



AZTERLAN
CEIT
CIDETEC

GAIKER
IDEKO
IKERLAN

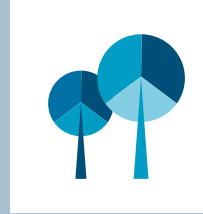
LORTEK
TEKNIKER
VICOMTECH

TOTAL INCOME

111,2 M€

53,87 % INDUSTRY
25 % BASQUE GOVERNMENT
4,6 % SPANISH PA
15,33 % EU
1,2 % LOCAL GOVERNMENTS

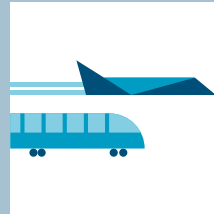
STRATEGIC AREAS



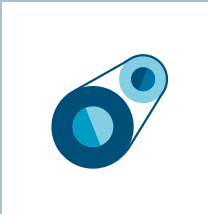
Energy



Health



Transport



Advanced manufacturing

THE IK4 ALLIANCE

9
TECHNOLOGY
CENTRES

1.274
PEOPLE

35
PATENTS REQUESTED
IN 2015

12
HEADQUARTERS

28 % (357)
DOCTORS

10
PATENTS GRANTED IN
2015

93
COMPANIES AND ENTITIES IN
GOVERNING BODIES



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Antxon López Usoz
President of IK4-IDEKO



Ramón Uribe - Echeberriá
Managing Director of IK4-IDEKO

Thirty years have now passed at an incredible pace since IDEKO was founded in 1986 with the single purpose of developing technologies applicable to machine tools. At that time, the recently appeared computer aided calculation and design tools had to be applied, electronics had to be incorporated, and the manufacturing processes had to be known in order to be able to compete in an increasingly internationalised market. With more hope than resources, a complex reality was put in place that, looking back, we can say with pride has been a great success.

Since then IDEKO, like our people, has grown, it has developed, it has been committed and it has become a guarantee of success for the companies with which it collaborates. In 2015, IDEKO worked on no less than 166 projects with more than 30 different companies and has been incorporated into 3 new European research consortiums.

Nevertheless, as on the first day, there are two aspects that have remained intact at IDEKO since its creation: a strong commitment to specialisation in manufacturing technologies and a desire for the results of the R&D projects that it undertakes to end up being put into production and finally arriving on the market. Both qualities, together with the levels of scientific excellence achieved by those that work at IDEKO, place it at the forefront of the international technological-scientific sector.

I want to end by thanking the companies with whom we work, the public administrations, our collaborators, all the other IK4 partners and stakeholders in the Basque Network of Science and Technology and, of course, the IDEKO Research Team, as through their contribution we are ensuring that advanced manufacturing increasingly occupies the place that it deserves in the economy of our country.

Thank you.

2015 was a very positive year for IK4-IDEKO because we broke our record in the number of projects and turnover. We managed to attract projects for a value of 9MC, up 28% from last year. Turnover for R&D increased by some 8%, with a good balance between knowledge generation (45%) and technology transfer with contracted projects by companies (55%).

In the field of research and training, we established a research and development programme for our 7 specialisation lines. We took part in all major programmes launched by public administration bodies on a regional, national and European level. We would like to highlight the fact that we received 3 new European projects, one of which being led by IK4-IDEKO.

With regard to projects carried with companies, we stepped up our efforts in sales which has resulted in a significant increase of our client portfolio reaching a total of 79, 15 of which were new this last financial year. Among all, one of the technological developments that stood out was DAS: Dynamic Active Stabiliser developed by Ideko in collaboration with Soraluze. We were awarded the 'Quality Innovation of the Year 2015' in the category large companies for this achievement.

We have submitted three new patents and obtained one new one as a result of our research and development, that makes a total of 22 active patents in our portfolio. Furthermore, in terms of publications, we published 11 articles in indexed journals and 9 articles at congresses, as well as numerous scientific articles.

The financial year 2015 saw the completion of the reorganisation of the Basque Network of Science, Technology and Innovation, which seeks to strengthen the market focus in a more efficient manner, backed by outstanding levels of excellence. IK4-IDEKO was certified again as it fulfils all requirements. The re-certification is only the beginning of a journey that will lead us to greater levels of excellence. Hence, as set out in the decree, we established the Action Plan 2020, which includes the strategy and action to be undertaken in order to achieve the ambitious final objectives by 2020.

ANNUAL REPORT 2015



01 | ABOUT US

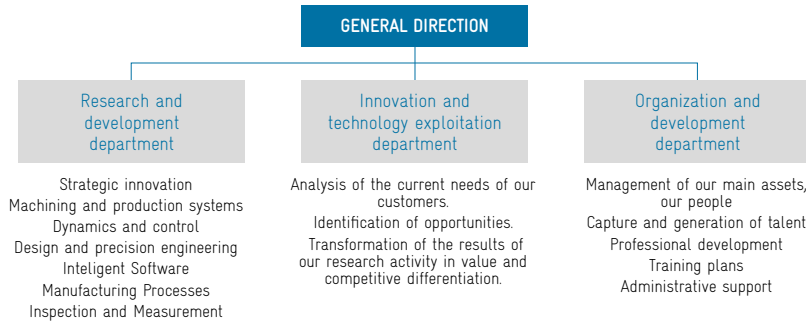
We are a technology centre that specialises in manufacturing and industrial production technology. We capture, develop and generate new knowledge capable of responding to current and future challenges in industry.

Our activity spans from research in manufacturing technologies and industrial production to the identification and analysis of opportunities, the design and technological development of products, business lines and production processes and the resolution of problems through the provision of technological services such as technical consultancy and equipment based services.

Thanks to scientific excellence and specialisation developed in our research lines and to the investments made in the latest generation equipment in our laboratories, we are able to offer solutions that are technologically advanced, innovative and differentiating in order to improve the production capabilities and the competitive position of our customers in sectors such as machine tools, railway, aeronautics, capital goods, automotive and energy, among others.

Our commitment to offering the best solution, the loyalty of our customers, our international presence and collaborations, and the recognised prestige of our personnel in our specialist areas attest to our leadership in manufacturing and industrial production.

02 | ORGANIZATION



03 | COLLABORATION OF IK4-IDEKO WITH COMPANIES

1. SERVICE PROVISION

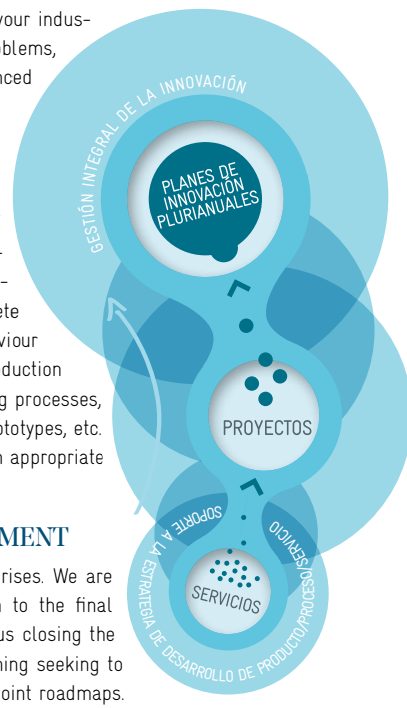
We provide ad hoc, fast, flexible and effective services for the optimisation of your industrial manufacturing and production processes: trouble shooting for vibration problems, modal analysis, FEM calculations and simulations, or the provision of advanced measuring, inspection and verification services, among others.

2. SUPPORT TO THE PRODUCT/PROCESS/SERVICE DEVELOPMENT STRATEGY

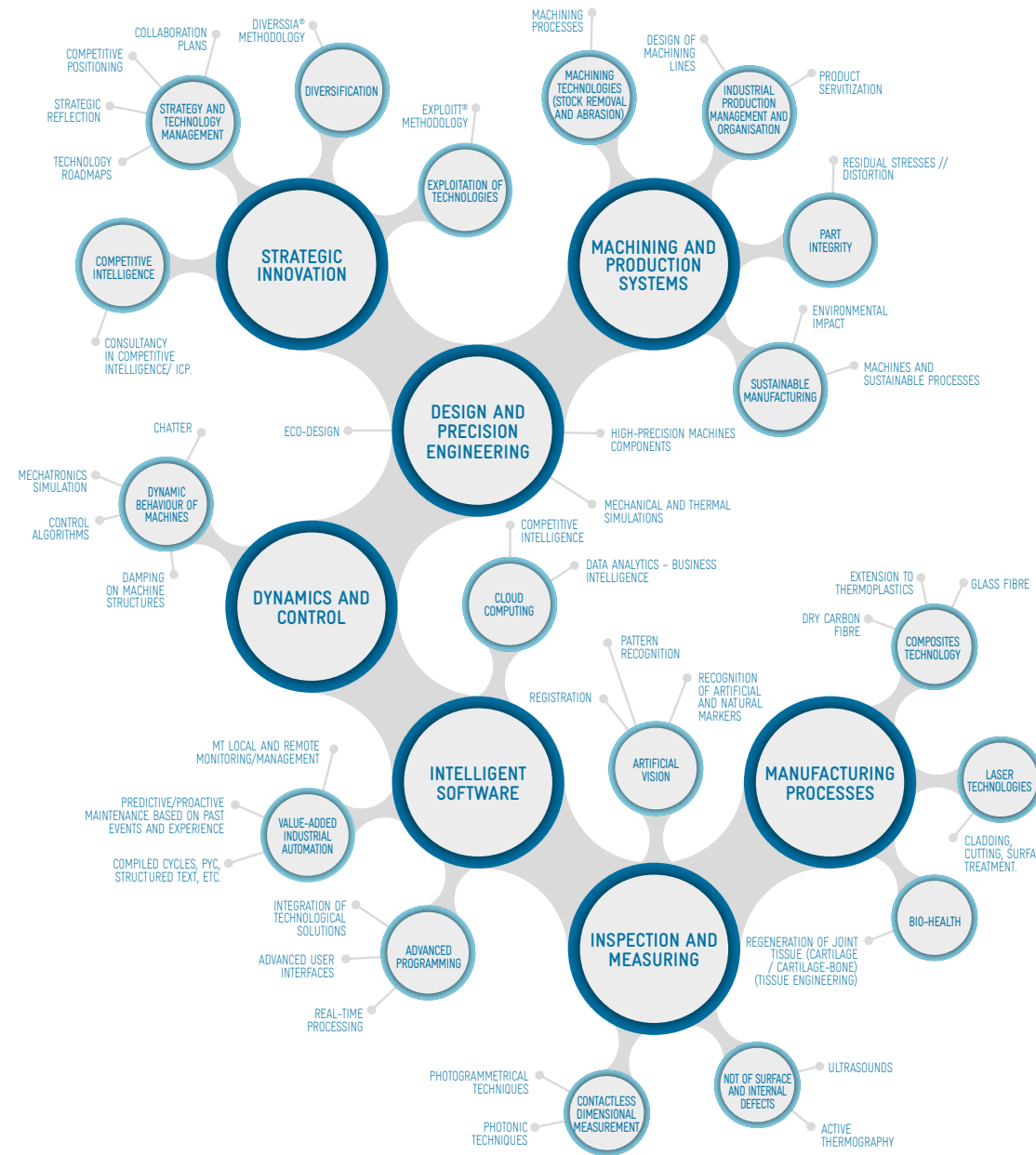
We develop customer-tailored R&D projects that facilitate the incorporation of new technologies, resulting from our research work, in their products and processes. We take on technological and market studies, and design product and technology innovation and development plans, as well as components and complete machines. Furthermore, we perform an analysis of thermal and dynamic behaviour of structures, ecodesign and sustainability, modelling and management of production lines, and we offer a review and selection of parameters and tools in machining processes, improvement of production processes, validation, manufacture and refining of prototypes, etc. All this for individual projects or in cooperation with other entities and within an appropriate timescale.

3. COLLABORATION FOR INTEGRAL INNOVATION MANAGEMENT

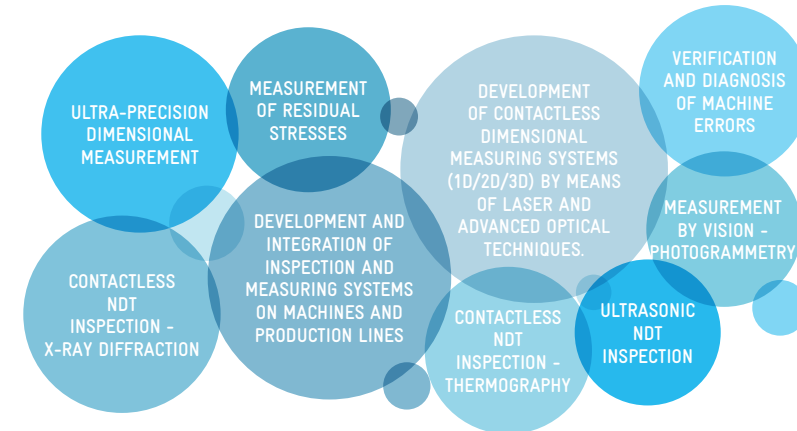
We assist in the definition of an innovation plan and in its execution in enterprises. We are involved in obtaining results spanning from the first phases of our research to the final implementation of the technologies developed in innovations for the market, thus closing the R&D&I cycle. Thus we achieve maximum collaboration with a multiannual planning seeking to establish long-lasting relationships with our customers on the development of joint roadmaps.



04 | RESEARCH LINES. SPECIALISATION.



05 | TECHNOLOGICAL SOLUTIONS AND SERVICES



06 | R&D PROJECTS

PROJECTS WITH COMPANIES

Simulation of railway and oil&gas lines

Grinding of curved couplings

Complete "Machine+Application" solution for the manufacture of complex and high added value parts

Competitive Intelligence System in the province of Gipuzkoa

Competitive Intelligence Reports

Photogrammetric alignment system

Generation of functional surfaces by means of grinding for the improvement of tribological properties and elimination of damaging patterns (helix and waves)

Thermal behaviour of tools for cellulose moulding

Web platform for the automatic definition of time studies and grinding process parameters

Profile measuring device for railway wheels on passing

Technical feasibility study for TIG welding surface inspection and EBW of Iconel 718 on TBHs by means of active thermography

Study and monitoring of laser cutting process

Smoothing device prototype for gas valve bodies and cones

Chip breaking system by dynamic threading by means of sinusoidal variation of the axial cut depth

Optimisation of the housing manufacturing process in the aeronautics sector

EUROPEAN PROJECTS

INTEFIX

Suppression of distortions in large structural components.

EASE-R3

Innovative Strategies for Renewal and Repair of Manufacturing Systems

FOCUS

Cluster methodology and support for the study on the exploitability of the results achieved in projects financed by the European Commission in the PPP FoF of the H2020 framework programme.

HIPPOCAMP

Process for the industrial production of nano-composites that dampen vibrations, act as reinforcement for the structural parts used in strategic sectors and improve their functional properties.

DYNEXPERTS

Plug and Produce Components for Optimum Dynamic Performance Manufacturing Systems

AXLEINSPECT

New inspection techniques based on electromagnetic technologies and phased array ultrasonics, suitable for both solid and hollow axles.

MC-SUITE

Application of ICTs and the latest advanced manufacturing techniques for increasing the efficiency and competitiveness of manufacturing processes

MM-TECH

New methods and technologies for the manufacture of gamma-TiAl alloy components, of high potential for the aerospace industry

POPJIM

Plug-and-Produce components for adaptive control in machining processes

SYMBIO-TIC

Design of work environments that allow the interaction of robots and people.

METALMORPHOSIS

Development and optimisation of new joining process for composites and metal materials for sheet and tubular applications in the automotive industry.

ASPIRATE

Technology for the machining of CFRP and GFRP based on the internal extraction of swarf and powder particles through the machining system (cutting tools, tool holders, machine spindle).

TRANSPARENCY

Collaborative design for customised machine tools.

OPTIMISED

Methods and technologies for the optimisation and adjustment of production plans based on modelling and simulation tools, real data from intelligent sensors and human-machine interfaces (HMI).

07 | 2015 IN FIGURES

INCOME
9,6 M€

PEOPLE

96

25%
DOCTORS

PUBLICATIONS

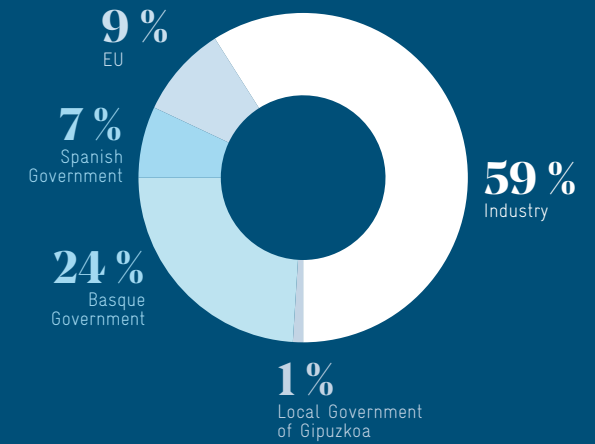
11

9

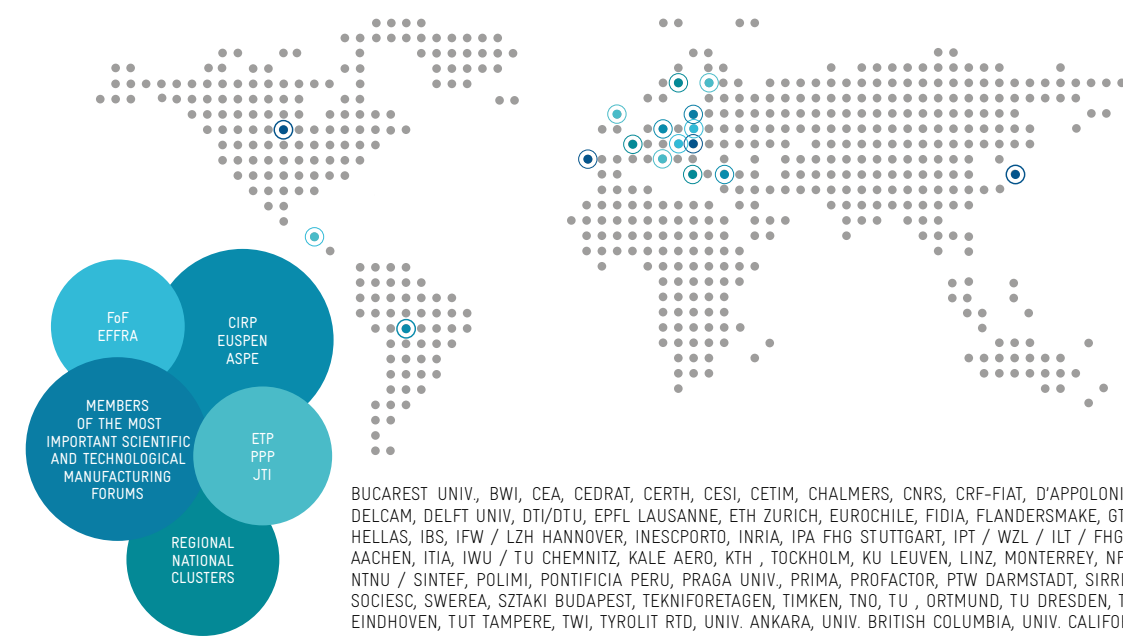
ARTICLE IN INDEXED JOURNALS

ARTICLES IN CONGRESS

2015 INCOME DISTRIBUTION



08 | ALLIANCES AND COLLABORATIONS



BUCAREST UNIV, BWI, CEA, CEDRAT, CERTH, CESI, CETIM, CHALMERS, CNRS, CRF-FIAT, D'APPOLONIA, DELCAM, DELFT UNIV, DTI/DTU, EPFL LAUSANNE, ETH ZURICH, EUROCHILE, FIDIA, FLANDERSMAKE, GTS, HELLAS, IBS, IFW / LZH HANNOVER, INESCPORTO, INRIA, IPA FHG STUTTGART, IPT / WZL / ILT / FHG / AACHEN, ITIA, IWU / TU CHEMNITZ, KALE AERO, KTH , TOCKHOLM, KU LEUVEN, LINZ, MONTERREY, NPL, NTNU / SINTEF, POLIMI, PONTIFICIA PERU, PRAGA UNIV., PRIMA, PROFACTOR, PTW DARMSTADT, SIRRIS, SOCIESC, SWEREA, SZTAKI BUDAPEST, TEKNIFORETAGEN, TIMKEN, TNO, TU , ORTMUND, TU DRESDEN, TU EINDHOVEN, TUT TAMPERE, TWI, TYROLIT RTD, UNIV. ANKARA, UNIV. BRITISH COLUMBIA, UNIV. CALIFORNIA, UNIV. COSTA RICA, UNIV. ESTAMBUL, UNIV. GRAZ, UNIV. KEIO, UNIV. KOBE, UNIV. KOC, UNIV. LISBOA, UNIV. MASSACHUSSETTS, UNIV. MICHIGAN, UNIV. NAGOYA, UNIV. PATRAS, UNIV. SABANCI, UNIV. SAO PAULO, UNIV. SETUBAL, UNIV. SOFIA, UNIV. TESALONICA, UNIV. WATERLOO, UNIV.CRANFIELD, UNIV.NOTTINGHAM, UNIV.OULU, UNIV.PADOVA, UNIV.SHEFFIELD + AMRC, UOB / BIBA / LFM BREMEN, VTT, WARSOV UNIV.