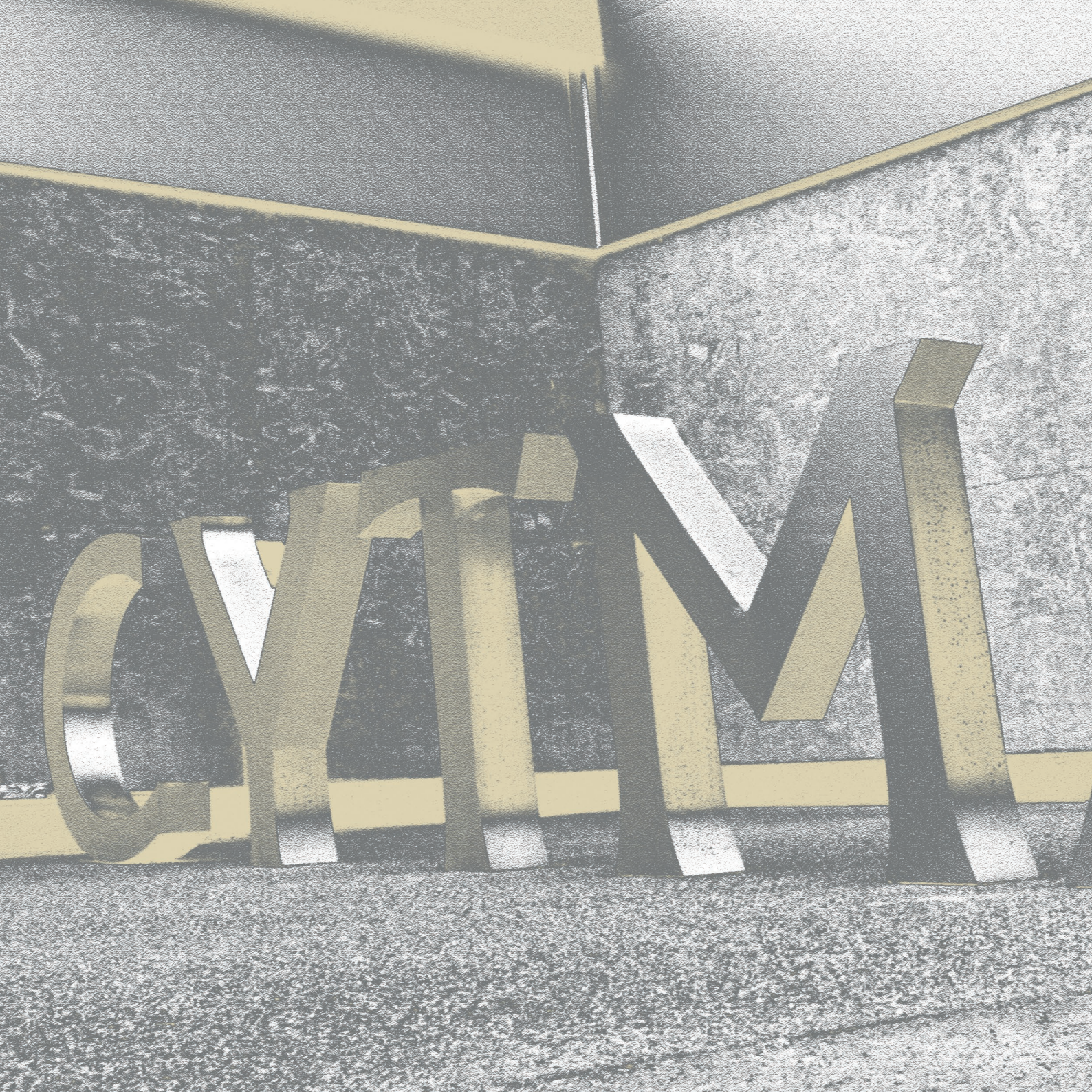


REPORT 2017







REPORT 2017



Carretera Colegio Universitario, 16
T. 986 469 301 - 986 469 303
Fax: 986 469 269
36310 Vigo (Spain)
www.anfaco.es

D. Jesús M. Alonso Escurís President

The future of the food industry and the processing sector of fish and aquaculture products inevitably passes through adapting to the latest technologies, which will improve the production processes efficiency, maximizing food quality and safety.

At ANFACO-CECOPESCA, we are very aware of our work as facilitators of access to the necessary tools for this transformation. For this reason, the consolidation of the Advanced Technology Center for Marine and Food Industry Research, CYTMA, as the undisputed reference point for the entire sector, has allowed the development and implementation of new technological solutions, provision of analytical services, technical and R&D&i consulting of maximum excellence and all this, supported by the best available human and technical resources.

The consolidation and increase of the client portfolio unequivocally shows the confidence that our clients place in our scientific and technological capabilities. Thus, during 2017 total revenues of 7.36 million € were achieved, of which 89% correspond to R&D&i activities and the provision of technological services, which means an annual increase of 5.1 % of total revenues and 7.8% of revenues from technological and R&D&i services.

In this way, thanks to the efforts of the whole personnel of ANFACO-CECOPESCA and to the companies that trust in our know-how, we will continue to add value to our associates and clients, feeling very proud that they trust us as their technology ally.

D. Juan M. Vieites Baptista de Sousa Secretary General

Having continuously positive growth indicators in recent years reflects the commitment to constant improvement in our technological and R&D&i services, and has as a consequence, the fidelity and confidence of our associates and clients in the excellence of our services.

The past 2017 has meant the achievement of a total of 500 clients of our technological and R&D&i services from 23 different countries. Thus, as main indicators, we can highlight the development of 86 R&D&i projects, 75% of them executed by contract with companies, the management of more than 24,000 samples for analytical determinations, which means more than 100,000 trials, and the execution of more than 1,700 technical assistance activities, as well as the resolution of more than 1,500 technical consultations. These very satisfactory indicators could only be achieved thanks to the excellent human team conformed by 108 highly qualified professionals, of whom 78% are researchers and technologists and 25% are doctors.

The Advanced Technology Center for Marine and Food Industry Research (CYTMA) facilities have the most advanced technologies such as high pressures, artificial vision (NIR, Hyperspectral,...), membrane filtration, multi energetic cavity and supercritical fluid extraction, in order to respond to the needs of the marine and food sector. That is the only way to offer more than 400 determinations and 181 procedures accredited by ENAC, participating in 13 international R&D&i projects and providing technical assistance and consulting services in more than 10 countries, what make us the most accredited laboratory in Spain and recognized by the AOAC as an independent evaluator of new analytical methods.

The excellence and competitiveness of our associated companies and clients are our main priority, for which we work in the continuous improvement of our services. In this 2018, we will continue advancing towards the provision of cutting-edge services to guarantee maximum quality, food safety and sustainability of the processes and products, maximizing the efficiency of the procedures and differentiation from international competition, always from the perspective of a greater digital revolution (Industry 4.0) and the use of blue biotechnology, within the circular economy.

Governing Board

PRESIDENT

D. Jesús M. Alonso Escurís
Jealsa Rianxeira, S.A.U.

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ANFACO-CECOPESCA

SECRETARY

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Hijos de Carlos Albo, S.L.

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Conservas Antonio Alonso, S.A.

D. Jorge Jordana Buttica de Pozas
Fundación LAFER

Dña. Rosa Quintana Carballo
Conselleira do Mar / Xunta de Galicia

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Desarrollo e Innovación**
Ministerio de Economía, Industria y
Competitividad

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Secretario General de Pesca / Ministerio
de Agricultura y Pesca, Alimentación y
Medio Ambiente

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Nueva Pescanova España, S.A.

D. Jordi Trias Fita
Stolt Sea Farm, S.A.

D. José M. Blanco Cid
Conservas Selectas de Galicia, S.L.

D. Manuel Calvo García-Benavides
Calvo Conservas, S.L.U. / Grupo Calvo

**D. Ignacio Rodríguez-Grandjeán López-
Valcárcel**
Justo López Valcárcel, S.A.

D. Ignacio Lachaga Bengoechea
Salica Industrias Alimentarias, S.A.

D. Jose Luis Morais Vallejo
Industrias Frigoríficas del Louro, S.A. /
Grupo Coren

D. Jose M^a Fonseca Moreton
Conservas A Rosaleira, S.L. / Grupo
Terras Gauda

D. José Antonio Gómez Díaz
Mascato, S.A.

D. José Luis Lojo Muñoz
S.A.C. Pescados y Mariscos Peixemar

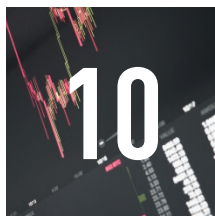
Index



Investments and
Equipment



R&D&i Area



Economic Data



Technical Assistance
and International
Cooperation Actions



Human Resources



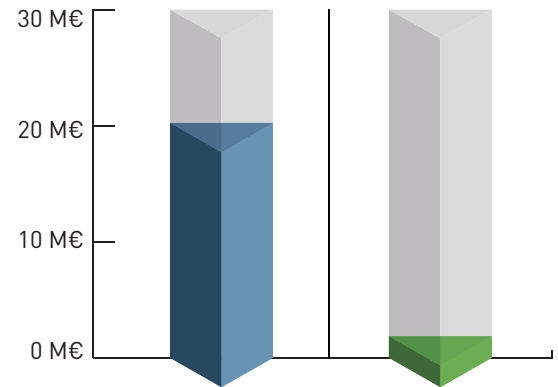
Analytical Technology
Area



Representativeness
Clients and Associated
Companies

► **20 M€**
of total investment

► **0.54 M€**
of investment in 2017
in new infrastructures
and scientific-technological
equipment



Investments and Equipment

Located at the University Campus of Vigo, ANFACO-CECOPESCA has a plot of 6,000 m² with a total constructed area of more than 10,000 m², in which is located the Advanced Technology Center for Marine and Food Industry Research (CYTMA). This new infrastructure, inaugurated in March 2016, has a constructed area of more than 6,300 m² distributed in five plants exclusively for research and a Pilot Plant destined to the scaling of technological solutions at semi-industrial level, simulation of processes, development of prototypes of processing, product development using new technologies of processing and conservation, among others.

CYTMA has the most advanced and sophisticated technologies of processing, packaging and food preservation, robotics and vision systems, equipment for the valorization of by-products and modern techniques for its application in food and

health and food safety. CYTMA has unique equipment like: High pressures, Multi-energetic Cavity, Induction Systems, Extrusion Systems, Skinpack, HPLC-MS / MS, FPLC, System for determining the bioavailability in tissues-Ussing Chamber, Supercritical Fluid Extraction, Hydrolysis Reactor, Vertical Centrifuge, Ultrafiltration Membranes Systems....

The Technological Control, Digitalization and Advanced Automation (TECDA) Laboratory stands out among the facilities located in the Center, which seeks to promote the implementation of the so-called industry 4.0 in the agri-food sector. TECDA will implement new technological developments in areas such as artificial vision, process simulation, data management and analytics, automation and industrial robotization, advanced sensory, ICT tools for the integral control of processes or industrial cybersecurity.



UPLC-MS/MS



Ussing camera



High pressure equipment



Multi-energy cavity



Hydrolyzer with vibrating sieve



Vertical centrifuge



Supercritical fluid extraction system



Filtration system with membranes



Spray dryer system



Economic Data

The proximity of ANFACO-CECOPESCA to its clients and associated companies, as well as the consonance of the services provided with the priorities of the marine and food industry become from data of sustained growth in recent years, consolidating the role of ANFACO-CECOPESCA as Technological Center of reference for the industrial sector.

7.36 M€ total revenue.

6.53 M€ revenue from Technological and R&D&i services.

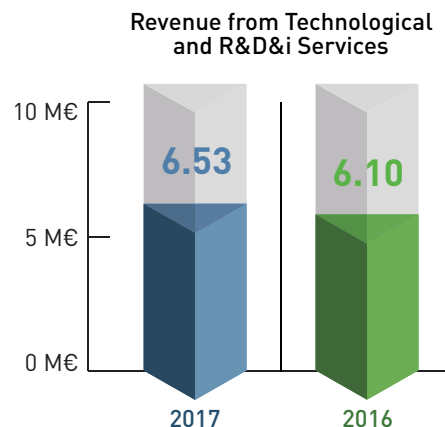
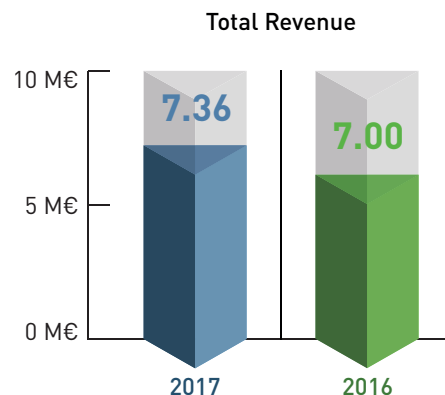
5.1% Annual increase of total revenues.

7.8% Annual increase of revenues Technological services and R&D&i.

89% of revenue from Technological and R&D&i services.

76% of revenue from private funding.

0% of non-competitive public funding.





PROFESSIONALISM AND EFFICIENCY

Human Resources 108 Professionals

Multidisciplinary Team

Chemists, biologists, veterinarians, engineers, marine scientists, pharmaceutical...

High Qualified

73% University graduates.

Research Excellence

78% Researchers and technical staff, of which 25% Ph.D.

Employment Creation

11.8 % Yearly increase of research and technical staff.

Employment Stability

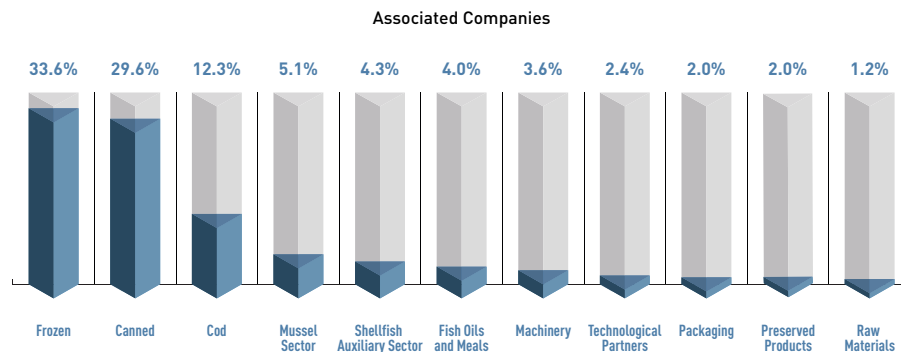
76 % Professionals with permanent contract.

Training

Training and professional practices to 49 fellows and interns.



Representativeness Clients and Associated Companies



253 NATIONAL AND INTERNATIONAL ASSOCIATED COMPANIES

(3.7% more than in 2016).

More than **9,400 M€** global turnover amounted

More than **26.000 professionals employed directly, more than 60% work in Galicia.**

Almost 50% of its products are for export, being present in over 140 countries on 5 continents.

500 CLIENTS

Technology and R&D&i services belonging to different sectors of marine and food industry (3.3% more than in 2016).

460 national clients from 34 provinces.

40 international clients from 23 countries.



Total: 100%



R&D&i Area Research Lines

BLUE BIOTECHNOLOGY

FOOD SAFETY AND INDUSTRIAL HYGIENE

- Chemical and biological contaminants:
 - Advanced detection systems. Risk control and prevention
 - Reduction / decontamination strategies
 - Toxicology. Mechanisms of action and biochemical target
 - Bioaccessibility and bioavailability
 - Synergistic and antagonistic effects
- Development of biosensors for detection of parameters in food or natural environment, from the point of view of the biological-chemical reaction.
- Predictive food microbiology. Mathematical models.
- Predicting shelf life through accelerated studies. Challenge test.
- Industrial hygiene. Development of strategies for the evaluation and disinfection of food pathogens in indus-

trial plants. Minimization of the use of cleaning chemicals, strategies to avoid cross contamination.

- Marine biotoxins: new methods of detection, toxicology, biochemical targets and detoxification of live and processed molluscs. Early warning systems for toxic episodes.
- Molluscs purification studies.

BY-PRODUCTS VALORISATION - CIRCULAR ECONOMY

- By-products recovery in the food industry through the development of new industrial chemical / biological processes to obtain new marketable products for food, pharmaceutical and cosmetic applications.
- Application of supercritical fluids for the extraction of high added value products.
- Microencapsulation of bioactive compounds for application in food or nutraceutical matrices.
- Concentration of added value com-



pounds in liquid streams through ultra and nanofiltration processes.

- Valorisation of food processing industry effluents.
- Development of new materials of interest from by-products or food raw material. Nanotechnology applied for this purpose.

HEALTH-NUTRITION AND PHARMAINDUSTRY

- Research in the development of bioactive ingredients, functional foods and diets adapted to people with certain pathologies and specific nutritional needs: active aging, food allergies, athletes, population with metabolic syndrome (prevention, reduction), ...
- Chemical and functional characterization of extracts with biofunctionality or functional ingredients. In vitro evaluation bioactivity of ingredients.
- Studies of digestibility and intestinal absorption of nutrients.
- Nutrients bioavailability ex vivo evalua-

tion and functional ingredients.

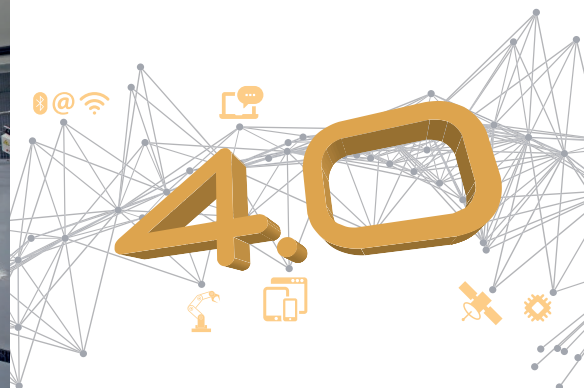
- Development of new ingredients: new protein sources, natural antioxidants, pre and probiotics, additives ...
- Studies on the influence of intestinal microbiota on metabolic diseases and methodologies for the incorporation of probiotic microorganisms in food matrices.
- Obtaining microorganisms and enzymes with biotechnological potential to produce functional ingredients with higher bioactivity and bioavailability of bioactive components.
- Nutricosmetics. Functional ingredients for the improvement and maintenance of physical appearance and aesthetics.
- Nanotechnology applied for nutritional purposes: obtaining new functionalities, increasing the stability, bioavailability and bioactivity of the active compounds.

MARINE RESOURCES AND AQUACULTURE

- Optimization of breeding techniques in

aquaculture from a biological and species point of view.

- Diseases of cultivated species
- Optimization of rearing conditions: growth and feeding
- Development of tools based on biotechnology for genetic improvement, larval development and prevention, diagnosis and control of pathogens and improvement of aquaculture production.
- Development of new probiotic diets to mitigate the impact of pathogens and optimize productive yield.
- Natural alternatives to chemicals use in aquaculture industry.
- New ingredients for feed and formulation.
- Technology for small-scale aquaculture: conditioning of breeding stock, on-growing, purification systems.
- Study of the marine species zoology and introduction of new species of culture.
- Development of techniques to culture new products of interest in the marine environment (algae, microalgae, etc.).



INDUSTRY 4.0

PRESERVATION TECHNOLOGIES - PRODUCT INNOVATION

- Development of new products minimally processed and easy to prepare - Fifth Range Products.
- Application of emerging technologies for processing (cooking, freezing, defrosting ...), preservation (sterilization, pasteurization) and product optimization (high pressure, ultrasonic, microwave, infrared,...).
- Optimization of the physical / technological parameters (temperature, time, etc.) used in the food products processing: smoked, dehydrated, sterilized, cooked, etc. to improve quality, efficiency, etc.
- Development of new forms of presentation for fresh / refrigerated foods that improve their shelf life (skinpack, etc).
- New packaging materials, films and new edible coating materials for preservation.
- Development of new differentiated products. Application of additives and ingredients for the purpose of improving sensory characteristics and shelf life.
- Development of new technologies of quality control and characterization of raw materials and products in production line - real time.
- Valorization of ingredients/raw material... by the development new food products (coextrusion, micro-encapsulation, freeze-drying, etc.).

PROCESS ENGINEERING - INDUSTRY 4.0

- Industrial process scalability from an engineering point of view (electricity, mechanics, heat transfer, etc.).
- Design, development and validation of industrial prototypes as well as optimization of their operation. Hygienic design of machinery.
- Automation and robotics applied to production processes.
- Artificial vision.
- ICT technologies applied to processes improvement. Technology and application in the chain of processing, distribution and commercialization.
- Development of ICT control platforms. Communication between processes. Internet equipment and machines.
- Development of technology for 3D printing.
- Drones and their applications.
- Instrumentation and sensory applied to industrial processes (electronics, non-development part reaction in case biosensors).
- Simulation and calculation of industrial processes. LEAN manufacturing.
- Management of thermal processes. Design of intelligent monitoring platforms.
- Optimization of energy and water consumption and Carbon Footprint calculation. Emission reduction.
- Study for the implementation of renewable energy and its applicability to current production processes.



R&D&i Area

Technology Transfer Activity and Support for Business R&D&i

SUPPORT TO THE PARTICIPATION OF COMPANIES IN R&D&i FUNDING PROGRAMS

- Support during the project preparation including: consortia building, administrative and economic support and writing of technical proposal ... in national and regional programs.
- Support for business participation in R&D&i international calls, particularly in Horizon 2020:
 - Guidance and support to companies developing high-quality proposals.
 - Partner search and identification of relevant consortia.
 - Identification of research areas of greater chance of success for companies in EU programs.
 - Integration of companies' areas of interest in the definition of future Work Programs in Horizon 2020 calls.
- Support for application to tax deduction for R&D&i activities.

• Participation in the main **Spanish Technology Platforms** related to fishing and food: **PTEPA and Food For Life Spain**

21 patents on new process technologies, conservation and biotechnology

Promoter **Industry 4.0 – The Smart Factory** in marine and food industry

10 scientific publications and participation in national and international scientific conferences

Coordination of the Alianza Tecnológica Intersectorial de Galicia (**ATIGA**)

Organization of **9** technical transfer conferences



R&D&i Area

Indicators 2017

Development of **86** R&D&i projects, **75%** of them are under contract with companies.

64 contracts with companies.

13 international projects.

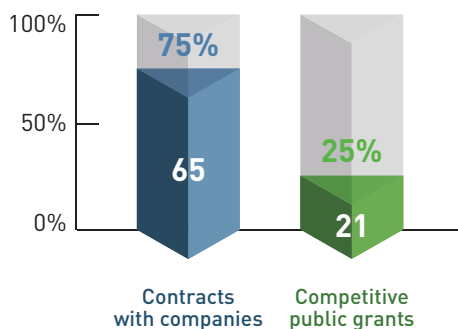
16 ININTERCONECTA, CONECTA PEME and INNOVA PEME projects:

- **43** companies involved
- **17.4 M€** budget
- **2.2 M€** technological services provided by ANFACO-CECOPESCA

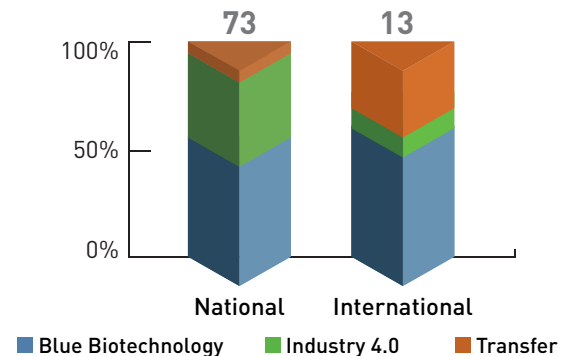
3 Unidades Mixtas de Investigación with Jealsa, Calvo and Emenasa with a global budget of **6.4 M€** for the 2014-2019 period.

5 CIEN projects (2015-2021)

Projects R&D&i



Typology of projects according to geographical area



R&D&i Area Projects

SEAFOOD TOMORROW

Nutritious, safe and sustainable seafood for consumers of tomorrow.

Aim: Strengthening the future of the European industry for fisheries and aquaculture production and processing of by addressing the development of eco-innovative and sustainable market solutions.

Call: HORIZON 2020

Partners: 35 partners from 15 countries: 19 innovation institutes, 12 PYMES and 4 associations of interest with the most advanced technological developments and market-oriented experience.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 773400 (SEAFOOD TOMORROW)

SEAFOOD TOMORROW



Tarelaks AS



Zachodniopomorski Uniwersytet Techniczny w Szczecinie



GAIN

Green Aquaculture Intensification in Europe.

Aim: H2020 project designed to support the ecological intensification of aquaculture in the European Union (EU) and the European Economic Area (EEA), with the dual objectives of increasing production and competitiveness of the industry, while ensuring sustainability and compliance with EU regulations on food safety and environment.

Call: HORIZON 2020

Partners: 20 partners from 12 countries.



ENHANCE MICRO ALGAE

High added-value industrial opportunities for microalgae in the Atlantic Area.

Aim: Led by ANFACO-CECOPES-CA, the main objective is to contribute to the competitiveness of microalgae-based industry in the Atlantic Area through the transfer of technological and economic expertise to the specialists in the sector and specialized companies (nutritional, cosmetic, pharma...).

Call: INTERREG-ESPACIO ATLÁNTICO

Partners: 9 research centers and 4 industries of the European Atlantic Area.



EBB

European Marine Biological Resource Centre Biobank.

Aim: Protection of marine biodiversity through the establishment of a biobank centrally operated by the EMBRC, ensuring compliance with access and benefit sharing regulations (ABS) for the conservation and sustainable use of biological diversity and the improvement of coastal ecosystems services through biotechnological valorization of marine biological resources (MBR).

Call: INTERREG-ESPACIO ATLÁNTICO

Partners: 20 partners from 6 countries.



TECFOOD

Development of new healthy technological foods for new social needs.

Aim: Increase in the innovative capacity of the agri-food industry through the development of new processes and food products with higher added value, as well as the promotion of the development of emerging sectors and high technological content such as the 3D food printer.

Call: CIEN Program - CDTI

Business partners: UVE.SA (leader), INDUKERN S.A., COOPERATIVA CLUN, GO FRUSELVA, S.L., DCOOP S. COOP. AND, ITC PACKAGING S.L.U. CONGELADOS NORIBÉRICA S.A., 2 VEGAN NATURAL MACHINES, S.L.

Research Centers: ANFACO-CECOPESCA, TECNALIA, CTIC-CITA, LEITAT, AIMPLAS, CERPTA – UAB, EURECAT, UNIV. VIGO, UNIV. SANTIAGO DE COMPOSTELA.



NUTRIAGE

Advanced solutions for a healthy aging through the nutrition in the framework of the Galicia – Norte Portugal Euroregion.

Aim: Generation of advanced solutions in research and innovation, aimed at the demand for new adapted products, to improve the quality of life of the elderly in the Galicia-North Portugal Euroregion.

Call: INTERREG-POCTEP

Partners: 5 Galician and 4 Portuguese institutions.



TOLERA

Industrial research of new ingredients, foods, technologies and safety in the field of food allergies and intolerances.

Aim: Industrial research of the food sector to generate new ingredients, foods and technologies that overcome the difficulties in terms of food safety and health that represent allergies and other immune diseases as well as food intolerances.

Call: CIEN Program - CDTI

Business partners: LABORATORIOS ORDESA S.L. (leader), GALLETAS GULLÓN S.A., ANGULAS AGUINAGA S.A., BIOPOLIS S.L., PAYMSA-CARINSA.

Research Centers: ANFACO-CECOPESCA, CARTIF, CIAL, IDI PAZ, IGFR, CTNS, SNBA, UNIV. GRANADA, UNIV. VALENCIA, UNIV. BARCELONA.



BIOSAN

More sustainable sanitary treatments in continental aquaculture: natural origin alternatives to chemical products.

Aim: Reduce the use of antibiotics and biocides in continental aquaculture by ingredients with antiparasitic and antimicrobial action incorporated into the diet.

Call: Pleamar Program - Fundación Biodiversidad

Partners: ANFACO-CECOPESCA, GRUPO TRES MARES S.L., VIVEROS DEL SOTO OLIVÁN S.L.



UNIDAD MIXTA FUTURE FOOD FACTORY 4P

Aim: Obtain a solid alliance that strengthens new competitive food engineering solutions, serving as enabler of new technological advances for a factory of the future made in Galicia. To do this, three main lines of research are proposed that address the key aspects of the food industry: Connected Factory - Advanced Robotics - Individualized production.

Call: Unidades Mixtas de Investigación

Business partners: EMENASA INDUSTRIA Y AUTOMATISMO S.A., BALIÑO S.A., ANFACO-CECOPESCA





Technical Assistance and International Cooperation Actions Indicators 2017

Resolution of **1,586** companies enquiries .

1,749 technical assistance activities managed.

48 training activities in companies with more than **300** students.

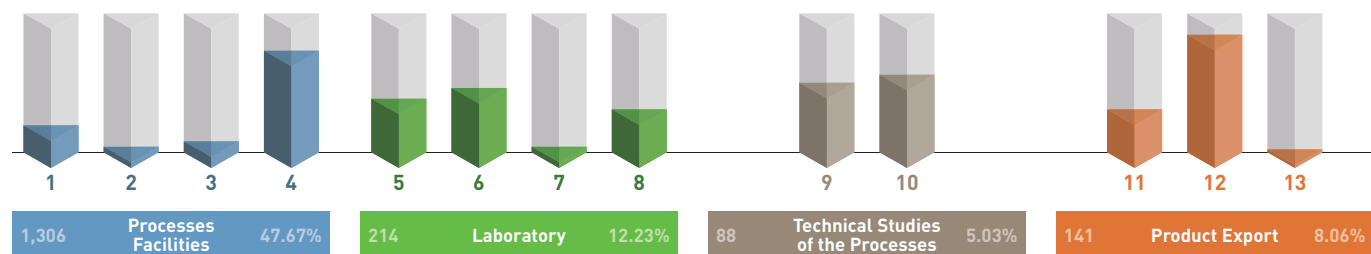
5.44% increase in annual turnover.

Coordination of the **Master's Degree in Science and Preservation Technology of Fish Products** (University of Vigo).

Management of **49** students doing their professional practice through educational cooperation agreements.

SUPPORTING ACTIVITIES AND TECHNICAL ASSISTANCE SERVICE

1. Quality and food safety manuals	284	21.74%	8. Intercomparative exercises	62	28.97%
2. Process audits	28	2.14%	9. Technical studies of the products (transfer factor, shelf life, etc)	41	46.59%
3. Sterilization tests	209	16%	10. Process studies/Validations	47	53.41%
4. Metrology	785	60.11%	11. FDA registration for companies and products	38	26.95%
5. Evaluation and optimization of analytical methods	37	17.29%	12. Consultancy to export to other countries	103	73.05%
6. Comprehensive consultancy for the laboratories of the companies	98	45.79%	13. Products and processes innovation	1	0.70%
7. Expert reports	17	7.94%			





PRODUCTS INNOVATION AND PROCESSES OPTIMIZATION

- New technologies supporting.
- Development of new products.
- Design viability and shelf life studies.
 - Process control.
 - Installations design.
 - Lean Manufacturing.



FOOD SAFETY AND AUDITS

- Support on implementation of HACCP and BRC standards, IFS, GlobalGap, ISO 22000, ISO 14000, EMAS.
- Systems supporting.
- Energy audits.
- Support on energy optimization.
- Wastewater control.
- Installation and adjustment of purification plants.



CONSULTANCY AND SPECIALIZED SERVICES

- Processing tests and reports required for FDA, Brazil, Vietnam, China and SAE RD 993/2014 registration for companies and products
 - Penetration-distribution heat testing
 - Intercomparative tests
 - Market surveys, labelling, concentration factor
 - Equipment calibration and metrology consulting
- Expert 's report, official control sampling, merchandise conformity assessment.



TRAINING

- Coordination of the Master's Degree in Science and Preservation Technology of Fish Products.
- Management of subsidized training (Tripartite Foundation).
- Organization and promotion of courses, seminars, conferences and other training events and sectoral interest.
- Processing and execution of international European projects in which ANFACO- CECOPESCA participates.
- Management of practices in ANFACO - CECOPESCA laboratories by students of universities, master's degrees, vocational training centers.

Foreign Cooperation

- More than **159** Foreign Cooperation activities in more than **37** countries in the last 20 years.
- **7** Foreign Cooperation Actions for **10** countries in 2017.
- **International tender:** Design and implementation in Kenya of three official control laboratories for fishery products (Ministry of Fisheries) and training in June 2017 of its technical staff (25 laboratory technicians and fisheries inspectors assigned to the State Department of Fisheries) and 33 representatives of companies in the sector.

INTERNATIONAL PROJECTS AND CONTRACTS

- **FarFish project (Horizon 2020 EU programme)** “Responsive Results -Based Management and capacity building for EU Sustainable Fisheries Partnership Agreement (SFPA)- and international waters”. Participation since June 2017 (duration 48 months) with 20 other European and African entities, to improve management of EU fisheries in non-EU

waters (Cape Verde, Mauritania, Senegal, Seychelles ...), while contributing to sustainability and long-term profitability.

- **Restricted competitive tender - Cape Verde:** “Technical Assistance in the installation and maintenance of new equipment: HPLC, GC, AAS and Training in High Performance Liquid Chromatography (HPLC); Gas Chromatography (GC-MS) and Atomic Absorption Spectroscopy (AAS)”. Ministry of Infrastructures and Maritime Economy (MIEM).
- **Circular Economy Project, Municipality of Maceió (Alagoas, Brasil).** Working sessions in Galicia in November 2017 with the Brazilian Institute for Development and Sustainability (IABS), executing partner of the project, and the rest of the participating entities (Maceió City Hall, Government of the State of Alagoas, Brazilian Service of Support of Micro and Small Companies (SEBRAE), companies of the sector), for the exchange of experiences mainly in the field of the use of mollusc shells.







SCIENTIFIC GUARANTEE + CLIENT ATTENTION +
HIGH QUALITY + FAST SERVICE =



Analytical Technology Area Indicators 2017

One of the main achievements of the of Analytical Technology Area during 2017 was the extension of our accreditation scope (96 / LE230) for the detection of two new allergens, walnuts and sulfites according to the UNE 33-129-82 standard, which, added to the existing ones, **results in the longest list of accredited tests for allergens in the country**. We also gained accreditation for the *Bacillus Cereus* count by automated most-probable-number (MPN) method, detection of *Staphylococcal enterotoxin* by automated immunofluorescence technique (ELFA) and the determination of weight by the Wellmec method. This extension of the scope has allowed us to obtain two new accreditation programs with the National Entity of Accreditation (ENAC) seal: **“Test of Gluten and Allergen in Food”** and **“Microbiological Food Testing”**, becoming the first laboratory in the Autonomous Community of Galicia to achieve such recognition. This fact places us in a position of leadership in terms of technical competence and allowing us to offer an integrated accredited service in these two important areas for food safety.

The area carries out a constant revision of the analytical procedures and **works on the development of innovative methodologies** for new emerging contaminants. In this sense, methods for the detection of Norovirus, genogroups I and II, and Hepatitis A virus by real-time RT-PCR, determination of sugars by liquid chromatography with refractive index detection (LC-RID), sterols and fatty acids by gas chromatography with flame ionization detector (GC-FID), and elements by inductively coupled plasma atomic emission spectrometry (ICP-AES), essential for nutritional labeling, have been developed. Also, drug residues as tetracyclines and disinfectant as Didecyldimethylammonium chloride (DDAC), were added to Benzalconium Chloride (BAC) and other veterinary drugs already available since the previous year.

Finally, among the 2017 accomplishments highlights the **designation by the Association of Official Analytical Chemists (now AOAC International), as independent laboratory** to conduct validation studies for the evaluation of methods submitted to



The number supports us...

>24,000 samples

315 laboratory clients

>129,000 analysis performed

7% annual increase turnover

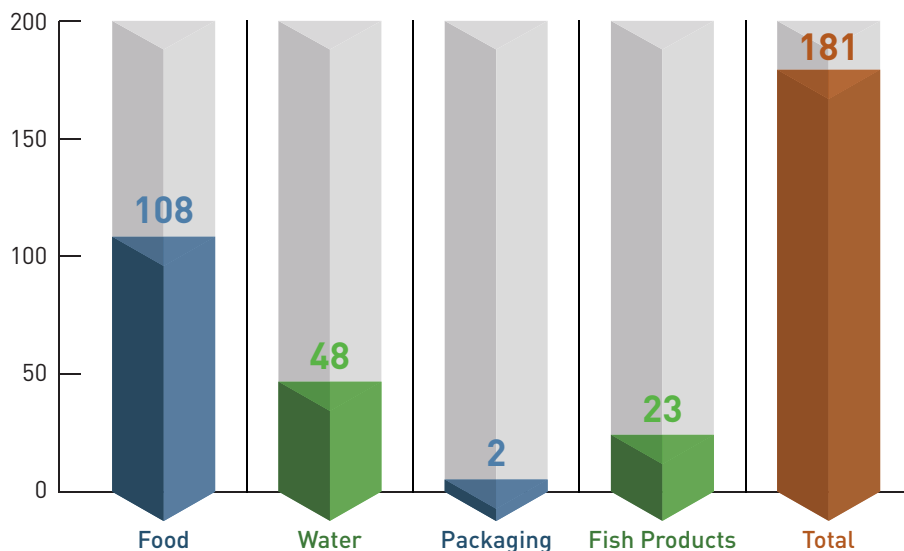
>400 determinations, 181 accredited procedures

86 % results reports covered by the scope of accreditation

N° OF ENAC PROCEDURES / MATRIX

the AOAC Performance Tested Methods Program in the areas of allergens, industrial contaminants, veterinary drug residues and marine biotoxins. This shows, once again, that ANFACO-CECOPESCA is an internationally acknowledged center, recognized by European surveillance and control systems in the field of food safety.

In summary, the Analytical Technology Area, constituted by several specialized laboratories, not only offers analytical results with **the highest quality standards**, but also, a complete counselling service in order to help our clients to reach the best solutions to the requirements of the high demanding food sector.



The background is a deep blue gradient. On the left side, there are several concentric circles. The innermost circle is a bright, glowing blue. Surrounding it are several rings of varying shades of blue. These rings are decorated with various digital and geometric patterns, including small squares, lines, and arrows. Some of the patterns resemble binary code (0s and 1s) or circuit board traces. The overall effect is a sense of depth and technological complexity.

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