

2014-2017 Strategic Plan



HEZKUNTZA, HIZKUNTZA POLITIKA ETA KULTURA SAILA

DEPARTAMENTO DE EDUCACIÓN, POLÍTICA LINGÜÍSTICA Y CULTURA







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INTRODUCTION

In 2007 the Basque Government promoted Ikerbasque to contribute to the development of scientific research by attracting top researchers and restoring talent. Thus, the mission of Ikerbasque is to contribute to the reinforcement of science in the Basque Country, establishing itself as a European reference of excellence in the field of research.

During these years, our activity has been guided by two strategic plans (2007-2009 and 2010-2013). This document is a brief summary of the results of these past seven years.

This Strategic Plan starts with an analysis of the global trends in science and scientific policy, to then analyse the current situation of science in the Basque Country. Under this perspective we analyse the organisation itself and the context we operate in, as well as the needs and expectations of our stakeholders, which have been collected by means of an open and participative strategic reflection process.

The strategic goals of Ikerbasque for the 2014-2017 period arise from the needs of our stakeholders, in particular the agents that make up the Basque science system, and of Basque society, structured along **three main axes:** Research talent, stimulus of the science system and excellent management.

Now is the time to look towards the future and to establish the goals that Ikerbasque wants to achieve over the next few years, with its sights set on 2017. Looking at the trends of the last five years and maintaining the current commitment to scientific research, the Basque Country can set itself **key challenges for 2017**, where Ikerbasque can play a facilitating role, helping different organisations to achieve their own goals:

Challenge 1 - The Basque Country reaches 7000 scientific publications by 2017

With an annual growth similar to that maintained during recent years, higher than the global and state average.

Challenge 2 - Improving the productivity of the Basque science system

The increase in scientific production will be accompanied by a relative improvement in productivity, measured by publications per capita, improving the absolute and relative position of the Basque Country with respect to other regions.





Challenge 3 - Improvement of the impact of Basque scientific publications

In addition to a quantitative leap, the production of relevant science at an international level, useful for the scientific community and which has a major impact, is particularly relevant. The Basque Country must progress to the level of the regions with the highest impact.

Challenge 4 - Ikerbasque hires 140 new researchers

Throughout the 2014-2017 period, 100 new Research Fellows will be recruited, as well as 40 Research Professors, meaning that the number of researchers recruited will reach 300.

Challenge 5 - Ikerbasque researchers publish over 1000 articles in 2017 and reach a H-index greater than 65

The number of scientific publications in which the Ikerbasque researchers take part will break the barrier of 1000 unique documents by 2017. Taking into account the size of our science system, many of them will work in collaboration and will carry out joint research. The impact of these publications on the international science community, measured by the H-index, will double to 65.

Challenge 6 - Ikerbasque achieves a return of €90 million during the 2014-2017 period

For each Euro that the Basque Government invests in Ikerbasque, almost twice the funds return to be invested in the science system, thanks to the funds attracted by the researchers themselves to finance projects (an annual average of €175,000 per Research Professor in the year 2017) and to the aid received by the management team at Ikerbasque for co-financing programs. During the 2014-2017 period, the total return will be €90 million.

Challenge 7 - The BERC (Basque Excellence Research Centres) publish 1000 articles, 15% of the total in the Basque Country

The maturity of the institutions created in recent years, particularly the BERC, will lead these institutions to have a prominent role in scientific production, consolidating a dynamic ecosystem of scientific research.

This Strategic Plan is a living document, subject to constant revision in order to adapt to a complex and dynamic environment.



SCIENCE WORLDWIDE

Until relatively recently, the global landscape regarding research was relatively homogeneous. Most relevant scientific events took place in Europe and North America. In 1973, almost two-thirds of the almost 400,000 research publications indexed by the Web of Knowledge had an author in one of the G-7 countries (Germany, Canada, United States, United Kingdom, Japan, France, and Italy).

Today, this has changed dramatically (Thomson Reuters, 2013). A much larger volume of documents are indexed -over 1.75 million publications-, and barely half have a G-7 author. The volume of publications with at least one G-7 author has tripled during this period, but the volume in which not a single G-7 country is represented has increased sixfold. Much of this change can be attributed to the rapid growth of research in five countries that until recently have been considered emerging countries: Brazil, Russia, India, China and South Korea.



Figure 1- Scientific production and H-index by country

This change in the international framework, along with the uncertain economic outlook and the pressing need for countries to turn knowledge and innovation into the drivers of change, has brought a strong element of global competition for the best talent and resources to boost scientific research.

This competition is changing the science policy tools used by public institutions. New debates emerge, the goals of science systems are reconsidered and new instruments and sources of funding are designed.

A commitment to excellence and an orientation towards social challenges are the most evident consequences of this change of paradigm. In fact, the new EU

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Framework Programme for Research and Innovation, Horizon 2020, has set itself three major strategic challenges strongly related to these new trends:

1. Excellent science: Increase the baseline level of scientific excellence in Europe and ensure a stable flow of world-class research

2. Industrial leadership: Develop technologies and their applications to improve European competitiveness

3. Social challenges: Research into the important issues that affect European citizens

With Horizon 2020, the EU is making the largest investment in research and innovation in its entire history, and it does so following a set of principles that are increasingly widespread throughout the world.

Even so, there are dissenting voices that propose alternatives in scientific policy. Several authors question first of all what parameters should establish the excellence of scientific activities carried out by people or by groups, and on the other hand, the efficiency of concentrating expenditure in a few research units (Fortin, 2013).

BIG SCIENCE VS LITTLE SCIENCE

Based on the fact that the funding of basic research is eminently public (Tatsioni, 2010) and that the resources available are limited, there is the inevitable need to prioritise the destination this funding.

For some years now commitments to large projects, such as the Brain Initiative in the United States, Graphene Flagship or the Human Brain Project in Europe have multiplied. There are also large supranational infrastructures such as CERN. There is a proliferation of excellence programmes that reward the best teams with additional funding.

But despite this, maintaining a heterogeneous and solid scientific community becomes inevitable. The best scientists do not work in isolation; they require at mature science system around them in order to thrive.

Having a limited group of select researchers publishing in the world's best journals does not, by itself, improve society's scientific culture, nor does it raise the quality of university education, contribute towards having a dynamic technology-based industry, or help to make decisions with scientific criteria... All of this requires a broad scientific community that works with broad goals, scientists who generate knowledge, who collaborate among each other and who transfer this knowledge to society.





The ideas that will shape the future cannot be planned for a specific time and place. Basic research without a specific orientation is the seed of future progress. Commitment to a variety of fields and the promotion of excellent agents cannot strangle all other scientific initiatives. Even in Europe, the star project for science funding, the grants of the European Research Council (ERC), are distributed among all fields of knowledge and among researchers at different points of their career, based more on commitments to the future, on the proposed targets, than on the prior work carried out.

CHANGES IN THE EVALUATION SYSTEMS

The different approaches concerning an optimal distribution of the available resources for research also reflect on the way in which scientific performance is measured. Scientific excellence is usually monitored by means of quantitative bibliometric indicators that situate scientists with respect to the rest of the community.

In December 2012, renowned scientists, directors of the world's most important scientific institutions and editors from some of the most influential journals met in San Francisco and published the "San Francisco Declaration on Research Assessment", popularly known as DORA.

They expressed the urgent need to improve the ways in which scientific research results are assessed, emphasising the importance of assessing the scientific work itself and not so much the journals in which it is published (basic premise of many bibliometric indicators). In addition, they requested the consideration of a much broader range of results, such as the data sets or the software. Finally, they called for an improvement in the transparency of the processes.

This declaration, due to the importance that its signatories have in science worldwide, is a clear example of the change in approach that is inevitably taking place concerning what is expected of science, and of how the efficacy of scientific policies can be measured.



INTERNATIONAL BENCHMARKING

At an international level there are many initiatives that seek to promote different science systems by means of a wide range of actions.

Ikerbasque has carried out a benchmarking study of some of the most significant initiatives, described below:

INITIATIVES TO STRENGTHEN SCIENCE SYSTEMS

EUROPE

- European Research Council (website)
- Alexander von Humboldt Stiftung / Foundation (Germany) (website)
- The Scientific and Technological Research Council of Turkey (Tübitak), Turkey (website)
- The Deutsche Forschungsgemeinschaft (German Research Foundation), Germany(website)
- Alfred Kastler Foundation, France (website)
- Netherlands Academy of Arts and Sciences (KNAW), Netherlands (website)
- Netherlands Organisation for Scientific Research (NWO), Netherlands (website)
- The Royal Swedish Academy of Science, Sweden(website)
- Swedish Foundation for Strategic Research (website)
- Swedish Foundation for International Cooperation in Research and Higher Education (website)
- The Royal Society, United Kingdom (website)
- Dorothy Hodgkin Fellowship, The Royal Society, United Kingdom (website)
- Brian Mercer Feasibility Award, The Royal Society, United Kingdom (website)

AMERICA

- Canada Research Chairs, Government of Canada, Canada (website)
- Accelerating Science Award Program, United States (website)
- Center for Open Science, United States (website)
- Faculty Development Program, Empire State Development, United States (website)
- Fondo de Fomento al Desarrollo Científico y Tecnológico (Fund for the Promotion of Scientific and Technological Development), CONICYT, Chile (website)

ASIA and OCEANIA

- Australia-China Science and Research Fund, China and Australia (website)
- Korea Institute for Science and technology, South Korea (website)
- Japan Society for Promotion of Science (website)
- Chinese Academy of Sciences Fellowships (website)



Based on the agents and initiatives included in the table above, the cases of special interest to the Ikerbasque Foundation due to reasons of singularity, efficacy or particular proximity to the activity of Ikerbasque have been grouped together.

Many of the good practices considered are based on the creation of communities and networks of scientific excellence starting from the idea that talent attracts talent and that what is most important is the prior stimulation of the aspects that concern mobility instead of focusing on retaining it within the country.

The main inspiring cases for Ikerbasque that have been identified are the following:

INSPIRING INITIATIVES	DESCRIPTION
Accelerating Science Award Program (ASAP) United States	The ASAP programme awards people who have applied or redesigned scientific research published through Open Access to mark a difference in science, medicine, business, technology or society as a whole, awarding funding to the best projects.
ERC Grants - Europe	The ERC Grants constitute generous funding for long-term projects.
Alexander von Humboldt Foundation - Germany	Its programmes to attract researchers allow some of the world's best scientists to carry out their research at any German centre.
Dorothy Hodgkin Fellowship, The Royal Society - United Kingdom	This programme is destined for outstanding female scientists in the United Kingdom at an early stage of their research career, who require flexible working due to personal circumstances such as raising children, family responsibilities or health problems. It is aimed in particular at women.
Centers of Excellence (CoE) - Finland	Programme for centres of excellence by the Finnish Science Academy, destined to promoting excellent research by the country's best academic groups and networks.
Canada Research Chairs- Canada	The Canada Research Chairs Programme seeks to attract and retain some of the world's most outstanding and promising minds. Those who obtain the Research Chairs aim to achieve excellence in their research in engineering and natural sciences, health sciences, humanities and social sciences.
Center for Open Science (COS) - United States	The Centre for Open Science is a not-for-profit organisation dedicated to improving the alignment between scientific values and scientific practices to improve the accumulation and application of knowledge.





SCIENCE IN THE BASQUE COUNTRY

Scientific research in the Basque Country has changed considerably in a few years. Over the last decade, the Basque Country has risen several positions in the ranking of autonomous communities as regards absolute production and production per capita. The map of agents has diversified, with the emergence of institutions specifically dedicated to research such as the BERC and the CIC.

The Basque Country currently has a considerable amount of ongoing research and a diverse ecosystem of research centres in relation to its size, where the results show a positive trend that improves the relative position of the Basque Country, though there is still a long way to go to position ourselves at the level of the world's top regions.

MAIN SCIENTIFIC AGENTS

The main agents of the Basque science system are the following:

- **Basque University System.** Among other goals, it seeks to guarantee the development of Basic Science (non-oriented and oriented) in the Basque Country. The University, understood as the public and private universities of the Basque Country combined, must place science, the generation of scientific knowledge and its valorisation as a real asset so that the Basque Country can fully be a part of the Knowledge Society.
- Health sector Biosanitary Research Centres: The Biosanitary Research institutes are the result of the association to research and teaching hospitals of the National Health System, Universities and other Public and Private Research Centres. With this, the aim is to promote the hospital as a research centre equipping it with the tools necessary to solve the questions that arise in the relationship of health professionals with patients and with the public. On the other hand, the Teaching Units of the UPV/EHU in hospitals, as well as the primary care centres, are an important source for the generation of science.
- **Basque Excellence Research Centers (BERC).** Basque Excellence Research Centers are structures for the generation of knowledge in fields of scientific interest for the Basque Country which are characterised by their novelty within the Basque Science and Technology System and by their excellence in research. These organisations are created in order to become the cutting edge of the Basque university system and of all the scientific research carried out in the Basque Country and will function as European hubs of knowledge connected with centres located around the world.





- Centres for Cooperative Research (CIC). The Centres for Cooperative Research are bodies dedicated to specialised research in a specific scientific or technological field that is considered strategic with regard to the economic and social development of a community. Their aim is to pool the resources and efforts in competitive research of a variety of agents, associated through the creation of CICs.
- **Technology Centres and R&D business units:** although it is not their main function, technology centres are agents with a considerable importance in the generation of science. Likewise, the R&D units of certain businesses within the Basque industrial fabric carry out basic research.





Performance analysis

Some of the most important data obtained from the latest Report on Science in the Basque Country (Ikerbasque, 2013) are:

• Scientific production in the Basque Country surpassed the barrier of 4000 indexed publications in 2012, which means that the number of publications has doubled since 2004 until now.



Figure 2 - Evolution of scientific production in the Basque Country

• Thanks to the improvement in productivity (publications/1000 inhabitants), the Basque Country has risen three positions since 2004 in the Autonomous Communities classification. However, due to the starting point, there is still a wide margin for improvement. The Basque Country must aspire to improve its position in scientific production (absolute) as well as in productivity.



Figure 3- Scientific production of autonomous communities





• The Basque Country has room for improvement in both productivity per capita and in the impact of its scientific production.



Figure 4- Normalised impact and productivity by autonomous communities

- The UPV/EHU continues to be the main scientific agent; the Basque science system has branched out with the creation and strengthening of new agents. BERCs and CICs now produce over 15% of the articles published in the Basque Country.
- Ikerbasque is consolidated as the main entity generating science, surpassing 10% of the total publications in the Basque Country in 2012.
- Since 2004 the Basque Country has overtaken three autonomous communities as regards scientific publications per capita. It is currently in the seventh position, slightly below the state average.



Figure 5- Productivity of the autonomous communities (publications per 1000 inhabitants).



- In 2011 the number of researchers in the Basque Country remained stable above 11,000 people.
- The Basque Country still has a science system based on consolidated sciences (mainly medicine, physics, chemistry and materials sciences). In recent years a diversification towards other fields has been appreciated: Business, Psychology, Engineering, Chemical Engineering and Social Sciences.



Figure 6- Thematic specialisation of Basque science.

• Nowadays, the Basque Country holds 13 ERC Grants received by researchers from six different centres. Ten of these ERC Grants have been awarded to Ikerbasque researchers. It is a figure lower than that of Catalonia and Madrid, the leading regions according to FECYT data from 2012.



Figure 7- ERCs received and success rate by autonomous community



- While the ratio of men and women defending doctoral theses is similar, the number of women who consolidate their research career is much lower.
- The Basque Country is among the autonomous communities with the highest inventive capacity. As to patents per million inhabitants, it is the fourth autonomous community, only behind Navarre, Aragon and Madrid, with a number of patents practically equal to the one in third place (Madrid).



SCIENTIFIC POLICY TOOLS

Ikerbasque is a science policy tool at the service of Basque society and is part of a more complex set of tools, mainly structured by the Basque Government (Department of Education, Language Policy and Culture and the Department of Economic Development and Competitiveness).

ENTITY PESPONSTRI F	INITIATIVE	MAIN GOALS		
Basque Government –	IKERKETA TALDEAK - Aid for research groups in the Basque University System	Strengthening of the critical mass of research		
Department of Education,	Programmes for the training (AE, AK) and upskilling (DKR) of research staff	• Strengthening of the critical mass of research		
Language Policy and Culture	Pre- and Post-Doctoral programmes	• Strengthening of the critical mass of research		
	IKERMUGIKORTASUNA - Grants for the mobility of research staff	• Strengthening of the critical mass of research		
	IKERBILERAK - Grants to carry out congresses, scientific meetings, courses or seminars	 Promotion of science among the science community and in society 		
	EKINBEREZI - Special research actions	Addressing isolated and extraordinary needs of the Basque Science System		
	Grants to carry out Basic and/or Applied Research Projects	• Development of high level scientific activities		
	Grants for scientific equipment	Creation and consolidation of research infrastructures		
	University-Business programme	• Transfer of scientific results to the private sector and economic exploitation of the same		
	Aid within the cooperation framework of the Pyrenees Working Community	Promotion of science by promoting cooperation activities		
	Grants for requesting patents	Exploitation of scientific results		
	Euskadi research awards	Recognition and consolidation of the critical mass of research		
	Visitors in Oxford, Cambridge and Glasgow.	• Strengthening of the critical mass of research		
	BERC programme	 Creation and consolidation of research infrastructures Strengthening of the critical mass of research 		



Basque Government – Department of Economic Development and Competitiveness	ETORTEK programme	•	Creation and consolidation of research infrastructures Strengthening of the critical mass of research
	CIC programme	•	Creation and consolidation of research infrastructures Strengthening of the critical mass of research
	SAIOTEK programme	•	Development of high level research and technological innovation projects
	NET programme	•	Support for launching science and technology-based businesses
	GAITEK programme	•	Grants for the development of new products the
	ETORGAI programme	•	Integrated industrial research and experimental development projects of a strategic nature Public-private cooperation and integration
	IKERTU programme	•	Strengthening of the critical mass of research
	EMAITEK programme	•	Development of high level research and technological innovation projects



CURRENT SITUATION

Over the last decades the Basque Country has developed a science and technology policy to support the Basque industrial fabric and to prepare it to face future challenges. This strategy has sought to position the capacities of all the players involved in the system and their innovations within an international context, to support the economic growth and the diversification of science and technology and to respond to the new needs of a dynamic, complex and global society.

Along these lines, in 2007 the Basque Government promoted Ikerbasque to contribute to the development of scientific research by attracting top researchers and restoring talent. Thus, the mission of Ikerbasque is to contribute to the reinforcement of science in the Basque Country, establishing itself as a European reference of excellence in the field of research.

During these years, our activity has been guided by two strategic plans (2007-2009 and 2010-2013). The main lines of work of Ikerbasque have been:

- Reinforcing the Basque science system, attracting internationally renowned scientists to its research areas so that they can carry out their research work in centres located in the Basque Country.
- Developing a Basque science system through the creation of Basque Excellence Research Centres (BERC).
- Promoting an image of the Basque Country as a point of reference in research.

During the 2010-2013 period Ikerbasque has grown until establishing itself as a relevant agent in the Basque Science System.



Figure 8- Level of awareness about Ikerbasque in society

Attraction of talent

From 2010 to 2013, Ikerbasque's Research Professor programme has established itself as a tool to attract talent. In addition, in 2012 the Research Fellow programme was launched, which seeks to promote a source of young scientific talent so that they can be the future leaders of the science system.

The number of applications is higher at each call and they are candidates from some of the world's most prestigious academic institutions.

Up until 2013 agreements have been made to recruit 275 researchers, distributed as follows: 137 permanent researchers (Research Professor), 21 postdoctoral researchers (Research Fellow) and it has managed the stay of 95 visiting professors (Visiting Professors). Likewise, Ikerbasque has managed 25 contracts of the Basque Government's research staff upskilling programme (DKR).



Figure 9 - Evolution of personnel at Ikerbasque

These researchers work at the three universities, all the BERC centres, six CIC centres, the biosanitary institutes and a technology centre. This means that the researchers attracted by Ikerbasque are working at over 80% of the institutions that carry out basic research.

At the UPV/EHU, which is by far the institution that recruits the most researchers, Ikerbasque researchers are appointed to 35 different departments at the three campuses.

In 2013 calls were opened for the positions of Research Professor and Research Fellow, where 12 and 25 people were selected, respectively.

On the other hand, the number of visits to the website where the calls were made, as well as the applications, has been consistently increasing year after year.



The satisfaction regarding Ikerbasque of the groups that recruit these researchers has stayed at high levels since the programme was started:



Figure 10- Level of satisfaction of the host groups

To summarise, the scientific production of the people attracted and established by Ikerbasque represented over 10% of the total publications produced by the Basque Science System in 2012.

Creation of BERCs

In 2012 three new BERCs were set up, jointly promoted by the Basque Government, the UPV/EHU and Ikerbasque, to work in the fields of neuroscience, polymers and new materials.

With these new centres the BERC network comprises nine centres, which already contribute over 10% of the Basque Country's scientific production.

Basque Science Observatory

In 2010, Ikerboost, the Basque Science Observatory, was set up. Since then reports on science in the Basque Country have been published on a biennial basis and since 2012, annually.

In addition, a website has been created where the main data on the performance of the Basque science system are available, as well as comparisons with other regions. The range of indicators has been significantly increased over the last year.

These indicators are useful for making decisions on scientific policy.





Excellent management

In 2011 Ikerbasque received the silver Q, which accredits excellence in management. We also received the HR Excellence award from the EU commission for our management of human resources in research.



Figure 11 - Points according to the EFQM model.

Thanks to a dynamic and efficient management system, Ikerbasque has received four grants from the EU amounting to almost \in 20 million in FP7 (COFUND). Ikerbasque researchers, on their part, pending the definitive data from 2013, have attracted funds to the value of \in 40 million, which benefit the science system in the form of equipment and the recruitment of staff for research projects.

Dissemination of science

The Zientzia Foroa programme was promoted for the dissemination of science bringing over 20 internationally renowned scientists closer to Basque society through conferences open to the public.

Summer courses are carried out annually in coordination with the Chair of Scientific Culture of the UPV/EHU.



STAKEHOLDERS

Having a fluid relationship with stakeholders provides knowledge on the organisation's expected response when faced with issues that are of its interest. With this, the organisation hopes to increase mutual trust and to contribute to the capacity to create value and generate persistent competitive advantages based on distinctive capacities.

Ikerbasque identifies a series of key stakeholders with whom the activity of the Foundation is interrelated. The distribution of these stakeholders is shown below, as well as an analysis of the needs, expectations and requirements of each one of these stakeholders:

ANALYSIS OF STAKEHOLDERS						
S	STAKEHOLDERS NEEDS, EXPECTATIONS AND REQUIREMENTS					
		Administrative directorates	To increase the number of research staff and its prestige by recruiting Ikerbasque scientists. That the integration of these researchers is adequate.			
			Collaboration in the management and quick responses to their requirements.			
	BERCs	Scientific directorates	To help them to identify interesting scientists, to attract them in order to increase the scientific excellence of their centre. To offer solutions for problems of scale. To be an interlocutor with the rest of the agents of the Basque Science System.			
		Researchers of the system	A clear idea of Ikerbasque's offer and of how it can help them.			
Basque Science System		Administrative directorates	To increase the number of research staff and its prestige by recruiting Ikerbasque scientists. That the integration of these researchers is adequate.			
	UD, MU, CICs, Biosanitary Centres, Technology Centres	Scientific directorates	To help them to identify interesting scientists, to attract them in order to increase the scientific excellence of their centre. To offer solutions for problems of scale. To be an interlocutor with the rest of the agents.			
		Researchers of the system	A clear idea of Ikerbasque's offer and of how it can help them.			
	UPV/EHU	Rectorate team	To increase the number of research staff and its prestige by recruiting Ikerbasque scientists. Adequate integration of these researchers.			
		PAS	To improve the international prestige of the UPV/EHU. To not complicate its management tasks.			



		PDI	Facilities to develop their own research career. That the Ikerbasque researchers do not become a complication in its management nor a drain on resources.			
	Eligible	Already in the system	Specific information, clear and fast procedures, an adequate economic- technical offer; security, not uncertainty.			
Candidate researchers	candidates	Outside the system	Specific information, clear and fast procedures, an adequate economic- technical offer; security, not uncertainty. Facilities for their return.			
	Non-eligible candidates		Clear information on the selection and assessment criteria.			
		Staff	Opportunity to develop their professional career, in an environment suited to their personal career. All this with fair remuneration within the market's parameters.			
People	Ikerbasque	Researchers	The possibility of developing their scientific career in an adequate professional and personal environment. Fluid relationship between the destination centre and Ikerbasque. Maintenance of competitive conditions.			
	Eutomal	Suppliers	A company that offers them profitability, loyalty and good communication.			
	collaborators	Assessment Committee	Clear communication and adequate planning that allows them to understand and assimilate the goals of their work.			
Board	Board	President, Vice- president, Secretary, Members	Assessment of results indicators and economic-financial monitoring, image and projection of the organisation.			
Competition	National	ICREA, CSIC, Universities, Research centres	That Ikerbasque improves the scientific capacity of the State without distorting the development of the research race.			
Competition	INTERNATIONAL	Universities, Centres, Research Agencies	That Ikerbasque improves the scientific capacity of Europe without distorting the development of the research race.			
	Public	DECPL civil servants	That Ikerbasque is an ally of the Department and supports its tasks.			
	Administration	MINECO	That the work of Ikerbasque is coordinated with that of MINECO			
Facilitating bodies	European	DG Research	That the work of Ikerbasque is aligned with the EU strategy and that the programmes agreed upon are fulfilled.			
	Commission	ERC	That Ikerbasque improves the scientific capacity of Europe without distorting the development of the research race.			
Society	Society in general		Improvement of the scientific capacity of the Basque Country and adequate use of Public Funds.			

INTERNAL AND EXTERNAL DIAGNOSIS

Throughout the strategic reflection process, Ikerbasque has used the organisation's different assessment tools (performance indicators, satisfaction surveys, personal interviews, participative sessions to carry out internal and external analyses), which as a result have given the following SWOT:

	WEAKNESSES		Strengths
W1	Little diversified financing	S1	Success of other similar experiences
W2	Ikerbasque is an organisation undergoing consolidation	S2	Swiftness of the Foundation to provide answers
W3	Insufficient integration of Ikerbasque researchers in the UPV/EHU	S3	Commitment of the Basque Government regarding Ikerbasque
W4	Insufficient public image of the Foundation	S4	Compact and committed management team
W5	Misalignment between the actions of Ikerbasque and the needs of researchers in the Basque Autonomous Community	S 5	Experience in the creation of BERCs
W6	Strong dependence on the Public Administration	S6	Financial support of the European Commission
W7	Shortcomings in biosanitary research, social sciences and other fields with a future projection	S 7	Strong alliances with the institutions of the BSS
W8	Few resources to communicate results to stakeholders	S8	Satisfaction of Ikerbasque researchers with the Foundation
W9	Annual funding	S9	Economic return on the investment
W10	Low presence of women among the research staff at Ikerbasque	S10	Certain reputation among the Spanish researchers abroad
W11	Scarce joint and proportioned strategy with the agents of the BSS in the selection of Ikerbasque researchers	S11	Accumulated experience in the talent attraction processes
		S12	High level of the candidates at calls
		S13	Internationally referential research in the Horizon 2020 research fields.

	Threats		Opportunities
Π	Little tradition in basic research in the Basque Autonomous Community in many fields	01	Commitment of the Country to Science
T2	There is not a culture of science	02	European commitment to Science
ТЗ	Rigidity of the university system	03	Positive image in Spain of the Basque Country's commitment to science
T4	More competitive offers by other bodies	04	High social regard for the scientific work
T5	Limitations in the capacity of the BSS to take in Ikerbasque researchers.	05	Medium-term integration of Ikerbasque researchers as staff of the centres themselves
T6	Increasing bureaucratisation in the management of science.	06	New possible lines of action aligned with the statutes of Ikerbasque
Π	Growing competition with other geographical areas	07	Collaboration with agents from the BSS to attract talent
T8	Disaffection of the BSS with Ikerbasque as it does not answer to its needs	08	Centrality of Ikerbasque in the BSS to promote synergies
T9	Questions about the future evolution of the economy and public revenue	09	Potential of the researchers themselves as a source of new ideas
T10	Changes in the long-term political strategy	010	New Framework Programme of the EU (Horizon 2020) with more funding
T 11	Devaluation of Spain's image abroad	011	Achieve greater gender equality at Ikerbasque and promote it within the BSS
T12	Loss of talent potential due to a lack of equality within the BSS	012	The possibility of consolidating Ikerbasque as a tool to repatriate talent.



FUTURE NEEDS

Since Ikerbasque was started, its activity has mainly focused on attracting excellent researchers and on the creation of BERCs and dissemination.

At a global level, the most advanced countries are developing strategies focused on the development of new economic sectors on which the future economic development of the same will be based.

In Europe, the Research and Innovation Smart Specialisation Strategies (RIS3) are being promoted. Right now, the Basque Country is developing its own RIS3 strategy.

In addition, there are several sectoral strategies to respond to the Basque Country's current and future needs, in such a way that a series of tools geared towards the development of each Strategy are implemented.

In this respect, Ikerbasque is one of the tools that the Government has in order to develop strategic sectors. Therefore, and as a result of the experience gained and the results obtained, it is necessary that Ikerbasque can guide its activities towards the development of strategic sectors defined by the Government.

Particularly in the attraction and consolidation of research talent, Ikerbasque plays an essential role. For example, the basic research institutions that are part of the bioBasque and nanoBasque strategies have found in the Ikerbasque researchers leaders that have enabled the development of lines of work and the creation of competitive teams.

Likewise, the Basque University System and in particular the UPV/EHU have developed their capacities in promising fields, with the incorporation of the Ikerbasque Research Professor.

For the future development of new scientific capacities and to maintain global competitiveness, it is essential that Ikerbasque has flexibility to keep its talent recruitment strategies in step with global R&D strategies.

The System's capacity to recruit more Ikerbasque researchers is given by the UPV/EHU and BERCs and to a lesser extent by the CICs and the Technology Corporations.



CHALLENGES FOR 2017

Analysing the current situation of science in the Basque Country and taking into account the strengths and weaknesses of the different institutions that make up the system, as well as the socio-economic context, the Basque Country has room to improve its position quantitatively and qualitatively.

Thanks to the improvement in productivity (publications/1000 inhabitants), the Basque Country has risen three positions since 2004 in the Autonomous Communities classification, though the starting point was lower than the economic and social reality of the Basque Country.

Historically, science in the Basque Country has had a lower relative weight than that which corresponds to an R&D system such as our own. The resources allocated to the system have had a rapid effect, with a high marginal performance of the investment.

Looking at the trends of the last five years and maintaining the current commitment to scientific research, the Basque Country can set itself, from now until 2017, the following challenges, where Ikerbasque must play a facilitating role, helping different organisations to achieve their own goals:

Challenge 1 - The Basque Country reaches 7000 scientific publications

With an annual growth similar to that maintained during recent years, higher than the global and state average.



Figure 12- Indexed publications by the Basque Country (SCOPUS), 2003-2013, 2014-2017 predictiont



Challenge 2 - Improving the productivity of the Basque science system.

The increase in scientific production will be accompanied by a relative improvement in productivity, measured by publications per capita, improving the absolute and relative position of the Basque Country with respect to other regions.



Figure 13- Normalised impact and productivity by autonomous community Current situation and projections for 2017.

Challenge 3 - Improvement of the impact of Basque scientific publications

The production of relevant science at an international level, useful for the scientific community and which has a major impact, is of particular importance. The Basque Country must progress to the level of the regions with the highest impact.



Figure 14- Normalised impact and productivity by autonomous community Current situation and projections for 2017.



Challenge 4 - Ikerbasque hires 140 new researchers

Throughout the 2014-2017 period, 100 new Research Fellows will recruited, as well as 40 Research Professors, meaning that the number of researchers recruited by Ikerbasque will reach 300 by 2017, moment at which the research staff number will be stabilised.



Figure 15 - Evolution of staff at Ikerbasque

Challenge 5 - Ikerbasque researchers publish over 1000 articles in 2017 and reach a H-index higher than 65

The number of scientific publications in which the Ikerbasque researchers take part will break the barrier of 1000 unique documents in 2017. Taking into account the size of our science system, many of them will work in collaboration and will carry out joint research. The impact of these publications on the international science community, measured by the H-index, will double to 65.



Figure 16 - Evolution of scientific production and Ikerbasque's H-index

Challenge 6 - Ikerbasque achieves a return of €90 million during the 2014-2017 period

For each Euro that the Basque Government invests in Ikerbasque, almost twice the funds return to be invested in the science system, thanks to the funds attracted by the researchers themselves to finance projects (an annual average of \in 175,000 per Research Professor in the year 2017) and to the aid received by the management team at Ikerbasque for co-financing programs. During the 2014-2017 period, the total return will be \in 90 million.



Figure 17 - Evolution of the return produced by investment in Ikerbasque

Challenge 7 - The BERC (Basque Excellence Research Centres) publish 1000 articles, 15% of the total in the Basque Country

The maturity of the institutions created in recent years, particularly the BERC, will lead these institutions to have a prominent role in scientific production, consolidating a dynamic ecosystem of scientific research.



Figure 18 - Evolution of the participation of BERCs in the scientific production of the Basque Country



ACTION PLAN 2014-2017

MISSION, VISION AND VALUES

Mission

Ikerbasque is the organisation promoted by the Basque Government to strengthen science in the Basque Country through programmes to attract and recruit researchers and to dynamise research, in cooperation with research centres and universities, while remaining committed to excellence.

VISION

By 2017, Ikerbasque aspires to be:

- the main entity structuring the science system in the Basque Country,
- thanks to its contrasted ability to attract and consolidate scientific talent
- and to its participation in the improvement of the efficiency of the Basque science system,
- Recognised by society, the administration and by the board due to its contribution to the improvement of Science in the Basque Country, its management model, transparency and its sustainability;
- and for being a place where the people part of it can fully develop themselves.

VALUES	
Efficiency	We are committed to surpassing the targets we have set for ourselves, using the resources we have at our disposal in an optimal way.
Cooperation	We are an extended organisation that cooperates closely with its stakeholders and which works as a team.
Rigour	We seek honesty and the highest precision possible in the deployment of our actions, being consistent with our Mission, Vision and Values.
Commitment	We dedicate, in a proactive way and with enthusiasm, all the working capacity of the organisation to the fulfilment of our goals.



CRITICAL SUCCESS FACTORS

Ikerbasque's strategy for 2014-2017 has been designed analysing critical factors which the achievements of the goals pursued fundamentally depend on. The success of the entity in coming years will be closely related to the following factors:

INSTITUTIONAL SUPPORT

The success of Ikerbasque when putting its strategy into practice and the development of its main activities involves, to a large extent, counting on firm institutional support from the various political and scientific communities of the Basque Country. In order to make Ikerbasque an initiative capable of fulfilling its main mission -strengthening the Basque Science System- it is essential to have the commitment, collaboration and support of the following institutions:

- Basque Government
- Universities
- Other agents of the Basque Science System (BERCs, CICs, Technology Centres, etc.)

SOLVENCY

Carrying out the activities that pertain to Ikerbasque, which leads to fulfilling its foundational goals, requires financial resources adequate to the targets pursued. This economic solvency must be supported by both the commitment of the Public Institutions that support Ikerbasque and by the search for and obtention of competitive sources of financing (Marie Sklodowska-Curie Actions, ERC, Ramón y Cajal Programmes, private funding, etc.)

ATTRACTIVENESS

The conditions and circumstances surrounding the services that Ikerbasque offers must be attractive for the potential recipients of the actions that the Foundation carries out. This attractiveness is related to two main factors:

- The attractiveness of the Basque Country as a place of residence
- The suitability of the Basque scientific context in terms of human resources and infrastructures

Prestige

It is fundamental for an entity such as Ikerbasque to develop a reputation based on excellence, which will allow it to create trust among the potential users of the Foundation's services and in society in general. In order to achieve this prestige it is necessary to rely on two fundamental elements:

- Excellence in the operation and management of Ikerbasque
- The quality, differentiation and excellence of the activities carried out by the Foundation.





OVERALL FOCUS OF THE STRATEGY

The main and overall goal of the Ikerbasque Foundation is to strengthen the Basque Country's Science System.

To achieve this goal, and depending on the future needs gathered during the strategic reflection process shared with our stakeholders, Ikerbasque has set itself strategic goals for the 2014-2017 period in three broad fields: talent, coordination of the Basque Science System and excellent management.

Talent: Since its creation in 2007, Ikerbasque has been committed to research talent as the main instrument to improve the capacities of the science system, through the attraction, repatriation and consolidation of researchers.

Coordination of the Basque Science System: due to its central location within the Basque science system, Ikerbasque can contribute to the different agents, in addition to the talent already mentioned, added value in the fields that require scale.

Excellent Management: maintenance of efficient and dynamic management tools is essential to achieve the rest of the organisation's strategic goals.

	TALENT
IK.1	To reinforce the Basque Science System through the recruitment and consolidation of senior research staff.
IK.2	To create a reserve of future scientific leaders for the Basque Science System through the recruitment and consolidation of young scientists.
	COORDINATION OF THE RESEARCH
IK.3	Monitoring and follow-up of scientific activity in the Basque Country
IK.4	To strengthen the Basque Science System through support in the management of the Basque Excellence Research Centres (BERC) network.
IK.5	To support the institutions of the Basque Science System to boost their capabilities
	EXCELLENT MANAGEMENT
IK.6	To promote excellent management and innovation within the organisation

Below is a description of the main lines of action to achieve the various goals.



STRATEGIC GOALS

IK1 - To reinforce the Basque Science System through the recruitment and consolidation of senior research staff.

Ikerbasque's Research Professor programme has been the fundamental core of Ikerbasque's work since it was created. To date over 135 recruitment agreements have been closed and the work of these people already represents over 10% of the Basque Country's total scientific production.

In addition, the Ikerbasque Research Professors have been an important means of attracting external resources, which have a direct influence on improving the capacities of the system through the recruitment of research staff and the improvement of scientific infrastructures.

- Recruitment and consolidation of scientific staff in strategic areas for the Basque Science System
- Support and assistance for hired researchers
- Full integration of the researchers in Basque scientific entities
- The development of new tools for measuring results
- The search for innovative tools to improve gender equality among consolidated researchers



IK2 - To create a reserve of future scientific leaders for the Basque Science System through the recruitment and consolidation of young scientists.

In 2012, Ikerbasque made the Research Fellow call for the first time, an initiative specifically designed to attract and keep in the Basque Country experts in diverse branches of knowledge under the age of 40, with the aim of creating a "reserve" of scientists and researchers. The aim is that the recruitment of senior scientists is complemented with another profile of people, to give continuity to Basque research in the longer term.

Taking into account the good results of the calls as well as the acceptance by the different research centres and universities of the system, commitment to this programme has been reinforced.

- Recruitment and consolidation of future scientific leaders in strategic areas for the Basque Science System
- Support and assistance for hired researchers
- Consolidation of the researchers within the system when their Research Fellow contract has expired through their integration in the Basque Country's scientific entities
- The search for innovative tools to improve gender equality among consolidated researchers



IK3 - Monitoring and follow-up of scientific activity in the Basque Country

In 2010 Ikerboost, the Basque Science Observatory, was created. It monitors the main results indicators in the field of scientific and research production in our surroundings, and provides reports for making scientific policy decisions.

- Management of the Basque Science Observatory.
- Development of new indicators relevant for making decisions on scientific policy
- Annual publishing of the Report on Science in the Basque Country
- Creation of an ISAB (International Scientific Advisory Board)
- Segmentation of the monitoring into fields of knowledge that include social sciences
- Analysis of the gender perspective in the monitoring of scientific activity in the Basque Country
- Provision of diagnoses of scientific performance to the institutions
- Creation of a catalogue of "best practices" in scientific policy that can be implemented by the agents of the BSS



IK4 - To strengthen the Basque Science System through support in the management of the Basque Excellence Research Centres (BERC) network.

The Basque Country has nine BERC (Basque Excellence Research Center) centres that research polymers, neuroscience, materials, cognition, applied mathematics, climate change, materials physics and biophysics. BERC centres aspire to be internationally-renowned research entities in the field of knowledge in which they carry out their research, as referential centres in the generation of knowledge and in the exploration of its frontiers.

Ikerbasque has participated in the setup of the programme and in the creation of several of these centres.

- Support for the management of BERC centres
- Collaboration in the assessment of BERC centres
- Support for the coordination and improvement of the network's efficiency
- Management of the shared BERC brand



IK5 - To support the institutions of the Basque Science System to boost their capabilities

Due to its central location within the Basque science system, Ikerbasque can contribute to the different agents added value in the fields that require scale.

Initiatives that enable the improvement of the system's global performance will be promoted, such as the attraction of resources external to the system.

- Promoting the achievement of ERC Grants by researchers consolidated in the Basque Country
- Promoting the convergence of Ikerbasque's strategy with the strategic plans of the rest of the Basque Country's scientific entities
- Facilitating access to the information related to jobs within the Basque Science System
- Supporting the reinforcement of excellence in fields of investigation with an international projection and contributing to the diversification and establishment of new hubs of excellence in research
- Contributing to the development of research in the fields of social sciences and humanities
- The search for instruments to better cover the needs of the institutions of the Basque Science System which, due to matters of scale, it cannot address individually.
- To contribute to reducing the gender gap among research staff in the Basque Country, particularly in leadership roles
- Support for the creation of a scientific infrastructure map of the Basque Country, as well as for an improvement of the access to the same by the scientific community
- International projection of the Basque Science System



IK6 - To promote excellent management and innovation within the organisation

Maintenance of efficient and dynamic management tools is essential to achieve the rest of the organisation's strategic goals. In 2011 Ikerbasque received the silver Q, which accredits excellence in management, and it seeks to consolidate this management model during coming years.

- To develop a model for the organisation and management of human resources oriented towards obtaining a high level of satisfaction among the people who develop their professional career within the Foundation
- To implement a gradual system of budgetary co-responsibility in collaboration with the scientific entities of the Basque Country which recruit Ikerbasque researchers
- To promote the development of socially responsible actions by Ikerbasque
- To foster the establishment of alliances and strategic cooperation relationships between Ikerbasque and other entities of interest
- To promote ongoing improvement and innovation within the Foundation, with the aim of improving the activities offered by Ikerbasque towards the exterior as well as the internal management of the Foundation
- To carry out economic management based on an efficient use of public resources and a diversification of sources of financing based on the search for new origins
- To consolidate Ikerbasque as a reference within the Basque Science System through the development of dissemination and communication actions



INDICATORS AND GOALS 2014-2017

IKERBASQUE Balance Scorecard 2014-2017								
BSC Flements	Strategic objectives	Key Indicators		Objec	tives			
boo Elements	otrategie objectives		2014	2015	2016	2017		
		1 Total number of indexed publications in Basque Country	5200	5800	6450	7000		
		2 Year increase of indexed publications in Basque Country	11%	11%	11%	11%		
		3 Total number of indexed publications in Social Sciences & Humanities	500	555	620	690		
		4 Year increase of indexed publications in Social Sciences & Humanities		11%	11%	11%		
	1 Monitoring and follow-up of scientific	5 Total number of indexed publications of Ikerbasque	550	700	850	1000		
	activity in the Basque Country	6 Year increase of indexed publications of Ikerbasque	12%	12%	12%	12%		
BOOST OF BASQUE		7 Ikerbasque's H index	35	40	50	65		
SCIENCE		8 Average articles ands proceedings indexed per Ikerbasque researcher	4,6	4,8	5	5		
		9 Average funds atracted per Ikerbasque researcher (m $\ensuremath{\mathbb{C}}$)	150	155	170	175		
	To strengthen the Basque Science System 2 through support in the management of the BERC network.	10 Indexed publications of BERC centers	624	754	903	1050		
		11 Share of BERC publications of total Basque publications	12%	13%	14%	15%		
	3 To support the institutions of the Basque Science System to boost their capabilities	12 ERC Grants achieved by Euskadi	3	5	5	5		
	To reinforce the Basque Science System	13 Permanently hired RP (total)	145	155	165	175		
	4 through the recruitment and consolidation of senior research staff	14 Research Professors satisfaction level	8	8	8	8		
IALENI	To create a reserve of future scientific	15 Hired Research Fellows (total)	50	75	100	125		
	5 leaders for the Basque Science System through the recruitment and consolidation	16 Índice de Satisfacción de Research Fellows	8	8	8	8		
	of young scientists.	17 Share of women among researchers recruited during the year	25%	30%	35%	40%		
		18 Score in the advanced management model	475	490	500	510		
		19 Satisfaction level of hosting groups	8	8	8	8		
EXCELLENT	To promote excellent management and	20 Number of innovations	15	20	25	25		
MANAGEMENT	innovation within the organisation	21 Socially responsible actions	12	12	12	12		
		22 Satisfaction level of staff	8,5	8,5	8,5	8,5		
		23 Share of non-regional governmnent funding	20%	20%	20%	20%		





BUDGET AND RESOURCES

Ikerbasque's budget is strongly linked to the planned increase in staff and currently has two main sources of income: the Basque Government, through the Department of Education, Language Policy and Culture, and the European Union through funding obtained by Ikerbasque's management team at several competitive calls.

To date, Ikerbasque has received four grants from the European Union amounting to almost \in 20 million in the 7th Framework Programme (COFUND). This funding has been granted for the development of international talent recruitment programs, with a duration of up to 5 years and a co-financing level of 40%.

Right now the possibility of obtaining additional funding from the State Administration is not contemplated.

With the aim of stabilising the contribution made by the Basque Government to Ikerbasque without limiting the Foundation's capacity for continuing with its policy of attracting researchers, the implemention of a gradual system of budgetary coresponsibility in collaboration with the scientific entities of the Basque Country which recruit Ikerbasque researchers has been considered.

For the development of the lines of action contemplated in this Strategic Plan, the following budget for the 2014-2017 period has been estimated.

EXPENDITURE	2014	2015	2016	2017
Collaborations with the BSS	1,161,000	1,500,000	2,000,000	2,500,000
Staff	12,252,000	13,832,537	15,859,915	17,887,293
Operation expenses	876,000	1,000,000	1,000,000	1,000,000
Investments	136,000	5,000	5,000	5,000
TOTAL EXPENDITURE	14,425,000	16,337,537	18,864,915	21,392,293

REVENUE	2014	2015	2016	2017
Subsidies	14,286,000	16,329,537	18,856,915	21,384,293
Financial income	3,000	3,000	3,000	3,000
Capital subsidies	136,000	5,000	5,000	5,000
TOTAL REVENUE	14,425,000	16,337,537	18,864,915	21,392,293



ANNEX: STRATEGIC REFLECTION PROCESS

This Strategic Plan has been carried out by means of an open and participative strategic reflection process.

#100 Zientzia

The strategic reflection process opened in late 2012, during the celebration of the X. Workshop by Ikerbasque. The #100Zientzia initiative was launched, which sought to collect at least 100 ideas to improve the Basque Science System.

Close to 400 ideas originating from different sections of Basque society were collected through social networks.

Working sessions

Several working sessions have been carried out in which Ikerbasque stakeholders have taken part (see participants)

Brainstorming by Ikerbasque researchers

During the XI. Workshop by Ikerbasque held at the San Telmo Museum, a brainstorming session was held were the researchers themselves contributed ideas for the future of the organisation.

External contrast

Close to the end of the strategic reflection process, an external contrast was carried out with assessors from Euskalit.



PARTICIPANTS

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BC3

CIC nanoGUNE

BCBL

BCAM

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Achucarro - Basque Center for Neuroscience

Biophysics Unit

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BioCruces

Basque Center for Materials, Applications and Nanostructures

UPV/EHU

University of Deusto

CIC biomaGUNE

DIPC

Mondragon Unibertsitatea

CIC bioGUNE

Ikerbasque researchers

Ikerbasque management staff



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Basque Foundation for Science

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