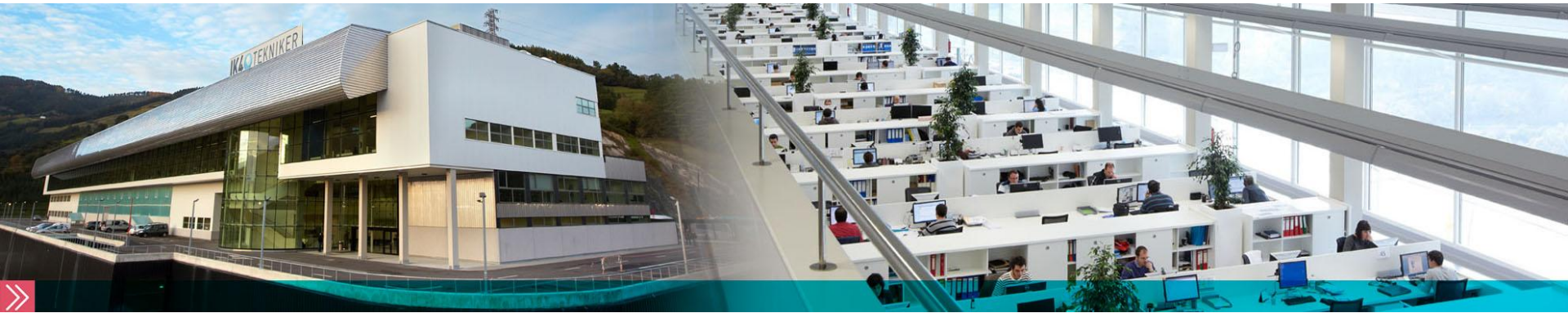




IK4  TEKNIKER  
Research Alliance

**GENERAL INTRODUCTION 2013**



- **Mission:**  
“**IK4-TEKNIKER** is a **technology centre** staffed by people who are committed to promoting the **ability to innovate** on the part of our **customers** and increase their technological capital to help them become more **competitive** through the generation and application of **scientific and technological knowledge**.”
- Founded in 1981 as a privately-owned, not-for-profit technology centre.
- Member of the IK4 Research Alliance technology platform.
- Specialized in Manufacturing.



## What is IK4?

We form a **Private Alliance of 9 R&D Centres** and our mission is to **generate, capture and transfer scientific and technological knowledge** so that we can contribute **towards improving the competitiveness of the business base in our area** through **innovation**, in a global context underscored by competitiveness.



Research Alliance

AZTERLAN

CEIT

CIDETEC

GAIKER

IDEKO

IKERLAN

LORTEK

TEKNIKER

VICOMTECH

## IK4 ALLIANCE CENTRES

### BASIC FIGURES



Source: R&D Centres as of the end of 2012



ENERGY



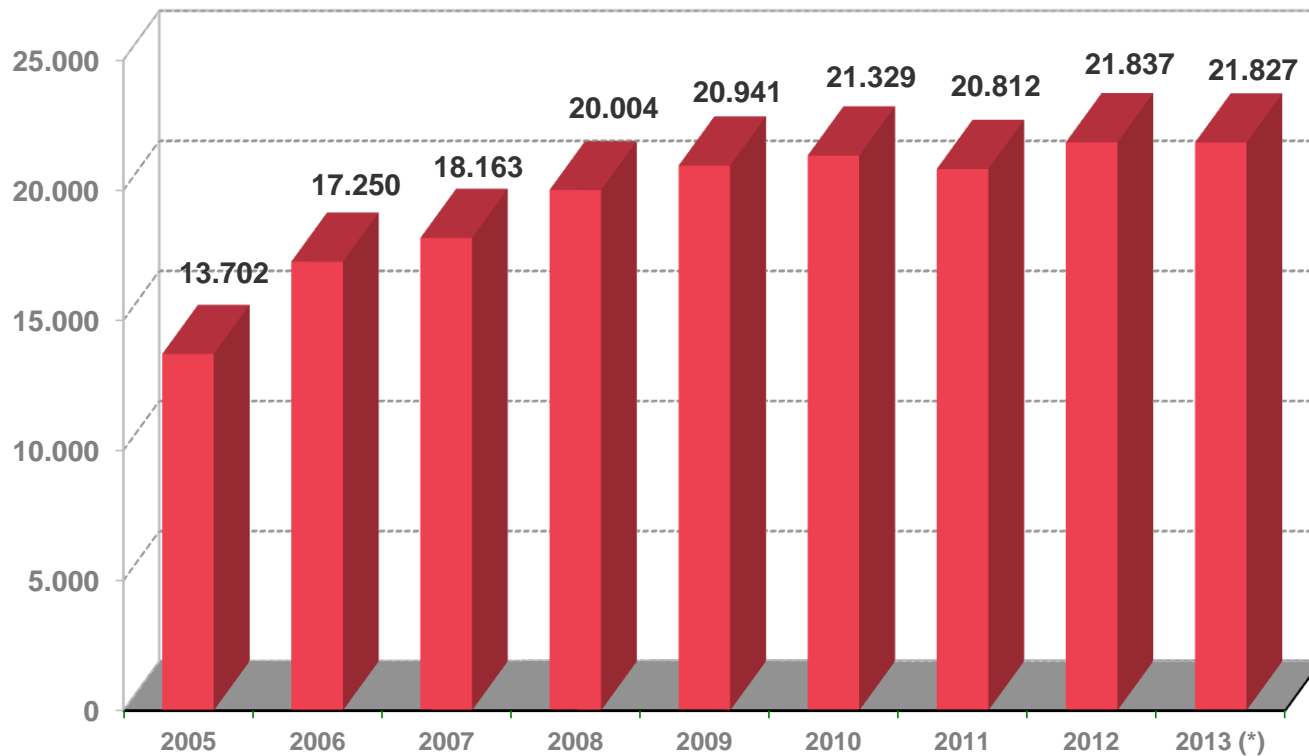
ADVANCED  
MANUFACTURING



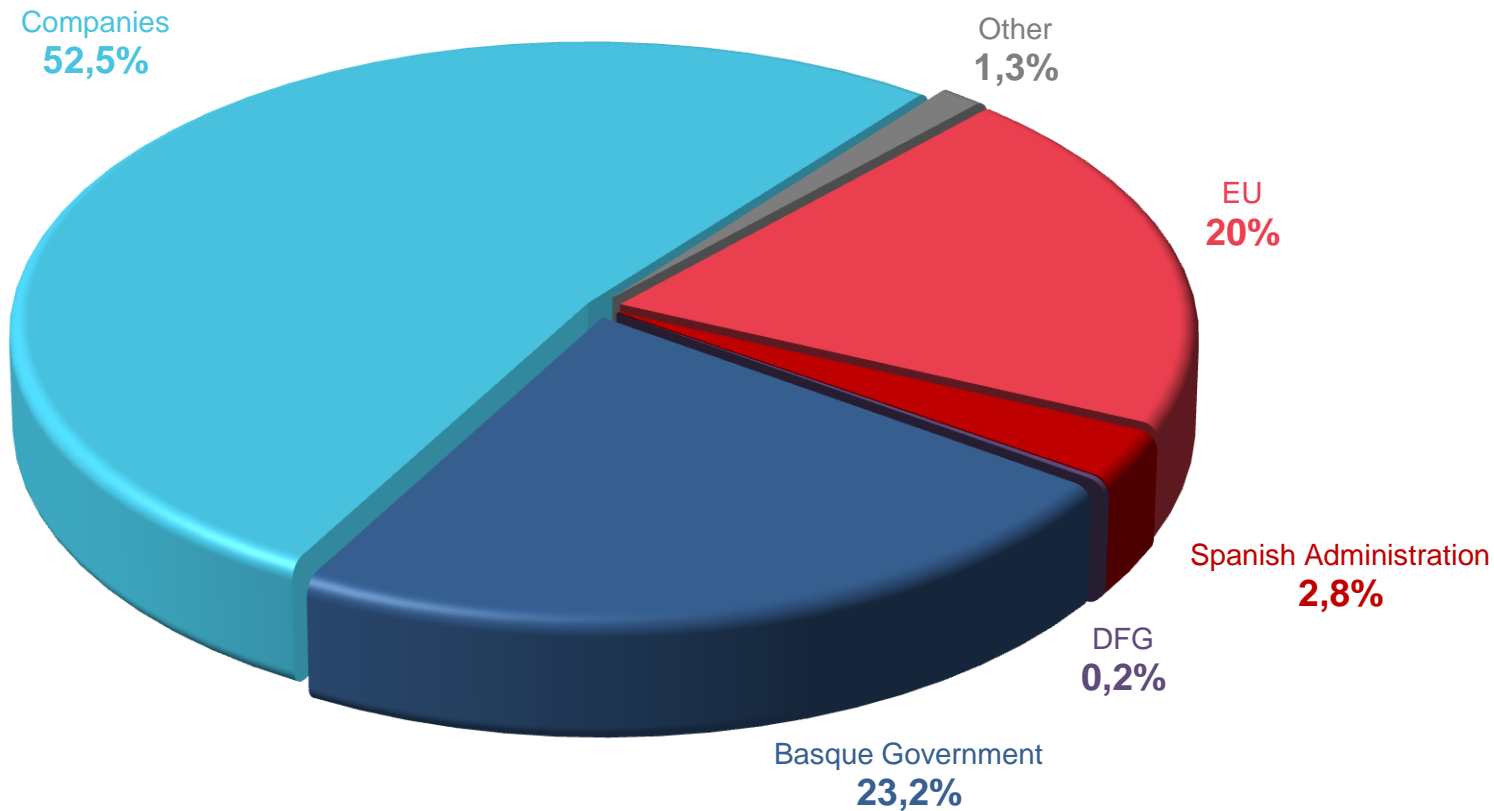
HEALTH

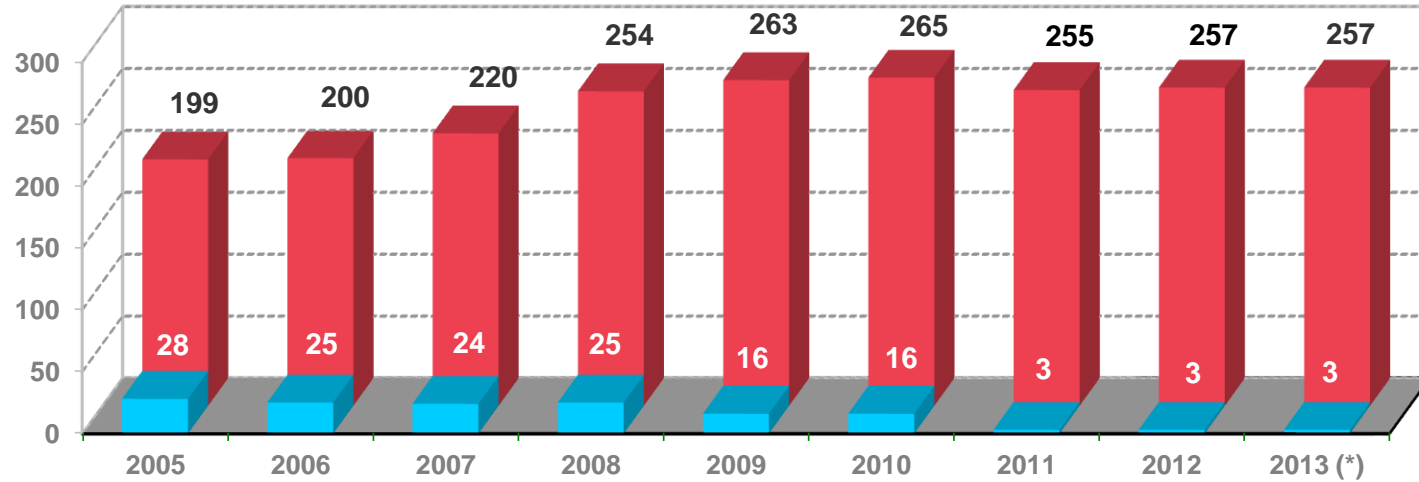


TRANSPORT  
AND MOBILITY



(\*) Forecast for 2013



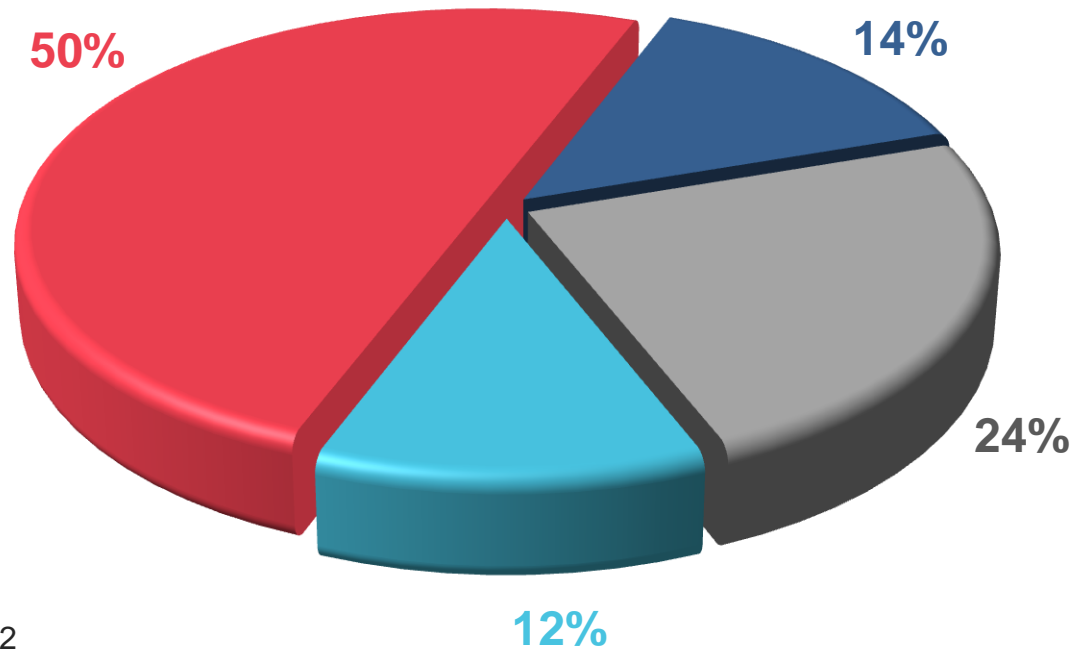


(\*) Forecast for 2013

■ Trainees

■ Recruited Personnel





- Doctors & long-course degree holders · 32
- Engineers & long-course degree holders · 130
- Short-course degree holders · 36
- Vocational training diploma holders · 62

63% Men  
37% Women



	2011	2012	PG 2013
<b>Total Income (€)</b>	<b>20.812.076</b>	<b>21.836.652</b>	<b>21.827.037</b>
Personnel (Recruited Personnel + Trainees)	255 + 3	257 + 3	257 + 3
Patents applied for during the year	3	7	6
Patents applied for (first filing)	21	28	34
Patents exploited	7	10	12
NTBFs set up during the year	1	2	2
Investee Companies	9	10*	12
Scientific publications	29	26	30
International conferences organised	0	2	1
PhDs	28 (10'8%)	35 (13'6%)	38 (14'7%)

\* Incorporation of Datalogger into Microelectrónica MASER

# R&D INNOVATION



IK4  TEKNIKER  
Research Alliance



**COMPANY**

**SPECIALIZATION**

**TRANSFER**

## Role played by IK4-TEKNIKER

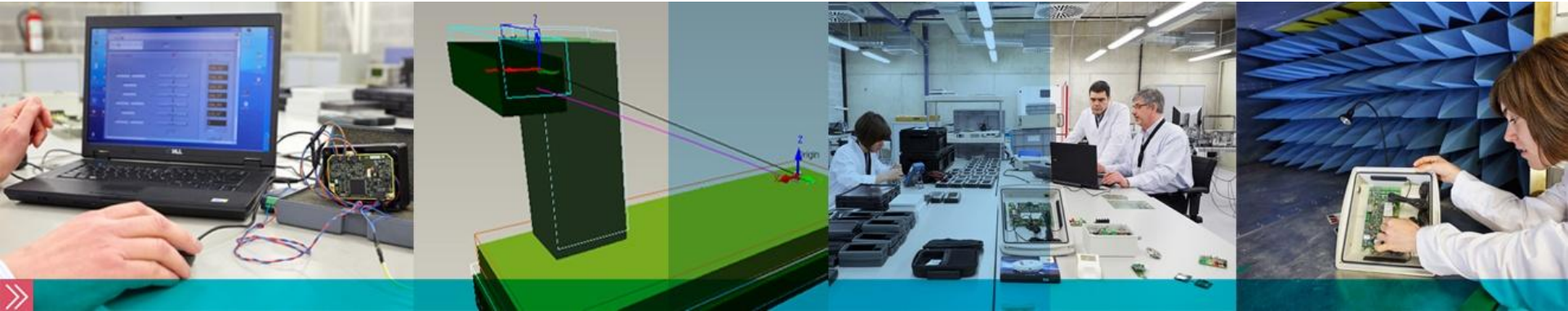


- **Conventional manufacturing processes** (milling, turning, etc.) and **non-conventional ones** (laser, ultrasound, PECM...).
- **On a macro, micro scale** (micromilling, micro EDM, diamond tool turning), and **nano** (pico and femto laser, clean room technologies, NIL).
- **Mechatronics and precision engineering:** Machines and special equipments design and manufacturing (machine-tool, PVD, scientific equipment, chemical reactors). From the conceptual design to the turnkey delivery.
- **Industrial production management and innovation** (production models, lean manufacturing, competitive intelligence, innovation).



- **Physical and chemical treatments and processes** to modify the structure and composition of the surfaces of materials (NIL, PEO, SOL-GEL, PVD, laser texturing, etc.) designed to obtain new functionalities, a new appearance or improve properties.
- **Materials and surfaces for energy:** PECM, HTF, Molten salts, absorbent layers, etc.
- **Tribological systems**, their design, characterization and optimization.
- **Industrial fluid use control.**





- **System regulation and control** (machine tools, chemical plants, wind energy, actuators, converters).
- **Automation of processes and means.**
- **Magnetic levitation.**
- **Electronics** (wireless communications, plug and play devices, power harvesting).
- **Information systems** (data mining, health monitoring, diagnostics and prediction, semantics).
- **Cognitive systems** (2D and 3D vision, image processing, positioning and navigation, human-machine interaction).



- **From the innovative idea to a high added value product.**
- **Integration of heterogeneous technologies** (optics, nanotechnologies, mechanics, materials) into a single solution in order to develop advanced solutions.
- **Product design and industrial-scale production.**



Some of the industrial sectors where we offer solutions with results:

- **Machine tool and equipment**
- **Renewable energies**
- **Scientific equipment**
- **Electronic products and ICTs**
- **Automotive**
- **Aerospace**



- **Standard R&D&i projects.**
  - A problem/need comes up -> Offer -> Order -> Delivery of result -> Invoicing.
- **Technology consulting service. For new clients or existing clients.**
  - 1-2 days spent on the client's premises reviewing the company's products and processes to identify new opportunities for innovation and technology development.
- **Stable framework for collaboration in the medium and long term.**
  - To take the degree of collaboration and its impact a stage further thanks to deep mutual knowledge based on trust and on the results achieved. The following are normally included in the framework agreement:
    - Support in the setting up of the "Competitive Intelligence" system.
    - Short-, medium- and long-term plans are established on the basis of a framework agreement.
    - A single, exclusive interlocutor.
    - Aligning of our expertise plan (generation of knowledge) to address common needs. Finding out the future needs of our clients helps us to focus our expertise.
    - Sharing the "technology plan". Joint reflection on the technology and strategy between the company and IK4-TEKNIKER.
- **Joint participation in the results.**
  - Whenever appropriate, shared risk and shared exploitation through patents, start-ups, etc.
- **Use of IK4-TEKNIKER's spaces.**
  - All the spaces may be used by companies and agents in the Basque network, as long as the necessary coordination is in place, particularly when it comes to assembling and/or commissioning special machinery.
  - Use of our facilities for attending to and introducing the clients/visitors of our client companies.

# VALUABLE ASSET

FOR COMPANIES AND SOCIETY





**Although the value of IK4-TEKNIKER is knowledge, and knowledge resides in people, THE NEW FACILITIES ARE GOING TO PROVIDE A MUCH MORE FERTILE CONTEXT FOR CREATIVITY AND THE GENERATION OF TECHNOLOGY:**

- Over 27,925 m<sup>2</sup> of construction, which is almost three times the area of the previous premises.
- 12 new laboratories and workshops fitted out and equipped to meet the most demanding requirements.
- Large, flexible spaces with controlled temperature, humidity and vibrations.
- Space and equipment to cater for the assembly of large-sized machinery and tools.
- A hazardous testing facility in the form of a bunker with full insulation guaranteed.
- A tour of IK4-TEKNIKER's facilities provides an overview of its technological capabilities.



Thank you