of IK4.
- Promotion of the Centre's image with the launch of a new website, reflection of a new communication strategy, also visible in new image and communication formats.
- Attraction of new companies in order to increase the number of members belonging to the Foundation.

