



CORPORATE REPORT 2023

FAQ



FREQUENTLY ASKED QUESTIONS

Here at Leitat, innovation is all about solving industrial technological challenges **efficiently and effectively**.

WHAT IS LEITAT?

Leitat aims to generate technological knowledge and innovation, managing technologies and talent. Leitat is a brand of the private entity Acondicionamiento Tarrasense and recognised by the Ministry of Science and Innovation.

WHO OWNS LEITAT?

Leitat is a private, non-profit association of industrialists with its own legal status and assets, established in 1906. It regulates its activities in accordance with current regulations, its bylaws, and its internal regulations.

WHAT DOES LEITAT OFFER?

Leitat leverages proactivity and proximity to provide flexible management in an open innovation environment as a collaboration and cooperation vehicle for technology transfer, while fostering the principles of professionalism, respect for people and the environment.

HOW DOES LEITAT IMPROVE COMPETITIVENESS ON AN INDUSTRIAL LEVEL?

It fosters the implementation of industrial innovation by promoting the modernisation of production structures and the development of new products with high technological value while meeting the ever-changing demands of the global market.

HOW DOES LEITAT MEET TECHNOLOGICAL NEEDS?

Leveraging its technological expertise, Leitat consistently generates knowledge, develops talent, and provides the latest technology equipment and cutting-edge facilities, enabling us to respond to the specific and technological needs of their clients.

WHY DOES IT WORK ON A MULTISECTORAL LEVEL?

Because it applies diverse technologies to different industries with a greater cost-effectiveness of technology, creating and expanding new opportunities. In so doing, it establishes interfaces between previously unconnected sectors. In order to achieve this, Leitat does not spread itself too thinly but instead focuses its activity on the following select industries: transport, construction, packaging, textiles, energy, environment, food, cosmetics, detergency, healthcare, pharmaceutical & veterinary, chemical & materials, biotechnology and safety & maritime.

HOW DOES LEITAT PARTNER WITH BUSINESSES AND INSTITUTIONS?

Leitat leverages its experience and flexibility to sign partnership agreements, joining forces with other experts to tackle industrial technology challenges at every step along the value-added chain and foster entrepreneurship and technology transfer.

WHAT EXPERIENCE DOES LEITAT HAVE WITH INDUSTRIAL PARTNERSHIPS?

For more than 100 years, Leitat has been making an impact on businesses and other organisations through the management of research, development, and industrial innovation proposals, spearheading and participating in strategic projects and generating assets and knowledge.

WHAT IS LEITAT'S GEOGRAPHICAL SPHERE OF ACTION?

In addition to working intensively in Spain, Leitat spearheads and actively participates in numerous international partnerships projects and networks, both in Europe and in other geographical areas with convergent interests.



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01 | ORIGINS





In 1906, a group of industrialists concerned about quality, certification and research projects in the wool industry decided to create an association to support the competitiveness of businesses, which they named Acondicionamiento Tarrasense.

These industrialists successfully anticipated solutions for the needs of business groups and laid the foundations of the current concept of Leitat.



1º logo of Leitat

Over the years, and thanks to the work carried out, the association has expanded its activities and is now identified by the brand name Leitat.

During this time, its dedication to serving companies and entities has remained unchanged, although the type of activities, its organisation chart and in-house working systems have changed considerably, specialising now in various areas of knowledge that seek out the best technological solutions for companies.

The results achieved in recent years prove that Leitat's passionate commitment to knowledge generation and the transfer of this to the production sector is an effective model for the fast, efficient, and sustainable growth of the economy, while also creating new spaces and models for talent development and employee performance.

02 | RECENT HISTORY

2019

- The 3D Factory Incubator is launched in Zona Franca, Barcelona.
- The General Director of Industry of the Department of Business and Knowledge of GENCAT, Matilde Vilarroya, visits Leitat.
- Leitat exhibits its capabilities at the international exhibition Hannover - Messe.

- Leitat and Vilanova del Camí City Council organise the fifth Innovation Day in Anoia.
- Leitat and Terrassa City Council promote the Kautic 2019 programme (ICT Incubator).
- Leitat hosts the “HELLO AI SUMMER SCHOOL”, training for international university students.
- A commercial delegation from Heze (China) visits Leitat Terrassa.
- Leitat collaborates with the Ricard Vaccaro Awards.
- Leitat designs a sustainable vertical garden for a school in Valencia.



- The Industry association acknowledges Leitat's progress.
- Leitat hosts the "summit meeting" of the Club de Excelencia en Gestión.
- FCRI and Leitat sign a collaboration agreement.
- Leitat co-organises and hosts the "Avança't 3d" conference.
- Leitat is leading a project to create a lighter and more efficient lithium-sulphur battery.

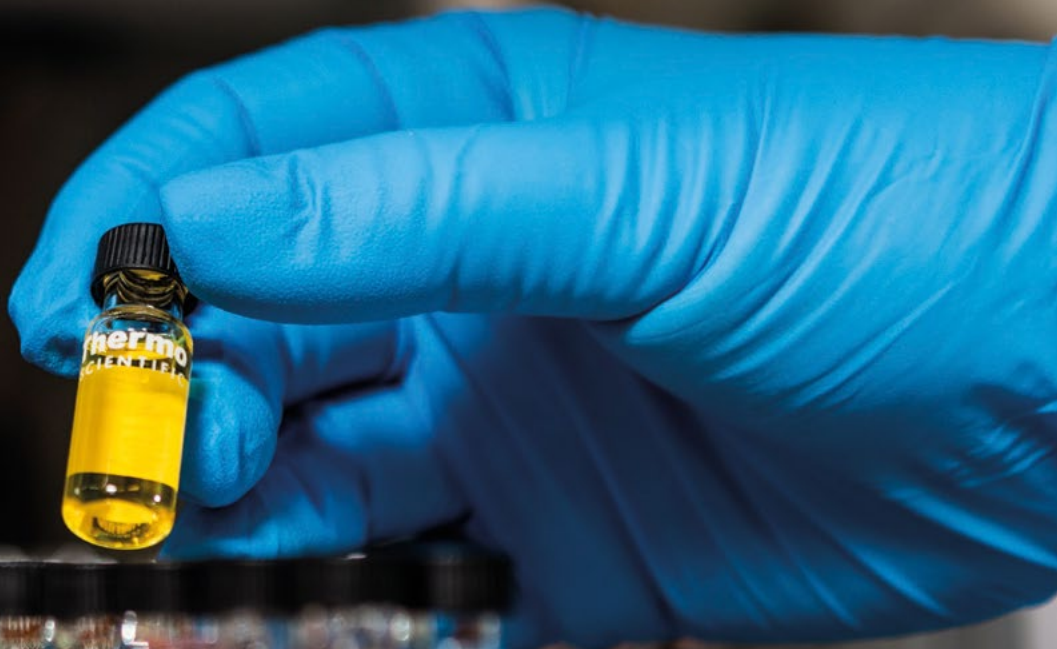
2020

- Leitat 1 reaches ICU patients as an accredited field respirator.
- Leitat delivered 500 splitters to Sanitat for ICUs.
- Leitat studies the sustainability of bio-electrochemical systems in water treatment.
- Leitat works on two projects to improve the applications of collaborative robotics.
- Leitat moderates several panels of the BNEW.
- The 3D Incubator celebrates a successful first year.
- Esteve and Leitat create WeLab, a strategic alliance for research and development.
- SAByNA project for the safe development of nanomaterials and nanotechnology-based products.
- Leitat donates computer equipment to Andròmines.
- Leitat joins the EMAS events on its 25th anniversary.
- Leitat achieves the EFQM Seal of Excellence 500+.

2021

- Leitat and SEIDOR sign a strategic alliance to support the digital transformation of companies and promote R&D projects.
- Leitat participated in the Regional Council's Industry 4.0 Webinar Cycle.
- Leitat and Hospital Clínic de Barcelona are promoting CATI, a leading centre in healthcare technology innovation.
- Leitat participates in the presentation of the Mercedes-Benz Factory Transformation Project.
- Leitat joins the advisory board of the BE TALENTSTEAM platform.
- Leitat participates in the Unprecedented Virtual Forum.
- Leitat 1 gets the IP22@ badge at the 22@: Emerging Tech 20th anniversary gala.
- Leitat participates in the Expoquímica Congress.
- Leitat and Ibec promote state-of-the-art biotechnologies from Barcelona.
- Leitat participates in the Cosmetorium Congress.
- Leitat takes part in the BNEW congress for the second year.
- Leitat organises the 'Circular Economy Hotspot Catalonia 2021' PACKAGING TOUR.
- New technologies applied to mental health and disability.
- Leitat is a finalist in the SAP Quality Awards.
- The Club de Excelencia en Gestión acknowledges Leitat's management.
- Leitat presents an award for a non-invasive neonatal ventilation mask and an artificial intelligence project for the detection of melanomas at the IED of the Clinical Campus innovation awards.

03 | CURRENT



MANAGING TECHNOLOGIES

Industrial R&D generates high-value employment, solid economic activity, and competitiveness in the business environment, in a sustained way over the long term. Thanks to the talent of its workers and the depth of its experience (since 1906), the Technological Center model has proven itself to be useful and efficient at promoting Industrial R&D, which acts as an economic engine in the present driving sustainability into the future.

The implementation of 540 projects, both national and international, in collaboration with partners from 71 countries in 2022, demonstrates the disruptive and innovative nature of Leitat's corporate culture. By managing technologies and lines of research, we have contributed to uniting the market and research through the transfer of technology while facilitating the adoption of transversal technological solutions in fields such as health, 3D printing, photonics and robotics, among others.

Technological development involves the creation of new production and business models that must be sustainable and aligned with the challenges posed by the Sustainable Development Goals (SDGs). At Leitat, we work with the conviction that technological innovation will be one of the key elements in achieving an equitable and sustainable progress model.

In this Corporate Report, we want to share some of the activities carried out during 2022 that allow us to approach the future, both immediate and long-term, with the optimism of an actor in the innovation ecosystem that is the result of the sum of the efforts of all the people

who are part of Leitat. It comes from their attitudes and aptitudes, through our commitment, our involvement, and our responsibility to contribute to generating well-being for society.

We would like to thank the effort and dedication of everybody who contributed to the activity detailed below.

Our warmest regards,



Mr. Jordi William
President
presidencia@leitat.org



Dr. Joan Parra
Executive vice president /CEO
info@leitat.org

04 | VALUE PROPOSITION

MANAGING TECHNOLOGIES

WE OFFER SOLUTIONS

PURPOSE

We generate technological knowledge and innovation by managing technologies and talent.

MISSION

We manage technologies to create sustainable social, environmental, economic and industrial value, transferring this value to companies and entities through research and technological processes.

VISION

To be a global benchmark for the management of innovative technologies, stimulating people's creativity and talent.

VALUES

Enthusiasm, achievement, and respect.

WE MANAGE TECHNOLOGY WITH FLEXIBILITY AND AGILITY TO PROMOTE

DYNAMISM

We are structured to give a quick and effective response, with adaptability, accountability, and transparency.

PROXIMITY

We establish communication and openness with our environment, with a global perspective, confidentiality, and commitment.

COLLABORATION

We take part in the development of R&D and industrial innovation projects by providing knowledge and experience, with economic and social return.

COOPERATION

We work together to create sustainable and innovative value and respond competitively in a global environment.



PRINCIPLES OF THE LEITAT MANAGEMENT POLICY OF LEITAT

STRATEGY
EQUALITY
LEADERSHIP
CUSTOMER SATISFACTION
COMMUNICATION
PARTICIPATION
TRAINING
SECURITY
ENVIRONMENT
LEGISLATION

CORPORATE CULTURE

PRINCIPLES

Our activities are based on four Strategic Pillars which help us to successfully overcome our challenges and make the most of our opportunities:

PROFITABILITY · REPUTATION
INNOVATION · TALENT

SKILLS

The team at Leitat possess the following skills:

PROFESSIONALISM
POSITIVITY
INNOVATION
RESILIENCE
HONESTY AND INTEGRITY

05 | ORGANISATION

BOARD OF DIRECTORS

Composition December 2022

PRESIDENT Mr. Jordi William Carnes Ayats
Representing the Carnes Global Projects, SL

VICE PRESIDENT Dr. Joan Parra Farré

VICE PRESIDENT Mr. Francesc Roca Llongueras
Representing the Finish S.A.

SECRETARY Mr. Joan Serra Albesa
Non member

MEMBER Mr. Ricard Cima Julià
*Representing the INDUSTRIAL INSTITUT OF
TERRASSA*

MEMBER Mr. Salvador Maluquer Trepas
*Representing the COTTON MANUFACTURING
ASSOCIATION*

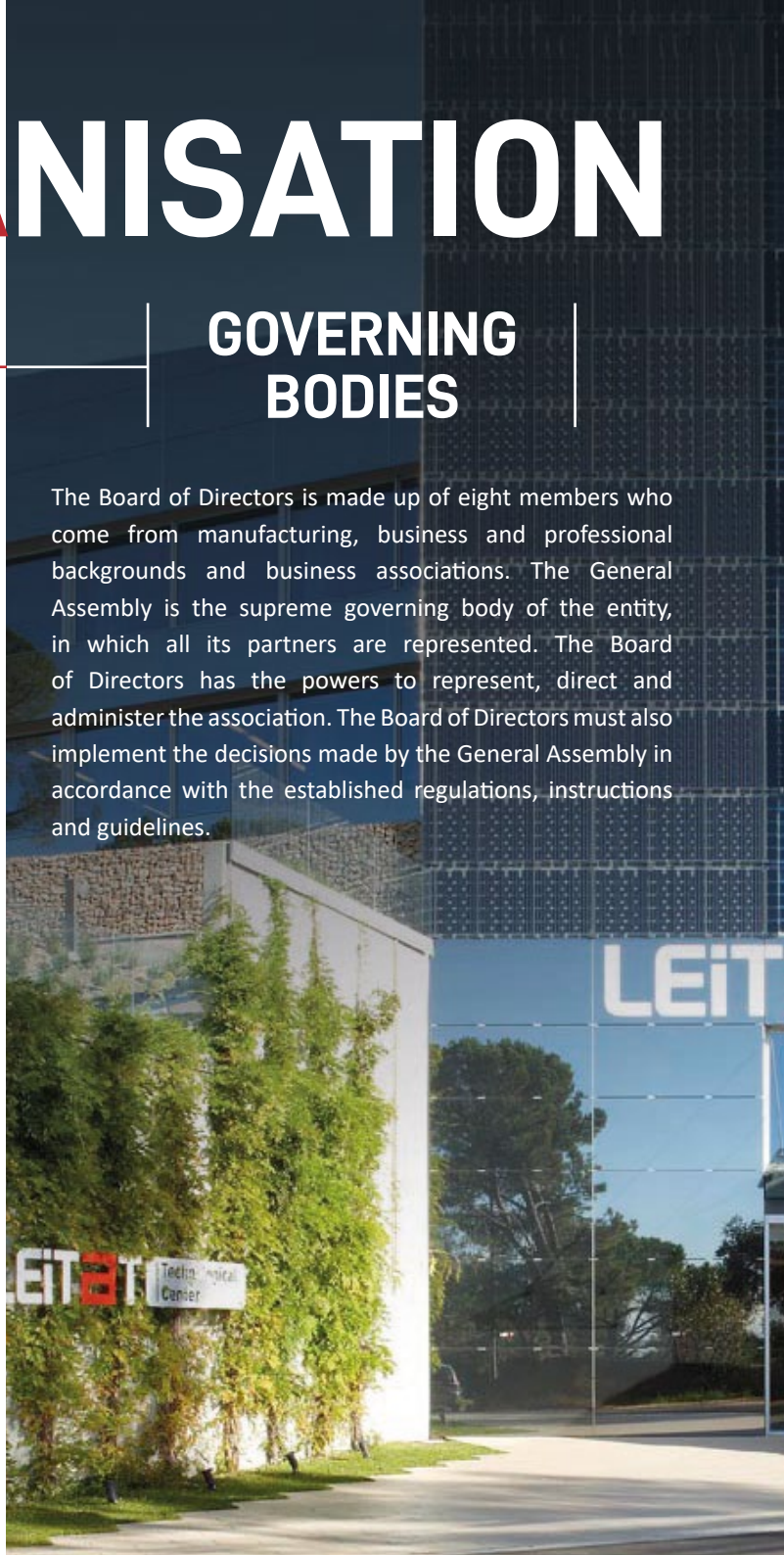
MEMBER Ms. Dolors Puig Gasol
Representing the TALENTUM ASSOCIATS, S.L.


MEMBER Mr. Joan Romero Circuns
*Representing the AGENCY FOR COMPANY
COMPETITIVENESS (ACCIÓ)*

MEMBER Mr. Xavier Torra Balcells
Representing the EURECAT FONDATION

GOVERNING BODIES

The Board of Directors is made up of eight members who come from manufacturing, business and professional backgrounds and business associations. The General Assembly is the supreme governing body of the entity, in which all its partners are represented. The Board of Directors has the powers to represent, direct and administer the association. The Board of Directors must also implement the decisions made by the General Assembly in accordance with the established regulations, instructions and guidelines.





Acondicionamiento Tarrasense is a non-profit association with its own legal status and assets, established in 1906. It regulates its activities pursuant to Law 4/2008 of 24 April of the Third Book of the Civil Code, relating to Legal Entities (Official Catalan Government Gazette No 5123 of 2 May), Organic Law 1/2002 of 22 March regulating the Right of Association (Official Spanish Government Gazette 73 of 26 March), and its bylaws.

ORGANISATION CHART

From a traditional structure to a flexible and dynamic organisation, prioritising operational and project-specific teams with cross-sectional communication and a definition of responsibilities, with the aim of meeting the technological expectations of customers and society.

APPLIED RESEARCH & TECHNOLOGY SERVICES (ARTS)

- Health & Biomedicine (H&B)
- Digital Industry
- Applied Chemistry & Materials (ACM)
- Circular Economy & Decarbonization (CED)
- Advanced Technological Services (STA)

NOTIFIED BODY

Certifications of personal protective equipment (PPE)

PROMOTED PROJECTS

- Healthcare Living Lab Catalonia
- IAM 3D HUB

SINGULAR INITIATIVES

- 3D INCUBATOR
- WELAB
- DFactory

INNOVATION

Technological and digital transformation

STRATEGIC AND SUPPORT STRUCTURES

- Finance and corporate
- Operations administration
- Science and technology
- Promotion and security
- Security and reputation
- Development and people management

06 | LEITAT INNOVATES

WHERE HAVE WE COME FROM?

1784

FIRST MECHANICAL LOOM

INDUSTRY 1.0

Application of mechanisation.
Driven by water and steam energy.

1870

FIRST CONVEYOR BELT

INDUSTRY 2.0

Mass Production.
Division of labour.
Electricity application.

1906

CREATION OF
ACONDICIONAMIENTO
TARRASENSE

WHERE ARE WE?

PLANET LIMITS

RESILIENCE

PERSON FOCUSED

1969

FIRST PROGRAMMABLE LOGIC CONTROLLER (PLC)

INDUSTRY 3.0

Use of electronics and computing to
promote automated production.

Social objectives.

Beyond jobs and growth.

Resilient provider of prosperity.

Respect for the limits of the planet.

Welfare of the worker central to
production.

INDUSTRY 5.0

TODAY

INDUSTRY 4.0

Hybridisation of physical and
cybernetic systems.

Technology 4.0

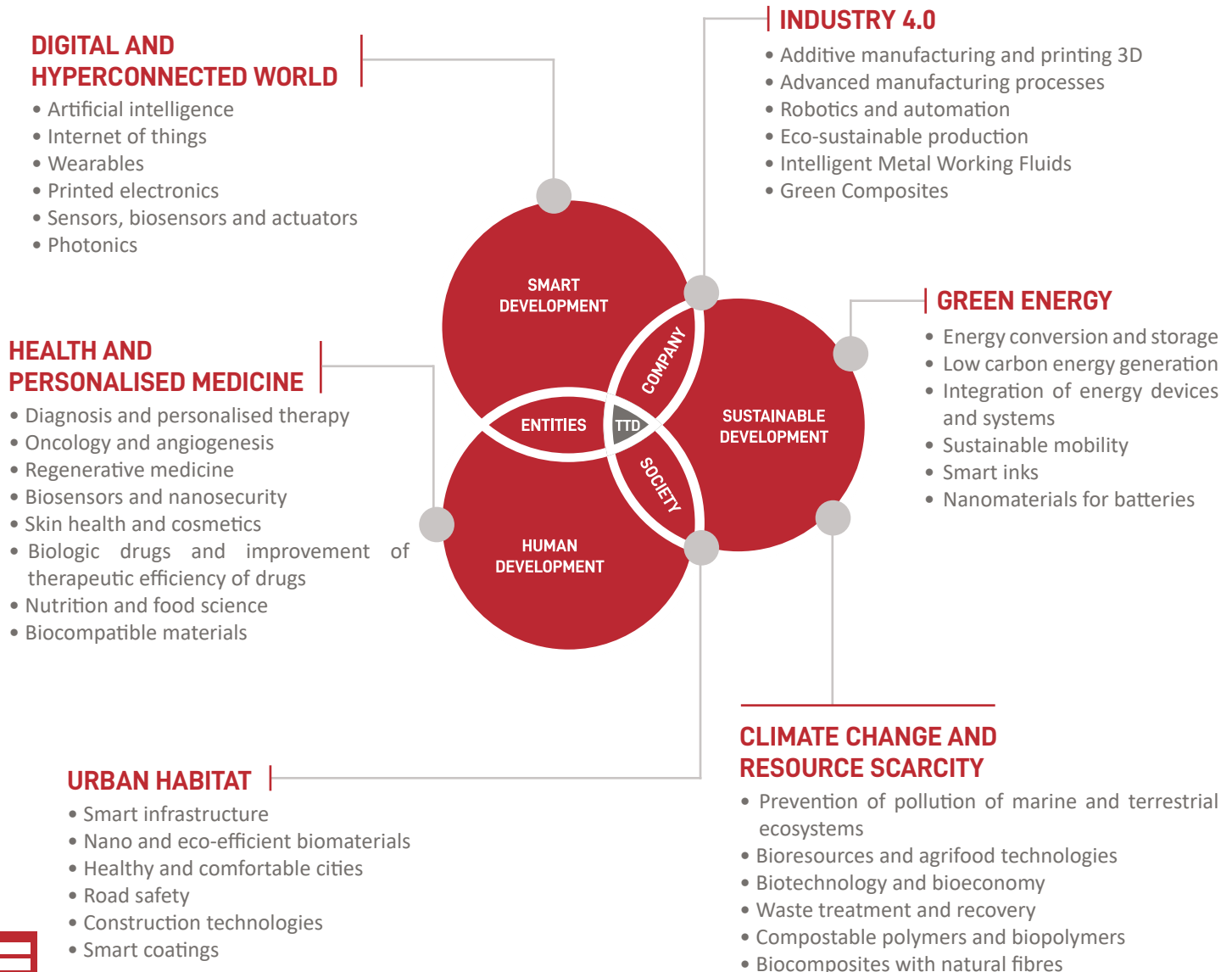
Technological development has allowed innovation to
flourish for the benefit of society, delivering
growth and improved well-being.

In order to complete the paradigm of industrial technology as a
source of innovation and well-being, it is necessary
to ensure that it respects the limits of the planet,
generates adaptable and resilient models,
and that it places human well-being at
the centre of production processes.

WHERE ARE WE GOING?

MAIN TECHNOLOGICAL AREAS OF ACTION

TTD: TECHNOLOGICAL AND DIGITAL TRANSFORMATION



HOW DO WE DO IT?

The field of technology is changing and will continue to do so, as well as posing present and future changes and challenges. However, it is not alone in this. We are moving towards transforming industry into having a beneficial evolutionary impact on society. The real aim of this new industry includes social and environmental considerations. We are moving towards responsible innovation that contributes to increasing the prosperity of all the players involved: businesses, society, and the environment.



R+D+2i PROJECTS



LABORATY TESTS AND CERTIFICATIONS



INCUBATION SERVICES

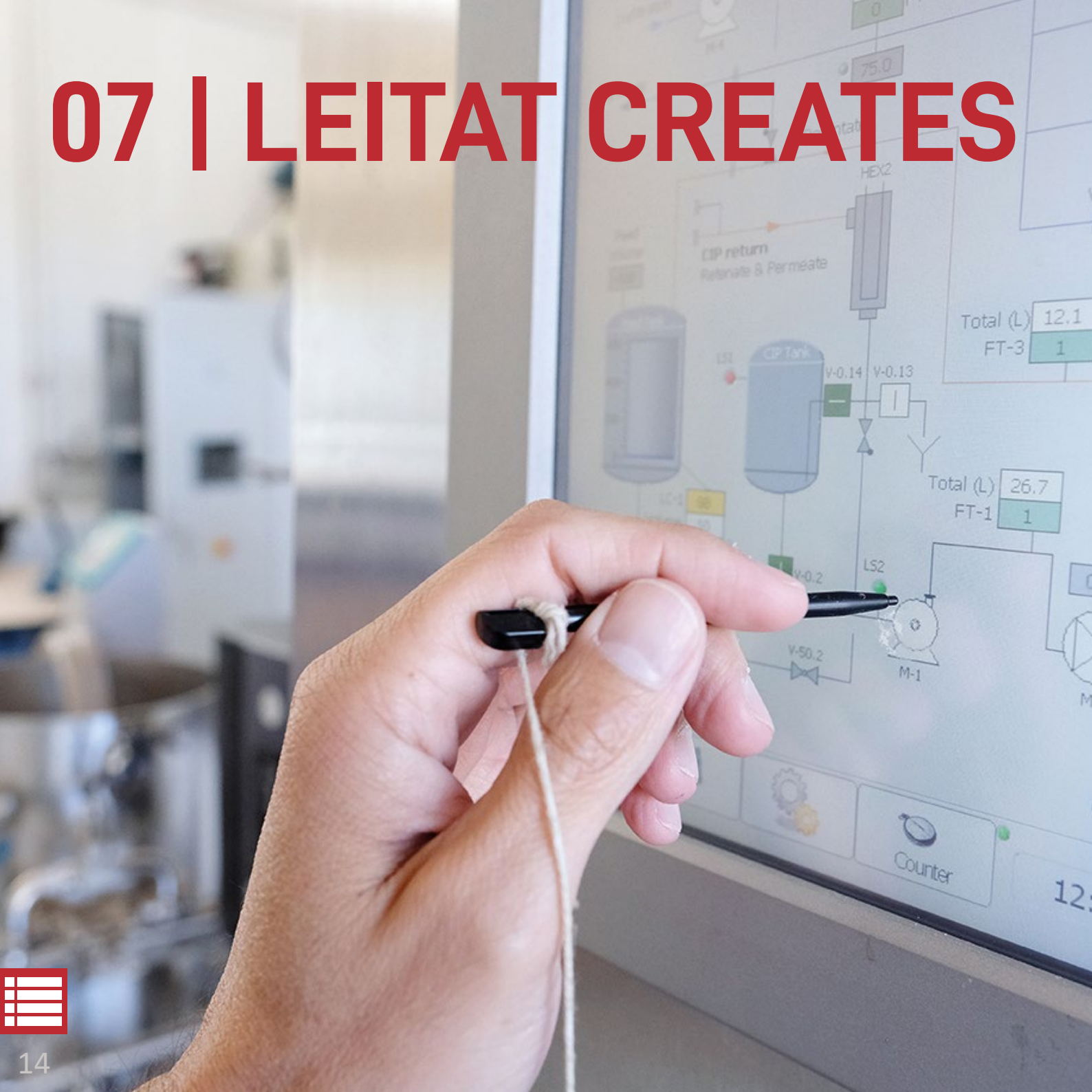


TECHNOLOGICAL CENTRE OF EXCELLENCE



SPIN-OFF & IPR

07 | LEITAT CREATES





ENTREPRENEURSHIP

Creation, development, and technology transfer with social engagement in new markets, based on needs identified in markets and industries. Financial and competitive support for the development of the projects/products for a guaranteed impact on the market while capitalising on technological development.



TECH MENTORING

Technology transfer from knowledge-generating cores to the market. Intensive use of technology and knowledge obtained through research. Creation of assets and capacities for clients (technology, brand and systems).



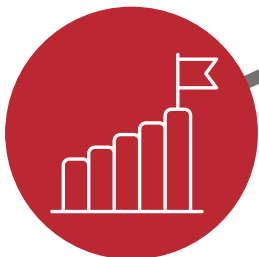
GROWING BUSINESS AREA

Access to multisectoral teams, leveraging synergies with the Centre in an open innovation environment to expand the scope of initiatives. Accelerator platform for international expansion. Complementarity with other existing projects.



ADVANCED MANAGEMENT

Strategic management focused on the global market. Management skills and abilities. Flexibility and adaptability.



FFF COMMUNITY

Relationship with funds and financial partners to facilitate and improve business plans and the initial stages of Technology-Based Business (EBT) projects. Generation of critical mass for business development, promoting and developing projects to support growth and business consolidation oriented to market success.

08 | CONNECTED TO KNOWLEDGE NETWORKS

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NATIONAL

Cognizant that intellectual property is universal and can be generated and developed anywhere in the world, Leitat firmly believes in and promotes the concept of open innovation as a form of partnership to provide an effective response to the technological challenges posed by our customers.

NATIONAL TECHNOLOGY ASSOCIATIONS AND PLATFORMS

AER Automation Spanish Association of Robotics and Automation

ASEBIO Spanish Association of Biotechnology Companies

BIOVEGEN Technology Platform for Plant Biotechnology

FEDIT Spanish Federation of Technological Centres

SeCPHO Southern European Cluster of Photonics and Optics

CLÚTER MAV Advanced Materials of Catalonia

CWP Catalan Water Partnership

FOTONICA 21 Spanish Technological Platform of Photonics

FOTOPLAT Spanish Technology Platform for Photovoltaics

HISPAROB Spanish Robotics Technology Platform

MANU-KET Manufacturing Technology Platform advanced MANU-KET

MATERPLAT Spanish Technology Platform of advanced materials and Nano-materials

NANOMED Spanish Platform for Nano-medicine

PLANETIC Spanish Technology Platform for systems with integrated intelligence (Embedded Systems)

PTE-HPC Spanish Technology Platform for hydrogen and fuel cells

PTEPA Spanish Technology platform for fishing and aquaculture

PTF4LS Technological platform Food for Life Spain

SUSCHEM-ES The Spanish technology platform for sustainable chemistry



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INTER
NATIONAL

INTERNATIONAL TECHNOLOGY ASSOCIATIONS AND PLATFORMS

- ARTEMIS ARTEMIS Industry Association
- BEPA Batteries European Partnership Association
- BIC Biobased Industries Consortium
- CLEANSKY Clean Sky Joint Undertaking
- EARPA European Automotive Research Partners Association
- EARTO European Association of Research and Technological Organizations
- EFFRA European Factories of the Future Research Association
- EMIRI AISBL Energy Materials Industrial Research Initiative
- EU ROBOTICS European Robotics Coordination Action
- SETAC Society of Environmental Toxicology and Chemistry
- SPIRE Sustainable Process Industry through Resource and Energy Efficiency
- WAITRO World Association of Industrial and Technological Research Organizations
- AM PLATFORM Additive Manufacturing Platform
- EPoSS European Technology Platform on Smart Systems Integration
- ETP NANOMEDICINE The European Technology Platform on Nanomedicine
- EUMAT European Technology Platform on Advanced Engineering Materials and Technologies
- PHOTONICS 21 European Technology Platform for photonics
- SUSCHEM European Technology Platform for Sustainable Chemistry
- TEXTRANET European Network of Textile Research Organization
- VANGUARD Vanguard Initiative
- WSSTP Water Supply and Sanitation Technology Platform
- Textile ETP European Technology Platform for the Future of Textiles and Clothing

WAITRO



orbital.40
Parc Científic i Tecnològic de Terrassa

09 | MULTISECTORALS RESPONSES

TO THE TECHNOLOGICAL NEEDS OF THE COMPANIES



TRANSPORTATION

- Industrial design and development of components and products.
- Advanced materials (polymers, adhesives, coatings, nanomaterials, micro and nanocapsules).
- Advanced manufacturing: IoT, collaborative/mobile robotics and additive manufacturing/3D printing.
- Tribology and tribochemistry.
- Treatment, disinfection, and control of indoor air quality.



ENERGY

- Emerging solar photovoltaic/concentration technology.
- Design and development of components and products for the photovoltaic and energy industry.
- Energy harvesting & management.
- Energy efficiency studies, measurement, and verification of savings.
- Energy recovery from waste streams.
- New materials for batteries and energy harvesting (polymers, nanomaterials, coatings, inks).



FOOD

- New alternative sources of ingredients (microalgae, insects, by-products).
- Development and validation of active ingredients, functional food.
- Microencapsulation of new active ingredients.
- Cellular models for studies of efficacy and bioavailability of assets.
- Mixed in vivo/in vitro models (cellular-microbiota) and humanised animal models.
- Microbiota study.
- Energy metabolism and nutrition.
- Formulation of new food products.
- 3D food printing.
- Quality control, Allergens, and Intolerances: detection by fast sensors and cellular characterisation.
- Food Safety.
- Sensory evaluation of food and shelf-life studies.
- Design and development of components, products, and equipment for the food industry.





ENVIRONMENT

- Efficient treatment, reuse, and management of water.
- Recycling, treatment and recovery of waste/by-products.
- Soil restoration and agronomy.
- Treatment and control of air quality.
- Separation and oxidation technologies, new materials, biological processes, and nature-based solutions.
- Removal of emerging pollutants.
- Microbiological control and detection of emerging pathogens.
- Sensors and biosensors for the detection of contaminants.
- Decarbonisation technologies and strategies
- Environmental impact of technologies, products, and processes. Life Cycle Analysis (LCA).
- Analysis of environmental and human health risks.
- Design of safe products and processes.
- Sustainable production and circular business models.



HEALTH

- Advanced materials (polymers and biopolymers, bioadhesives, compatible adhesives).
- Portable or desktop diagnostic devices.
- Microbiota as a biomarker of wellness/disorders.
- Biomarkers in blood, urine, and saliva.
- Design and development of products and tools for diagnosis, prognosis, monitoring and response to therapy.



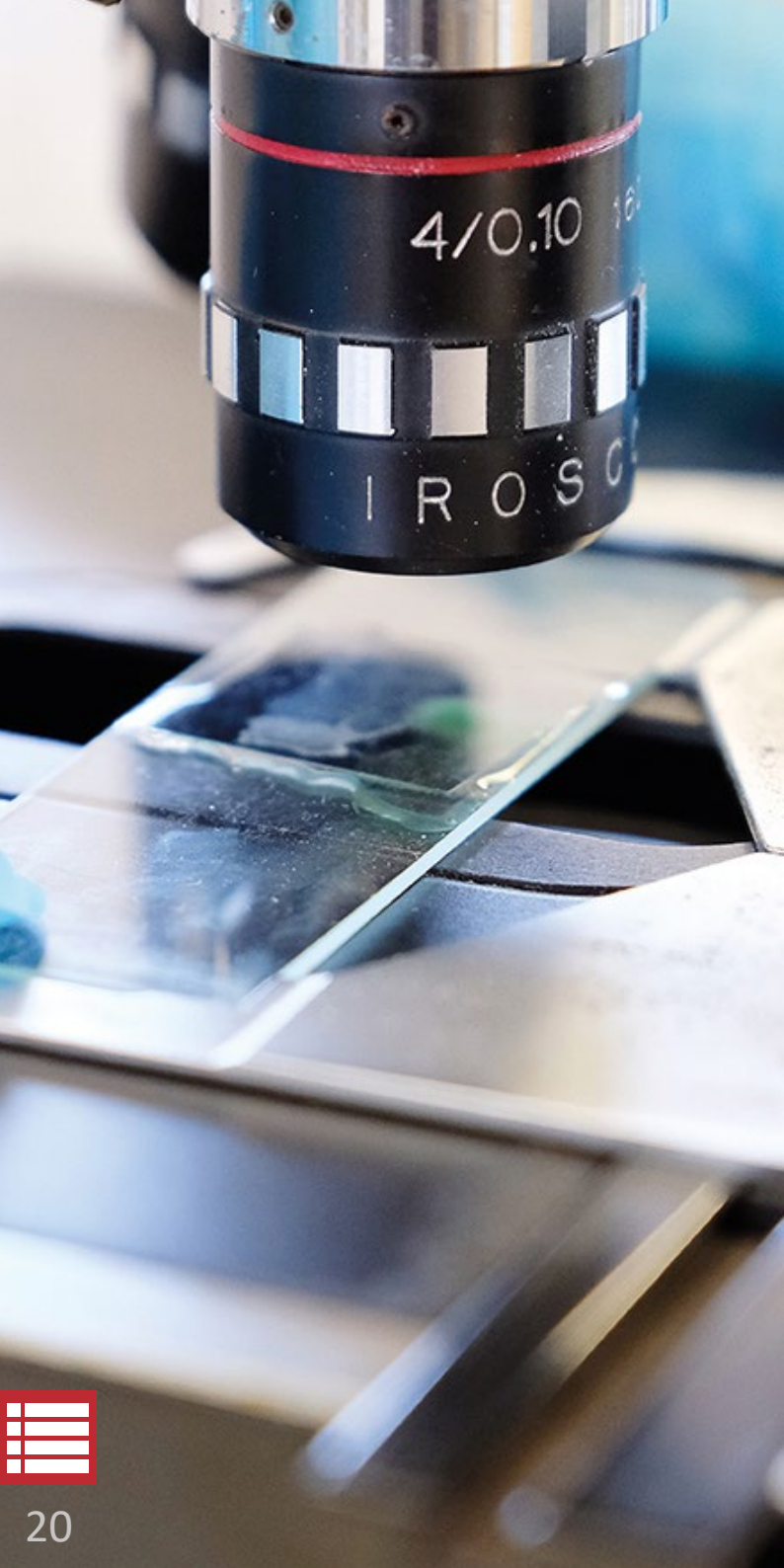
PHARMACEUTICAL AND VETERINARY

- Preclinical validation of therapeutic targets.
- Mechanism of action and drug efficacy studies.
- ADMETox.
- Cellular models, organoids, and animal models.
- Oncological, inflammatory, autoimmune, dermatological indications.
- Generation and production of monoclonal and recombinant antibodies.
- ScFV libraries and phage display.
- Nanoformulation of drugs.
- Drug discovery and drug development.
- Metabolomics.



TEXTILES

- Technical/smart textiles, support for industrialisation and testing.
- New materials for fabrics (biomaterials, polymeric materials).
- Product design and development based on textile solutions.
- Development of inks, finishes and application of nanotechnologies.
- Textile finishes with advanced functionalities (coatings, inks, dyes, nanomaterials, micro and nanocapsules).
- Remanufacturing and preparation for reuse.
- Textiles recycling.



PACKAGING

- Development of packaging projects.
- Prototyping by additive manufacturing.
- Inks and printed electronics.
- Global support for product industrialisation, testing, and validation.
- Advanced materials (polymers, nanomaterials, barrier materials, coatings, electronic inks, sensor inks, micro and nanocapsules.
- Biobased, biodegradable materials.
- Ecodesign of containers and packaging.
- Active packaging.



CONSTRUCTION

- Advanced materials (asphalts, cements, concretes, nanomaterials, micro and nanocapsules, smart materials).
- Smart integration of renewable energies.
- Energy efficiency.



BIOTECHNOLOGY

- Enzymes as active ingredients in high turnover products (cosmetics, detergent).
- Biocatalysis for the bioproduction and improvement of active ingredients.
- Directed evolution of enzymes.
- Bioprocesses to obtain bioproducts from alternative sources (CO₂, waste).
- Microbial consortia.
- Agro biotechnology.





SECURITY

- Nanosafety
- Sensors and actuators.
- Efficacy and safety studies
- Biosafety: rapid detection of toxic and infectious agents.
- Advanced materials (smart inks, nanomaterials).



DETERGENCY

- Study and development of active ingredients.
- Product formulation and efficacy tests.
- Consumer tests.
- Ecolabels for detergency products.
- Applied microbiology enzyme activity.



MARITIME

- Prevention and mitigation of emergent pollutants in the sea (microplastics).
- Recycling of materials in the maritime environment (boats, etc.)
- Reduction of marine pollution.
- Management and recovery of fishing and port waste: recovery of marine biomass to obtain ingredients and products.
- Screening of marine microorganisms and bioproduction of natural products.



COSMETICS

- Advanced materials (micro and nanocapsules and nanomaterials).
- Formulation of cosmetic products.
- Consumer tests.
- Ecolabels for cosmetic products.
- Efficacy studies and 'innovative claim support'.
- Safety profile of cosmetic ingredients and formulations.
- Screening, bioproduction and characterization of new (active) cosmetics.
- Mixed in vitro models (cellular - microbiota).
- Design and development of components, products, and equipment for the cosmetics industry.



CHEMISTRY AND MATERIALS

- Nanomaterials and polymer synthesis.
- Formulation of polymers, paints, inks, coatings, and construction materials.
- Design of bioprocesses. Biocatalysis and enzymes.
- Surfaces treatment.
- Nanosafety, REACH.
- Testing, analytical chemistry and industrialisation mentoring.
- Tribology and tribochemistry (cutting fluids, coolants, oils, lubricants, and greases).
- Flow Chemistry.
- Chemical recycling of polycondensation polymer.

10 | APPLIED RESEARCH & TECHNOLOGY SERVICES (ARTS)



10.1 | HEALTH & BIOMEDICINE (H&B)

10.2 | DIGITAL INDUSTRY

10.3 | APPLIED CHEMISTRY & MATERIALS (ACM)

10.4 | CIRCULAR ECONOMY & DECARBONIZATION (CED)

10.5 | ADVANCED TECHNOLOGICAL SERVICES (STA)

11 | LEITAT NOTIFIED BODY

12 | PROMOTED PROJECTS

Healthcare Living Lab Catalonia
IAM 3D hub

13 | SINGULAR INITIATIVES

3D Incubator
DFACTORY

INDUSTRIAL RESEARCH

That adds value, differentiation, and innovation opportunities in global markets.

- IMPROVEMENT OF PROCESSES
- IMPROVEMENT OF PRODUCTS
- ADAPTATION TO CHANGE
- INNOVATIVE CAPACITY

MULTIDISCIPLINARY TEAMS

With expertise and experience in different disciplines and areas of knowledge.

- COMPETITIVE IMPACT
- SOCIAL IMPACT
- INTERNATIONALIZATION
- ECONOMIC RETURN

10.1 | HEALTH & BIOMEDICINE (H&B)



RESEARCH AREAS

Generation of on-demand polyclonal and monoclonal antibodies (mAbs) for basic research, diagnosis, and therapeutic treatments.

Genetic engineering of proteins and monoclonal antibodies: Recombinant Proteins, Antibody Drug Conjugates (ADC), VHH single domain (nano) antibodies, Bispecific Antibodies, Chimerisation, Humanisation, Fusion Proteins, Antibody fragments (Fab, scFv), Phage Display Libraries and Biosimilars.

In vitro cell models to study efficacy, safety, mechanism of action, screening, synergies, bioanalytics, metabolomics, etc. of drugs, cosmetic health products, regenerative products, and food supplements.

In vivo animal models to study efficacy, biodistribution, preclinical toxicology and maximum tolerated dose (MTD), pre-PK, histology, etc. (oncology, inflammation, dermatology, sports, cell and tissue regeneration, angiogenesis).

In vivo animal models for microbiome, dysbiosis, and human microbiota transplant studies. Collaboration in the development of probiotics and prebiotics for nutrition and treatment of diseases.

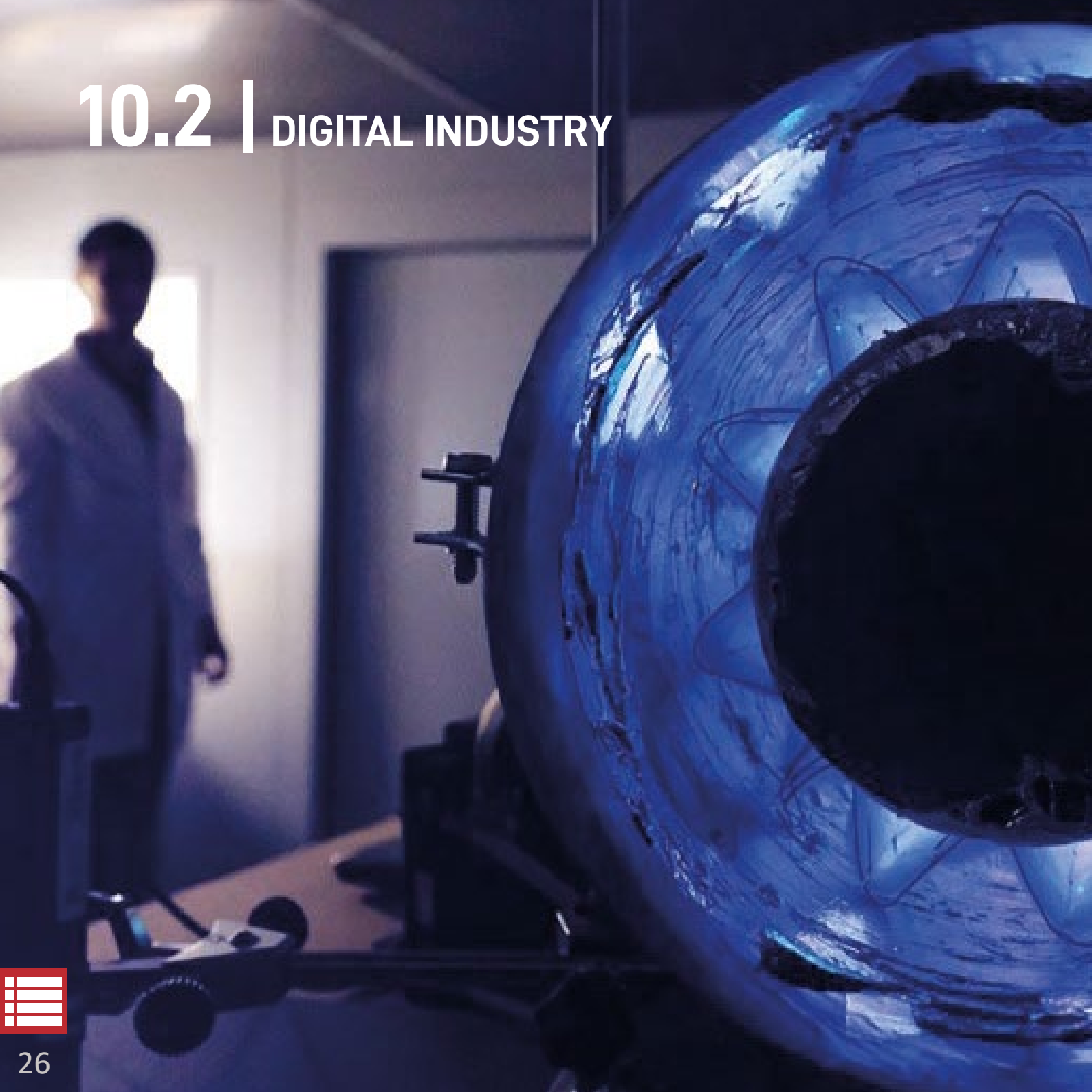
In vivo models of osteoarticular injuries -muscle, cartilage, tendon, ligament (small and large animals) combined with imaging studies (CT, MRI).

Design of biogenome tools for the validation of therapeutic targets and diagnostic biomarkers: siRNA, DNA, hairpins, array analysis, etc.

We focus on therapy and diagnosis in areas and sectors such as oncology, inflammation, dermatology, sports, cell and tissue regeneration, angiogenesis, etc., with activities in:

- Analysis of the therapeutic efficacy of new drugs, whether chemical, biological, cellular or genetic (at a molecular, biochemical, immunochemical and cellular level, and in laboratory animals).
- Drug targeting and drug delivery projects for the improvement of drugs and other therapeutic applications.
- Development of new biological drugs (monoclonal antibodies and recombinant proteins) and their improvement (chimerisation, humanisation, biosimilars, conjugation).
- Identification, validation and characterisation of new therapeutic targets and diagnostic biomarkers.
- Determination of new indications for drugs on the market and in clinical phases (reprofiling).
- Development of new and innovative tools for the diagnosis, prognosis and monitoring of the evolution of diseases and their treatment (monoclonal antibodies, ELISA kits, immunohistological kits).
- Development of devices for ambulatory use (lateral flow devices, biosensors). Our diagnostic solutions and specific biosensors are applicable in various industrial sectors such as health, sports medicine, veterinary medicine, food, and the environment.
- Bioanalytical and metabolomic services for in vitro and in vivo studies, making use of high-performance analytical techniques (chromatography combined with mass spectrometry).

10.2 | DIGITAL INDUSTRY



RESEARCH AREAS

Energy conversion and storage technologies. Design, assembly and characterisation, control and integration of energy devices and systems (solar, energy storage, bioelectrochemical systems, conversion of energy vectors).

Smart systems. Sensors, optical/electrochemical biosensors, printed electronic components, industrial Internet of Things, and communications.

Robotics / advanced manufacturing processes. Collaborative robotics, mobile robotics, and automation.

Additive manufacturing/3D printing. Design and engineering of advanced industrial applications, development of process parameters and post-processing strategies/systems.

Design and development of product and process supported by industrial design tools, simulation and multiphysics modelling.

Our activities improve industrial competitiveness, bringing knowledge and technology to a digital and sustainable industry.

We provide technological innovation in industries such as energy, transport, and manufacturing, with an impact on new products, production processes and/or business models.

The activity focuses on:

Technological research and industrial development.

A multidisciplinary team made up of physicists, chemists, electrochemists, and engineers means that we can develop innovative projects from different perspectives and that we have laboratories specially designed for these activities.

- Electronics lab.
- Robotics lab.
- Energy lab.
- Device manufacturing, assembly, and printing equipment
- Solar simulation and electrochemical characterisation equipment.
- Composite characterisation and processing equipment.
- CAD/CAE/CAM design tools.
- Multiphysics simulation software.
- Accelerated ageing life cycle and pre-approval testing.

10.3 | APPLIED CHEMISTRY & MATERIALS (ACM)



RESEARCH AREAS

We carry out end-to-end projects in the field of applied chemistry and materials science, encompassing its entire scale of value and various stages of production processes: synthesis stages, formulation of raw materials with pilot processes and implementation of technology demonstrators applicable to the new materials developed, as well as studies of recyclability and service life. With all this, our aim is to help industries develop their projects from any stage of the value chain of applied chemistry and materials sciences in order to provide knowledge and innovation and create a strong and powerful industrial network based on the new products and processes developed.

Raw Materials. Study and synthesis of polymers and biopolymers, resins, organic compounds, surfactants and oils. Synthesis of micro and nanocapsules. Synthesis and surface modification of metallic nanomaterials, ceramics, nanofibres and carbonaceous structures. Study and modification of surfactants, oils and greases. Synthesis of organic molecules by conventional techniques and by flow chemistry.

Design and formulation. Formulation of paints, inks and functional coatings. Asphalt, concrete and cement mixing processes. Formulation of detergents and cosmetic products. Development of polymer composites (nanocomposites, biocomposites) by extrusion and reactive extrusion. Electrospinning of nanofibres, nanomesh and hollow fibres. Formulation of cutting fluids, coolants, lubricants, and greases.

Processing and application. Transformation of polymers using conventional techniques (injection, extrusion blow moulding and injection blow moulding). Spinning processes. Plasma treatments and application of coatings and paints (spray, spin coating, padding, scraper). Ink printing (screen printing, inkjet, pad printing). Washing processes in textiles and on surfaces. Application of tribochemical products on metal surfaces. Sol-gel treatments and application of nanofibres by electrospinning on substrates.

Validation. Material characterisation (mechanical, impact, barrier, antimicrobial, hardness, scratch resistance, adherence, fire resistance), validation tests on detergents and cleaning products, formulation stability studies, lubricity, corrosion, and foaming studies for tribochemicals, consumer tests, olfactory evaluations and ecolabelling. Accelerated ageing tests. Chemical characterisation HPLC, GPC, UV-VIS, FTIR, ICP-MS, etc.

Global and optimised projects for the development of new materials, aimed at key industries such as transport, aeronautics, energy, textiles, detergency, cosmetics, packaging and the environment.

Chemical recycling of polycondensation polymers.

10.4 | CIRCULAR ECONOMY & DECARBONIZATION (CED)



RESEARCH AREAS

Innovative technologies and strategies for sustainable and safe production, the efficient management of natural resources and the optimal treatment and recovery of residual flows.

Water treatment and reuse. Industrial, municipal and process wastewater, separation and purification technologies (membrane processes, product recovery), biotechnologies (bioelectrochemical systems, nature-based solutions), oxidative and disinfection technologies (advanced oxidation processes, electrochemical processes).

Waste/by-product treatment and recovery. Urban, biomass, mixed or complex industrial, conditioning technologies, transformation from waste to product (hydrolysis/extraction, bioconversion), primary raw material recovery, energy recovery (anaerobic digestion, thermal processes, bioelectrochemical systems).

Treatment and control of air quality. Indoor/outdoor air, chemical and microbiological control, dispersion models, photocatalysis technologies, filtration, adsorption, nature-based solutions.

Soil restoration and agronomy. Soil phytoremediation, bioremediation, use of organic amendments, food provision, smart cities.

Biotechnologies and bioeconomics. Bioprocesses and biocatalysis for sustainable production, enzymes as active ingredients, new natural active ingredients, new microbial consortia for industrial or environmental applications, agrobiotechnology.

Bioresources and agri-food technologies. New sources (microalgae, insect rearing and obtaining new sources of ingredients and products), biorefinery (conditioning, extraction, and conversion technologies), validation of functional ingredients.

Sustainable production. Combination of technology, sustainability and competitiveness through business models based on the circular economy, industrial symbiosis strategies and process efficiency, ecodesign and ecoinnovation.

Quantification of environmental, economic, and social benefits: Life Cycle Analysis (LCA) of products, services, and processes.

Ecological labeling for products and services, environmental communication strategies, social responsibility, social innovation, awareness, and citizen participation.

Safe technologies, products and processes for the environment and human health. Identification and monitoring of properties as well as the quantification of emerging contaminants (nanomaterials, microplastics, metals, chemicals, and other materials of organic and inorganic origin). Risk analysis for human and environmental health throughout the life cycle of the products. Monitoring of product/additive/pollutant transformations throughout the life cycle in biological and environmental environments (biodegradability, ageing, mechanical stress, etc.).

Support for industrial innovation by developing safety and sustainability criteria for its application and integration from the design stages (SSbD) of new products and processes.

10.5 | ADVANCED TECHNOLOGICAL SERVICES (ATS)

TECHNICAL SKILLS AND RELIABILITY IN THE RESULTS

Leitat is aware that, with its multi-sector vocation, it needs to continuously adapt to the context and circumstances in which it finds itself while making the latest generation equipment and services available to the market. With extensive experience in the testing of all types of materials, their characterisation and behaviour determination, as well as the dimensional measurements of parts and components, Leitat calls on more than 30 years of experience working under ISO 9001 and ISO/IEC 17025 quality framework.



DETERMINATION OF PHYSICAL-MECHANICAL PROPERTIES

- Traction, flexion, compression, peeling, coefficient of friction, adhesion, Drilling, and others.
- Abrasion, wear, scratching, and surface hardness.
- Colour fastness, wash resistance, and comfort.
- Impact Resistance.
- Rheometry (MFI/MVR) and viscosity.
- Density of liquids and solids.
- Water permeability, vapour resistance, liquid absorption, and others.
- Electrostatic charges.
- Tribology.

DETERMINATION OF CHEMICAL PROPERTIES AND EMISSIONS

- Identification and characterisation of polymers and additives: FT-IR, DSC, TGA, UV-Vis, and others.
- Molecular weight (GPC).
- Gas (GC-MS, GC-FID) and liquid chromatography (HPLC Inductively coupled plasma mass spectrometry (ICP-MS).
- Analysis of nanoparticles and encapsulated products.
- Elemental analysis (EA).
- Identification and characterisation of volatile and residual substances (VOCs, formaldehyde, and others).
- Carbon and formaldehyde emissions (automotive).
- Condensable fogging components (automotive).
- Phthalate analysis.

DETERMINATION OF AGEING RESISTANCE OF MATERIALS

- Radiation aging: Xenotest, QUV, IR.
- Solar simulation: MHG lamps.
- Corrosion ageing.
- Climatic ageing: temperature, humidity, thermal shock,
- Natural ageing.

DETERMINATION OF OPTICAL PROPERTIES

- Optical microscopy (OM) and electron microscopy (SEM).
- Macro and digital microphotographs.
- Cross sections, coatings.
- Studies of defects, surface degradation and others.
- Surface appearance, brightness, colour and others.

REACTION TO FIRE

- Tests for materials intended for upholstery and curtains.
- Materials for tents and textile architecture.
- Fire safety of aviation textile and polymeric products.
- Fluid tests (Manifold, Wick test).
- Horizontal combustibility tests for automotive interior products.

ENVIRONMENT

- Waste water analysis (DQO, BOD5, NTK, SSD, SSV, Hardness, etc.)
- Analysis of anions and volatile fatty acids.
- Analysis of metals in soil and water.
- Analysis of emerging contaminants.
- Biodegradability tests.
- Analysis of biogas.
- Analysis of air pollutants.
- Analysis of fertilisers (NPK).

PROTECTION – GLOVES AND CLOTHING

- Resistance to cut, impact and impact abrasion.
- High Visibility.
- Mechanical, thermal, chemical and microorganism risks.
- Motorcycling, welders, firefighters, forestry, and others.
- Protective clothing comfort.

METROLOGY

- Three-dimensional contact metrology (in laboratory).
- Non-contact dimensional metrology (in laboratory).
- Measurement and graphical reports with comparative CAD method.
- Dimensional studies for problem analysis.
- Capacitive and statistical studies of process control.
- Digitisation and reverse engineering.
- Surface roughness analysis.

PROTECTION MASKS

- Bacterial Filtration Efficiency (BFE).
- Breathability (differential pressure).
- Resistance to blood splashes.
- Biological load (bioburden).
- Biocompatibility.

ECOLABEL

- Tests and evaluation of environmental criteria for all categories. For example:
 - Textile products.
 - Surface cleaning products.
 - Laundry detergents.
 - Laundry detergents for industrial and institutional use.
 - Dishwasher detergents.
 - Dishwasher detergents for industrial and institutional use.
 - Hand-washing detergents.
 - Cosmetics (which require rinsing).
 - Paint and varnishes.
 - Furniture.
 - Lubricants.
 - Paper.
 - Tourist accommodation.
 - Camping sites.



FOOD

- Analysis of fatty acids (GC-FID).
- Analysis of proteins.
- Analysis of total polyphenols and antioxidant power.
- Analysis of total protein.
- Analysis of fibres.
- Analysis of sugars.
- Analysis of metals (Hg, As, Cr, etc.).

APPLICATION OF NEW TECHNOLOGIES

- Plasma.
- Polymer extrusion.
- Rapid prototyping - 3D printing three-dimensional metrology (in laboratory).
- Metrology of parts; approval reports of moulds and dyes.
- Measurement and graphical reports with comparative CAD method
- Dimensional study for analysis of assembly problems.
- Measurement of samples and statistical studies of process control.
- Automatic measurement software for coordinate measuring machines.
- Digitisation and reverse engineering.

VALIDATION OF PROTOTYPES

- Materials.
- Finished products.
- Industrial processes.

BIOANALYSIS AND HEALTH

- Antibacterial and antifungal activity of active principles, materials, and formulations.
- Models of formation and elimination of biofilms.
- Microtoxicity studies and microbiological control of water.
- Tests for enzyme activity.
- Safety and efficacy studies for cosmetics.
- Efficacy test for preservatives in cosmetics (Challenge Test).
- Safety studies for detergents.
- Safety studies for medical devices.
- Bioavailability and food allergenicity studies.
- Drug absorption, distribution, metabolism, excretion, and toxicity studies (ADME-Tox).
- Bioequivalences.
- In vitro/in vivo metabolomic analysis.
- Efficacy studies for anti-tumour compounds (in vitro and in vivo).
- Efficacy studies for potential drugs against autoimmune and inflammatory diseases (in vitro and in vivo).
- Generation of polyclonal and monoclonal antibodies for research, diagnosis, prognosis, and therapy.
- Design and development of diagnostic biosensors
- Antibody engineering: humanisation and chimerisation; nanobodies, scFv, bispecifics, ADCs, fusion proteins, biosimilars.
- Drug reprofiling.

11 | NOTIFIED BODY

Leitat is a Notified Body with No. 0162, recognised by the European Community and authorised by the Ministry of Industry, Energy and Tourism to conduct the Conformity Assessment (CE Marking) before Personal Protection Equipment (PPE) included in the accreditation scope and in compliance with the REGULATION (EU) 2016/425 of the European Parliament and Council is launched into the community market for:

- EU type-examination certificates (Module B, PPE category II and III)
- Conformity with the type based on the production internal control plus the product supervised control at random intervals (Module C2, PPE category III)





12 | PROMOTED PROJECTS







WWW.HEALTHCARELIVINGLAB.CAT

The Healthcare Living Lab Catalonia (HCLLC) is a Living Lab specialised in the health and social sector. It's mission is to bring together health centres, technology centres and Living Labs from all over Catalonia connecting them with innovative people and entities. In so doing, it facilitates prototyping, testing and validation of solutions based on a proprietary methodology in a quick and efficient manner, maximising the results obtained. The HCLLC offers its services to methodologically advise and

guide start-ups, SMEs and companies that aim to prototype, test and/or validate innovative solutions in real environments and with end users in the fields of medical devices, in vitro diagnostics, and digital health.

It is a Leitat initiative with a mission to transform Catalonia into a landmark living lab. In order to make this a reality, it has developed a vast network of collaborating entities. These consist of the country's principle landmark health centres in innovation on the one hand and the main associations of health and social centers in the country on the other.

This network is growing day by day and today consists of the following entities:



In addition, the HCLLC has the seal of the European Network of Living Labs (ENoLL), is a Reference Site for the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) and collaborates with the ULabs programme by EIT Health and with the Centre for the Integration of Medicine and Innovative Technologies (CIMTI).



SERVICES

CO-CREATION ACTIVITIES

The HCLLC organises and carries out activities for the co-creation of innovative solutions which facilitate the collaboration of all parties involved. This includes citizens (patients or healthy population), professionals in the health and social fields, and universities and companies, in order to involve end users from the beginning and help innovators design solutions that solve real problems.

Types of co-creation activities organised:

- Individual interviews.
- Focus groups.

The HCLLC has its own methodology to carry out these activities, involving the necessary people and obtaining high-value information.

PROTOTYPING SERVICES

In order to develop design or functional prototypes of innovative solutions, the HCLLC uses Leitat's prototyping capabilities in the areas of Health and Biomedicine, Applied Chemistry and Materials, Advanced Engineering and Robotics. Prototyping demonstrates key functions of products and services, helps to generate feedback from end users and guides further design and development. Methodology based on Leitat's experience.

DISSEMINATION, COMMUNICATION AND TRAINING

In its projects with European partners, the HCLLC plays a key role in the elaboration and execution of the communication strategy for the dissemination of activities and project results among stakeholders and citizens. In addition, it spearheads training of interest groups to ensure the dynamisation of each project and the involvement of

the end users right from the beginning. The target audience of this service includes professionals from the health and social care fields, research personnel, citizens and administrative personnel.

PILOT STUDIES AND CLINICAL VALIDATIONS

In order to validate the effectiveness and efficiency of the developed solution in real environments, the HCLLC organises and executes pilot studies and clinical validations with the collaboration of the health and social entities associated with the network. The results obtained from these studies help to validate the solutions quickly and efficiently, with a statistical sample that allows evidence to be generated with significant results and with a minimum budget. This information is essential to focus investment rounds and regulatory processes.

USABILITY STUDIES

In order to evaluate the ergonomics, design, usability, and function of a solution, the HCLLC organises and executes usability studies where end users test and evaluate innovative solutions. The end users involved include citizens (patients or healthy population) and professionals from the health and social care fields. The HCLLC has its own methodology to carry out the entire process, from the definition of the necessary indicators to the execution of the study, data analysis and the writing of the final report.

FUNDING SEARCH

Searching, guidance and submitting to national and international competitive calls for financing for the development of innovative projects. Our expert team advises SMEs and start-ups on the most appropriate ways to request competitive financing, both nationally and internationally, based on their characteristics and needs. We guide them through the entire application process: from the identification of the call and the selection of partners to the drafting and presentation of the competitive proposal.

IAM3DHUB

WWW.IAM3DHUB.ORG

IAM 3D Hub is a digital innovation centre specialised in additive manufacturing and 3D printing. Its mission is to accelerate the adoption of additive manufacturing and 3D printing technologies in the European Union manufacturing sector as an alternative to the design, development and production of new products and services that boost competitive advantage.

IAM 3D HUB offers a one-stop shop to advise and guide companies wishing to invest in 3D printing. It also contributes to a new era of toolless code-to-material production as a fast, safe and efficient manufacturing method.

The initiative was founded by HP, Leitat Technological Center, Renishaw, BASF and Abrast by Coniex as technological partners, as well as the 3D Factory Incubator, the first 3D printing incubator in Europe, and Fira de Barcelona, together with its 3D printing trade fair: INDUSTRY 'From Needs to Solutions', AM Solutions, GPAINNOVA, AMT, MASSIVit 3D, Materialise and 3D Natives. It is also supported by ACCIÓ, the Catalan Government's agency for competitiveness.

SERVICES

EXPERIMENTING AND TESTING

With a focus on fostering knowledge and confidence in technologies, the hub currently offers the following activities:

- Initial contact with an expert.
- Company diagnosis
- Laboratory visit.
- Use of AM/3DP.
- Benchmarking and testing for product development.
- Analysis of strengths and weaknesses.
- Capabilities and limitations of AM/3DP for manufacturing purposes.
- Materials and processes selection.
- Practical workshop/Lab Day.

BUSINESS & MENTORING

Once the adoption process for additive manufacturing technology has been completed, the centre provides support and advice for business development and expansion.



EDUCATION & TRAINING

As a means of sharing the digital skills necessary for the adoption of AM/3DP, the centre provides industrial training programmes and theoretical-practical professional training to company staff throughout the entire value chain, as well as instructor training workshops.

END TO END SOLUTIONS

The centre currently offers the following options for developing end-to-end solutions:

- Part design or redesign service in order to leverage the advantages and possibilities provided by additive manufacturing technology.
- Advice on the creation of the floorplan layout of a 3D production plant or for the integration of technology into a traditional production plant.

The centre offers the following resources for these activities:

- A team of twenty people, including the technical/operational staff of the 3D printing machines.
- Design software, simulation software and production software.
- Materials laboratory (physical and chemical).
- Additive manufacturing machines. The centre currently has the following machines:

- 1 SLM MACHINE	- 5 LCD machines	- 1 MJF machine	- 1 SLS machine
- 2 LA machine	- 9 FDM machines	- 1 Voxeljet machine	- 1 MASSIVit machine.
- Metallographic laboratory.
- Heat treatment laboratory.
- Surface treatment laboratory (coatings, plasma, metallisation).
- Cleaning, mechanical, and electrochemical polishing, infiltration, and dyeing laboratory
- Characterisation and testing laboratories:
- Metrology and reverse engineering laboratory.
- Fire resistance laboratory.
- Climate, solar and UV ageing laboratory.
- Chemical and mechanical characterisation laboratory.
- Corrosion laboratory.

13 | SINGULAR INITIATIVES





The 3D Incubator is the first European high-tech incubator in 3D printing. Its objective is to promote the growth of initiatives related to additive manufacturing by creating a space for the incubation of start-ups, SMEs and micro companies that use this technology. The 3D Incubator has the capacity to incubate more than 100 companies in five years and will help launch incubator initiatives run by businesses by providing general incubation services, 3D production technology services, business consulting, part testing and consultation services regarding marketing and internationalisation.

The space has a surface area of 1000m² and has a coworking and training area, private offices, meeting rooms and a laboratory with eight different 3D production technologies, post-processing equipment and metrology. Likewise, all incubated projects have at their disposal a wide range of services across the entire value generation chain: production, business consulting, marketing, and certification.

It is an initiative led by the Consorci de la Zona Franca de Barcelona and Leitat and has the financial support of FEDER funds through the INCYDE Foundation.

SERVICES

GENERAL INCUBATION

- Reception and switchboard.
- Reservation of rooms and shared equipment.
- Private office spaces and co-working areas.
- Computer services, telephone, and reprographics.
- Incubator suppliers.
- Cleaning and safety.
- Common spaces.

INNOVATION & BUSINESS CONSULTING

- Analysis of investment opportunities and international financing.
- Design of commercial campaigns and operational plans.
- Data protection advice.
- Business Plan

TESTING

- Specific tests related to products to obtain official certificates.

MARKETING AND INTERNATIONALIZATION

- International business meetings.
- Conferences on international markets.
- Commercial activities.
- Advice on negotiation of international contracts

TECHNOLOGICAL SERVICES

- Training
- 3D design and engineering
- Production.
- Reverse engineering and quality control.



The 3D Incubator offers the following resources for these activities:

- 4 industrial 3D printers (MJF, Material Jetting and FDM).
- Six mini printers (FDM, SLA, DLP and SLS).
- Post-processing laboratory.
- Design, scanning and metrology area.



WWW.DFACTORYBCN.COM

DFactory Barcelona was launched as a node focused on creating an ecosystem that promotes the development of Industry 4.0. The centre promoted by the Consorci de la Zona Franca de Barcelona acts as a tool for the transformation of the Spanish productive fabric and guides companies through the digitisation process.

To achieve its objectives, DFactory Barcelona has laboratories managed by Leitatz and equipped with the latest technology:



3D PRINTING



ROBOTICS



AI



CYBERSECURITY



SENSORICS



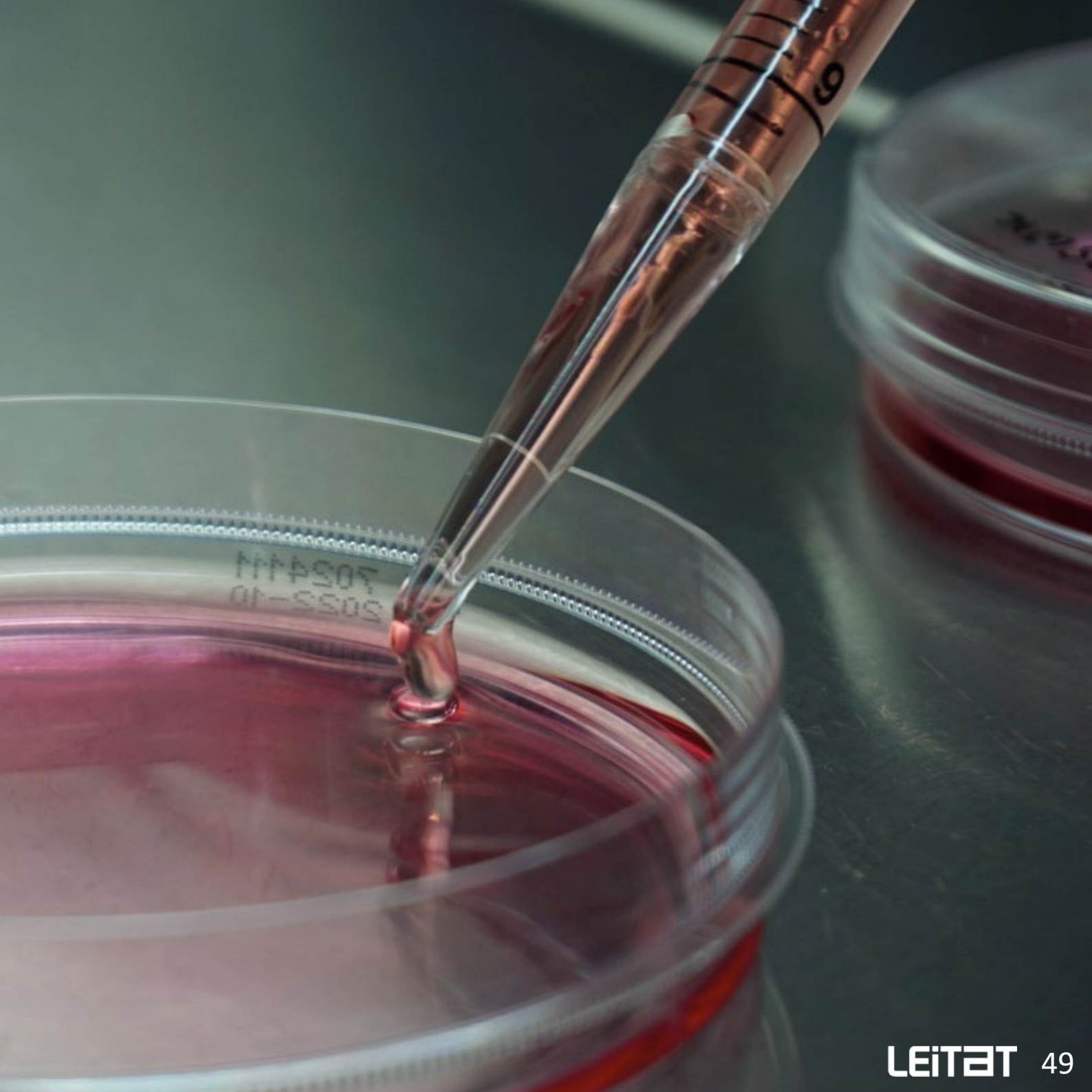
ADVANCED
MANUFACTURING

Leitatz improves the competitiveness of companies in the DFactory ecosystem by providing knowledge and technology for the transition to a digital and sustainable industry. Leitatz operates under open innovation models as the technology manager of laboratories carrying out research and innovation projects. In so doing, it is guided by a vision of technology transfer and adoption by industry with the aim of producing a positive impact on society.

At DFactory Barcelona, Leitatz focuses on technology management and industrial R+D, to generate transformative projects that generate technological value to the DFactory ecosystem.

14 | NOTABLE INDUSTRIAL RESEARCH PROJECTS





RAADICAL

The aim of the project is to research and develop intelligent robotics systems that improve the physical and mental health of elderly or disabled people. Among other functions, the intelligent robotic system will help its users to foster social relationships, maintain healthy eating habits and perform daily physical and mental exercises routines. The results of the project will also result in an improvement of the services offered by care professionals, as it will allow them to intervene in risk situations remotely and in real time.



Funded by: Ministry of Science and Innovation - State Research Agency/Project PLEC2021-007817

REGENERA

The REGENERA project, developed by a consortium of eight companies, namely the DAM Group, ENGIE, Sorigué, Hidroquímica, Tyrís AI, H2B2, AIGUASOL and Exolum, aims to develop innovative technologies to store renewable energy surplus in an efficient and cost-effective manner and use it in industrial processes for the production of green fuels like hydrogen, methane and hythane.

These can be used for heat and power generation, as precursors to other chemicals or in transportation to promote sustainable mobility. All of this using Artificial Intelligence models to optimise the use of energy resources.

These can be used to generate heat and electricity, used as precursors to other chemicals and/or used in transport

to boost sustainable mobility. All this, using Artificial Intelligence models to optimise the use of energy resources. The research project, which will last for 40 months, is predicated on the expectation that energy from renewable sources will increase from 25% to 86% by 2050. “One of the main characteristics of renewable energy sources such as wind and solar is that their production is not constant, but rather fluctuates both daily and monthly.” This requires improved security of supply, not only of fossil fuels, but of the energy storage systems that are key to the development and enhancement of this sustainable energy”, explain the companies participating in the project. In this context, the integration of storage systems to balance energy generation and demand, in both the short and the long term, is essential in order to accelerate the decarbonisation of the energy system and meet the targets set by the European Commission in the Green Deal and comply with the Paris Agreement.



Funded by: Centre for Industrial Technological Development (CDTI) /Project MIG-20211040

FUNTOYS

The aim of the project is to design a new generation interactive toy line with improved features thanks to the research and development of new disruptive materials with intelligent properties. Examples of this include the latest-generation fabrics or polymers, which make the toy highly interactive. This new line of state-of-the-art toys will entertain children while contributing to their cognitive development.



Funded by: Centre for Industrial Technological Development (CDTI) /Project exp - 00139296

INTES

The INTES project will investigate and develop sustainable and durable garments with multiple functionalities for technical use in industry and by state security forces. It will also promote the development of new fibres and fabrics that are more environmentally friendly both in their manufacture and at the end of their life cycle. This range will consist of technical fabrics, with viral and pathogenic protection, as well as highly functional fabrics adapted to the needs of the state security forces and industry.

Leitat will focus on the research of new textile materials (new natural, synthetic, or bio-based fibres), finished to confer functionality (for example, water repellency, flame retardants, antimicrobials, anti-insect and insect repellents). It will also focus on the other processes involved and on providing the resources necessary to develop new sustainable and functional fabrics.



Funded by: Centre for Industrial Technological Development (CDTI) /Project exp IDI-20210526

ECLIPSE

The general objective of SYNTHESIA in ECLIPSE is the generation of new technologies for the chemical recycling of polyurethane waste and the optimisation of existing technologies. This involves very significant improvements in terms of energy cost, the reduction of emissions or waste generated in the process, the percentage of use and/or the quality of the material obtained. To achieve this, SYNTHESIA will focus its efforts on:

- Optimising its chemical recycling processes.
- Simplifying its formulations to facilitate recycling.
- Validating raw materials obtained through new technologies developed by Leitat.



Funded by: Centre for Industrial Technological Development (CDTI)

SOLAR BRICK

The “Solar Fabric” Flexbrick is an architectural structure that will increase the energy self-sufficiency of buildings. The challenge of the project is to achieve a “Brick Solar” Flexbrick (“BSF”) that facilitates power generation and that is easy to install within a mesh of similar devices.

Two important issues in the construction sector will be addressed throughout the project. The aim is to enhance the design of the “BSF”, both in engineering and architectural terms, to make it extremely energy-efficient and capable of

competing in the market on an aesthetic level. Meanwhile, work will be done to instal the BSFs as quickly and easily as possible, both electrically and mechanically, and without the need for specialised personnel in the field, to facilitate their future standardisation.



Funded by: Centre for Industrial Technological Development (CDTI) /Project TP-20210048

BIOAPTA

The general objective of the BioApta project is to study a panel of biomarkers associated with ischemic damage in general and AIS in particular as a tool for stratifying patients to customise the therapeutic strategy. It will be based on the analysis of biological samples from animal studies and subsequent confirmation in human clinical samples in order to achieve a better characterisation of the mechanism of action of ApTOLL, a better stratification of patients and, with this, the possibility of personalised treatment for patients with AISAIS.



Funded by: Centre for Industrial Technological Development (CDTI)

SESA

Applied in nine African countries, the European SESA project will develop and test solutions to accelerate the green transition and access to energy in Africa. It will explore innovative technologies and services in urban and rural environments, support their implementation and deepen the technical, financial, and political aspects.

Specifically, SESA will co-develop innovations with local partners. The first phase will begin in Kenya, where solutions include the use of water reservoirs on Lake Victoria to produce biogas. In a second phase, SESA will test energy solutions in Ghana, Malawi, Morocco, and South Africa. The results, included in a scalable toolbox for advanced deployment and management strategies will facilitate the applicability and replicability of technologies.



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BATRAW

The main objective of BATRAW is to develop and demonstrate two innovative pilot systems for the sustainable recycling and management of EV batteries, domestic batteries and battery waste that contribute to the



generation of secondary flows of strategically important raw materials and critical raw materials. The first pilot will offer innovative technologies and processes for dismantling battery packs that will achieve the recovery of 95% of the components of the battery pack by separating waste streams, including cells and modules, by means of semi-automated processes for recycling.



Funded by the European Union. The views and opinions expressed belong only to the authors and do not necessarily reflect those of the European Union or the European Health and Digital Executive Agency (HADEA). Neither the European Union nor the granting authority can be held responsible for them.

REDWINE

Motivated by the urgent need to mitigate climate change and, in particular, to reduce greenhouse gas emissions from food value chains, REDWine focuses on the use of biogenic carbon dioxide (CO₂) from the wine fermentation process for the production and recovery of microalgae biomass.

The strong synergy between bio-industries will make REDWine's innovative circular business model possible, as it will allow wine producers to effectively treat their liquid and gaseous effluents, while cost-effectively diversifying their revenues by valorising *Chlorella*'s biomass into multiple high-value ingredients.



This project has received funding from Bio Based Industries Joint Undertaking (JU) under grant agreement No 101023567. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.

ILIAD

ILIAD builds on the assets resulting from two decades of investment in policies and infrastructure for the blue economy and aims to establish an interoperable, data-intensive, and cost-effective Digital Twin of the Ocean (DTO). It takes advantage of the explosion of new data provided by many different terrestrial sources, advanced computing infrastructures (cloud computing, HPC, Internet of Things, Big Data, social media and more) in an inclusive, virtual/augmented, and engaging way to address all Earth Data challenges. It will contribute to a sustainable ocean economy as defined by the Centre for the Fourth Industrial Revolution and the Ocean, a centre for global multi-stakeholder cooperation.

ILIAD's DTO will merge a large volume of diverse data into a semantically rich, agnostic data approach to enable simultaneous communication with real-world systems and models. Ontologies and a standard style-layered descriptor will facilitate semantic information and intuitive discovery of underlying information and knowledge to provide a seamless experience. The combination of geo-visualisation, immersive visualisation, and virtual or augmented reality allows users to interactively explore, synthesise,



present, and analyse underlying geospatial data. The enabling technology of ILIAD DTO will contribute to the implementation of the Green Agreement and the EU Digital Strategy and the achievement of the outcomes of the UN Decade of the Oceans and the Sustainable Development Goals. To realise its potential, ILIAD DTO will follow the Systems of System approach, integrating all existing digital Earth modelling and Earth observation infrastructures and facilities in the EU.

To promote additional applications through ILIAD DTO, partners will create the ILIAD Marketplace. Vendors will use the ILIAD Marketplace like an app store to distribute applications, add-ons, interfaces, raw data, citizen science data, synthesised information, and value-added services derived from ILIAD DTO.



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SURPASS

Plastic waste last for a long time on our planet because it takes centuries to decompose. Endocrine disruptions and contamination of soil, air and water are just some of the adverse effects of plastic waste on public health and the environment.

Yet 70% of the plastic waste collected in Europe is sent to landfill or incinerated. The overall objective of the SURPASS project is to lead the transition towards safer, sustainable and recyclable polymer materials by design (SSRbD). The SURPASS consortium, made up of 14 partners including technology and research centres and industries, will be responsible for:

1. Developing SSRbD alternatives without potentially hazardous additives through industry-relevant case studies
2. Optimising reprocessing technologies tailored to new SSRbD systems to support the achievement of ambitious recyclability goals.
3. Developing a scorecard-based assessment to guide material designers, formulators, and recyclers in designing SSRbD polymeric materials.
4. Gather all the data and methodologies in an open digital infrastructure, offering an easily accessible interface.

SURPASS will target its results, in particular, at SMEs, which account for more than 99% of enterprises, and therefore have a great potential to contribute to the transition to the green economy.



Funded by the European Union. The views and opinions expressed belong only to the authors and do not necessarily reflect those of the European Union or the European Health and Digital Executive Agency (HADEA). Neither the European Union nor the granting authority can be held responsible for them.

VIBES

The VIBES project presents an innovative solution to end-of-life problems of thermosetting compounds based on the development of a new green technology focused on the separation and controlled recovery of the components of the materials through the development of bio-based materials (BBM) degradable to measure.

BBMs are biologically based chemicals that decompose under certain external stimuli (temperature, UV rays or electrical impulses), allowing separation between the matrix and the reinforcement. The VIBES project will contribute directly to achieving the SIRA targets in KPI1, KPI2, KPI5 and KPI8 and to demonstrating the solution by reducing the amount of non-biodegradable polymers sent to waste or discharged into the environment by at least 40%.



This project has received funding from Bio Based Industries Joint Undertaking (JU) under grant agreement No 101023190. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.

OXIPRO

The general objective of OXIPRO is the research of new enzymes, especially oxidoreductases, and their application to create environmentally friendly consumer products.

Applying cutting-edge technologies such as bioinformatics and biotechnology, OXIPRO investigates new sustainable and efficient production processes for consumer products that will benefit the environment and also consumers, industry, researchers and society in general. OXIPRO will enable the production of more environmentally friendly sunscreens, textiles, nutraceuticals, and detergents, contributing to the sustainability and global competitiveness of the bioeconomy at a European level.



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement 101000607

NINFA

The NINFA project aims to develop a holistic aquifer control strategy based on a decision-making system (DSS) and a knowledge platform (NINFA platform) that will feed on the results of the monitoring, prevention and reduction modelling technologies applied to the project.

Specifically, NINFA generates a series of innovative and cost-effective monitoring, modelling, and treatment solutions, taking into account several pollutants: nutrients (Nitrates, phosphates), pesticides, salinity, emerging contaminants (CEC), low antibiotic resistance (ARG) and microplastics (MP). It also considers the synergistic effects in relation to stressors derived from climate and global changes, with the aim of preventing the pollution of aquifers, protecting their quality, and improving their resilience.





This project has received funding from the European Union Horizon Europe Research and Innovation Programme under grant agreement No. 101081865

SABYNA

The SABYNA project will develop an online platform that helps manage risks associated with human and environmental safety, nanomaterials and nanotechnological products for industry throughout the product life cycle.

The platform will provide the industry with clear and design-safe solutions to minimise risks in the innovation process of nanomaterial and nanoprodukt development as quickly as possible, integrating all currently available resources (methods, models, frameworks, and tools) to reduce complexity and costs.



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No. 862419

GH2

This is a research project, coordinated by Leitat and funded by the European Union, which aims to generate ecological hydrogen using only solar energy, the water that is abundant on Earth, biomass, and non-critical raw materials.

The central pillar is the creation of a pioneering hydrogen production process that does not use or produce CO₂ or methane, which are harmful to the environment. As a result, the GH2 project could play an important role in reducing the emissions generated during the hydrogen production process.



This project has received funding from the European Union Horizon Europe Research and Innovation Programme under grant agreement No. 101070721

15 | SUMMARY OF ACTIVITIES 2022





LEITAT

NOTABLE VISITS TO LEITAT 'S CORPORATE HEADQUARTERS IN TERRASSA

DURING THE FIRST QUARTER OF 2022, LEITAT RECEIVED SEVERAL VISITS FROM ENTITIES AND COMPANIES INTERESTED IN LEARNING ABOUT ITS CAPABILITIES AND PROJECTS IN DIFFERENT FIELDS OF SCIENCE AND TECHNOLOGY.



1. In February, Jaime Arboleda, Deputy Director of the Antioquia Science and Technology Centre (CTA), carried out a close inspection of Leitat's facilities and lines of work as part of a collaborative framework to promote both entities. In addition, views were exchanged on collaboration opportunities through the international WAITRO platform, which fosters international cooperation between technology centres.
2. Also in February, we had the visit of Virbac, a leading global veterinary company dedicated exclusively to animal health. The facilities were visited and Leitat's capabilities in this area were presented, with the intention of exploring future collaborations. Virbac develops, manufactures, and distributes a wide range of products and services for the prevention and treatment of the main pathologies in companion and consumer animals.

3. In March, the Cercle Cecot Joves Empresaris visited Leitat, as part of the activities they carry out to promote innovation and exchange in the business field. Attendees were shown the projects we are developing in the different areas of research and development for the transition to a sustainable digital industry.

4. In May, we received the PromPerú business delegation, accompanied by Cònsol Adscript Joe Torres Pajuelo and the Director of the Peruvian Chamber of Commerce Spain, Aurelia Ramírez Quiroz. The objective was to get to know



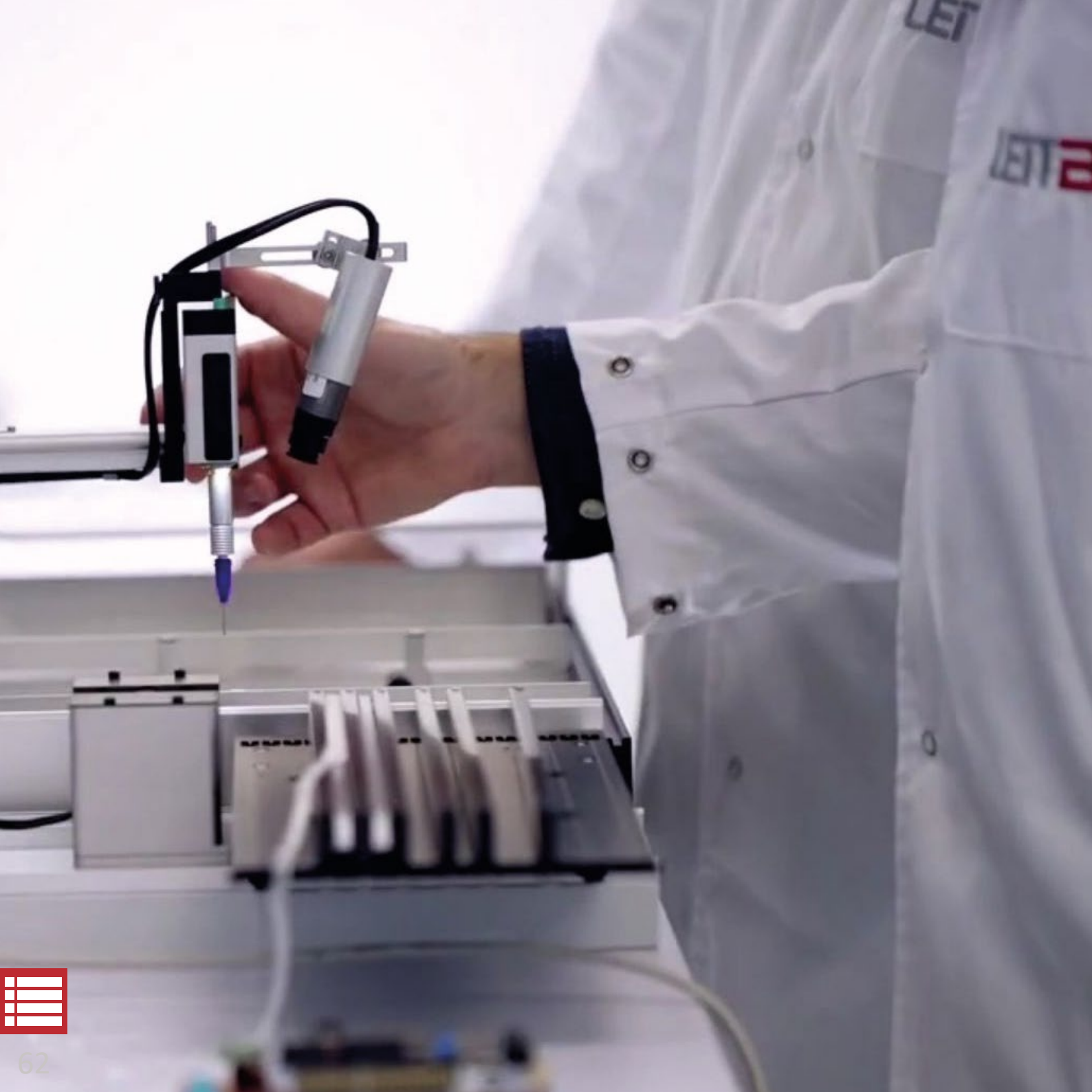
the capabilities of the Technological Center, especially the technologies used in the aquaculture and fishing sectors. We would like to thank the Promperú Lima team, Estel Flores Werlen and Jhoselin Guevara, as well as the Director of the Commercial Office of Peru in Spain, Joan Barrena, for organising the event.

5. In June, we had the pleasure of receiving the visit of the Minister of Business and Knowledge of the Generalitat de Catalunya, Joan Margall. The most important projects we are working on in the fields of energy, environment, health, and advanced materials were presented.

6. In October, the astronaut Pedro Duque visited and was able to learn about some of the projects we are developing at Leitat in the different areas of research and development for the transition to a digital and sustainable industry.



7. Finally, in November, we organised a visit of technological discovery for Sabadell companies, so they could learn about technologies that could be useful in their activities. They visited ageing simulation, polymers, chemicals, mechanical tests, and energy laboratories.



LEITAT PARTICIPATES IN THE WEBINAR 4.0 THE SMART INDUSTRY

23 March 2022



Sergi Artigas, Corporate Development Manager of Leitat, participated in the webinar '4.0 The Smart Industry' promoted by the 3D Incubator during which the different industrial revolutions were reviewed, along with some current success stories. In this meeting, he shared the stage with Domingo Alcalá, Head of Maintenance at Damm, who addressed the real applications of the latest technological advances in the Damm production line.

LEITAT PARTICIPATES IN THE 2nd "WAKE UP, SPAIN" SYMPOSIUM

4 April 2022

Leitat participated in the second 'Wake Up, Spain!' economic forum 'Learning, growth, and sustainability in a Europe of solidarity, organised by ESPANYOL, Invertia i D+I (Disruptors and Innovators). The central theme was the analysis of the different Strategic Projects for Economic Recovery and Transformation and the main reforms adopted after the arrival of the Next Generation funds within the framework of the Recovery, Transformation and Resilience Plan. Dirk Saseta, Director General of Promotion and Development spoke at the round table in which the role of technology centres was discussed.



LEITAT PARTICIPATES IN THE MOBILE WEEK TERRASSA FOR THE SECOND CONSECUTIVE YEAR

27 April 2022



The organiser of the mobile week chose Terrassa to carry out various activities linked to this event since it considers the city to be an important pole of research and innovation. Leitat participated with the contribution of Sergi Artigas answering a question on how entities are preparing for digitisation.

Terrassa also has a significant number of leading companies working in high-tech strategic sectors and clusters such as audiovisual, optics and photonics, and healthcare industries as well as in the fields of technical textiles, sustainability industries and ecological technologies, among others.

LEITAT PARTICIPATES IN THE EVENT ORGANISED BY THE EXCELLENCE CLUB

21 June 2022

Carles Gimeno, General Director of Security and Reputation at Leitat, has participated in the conference “Un modelo para gestionar las organizaciones hacia la excelencia: El Modelo EFQM” organised by the Colegio Oficial de Ingenieros Industriales de Cataluña y el Club Excelencia en Gestión.



LEITAT COLLABORATES WITH THE SUSTAINABLE MOBILITY INDUSTRIAL HUB INDUSTRIAL OF THE BARCELONA CHAMBER OF COMMERCE

5 July 2022



The Barcelona Chamber of Commerce's Industrial Hub for Sustainable Mobility (HubIMS) will promote new business projects and support three more in the framework of the second call for projects, launched a year ago. The initiatives were announced on Tuesday during the HubIMs annual event, the Catalunya Mobility Day'22 According to Sergi Artigas, “European regulations regarding the environment are an incentive to start working seriously on the Re-Cycle.”

LEITAT COLLABORATES ON THE ASEBIO REPORT

18 August 2022

The AseBio report, which the Spanish Association of Bioenterprises has published annually since 2003, is the leading publication in the Spanish biotechnology sector. The report includes the main statistical data on the evolution of the biotechnology sector, collected by the INE and analysed by AseBio, as well as information on the production (pipelines) and transfer (patents) of national biotechnology companies and the flow of investments into the sector. This year, 2022, Leitat participated with an article by Júlia García, Director of the Circular Economy, which explains how biotechnology promotes responsible consumption and production, as well as contributing to a circular economy.



LEITAT TAKES PART IN THE BNEW CONGRESS FOR THE THIRD YEAR

21 June 2022



Leitat Technological Center participated in the second BNEW – Barcelona New Economy Week event. Sergio Martínez Navas, Principal Researcher at #Leitat, participated in the conference focused on the challenges of industry 4.0, contributing his vision from a perspective of security at the node, and technology transfer to the industrial fabric. The director of the 3d_incubator, Pablo Valderrama Sánchez, concluded the second #BNEW event, accompanied by three incubated companies and their strong projects. Attendees learned about Europe's first high-tech #3D incubator and the success of Admire OCEAN ECOSTRUCTURES and Infiniski.

LEITAT PARTICIPATES IN THE COSMETORIUM CONGRESS

29 September 2022

Leitat participated in Cosmetorium with a stand and a talk on “New EU Ecolabel criteria for cosmetic products” by Davinia Morera, Home & Personal Researcher at Leitat.



LEITAT PARTICIPATES IN THE 22@ COMMITTEE ON INNOVATION AND INDUSTRY 4.0

14 October 2022



Leitat will participate tomorrow in the Foro D+I: Take-off from the Digital Poles, on regional and local innovation. Dirk Saseta Krieg, general director of the Leitat Promotion and Management Area, will participate in the round table on Technology Centres and Knowledge Transfer. As a climax to the event, the R&D Awards 2022 will be presented.

The session can be followed by streaming through the D+I, Invertia and El Espanyol websites.

PARTICIPATION IN THE D+I FORUM - EL ESPANYOL

11 October 2022

Leitat will participate tomorrow in R&D Forum: Take-off from the Digital Poles, on regional and local innovation. In this second event, the potential of regional and local innovation poles will be discussed.

Dirk Saseta Krieg, General Manager of the Promotion and Management Area of Leitat, will participate in the round table on Technology Centres and Knowledge Transfer. As a climax to the event, the R&D Awards 2022 will be presented.

The session can be followed by streaming through the D+I, Invertia and El Espanyol websites.



LEITAT IS A MEMBER OF FEDIT'S GOVERNING COUNCIL AS A MEMBER, REPRESENTED BY DIRK SASETA, GENERAL DIRECTOR OF PROMOTION AND MANAGEMENT

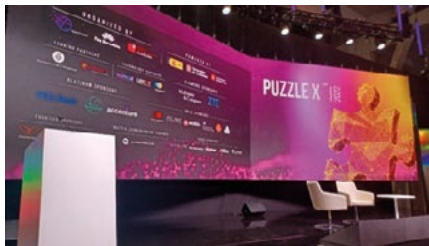
10 November 2022



The representatives of 43 Technology Centres and three regional groupings integrated in the Federation of Technology Centres of Spain (Fedit), met to hold the LVII Ordinary General Assembly, which aimed to elect the new Governing Council, which is a representative sample of the group in terms of size, type and origin. Likewise, the assembly appointed the new Governing Council, composed by Laura Olcina (ITI) as president. Leitat is part of this Governing Council as a member, represented by Dirk Saseta, General Director of Promotion and Management.

TECHNOLOGICAL PARTNER OF THE CONGRESS @PUZZLE X™

15 November 2022



Leitat becomes the technological partner of the PUZZLE X™ congress at the Fira de Gran Via. We would like to invite interested associations to attend this event.

Leitat had the opportunity to collaborate and help organise this important international meeting. This year it brought together global experts in technology, science, biology, and innovation to talk about the future impact of frontier technologies on our industries and cities for a more sustainable future.

DIRK SASETA ELECTED SECOND VICE PRESIDENT OF WAITRO

16 November 2022

Dirk Saseta, general director of Promotion and Management at Leitat, has been elected second vice president of WAITRO at the General Assembly held in South Africa.



LEITAT PARTICIPATES IN THE OCCUPATION SALON

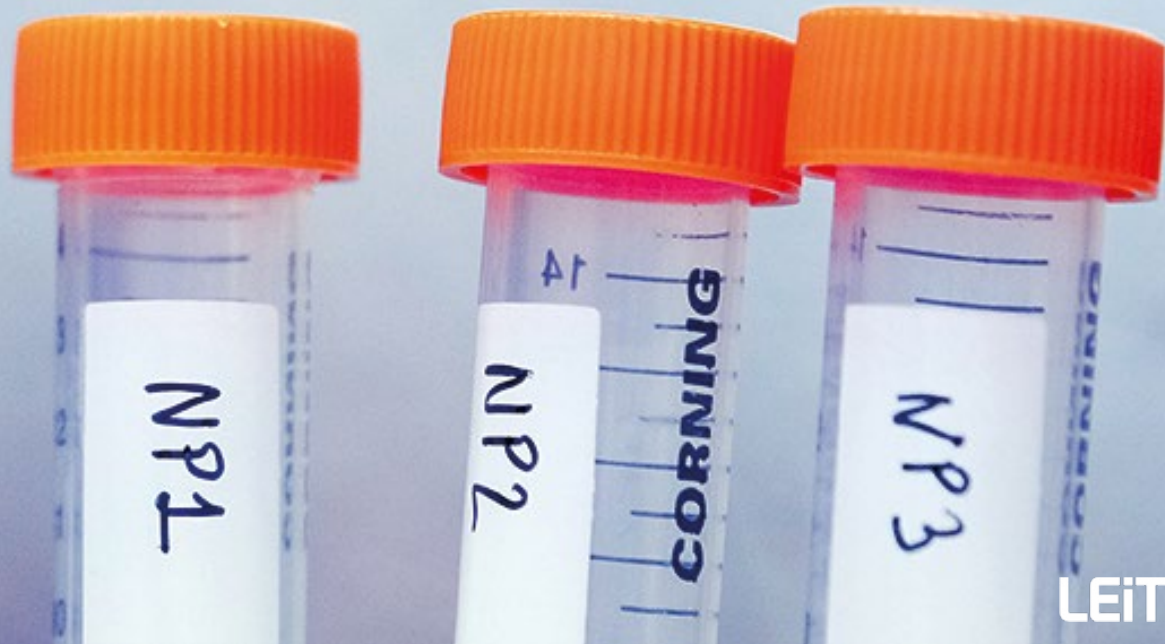
9 November 2022



Leitat participated in the salon by attending a round table, moderated by Aintzane Arbide, Director of Organisation and Communication at Leitat with David Gutiérrez as speaker.

16 | LEITAT IN FIGURES





PERSONNEL

TOTAL: 506



47,83% men

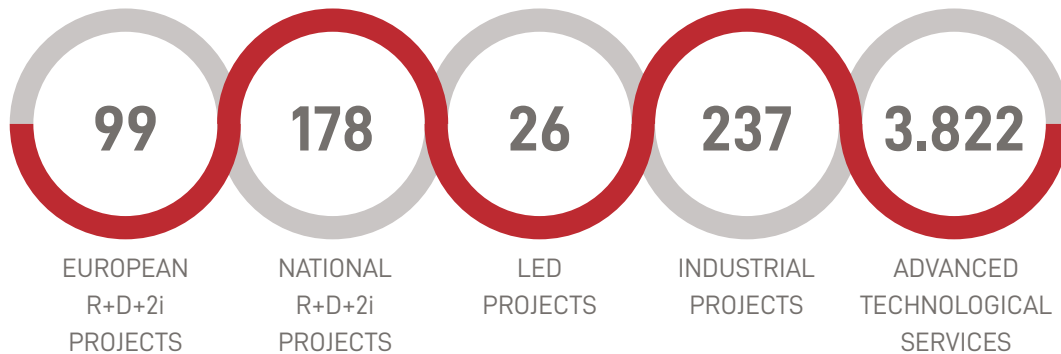
52,17% women

GRADUATED

PhDs: 128 employees (25,30%)

HIGHER DEGREES: 280

OUTPUTS



LAST 3 YEARS

130+

M€ INCOME

90+

COUNTRIES

1.700+

PROJECTS

2.200+

CUSTOMERS

500+

PEOPLE

675+

M€ IMPACT

12.500+

ADVANCED
TECHNOLOGICAL
SERVICES



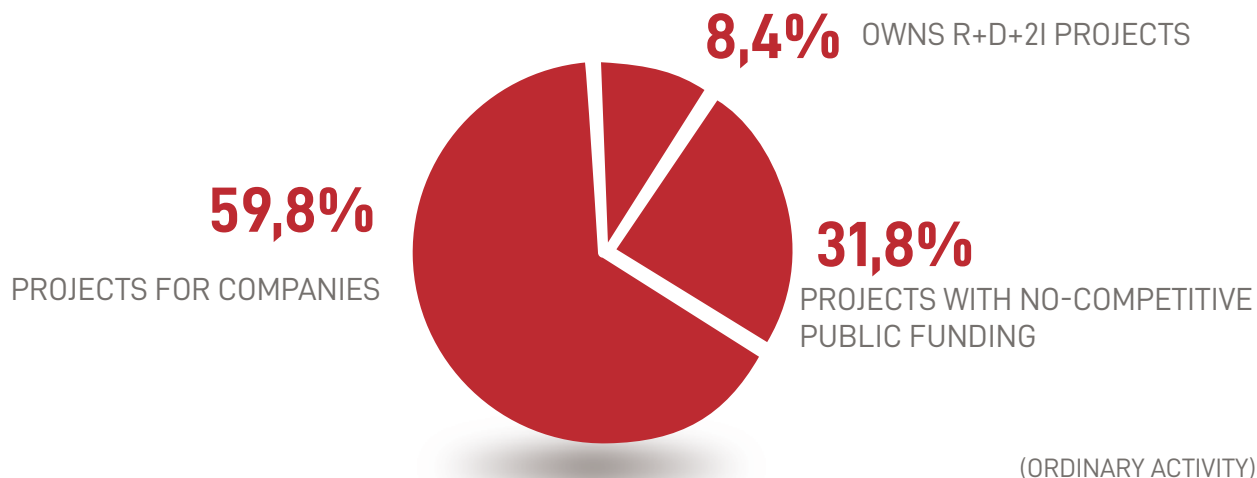
INCOME

The evolution of Leitat in recent years has focused on the creation of lasting and sustainable technological value, aligned with the needs and expectations of the market while delivering an economic return for companies and institutions.

INCOME IN MILLIONS OF EUROS

53 €

DISTRIBUTION OF INCOME BY TYPE OF PROJECTS



BALANCE

NON-CURRENT ASSETS	22.621.505
DEBTORS	52.330.568
FINANCIAL ACCOUNTS	4.632.737
TOTAL	79.584.810

NET EQUITY	25.724.016
NON-CURRENT LIABILITIES	21.806.237
CURRENT LIABILITY	32.054.521
TOTAL	79.584.810

17 | OUR COMMITMENT





We continue to strengthen our commitment to corporate social responsibility through initiatives aimed at providing social and technological value to our stakeholders: clients, associates, collaborators, suppliers, public administrations, related companies, alliances, and society.

OUR COMMITMENT TO THE SDGS (ODS)

We align our strategy with the SDGs to contribute towards a development model capable of generating wealth without compromising social, environmental, and economic justice.



COMMITTED WITH SOCIETY

- Determined commitment to dual training as a basic tool of the business fabric and the educational community in the creation of new professional profiles linked to the industrial world and R&D. In addition to actively and jointly participating in the definition of the training curriculum of these new professional profiles, Leitat also participates in orientation days for young people and motivational chats. Likewise, Leitat collaborates with entities working in the area.
- Collaboration in programmes for young entrepreneurs as technical coordinators and as project evaluators on the various institutional and technical panels. Promoting and raising awareness of scientific careers among students, workers of the future in the areas of knowledge and innovation, through collaboration with public-private entities in specific projects.
- Organising conferences and hosting internship students in the different areas of Research and Technological Solutions at Leitat, both on a national level and with international entities, welcoming students with Leonardo scholarships, Marie Curies, Erasmus internships, etc.
- Collaboration with regional stakeholders (Consorci per l'Ocupació del Vallés Occidental) on strategic policies linked to entrepreneurship, environmental sustainability and the attraction of entrepreneurial economic activity that generates a direct impact on the creation of jobs linked to industry.
- Participation in the "Setmana de la Ciència", making our facilities available for visits focused on the themes of future technologies.
- Conferences for professional and business orientation for institutes, private schools, and universities to recruit talent.
- Collaboration in committees related to promoting the development of talent and diversity.



- Collaboration with foundations and entities for the promotion of training and access to the labour market, as well as the promotion of diversity.
- Participation in working groups with the different public representatives that make up the political spectrum in the formulation of possible proposals that lead to executive actions and legal measures which help to make a positive impact on economic reactivation and growth. This is based principally on Research, Development, and Innovation, specifically in real knowledge transfer to the SMEs.
- Renewal of our commitment as a signatory member of the United Nations Global Compact.
- Creation of the Office for SDGs on the 10th anniversary of Leitat's accession to the United Nations Global Compact with the aim of measuring the impact and increasing our contribution to the fulfilment of the 2030 agenda.

COMMITMENT WITH OUR WORKERS

- Investment and adaptation of training plans adapted to the needs of our workers. These will be aligned with their performance, development plans and career, applying an annual budget appropriate to the demands of each of Leitat's organisational structures.
- Doctoral programmes.
- Facility for Leitat staff to give and receive internal/external training.
- Empowerment, training, and development of collaborators in the tutoring and management of trainees.
- Welcome plans that help trainees and workers from different cultures settle comfortably into Leitat's different centres and the cities in which they are located.
- Reinforcement of corporate culture through various internal communication channels.
- Targeted campaigns to promote healthy habits in daily life, positive environmental actions, risk prevention and safety, for the benefit of all.
- Visibility of the Equality Officer through welcome plans, training actions and awareness campaigns aimed at all workers.
- Worker's conciliation and flexibility measures.
- Leitat takes part in the European Week for Waste Reduction with activities such as a workshop and study on food waste, prevention of packaging waste, reuse of products, and the distribution of reusable cups.
- Leitat takes part in Safe and Sustainable Mobility Week with carsharing activities, facilitating the combination of public transport and promoting the efficient driving manual.
- Internal mentoring programmes to achieve an adequate and optimal adaptation to the organisation and the workplace.

Environmental information

Leitat, within the framework of its environmental strategy, and in line with the new circular economy models, manages its processes to optimise its environmental behaviour through an integrated management system (EMAS, ISO 14001, ISO 9001, ISO 17025, BPL and EFQM). This corporate report has been edited in accordance with environmental criteria to optimise the use of resources, reduce the generation of waste and in so doing reduce its carbon footprint.

The paper is FSC® certified and 100% recycled, and so the paper has been produced in a controlled manner, extracting resources from forests which have also been managed in an environmentally, economically, and socially responsible way.



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LEITAT, 2023

ECOLOGICAL RUCKSACK - Calculation of the ecological rucksack of one unit of the publication						
Publication mass (g)	Carbon footprint (g CO ₂ eq.)	Waste production (g)	Water consumption (L)	Energy consumption (MJ)	Raw materials consumption (g)	
117	336	59	72	23	459	
Savings*:	48	9	2	2	40	

*Environmental impact saved compared to a similar common publication.

Technological and Management Solvency



What's next??

Connectivity
Transport
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Contamination
Cosmetic
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Chemicals
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