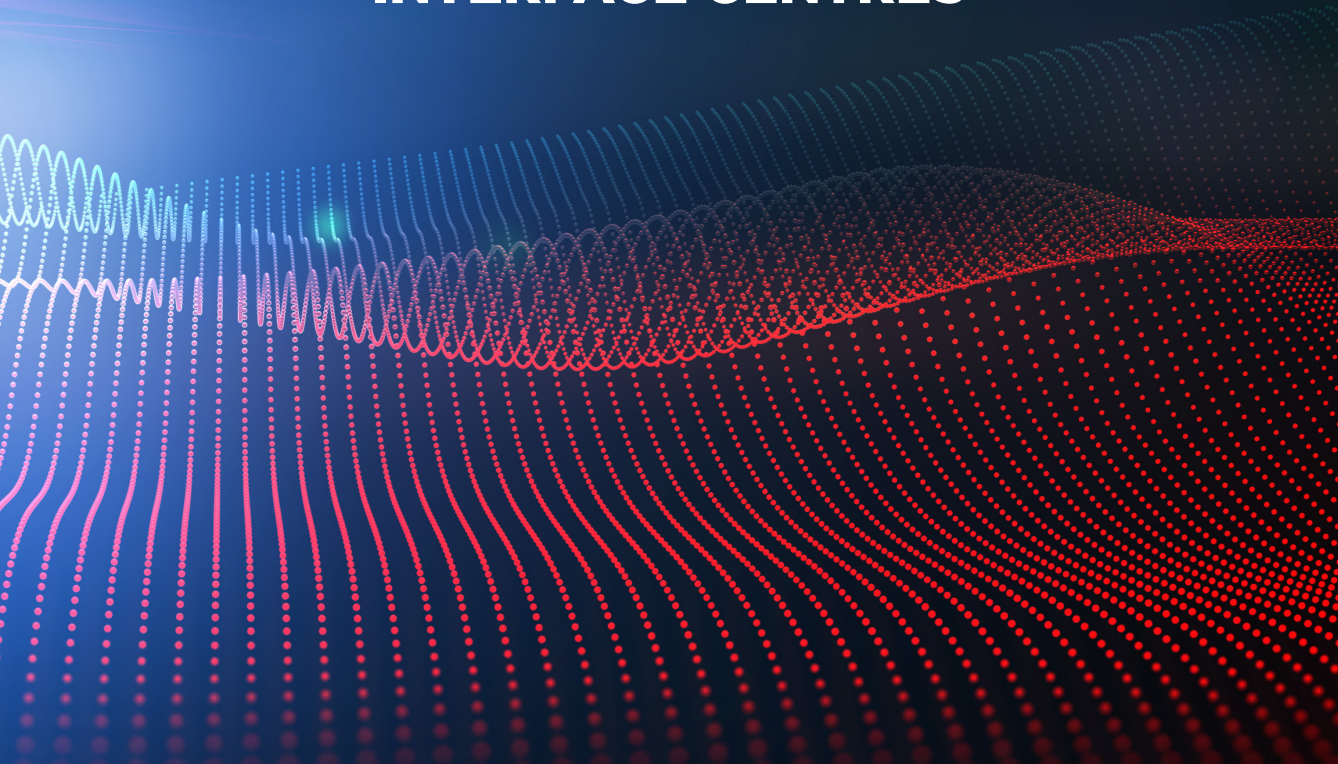
Centro Interface

INTERFACE CENTRES



AGÊNCIA NACIONAL DE INOVAÇÃO

PROGRAMA INTERFACE

Cofinanciado por:

COMPETE 2020 PORTUGAL 2020 UNIÃO EUROPEIA Fundo Europeu de Desenvolvimento Regional

Centro Interface

AGÊNCIA NACIONAL DE INOVAÇÃO

PROGRAMA INTERFACE

Cofinanciado por:

COMPETE 2020

PORTUGAL 2020

UNIÃO EUROPEIA
Fundo Europeu de Desenvolvimento Regional

THE IMPORTANCE OF INTERFACE CENTRES TO THE ECONOMY

JOÃO CORREIA NEVES, DEPUTY SECRETARY OF STATE FOR ECONOMIC AFFAIRS

The Portuguese economy has achieved positive results in recent years, as a result of a clear commitment to internationalisation, investment, innovation and the creation of more and better jobs. Portugal is now well on its way to achieving the target of 50% of GDP in exports and total R&D spending of 3% of the national product, ambitious goals that are only possible due to a thriving combination of factors.

Firstly, the role of the state. Recent years have seen public policies increasingly becoming oriented towards the real needs of private agents, creating support instruments adapted to suit the Portuguese business fabric to improve financing conditions by streamlining access to EU funds and improving the business environment through programs such as Capitalizar, Fundo 200M and Simplex. We intend to continue our commitment to improving the relationship between entrepreneurs and the Administration by creating conditions to allow companies to achieve their goals.

Secondly, these ambitious targets can only be achieved because of the unique willingness and ability of Portuguese entrepreneurs, who want to continue to invest, to take risks, to create jobs and to commit to qualified workers and supply. Today we have companies that are increasingly competitive internationally and that interact with foreign markets much earlier by integrating global value chains. This proves their ability to incorporate value, both through human resources that are now more qualified than ever, and through new forms of production and organisation that are increasingly incorporating more technology - particularly digital technology -, allowing goods to be produced and services provided with more and more added value.

Finally, the good results are also a reflection of a change that is gradually taking place in the form relationships both between companies and with knowledge and technology production centres. Companies in Portugal are entering into more partnerships and acting in an increasingly collaborative manner, forming networks and clusters that include a wide range of players along the entire value chain, united by a common strategy.

Out of this group of players, Interface Centres take on particular relevance, as they are the institutions that carry out R&D and Innovation with and for companies. They have been essential for increasing the competitiveness of Portuguese companies. These entities started to be recognised in 2017 and today there are 31 recognised ICs originating both from partnerships and the world of academia.

In addition to their main mission of stimulating and carrying out collaborative R&D, these entities often also act as specialised service providers for companies that have neither the capacity nor infrastructure to carry out certain activities relevant to their success internally, due to their size, such as laboratory tests and metrological analyses, which also contributes to the qualification of Portuguese supply. In parallel, the Interface Centres play a major role alongside companies and clusters, promoting training and internationalisation. Since many of these Centres are part of international networks and interact directly with entities at a global level, they are able to identify opportunities for the development of new technologies on the one hand, and, on the other hand, provide companies and associated clusters with some international exposure.

We know today that innovation is more productive when generated collaboratively. We therefore want to continue to focus on innovation and building the capacity of interface infrastructure, in recognition of the importance of each of the different players for meeting the ambitious goals we have set and for the collective success of the country.

November 2019

INTERFACE CENTRES: FROM RESEARCH TO MARKET

EDUARDO MALDONADO, CHAIRMAN OF THE BOARD OF DIRECTORS OF THE NATIONAL INNOVATION AGENCY

The mission of the National Innovation Agency (ANI) is to develop actions aimed at supporting technological and business innovation in Portugal, thereby contributing to the consolidation of the National Innovation System (NIS) and strengthening the competitiveness of the Portuguese economy on global markets.

ANI is responsible for coordinating and monitoring the technological and business innovation strategy for Portugal, 2018-2030 (RCM 25/2018), stimulating private investment in R&D, collaboration between research bodies and companies, as well as strengthening the participation of companies and entities in the scientific and technological system in international networks and programmes.

One of the challenges to increase innovation capacity in Portugal is to promote knowledge and technologies produced by entities in the scientific and technological system on the market, but also to broaden the base of entities involved in R&D and innovation activities.

The Interface Centres (CIT), under the INTERFACE Program, play a fundamental role in this process, particularly due to their ability to stimulate the link between Science and Businesses.

ANI will be an active CIT partner over the coming years. Our work will include supporting CITs in their process of capacity building and increasing competitiveness, contributing to their medium- and long-term sustainability.

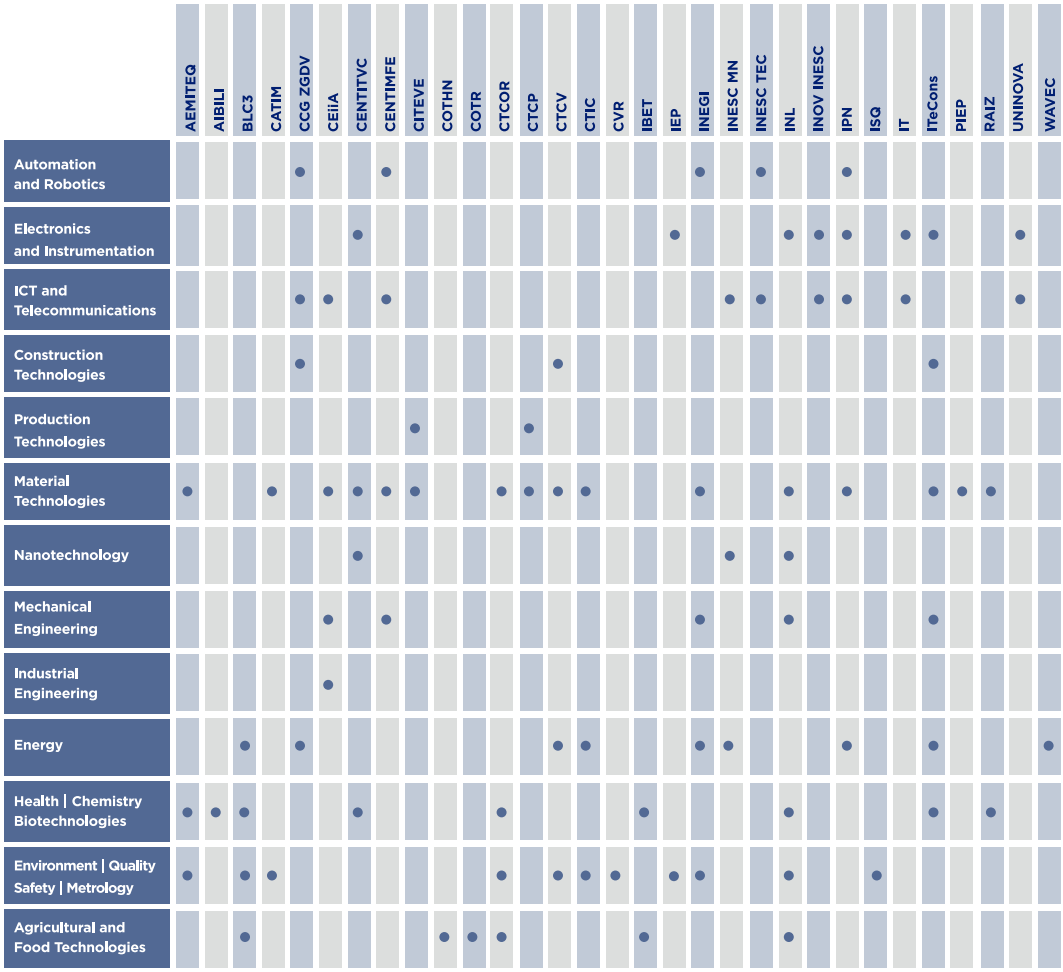
The identification of funding opportunities - both at a national and European Community level - the promotion of R&D and innovation results, as well as the strengthening of collaborative networks with other NIS players, specifically with other technological infrastructure, will be some of the areas in which ANI will support the NIS in years to come.

November 2019

INTERFACE CENTRE NETWORK

AEMITEQ Association for Technological Innovation and Quality	**COIMBRA**
AIBILI Association for Innovation and Biomedical Research on Light and Image	**COIMBRA**
BLC3 Technology and Innovation Campus	**OLIVEIRA DO HOSPITAL**
CATIM Technological Centre for the Metal working Industry	**PORTO**
CCG Computer Graphics Centre	**GUIMARÃES**
CEiiA Center of Engineering and Product Development	**MATOSINHOS**
CENTITVC Centre for Nanotechnology and Smart Materials	**V.N. FAMALICÃO**
CENTIMFE Technological Centre for the Moulds, Special Tools and Plastics Industry	**MARINHA GRANDE**
CITEVE Technological Centre for the Portuguese Textile and Clothing Industries	**V.N. FAMALICÃO**
COTHN National Fruit and Vegetable Operational and Technological Centre	**ALCOBAÇA**
COTR Irrigation Technology and Operational Centre	**BEJA**
CTCOR Cork Technological Centre	**S. MARIA LAMAS**
CTCP Portuguese Footwear Technological Centre	**S.J. MADEIRA**
CTCV Ceramic and Glass Technological Centre	**COIMBRA**
CTIC Leather Industry Technological Centre	**ALCANENA**
CVR Waste Recovery Centre	**GUIMARÃES**
IBET Institute of Experimental and Technological Biology	**OEIRAS**
IEP Portuguese Electrotechnical Institute	**PORTO**
INEGI Institute of Science and Innovation in Mechanical and Industrial Engineering	**PORTO**
INESC MN Microsystems and Nanotechnologies	**LISBOA**
INESC TEC Institute of Systems and Computer Engineering, Technology and Science	**PORTO**
INL International Iberian Nanotechnology Laboratory	**BRAGA**
INOV - INESC New Technologies Institute	**LISBOA**
IPN Pedro Nunes Institute	**COIMBRA**
ISQ Welding and Quality Institute	**PORTO SALVO**
IT Institute of Telecommunications	**AVEIRO**
ITeCons IInstitute of Research and Technological Development for Construction, Energy, the Environment and Sustainability	**COIMBRA**
PIEP Innovation in Polymers Engineering	**GUIMARÃES**
RAIZ Forest and Paper Research Institute	**AVEIRO**
UNINOVA New Technologies Development Institute	**ALMADA**
WAVEC Offshore Renewables	**LISBOA**

TECHNOLOGICAL AREAS



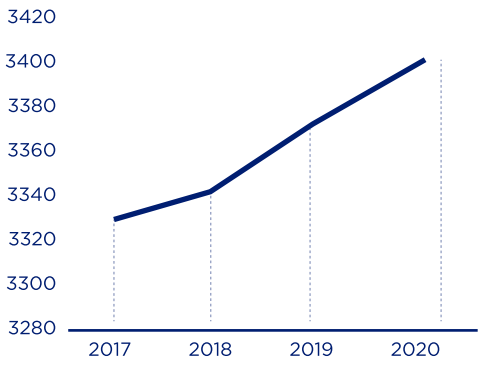
CORE FUNDING FOR NIS 2018-2021

Acronym	Name	Core Funding for 3 years (€)
AEMITEQ	Association for Technological Innovation and Quality	**148 087**
AIBILI	Association for Innovation and Biomedical Research on Light and Image	**824 829**
CATIM	Technological Centre for the Metal working Industry	**2 393 985**
CEiiA	Centre of Engineering and Product Development	**3 000 000**
CENTITVC	Centre for Nanotechnology and Smart Materials	**897 833**
CENTIMFE	Technological Centre for the Moulds, Special Tools and Plastics Industry	**824 313**
CITEVE	Technological Centre for the Portuguese Textile and Clothing Industries	**2 400 000**
CTCOR	Cork Technology Centre	**396 695**
CTCP	Portuguese Footwear Technological Centre	**1 034 587**
CTCV	Ceramic and Glass Technological Centre	**1 445 189**
CTIC	Leather Industry Technological Centre	**539 277**
CVR	Waste Recovery Centre	**386 003**
IBET	Institute of Experimental and Technological Biology	**2 400 000**
INEGI	Institute of Science and Innovation in Mechanical and Industrial Engineering	**2 800 000**
INESC TEC	Institute of Systems and Computer Engineering, Technology and Science	**2 237 784**
INL	International Iberian Nanotechnology Laboratory	**234 326**
INOV - INESC	New Technologies Institute	**1 310 000**
IPN	Pedro Nunes Institute	**1 106 515**
ISQ	Welding and Quality Institute	**2 400 000**
IT	Telecommunications Institute	**594 000**
ITeCons	Institute of Research and Technological Development for Construction, Energy, the Environment and Sustainability	**1 586 990**
PIEP	Innovation in Polymers Engineering	**750 186**
RAIZ	Forest and Paper Research Institute	**2 330 583**
WAVEC	Offshore Renewables	**213 434**
TOTAL		**32 254 609***

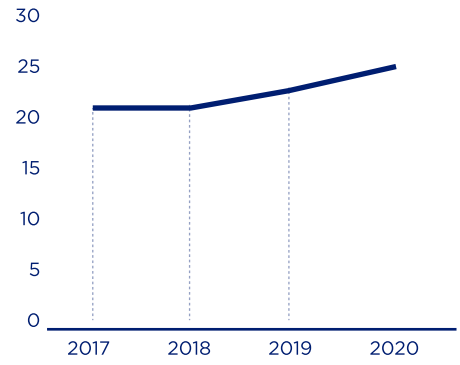
*Funding through FITEC

NIS ACTIVITY
EVOLUTION INDICATORS*

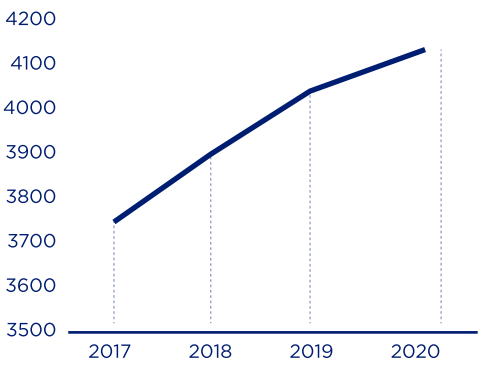
No. of ASSOCIATES



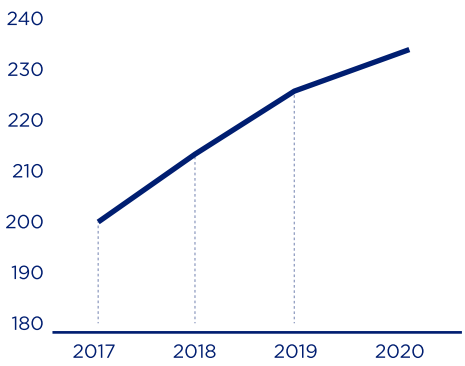
EXPORTS (MILLION €)



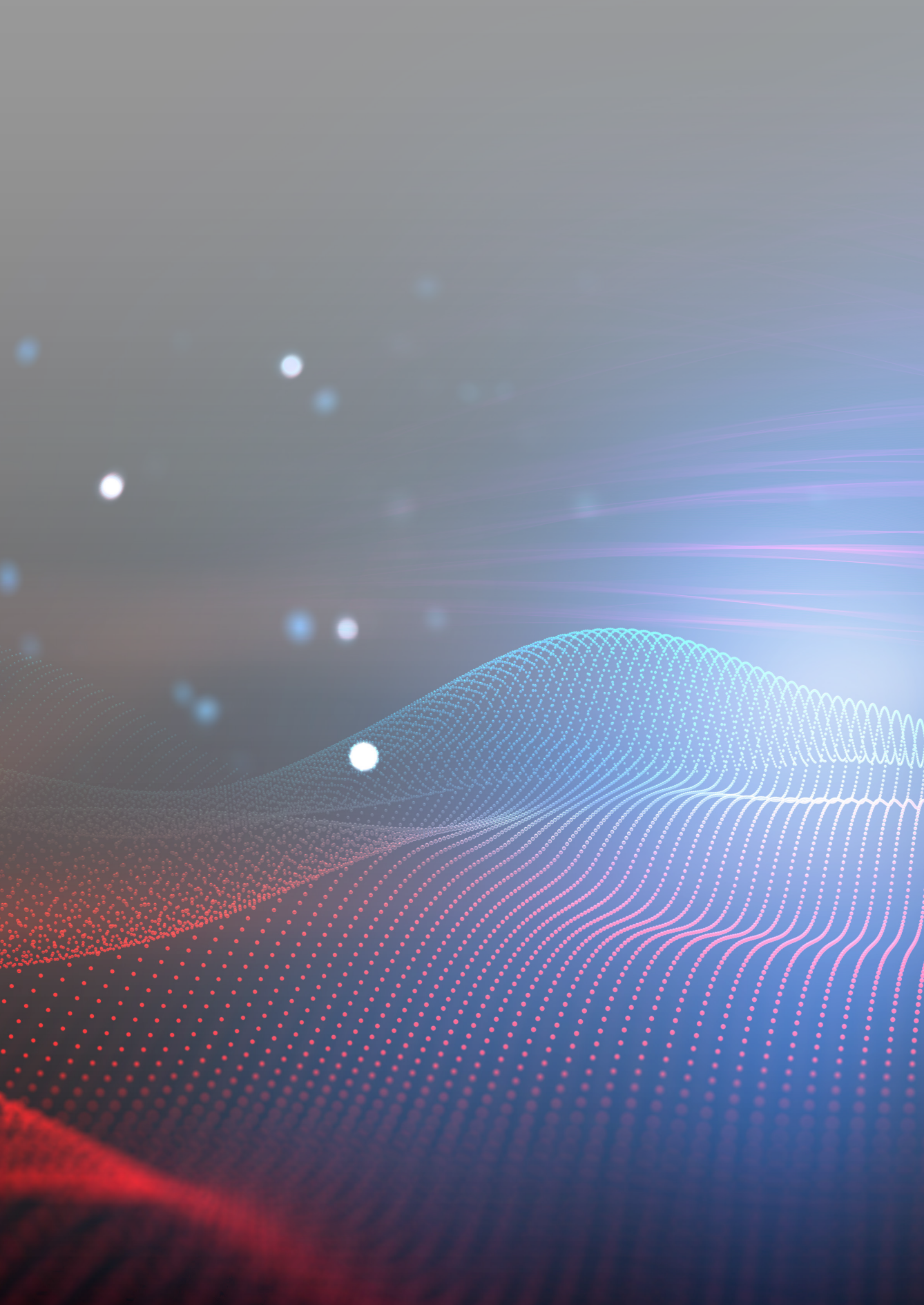
EMPLOYMENT



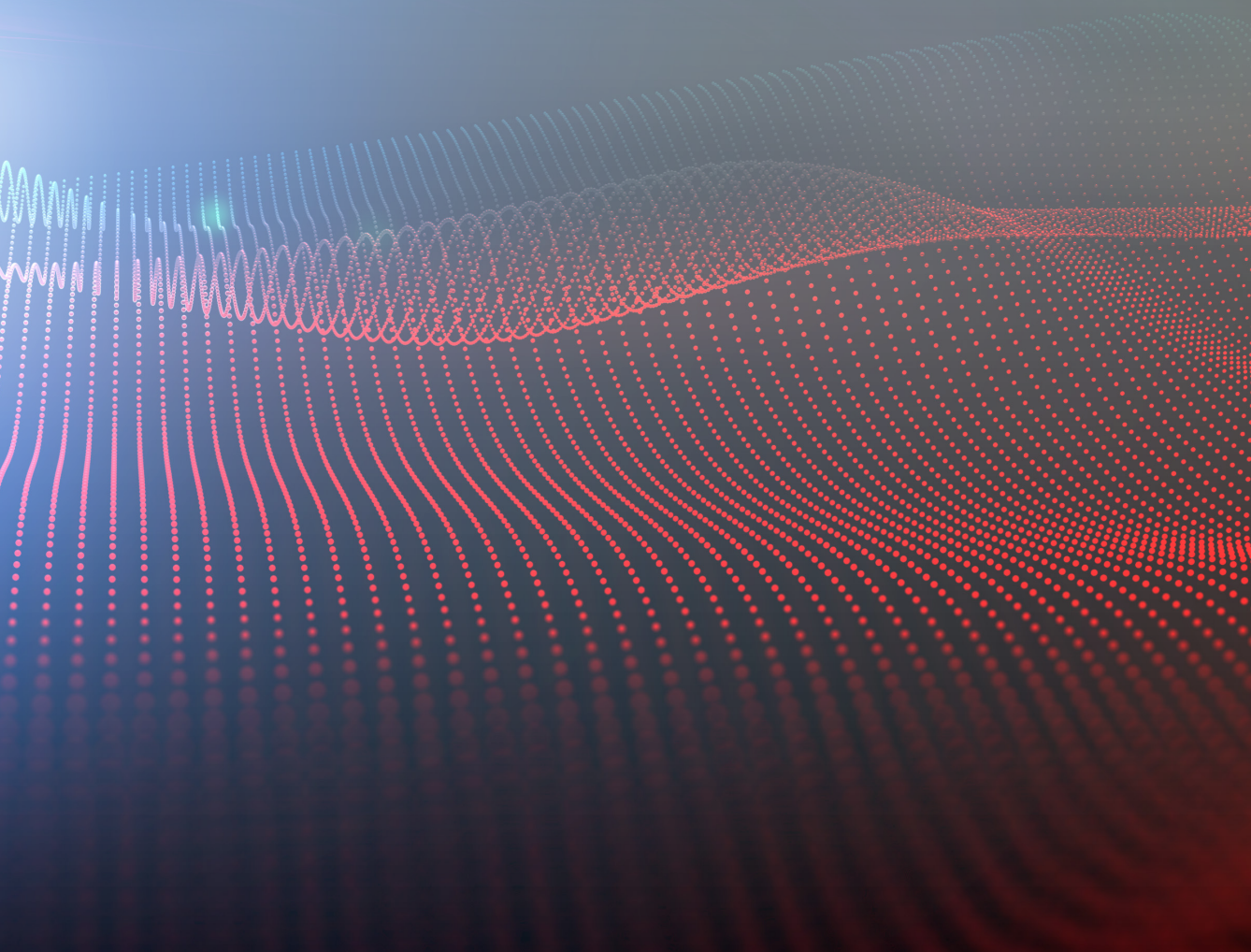
GROSS INVESTMENT (MILLION €)



* Based on applications submitted for core funding



CHARACTERIZATION OF THE INTERFACE CENTRES



ASSOCIATION FOR TECHNOLOGICAL INNOVATION AND QUALITY

Rua Coronel Júlio Veiga Simão, 3025-307 Coimbra
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Website: www.aemiteq.pt
Phone: 239 494 745

TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | HEALTH, CHEMISTRY, BIOTECHNOLOGIES | ENVIRONMENT, QUALITY, SAFETY AND METROLOGY

SERVICES
TESTS | CERTIFICATION | TRAINING | METROLOGY/CALIBRATIONS
TECHNICAL ASSISTANCE | CONSULTANCY

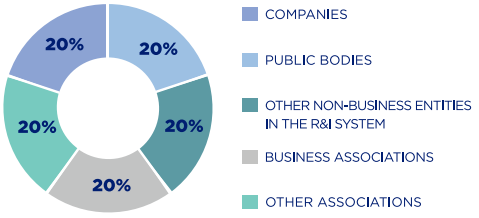
MISSION, OBJECTIVES AND ACTIVITY

AEMITEQ carries out activities in the areas of chemical control of raw materials and products, composition of natural products, water quality control, industrial and urban waste analysis, analytical determinations in biological materials, development of analytical methods and fine chemicals.

Its activity is especially directed towards providing technical and scientific support to industrial companies in different sectors (such as food, water, pharmaceuticals, landfill and waste management, fine chemicals, among others) as well as providing support to municipalities and municipal companies for controlling the quality of drinking, waste and recreational water, and supporting the operation of WTP and WWTP.

ASSOCIATES

AEMITEQ has the following types of associates:



AVAILABLE RESOURCES

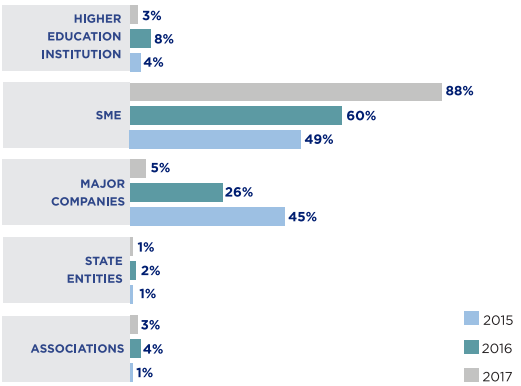
AEMITEQ owns laboratory facilities that allow it to carry out analytical chemistry-based work on: chemical control of raw materials and products; composition of natural products; water quality control; industrial and urban waste analysis; analytical determinations of biological materials; development of analytical methods and fine chemicals.

R&D ACTIVITIES

AEMITEQ has a strong connection to the scientific and academic community and to entities with a high degree of technical expertise, as well as high levels of recognition achieved by its "brand" in carrying out TR&D activities in the areas of quality and environment and specific and in-depth know-how of chemical analysis. This involvement has allowed AEMITEQ to solidly establish itself in the field of environmental control, in particular with public and private entities located in the central region of Portugal.

Given the international technological context and putting into perspective the possibility of boosting the competitiveness of Portuguese companies, the strategy that AEMITEQ assumed was to focus its future activities on three main sectors of the economy: agro-food, the environmental and pharmaceuticals. The objective includes better domestic specialisation and promoting its relationship with the national business fabric and with national and international higher education bodies.

CHARACTERISATION OF DEMAND



ASSOCIATION FOR INNOVATION AND BIOMEDICAL RESEARCH ON LIGHT AND IMAGE

Azinhaga de Santa Comba – Celas, 3000-548 Coimbra
E-mail: aibili@aibili.pt
Website: www.aibili.pt
Phone: 239 480 100

TECHNOLOGICAL AREAS
HEALTH, CHEMISTRY, BIOTECHNOLOGY

SERVICES
TECHNOLOGICAL RESEARCH, DEVELOPMENT AND INNOVATION

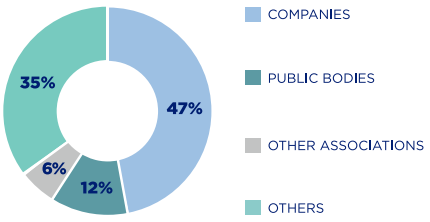
MISSION, OBJECTIVES AND ACTIVITY

AIBILI is a health research institution dedicated to clinical research and the development of new methods for early diagnosis. AIBILI is a Health Interface Centre that links scientific institutions, companies and industry with the objective of bringing innovative products and diagnostic methods to the market.

The main objectives are translational research and the transfer of properly validated knowledge to clinical practice. Its activities include designing studies, clinical protocol development, submission to regulatory authorities, coordination of studies and Test Centres, database development and statistical analysis, pharmacovigilance and publication, as well as the economic appraisal of the entire process of translation and safety monitoring of medicines and medical devices.

ASSOCIATES

AIBILI has 17 associates of the following types:



AVAILABLE RESOURCES

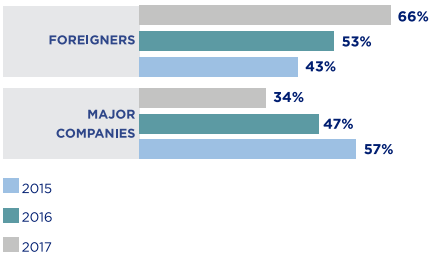
AIBILI's team currently consists of 54 employees, distributed across several functional areas. A AIBILI is the Coordinating Centre of the European Vision Institute Clinical Research Network, EVICR.net, which brings together 102 Test Centres in 15 countries and is the European partner of the Champalimaud Foundation's C-TRACERs network.

R&D ACTIVITIES

One of AIBILI's main technological and innovation objectives is the ambition to remain a centre of reference at a European level for clinical and translational research. Therefore, regarding coordination and logistic support to clinical and translational research, AIBILI is committed to its recognition as C-TRACER - Translational Research Centre in Ophthalmology by the Champalimaud Foundation, as well as to its integration into EVICR.net - European Vision Institute Clinical Research Network, which brings together 102 Centres.

In the area of innovation in the development of imaging biomarkers for the progression of retinal diseases, AIBILI develops new imaging biomarkers and teleophthalmology screening projects, carried out in the context of primary health care, encouraging clinical research and creating conditions for greater access to different patient populations. In addition, it has committed to the development of unique skills in the areas of automatic image analysis and artificial intelligence applied to preventive diagnosis and the development of image biomarkers, allowing companies in the health sector to value the results of this research.

CHARACTERISATION OF DEMAND



TECHNOLOGY AND INNOVATION CAMPUS - BLC3

BLC3
CAMPUS DE TECNOLOGIA E INOVAÇÃO

Rua Nossa Senhora da Conceição, nº 2, 3405-155 Oliveira do Hospital
E-mail: info@blc3.pt
Website: www.blc3.pt
Phone: 238 641 059

TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | ENERGY | ENVIRONMENT, QUALITY, SAFETY, METROLOGY | AGRICULTURAL AND FOOD TECHNOLOGIES

SERVICES
DEVELOPMENT OF NEW PRODUCTS, SYSTEMS AND VALUE CHAINS | R&D AND INNOVATION | CONSULTANCY.

MISSION, OBJECTIVES AND ACTIVITY

BLC3 - Technology and Innovation Campus is a non-profit association, founded in May 2010, with a new model for carrying out research and technological intensification activities of excellence, incubating ideas and companies and supporting the economic fabric in inland and rural areas. It is the first and only entity in Portugal created for the development and industrialisation of 2nd and 3rd generation biorefineries and the bio-economy and "Smart Regions"; with a commitment to the circular economy concept.

ASSOCIATES

The founding partners or associates of BLC3 are entities in the national scientific and technological system, such as the University of Minho, University of Coimbra, ESTG of Oliveira do Hospital and LNEG, I.P.

AVAILABLE RESOURCES

The BLC3 team currently consists of 23 employees.

R&D ACTIVITIES

BLC3's area of activities is multidimensional, depending on the type of project and scope. In strategic areas such as Biorefineries, Bioindustries, Bioproducts, Bioeconomy and the Circular Economy or Smart Regions, BLC3 carries out its industrial biotechnology activities in a national and international dimension. It also engages in local and regional activities for the implementation of policies and development strategies linked to the recovery of endogenous resources and genetic heritage of the territory.

BLC3 has a TR&D Centre aimed at the areas of Bioindustries, Biorefineries and Bioproducts. This Centre allows the development of activities with TRLs between 2-7, and consists of 4 vertical R&D units and three cross-sectional R&D units:

- Vertical R&D Unit:
  - Citizenship;
  - Energy and Territory;
  - Environment and Quality of Life;
  - Agriculture and Food Technologies.

- Cross-sectional R&D Units:
  - Bioeconomy, Circular Economy and Smart Regions;
  - Sustainability and Life Cycle Assessment;
  - Design and Prototyping.

The enhancement of the TR&D centre's activities and technology transfer is supported by the Innovative Designs and Ideas Support Centre, which is one of the links between BLC3 and companies, with strong links to regional players. The Bioeconomy Department also plays an major role in technology transfer. Its mission focuses on linking national and international scientific/technological knowledge and companies, in a collaborative manner in order to maintain the laboratory Accreditations and Recognitions and achieve extensions/new accreditations.

TECHNOLOGICAL CENTRE FOR THE METALWORKING INDUSTRY

Rua dos Plátanos nº 197, 4100-414 Ramalde
E-mail: icatim@catim.pt
Website: www.catim.pt
Phone: 226 159 000

TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | ENVIRONMENT, QUALITY, SAFETY, METROLOGY

SERVICES
TESTING | STANDARDISATION | CERTIFICATION | METROLOGY TRAINING/ CALIBRATION | CONSULTANCY | ENGINEERING | R&D AND TECHNICAL AND TECHNOLOGICAL SUPPORT

MISSION, OBJECTIVES AND ACTIVITY

CATIM is a technological support centre for the metalworking industry. It is a private non-profit public utility institution, which resulted from the association of interests of industrial companies and respective association with public bodies. Its mission is to contribute to the innovation and competitiveness of Portuguese metalworking industries and related or complementary sectors.

ASSOCIATES

CATIM has 690 associates, 97% of whom are companies. The remaining 3% include public entities, business associations and other non-business entities of the R&I system.

AVAILABLE RESOURCES

Currently, CATIM's team consists of 96 employees distributed across several functional areas.

R&D ACTIVITIES

CATIM, in line with the international strategic positioning of companies in the sector, is committed to qualification, innovation and technology aimed at companies. CATIM's strategy focuses on increasing the centre's technological and innovation profile by strengthening:

- Technical and technological training through the hiring of qualified human resources, support for training and development of new skills, both in new technological capacities within activities that have already been developed, as well as in new areas of activity. Strengthening of the laboratory side of R&D+i for performing new tests and trials, due to changes in regulations/legislation and as a result of innovation in products;
- Collaboration with higher education and research institutions;
- Intensification of Technological and Regulatory Monitoring activities, as well as knowledge transfer activities, and consolidating CATIM's participation on European and International Standardisation Committees; acquiring technical information;
- Integration in international networks, technological platforms and collaborative projects.

The boost to the centre's technological and innovation profile increases and accelerates its ability to meet the needs of companies, mainly those that are not covered by commercialised services, and that promote improvements in business productivity and competitiveness. CATIM plans to develop new skills, both in new technological capabilities within activities that have already been carried out, and in new areas of activity, specifically:

- Energy efficiency: participation in training activities and events, monitoring changes in legislation, cross-referencing this information with new trends and concepts and the creation of new skills;
- Circular Economy: support for the transition to a circular economy, encouraging participation in training activities, collaborative projects and events on the subject;
- Digital transformation: development of skills to cover themes associated with I 4.0 (Digitalisation, Augmented Reality; IoT; Simulation; Big data, artificial intelligence), to support companies in the development of processes and organizational models that derive from Economy 4.0, to obtain gains in design, production, distribution and marketing productivity;
- Updating knowledge and skills in order to maintain the Laboratories' Accreditations and Recognitions and achieve extensions/new accreditations.

COMPUTER GRAPHICS CENTRE

Centro de Computação Gráfica

Campus de Azúrem
E-mail: info@ccg.pt
Website: www.ccg.pt
Phone: 239 499 200

TECHNOLOGICAL AREAS
AUTOMATION AND ROBOTICS | ICT AND TELECOMMUNICATIONS | BUILDING TECHNOLOGIES | ENERGY

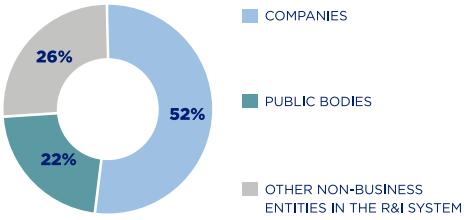
SERVICES
TECHNICAL AND SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

The CCG Association - Computer Graphics Centre, sees itself as an organization that seeks to be continuously recognised as a benchmark for excellence as an interface entity. Focused on applied research, aimed at fully meeting the expectations of its associates, customers and partners, it aims to be able to produce value in demanding and competitive markets, in the field of information technology, communication and electronics (ITCE). Its mission includes the development of new products/services in close cooperation with customers in the field of ITCE.

ASSOCIATES

The CCG has 23 associates of the following types:



*Date for the year 2017

AVAILABLE RESOURCES

The CCG team currently consists of 56 employees distributed over various functional areas.

R&D ACTIVITIES

The CCG aims to be an international benchmark technological interface centre in the ITCE sector, using the latest technical-scientific approaches from academia to deliver unique integrated applications to industry with the ability to compete at a global level. It presents the following technological and innovation objectives:

- IT Products and Services Architectures;
- Database and Business Referencing Systems;
- Project and Process Life Cycle Management;
- Artificial Vision - Intelligent scenarios analysis for the detection and recognition of people and objects through technical-scientific approaches such as Pattern Recognition, Machine Learning, Image Processing and Machine (Deep) Learning;
- 3D Modelling - Three-dimensional models to be used by the production and multimedia (AR/VR) industries and medicine;
- Virtual and Augmented Reality - Solutions for the textile/fashion sector (virtual fitting rooms), recreation and tours (VR/AR) of heritage sites and properties; in the health sector for the automated training of surgeons or treatment of sight disorders, as well as in the manufacturing industry. Innovative solutions for Industrial Maintenance, education and training, remote assistance and digital manuals;
- Natural Interfaces - Systems that recognize gestures and actions, allowing innovation in H-M interaction, with uses ranging from the retail/fashion sector to healthcare and industry;
- Interactive Applications - Multi-touch interactive technologies;
- Virtual actors - Modelling of realistic avatars;
- Usability of solutions, products or services;
- Sound capture, analysis and virtualisation;
- Motion capture and analysis;
- Urban and Pervasive Computing;

In response to the challenges of Industry 4.0, SmartCites and Urban Mobility, Energy Efficiency and the Circular Economy, skills are being developed for the development of devices (hardware) for signal control and monitoring, as well as for applied research in electronics, with a focus on research and technological development of embedded computing systems, digital and signal processing, industrial communications and low level programming (microprocessors/ microcontrollers/ FPGAs).

CENTRE OF ENGINEERING AND PRODUCT DEVELOPMENT

CEiiA

Avenida Dom Afonso Henriques nº 1825, 4450-017 Matosinhos
E-mail: ceiia@ceiia.com
Website: www.ceiia.com
Phone: 220 164 800

TECHNOLOGICAL AREAS
ICT AND TELECOMMUNICATIONS | MATERIAL TECHNOLOGIES | MECHANICAL ENGINEERING | INDUSTRIAL ENGINEERING

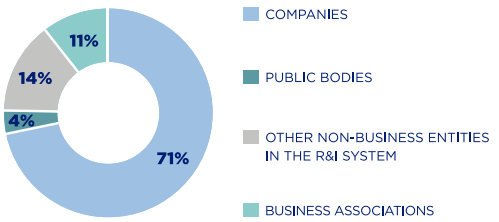
SERVICES
CERTIFICATION | TECHNICAL ASSISTANCE | ENGINEERING | R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

CEiiA acts as a lever for the development of Mobility Industries (automotive and mobility, aeronautics, sea and space), from the creation of opportunities and development of skills, to the development and integration of technologies in new products and services. For this purpose it coordinates design and structures analysis skills with information technology, communication and electronics skills.

ASSOCIATES

CEiiA has 28 associates of the following types:



AVAILABLE RESOURCES

The CEiiA team currently consists of 278 employees distributed across a range of functional areas. In terms of infrastructure, it has production and prototyping facilities that allow the rapid development of prototypes, mock-ups and functional prototypes using different technologies and materials.

Large scale static, fatigue and material tests of structural parts and components are performed at the Test Centre. This includes a metrological laboratory to provide support for testing activities. A 1,800 m2 adjustable test hangar, 900 m2 of which has a reinforced floor with slits and two 10-t cranes, allows equipment to be moved, and parts tested along an 80 m track.

R&D ACTIVITIES

This centre identifies the following technological and innovation objectives:

- Strengthen the competitiveness of Portuguese industry in the global context, specifically in the automotive and aeronautical sectors. CEiiA's essential objective is to contribute to national technological, industrial and economic development, by promoting competitiveness, capacity for innovation and the internationalisation of the business fabric;
- To attract entire projects to Portugal in the automotive and aeronautical sectors, via cooperation with global manufacturers and suppliers;
- Affirm Sustainability (Sustainability by Design) as a goal at both the levels of activities and designs, and organisation and management;
- Develop a new generation of its own products and services in the areas of mobility and cities, and sea and space;
- Develop innovative business models based on emerging technologies;
- Test and experiment with new products and services in Portugal, with the capacity for replication on a global scale;
- Mobilize industry, universities, knowledge centres and other entities to participate in R&D and innovation projects in critical areas of technology;
- Promote technologies, products and services by outsourcing activities and bringing dynamism to spin-offs;
- Strengthen participation in international knowledge networks, which enhance and boost R&D and innovation activities supported by European programmes.

CENTRE FOR NANOTECHNOLOGY AND SMART MATERIALS

Centre for Nanotechnology and Smart Materials

Quinta da Maia – Rua Fernando Mesquita 2785, 4760-034 V. N. de Famalicão
E-mail: centi@centi.pt
Webesite: www.centi.pt
Phone: 252 104 152

TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | MATERIAL TECHNOLOGIES | NANOTECHNOLOGY | HEALTH, CHEMISTRY, BIOTECHNOLOGY

SERVICES
TESTING | TECHNICAL ASSISTANCE | PRODUCT ENGINEERING DESIGN | R&D AND INNOVATION | TRAINING

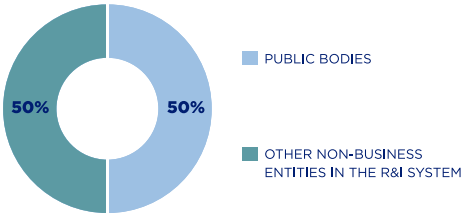
MISSION, OBJECTIVES AND ACTIVITY

CeNTI is a private, non-profit TR&D institute that carries out applied R&D activities aimed at the industrial assimilation of disruptive technologies, product engineering and technology transfer to companies using a B2B approach.

CeNTI's mission is to develop advanced materials for innovative products, starting from different TRL levels, specifically Nanostructured Materials, Functional Materials, Smart Systems, Design and Engineering, targeting a wide range of industrial sectors, with a particular focus on the automotive/aeronautical, architecture/construction and sports/protection/health/wellness sectors.

ASSOCIATES

CeNTI has 6 associates of the following types:



AVAILABLE RESOURCES

CeNTI's team currently consists of 66 employees distributed across several functional areas.

R&D ACTIVITIES

CeNTI's main objective is to strengthen and consolidate its position as a benchmark Centre for Research and Technological Development in Europe in the areas of Nanotechnology and Advanced Materials for industrial applications, reinforcing its position as an interface of excellence for Portuguese industries. CeNTI's strategy to consolidate and strengthen R&D and technology transfer capacities can be summarised as 5 main objectives:

- Strengthening the areas of R&D and pre-competitive R&D, while promoting consolidated pilot lines that lower the risk of technology transfer projects, and the investigation of new products and industrial processes;
- Consolidation of new R&D lines and technology transfer;
- Strengthening of internal technical and scientific skills through the hiring of highly qualified human resources;
- Building new facilities to accommodate new pilot plants and pilot lines, and to house existing laboratories;
- Strengthening the international network by giving an impetus to technological networking actions, B2B business development, scientific disclosure of excellence and presentation of technology at international fairs.

CeNTI's objectives are related to strengthening, supporting and leveraging pre-competitive R&D activities in areas related to nanomaterials, advanced materials and smart systems to subsequently transfer these technologies to industrial applications, focusing on the development and introduction of new concepts circular economy, energy efficiency and process/product digitalisation for national companies, highlighting CeNTI's position as a national and international benchmark in nanotechnology and smart materials.

TECHNOLOGICAL CENTRE FOR THE MOULDS, SPECIAL TOOLS AND PLASTICS INDUSTRY

Centimfe
Centro Tecnológico da Indústria de Moldes, Ferramentas Especiais e Plásticos

Zona Industrial, Rua de Espanha, Lote 8, 2431-904 Marinha Grande
E-mail: inovacao@centimfe.pt
Website: www.centimfe.com
Phone: 244 545 600

TECHNOLOGICAL AREAS
AUTOMATION AND ROBOTICS | ICT AND TELECOMMUNICATIONS | MATERIAL TECHNOLOGIES | MECHANICAL ENGINEERING

SERVICES
METROLOGY/CALIBRATIONS | TECHNICAL AND SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | PRODUCT DESIGN | R&D AND INNOVATION | TRAINING

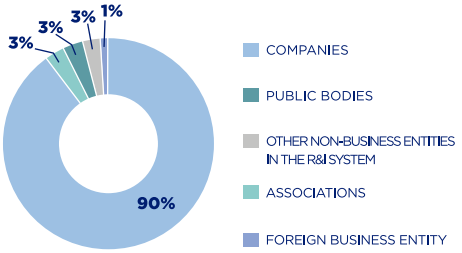
MISSION, OBJECTIVES AND ACTIVITY

CENTIMFE, created in 1991, is a non-profit Public Utility institution, which carries out activities ranging from technical assistance, R&D and technology transfer to specialised training.

This centre's mission is to position itself as an interface that supports the development of the Moulds, Special Tools and Plastics Industries by interacting with different functions of companies in these sectors, and to act as a link for transferring technology between the Scientific and Technological System, of which it is an integral part, and companies.

ASSOCIATES

CENTIMFE has 235 associates of the following types:



AVAILABLE RESOURCES

Currently, CENTIMFE's team consists of 40 employees distributed across several functional areas.

R&D ACTIVITIES

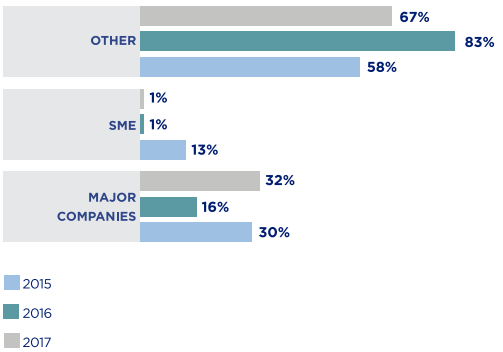
CENTIMFE has a research, development and innovation programme adapted to suit the vision and strategy of companies. This strengthens its competitiveness through the launch of new products and services and the approach to new markets.

Within the scope of its activity, this centre can provide RDI management services, industrial property support, technology monitoring, networks and partnerships, TR&D, technical and scientific assistance, technology and knowledge transfer, portfolios of co-funded projects.

The following objectives have been defined with the aim of strengthen international competitiveness, both in terms of technology and the unique nature of its products:

- Reduce lead time and the number of unscheduled stops through smart planning;
- Extension of the upstream value chain (product development);
- Increase the use of KET;
- Increase the level of process automation in the Cluster's industries;
- Increase the level of energy efficiency of the Cluster;
- Increase the laboratory capacities available to the Cluster.

CHARACTERISATION OF DEMAND



TECHNOLOGICAL CENTRE FOR THE PORTUGUESE TEXTILE AND CLOTHING INDUSTRIES

citeve
TECNOLOGIA TÊXTIL

Rua Fernando Mesquita, 2785, 4760-034 Vila Nova de Famalicão
E-mail: citeve@citeve.pt
Website: www.citeve.pt
Phone: 252 300 300

TECHNOLOGICAL AREAS
PRODUCTION TECHNOLOGIES | MATERIAL TECHNOLOGIES

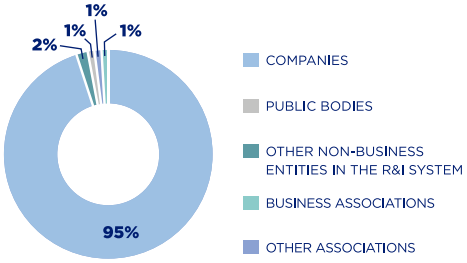
SERVICES
TESTS | CERTIFICATION | METROLOGY/CALIBRATIONS | CONSULTANCY | PRODUCT DESIGN | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

CITEVE is the result of a partnership between industrial companies and associations in the sector and public organisations. It is a benchmark institution in Europe and Portugal for the promotion of Technological Innovation and Development in the Textile and Clothing Industries. Its mission is to support the development of technical and technological capacities in the textile and clothing industries, by encouraging and publicising innovation, promoting improvements in quality and instrumental support for the definition of industrial policies for the sector.

ASSOCIATES

CITEVE has 736 associates of the following types:



AVAILABLE RESOURCES

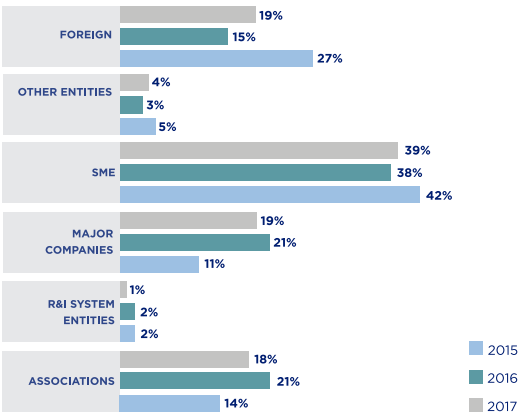
Currently, CITEVE's team consists of 123 employees distributed across several functional areas.

R&D ACTIVITIES

CITEVE's activity focuses on three basic principles:
- Companies that are competitive and, to this end, strongly integrated into scientific and technological communities at an international level;
- Inclusive: prepared to serve all companies regardless of size and sub-sector;
- Eclectic: from materials science and technology to distribution.

In addition to its day-to-day activities providing support to the sector and always maintaining a high service standard to support the technological needs of textile and clothing companies (the base for the provision of services), strategic plans point at a set of new pre-competitive commitments in terms of CITEVE's technological capacity, specifically:
- New business models aligned with digital policies (industry 4.0), through the construction of Learning Factories to demonstrate the principles of digital manufacturing and digital economy in the sector, with a view to preparing companies to provide an integral and specialised range of products quickly, competitively and in advance;
- Excellence in the development of complex textile structures for use in high tech sectors, specifically mobility (automotive, aeronautics, railways), construction, architecture and smart spaces;
- Development of new processes and technologies to enhance the functionality and enrichment of textile-based materials for use in the health and well-being, sport and protection sectors, as well as for high-tech applications.

CHARACTERISATION OF DEMAND



NATIONAL FRUIT AND VEGETABLE OPERATIONAL AND TECHNOLOGICAL CENTRE

COTHN
CENTRO OPERATIVO E TECNOLÓGICO HORTOFRUTÍCOLA NACIONAL
CENTRO DE COMPETÊNCIAS

Estrada de Leiria s/n, 2460-059 Alcobaça
E-mail: geral@cothn.pt
Website: www.cothn.pt
Phone: 262 507 657

TECHNOLOGICAL AREAS
AGRICULTURAL AND FOOD TECHNOLOGIES

SERVICES
CERTIFICATION | METROLOGY AND CALIBRATION | CONSULTANCY | R&D AND INNOVATION | TECHNOLOGY BROKERAGE INITIATIVES

MISSION, OBJECTIVES AND ACTIVITY

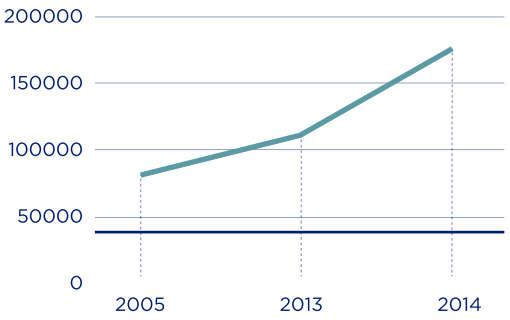
The creation of COTHN was an old aspiration of the Portuguese fruit and vegetable sector, due to the difficulty of establishing and improving contacts with NSTS entities. COTHN was therefore created as a response to this gap, as it has been possible to bring together entities in the NSTS related to agricultural teaching and research, with producer organisations and associations, as well as with other entities (chambers and production factor companies) that are essential to increasing the level of knowledge and, consequently, the competitiveness of the horticultural sector. Since the creation of COTHN it has been possible to give an impetus to applied research based on the real needs of fruit and vegetable production, as well as to develop specialised services to meet the needs of companies in this sector.

The corporate purpose of COTHN is to promote the development of the national fruit and vegetable sector, particularly through applied research, improvement of knowledge levels in the sector and increasing cooperation and partnerships in technology and organisation areas. It aims to promote closer links between business and research, as well as between public and private entities.

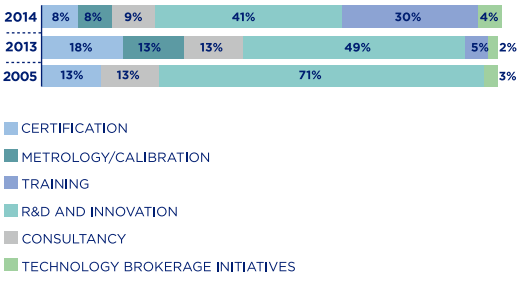
R&D ACTIVITIES

COTHN pays particular attention to trends in terms of business needs and solutions, both relating to increasing efficiency (cost reduction, increase in energy efficiency and waste reduction), and increasing income by making their production unique by placing an emphasis on quality. It has therefore developed its services with this concern and has diversified its customers. At the time of writing it had made inroads in sectors such as vineyards and agro-industry.

It invested the following amounts in R&D between 2005 and 2014:



PROVISION OF SERVICES



IRRIGATION TECHNOLOGY AND OPERATIONAL CENTRE

Quinta da Saúde - Apartado 354, 7801-904 Beja
E-mail: info@cotr.pt
Website: www.cotr.pt
Phone: 284 321 584

TECHNOLOGICAL AREAS
AGRICULTURAL AND FOOD TECHNOLOGIES

SERVICES
CONSULTANCY | R&D AND INNOVATION

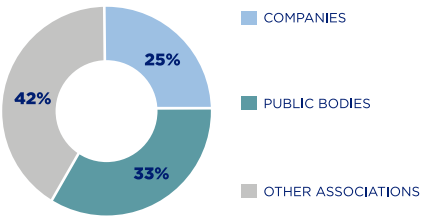
MISSION, OBJECTIVES AND ACTIVITY

COTR is a non-profit association created in 1999 with the aim of supporting the conversion of dry farming to irrigation, and to support the improvement of the area that has already been equipped in the Alentejo region. As such, the main activities of COTR and related knowledge are irrigation water management and irrigation technology. This knowledge and technology is transferred to farmers, who are the main users of the water resource.

COTR is involved in the following main activities: experimenting with and demonstrating irrigated crops; analysing the water needs of crops and irrigation scheduling; management of a network of agrometeorological stations; physical soil analysis; irrigation training; providing information to those who use irrigation through an irrigation guide consisting of over 30 manuals; providing technical videos and other documentation; technical assistance to farmers; specifically through audits of irrigation and pumping systems; irrigation equipment testing; and irrigation and fertigation consultancy services.

ASSOCIATES

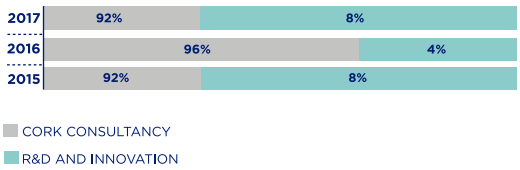
COTR has 36 associates of the following types:



R&D ACTIVITIES

COTR's activities consist of:
- Strengthening the capacity of existing R&D infrastructure in the region to support irrigation and the efficient use of water and energy;
- Conducting scientific research in order to exploit the full potential of irrigation agriculture and the agro-industry resulting from the Alqueva Multi-purpose Venture (EFMA);
- Increasing the competitiveness of agricultural companies, in particular those that form part of productive irrigation systems;
- Supporting companies in the region with their irrigation technology R&D, certification, quality and safety needs;
- Promoting environmental conservation, enhancement and monitoring, as well as the sustainable use of water, soil, energy and fertiliser resources.

PROVISION OF SERVICES



CORK TECHNOLOGICAL CENTRE

Rua Amélia Camossa Ap. 96, 4536-904 Santa Maria de Lamas
E-mail: geral@ctcor.com
Websie: www.ctcor.com
Phone: 227 645 797

TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | HEALTH, CHEMISTRY, BIOTECHNOLOGIES ENVIRONMENT, QUALITY, SAFETY, METROLOGY | AGRICULTURAL AND FOOD TECHNOLOGIES

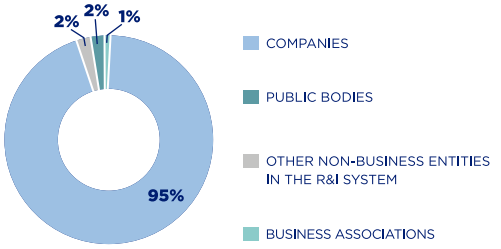
SERVICES
TESTS | METROLOGY/CALIBRATIONS | TECHNICAL ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

CTCOR is a technology centre that aims, among other activities: to support companies in solving technical, technological, environmental and other problems; to carry out industry diagnoses and identify priority actions for development; to provide services to improve quality, functionality and design; to test manufacturing processes as part of production technologies to be implemented in cork businesses and upstream/downstream businesses.

ASSOCIATES

CTCOR has 209 associates of the following types:



AVAILABLE RESOURCES

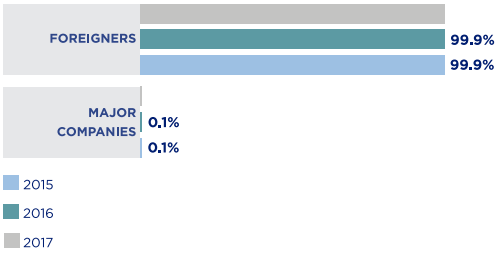
Currently, CTCOR's team consists of 15 employees distributed across several functional areas.

R&D ACTIVITIES

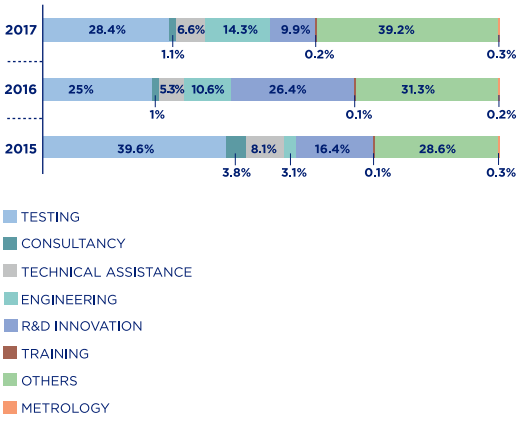
For the execution of R&D projects, COTR intends for forge deeper relationships with other science and technology institutions (universities and interface centres).
COTR envisages an evolution in the development of new technological areas among its customers, specifically energy efficiency, the circular economy and digitalisation of the economy.

CTCOR works with the entire cork industry, particularly suppliers and customers, so it is expected to provide more and more services in new areas of expertise in different industries.

CHARACTERISATION OF DEMAND



PROVISION OF SERVICES



PORTUGUESE FOOTWEAR TECHNOLOGICAL CENTRE

centro tecnológico do calçado de portugal

Rua dos Fundões, Devesa-Velha, 3700-121 São João da Madeira
E-mail: Luisa.correia@ctcp.pt
Website: www.ctcp.pt
Phone: 256 830 951

TECHNOLOGICAL AREAS
PRODUCTION TECHNOLOGIES | MATERIAL TECHNOLOGIES

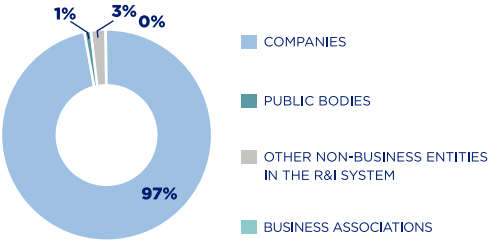
SERVICES
TESTS | CERTIFICATION | TECHNICAL AND SCIENTIFIC ASSISTANCE | R&D AND INNOVATION | TRAINING | STUDIES AND KNOWLEDGE TRANSFER

MISSION, OBJECTIVES AND ACTIVITY

CTCP is a research and innovation centre for the footwear cluster (footwear, leather, leather goods, components, equipment and software). It provides technical support and ensure that it remains at the forefront of innovation, modernisation, competitiveness and internationalisation.
The CTCP is recognised for its capacity for innovation in terms of processes, products and services in strategic and fundamental areas, specifically: the implementation of TRD&I projects; technology transfer; testing for quality assessment, product conformity and certification; company certification; technical and industrial assistance; training and qualification; carrying out sector, investment, environmental and safety studies.

ASSOCIATES

CTCP has 520 associates of the following types:



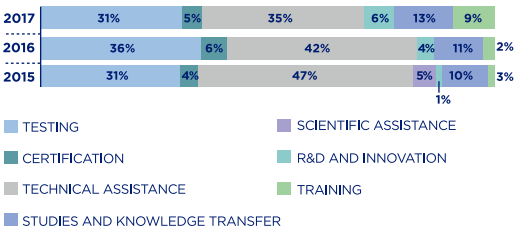
AVAILABLE RESOURCES

The CTCP team currently consists of 46 employees distributed across a range of functional areas.

R&D ACTIVITIES

Innovation, knowledge transfer and the technological densification of unique new materials and components; footwear products and leather goods to meet the needs of consumers and markets; advanced, digital and efficient capital equipment and processes (resources and energy). This is all aimed at boosting the flexibility and productivity of businesses, the digital and circular economy, sustainable and responsible development, and innovative business models of the future (e.g. digital business models and the circular green economy).
From 2015 to 2017, CTCP carried out the following TR&D projects in co-promotion, co-funded by Portugal 2020: FASCOM (completed), BUILD, ExtraLightSafeShoe, SmartCoverPool &Deck and the FAMEST mobiliser, and the European innovation projects BeinCPPS (Horizon 2020) and CO2Shoe (Life completed). The objective for the 2018 to 2020/21 period is to properly carry out the ongoing projects, specifically the mobiliser involving 33 co-promoters; to execute the current project and to launch 3 new Portuguese projects and 1 European project coordinated by CTCP. Investment and partnerships with Universities, Institutes, Technology Centres, and Portuguese and international companies are envisaged, aimed at the technological densification of products and services and the effective transfer and enhancement of knowledge of innovations with added value that can be exported.

PROVISION SERVICES



CERAMIC AND GLASS TECHNOLOGICAL CENTRE

CTCV

Rua Coronel Veiga Simão, 3025-307 Coimbra
E-mail: inovacao@ctcv.pt
Website: www.ctcv.pt
Phone: 239 499 200

TECHNOLOGICAL AREAS
CONSTRUCTION TECHNOLOGIES | MATERIAL TECHNOLOGIES | ENVIRONMENT, QUALITY, SAFETY, METROLOGY | ENERGY

SERVICES
TESTING | STANDARDISATION | CONSULTANCY | R&D AND INNOVATION | TRAINING

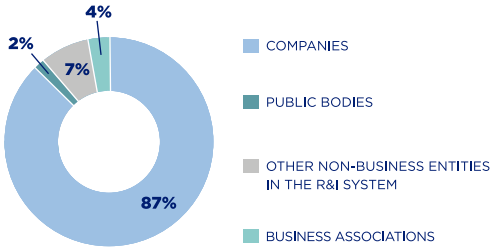
MISSION, OBJECTIVES AND ACTIVITY

The CTCV - Technological Centre for Ceramic and Class, is a non-profit institution of public utility, created to provide technical support and technological promotion for Portuguese industries in the construction and residential sectors, to promote the development and quality of products and the respective industrial processes.

CTCV's mission is focused on the development of suitable knowledge for the modernisation of the client industry, giving preference to anticipating its needs and providing services that allow it to adapt to the demands of the market.

ASSOCIATES

CTCV has 111 associates of the following types:



AVAILABLE RESOURCES

The CTCV team currently consists of 53 employees distributed across a range of functional areas.

CTCV has 4 accredited laboratories equipped with the resources to perform environmental monitoring, tests of products and energy systems, and the analysis of materials and occupational health and safety.

R&D ACTIVITIES

CTCV's know-how is largely acquired through agreements with external entities, specifically universities (such as the University of Aveiro, Coimbra and Minho), and through participation in R&D projects involving around 100 Portuguese and international partners.

CTCV identifies R&D activities as one of the cornerstones of its success and a determining factor for the development of its skills. It currently has 30 strategic partnerships with business associations, clusters, companies and non-business entities in the R&I system, of which 25 are at a Portuguese level and 5 at an international level.

Across the board, the emerging priority areas for CTCV's commitment are: advanced materials; multifunctional materials and products; nanomaterials and nanotechnologies; systems and products conducive to reducing energy content, ecological footprints and increased residential comfort; technological innovation in industrial processes, including digitalisation and industry 4.0 (i4.0).

These activities fall within the following six areas of intervention:

- Promotion of the Circular Economy;
- Promotion of Industry Digitalisation (Industry 4.0)
- Energy efficiency.
- Demonstration of technological development in advanced component forming processes (metal and ceramics) and additive manufacturing in ceramics (modelling, manufacturing);
- Demonstration of technological development in Multifunctional Products for residential use;
- Promotion of responsible innovation (in safety) in the materials and nanotechnology industries and the production of safe materials for indoor residential use (Volatile Organic Compounds and Odours - VOCs).

LEATHER INDUSTRY TECHNOLOGICAL CENTRE

CTIC Centro Tecnológico das Indústrias do Couro

S. Pedro – Apartado 158, 2384-909 Alcanena
E-mail: alcinomartinho@ctic.pt
Website: www.ctic.pt
Phone: 249 889 190

TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | ENERGY | ENVIRONMENT, QUALITY, SAFETY, METROLOGY

SERVICES
TESTS | METROLOGY/CALIBRATIONS | TECHNICAL ASSISTANCE | CONSULTANCY | R&D AND INNOVATION | TRAINING

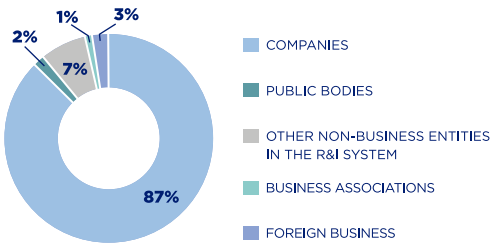
MISSION, OBJECTIVES AND ACTIVITY

CTIC was founded in 1992 and plays a major role in supporting the increasing levels of innovation and competitiveness seen in the sector. It contributes to the level of internationalisation of the sector by carrying out technological innovation and development activities and promoting the transfer of this work to companies.

This dynamic is based on technology monitoring activities, the selection of R&D projects of greatest interest to the sector, preliminary laboratory studies to assess the real potential of the selected solutions and participation in scientific and technological forums and networks. Within the SSB - Sectoral Standardisation Body for Tanning and Leather Products, the CTIC coordinates and gives an impetus to the Technical Committee that brings together representatives of the tanning industry and upstream and downstream sectors, with the scientific community and public entities, by participating in the respective international forums.

ASSOCIATES

CTIC has 111 associates of the following types:



AVAILABLE RESOURCES

The CTIC team currently consists of 24 employees distributed across a range of functional areas.

The facilities have space for laboratories, a pilot plant, training rooms, auditorium and library.

R&D ACTIVITIES

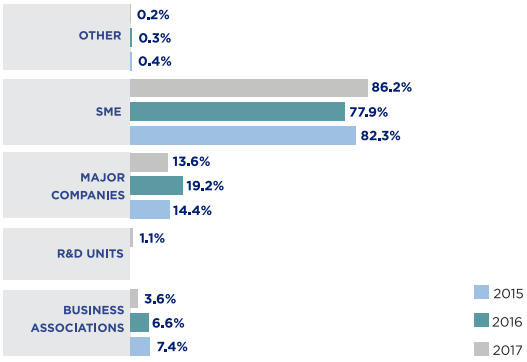
Despite the evolution that has been seen in the tanning sector, regarding the upgrade in market terms, with the sharp increase in supply to the automotive sector and in the export share, CTIC focuses on the following areas in terms of priorities:

- Aesthetic development of the product;
- R&D to increase sustainability and chemical harmlessness, integrating technical and functional properties- Efficient management of a tannery: robotics, digitalisation and automation;
- Improving the public image of the tanning industry;
- Specialised and up-to-date training due to the evolution of the product and market;

CTIC has the following strategic courses of action:

- Technological research and development, with particular emphasis on product development;
- Sustainability, circular economy and energy efficiency. Despite technological developments in the tanning industry in recent decades, it is still known for causing considerable levels of pollution;
- Automation and digitalisation of the industry.

CHARACTERISATION OF DEMAND



WASTE RECOVERY CENTRE

Campus de Azurém da Universidade do Minho, 4800-058 Azurém
E-mail: geral@cvresiduos.pt
Website: www.cvresiduos.pt
Phone: 253 510 020

TECHNOLOGICAL AREAS
ENVIRONMENT, QUALITY, SAFETY, METROLOGY

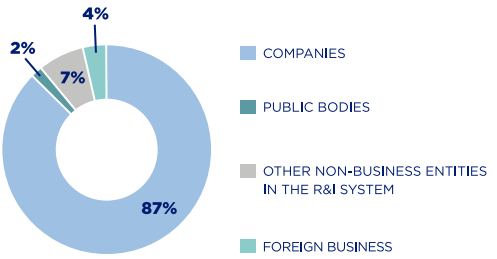
SERVICES
TESTS | SCIENTIFIC ASSISTANCE | CONSULTANCY | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

CVR is an interface centre that allows knowledge to interact with the market through applied research and technological development in the areas of incorporation of waste in civil construction, metal recovery from waste, biological treatment processes, energy recovery processes from waste, recovery of materials from animal by-products, bio-fuel production and life cycle assessment.

ASSOCIATES

CTCV has 111 associates of the following types:



R&D ACTIVITIES

CVR's know-how is largely acquired through agreements with external entities, specifically with educational institutions and through participation in R&D projects with Portuguese and international partners. The scope of CVR's activities in the waste recovery area is aimed at the research, scientific analysis and application of solutions for the recovery of several types of organic and inorganic waste. Since its foundation, it has contributed to the circular nature of the economy related, whenever possible, to industrial symbiosis.

At the same time, CVR provides technical and scientific support to R&D projects, as it has the know-how to develop solutions sustainable (technical, economic and environmental) in waste treatment. In the area of R&D projects, it has entered into strategic partnerships with business associations, businesses and non-business entities in the R&I system, both at a Portuguese and international level. As regards the innovation area, CVR defines the following objectives:

- Transfer of circular models developed circular models and validated for the market through the creation and scale-up of prototypes and pilot facilities as a result of the consolidation of thermochemical and environmental technologies;
- Ensure the conformity of eco-materials developed with the CE marking, and the drafting of product environmental declarations;
- Register utility models and/or patents related to the developed circular models (waste recovery prototypes, systems, methodologies and processes);
- Creation and promotion of the "CVR" and "WASTES" brands;
- Creation of spin-off to work on the implementation of circular models;

The Action Plan for the three year period 2018-2021 involves the following areas of the EU Action Plan for the circular economy: (1) biomass and biologically based products; (2) plastics; (3) construction materials and; (4) essential raw materials. The Action Plan consists of the following 4 main cornerstones:

i) The implementation of several TR&D projects in the area of circular economy related to the recovery of energy and waste material;

ii) Providing scientific assistance to SMEs, with a focus on knowledge transfer;

iii) Environmental promotion and awareness through the organisation of events, and

iv) The establishment of industrial and institutional partnerships with companies, entities of the scientific system and Portuguese and international entities.

INSTITUTE OF EXPERIMENTAL AND TECHNOLOGICAL BIOLOGY

iBET
Instituto de Biologia Experimental e Tecnológica

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TECHNOLOGICAL AREAS
HEALTH, CHEMISTRY, BIOTECHNOLOGIES | AGRICULTURAL AND FOOD TECHNOLOGIES

SERVICES
R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

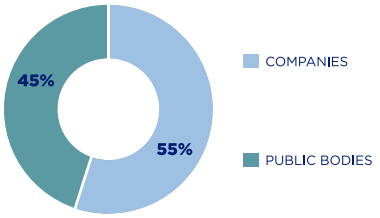
iBET was founded in 1989 as a Research and Development (R&D) institution to build bridges between academia and industry.

It is currently one of Portugal's largest private non-profit institutions, dedicated to biotechnology research, an area in which it was a pioneer.

Its mission is to create value for its partners by leveraging scientific and technological knowledge in Biology and Chemistry.

ASSOCIATES

iBET has 20 associates of the following types:



AVAILABLE RESOURCES

The iBET team currently consists of 192 employees distributed across a range of functional areas.

R&D ACTIVITIES

IBET's priority objective will be to pursue its mission as part of the European Research Infrastructure in Biotechnology, with four business vectors aligning to meet this objective. One of them is the existence of satellite laboratories with pharmaceutical companies.

A second vector will take the form of the Development of Bio-processes and Analytical Characterisation Support in iBET - Production of Biopharmaceuticals for Clinical Trial in GenIBET. The third vector will encompass multi-disciplinary and translational activities in the areas of oncology and chronic diseases. The fourth vector will encompass activities carried out with Portuguese business partners in the pharmaceutical and agro-industry areas.

iBET intends to address the following points, taking into account these strategic objectives:

- Meeting the needs of businesses, not covered by commercialised services that are available on the market;
- Stimulate partnerships with teachers and researchers at higher education institutions, that will guarantee the transfer of knowledge and its economic valorisation;
- Internationalisation: the truth is that Portuguese SMEs have limited access to disruptive international projects; this difficulty essentially stems from a lack of international networking activity.

This limitation can be progressively eliminated by setting up partnerships with iBET, which maintains an extensive international collaboration network;

- Promote business innovation in the area of the circular economy;
- Support the implementation of measures in the energy recovery sector through the analysis and optimisation of energy flows
- Supporting the transition of businesses to Economy 4.0, particularly through relevant enabling technologies such as Biotechnology, proposals for the development of cleaner and more sustainable alternatives for the agro-food industry and the development of advanced materials.

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TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | ENVIRONMENT, QUALITY, SAFETY, METROLOGY

SERVICES
STANDARDISATION | TRAINING | QUALITY AND ENVIRONMENTAL MANAGEMENT | CONSULTANCY | CERTIFICATION | INSPECTION | LABORATORY TESTS AND METROLOGY

MISSION, OBJECTIVES AND ACTIVITY

Founded in 1981, IEP is a company with solid roots, recognized on the market as a technological infrastructure guided by innovation, competence and quality. It provides the market with integrated solutions in the areas of inspection, auditing, testing, calibration, oil and gas, the environment, transport, industry, health and services. IEP's mission is to provide unique solutions with a high technological value, allowing us to leverage the development of our customers by contributing to an increase in the quality and competitiveness of their products, reducing the risks associated with their activities and with innovation of their processes.

R&D ACTIVITIES

IEP's activity focuses on standardisation, training, quality and environmental management, consultancy, certification, inspection, laboratory testing and metrology. These activities are important cornerstones that support the development of R&D and incremental innovation. In addition to these activities, which constitute its "core business", IEP is increasingly involved in R&D activities and providing support for the design and development of new products, specifically:

- Ongoing and permanent applied R&D and experimental development activities, in a vertical manner and directed at companies in the electronics sector, in addition to applied R&D and technology development processes (TRL4 to TRL 8);
- Active and "on site" participation by IEP's Laboratory in its customers' project teams, involving technicians and researchers, technicians working for the manufacturers, advanced customer technicians and researchers, and technology workers from NSTS entities;
- Implementation of a lab-sharing model, in which IEP's physical and technical resources can be acquired for the development and testing of new solutions, as well as to optimise hardware projects in the fields of safety, electromagnetic compatibility, energy efficiency, mechanical robustness, climatic behaviour, performance and/or usability;
- Activities to promote technology transfer and to facilitate coordination between SMEs and Higher Education entities, contributing to increase the capacity to absorb knowledge and technologies from outside SMEs. In this field, as a result of partnerships with universities, IEP releases new solutions, new materials and new trends, by operating in the areas of technological monitoring and planning. For this purpose, in addition to a formal R&D department, an institutional relations management department was created, which has been coordinating IEP's activity with the University of Porto, ENTI, INL, IPN, CEIIA and the Association of Technical Engineers;
- Participation in European projects (e.g. I_HeERO III), facilitating access to new knowledge and its transfer to Portuguese companies and promoting the participation of Portuguese SMEs in these consortia;
- Participation in several R&D projects with NSTS entities, particularly in the area of unmanned aerial vehicles (UAV) or the wind energy sector.

In terms of formal partnerships with NSTS entities, including higher education entities, a set of collaboration agreements is in place, with the involvement of companies and other entities, including some that are already certified as Interface Centres (e.g.: FEUP - Faculty of Engineering of the University of Porto; FCUP - Faculty of Sciences of the University of Porto; FLUP - Faculty of Arts of the University of Porto; INESC Porto; Polytechnic Institute of Viseu; IPP - Polytechnic Institute of Porto; ISEP - Higher Institute of Engineering of Porto; CEIIA; Altice Labs). These partnerships include the collaborative development of R&D and research activities in co-authorship, mutual technical assistance, collaboration with activities to promote and distribute technology, the facilitation of technology transfer and valorisation processes with IEP's customer companies, and hosting researchers and students.

INSTITUTE OF SCIENCE AND INNOVATION IN MECHANICAL AND INDUSTRIAL ENGINEERING

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TECHNOLOGICAL AREAS
AUTOMATION AND ROBOTICS | MATERIAL TECHNOLOGIES | MECHANICAL ENGINEERING | ENERGY | ENVIRONMENT, QUALITY, SAFETY, METROLOGY

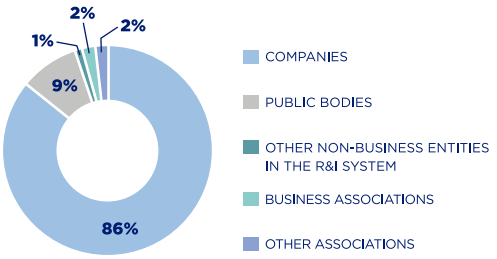
SERVICES
TESTS | METROLOGY/CALIBRATIONS | ENGINEERING | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

INEGI's mission is to contribute to the development of Industry and the Economy in general, through scientific and technological innovation in the areas of Mechanical Engineering and Industrial Engineering. It operates in the following 4 main areas: 1) Energy and the Environment, 2) New Materials and Structural Solutions, 3) Advanced Processes and Production Technologies, and 4) Product and System Development. It creates value for the economy through 5 areas of activity: 1) research and development projects, 2) innovation and technology transfer projects, 3) scientific and technological consultancy, 4) provisions of laboratory services and 5) advanced training.

ASSOCIATES

INEGI has 97 associates of the following types:



AVAILABLE RESOURCES

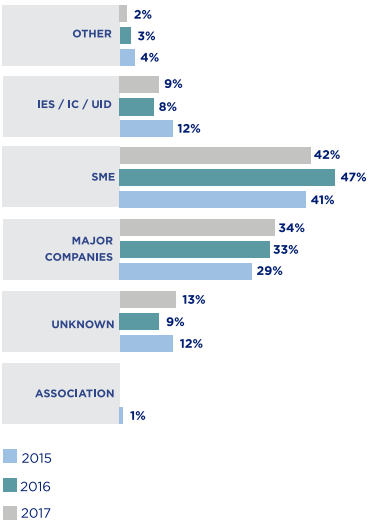
Currently, INEGI's team consists of 368 employees distributed across several functional areas.

R&D ACTIVITIES

INEGI constantly and extensively interacts with a significant number of NSTS institutions, particularly through LAETA. For the 2019-2021 period it plans to implement pilot projects in a set of priority areas in the field, including Sustainable Energy Systems, Surface, Space and Aeronautical Transportation, Advanced Production, Health and Safety, and Emerging Technologies, in which the 5 inter-institutional research groups will be involved (manufacturing materials and processes; mechanical structures and systems; energy, the environment & sustainability; smart systems & control; biomechanics).

The innovation and internationalisation promotion activities highlighted in the previous items will also contribute to opening up new scientific and technological challenges to be addressed by INEGI.

CHARACTERISATION OF DEMAND



INESC MN MICROSYSTEMS AND NANOTECHNOLOGIES

INESC MN
Microsystems and Nanotechnologies

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TECHNOLOGICAL AREAS
ICT AND TELECOMMUNICATIONS | NANOTECHNOLOGY | ENERGY

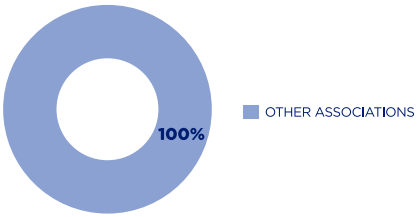
SERVICES
TECHNICAL ASSISTANCE | ENGINEERING | R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

INESC MN pioneered the introduction of micro manufacturing technologies in Portugal with the installation of its clean room in 1993. Its equipment is compatible with 150 mm diameter substrates. In 2006, INESC MN became the first Portuguese laboratory with nano manufacturing capacity, with the installation of an electron-beam lithography system that allows the definition of structures with lateral dimensions up to 20 nm.
With 20 years of experience in the design, operation, maintenance, and development of a micro and nano manufacturing infrastructure, INESC MN focuses its activities on scientific research, advanced training, micro and nano manufacturing services, intellectual property, technology transfer, and the formation of start-ups.

ASSOCIATES

INESC MN has 4 associates of the following types:



AVAILABLE RESOURCES

Currently, INESC MN's team consists of 48 employees distributed across several functional areas.

R&D ACTIVITIES

INESC MN is dedicated to research and development (R&D) in the areas of micro- and nanotechnologies and the application of these technologies to electronic, biological and biomedical devices. Specifically, its activity focuses on the development of R&D projects in electromechanical microsystems (MEMS), spintronics, biochips, Lab on Chip, sensors, thin film materials and simulation of materials and devices.
INESC-MN also offers technology transfer solutions to both Portuguese and international business and non-business entities, through collaborative and contractual R&D, prototyping and consultancy. In 2015, it initiated a patent application in the USA in the area of microfluidics. It also supports the creation of spin-offs and ensures the viability of the results of internal R&D projects (e.g. the company Magnomics, SA, launched in 2013 with INESC-ID, or the MagCyte project, an innovative project that allows cancer to be diagnosed up to 4 years before is can be diagnosed by the imaging techniques used today). INESC-MN also provides support to other Portuguese and international entities and infrastructure that develop R&D projects in the area of micro and nano device manufacturing. Several industrial and R&D customers enjoy these supports and services (e.g.: INL, Fraunhofer Inst., Western Digital-USA, IMM-Uni.Lisbon, Bogen Electroni-
-Germany, Neocera-USA, Lertech-China, Univ.Cambridge-
-UK, Kaust-Saudi Arabia, Infineon-Germany, etc.). In 2015, INESC-MN had 14 active projects, 7 financed by the Foundation for Science and Technology, IP. (FCT) and 6 by the 7th TR&D Framework Programme (FP7). It also participates in several international R&D networks and projects, such as "The SpinTronicFactory", a European network to promote R&D and innovation based on spintronics, or the RRI Tools project, in the area of responsible R&D and innovation.

INSTITUTE OF SYSTEMS AND COMPUTER ENGINEERING, TECHNOLOGY AND SCIENCE

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TECHNOLOGICAL AREAS
AUTOMATION AND ROBOTICS | ICT AND TELECOMUNICATIONS

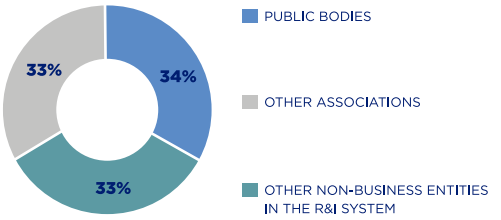
SERVICES
CONSULTANCY | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

INESCTEC is a private non-profit institution dedicated to scientific research and technological development, technology transfer, consultancy and advanced training, as well as the pre-incubation of technology-based companies. INESCTEC has 13 R&D centres structured into four themed Clusters (domains) - Computing, Smart System Networks, Industry and Innovation, and Energy. With over 30 years of experience.

ASSOCIATES

INESCTEC has 3 associates of the following types:



AVAILABLE RESOURCES

Currently the INESTEC team is made up of 807 employees, distributed across several functional areas.

R&D ACTIVITIES

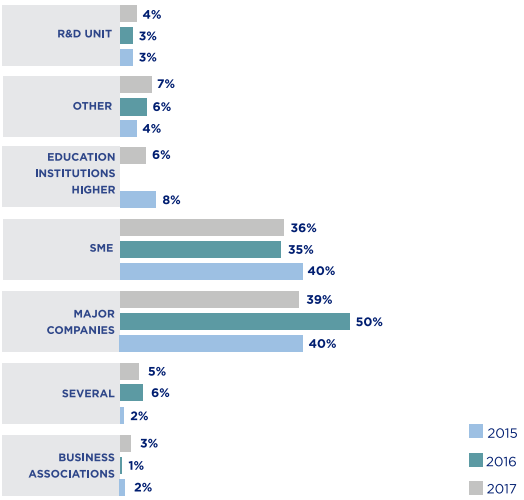
INESC TEC's mission consists of:

- Performing R&D activities in its areas of competence, generating internationally competitive and socially relevant results;
- Acting as an effective interface between universities, companies and public institutions, through research contracts, technology transfer, specialised consultancy and advanced training.

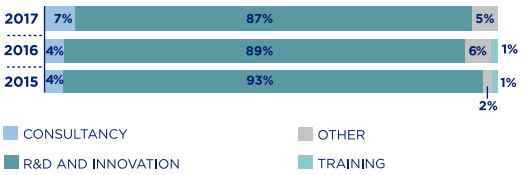
Its main technological and innovation objectives include:

- Digital transformation of the industry;
- Energy, energy efficiency and the circular economy;
- Creative industries;
- Health;
- Agrofood and forests;
- Sea economy.

CHARACTERISATION OF DEMAND



PROVISION SERVICES



INTERNATIONAL IBERIAN NANOTECHNOLOGY LABORATORY

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Phone: 253 140 112

TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | MATERIAL TECHNOLOGIES | NANOTECHNOLOGY | MECHANICAL ENGINEERING | ENVIRONMENT, QUALITY, SAFETY, METROLOGY | HEALTH, CHEMISTRY, BIOTECHNOLOGIES | AGRICULTURAL AND FOOD TECHNOLOGIES

SERVICES
TESTING | SCIENTIFIC ASSISTANCE | R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

The International Iberian Nanotechnology Laboratory is an intergovernmental organisation legally constituted by the governments of Portugal and Spain in 2011. Based in Braga, INL is the only organisation in Europe with international legal status that is entirely dedicated to nanotechnology and nanoscience research. INL has a research infrastructure based on the highest standards of excellence, capable of attracting internationally renowned researchers and stimulating the creation of new businesses.

INL acts in an international context and intends to position itself as a research centre that is known for its focus on the transformation of intensive knowledge to the benefit of society. It aims to be a nanotechnology innovation hub an a national level, stimulating the transfer of technology and knowledge, making the region one of the most competitive in this sector.

ASSOCIATES

The INL has 2 associates that are public entities.

AVAILABLE RESOURCES

The INL team currently consists of 166 employees distributed over various functional areas.

The INL campus is located on a 47,000 m2 site, near the Gualtar campus of the University of Minho.

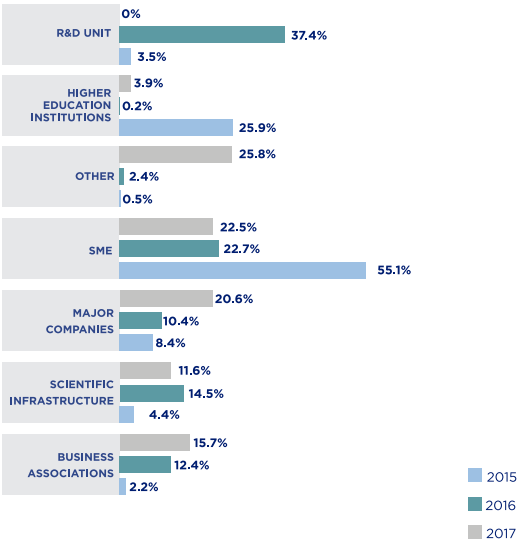
The laboratory is designed for 200 scientists and about 100 PhD students.

R&D ACTIVITIES

The following objectives have been defined based on this strategic forecast:

- to continue to develop the network of Pilot Lines and Innovation Hubs.
- to increase market-oriented activity and ensure subcontracting by companies in the field of R&D+I.
- to create a network of international business consultants who are supporting INL in the acquisition of privately funded TR&D contracts with foreign companies;
- to develop an International School in collaboration with the main Universities in the world;
- to promote the possibilities of involving other member states as INL associates;
- to carry out more in-depth activities in the field of Arts, Design and Science;
- to strengthen the visiting researchers program;
- to create a broader dialogue between the INL Research Managers to allow weak points to be identified for the purpose of the extensive planning of INL activities.

CHARACTERISATION OF DEMAND



NEW TECHNOLOGIES INSTITUTE

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Phone: 213 100 444

TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | ICT AND TELECOMMUNICATIONS

SERVICES
TECHNICAL AND SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION | TRAINING

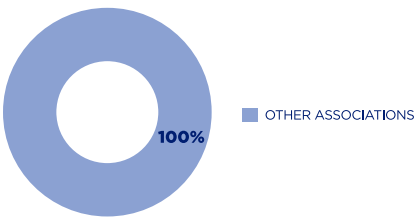
MISSION, OBJECTIVES AND ACTIVITY

The structure of INOV contains a significant portion of INESC's Electronics and Telecommunications Area in Lisbon, inheriting a reputation among the business fabric for unique technological ability in a markedly professional environment, as a result of its proven capacity to transfer technology to existing or emerging companies.

INOV provides a streamlined and flexible organisation, directed at the creation of technological skills and forging links of cooperation with different economic players (universities, industries, businesses, telecommunication operators). To this end, it intends to carry out pivotal activity between the University and Companies, rooted in privileged cooperation with the University, in order to provide sustainable, consistent and innovative solutions to the problems and challenges faced by our partners.

ASSOCIATES

INOV has 111 associates of the following types:



AVAILABLE RESOURCES

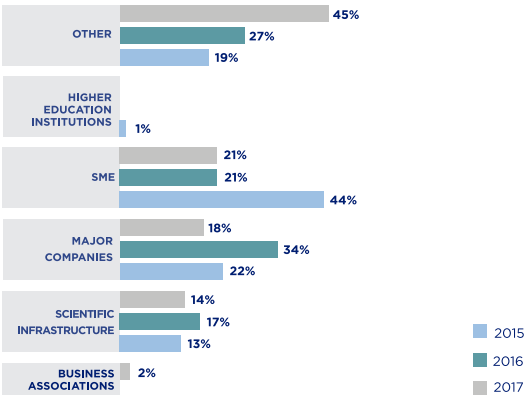
The INOV team currently consists of 30 employees distributed across various functional areas

R&D ACTIVITIES

As INOV is an interface centre between academia and society/the economy, its market vision is built from an application-based perspective with a focus on vertical sectors such as health; inclusive, secure and resilient societies; food and natural resources; the climate, energy and mobility. In these sectors, INOV focuses its attention on promoting the digital transformation of the economy (main activity) and on energy efficiency and the circular economy (complementary activities): it is here that the INOV's technologies and competences in the ITCE area represent added value when it comes to helping organizations with processes to digitalise their operations and optimise energy consumption while rationalising their resources. INOV focuses on the following topics as a starting point:

- Cybersecurity
- Advanced Communication Networks
- Smart Systems
- Business Systems
- Cyber-physical systems & remote monitoring

CHARACTERISATION OF DEMAND



INSTITUTE OF RESEARCH AND TECHNOLOGICAL DEVELOPMENT FOR CONSTRUCTION, ENERGY, THE ENVIRONMENT AND SUSTAINABILITY

ITeCons
INSTITUTO DE INVESTIGAÇÃO E DESENVOLVIMENTO TECNOLÓGICO EM CIÊNCIAS DA CONSTRUÇÃO

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TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | CONSTRUCTION TECHNOLOGIES | MATERIAL TECHNOLOGIES | MECHANICAL ENGINEERING | ENERGY | HEALTH, CHEMISTRY, BIOTECHNOLOGIES

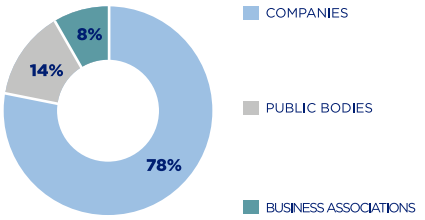
SERVICES
TESTS | SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

Established on January 11, 2006, Itecons - Institute of Research and Technological Development for Construction, Energy, the Environment and Sustainability, is a non-profit association, which functions as a dynamic knowledge interface between the scientific community and industry, providing applied research, testing, consulting and training services in the fields of construction, energy, the environment and sustainability.

ASSOCIATES

ITECONS has 59 associates of the following types:



AVAILABLE RESOURCES

Currently, ITECONS's team consists of 72 employees distributed across several functional areas.

It has laboratories distributed over two buildings with around 7500 square metres. It employs multidisciplinary technical staff, with extensive experience in providing research and consultancy services in a range of disciplines, including Construction, Energy, Environment and Sustainability.

R&D ACTIVITIES

Itecons aims to achieve the following with its R&D activity:

- To support industry, in particular SMEs, through research and development, technical appraisal, consultancy, testing and updating of knowledge;
- To support manufacturers with the CE marking of a wide range of construction products, either through the harmonised standard or through the European Technical Assessment, promoting the internationalisation of the Portuguese business fabric;
- To support manufacturers who intend to implement energy and resource-use efficiency measures that reduce environmental impacts and achieve gains in competitiveness;
- To support industry with the application of Eco-design and life cycle methodologies, supporting the transition to a more sustainable and circular economy;
- To collaborate with industry, particularly SMEs, for the preparation of applications and the implementation of R&D projects;
- To promote the development of content and collaborative platforms;
- To promote the organization of national and international technical and scientific events;
- To promote participation, as speakers, at conferences, seminars and workshops within the institute's areas of expertise, specifically on topics related to the circular economy, energy efficiency and the digital transformation of the economy.

PEDRO NUNES INSTITUTE

IPN INSTITUTO PEDRO NUNES

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TECHNOLOGICAL AREAS
AUTOMATION AND ROBOTICS | ELECTRONICS AND INSTRUMENTATION | ICT AND TELECOMMUNICATIONS | ENERGY | MATERIAL TECHNOLOGIES

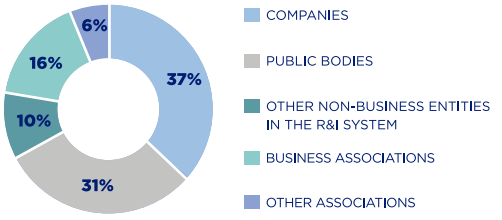
SERVICES
TESTING | TECHNICAL AND SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

The Pedro Nunes Institute (IPN) commenced its activity in 1991, after its creation on the initiative of the University of Coimbra and with the aim of forging a link between the scientific sector and the production fabric. It is now a benchmark for the promotion of a culture of innovation, quality and entrepreneurship, based on a solid university/company relationship, promoting the incorporation of science and technology into the economy. It carries out activities in 3 areas: Technology transfer, through TR&D laboratories; incubation/acceleration of technology-based companies and training.

ASSOCIATES

IPN has 49 associates of the following types:



AVAILABLE RESOURCES

The IPN team currently consists of 136 employees distributed over various functional areas.
IPN has six TR&D laboratories in a range of different areas (Materials, Automation, Information Technology, Geotechnics, Corrosion and Plant Health).

R&D ACTIVITIES

IPN is an interface institution that promotes integration between research in academia and the business sector. One of its particular features is that, in addition to its TR&D activities, it is involved in major business incubation and acceleration activities, with a remarkable number of spin-off companies created based on TR&D results.

IPN, in the field of nanomaterials, advanced materials and production technologies has been bolstering its role as a strategic industry partner in R&D projects in the area of Surface Engineering, advanced high performance and low cost materials (aerogels, VIPs) and material recovery/reuse. Also in the field of geotechnics it intends to double down on reuse and recycling activities of mineral resources and construction and demolition waste, from the perspective of urban stability, through the effective use of natural resources (soil, rock, water, metals).
In the context of sustainable cities, IPN is geared towards mobility (improving sustainable mobility options, matching urban activities with mobility needs, use of open data and big data) and energy. It has developed solutions that incorporate smart systems (e.g. pattern analysis) for various sectors of the industry, and it has competences for the incorporation of Blockchain technology.
IPN has been working for the agri-food, forestry and environmental sectors through the detection and investigation of pests and diseases that are the main factors responsible for production losses of around 30%, and through the development of electrochemical sensors and biosensors.

WELDING AND QUALITY INSTITUTE

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TECHNOLOGICAL AREAS
ENVIRONMENT, QUALITY, SAFETY, METROLOGY

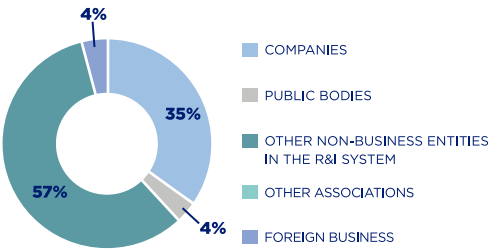
SERVICES
TESTING | CERTIFICATION | METROLOGY/CALIBRATION | TECHNICAL ASSISTANCE | CONSULTANCY | ENGINEERING | TECHNOLOGY BROKERAGE INITIATIVES | R&D AND INNOVATION | TRAINING

MISSION, OBJECTIVES AND ACTIVITY

ISQ is a non-profit entity created in 1965 with a presence in 16 countries on 4 continents. ISQ provides support to industrial sectors such as the Process, Energy, Oil & Gas, Aerospace, Automotive, Construction and Infrastructure industries. As part of its mission to support staff training and specialised qualification, and as a result of its partnerships with universities and other R&D centres, it welcomes Master and PhD students, supporting theses and research work applied to industry. R&D activities include the R&D Unit for Industrial Welded Products and Components Life Cycle Analysis, recognised 12 years ago by the Foundation for Science and Technology (FCT).

ASSOCIATES

ISQ has 263 associates of the following types:



AVAILABLE RESOURCES

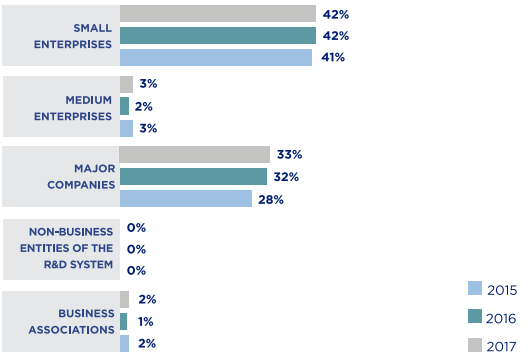
The ISQ team currently consists of 812 employees distributed across various functional areas.
ISQ's activities are supported by 16 accredited laboratories.

R&D ACTIVITIES

ISQ has an international network of more than 1200 partners, as a result of participation in more than 400 projects over 30 years. ISQ's R&D projects target the areas of material development, customised tests, production technologies and applied robotics, inspection, maintenance and reliability, safety, sustainability and eco-efficiency. ISQ aims to increase the capacity to meet the needs of Portuguese companies that are not covered by commercialised services, to ensure their competitiveness by bolstering human resources in existing infrastructure with ISQ as the interface, for the development of new technologies above and beyond the "state-of-the-art", which contribute to the development of new and better products, processes and organisational systems in industry. The following lines of development are specifically identified:

- Digitalisation;
- Sustainability;
- Materials (Technologies for the evaluation of new materials);
- Production Technologies

CHARACTERISATION OF DEMAND



INSTITUTE OF TELECOMMUNICATIONS

instituto de telecomunicações

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TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | ICT AND TELECOMMUNICATIONS

SERVICES
TESTS | SCIENTIFIC ASSISTANCE | CONSULTANCY | ENGINEERING | R&D AND INNOVATION | TRAINING

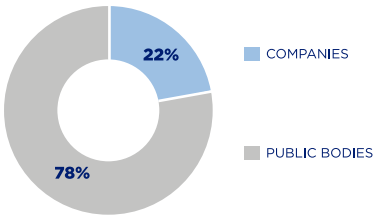
MISSION, OBJECTIVES AND ACTIVITY

The main objective of the Institute of Telecommunications (IT) is the creation and distribution of knowledge in the field of telecommunications. Essentially dedicated to pre-competitive scientific research, this Institute has Centres in Aveiro, Coimbra and Lisbon, and four branches in Porto, Leiria, Covilhã and Lisbon (ISCTE).

IT has two companies as associates, Altice Labs, S.A. and Nokia Solutions Networks. IT also works closely with many other academic institutions, including the Polytechnic Institutes of Setúbal, Tomar, Coimbra and Lisbon.

ASSOCIATES

IT has 9 associates of the following types:o:



AVAILABLE RESOURCES

The IT team currently consists of 54 employees distributed across various functional areas.

R&D ACTIVITIES

IT has been involved in the evolution of telecommunications and intends to step up its role in this evolution, not only as an R&D contributor but also as a member of international institutions that set policies and standards. Two current examples are the facts that it currently holds the "Chair of the JPEG Requirements Group, ISO/IEC" and the "Chair of the Steering Board of Networld2020 European Technology Platform", occupied by two IT researchers. Examples of technological maturity are involvement in two "cubesats" to be launched in 2019 by the ESA and in 2020, together with NICT (from Japan), the record for transmission rate over a single optical fibre (20 Tbit/s), the "Annual Collaboration Team Award" and "Best Collaboration with Huawei Wireless, 2015" awarded by Huawei Technologies.

The following topics were chosen to guide (but not restrict) IT's R&D activities in 2018-2022:

- Internet of things, from sensors to reasoning
- Beyond 5G
- New space technologies
- Autonomous mobile systems
- Quantum technology
- Bio-applications and health
- Cyber security
- Low energy systems
- Digital reality and games

INNOVATION IN POLYMERS ENGINEERING

piep
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TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES

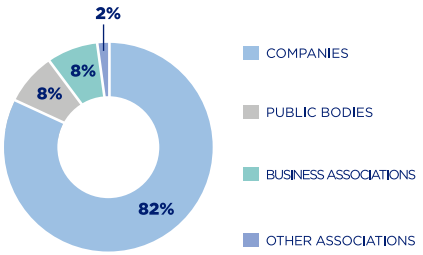
SERVICES
TESTS | R&D AND INNOVATION

MISSION, OBJECTIVES AND ACTIVITY

PIEP brings together know-how in technological areas that provide integrated support for development processes for products and systems in polymer materials (MPS) and composites (CPS). PIEP meets the basic conditions for the characterisation and development of materials, product engineering and processing/manufacturing technologies, culminating in a global technological supply that helps to overcome the innovation challenges faced by production companies and consumers of products and services based on (MPS) and (CPS).

ASSOCIATES

PIEP has 50 associates of the following types:



*Data for the year 2017

AVAILABLE RESOURCES

The PIEP team currently consists of 25 employees distributed across various functional areas.

R&D ACTIVITIES

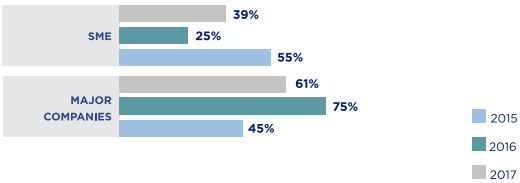
PIEP intends to strengthen its capacity to respond to the needs of the polymer and composite materials sector, which is known for being capital intensive and having high levels of technological demands, global competition and very intense technological dynamics, such as to contribute to an increase in the industry's competitiveness by bringing its supply into line with the needs of different players, promoting cooperative and interdisciplinary innovation. PIEP intends to improve its technological competences and capabilities in the aforementioned areas, based on the following 3 cornerstones: Materials, Digitalisation of Products and Processes and Circular Economy.

In materials:
- Biodegradable materials and/or bio-derivatives;
- Additive manufacturing materials;
- Materials for advanced applications;
- Virtual development of materials (materials by design).

In the digitalisation of products and processes:
- Injection moulding;
- Extrusion;
- Composites;
- Development of multifunctional systems/products.

In the circular economy:
- Recover of waste as new materials and products;
- Ecodesign.

CHARACTERISATION OF DEMAND



FOREST AND PAPER RESEARCH INSTITUTE

RAIZ
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TECHNOLOGICAL AREAS
MATERIAL TECHNOLOGIES | ENVIRONMENTAL TECHNOLOGIES AND BIOTECHNOLOGY

SERVICES
R&D AND INNOVATION | TECHNICAL ASSISTANCE

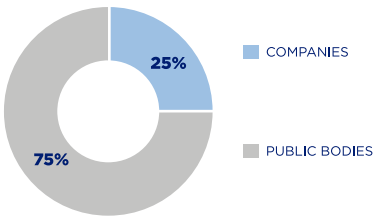
MISSION, OBJECTIVES AND ACTIVITY

The RAIZ is a private, non-profit organisation, well known as an entity of the National Scientific and Technological System. It carries out research activities, consultancy, specialised services and training in the areas of forestry, pulp, paper and bio-refineries based on forestry. It was created in 1996 and its partners are The Navigator Company, the University of Coimbra, the University of Aveiro and the Higher Institute of Agriculture / University of Lisbon.

Its mission is to contribute to the competitiveness and sustainability of the eucalyptus sector, from forest to product: creating a high standard of knowledge; providing specialised services and consultancy; developing innovative solutions that promote a new bio-economy; promoting cooperation with world-class universities and knowledge centres; training highly qualified and motivated human resources.

ASSOCIATES

RAIZ has 4 associates of the following types:



R&D ACTIVITIES

RAIZ's activity, mainly funded by The Navigator Company, by other private entities, public, Portuguese and European funds, of a competitive nature, acts from a perspective of producing knowledge and transforming it into products, technology and services, in order to optimise the competitive advantages of the Portuguese and the company's forestry sector, from a cost-benefit perspective, guaranteeing its sustainability. RAIZ has aimed to meet the needs and challenges of this sector. It currently identifies 12 objectives with its activity:

- Increase the productivity and sustainability of the Portuguese eucalyptus forest;
- Create more in-depth knowledge about eucalyptus plantations, the environment, society and climate change;
- Ensure levels of excellence in resource use efficiency, performance and sustainability of industrial processes;
- Promote the unique nature, diversification and international competitiveness of Portuguese paper products;
- Diversify the portfolio of products of the Portuguese eucalyptus pulp and paper industry by implementing the biorefinery concept;
- Promote the digitalization of management and operations processes in the forestry, industrial, logistics and commercial areas;
- Attract, train and retain highly qualified and motivated resources;
- Guarantee the functionality and up-to-date nature of the infrastructure and services supporting RAIZ's activity;
- Consolidate the national and international RAIZ-university-business cooperation network;
- Promote the raising of awareness in society of the knowledge that is generated and the assimilation of scientific and technological knowledge into the value chain, from forest to product;
- Ensure permanent online access to international bibliographic reference sources.

NEW TECHNOLOGIES DEVELOPMENT INSTITUTE

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TECHNOLOGICAL AREAS
ELECTRONICS AND INSTRUMENTATION | ICT AND TELECOMMUNICATIONS

SERVICES
RESEARCH AND DEVELOPMENT OF PHYSICAL AND NATURAL SCIENCES

MISSION, OBJECTIVES AND ACTIVITY

UNINOVA is a non-profit association created in 1986 with the objectives of scientific research, technological development, advanced training and the creation of technological innovation centres and small-scale industry. It is a private, non-profit, public utility institution which pursues R&D without any express limitation when it comes to areas of intervention.

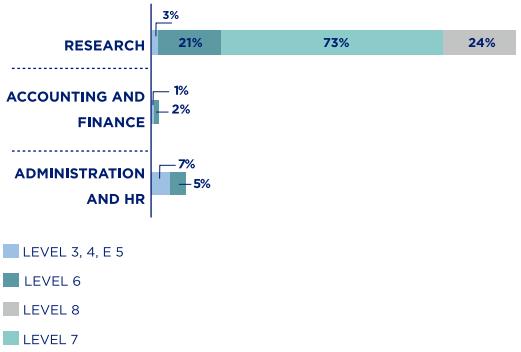
However, its actions have mainly covered areas associated with electrical engineering and computers, computing and materials and environment engineering and science.

ASSOCIATES

The Association Fund is distributed between 5 associates, with FCT/UNL holding an absolute majority.

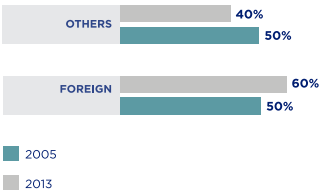
AVAILABLE RESOURCES

Currently, UNINOVA's team consists of 136 employees distributed across several functional areas.

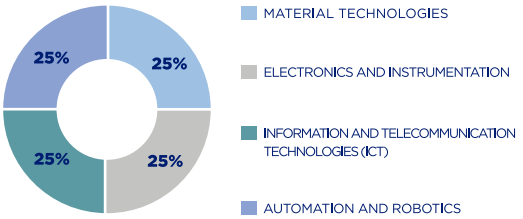


*Data for the year 2015

CHARACTERISATION OF DEMAND



CHARACTERIZATION OF SUPPLY



OFFSHORE RENEWABLES

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TECHNOLOGICAL AREAS
ENERGY

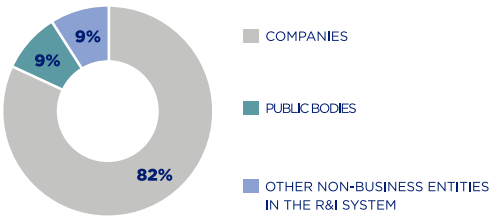
SERVICES
CONSULTANCY

MISSION, OBJECTIVES AND ACTIVITY

WavEC was created as a centre of excellence and innovation especially dedicated to the promotion of wave energy and, later, other ocean-related activities (including offshore wind energy in a very relevant way). WavEC plays a coordinating role between public policies, technology development and a high value-added supply chain. It also promotes the market in the offshore renewable energy sector, not only in Portugal but also in an international context. Its mission is to develop sustainable solutions for the Blue Economy through innovation, knowledge transfer and dissemination. It ensures this mission by providing technological and scientific support to companies and governments, promoting greater participation in R&D and Innovation projects, providing consultancy and interacting with international institutions.

ASSOCIATES

WavEC has 11 associates of the following types:



R&D ACTIVITIES

WavEC was a pioneer in wave energy. Its expansion into offshore wind energy took place when it became involved in EDP's Windfloat project, and it has progressively sought to achieve international recognition in this area, as it is recognised in the wave energy sector. In 2017 an effort was made to gain international visibility through a partnership with the British company LOC. This partnership returned its first results in 2017.

In offshore aquaculture, it has taken preliminary steps to do work to assess the potential of offshore aquaculture on the Portuguese coast, at the request of a Norwegian company. Over the next few years the aim is to consolidate WavEC's efforts to expand its activity into offshore wind energy, offshore aquaculture and other ocean technologies, without affecting its wave energy activity. WaveEC intends to expand its R&D and innovation activity, so it is planning the following actions:

- Enhance the innovation component of offshore wind energy, offshore aquaculture and ocean engineering by participating in European R&D projects;
- Increase its capacity to attract public funding projects, specifically for offshore wind energy and aquaculture, by diversifying its sources of funding for TR&D projects, in liaison with Portuguese industry;
- Carry out activities to monitor the main players, projects and results of existing R&D activities in the areas of offshore wind energy and aquaculture;
- Promote partnerships with science and technology institutions and industry for R&D and innovation projects in these areas;
- Promote advanced training of human resources in critical competence areas of WavEC;
- Monitor and provide guidance for Master and Doctoral theses in the areas of activity of WavEC;
- Disclose R&D results through scientific and technical papers, publications or conference presentations, as well as by submitting and registering patents;
- Participate in specific events in these areas where WavEC is expanding (e.g. European Commission Technology Platforms) and in international fairs to promote WavEC, developing an effective strategy to obtain the desired return on investment at the fair.
- Organize bilateral meetings and encourage discussions of concepts and potential new projects or areas of development;
- Develop a greater capacity to act at sea, in terms of technological and environmental inspection and monitoring.