

ANNUAL REPORT

2011



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GREETINGS

Hello everyone. By the time this report reaches you, you will already be fully aware of the changes IK4 went through last year. You will have seen that the new graphic expression of the brand is gradually being incorporated in the Alliance's centres as well as in its external projection. This fresh visual identity, which aims to better represent what we are and what we consider we should be, is no more than the symbol of our commitment to the shared project, which is IK4.

This is the most visible change, but naturally it is not the most important one since it only sets out to symbolise the new era that has opened up in the IK4 Alliance. The hallmark of this new era will be fixed in the Strategic Plan 2013-2016, which is currently being drawn up and which is due to be completed in the course of this year. It aims to establish a firm course to ply the rough seas of the present economic situation and find ourselves in an advantageous position once the storm has abated.

There is no doubt that this is a crucial moment for IK4. We are all aware that living

with uncertainty could well be the natural state of things in the future. That is why it is essential that we act with the conviction that this scenario in no way questions our function, but simply stresses the importance of being a driving force for progress.

We have exciting challenges ahead of us. Firstly, we have to contribute in an increasingly decisive way towards consolidating technological innovation as the tool for improving the competitiveness of the industrial base through the generation, capture and transfer of knowledge. And secondly, we have to win this future in an inexorably more global environment. In other words, we have to compete with the best if we want to be better.

Driven by these challenges, we have embarked on the reflection process that will lead us to the drawing up of a new strategic plan. By 2011 we had made great progress in the quest for effective mechanisms to optimize the results of our collaboration within the framework of the Alliance. It is a fact that we, the IK4 centres, are in this together, but this means we can avail ourselves of more possibilities for improving, and

for rendering a better service to society. The new strategic plan for the coming four years will be speaking about specialisation, internationalisation, governance, projecting the Alliance, and strategic environments. Addressing these challenges efficiently will require a multiple dose of commitment to specific plans and common objectives.

This is where one can fully appreciate the symbolic value of the fresh visual identity of the IK4 Alliance. The reason is that this symbol represents our commitment to the significant work done in 2011 and to the aims that will be established by the IK4 Strategic Plan 2013-2016, the "road map" set to consolidate IK4 as a European benchmark in technology applied to companies.



Jesús María Iriondo
Chairman of the IK4 Technological Alliance

In a context of great economic uncertainty like the one we find ourselves in, resorting to concepts like success or satisfaction can be a rather sensitive issue. Nor is it fitting for an organisation like IK4 to let itself be carried away by self-complacency, or to boast about its achievements in an environment characterised by worry and even pessimism.

But the fact is, the results achieved by IK4 in 2011 must be rated as positive, so we have to admit that the position of the Alliance is one that, in general terms, we could regard as privileged.

In 2011, IK4's total revenue was in the region of 103 million euros, 96 of which corresponded to its R+D+i activities. About 63% of this figure comes from direct contracts with companies, a highly significant figure which puts us in a leading position among the Europe's main private technology corporations.

As regards income from the administrations, it is worth highlighting the increase in funding from the European Union's competitive programmes, which have to a certain extent offset a slight fall in other spheres, which we trust will return to normal over the coming years.

It is important to stress that IK4 has obtained returns amounting to 41 million euros from its participation in the EU's 7th Framework Programme, having participated in 104 research projects and leading 18 of them. By the end of 2011 we had a total of approximately 1,500 projects ongoing, and a portfolio of active clients numbering 833.

Equally important is the contribution of technological know-how which IK4 makes to society from the centres that form the Alliance. So the number of patents applied for in 2011 was 32, and the number of patents granted rose to 23. With them we have a total of 152 patents in force. Last year, we also made investments to the tune of 21 million Euros.

2011 was also an important year from the perspective of the growth of the Alliance. LORTEK and AZTERLAN are now full members, and their joining IK4 considerably adds to its technological offer. With these new members, over 1,430 people –with 23% of us being PhD holders– are now part of this Alliance. So the IK4 family is a large, highly qualified group.

I have to acknowledge that these figures are very positive right now, because they enable us to look towards the future with an attitude of one who is more concerned about opportunities than threats. The fact is, we pre-

fer to see these figures as the launch pad for addressing tomorrow's challenges. For this very reason we are putting great effort into the new Strategic Plan, the road map that will mark out the route for our journey over the coming years.

I pointed out at the beginning that it is not fitting that IK4 should become self-complacent. I would like to think that, by contrast, responsibility and the spirit of commitment figure among our defining characteristics. Commitment to ourselves, our centres, to the IK4 Alliance, to the companies we work with, and to society as a whole.

It is a commitment we must accept individually and as a group. Because our skill in successfully overcoming future challenges is going to depend on this capacity to commit ourselves, to work together, and to improve on a day-to-day basis.



José Miguel Erdozain
General Manager of the IK4 Technological Alliance

The world has changed so much since the 1980s that in many respects it is almost unrecognisable. The difficult economic situation affected the Basque Country particularly seriously and left our companies in serious difficulties. Fortunately, our government was able to find solutions, for example, creating a series of Basque Technological Centres, GAIKER-IK4 among them. The aim was to stop the destruction of our industry and to put a halt to the 22% unemployment level. The installation of Technological Centres in different areas around the region helped prepare the terrain for the creation of an innovative Society.

During this time, there have been great developments in the area of innovation. The Basque Country has been a pioneer in R&D linked to disciplines whose progress over the past few years has resulted in di-

rect, specific benefits to our environment. For example, to Biotechnology, almost an unknown field when GAIKER-IK4 began to develop its projects back in 1985 and which today is as well-known in the field of research as in society itself.

That decision by our institutions ploughed the way and enabled the culture of innovation to lay down roots, so that today large Basque companies do not outsource their research centres and the Basque Autonomous Community hopes to exceed 3% of the Gross Domestic Product (GDP) by 2015. This long term ambition is the reason we have also been able to face the current situation in above average condition, although the storm is a heavy one and logic demands that new ideas must be proposed to solve new problems.

At the Technological Centres, we hope we are up to the challenge. Specifically, at GAIKER-IK4 we will work to align our tech-

nological specialisation, in other words our knowledge, with the politics of different Public Administrations that aim to boost R&D. We will aim to achieve coherence between their strategies and our fields of knowledge, all within the Science, Technology and Innovation System. Efforts to restructure our industry and Society will be more effective if we work together.



Juan Miguel Retolaza
Chairman of GAIKER-IK4

Just like every year, at GAIKER-IK4 it is now time to draw up a balance. This is a voluntary requirement stated in the Annual Report, which, in at least our case, vouches for the commitment to transparency that we renew every year. Ultimately, it is another way for us to assess our decisions, the results obtained and future challenges.

Unfortunately, in 2011 the economic situation continued to have an undesired prominence. These are difficult times and it is true that the current circumstances affect an increasingly large number of companies and sectors; indeed, this is undeniable. As a result, public institutions have seen the content of their coffers progressively dwindle and this situation, to a greater or lesser degree, has affected every layer of our Society: citizens, companies and entities and even public institutions themselves.

Fortunately, Society is made of people, and people are architects of ideas... And when there is the will, as Victor Hugo once said, ideas can move the world, because ideas push us to try, to improve and to innovate.

At GAIKER-IK4 we continued to search for ideas, new ideas, throughout 2011. We learned about new technologies, improved products and processes and developed new solutions to new problems. For example, during 2011 we worked on 17 European projects and on a total of 23 R&D projects in order to gather knowledge, the majority in collaboration with expert partners. We also worked on the development of 73 R&D projects under contract from clients; confidential developments that aimed to provide technological solutions tailored to their needs. And, as always, we continued to explain this work through our technological communication activities, a commitment that is part of our Centre's mission.

In short, we continued with our usual activities, but with the drive and the optimism required by the present economic situation. Because at GAIKER-IK4 we believe this is not the time to be negative. We have the challenge of our Sixth Strategic Plan (2012-2016) ahead of us; now is the time to imagine and aspire to a different and innovative future. Above all, now it is the time to work hard to achieve it, because hard work combined with responsible and sensible optimism is the key to permanence and advancement. In our opinion there are no magic spells. But nor are there vaccines against optimism.



Begoña Goiricelaya
General Manager of GAIKER-IK4

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Who we are

We are among those who believe

We believe there are no vaccines against optimism. We have been working in this spirit for 26 years and hope that it continues to carry us on further. In 2011 we crossed the midpoint of our Fifth Strategic Plan / Long-term Plan (2009-2012) and we are continuing to draw closer to the Vision of what we want to be as an Organisation.

A Vision in which we are a reference point and providers of technological knowledge with international scope. With a plan sustained by the commitment of all, management based on continuous improvement and a strategy geared towards 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

To achieve this Vision we are clear in our Mission: to research and provide reliable and innovative technological solutions that add value to a company, contributing to its technological development and competitiveness; to collaborate with others; to generate opportunities for emerging economic activity, making the creation of new products and companies possible; and, to achieve all of the above within a sustainability framework.





The people behind the GAIKER-IK4 project

We understand the importance of people because we know they are the engine behind any Organisation. If they believe, we believe. As Victor Hugo said, "What drives and carries the world forward are not machines but ideas". And ideas belong first to people and then to their Organisations.

On 31 December 2011 the Centre's team was made up of 131 people on the workforce. A team of minds generating ideas with a shared objective: to innovate and improve, in terms of technology, communication, management, organisation, etc.

In 2011, we also had 6 doctorate interns completing their doctoral theses with us, and another 11 people undertaking training stays at the Centre (clinical fellowships, end of Master's projects, Master's internships and aid workers).

If we examine the gender statistics of people on the workforce, in 2011 the proportion of men and women was 53% women and 47% men. In terms of age, 57% were between 30 and 40 years old, 29% were over 45 years old and 14% were under 30.

With regard to qualifications, the profile of our team was as follows: 91 advanced graduates (19 PhD and 72 graduates/engineers), 11 intermediate graduates, 22 technicians and 7 others.



Our expertise: What we do

We gather to transfer

At GAIKER-IK4 we are dedicated to R&D in 3 areas of knowledge: Biotechnology, the Environment and Recycling, and Plastics and Composites. During 2011 we continued to develop R&D projects, offering Advanced Technological Services, and carrying out Analysis and Testing and Training and Dissemination Activities in these fields.

We also continued to apply the Technological Centre Model and worked to keep a balance between the activity of gathering new technologies and that of transferring what we have learned to industry. Simply by devoting half of our resources to R&D in emerging technologies, we always have a cutting-edge offer to make to our clients.

During 2011 we also continued to dedicate more time to identifying new business opportunities, driving forwards new technology-based initiatives and protecting our results through patents.





Technological results in 2011

R&D Projects

GATHERING, LEARNING AND KNOWLEDGE GENERATION PROJECTS

In 2011 we, completely or partially, carried out 23 R&D projects which meant to gather, learn and generate knowledge about technologies associated to our Knowledge Areas. These projects counted on with the co-financing of the Biscay Regional Council, the Basque Government and the Ministry of Science and Innovation and a total budget of € 2.2 M.

These projects were, in many cases, carried out in partnership with other Technological Centres, Universities, Cooperative Research Centres (CRCs) and Public Research Bodies (PRBs). For example, at the Basque Country level we collaborated with our partners in the IK4 Research Alliance, as well as with Tecnalia Research and Innovation, the University of the Basque Country (UBE/EHU), the University of Mondragon and the BIO Foundation. In the

national sphere, we worked alongside Caratif, Itene, Circe, L'Urederra, Leitat and Ite, as well as with the University of Granada, the Autonomous University of Barcelona, the Polytechnic University of Valencia, the Complutense University of Madrid and the University of Santiago de Compostela.

In turn, we also continued to actively participate in programmes aimed at promoting R&D driven by different Public Adminis-

trations: the Regional Council of Biscay (Comprehensive Business Innovation Plan, Innovation and Cooperation Development Plan), the Basque Government, (EMAITEK, ETORTEK, NETS) and the General State Authority through the Ministry of Science and Innovation (key research projects, applied research projects, singular projects and the INNPACTO programme).





BIOTECHNOLOGY

- Strategic research and technological development in signalling and cancer, proteomics and genomics (BIOGUNE 2009)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- Strategic research and technological development in nano-security. Study on the effects of nanoparticles and nanostructured materials on health (BIOMAGUNE 2010). In collaboration with our partners in the IK4 Alliance: Cidetec and Ceit

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- Development of a plasmonic nano-bio-sensor system in micro-nanostructured polymeric fibre optics (BIOSOP)

Source of financing: **REGIONAL COUNCIL OF BISCAY, DEPARTMENT OF INNOVATION AND ECONOMIC DEVELOPMENT**

Programme: **INNOVATION AND COOPERATION DEVELOPMENT PLAN (centres of excellence)**

- Development of bio-sensors for the detection of pathogens based on molecular and immunochemical techniques (PATSENS). In collaboration with our partners in the IK4 Alliance: Ceit and Ikerlan

Source of financing: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT**

Programme: **Singular and strategic projects**

- Open platform on health in biopharmaceutical experimentation (PLASMA). In collaboration with our partners in the IK4 Alliance: Ceit, Cidetec, Ikerlan, Tekniker and Vicomtech

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **EMAITEK**

- Strategic research and technological development in molecular imaging and biofunctional nanoparticles for cellular marking and sensors (BIOMAGUNE 2009). In collaboration with our partners in the IK4 Alliance: Cidetec

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- MicroLab Detect. Pre-industrial development of an analytic integrated and portable device for the qualitative analysis of pathogenic microorganisms through immunology detection techniques (MICROLAB)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **NETS**

- Development and transfer of non-invasive molecular diagnostic system for colorectal cancer in peripheral blood (CRC MARKERS)

Source of financing: **REGIONAL COUNCIL OF BISCAY, DEPARTMENT OF INNOVATION AND ECONOMIC DEVELOPMENT**

Programme: **INNOVATION AND COOPERATION DEVELOPMENT PLAN (centres of excellence)**

- Nanobiomedicine: bio-functional modular nanostructures for the diagnosis and therapy of cardiovascular pathologies and cancer using molecular imaging and skills development techniques (ICTS – molecular imaging unit) (BIOMAGUNE 2011). In collaboration with our partner in the IK4 Alliance: Cidetec

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- R&D in metabolomics, structural biology and target validation with therapeutic activities and development of centre results (BIOGUNE 2011)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**



ENVIRONMENT AND RECYCLING

- Health of the soil and chemical contamination: development and application of technologies for identification, diagnosis and therapy (BERRILUR III)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programa: **ETORTEK**

- Development of a new system of bio-remediation for the treatment of soils polluted by lindane (BIOLINDANE)

Source of financing: **REGIONAL COUNCIL OF BISCAY, DEPARTMENT OF INNOVATION AND ECONOMIC DEVELOPMENT.**

Programme: **INNOVATION AND COOPERATION DEVELOPMENT PLAN (centres of excellence)**

- Strategic commerce research programme (MERKABILA)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- Sustainable chemical processes for the conversion of complex polymeric waste in resources (PROQUIPOL)

Source of financing: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT.**

Programme: **APPLIED RESEARCH PROJECTS FOR TECHNOLOGICAL CENTRES.**



PLASTICS AND COMPOSITES

- New Strategic Materials: smart, functional and special compounds (ACTIMAT 2010-2012). In collaboration with our partners in the IK4 Alliance: Cidetec, Ideko, Ikerlan and Tekniker

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **ETORTEK**

- High performing multifunctional surfaces obtained by combining surface treatment techniques (SURFACE). In collaboration with our partners in the IK4 Alliance: Cidetec, Ideko, Tekniker, Lortek

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **EMAITEK**

- Development of composite engineering parts with high added value based on pre-impregnated epoxidic vinylester mouldable by compression or a vacuum at temperature (PREPREG)

Source of financing: **BASQUE GOVERNMENT, DEPARTMENT OF INDUSTRY, TRADE AND TOURISM.**

Programme: **NETS**

- Development and processing of nanoclay conductors for the development of multifunctional polymer conductors (ElectroClay)

Fuente de financiación: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT.**

Programme: **APPLIED RESEARCH PROJECTS FOR TECHNOLOGICAL CENTRES.**

- Development of light composites for application in the transport sector (INNOLIGHTCOMP)

Source of financing: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT.**

Programme: **APPLIED RESEARCH PROJECTS FOR TECHNOLOGICAL CENTRES.**

- Development of molecular imprinted polymers for application in the food industry (MIPFOOD)

Source of financing: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT.**

Programme: **INNPACTO**

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

Source of financing: **CDTI**

Programme: **AEROSPACE RESEARCH PROJECTS.**

- Development of natural composites that meet fire regulations in the transport and construction sectors (BIOSUA)

Source of financing: **REGIONAL COUNCIL OF BISCAY, DEPARTMENT OF INNOVATION AND ECONOMIC DEVELOPMENT.**

Programme: **INNOVATION AND COOPERATION DEVELOPMENT PLAN (centres of excellence).**

- Design and exploitation of anti-vibration materials manufactured from secondary materials derived from used tyres for application in the field of railway infrastructures (H-GOMA)

Source of financing: **MINISTRY OF SCIENCE AND INNOVATION, GENERAL DIRECTORATE OF TECHNOLOGY TRANSFER AND BUSINESS DEVELOPMENT.**

Programme: **INNPACTO**



INTERNATIONAL PROJECTS



Our track record in developing European Projects began in 1991, and since then we have participated in all of the R&D development programmes promoted by the European Union. Throughout 2011 we continued to work on the 17 projects financed by the European Commission in which we currently participate, 14 of which are within the Seventh Framework Programme (FP). As an example, we should highlight our leadership of the Nanother project, which

aims to integrate a new technology based on nanoparticles for the diagnosis and therapy of different cancer types, and also our collaboration with other members of the GAIKER Foundation (Maier Technology Centre, S. Coop., Uriate Safybox, S.A. and Ondoan S. Coop.) in the development of 3 of the 17 projects currently underway.

In turn, our active participation throughout the year in a dozen Technological Plat-

forms, half of which are national “mirror” groups, has also been important.. These platforms constitute an experts’ forum that allows us to learn and share our knowledge with others, as well as to identify possible R&D needs in industry.



PROJECTS UNDER CONTRACT



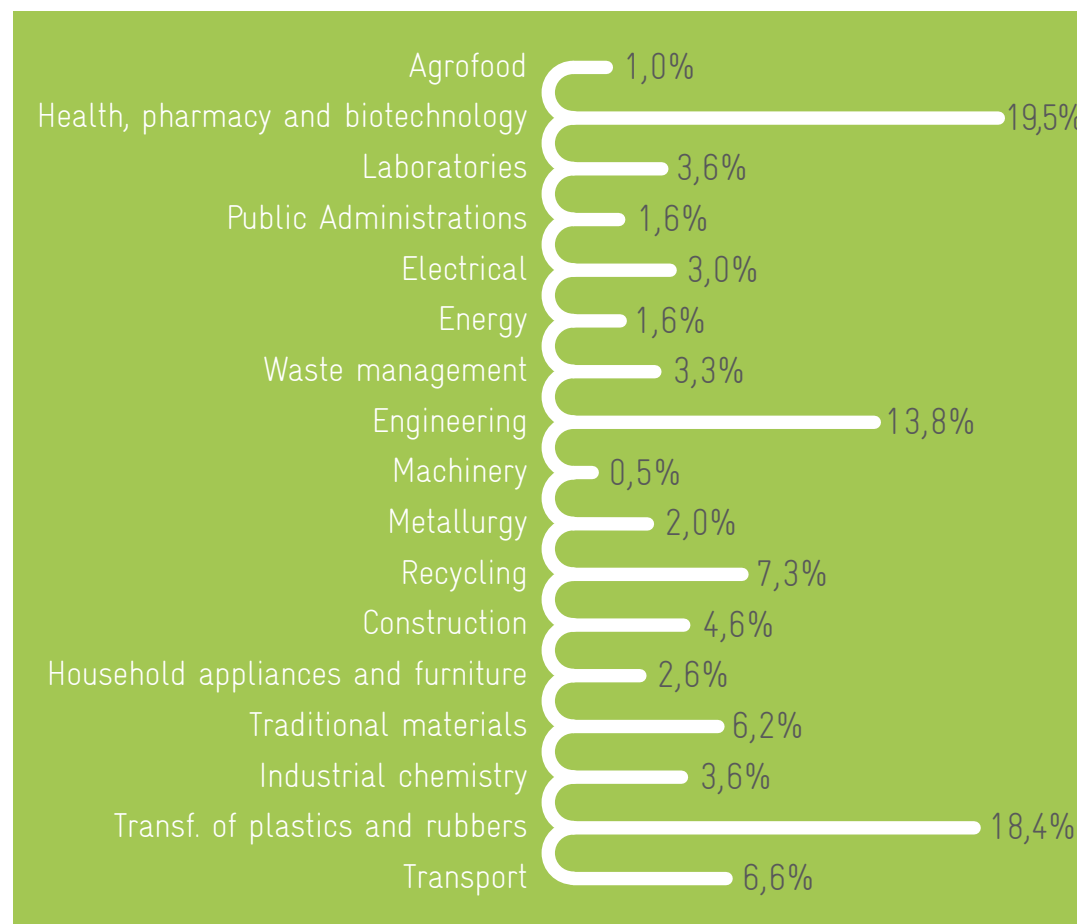
During the last financial year we worked, fully or partially, on a total of 73 R&D transfer projects. Under confidential terms, these projects aimed to offer innovative solutions to a total of 105 companies which entrusted us with their technological needs. The majority were local companies from a variety of spheres with an average contract amount per multi-year project of €106,000.



Out of these projects, 7 were framed within the CENIT programme of the General State Administration (Aton, InfiniTex, Liquion, Oncológica, Dendria, Seila and Vida) and 10 within the ETORGAI programme of the Basque Government (Bio-based Materials, CIAD XXI, Fluintel, IDECO, Innova-Sens, GAR2, Nanosegur, and Smart Safety).



Regarding the origins of our Income Under Contract by sector, activity carried out in 2011 covered a variety of sectors, due to the fact we are a multidisciplinary and multi-sector Technological Centre.





The R&D projects developed over the past year were framed within a variety of subjects which are summarised below under the different research lines.

BIOTECHNOLOGY

RESEARCH LINES	No.
Molecular biology	5
Biosensors / Biodetection	4
Industrial microbiology	1
Genomics / Proteomics	2
ADME / Tox in vitro / Cell cultures	4

ENVIRONMENT AND RECYCLING

RESEARCH LINES	No.
Environmental assessment / Sustainability	6
Separation of materials processes	10
Water treatment technology	5
Soil-waste technology	2
Chemical recycling and energy valuation	4

PLASTICS AND COMPOSITES

RESEARCH LINES	No.
Functional materials	6
Nanomaterials	3
Development of applications of composites	7
Development of TE materials	4
Development of pre-impregnated materials	2
Bioplastics / Biocomposites	5
Thermo-plastic compounding	3

Other technological services from GAIKER-IK4

ADVANCED TECHNOLOGICAL SERVICES, ANALYSIS AND TESTING

During 2011 we carried out a total of 39 technological services with the aim of providing innovative solutions to our clients, as well as improving our 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 14 of these plans, 9 of which were carried by companies that belong to the GAIKER Foundation.

In 2011 we also carried out 266 analysis and tests for a total of 111 client companies. Out of them, 78 were carried out under ENAC accreditation.

39

Advanced
Technological
Services

266

Analysis
and Tests





TECHNOLOGICAL TRAINING AND DISSEMINATION

TECHNOLOGICAL DISSEMINATION SERVICE

In 2011 we organised a total of 7 technical sessions with the aim of passing on the results of the research and developments achieved at the Centre. These were attended by a total of 213 people from 113 companies.

- Instrumentation seminar.
3 March 2011.
- "Re-using water in urban planning and design: towards sustainable cities".
4 April 2011.
- "New LC-MS methods and tools".
Food and environmental safety analysis laboratories.
26 June 2011.
- Third Session on "Innovation in plastic materials and technology".
27 October 2010.
- "Methodological tools for advanced environmental management" within the framework of European Quality Week.
8 November 2011.
- "The responsible use of nanoparticles from synthesis to application".
16 November 2011.
- "PH meters and selective electrodes".
1 December 2011.

Last year, as we do every year, we presented the results of our knowledge in a variety of international forums. We gave a total of 28 conferences and presented 24 posters in different forums and conventions: European Polymer Federation 2011, Euronanoforum 2011, Identiplast 2011 or ISFR 2011 (6th Symposium on Feedstock Recycling of Polymeric Materials), among others.

In 2011 we spread our scientific knowledge through publishing papers and scientific articles in 8 publications, 5 of which appeared in the Citation Index of the Institute for Scientific Information (ISI).



TRAINING SERVICE

In 2011 we taught 4 courses on subjects related to Life Cycle Analysis, RTM and Waste Evaluation Processes in order to transfer knowledge through training. These courses were attended by 42 people from 3 companies.

We also participated in teaching a Master's in Biomedical Engineering, in partnership with the University of the Basque Country (UBC/EHU).

INFORMATION AND DOCUMENTATION SERVICE

Throughout 2011, the GAIKER-IK4 Documentation Centre continued to provide companies with information in accordance with their needs. We responded to a total of 7 external enquiries from 7 companies regarding technical issues related to patents, bibliographic searches, legislation and regulations. We also carried out 59 technological alerts for a total of 8 companies.

In terms of technical publications, we published the "Practical Guide to Bioplastics", and the yearly editions of "Lex Alimentaria" and "Páginas Verdes" updated with new food and environmental legislation from the financial year. We also published the "Yearbook of Articles and Technical Communications" which includes a list of the presentations and articles prepared by our researchers, and the "Catalogue of Bibliographic Sources" with a list of new sources acquired from the Documentation Centre.

Finally, we sent a total of 14 "Information Sheets" to 235 client companies. Among other information, these documents provided details about calls for R&D, which are launched at the same time as the documents are published.



NEW BUSINESS INITIATIVES AND PATENTS

In terms of the Exploitation of Results, in 2011 we continued to provide support to help start up New Business Initiatives that are technological in nature. Special mention is given to G&F Special Composites Design, S.L., set-up in the previous financial year with FLUYTEC, S.A., in partnership with Comargo Composites, S.L. Since we started, 6 of the companies we have created are still active in business.

In 2011 we also continued to work on protecting results achieved from our research through patents. At an international level, in order to further this protection, we requested the European and U.S. extension of a patent for colorectal cancer markers. Since our beginnings, we now have a total of 17 patents, 6 of which are international, and 3 utility models.

How we do it

We manage this way

Whatever your core business may be, quality in management is important because it is intrinsically linked to strategy. Immersed in our Fifth Strategic Plan /Long-term Plan 2009-2012 (SP/LTP), in 2011 we finished the corresponding Annual Operating Plan/Management Plan (AOP/MP) with a compliance rate of 82%. We also continued to work on the aims of the Technological Specialisation and Differentiation Plan and the Market Forecast Plan 2009-2012 and applied the results of the two-yearly review, carried out during the previous financial year, reorientating some of our technologies.

We invested a total of 2.78 million euros on equipping our Centre with cutting-edge resources, €1.1 million of which were dedicated to the automotive sector. Half of this sum was specifically used in our new installations in the Automotive Intelligence Centre (AIC), a centre of value generation for the sector that will allow us to work and develop new functional and aesthetic paints and finishes for the car world.

In turn, during 2011 our Organisation model continued to support and promote cooperation, taking advantage of the multi-disciplinary skills of our workforce and integrating

all of the different areas of activity, 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 to work in depth in their respective fields of activity, encouraging people's participation and involvement.

In 2011, the new research teams were defined and the Centre's strategic projects were reviewed and updated, further contributing to the participative spirit of the Organisation and improving connections between our technologies.

In terms of our Management Model, in 2011, we continued our activity in the Foundation's Evaluators' Club (EFQM) where two GAIKER-IK4 evaluators participated in carrying out both Contrasts and External Evaluations of other Organisations. We were also invited by Euskalit, the Basque Foundation for Excellence, to teach a seminar on our experiences in relation to clients at the School of Armeria de Eibar (Gipuzkoa). Finally, with the aim of improving our management results, we continued to carry out the normal benchmark comparisons with Euskalit, with Osakidetza (Hospital de Galdakano), Osakidetza (Bilbao region), and Azti Tecnalia e Ihobe, as well as exchanging Good Practises with Adif and Topagunet, among others.

During 2011 the establishment of a new Enterprise Resource Planning (ERP) system was begun, with the aim of improving the Centre's project management. In the past financial year this project, which will take place in two phases, focused on financial and logistical functionalities which will be put into effect at the beginning of 2012. However, the functionalities related to project management will start to be implemented in the middle of this financial year.





The guarantee of our work

In 2011 we carried out the usual audits and inspections in order to demonstrate that our business activity meets the most demanding international standards.

In the yearly audit carried out by AENOR (Spanish Association of Standardisation and Certification), the following certificates were monitored:

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



BPL



We also requested an external audit from ENAC (National Accreditation Entity) in accordance with regulation UNE EN ISO 17025:2005 to:

- Reassess accreditation 72/LE 272. This file includes tests on plastic materials: traction, flexion, and migration in aqueous and fatty simulants.
- Monitoring and expansion of accreditation 72/LE 187 on Fire Reaction tests. This includes accreditation of the new European tests on the reaction of railway and construction products to fire. The expansion is complemented by the test on measuring the thermal conductivity of isolating products for construction.
- Voluntary abandonment of accreditation 72/LE 1408 (Water tests for the environmental sector).

The ultimate goal shared by all of these changes was to further our policy of changing our total number of laboratory accreditations to meet the needs of our clients.



Commitment to environmental sustainability

Since 2004, GAIKER-IK4's environmental policy has been stated in the EMAS Environmental Declaration validated by AENOR each year. In 2011 the Centre achieved three out of the five minimisation targets set in this Declaration.

We also continued to monitor basic indicators established in regulation **EMAS III**:

• Total energy consumption	Increase of 17%
• Total consumption of renewable energy	Reduction of 61%
• Annual mass flow cost of materials used	Reduction of 11%
• Water consumption	Increase of 5%
• Total annual waste generation	Reduction of 22%
• Annual generation of hazardous waste	Reduction of 2%
• Land occupation	Reduction of 1%
• Annual emissions of greenhouse gases	Increase of 21%
• Total annual air emissions	Not evaluated

The positive trend of these indicators clearly demonstrates our policy of gradually lowering the environmental impact of our activity via reducing the consumption of raw materials and decreasing waste generation. Applying this policy helps our environment and optimizes resources.

Among the activities that have contributed to this positive result, it is important to highlight the installation of a new air conditioning system in the Centre that uses geothermic energy to keep our offices in comfortable conditions and to maintain strict temperature and humidity control in our laboratories all year round. Other activities that have contributed to this result include the implementation of a new intranet, which has provided a significant leap forwards in terms of internal communication at the Centre, as well as a reduction in printing hard copies of documents. A new Improvement Group was also established at the Centre with the task of encouraging online records and reducing the use of paper. In 2011 we also installed new water meters to optimise our future water consumption, in order to improve on the trend



already seen in the 2011 financial year.

In March 2011 we joined the “Stop CO2 Euskadi” initiative, promoted by the Department for the Environment, Territorial Planning, Agriculture and Fishing of the Basque Government, in order to combat climate change. In order to fulfil this commitment, at GAIKER-IK4 we will work to reduce our greenhouse gas emissions (GGE) and encourage our Stakeholders to do the same.

Who we learn from and work with Our partners

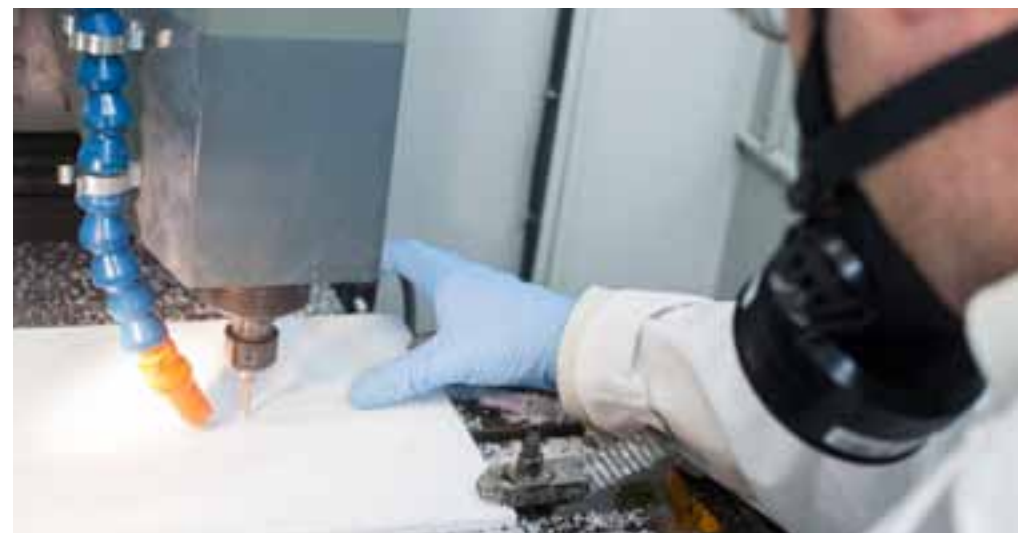
Our partnerships with Technological Centres, Universities, Public Research Organisations (PRO) and other entities in the Science-Technology and Innovation System are hugely important to us, both at a local and international level. Working in partnership with others and collaborating on projects within the framework of European Projects or Projects of Gathering, Learning and Knowledge Generation allows us to learn and share knowledge. In short, it allows us to advance faster.

In 2011, at a Basque Country level, we collaborated on strategic research projects in the ETORTEK Programme of the Basque Government (ACTIMAT, BERRILUR III, BIOGUNE 2009, BIOMAGUNE 2009, BIOMAGUNE 2010, BIOGUNE 2011, BIOMAGUNE 2011, MERKABILA). We also collaborated closely with some of our IK4 Research Alliance partners (Ceit, Cidetec, Ideko, Ikerlan, Lortek, Tekniker and Vicomtech), as well as with Technological Centres in the Tecalia Corporation and other entities such as the Basque Foundation of Health Research and Innovation (BIO Foundation) or the SRC's bioGUNE y biomaGUNE. In the university sphere we collaborated with the University of the Basque Country (UBC/

EHU) and the University of Mondragon.

We also worked with other national Technological Centres such as : Itene, Cartif, Circe, L'urederra, Ite and Leitat. Collaboration with universities such as the University of Granada, the Polytechnic University of Valencia, the University of Santiago de Compostela, the Complutense University of Madrid and the Autonomous University of Barcelona also continued within the framework of projects financed by the Ministry of Science and Innovation.

In the international sphere, in 2011 we continued to establish contacts and partnerships with Technological Centres such



as Vito and VIB from Belgium. We also created links with the Solid Waste Cluster of Wallonia (Belgium) and continued to actively participate in European Technological platforms such as the In Vitro Testing Industrial Platform (IVTIP), the Nanomedicine Platform (EURONANOMED) or Nanofutures, whose convention we attended in May in Budapest. Our installations also received trade missions from Brazil, Japan and Poland to highlight just a few.

In turn, during 2011 we participated in establishing the MoniQA association, the result of a European Project that began in 2007 dedicated to disseminating good practice in food health across the world.



Associations that we belong to

At GAIKER we are linked to a series of Associations, Institutions and Clusters that work in a variety of fields, beyond our network of partnerships related to technological activity. This context includes our membership of more than twenty forums associated with business, management, quality and culture, among others, which allows us to learn, contribute and relate to others.

We work with them

Companies in our Foundation

During 2011, Elikor, a laboratory services and consulting company specialising in the agrofood and environment sectors, and HBIO, a company dedicated to sustainable water management, joined the GAIKER Foundation. Close links were also established with a new company, the CMAE Foundation, which will officially join the Foundation during the course of 2012.

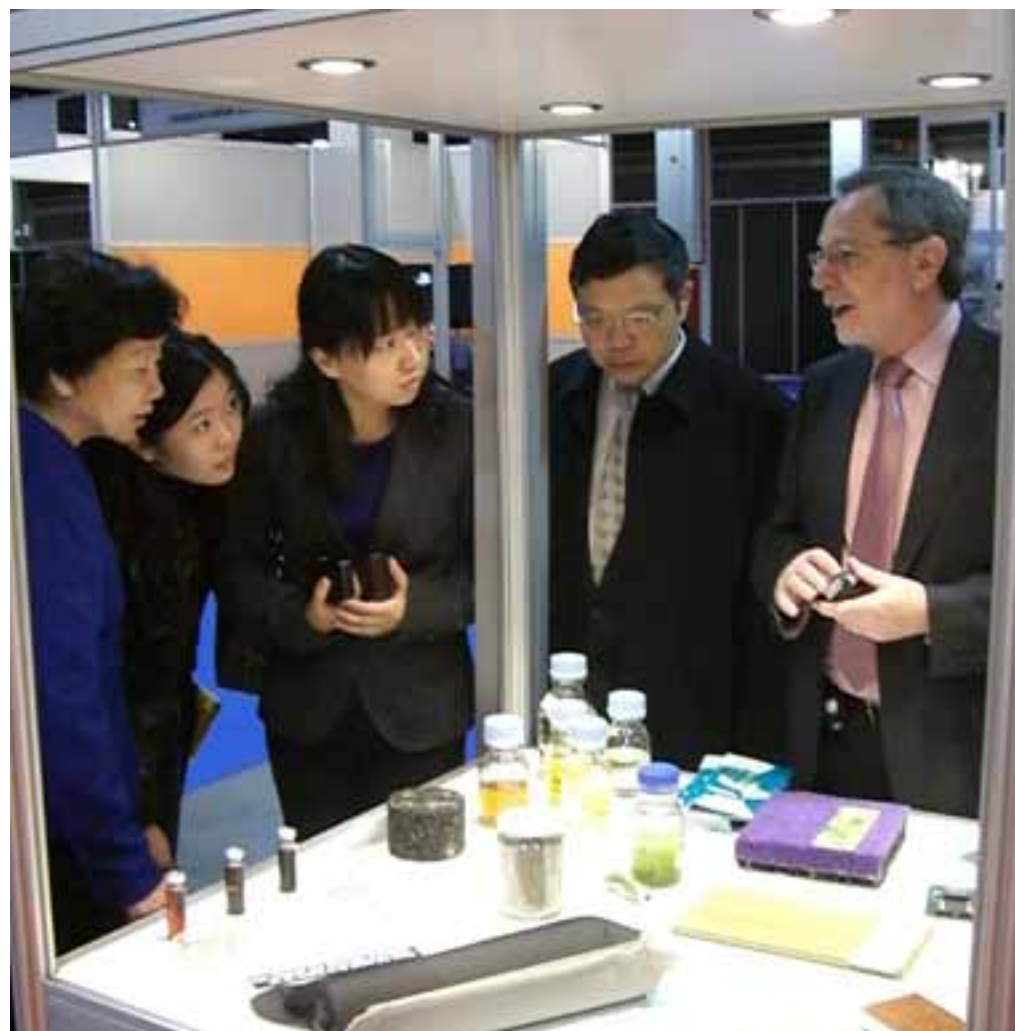


Our clients

In 2011 a total of 219 clients entrusted us with their technological innovation needs. According to data obtained from the Client Satisfaction Survey sent to all of our clients each year, in 2011 their satisfaction rate was high: over 3 on a scale of 0 to 4. In line with previous financial years, the most highly valued parameter for people using our services was “accessibility and attention to enquiries”, following by “clarity and understanding of results and technical quality”.

In turn, in order to inform clients and potential clients of our technological range, in 2011 we ran a stand with our product information at 6 fairs. We attended Ecofira, held in Valencia in February, Construmat, which took place in Barcelona in June, Expore-

cicla, held in Zaragoza in September and Expoquimia, held in Barcelona in November. In March we accompanied our partners in the IK4 Alliance to the JEC in Paris and in April we also went to Imaginenano which took place in Barakaldo (Biscay).





Society

In line with our intention to transfer the results of our activity to society, in 2011 we continued to make an effort to report on this activity in the mass and specialised media. The results of our activity affect areas that are of great social interest, such as Health, Quality of Life and Safety, so the information released was printed in the media a total of 161 times. Last year we also appeared 17 times in the audiovisual media: 5 television appearances and 12 radio broadcasts. We published a total of 13 articles in technical publications which are more specialised and are aimed at the world of technology and business.

In line with previous financial years, in 2011 we published 4 editions of our magazine, "Oldartu", which included news related to our business activity and interviews with renowned figures from our environment, for example: Txomin García, Chairman of the Caja Laboral, Juan Tomás Hernani, ex Secretary General for Innovation at the Ministry of Science and Innovation, Pilar Kaltzada, Director of Communication and Institutional Relations at IDE and María Luisa Lucero, Chairman of the Basque Bioscience Cluster.

In November we joined the events run each year by Euskalit (Basque Foundation for Excellence), within the framework of European Week for Quality and Health, by organising a session on "Methodological tools for advanced environmental management". Coinciding with the Open Doors Session organised each year by the Biscay Technological Park within the framework of European Week of Science, Technology and Innovation, on Sunday 13 November we organised an open doors session with activities for children focusing on spreading information about the work we do in the field of Plastics and Composites. This session was framed between "Week 11" activities, the biggest event related to science, technology and innovation held in the Basque Country. It is an event held each year that helps to promote the culture of science in society and encourages scientific-technological vocations among young people.

We should also highlight our participation in the 2011 session of the "First Lego League", a competition in which school children around the world work to present the best ideas and projects related to a specific subject. This year's challenge was food safety, a field in which GAIKER-IK4 has



extensive experience. We were involved in both launching the competition and in the Basque Country final, and our participation included teaching food safety classes in our installations to 25 teams. During 2011 we also participated as judges in the national final of the competition begun the previous year.

In turn, we received more than a thousand visitors to the Centre, including clients and suppliers, universities and schools and also trade missions and delegations. Finally, we continued to boost the employment market, contracting and transferring people to companies, as well as receiving students who came to train at our installations.

Other results

Economic data from the financial year

In the 2011 financial year, GAIKER-IK4 felt the effects of the economic crisis due to the Public Administrations' budget restrictions, which resulted in a reduction in R&D support programmes in Centres and companies. Total income reached 9.2 million euros. In terms of the forecast for 2012, the figures indicate that total income will reach 10.66 million euros.

We invested (fixed assets) 2.78 million euros over the course of the financial year.

OPERATING ACCOUNT

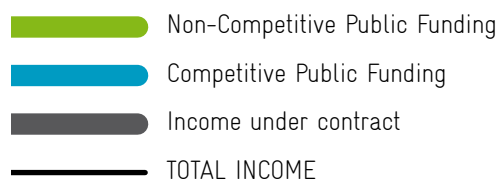
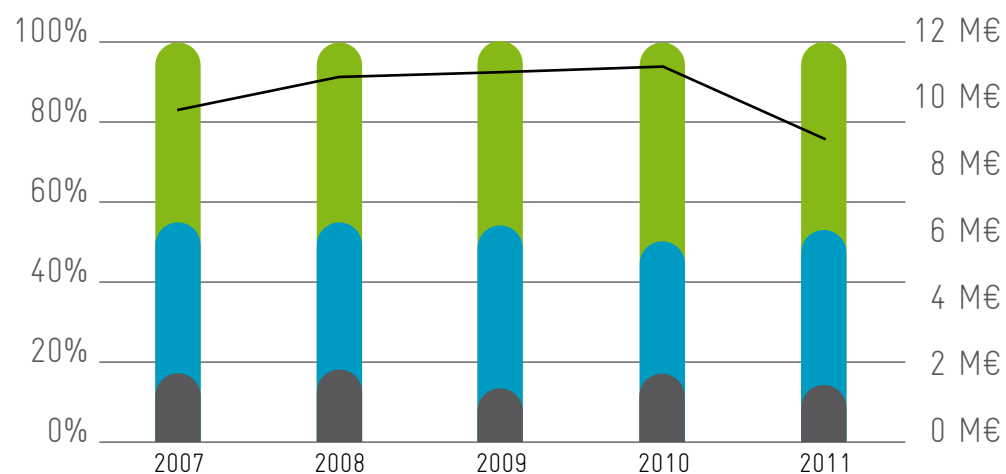
Income from Non-Competitive Public Financing	1.422 K€
Income from Contracts and Tenders	7.645 K€
Other Income	117 K€
Application to Self-Financing	-1.148 K€

BALANCE SHEET

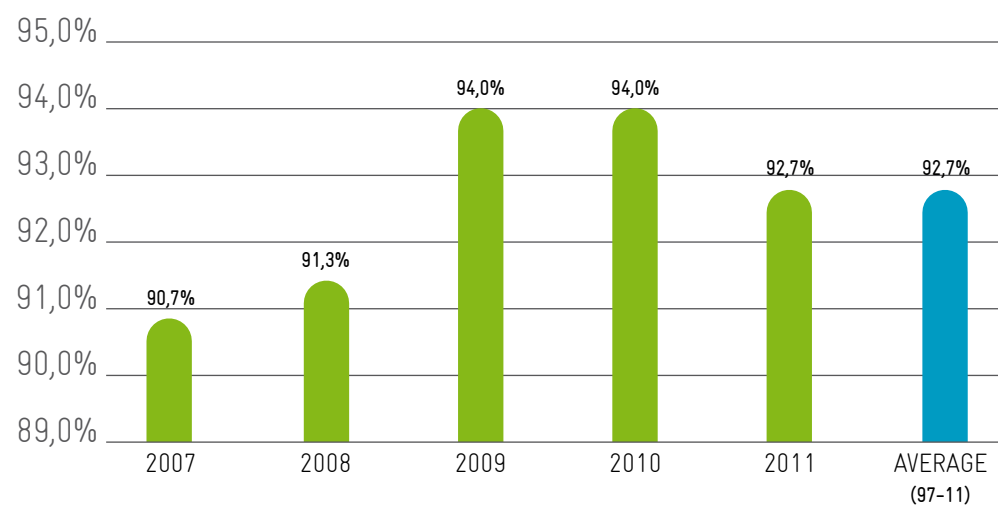
Non-Current Assets	11.215 K€
Shareholders' Equity	6.223 K€
Cash Flow	130 K€
Working Capital	5.006 K€
Total Assets	22.515 K€



EVOLUTION OF STRUCTURE OF TOTAL INCOME



EVOLUTION OF ADDED VALUE





TECHNOLOGICAL RESULTS OF OUR ACTIVITY

TECHNOLOGICAL RESULTS OF OUR ACTIVITY	2011	PERIOD 2001-2011 Accumulated Totals
New products for companies	34	230
New processes for companies	14	115
Patents granted (Inventors/Own)	0/1	6/11
Patents applied for or being processed	1	32
Ideas from NBI (New Business Initiatives)	1	34
NBIs (Spin Off) created (ACTIVE)	2	2 8 (7)
NBI promoters emerging from the Centre	0	6
Partnerships with CRO/RTO (CC.TT.) R&D projects	3	55
Partnerships with universities. R&D projects: UBC/EHU	4/3	60/41
Partnerships with CRC. R&D projects	2	10
Grant holder incorporated into industry	4	72
Centre staff incorporated into industry	7	49
R&D project under contract. Companies	29	303
R&D project under contract. Members of the Foundation	5	87
Innovation schemes for companies	14	122
R&D partnerships with engineers	16	71
Technology Surveillance and Prospective Services	59	915
"Audits" or Technological Services for processes and/or products	39	214
Certificates of Analysis and Tests	266	7201
Product certification (ENAC-National Accreditation Entity)	78	1275
Technical Information Sessions	7	67
Companies attending the sessions	113	1517



TECHNOLOGICAL RESULTS OF OUR ACTIVITY

TECHNOLOGICAL RESULTS OF OUR ACTIVITY	2011	PERIOD 2001-2011 Accumulated Totals
Training courses taught	4	68
Spokespeople at national (N) and international (I) conventions	N/I - 17/11	N/I - 141/110
Articles published in national (N) and international (I) magazines	N/I - 2/7	N/I - 96/53
Posters presented at conventions	N/I - 2/22	N/I - 36/110
Participation in national (N) and European (E) thematic networks	0/2	N/E - 12/18
European projects started (Seventh Framework Programme)	1	18

Tasks for 2012

1. New focus for GAIKER-IK4's Sixth Strategic Plan (2012-2016) and the different plans that comprise it.
2. Generation of new services and developments related to the start-up of our new "Paints and Coatings" laboratories in the Automotive Intelligence Center (AIC).
3. Reflection and creation of IK4 Alliance Strategic Plan (2013-2016).
4. Gathering and acquisition of the knowledge necessary to achieve our technological and non-technological aims related to the Technological Specialisation and Differentiation Plan and the Training Plan.
5. Support for the sustainable development of our economy, society and environment.
6. Positioning of the Centre on the Web 2.0 by opening social network sites and streaming our technical sessions.
7. Push to create new technology-based companies.
8. Development of new technological services based on the Centre's innovation and knowledge: nano-toxicology, Environmental Management tools, etc.
9. Entry into new markets and partnerships with innovative companies.
10. Set-up of R&D projects with companies that are new to innovation.

