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# RESEARCH AND INNOVATION

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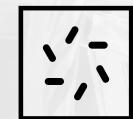
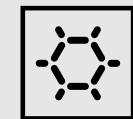


**University of Minho**  
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# RESEARCH AND INNOVATION

2023 . 2024



**06**

MESSAGE FROM  
THE RECTOR

**08**

MESSAGE FROM  
THE VICE-RECTORS

**10**

UNIVERSITY  
OF MINHO

**12**

A RESEARCH  
UNIVERSITY

**18**

RESEARCH  
UNITS

**38**

SCIENTIFIC  
MERIT AWARD

**44**

EUROPEAN  
RESEARCH  
COUNCIL  
GRANTS

**48**

PROJECTS  
OVER 2 M€

**62**

HIGHLY CITED  
RESEARCHERS

**68**

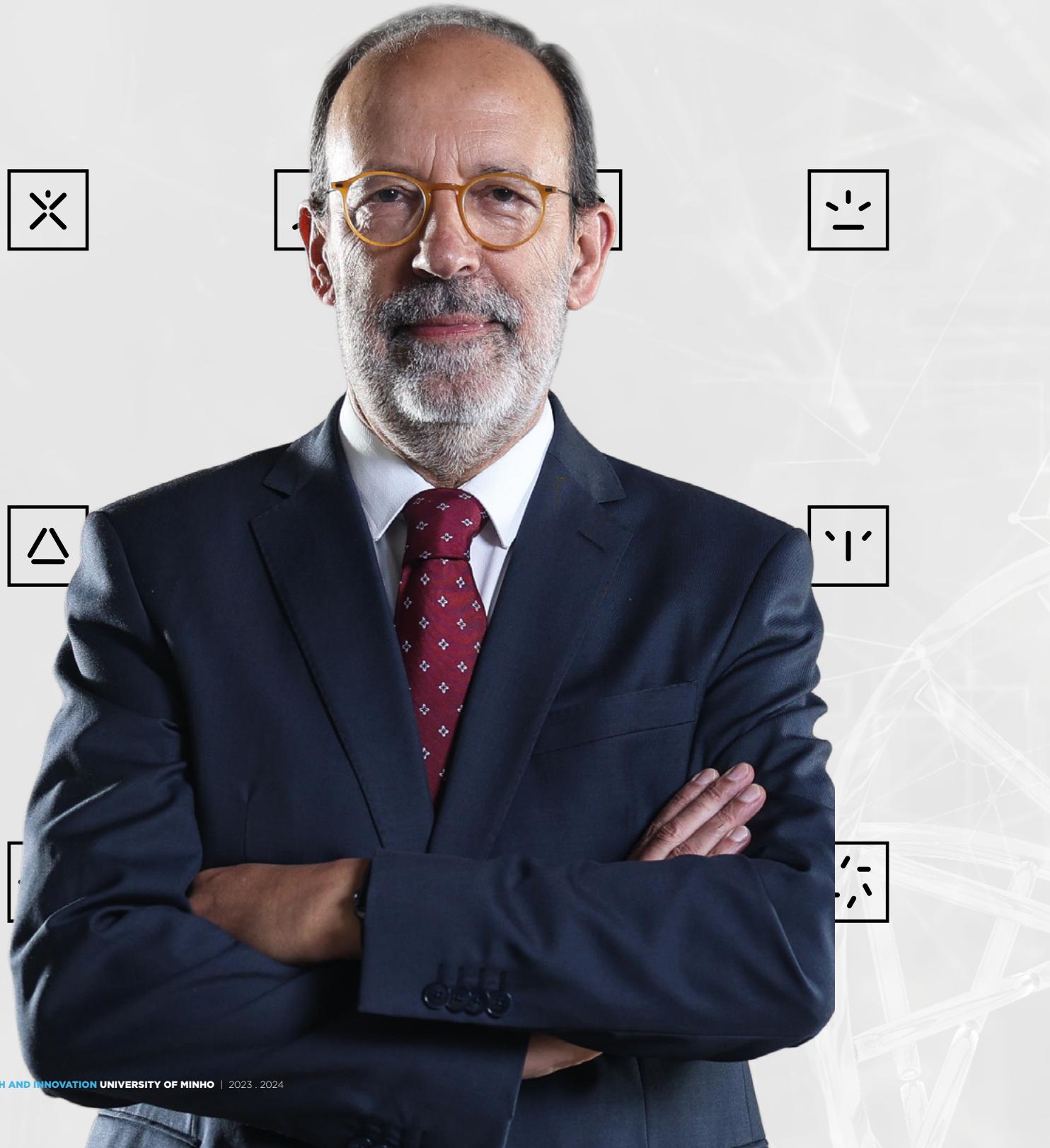
COLLABORATIVE  
LABORATORIES

**88**

INTERFACE  
UNITS

**112**

UMINHO PRIZE  
FOR INITIATION  
IN SCIENTIFIC  
RESEARCH



# MESSAGE FROM THE RECTOR

At the University of Minho, research and innovation are not simply outputs we measure — they are commitments we embody. The years 2023 and 2024 demonstrated a university increasingly defined by rigor of inquiry and clarity of purpose, converting scientific creativity into real-world answers, shared progress, and longstanding intellectual value.

Throughout this period, our scientific ecosystem revealed both strength of foundation and openness of vision. The network of research units continued to evolve as an inclusive space for discovery and collaboration, sustaining a level of quality that is now a defining institutional attribute: 90% of these units were recognized as “Very Good” or “Excellent” by the FCT. This acknowledgment reinforces a research model distinguished by disciplinary diversity, organizational cohesion, and a cooperative scientific fabric that brings together students, scholars, and innovation partners around shared questions and shared impact.

Our increasing relevance did not emerge from declaring a direction, but from delivering on it. We expanded our engagement in both European and transatlantic research and development constellations, strengthening our participation in frameworks and consortia that shape scientific agendas, accelerate knowledge exchange, and influence investment priorities. Through competitive programmes supported by entities such as the European Commission and the European Research Council, UMinho contributed actively to fields of emerging global importance. These include advanced and sustainable production systems, circular and bio-based industrial innovation, frontier biomedical and health technologies, digital transformation and cybersecurity, climate resilience and environmental sustainability, as well as political science, cultural heritage and other areas focused on analysing the complex challenges facing contemporary societies.

These efforts reflect more than scientific competitiveness: they express a university whose relevance is measured in

proposals converted into prototypes, ideas progressing into practice, and research results shaping both public and industrial domains through scientific co-creation.

Strengthening relevance also meant strengthening roots. Through a constellation of collaborative laboratories and dedicated interface structures, we deepened reciprocal innovation agendas with industry, public services, cultural institutions, and civic organizations. Our scientific contributions increasingly generated shared economic opportunity, informed public decision-making, strengthened regional competitiveness, and enabled socially-attentive innovation pathways that actively benefit communities, addressing structural inequalities while fostering sustainable and inclusive growth.

The same connective ambition guided our progress in talent cultivation. The expanding involvement of students in research initiation, structured scientific training, and knowledge-intensive innovation pathways signals a generational transition already underway — one built not on succession, but on participation. We continue to nurture this transition by ensuring that scientific ambition, methodological integrity, and innovation literacy become part of the student experience from the earliest stages of academic life.

The years 2023-2024 confirmed a university that generates, articulates, and transforms. To our scholars, students, alumni, and research partners: thank you for converting institutional vision into collective achievement, and scientific work into shared futures. The University of Minho moves forward with a renewed sense of clarity, coherence, and purpose — grounded in its region, responsible toward its country, and ambitious in its contribution to global knowledge and collaborative innovation.

**Rui Vieira de Castro**  
Rector of the University of Minho



## MESSAGE FROM THE VICE-RECTORS

The period 2023-2024 marked a significant strengthening of the University of Minho's research and innovation ecosystem. It was characterised by scientific ambition, competitive performance, and a deepening contribution to national development and international visibility. This progress reflects the dedication of our researchers, the work of our research units and technical teams, and a strategic vision that places science at the core of the University's mission.

During this period, UMinho reinforced its position within the European Research Area, expanding participation in highly competitive programmes and consolidating its presence in major initiatives such as Horizon Europe, the Widening instruments, the Marie Skłodowska-Curie Actions, and the European Research Council. These achievements demonstrate the maturity of a scientific community capable of conceiving and leading disruptive projects and of positioning itself in emerging areas of global relevance, from advanced materials to biotechnology, from social sciences to health sciences.

At the same time, the University deepened its engagement with society and the economy through its Associated Laboratories, Collaborative Laboratories, and a diversified set of interface units that strengthen knowledge transfer, collaborative innovation, and the social and economic valorisation of research results. This ecosystem enabled UMinho to consolidate innovation agendas, attract strategic investment, and enhance its contribution to regional and national development.

This period also highlighted the importance of cultivating talent and fostering a research culture that is transversal, inclusive, and aligned with long-term institutional goals. The growing involvement of students in scientific activities, notably through structured programmes such as the UMinho Prize for Initiation in Scientific Research, reflects the University's commitment to nurturing the next generation of researchers and innovators.

This volume, *Research and Innovation 2023-2024*, celebrates this collective endeavour. It showcases the achievements of our research units, collaborative laboratories, and interface organisations, and illustrates the University's sustained commitment to scientific excellence, innovation, and societal impact. It is both a record of what has been accomplished and a reaffirmation of the shared vision that guides UMinho forward: a university that generates knowledge, drives innovation, and contributes actively to social, economic, and cultural progress.

We present this document with pride and a deep sense of responsibility, confident that the path taken further strengthens the foundations for an even more impactful and internationally engaged University of Minho.

**Eugénio Campos Ferreira & Sandra Paiva**  
Vice-Rectors for Research & Innovation  
of the University of Minho



# UNIVERSITY OF MINHO

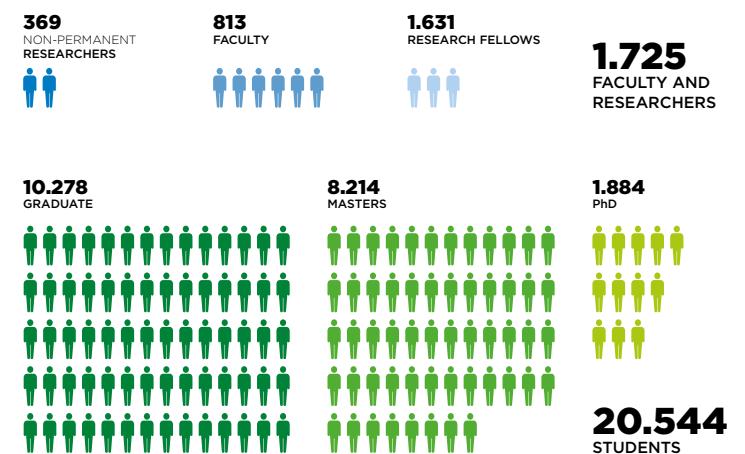
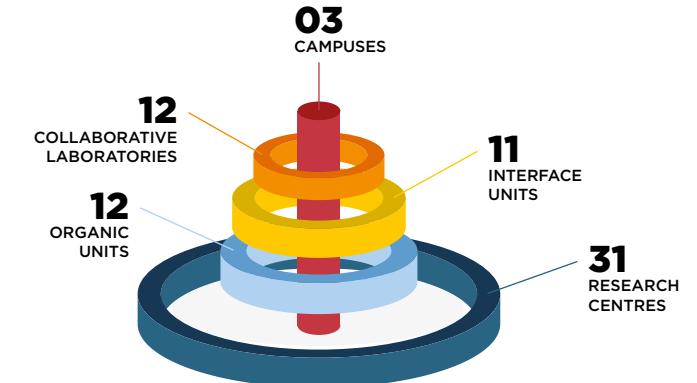
Rooted in a rich legacy and propelled by a forward-looking mission, the University of Minho (UMinho) continues to evolve as a comprehensive institution—one that embraces the full spectrum of scientific and educational domains. From the social sciences and humanities to life and Earth sciences, health, engineering, and technology, UMinho stands as a vibrant ecosystem of knowledge, inquiry, and transformation.

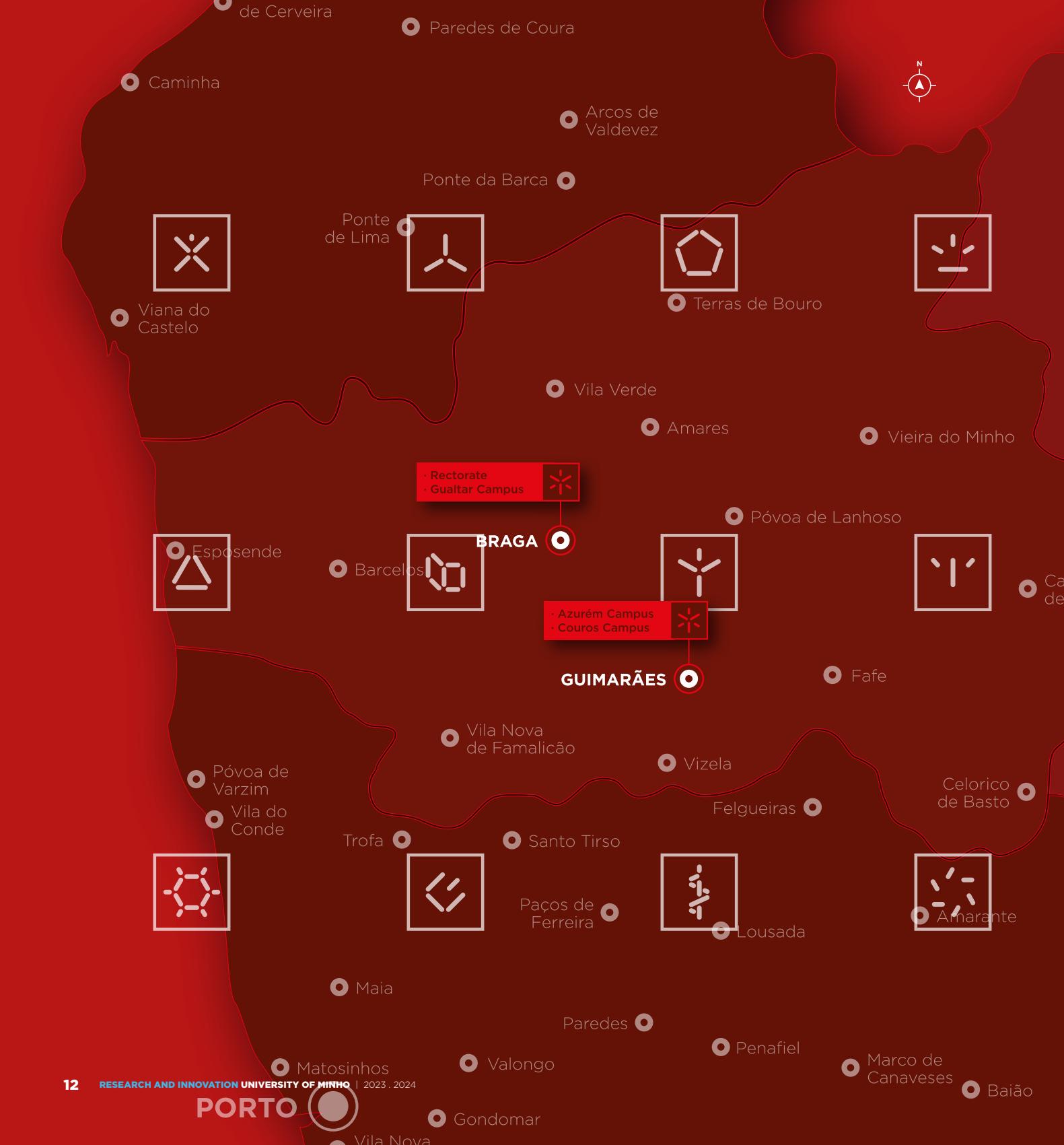
At the heart of its strategic vision lies a deep commitment to research—not as a peripheral activity, but as the very engine of its academic and societal mission. Scientific discovery is not only a hallmark of the university's identity; it is the foundation upon which education, innovation, and civic engagement are built. UMinho believes that the generation and dissemination of knowledge are essential to shaping a more informed, resilient, and inclusive society.

Yet research alone does not define the university's purpose. UMinho is equally devoted to cultivating strong, reciprocal ties with the community that surrounds it. The region of Minho is not merely a geographic reference—it is a living partner in the university's journey. Through active dialogue with local economic, cultural, and social actors, UMinho ensures that its academic pursuits remain relevant, responsive, and grounded in real-world challenges.

This openness to collaboration extends beyond borders. UMinho embraces its role as an internationalized university, forging connections with leading institutions across the globe. Its research ecosystem thrives on global partnerships, enabling the university to contribute meaningfully to international scientific discourse while remaining deeply anchored in its regional and national context.

In shaping the future, UMinho does not abandon its past—it builds upon it. With a clear-eyed view of its institutional identity and a bold commitment to innovation, the university continues to redefine what it means to be a modern, engaged, and globally connected academic institution.





# A RESEARCH UNIVERSITY

The University of Minho (UMinho) has firmly established itself as a powerhouse in international research funding, thanks to a bold, competitive, and meticulously executed strategy. Its proactive engagement with major programs — such as Horizon Europe, Portugal 2030, NORTE 2030 and NORTE 2020 — has positioned UMinho among the most successful Portuguese institutions in securing international projects.

This strategic orientation has yielded remarkable results:

- **European Commission's Widening Programs:** UMinho has led and participated in high-impact initiatives like TWINNING and ERA-Chairs.
- **Cross-border collaborations:** Active involvement in POCTEP, and SUDOE.
- Euro-Atlantic Space projects.
- **ERA-NET and ERC Success:** The university has earned 3 Advanced Grants, 4 Consolidator Grants, 1 Starting Grant, and 3 Proof of Concept awards from the European Research Council — testament to its research excellence.

UMinho has demonstrated strong capabilities across a broad spectrum of research and innovation areas, with particular strengths in emerging technologies, life sciences, and digital advancements. Over the past several years, the university has actively participated in numerous European initiatives, securing funding through a variety of programs. These projects have addressed a wide range of societal and scientific priorities, contributing to both regional development and international collaboration.

The university also excels in the **Marie Skłodowska-Curie Actions (MSCA)**, particularly in training networks (ITNs), further enhancing its global research footprint.

Strategic partnerships are central to UMinho's success. Through a collaborative ethos, the university has become a key player in large international consortia — often serving as both coordinator and beneficiary. Its national research leadership is reinforced by active participation in all international partnerships launched by the Portuguese government, with projects funded by:

- FCT (Foundation for Science and Technology)
- ANI (National Innovation Agency)
- La Caixa Foundation
- EEA Grants
- NIH (National Institutes of Health)
- FLAD (Luso-American Development Foundation)

Under the **NORTE 2020 and Norte 2030 Regional Programs**, UMinho has secured substantial funding for:

- Integrated and structured IC&DT programs
- Scientific infrastructure upgrades and reequipment
- Cultural heritage enhancement
- Institutional capacity building and innovation promotion

Tables 2 and 3 provide a detailed breakdown of project distribution and total funding across UMinho's Organic Units from 2023 to 2024, reflecting the university's diversified research portfolio.



## GUALTAR CAMPUS

 **Institute of Education**  
ie.uminho.pt

 **School of Engineering**  
eng.uminho.pt

 **School of Nursing**  
ese.uminho.pt

 **Institute of Social Sciences**  
ics.uminho.pt

 **School of Law**  
direito.uminho.pt

 **School of Psychology**  
psi.uminho.pt

 **School of Arts and Humanities**  
elach.uminho.pt

 **School of Medicine**  
med.uminho.pt

 **School of Sciences**  
ecum.uminho.pt

 **School of Economics, Management and Political Science**  
eeg.uminho.pt

## AZURÉM CAMPUS

 **Institute of Social Sciences**  
ics.uminho.pt

 **School of Engineering**  
eng.uminho.pt

 **School of Architecture, Art and Design**  
eaad.uminho.pt

 **School of Sciences**  
ecum.uminho.pt

## AVEPARK

 **Research Institute on Biomaterials, Biodegradables and Biomimetics**  
i3bs.uminho.pt

## TABLE 2 RESEARCH PROJECTS RUNNING IN 2023-2024\*

\* Including new ones obtained and concluded during this period.

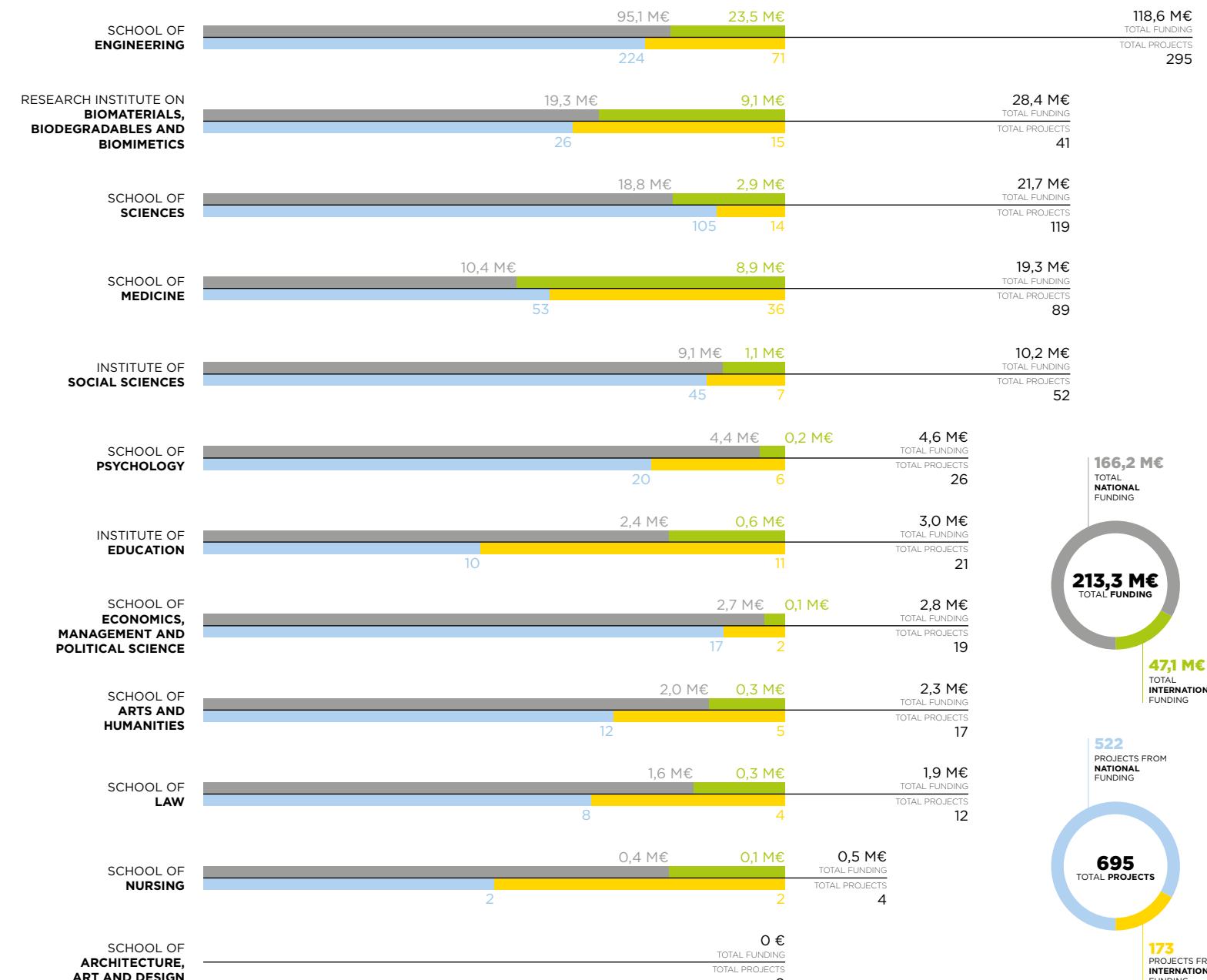
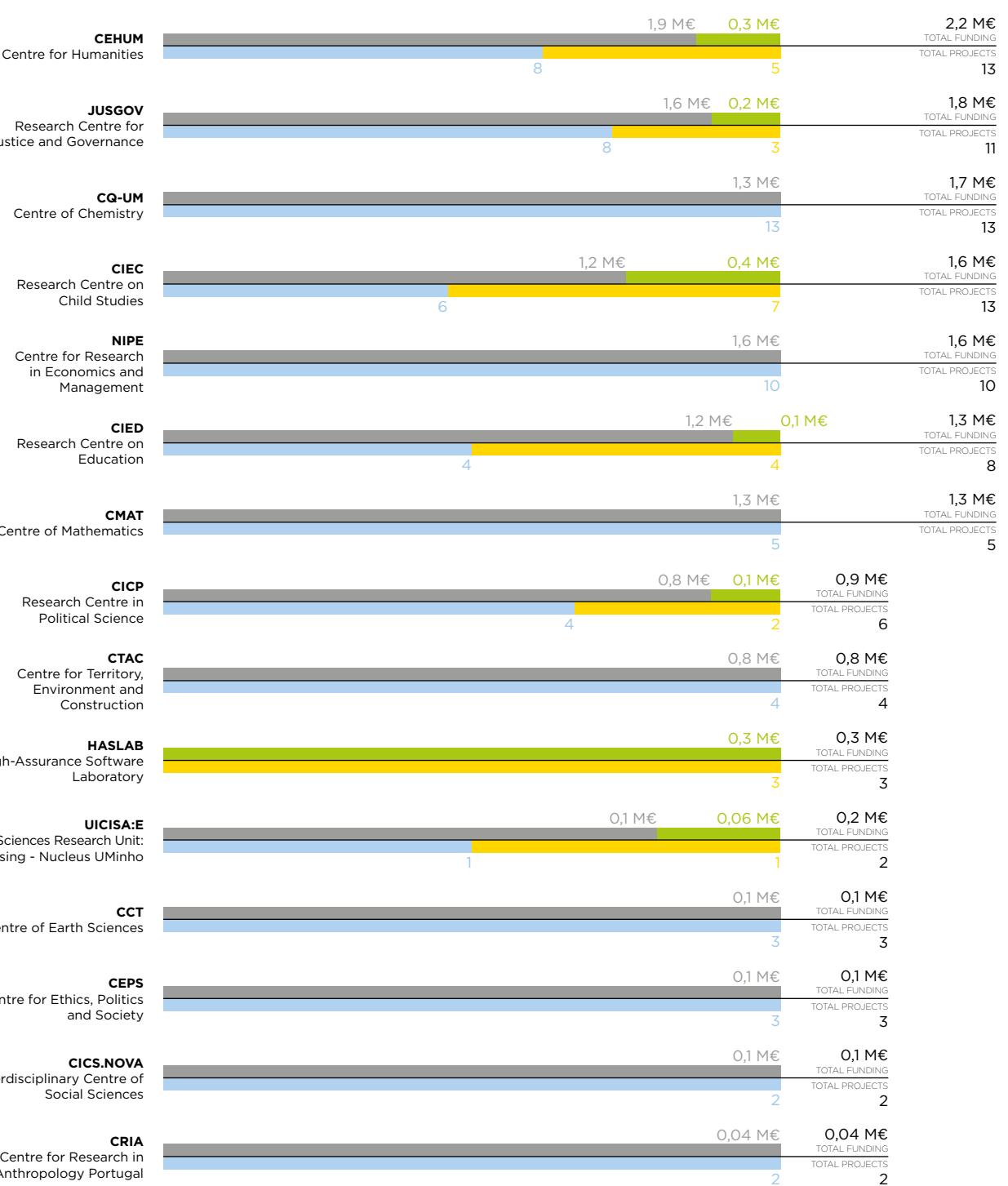
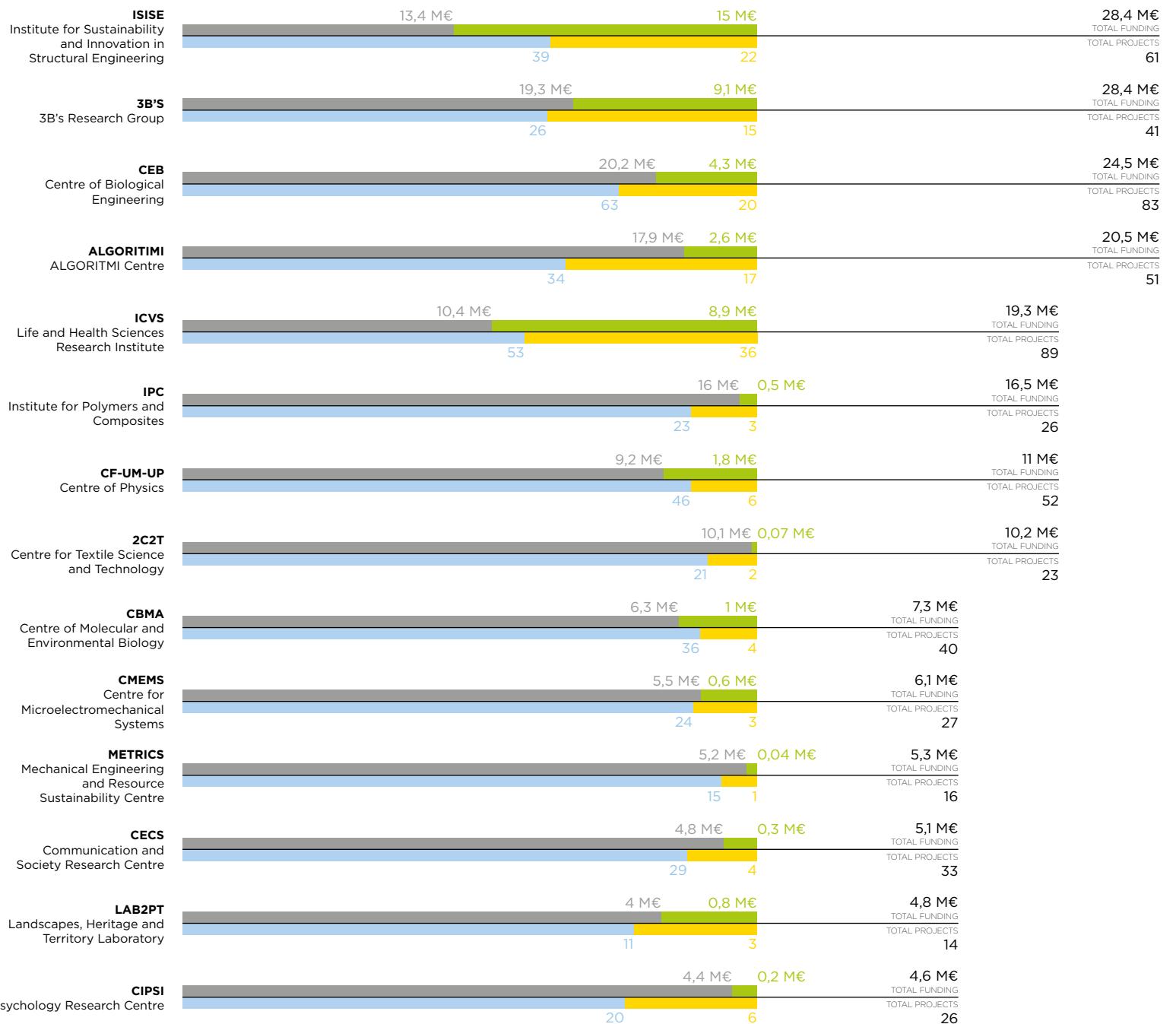


TABLE 3 RESEARCH SUBUNITS IN 2023-2024



# RESEARCH UNITS

The University of Minho (UMinho) boasts a dynamic and expansive research system, composed of 30 R&D units embedded across all its organic structures. This network reflects the university's deep commitment to scientific excellence and interdisciplinary collaboration.

Currently, 90% of these units are rated "Excellent" or "Very Good" by Portugal's Foundation for Science and Technology (FCT), encompassing 92% of UMinho's researchers—a testament to the institution's high-performance culture and research vitality.

UMinho's influence extends into the national research landscape through its active participation in 9 of the 40 FCT Associate Laboratories. Thirteen of its R&D units, spanning six organic units, contribute to these prestigious labs, with UMinho serving as the host institution for three:

- ARISE - Advanced Production and Intelligent Systems, with the participation of ISISE;
- AR-NET - Aquatic Research Infrastructure Network, involving the CBMA;
- ICVS/3Bs, composed exclusively of two UMinho R&D units: ICVS and 3Bs group;
- IN2PAST - Associated Laboratory for Research and Innovation in Heritage, Arts, Sustainability and Territory, with the participation of Lab2PT and CRIA;
- INESC-TEC, through HASLab;
- LABBELS - Associated Laboratory in Biotechnology, Bioengineering and Electromechanical Systems, composed exclusively of 2 UMinho R&D units: CEB and CMEMS;
- LaPMET - Physics Laboratory for Emerging Materials and Technologies, with the participation of CFUM/UP;
- LASI - Associated Laboratory of Intelligent Systems, based at UMinho, involving the ALGORITMI Research Centre and the IPC;
- LIP - Instrumentation and Experimental Particle Physics Laboratory, through LIP - MINHO.

This robust network of R&D units and strategic laboratory partnerships positions UMinho as a leading institution in Portugal's scientific landscape—one that not only nurtures excellence but also drives innovation across borders and disciplines.

The following pages provide detailed profiles of each of the 30 R&D units, offering a closer look at their missions, achievements, and contributions to UMinho's research legacy.



# RESEARCH UNITS PRESENTATION

The University of Minho continues to affirm its status as a leading institution in higher education, distinguished by its unwavering commitment to research. At the core of its academic mission, research serves as a foundational pillar—shaping its identity, driving innovation, and fostering societal impact.

This dedication is reflected in the remarkable performance of its research community:

- Over **92%** of UMinho's researchers are embedded in **Research Units** rated "Excellent" or "Very Good" by the Foundation for Science and Technology (FCT).
- These units span a wide array of disciplines, including **Exact Sciences, Natural Sciences, Engineering and Technology, Social Sciences, and Arts and Humanities**—demonstrating the university's breadth and depth of expertise.

UMinho's research infrastructure is both comprehensive and strategically organized. The university's **30 Research Units** are distributed across its **12 Organic Units**, forming a cohesive and interdisciplinary ecosystem that supports collaboration, knowledge generation, and academic excellence.

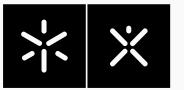
The accompanying figure illustrates the current organizational structure of these Research Units within the broader framework of UMinho's academic landscape.

Color	Organic Unit & Research Units	Acronym	FCT	Evaluation	Color	Organic Unit & Research Units	Acronym	FCT	Evaluation	Color	Organic Unit & Research Units	Acronym	FCT	Evaluation
	<b>Institute of Education</b>					<b>School of Arts and Humanities</b>					<b>School of Law</b>			
	Research Centre on Child Studies	CIEC	Very Good			Centre for Ethics, Politics and Society	CEPS	Very Good			Research Centre for Justice and Governance	JusGov	Very Good	
	Research Centre on Education	CIEd	Very Good			Centre for Humanities	CEHUM	Very Good						
	<b>Institute of Social Sciences</b>					<b>School of Economics and Management</b>					<b>School of Medicine</b>			
	Communication and Society Research Centre	CECS	Excellent			Research Centre in Political Science	CICP	Excellent			Life and Health Sciences Research Institute	ICVS**	Very Good	
	Landscapes, Heritage and Territory Laboratory	Lab2PT*	Excellent			Centre for Research in Economics and Management	NIPE	Very Good						
	Centre for Research in Anthropology Portugal	CRIA	Very Good			<b>School of Engineering</b>					<b>School of Nursing</b>			
	Interdisciplinary Centre of Social Sciences	CICS.NOVA.UMinho	Good			Centre of Biological Engineering	CEB	Excellent			Health Sciences Research Unit: Nursing - Nucleus UMinho**	UICISA:E NUMinho	Very Good	
	<b>Research Institute on Biomaterials, Biodegradables and Biomimetics</b>					Centre for Microelectromechanical Systems	CMEMS	Excellent						
	3B's Research Group	3B's**	Very Good			Institute for Sustainability and Innovation in Structural Engineering	ISISE	Excellent			<b>School of Psychology</b>			
						ALGORITMI Centre	ALGORITMI	Very Good			Psychology Research Centre	CIPsi	Excellent	
	<b>School of Architecture, Art and Design</b>					Centre for Textile Science and Technology	2C2T	Very Good			<b>School of Sciences</b>			
	Landscapes, Heritage and Territory Laboratory	Lab2PT*	Excellent			High-Assurance Software Laboratory	HASLab	Very Good			Laboratory for Instrumentation and Experimental Particle Physics	LIP	Excellent	
						Institute for Polymers and Composites	IPC	Very Good			Centre of Chemistry	CQ-UM	Good	
						Mechanical Engineering and Resource Sustainability Centre	MEtRICs	Very Good			Centre of Earth Sciences	CCT	Very Good	
						Centre for Territory, Environment and Construction	CTAC	Good			Centre of Mathematics	CMAT	Very Good	
											Centre of Molecular and Environmental Biology	CBMA	Very Good	
											Centre of Physics	CFUM	Very Good	

\*Shared by the two Organic Units \*\*Evaluated as a single Unit (Associated Laboratory).



## INSTITUTE OF EDUCATION



University of Minho  
Institute of Education  
Research Centre on Child Studies

Campus de Gualtar  
4710-057 Braga,  
Portugal  
T: (+351) 253 601 212  
E: [ciec@ie.uminho.pt](mailto:ciec@ie.uminho.pt)  
[ciec-um.com](http://ciec-um.com)

**fct** **Very Good**  
2 people **47 PhD**  
Researchers  
3 coins **1,6 M€**  
Total Funding

The Research Centre on Child Studies was founded in 2011 with the aim of improving understanding of children's lives by adopting a multi and interdisciplinary approach. It also focuses on the views of adults with whom children interact (e.g. educators, teachers, nurses, caring professionals) by investigating the conditions and contexts of their activity and their professional development. CIEC (rated as Excellent by FCT in the last evaluation exercise) develops strategic actions that enhance the social and political relevance of research to promote policies, rights, cultures and practices aimed at improving the living conditions of children, particularly in contexts of social vulnerability.

## CIED

Centro de  
Investigação  
em Educação

Campus de Gualtar  
4710-057 Braga,  
Portugal  
T: (+351) 253 604 686/87/88  
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[cied.uminho.pt](http://cied.uminho.pt)

**fct** **Very Good**  
2 people **57 PhD**  
Researchers  
3 coins **1,3 M€**  
Total Funding

CIED, established in 2002 though rooted in 1976, is one of Portugal's oldest education research units. It leads nationally through pioneering master's and doctoral programs. Its research focuses on democratization, lifelong education, inquiry-oriented teacher training, learner-centred pedagogy, and technology-enhanced learning. With 43 integrated researchers, CIED restructured in 2020/21, creating three thematic strands and reflection groups to foster interdisciplinary collaboration. Its strategic focus includes impactful research, training, innovation, and dissemination, contributing to inclusive, sustainable, and high-quality education.



## INSTITUTE OF SOCIAL SCIENCES



**CECS**  
centro de estudos  
de comunicação  
e sociedade

Campus de Gualtar  
4710-057 Braga,  
Portugal  
T: (+351) 253 604 695  
E: [cecs@ics.uminho.pt](mailto:cecs@ics.uminho.pt)  
[cecs.uminho.pt](http://cecs.uminho.pt)

**fct** **Excellent**  
2 people **71 PhD**  
Researchers  
3 coins **5,1 M€**  
Total Funding

CECS is a creative, innovative and dynamic research unit, one of Portugal's longest-established academic centres specialising in media and communication studies. Evaluated as "Excellent" since 2008, it is renowned for interdisciplinary understanding of communication, focus on communities and citizenship, intervention-oriented research, and a strong commitment to sustainable social and cultural development. With a cross-disciplinary group of more than 80 researchers and 150 PhD students, CECS interprets the critical role of communication in overcoming inequalities, disinformation, environmental and political risks and promoting inclusion, literacy, peace, activism and social engagement.

## CICS.NOVA

INTERDISCIPLINARY CENTRE  
OF SOCIAL SCIENCES

Campus de Gualtar  
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T: (+351) 253 601 752  
E: [cics@ics.uminho.pt](mailto:cics@ics.uminho.pt)  
[cics.uminho.pt](http://cics.uminho.pt)

**fct** **Good**  
2 people **29 PhD**  
Researchers  
3 coins **0,1 M€**  
Total Funding

CICS.NOVA has been, since 2015, an Interdisciplinary Social Sciences Research Unit. It is headquartered at the Faculty of Social and Human Sciences of the Universidade Nova de Lisboa. It has hubs at the University of Minho, the University of Azores, the University of Évora and the Polytechnic Institute of Leiria, which work cooperatively. The mission of CICS.NOVA.UMinho is to promote the production and dissemination of knowledge alongside community intervention, recognizing the importance of the plurality of ideas and critical thinking and aiming to contribute to a more unified, fair and cohesive society.



## INSTITUTE OF SOCIAL SCIENCES



ISCTE-IUL  
NOVA FCSH  
UC  
UMinho

CENTRO EM REDE  
DE INVESTIGAÇÃO  
EM ANTROPOLOGIA

Campus de Gualtar  
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Portugal

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[cria.org.pt](http://cria.org.pt)

**fct** Very Good  
7 PhD Researchers  
0,04 M€ Total Funding

CRIA is the primary Portuguese research center in Anthropology, holding a significant position within Portuguese social sciences. It is also part of IN2PAST. Emphasizing interdisciplinary approaches, CRIA's strategic research areas focus on environment, sustainability, public policies, inequalities, religion, migrations, documentaries and archives.

An interuniversity R&D unit, CRIA is hosted by Iscte, NOVA FCSH, the University of Coimbra, University of Minho, and collectively manages several activities. Besides 4 laboratories, it hosts two important venues of open access online publication in social sciences: The publisher *Etnográfica Press* and the journal *Etnográfica*.



## RESEARCH INSTITUTE ON BIOMATERIALS, BIODEGRADABLES AND BIOMIMETICS



The activity of the 3B's Research Group (Biomaterials, Biodegradables and Biomimetics) is focused on the development of new biodegradable or biomimetic biomaterials, as well as on human stem cell sourcing and differentiation, towards new solutions that may lead to relevant patient-centred clinical applications. The 3B's is among the leading groups in Tissue Engineering and Regenerative Medicine worldwide. It has established long-term collaborative partnerships with major research groups in Europe, Asia, and North America, providing opportunities for student and postdoctoral exchange programs and joint research projects.

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Zona Industrial da Gandra  
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**fct** Very Good  
86 PhD Researchers  
28,4 M€ Total Funding

## SCHOOL OF PSYCHOLOGY



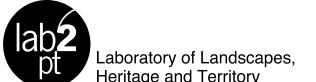
CIPsi is the Research Unit of the School of Psychology. Founded in 2001, it has become one of the most productive research units at UMinho. Research at CIPsi is organised into Research Labs and Groups, where faculty, researchers and students collaborate to conduct high-quality research. The scientific expertise at CIPsi encompasses a wide range of areas within Psychological Science, including experimental psychology, cognitive neuroscience, developmental, health, clinical, educational and forensic psychology. With its diverse expertise, well-equipped labs and technical support, CIPsi offers a unique environment for interdisciplinary research with significant translational and societal relevance.

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**fct** Excellent  
46 PhD Researchers  
4,6 M€ Total Funding



## INSTITUTE OF SOCIAL SCIENCES / SCHOOL OF ARCHITECTURE



Laboratory of Landscapes,  
Heritage and Territory

Campus de Gualtar  
4710-057 Braga  
Campus de Azurém  
4800-058 Guimarães  
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(+351) 253 510 526  
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[lab2pt.net](http://lab2pt.net)

**fct** Excellent  
55 PhD Researchers  
4,8 M€ Total Funding

Lab2PT is a R&D unit focused on Social Sciences, Arts and Humanities, evaluated as Excellent by FCT. Three interdisciplinary research groups - Landscapes and Societies (LandS), Design and Technology (DeTech), Space and Representation (SpaceR) - gather different scientific areas - Archaeology, Architecture/Urbanism, Design, Geography, Geology, History, Visual Arts - and share interest in the study of the territory, its landscapes and heritage, understood as the material, spatial and cultural expressions of societies over time.



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[cehum.elach.uminho.pt](mailto:cehum.elach.uminho.pt)

 **Very Good**  
 **55 PhD**  
Researchers  
 **2,2 M€**  
Total Funding

Founded in 1994, CEHUM is the oldest research unit of the School of Letters, Arts and Human Sciences at the University of Minho. It builds on the legacy of the former Centre for Portuguese Studies (1980) and has since expanded into a dynamic, interdisciplinary hub dedicated to advanced research in Literature, Linguistics, Culture, the Arts (Music and Theatre), and Philosophy. Currently, 57 senior researchers and 17 junior researchers collaborate across 11 research groups, combining disciplinary depth with innovative cross-disciplinary approaches. CEHUM fosters a vibrant intellectual environment, committed to academic excellence, critical thinking, and meaningful societal engagement.



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[ceps.elach.uminho.pt](mailto:ceps.elach.uminho.pt)

 **Very Good**  
 **14 PhD**  
Researchers  
 **0,1 M€**  
Total Funding

CEPS is the main research centre in Portugal specializing in Political Philosophy and Applied Ethics. CEPS's research focuses on studying social institutions and practices, with particular attention to issues in theories of social and political justice, political legitimacy, power, constitutional democracy, and public policy. Recent research has also focused on the philosophy of food, the ethics of new technologies, and workplace democracy. The Center hosts a rich series of events, including the Meetings on Ethics and Political Philosophy, and the Summer School in Political Philosophy & Public Policy, and publishes *Ethics, Politics & Society*, an international open-access peer-reviewed journal.



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[cicp.eeg.uminho.pt](mailto:cicp.eeg.uminho.pt)

 **Excellent**  
 **34 PhD**  
Researchers  
 **0,9 M€**  
Total Funding

The Research Centre in Political Science (CICP), based at the University of Minho and partnered with the University of Évora, is a nationally and internationally recognized research unit rated "Excellent" by the FCT. CICP is dedicated to three core missions: research, knowledge transfer, and advanced training. Its work is structured around six thematic clusters: Political Science, Citizenship and Democracy, European Union Studies, International Relations, Public Administration, and Public Policies. CICP promotes academic excellence while contributing to policy and society through impactful and evidence-based research



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E: [nipe@eeg.uminho.pt](mailto:nipe@eeg.uminho.pt)  
[nipe.eeg.uminho.pt](mailto:nipe.eeg.uminho.pt)

 **Very Good**  
 **33 PhD**  
Researchers  
 **1,6 M€**  
Total Funding

NIPE is a research sub-unit of the School of Economics, Management and Political Science, comprising 38 members. Ranked "Very Good" by FCT, it is an internationally oriented research centre known for high-impact publications in leading academic journals. NIPE leads research in Political Economy, ESG, Healthcare Markets, and the Portuguese Economy, contributing to evidence-based policymaking. It organises a prestigious Summer School on advanced topics in economics, econometrics, and policy evaluation, and hosts regular research seminars. NIPE also provides consultancy services supporting public and private sector decision-making, including at the international level.



## SCHOOL OF ENGINEERING



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E: ceb@ceb.uminho.pt  
[ceb.uminho.pt](http://ceb.uminho.pt)

**fct** **Excellent**  
 **118 PhD**  
Researchers  
 **24,5 M€**  
Total Funding

The Center of Biological Engineering (CEB) at the University of Minho combines science and engineering to develop sustainable, high-value biotechnological solutions. With over 300 researchers, CEB focuses on four areas: Industrial, Food, Environmental, and Health Biotechnology and Bioengineering. It has published over 2,000 scientific papers, launched 17 spin-offs, and collaborates with leading institutions and industries. CEB's motto, "Linking life and technology to shape the future," reflects its mission to drive innovation with global impact.



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[isise.net](http://isise.net)

**fct** **Excellent**  
 **41 PhD**  
Researchers  
 **28,4 M€**  
Total Funding

ISISE brings together the Civil Engineering Departments of the University of Minho and the University of Coimbra. The Unit is founded on strong leadership and boasts a proven track record in international collaboration, contract research, and partnerships with industry. It is recognised for its high-level dissemination in the global scientific community and its active contribution to addressing key societal challenges, including safety, Industry 4.0, the blue economy, energy, cultural heritage, future cities, and the impacts of climate change. ISISE seeks to develop innovative, research-based solutions aligned with smart specialisation strategies.



## SCHOOL OF ENGINEERING



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[2c2t.uminho.pt](http://2c2t.uminho.pt)

**fct** **Very Good**  
 **30 PhD**  
Researchers  
 **10,2 M€**  
Total Funding

The Center for Textile Science and Technology (2C2T) focuses on strategic textile areas, including new materials and product engineering, advanced manufacturing processes, integrated systems, and design methodologies. It emphasizes research training and knowledge transfer through two PhD courses. 2C2T also prioritizes dissemination and internationalization by organizing conferences, participating in expert networks, and contributing to international standardization committees. 2C2T excels in Engineering and Design of Fibrous Materials, addressing society's key challenges through global collaborations and supporting the textile value chain's global competitiveness and sustainability.



CENTROALGORITMI

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**fct** **Very Good**  
 **101 PhD**  
Researchers  
 **20,5 M€**  
Total Funding

ALGORITMI is a research unit that conducts R&D activity across six major fields: (1) Computer Science and Technology (CST); (2) Information Systems and Technology (IST); (3) Computer Communications and Pervasive Media (CCPM); (4) Industrial Electronics (IE); (5) Industrial Engineering and Management (IEM); (6) Systems Engineering and Operational Research (SEOR). With a strong international presence and national recognition, ALGORITMI brings together expertise to generate and disseminate leading-edge scientific knowledge, advance world-class interdisciplinary research and contribute to the development of industry and society.



## SCHOOL OF ENGINEERING



CENTER FOR MICROELECTROMECHANICAL SYSTEMS

Campus de Azurém  
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Portugal  
T: (+351) 253 510 380  
E: diretor@cmems.uminho.pt  
[cmems.uminho.pt](http://cmems.uminho.pt)

**fct** **Very Good**  
 **43 PhD**  
Researchers  
 **6,1 M€**  
Total Funding

The Center for MicroElectroMechanical Systems is a research center member of LABBELS Associated Lab. CMEMS has a multidisciplinary research team, from engineering, physics, medical, and from academic and industrial fields. The focus is on computational modelling, development and micro/nano fabrication of devices and components for two major domains: industrial applications (automotive, aerospace, energy, textile, environment) and biomedical applications (neuroengineering, microendoscopy, surgical microinstruments, smart prostheses, rehabilitation, organ-on-chip).



## SCHOOL OF ENGINEERING



INSTITUTE FOR  
POLYMERS AND COMPOSITES

Campus de Azurém  
4800-058 Guimarães,  
Portugal  
T: (+351) 253 510 320  
E: ipc@dep.uminho.pt  
[ipc.uminho.pt](http://ipc.uminho.pt)

**fct** **Very Good**  
 **22 PhD**  
Researchers  
 **16,5 M€**  
Total Funding

IPC is a Research Unit developing R&D activities in Polymer & Composite Science and Engineering, valued as Very Good by the National Foundation FCT. Providing advancements on the science, technology, design and sustainable development, it promotes added value to the industry and the socio-economic growth, wellbeing and society awareness on the polymeric based materials role/importance. Developing leading edge research and breakthrough concepts, IPC converts R&D into applications by adopting a multidisciplinary approach aggregating the scientific knowledge of the polymer/composite chemistry, physics, engineering and technology.



HASLab  
HIGH-ASSURANCE  
SOFTWARE LABORATORY

Campus de Gualtar  
4710-057 Braga,  
Portugal  
T: (+351) 253 604 430/40  
E: haslab-secr@inesctec.pt  
[inesctec.pt/haslab](http://inesctec.pt/haslab)

**fct** **Very Good**  
 **28 PhD**  
Researchers  
 **0,3 M€**  
Total Funding

At INESC TEC's the High-Assurance Software Laboratory (HASLab), we advance scientific knowledge by bridging theory and practice to develop software that is correct, resilient, and secure. Our research spans software engineering, distributed systems, and information security, grounded in rigorous formal methods. We design innovative solutions for dependable systems, secure cloud infrastructures, and privacy-preserving data management. Complemented by work in HCI, programming languages, computational mathematics, and quantum computing, HASLab drives innovation at the frontier of trustworthy software.



Mechanical Engineering and Resource Sustainability Center

Mechanical Engineering and Resource Sustainability Center (MEtRICs) mission is to create scientific knowledge and provide technical solutions for a cleaner, safer and sustainable world. MEtRICs aim to have an impact in our society and contribute to the social and economic benefits that come hand in hand with a knowledge-based economy. Although fundamental research is considered in all activities, MEtRICs is oriented for applied research. Considering existing industrial and scientific projects, publications and interaction with society, 4 research topics were defined for 23/24: Energy Conversion; Advanced Engineering Systems; Structures and Vehicle Engineering; Food Technology and Wellbeing.



## SCHOOL OF ENGINEERING



Centre of Territory  
Environment and Construction

Campus de Azurém  
4800-058 Guimarães, Portugal  
T: (+351) 253 510 200  
253 517 206  
E: geral@ctac.uminho.pt  
[ctac.uminho.pt](http://ctac.uminho.pt)

**fct** **Good**  
24 PhD  
Researchers  
0,8 M€  
Total Funding

The Center of Territory, Environment and Construction objective is to produce knowledge to support its vision of Sustainable and Resilient Territories, developing innovative materials and technologies and systems in the fields of built environment, water and wastewater and for territory development, contributing to climate change-resilient buildings and infrastructures, supporting a steady improvement in the quality of life. To fulfil this objective, CTAC combines R&D activities with advanced training, technology transfer, consulting and services.



## SCHOOL OF MEDICINE



Life and Health Sciences Research Institute  
Instituto de Investigação em Ciências da Vida e Saúde

Campus de Gualtar  
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Portugal  
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[icvs.uminho.pt](http://icvs.uminho.pt)

**fct** **Very Good**  
111 PhD  
Researchers  
19,3 M€  
Total Funding

The ICVS is the R&D Unit of the University of Minho's School of Medicine, strategically positioned within a fast-growing cluster of biomedical science, technology, and healthcare organizations. Researchers with complementary academic backgrounds work together at the ICVS, covering the entire R&D pipeline. This ranges from in vitro research to animal models, pre-clinical validation, clinical trials, and ultimately bringing innovative medical solutions to market. The ICVS aspires to create scientific knowledge that improves Health outcomes.



## SCHOOL OF LAW



RESEARCH CENTRE FOR JUSTICE AND GOVERNANCE

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[jusgov.uminho.pt](http://jusgov.uminho.pt)

**fct** **Very Good**  
42 PhD  
Researchers  
1,8 M€  
Total Funding

The Research Centre for Justice and Governance (JusGov) is a pioneering, interdisciplinary R&D Unit for cutting-edge legal scholarship. As reflected in the most recent FCT evaluation, the achievements of the JusGov community are of an "Excellent" standard. The twin pillars of justice and governance are at the heart of the Centre's endeavours. While each of JusGov's seven Research Groups pursues inquiries into different elements of the legal landscape, all of them converge on the study of 'law in action', taking a close look at the legal foundations of contemporary sociopolitical life and exploring ways to reframe and fine-tune them in light of the evolving complexity of the issues at hand.



## SCHOOL OF PSYCHOLOGY



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**fct** **Very Good**  
14 PhD  
Researchers  
0,2 M€  
Total Funding

UMinho Nucleus of the Health Sciences Research Unit: Nursing (UICISA: E), accredited and funded by FCT since 2004, brings together researchers from 24 higher education and healthcare institutions. The University of Minho nucleus plays a pivotal role in its international and interdisciplinary R&D, tackling complex health challenges through innovation and collaboration. Its mission is to promote health and mental health, prevent disease, and strengthen care directed to the person, family, and community, as well as to patients with disabilities and those in end-of-life situations. Nationally and internationally recognized, UICISA:E drives nursing research and fosters evidence-based healthcare solutions.



## SCHOOL OF SCIENCE



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CP3, 3.02  
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[lip.pt](http://lip.pt)

**Excellent**  
 **4 PhD**  
Researchers  
 **Total Funding**

LIP is the reference laboratory for particle physics and associated technologies in Portugal. LIP is committed to R&D in three main areas: particle and astroparticle physics; development of new instruments and methods and computing. Advanced training, knowledge transfer and the engagement of society with science are also in the core of LIP's activities. The node of LIP at UMinho was created in 2010 and today it has about 30 members, including researchers, students and technicians. The main activities are related to the ATLAS experiment at CERN, the Pierre Auger Observatory in Argentina, phenomenology studies, advanced computing and development of multimedia tools for scientific outreach.



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**Very Good**  
 **58 PhD**  
Researchers  
 **7,3 M€**  
Total Funding

The Centre of Molecular and Environmental Biology (CBMA) is an FCT Research Unit, hosted in the School of Sciences at the University of Minho (UMinho). CBMA is founder of the Associate Laboratory Aquatic Research Network and has most laboratories at the Institute of Science and Innovation for Bio-Sustainability at UMinho. Our VISION is of a sustainable transformation in society based on the responsible use of natural resources that enables human well-being and a prosperous future within safe planetary boundaries. Our MISSION is to conduct cutting-edge research and training in Molecular and Environmental Biology, translating it into practical applications, while fostering scientific literacy and facilitating knowledge transfer to our stakeholders.



## SCHOOL OF SCIENCE



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**Very Good**  
 **69 PhD**  
Researchers  
 **11 M€**  
Total Funding

The Centro de Física das Universidades do Minho e do Porto (CF-UM-UP) began in 2014 and comprises the Centro de Física da Universidade do Minho (CFUM) and the Centro de Física do Porto (CFP), two former research units, recognised and evaluated by FCT. The two Centres agreed to join forces and form a comprehensive research centre in the broad area of Pure and Applied Physics. This union is supported by a Protocol signed by the Rectors of both universities. The partnership aims at building new strategies to fulfil the potential of the 80 PhD integrated researchers of CF-UM-UP, to perform high quality research, both fundamental and applied, in Physics and adjacent areas.



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**Very Good**  
 **41 PhD**  
Researchers  
 **1,3 M€**  
Total Funding

CMAT is a Research Unit of the School of Sciences of UMinho with a pole at the University of Trás-os-Montes e Alto Douro (UTAD), classified with Very Good in the last evaluation of R&D Units by FCT. The Partnership with UTAD started in 2015 and is unique in the context of Portuguese Mathematics Centres. CMAT has 76 PhD members and 28 PhD students, structured in 4 research groups: Algebra, Logic and Computation; Analysis and Applications; Geometry, Topology and Applications; Statistics, Applied Probability and Operational Research.



## SCHOOL OF SCIENCE



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[icterra.pt](http://icterra.pt)

**fct** **Very Good**  
12 PhD Researchers  
0,1 M€ Total Funding

The Earth Sciences Centre (CCT) develops cutting-edge research in geosystems characterization and environmental monitoring, integrating laboratory, field, and modelling approaches. Equipped with advanced tools, it focuses on soil, water, and ecosystem analysis in degraded areas and under climate extreme scenarios, promoting sustainable practices and supporting critical raw materials exploration. CCT also plays a leading role in geodiversity and geoheritage studies, recognized through the attribution of a UNESCO Chair (since 2025). Its research on contemporary challenges guides sustainable land management and strengthens CCT's contribution to addressing critical environmental and societal issues.

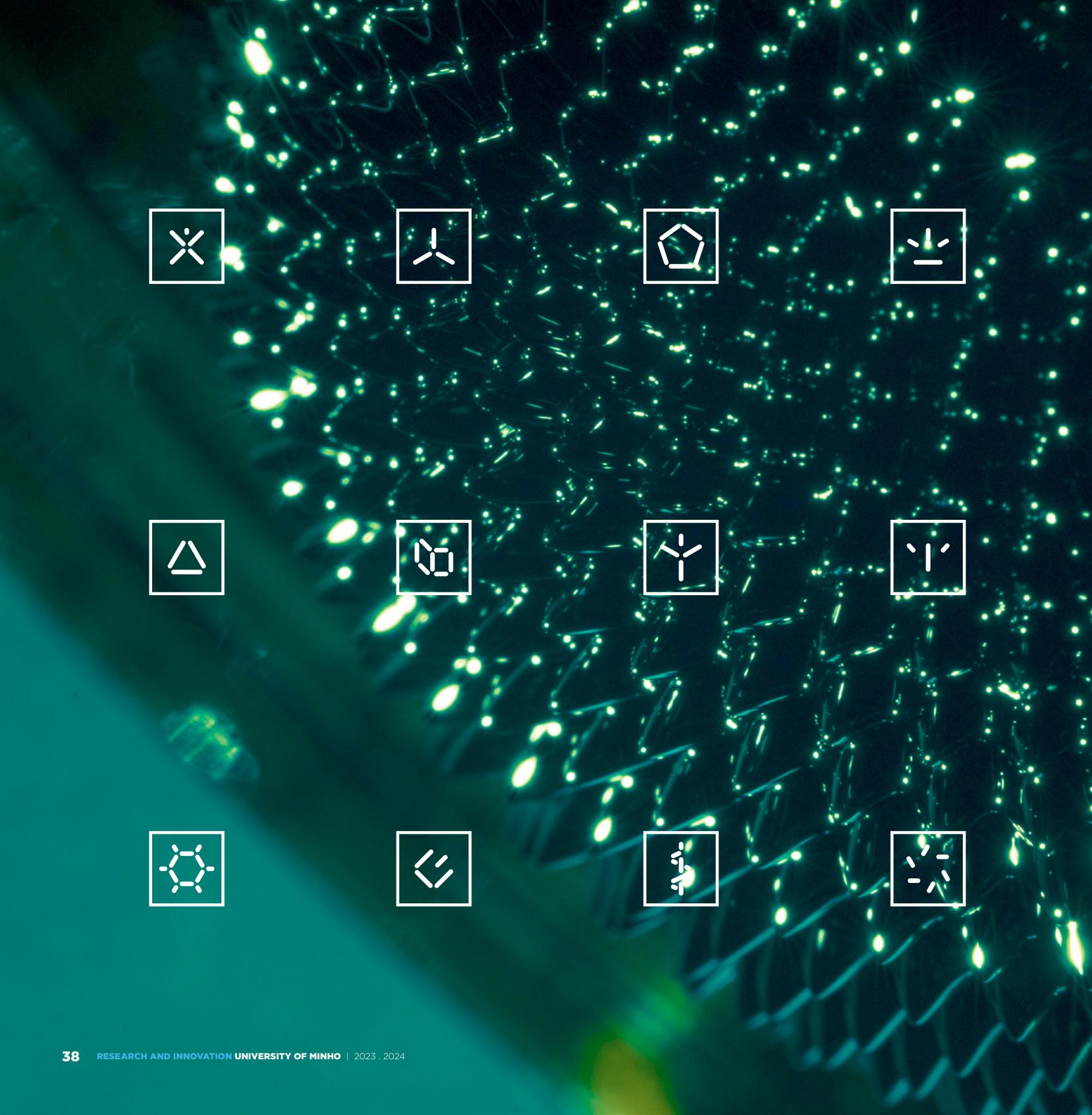


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[cq.uminho.pt](http://cq.uminho.pt)

**fct** **Good**  
31 PhD Researchers  
1,7 M€ Total Funding

CQ-UM is an important hub of interdisciplinary research and innovation. Its mission is to foster advanced research and training in chemistry, particularly at the interface with biology, physics, materials, medicine and nano-sciences, within the themes of Applied Biomolecular Chemistry, Heterocycles for Societal Challenges and Sustainable Chemistry - New Methods and Materials. CQ-UM tackles global challenges through key objectives include developing smart drug delivery, diagnostic tools and drug candidates to advanced materials and friendly technologies. Empowers scientific discovery and real-world impact—driving solutions for health, technology, and sustainability through creative research.





# SCIENTIFIC MERIT AWARDS



Each year, on the occasion of its anniversary, the University of Minho (UMinho) proudly celebrates the outstanding contributions of its academic community by awarding a prestigious prize to a Professor or Researcher whose career exemplifies scientific excellence. This distinction honors individuals whose visionary work and sustained dedication have elevated the university's reputation—locally, nationally, and internationally.

More than a recognition of achievement, this award reflects UMinho's belief that excellence and belonging go hand in hand. From the very beginning, the university has understood that celebrating merit not only affirms individual accomplishment but also strengthens the collective spirit of its research community.

The award is designed to:

- Acknowledge a career of intense scientific engagement
- Celebrate the global impact of a researcher's work
- Inspire others to strive for excellence in their own fields
- Serve as a beacon for young researchers, encouraging ambition, integrity, and innovation

Since the inaugural award in 2009, presented to Nuno Peres from the School of Sciences, UMinho has honored researchers from across its academic spectrum—each one a testament to the university's vibrant and diverse research culture.

This annual tradition not only reinforces UMinho's commitment to scientific advancement but also pays tribute to the effort, dedication, and intellectual rigor that define its research community.

**2009** Nuno Peres (School of Sciences)

**2010** Rui L. Reis (School of Engineering at the time, nowadays at the I3Bs Institute)

**2011** Carlos Mendes de Sousa (Institute of Arts and Humanities)

**2012** Odd Rune Straume (School of Economics and Management)

**2013** Nuno Sousa (School of Medicine)

**2014** Armando Machado (School of Psychology)

**2015** José António Teixeira (School of Engineering)

**2016** Moisés de Lemos Martins (Institute of Social Sciences)

**2017** Paulo Lourenço (School of Engineering)

**2018** José González Méijome (School of Sciences)

**2019** Leandro Almeida (Institute of Education)

**2020** Patrícia Jerónimo (School of Law)

**2021** António Vicente (School of Engineering)

**2022** Helena Machado (Institute of Social Sciences) and Fernando Alexandre (School of Economy & Management)

**2023** António Salgado (School of Medicine)

**2024** Isabel Soares (School of Psychology)



# ANTÓNIO SALGADO

António Salgado was born in Braga in 1978. He holds a degree in Applied Biology from the University of Minho's School of Sciences, earned in 2000; a PhD in Materials Science and Technology with a specialization in Tissue Engineering and Hybrid Materials from the School of Engineering at the University of Minho, completed in 2005; and a Habilitation in Health Sciences from the School of Medicine at the same university, obtained in 2018. He is currently a Coordinating Researcher and Vice-President for Research at the University of Minho's School of Medicine, where he leads the thematic team ReNEU at the Life and Health Sciences Research Institute.

His main research focus is the development of therapeutic strategies in regenerative medicine for the central nervous system, particularly through the use of stem cell secretome. He is the author of over 145 peer-reviewed scientific articles (h-index = 42, over 7,000 citations), 20 book chapters, 2 patents, and has also edited a book. As a result of his scientific activity, he was included in the Stanford/Elsevier ranking of the top 2% of scientists worldwide.

He has coordinated the University of Minho's participation in more than 20 scientific projects funded by national and international entities, both public and private. He also serves as President of the Portuguese Society for Stem Cells and Cellular Therapies. Throughout his career, he has received several awards and distinctions, including the Gulbenkian Frontier Research Award in Life Sciences and the Melo e Castro Research Award, granted by Santa Casa da Misericórdia de Lisboa.

In recognition of his contributions to the study of the Portuguese economy, he received the Scientific Merit Award from the University of Minho in 2023.



# ISABEL SOARES

Isabel Soares was born in 1956 in S. Mamede de Infesta, in the district of Porto. She holds both a licentiate and a doctorate in Psychology from the Faculty of Psychology and Educational Sciences of the University of Porto, where she taught from 1980 until 1993, when she joined the University of Minho. She served as Director of the Psychology program, of the Departments of Psychology and Applied Psychology, and as President of the Council of Education and Psychology Programs. She was also President of the School of Psychology between January 2013 and January 2016.

Currently, she is a member of the General Council of the University of Minho and Full Professor at the School of Psychology, where she serves as President of the School Council. She is Director of the Master's program in Clinical Psychology in Childhood and Adolescence and Coordinator of the Attachment and Parenting Studies Group, integrated in the Research Laboratory on Development and Psychopathology of the Psychology Research Center. Her research focuses on attachment and developmental psychopathology, coordinating studies on the development of children and families in situations of high psychosocial adversity, centered on the effects of disruptive relational experiences in the family context and the deprivation of parental care. These studies are funded by the Foundation for Science and Technology and the Bial Foundation.

She has around 150 publications in national and international scientific books and journals, and has supervised dozens of master's and doctoral theses. She is a specialist in Clinical and Health Psychology, with an advanced specialty in Psychotherapy, and is a member of the National Council of Psychologists of the Portuguese Psychologists' Association. In 2023, she was awarded the Iberian Psychology Prize by the Portuguese Psychologists' Association and the Spanish General Council of Psychology.

She was the Principal Investigator for the FCT application of the ProChild Collaborative Laboratory and currently serves as President of its Board. ProChild CoLAB received the 2023 Human Rights Award from the Portuguese Parliament, recognizing its work in combating childhood poverty and social exclusion, and its contributions to public policies defending children's rights through a transdisciplinary scientific approach and collaboration with various public and private sector entities.

In recognition of her contributions to the study of the Portuguese economy, she received the Scientific Merit Award from the University of Minho in 2024.

# EUROPEAN RESEARCH COUNCIL GRANTS

Since its inception, the European Research Council (ERC) has marked a turning point in European science policy—fulfilling a long-standing aspiration of the research community to foster a truly excellence-driven scientific ecosystem. The ERC was created to empower frontier research and cultivate a world-class scientific community within the European Research Area.

Its mission is clear and ambitious:

“To encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, based on scientific excellence.”

At its core, the ERC is designed to strengthen and shape Europe’s research landscape by:

- Implementing rigorous, high-quality peer-review processes
- Establishing international benchmarks of success
- Providing transparent insights into who is succeeding and why

ERC grants are among the most prestigious in the world, demanding researchers to push boundaries and pursue bold, transformative ideas. The sole criterion for selection is scientific excellence, making ERC funding a hallmark of distinction and innovation.

The ERC offers five main funding schemes tailored to different career stages and research ambitions:

- Starting Grants – For early-career researchers (2–7 years post-PhD)
- Consolidator Grants – For mid-career researchers (7–12 years post-PhD)
- Advanced Grants – For established researchers with a proven track record of major achievements over the past decade
- Proof of Concept Grants – Supporting the societal or commercial potential of previously funded ERC projects
- Synergy Grants – Enabling 2–4 researchers to join forces across disciplines to tackle ambitious, complex challenges

Through these schemes, the ERC not only funds groundbreaking research but also sets the tone for scientific ambition, independence, and excellence across Europe. Institutions like the University of Minho benefit immensely from this framework, aligning their research strategies with the ERC’s vision and contributing to the advancement of knowledge on a global scale.

# ALEXANDRA P. MARQUES



**3B'S RESEARCH GROUP**  
RESEARCH CENTRE

**MEDICAL BIOTECHNOLOGY**  
MAIN SCIENTIFIC AREA

**1.998.939 €**  
FUNDING AWARDED

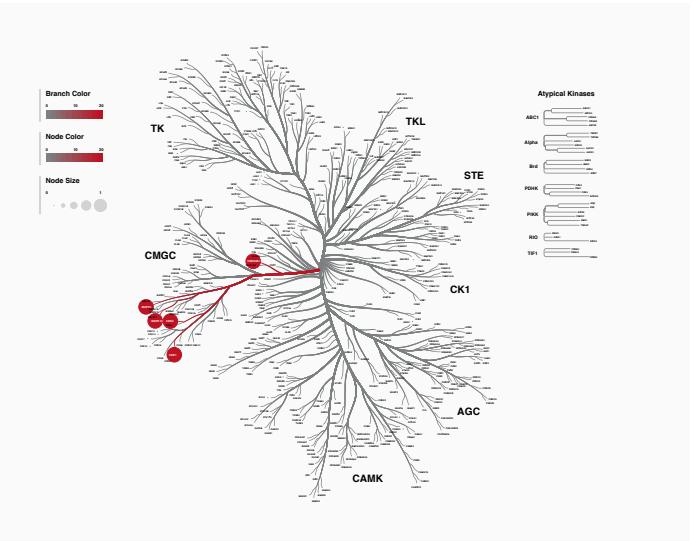
**MAY 2017 - JUL 2023**  
ERC GRANT PERIOD

## ECM\_INK

CELLS-SELF EXTRACELLULAR MATRICES-BASED BIOINKS TO CREATE ACCURATE 3D DISEASED SKIN TISSUE MODELS

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PROJECT TITLE



### DESCRIPTION

The ECM\_INK project leveraged cell-derived extracellular matrix (ECM) from patient-specific chronic, genetic, and neoplastic skin diseases to develop disease-tailored bioinks and fabricate pathophysiological relevant 3D in vitro skin models. Ultimately, it contributed to the creation of reliable cell-based platforms with significant impact on disease modelling, drug development, and the reduction or replacement of animal experimentation.

### MAIN ACHIEVEMENTS

- Disease-specific ECM fingerprints in chronic, genetic, and neoplastic skin conditions.
- Revealed shared ECM traits across dystrophic epidermolysis bullosa variants, suggesting potential therapeutic targets.
- Method for ECM extraction and fractionation that preserves essential biological components.
- Identification of ECM extracts disease-relevant bioactivity, guiding tailored bioink formulations.
- 3D printer capable of using multiple inks to fabricate complex 3D tissue structures.
- Dynamic culture platform to support maturation and maintenance of functional multi-tissue constructs.
- Fully biological 3D in vitro models of dystrophic epidermolysis bullosa and squamous cell carcinoma.

# ROGÉRIO PEDRO DE SOUSA PIRRACO



**3B'S RESEARCH GROUP**  
RESEARCH CENTRE

**MEDICAL BIOTECHNOLOGY**  
BIOENGINEERING

**1.500.000 €**  
FUNDING AWARDED

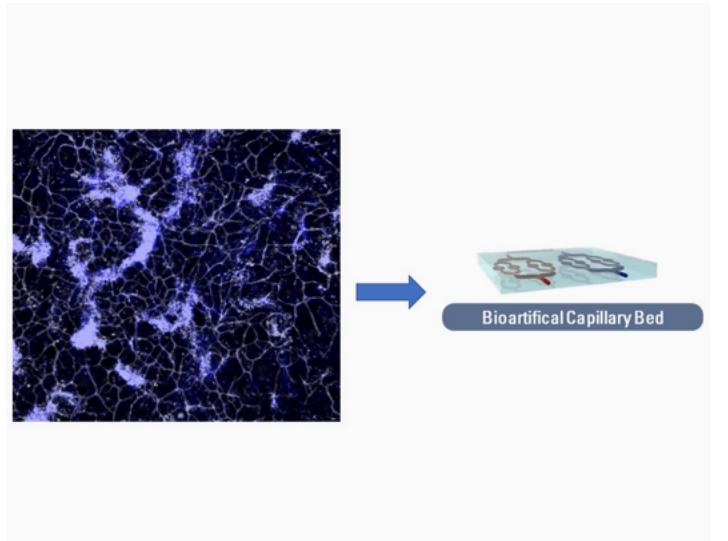
**NOV 2018 - APR 2025**  
ERC GRANT PERIOD

## CAPBED

ENGINEERED CAPILLARY BEDS FOR SUCCESSFUL PREVASCULARIZATION OF TISSUE ENGINEERING CONSTRUCTS

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PROJECT TITLE



### DESCRIPTION

CapBed aimed at developing a new technology to fabricate in vitro capillary beds that include a vascular axis that can be anastomosed with a patient circulation. Such capillary beds could be used as prime tools to prevascularize bioartificial tissues in bioreactor systems and allow fast perfusion of the tissues after transplantation to a patient, ensuring their viability and function.

### MAIN ACHIEVEMENTS

Peer-reviewed articles reporting works supported by the project:

- Freitas-Ribeiro, S., ... & Pirracó, R. P. (2024). Prevascularized spongy-like hydrogels maintain their angiogenic potential after prolonged hypothermic storage. *Bioactive Materials*, 37, 253-268.

- Vilaça-Faria, H., Noro, J., ... & Pirracó, R. P. (2024). Extracellular matrix-derived materials for tissue engineering and regenerative medicine: A journey from isolation to characterization and application. *Bioactive Materials*, 34, 494-519.
- Rodrigues, D. B., ... & Pirracó, R. P. (2024). Generation of 3D melanoma models using an assembloid-based approach. *Acta Biomaterialia*, 178, 93-110.
- Rodrigues, D. B., ... & Pirracó, R. P. (2024). Modelling the complex nature of the tumor microenvironment: 3D tumor spheroids as an evolving tool. *Journal of Biomedical Science*, 31(1), 13.
- Rodrigues, D. B., ... & Pirracó, R. P. (2024). How are natural-based polymers shaping the future of cancer immunotherapy—A review. *Polymer Reviews*, 64(1), 371-406.
- Pirracó, R. P. (2023). Macro, Micro, and Everything in Between. Bridging the Gap: A Vision Toward the Creation of Multiscale Vascular Networks. *Advanced Biology*, 7(12), 2300291.



## PROJECTS OVER 2 M€

At the UMinho, research is conceived as a global endeavour, aimed at addressing the grand challenges of our time. It is therefore intrinsically international, requiring the continuous strengthening of collaborations and participation in transnational initiatives, particularly within the framework of the European Research Area. At the same time, UMinho remains deeply committed to ensuring that scientific knowledge generates tangible socio-economic and cultural benefits for the country and for the Northern region of Portugal.

Strengthening and supporting research projects and their overall funding base is a key institutional priority. In recent years, there has been a steady rise in competitive project funding, which has progressively shifted control over significant research resources towards funding agencies responsible for allocating them to research groups and individual investigators through rigorous peer-reviewed selection processes. This context demands from our researchers an ever-greater capacity to conceive, structure, and write complex, high-quality proposals.

At UMinho, the attraction of competitive research funding has evolved significantly in recent years. This evolution reflects not only the growing engagement of our research units and their teams, but also a remarkable increase in the quantity, quality, and international recognition of the research carried out across the institution.

One of the clearest indicators of this transformation is the growing number of projects with substantial budgets. Beyond the prestigious ERC grants, UMinho has been actively involved in 18 Agendas for Innovation and Reindustrialization under the PRR, confirming its strategic role in the national innovation ecosystem. Among these, six projects have internal budgets exceeding €2 million, a clear demonstration of the institution's capacity to attract, lead, and manage large-scale funding. This success contributes decisively to the consolidation of UMinho's research ecosystem—enhancing excellence, critical mass, and long-term sustainability.

# BE.NEUTRAL

MOBILITY AGENDA FOR  
CARBON NEUTRALITY IN CITIES



# GREENAUTO

GREEN INNOVATION FOR  
THE AUTOMOTIVE INDUSTRY



## DESCRIPTION

Reduce carbon emissions and aspire to create Europe's first Carbon Neutral Region. Be.Neutral seeks to position Portugal as an exporter of cyber-physical zero-carbon mobility products to cities around the world. Its design arose from an opportunity to develop, industrialise, and operate new mobility products and services (physical devices, connectivity and data science platforms) that are able to quantify the emissions avoided in real time so as to accelerate carbon neutrality by 2030.

The consortium integrates 44 partners (29 companies, 14 ENESII and 1 cluster) and 8 cities as environments for development, testing and demonstration of products and services. The agenda will result in 16 PPS: 4 mobility products and their respective complete value chains and 1 bus conversion; 1 set of connectivity devices; 7 platforms; 2 charging systems; 1 new infrastructure.

## DESCRIPTION

The GreenAuto agenda aims to position the national automotive industry in the value chain of low-emission vehicles. To achieve this goal, innovative, digital and sustainable products and processes associated with the manufacture of cars and their components will be developed.

Promoted by industrial and R&I entities with extensive expertise in automotive development and production technologies, it will create the conditions for Stellantis Mangualde to produce a new battery-electric light commercial vehicle (BE-LCV) in Portugal, with strong national input.

# INOV.AM

ADDITIVE  
MANUFACTURING



## DESCRIPTION

INOV.AM is an Innovation Mobilization Program in Additive Manufacturing, composed of companies from various sectors of activity and a set of entities from the national scientific system. It aims to develop various areas of intervention, including new materials, advanced additive manufacturing processes, advanced post-production processes, advanced automation and control software, new products and training for human resources. In order to empower the human resources of companies in core additive manufacturing subjects, this program also aims to develop an advanced training/certification plan that will be implemented across all areas of application covered by this program.

# NGS

NEW GENERATION  
STORAGE



## DESCRIPTION

The NGS Innovation Pact – New Generation Storage brings together 47 partners working towards the development of a complete and fully circular battery ecosystem in Portugal.

The consortium aims to structurally transform the national battery industry ecosystem, creating the necessary conditions – at the technological and human resources level – from the development of innovative technologies to the management of battery end-of-life, contributing to the implementation of a complete value chain, making Portugal a world reference.

# BLUE BIOECONOMY PACT



# R2UTECHNOLOGIES

NEW SOLUTIONS FOR THE MODULAR  
CONSTRUCTION INDUSTRY



## DESCRIPTION

Advocating for a new, sustainable, innovative, and decarbonizing paradigm, which finds in the sea an answer to the challenge of global scarcity of land resources, and bringing together various national industries, the project Pacto da Bioeconomia Azul (Blue Bioeconomy Pact) plans to develop new products, processes, and services resulting from the incorporation of blue bioeconomy goods into new or already existing value chains, with positive impact on the environment, consumer life, and national exports.

## DESCRIPTION

The R2U Innovation Pact aims to develop an innovative solution in Portugal, in the field of prefabrication and modular construction, to meet the growing needs of the global market.

A cluster specializing in prefabrication and modular construction will be created, standing out as a national response and positioning Portugal as a leading global supplier in this new approach to the construction industry.

# CONNECTED MANUFACTURING

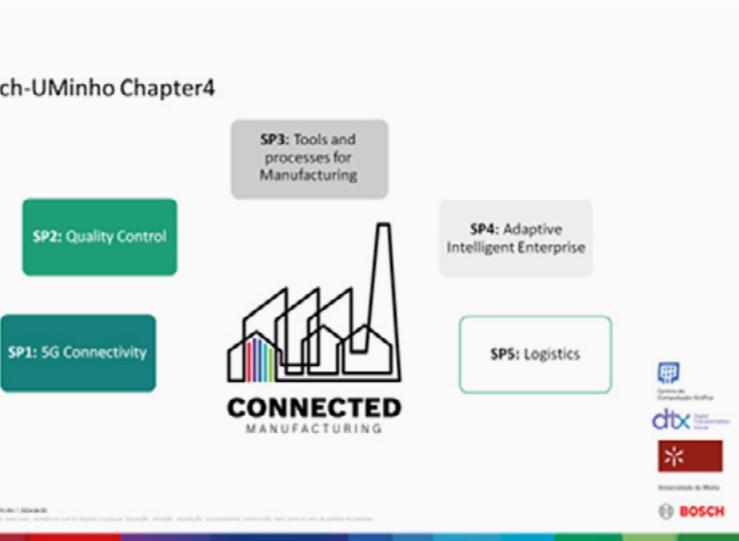
DIGITAL  
TRANSFORMATION



## DESCRIPTION

The Connected Manufacturing program is based on five major thematic areas: 5G Connectivity, Quality Control, Tools and Processes for Manufacturing, Adaptive Intelligent Enterprise, and Logistics.

These areas highlight the importance of accessing and analyzing the information available across the various production sectors at Bosch Braga, with the central goal of developing innovative solutions that leverage new connectivity technologies to ensure that the best information is available in a coherent, consolidated, and real-time manner. This enables stakeholders to intervene promptly and effectively in decision-making processes.



## MAIN ACHIEVEMENTS

**2023**

- 5 deliverables

**2024**

- 36 deliverables
- 2 scientific publications
- 3 master's dissertations

# NEXT SENSE

SAFETY CONNECTED AND  
AUTOMATED VEHICLES



## DESCRIPTION

The neXt Sense program aims to develop a new generation of automotive sensor systems for autonomous driving. It is organized into four subprograms: Microsystem Technology (MEMS), Reliability and Security, Positioning and Connectivity, and Integrated Program Management.

The project will strengthen Bosch Braga as a key R&D centre within the Bosch Group, enhancing expertise in embedded firmware design, sensor co-simulation, and hardware-software integration.

With an investment of €15.3 million, the program is expected to generate at least six patents, expand Bosch's international sales from Braga, reinforce R&D capacities among partners, and foster youth employment through the recruitment of highly qualified researchers.



## MAIN ACHIEVEMENTS

**2023**

- 20 deliverables

**2024:**

- 34 deliverables
- 9 scientific publications
- 8 master's dissertations
- 3 patents submitted:
  - “High-Performance Circular Polarization in a Compact Antenna Design”
  - “Linear Position Sensor with multiple windings in-series and reduced edge-effects”
  - “Inductive Position Sensor”

# TERM RES HUB

INFRAESTRUTURA EM ENGENHARIA DE TECIDOS  
E MEDICINA REGENERATIVA



## DESCRIPTION

The TERM RES-Hub distributed Infrastructure is based on the existing facilities at AvePark, Taipas-Guimarães, as a result of the consortium coordinated by the PT Associate Lab. ICVS/3B's (from the University of Minho), in a partnership with EPERTISSUES (EEIG) and A4TEC Association, which already provide laboratories with extensive resources and high interest to the scientific and business community focused on the development of research in Tissue Engineering and Regenerative Medicine (TERM), Nanomedicine, Biomedical Engineering and Biomaterials Science and Technology. One of the main objectives of TERM RES-Hub infrastructure consists in offering services (tests and/or consulting), carrying out scientific projects and publishing scientific results in high impact journals and generating intellectual property, related to the areas of development and characterization of biomaterials, tissue engineering and regenerative medicine, medical devices, and valorization of marine resources, to the scientific, educational, and business communities.

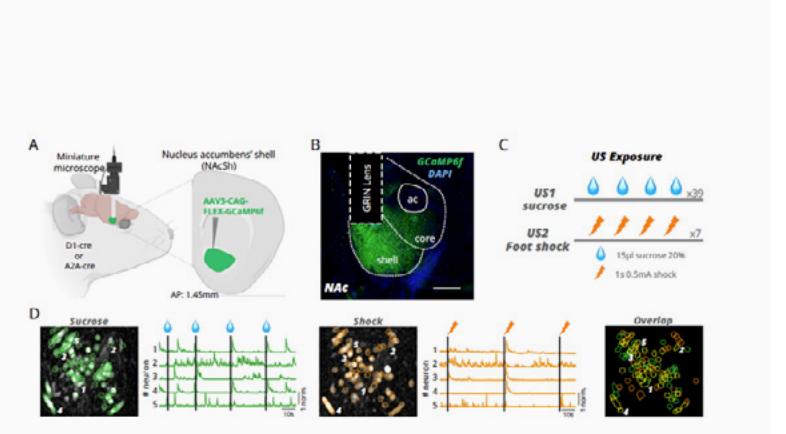
## MAIN ACHIEVEMENTS

TERM RES-Hub is a European infrastructure that runs, simultaneously, many different types of regional, national, european and other international grants. In addition to biomaterials, tissue engineering and regenerative medicine projects, TERM RES-Hub is also involved in several grants focusing on the exploitation of marine resources, and many other industrial projects. To strengthen the technical and administrative staff, a new building (area 2900m<sup>2</sup>) was built and the state-of-the-art scientific equipment was acquired. This reinforcement allowed TERM RES-Hub distributed infrastructure to operate based on a philosophy of four complementary pillars: i) open access, ii) training, iii) collaboration projects, and iv) providing high quality services and assistance.

All equipment available at TERM RES-Hub infrastructure facilities are used by internal and/or external users, namely researchers from departments/research centers nearby or other academic institutions, as well as national and international companies.

# VALENCE

CHALLENGING CURRENT MODELS OF VALENCE  
ENCODING IN THE MAMMALIAN BRAIN



## MAIN ACHIEVEMENTS

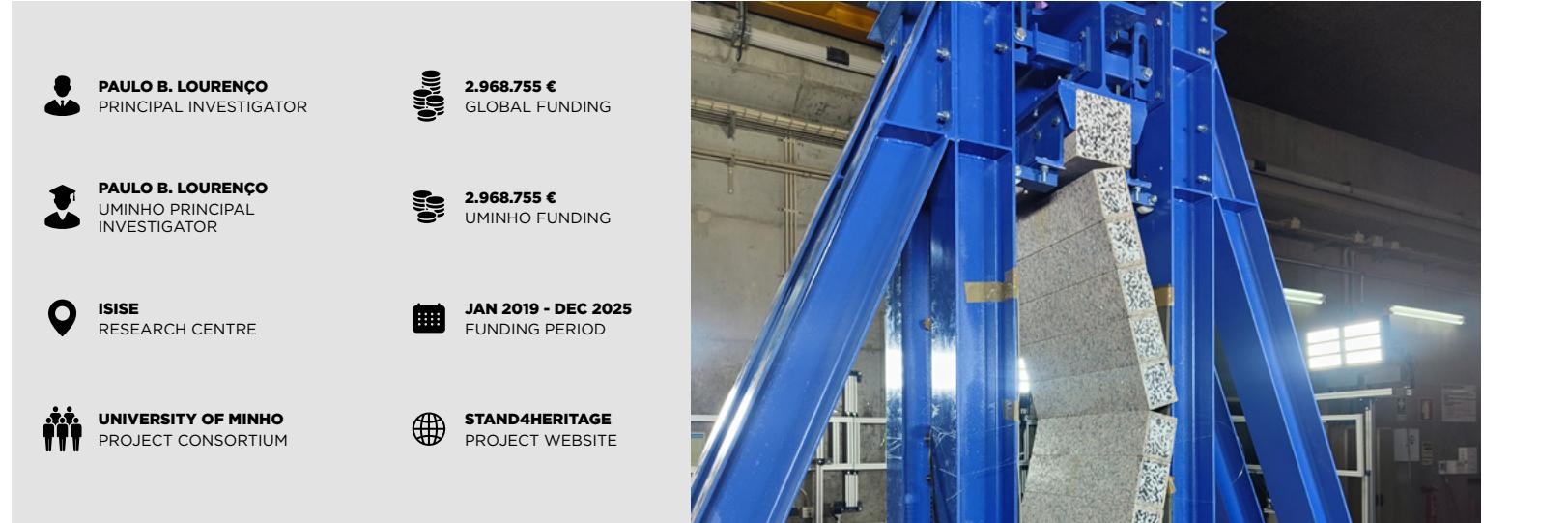
We have recorded neuronal activity of rodents performing tasks with opposing valences, and our groundbreaking research revealed that D1 and D2 neurons are co-recruited during both rewarding and aversive experiences in rodents, challenging the traditional antagonistic model. We provided evidence that these populations work cooperatively to drive appropriate motivated behaviors.

In parallel, using novel fluorescent opioid sensors, we demonstrated spatiotemporally-resolved opioidergic transmission in the nucleus accumbens and downstream regions, identifying these neuropeptides as critical modulators of associative learning.

Through precision optogenetic manipulation of D1 and D2 neuronal activity, we established causal relationships between specific neural circuits and behavior, successfully bidirectionally modifying rewarding and aversive responses.

# STAND4HERITAGE

NEW STANDARDS FOR SEISMIC ASSESSMENT  
OF BUILT CULTURAL HERITAGE



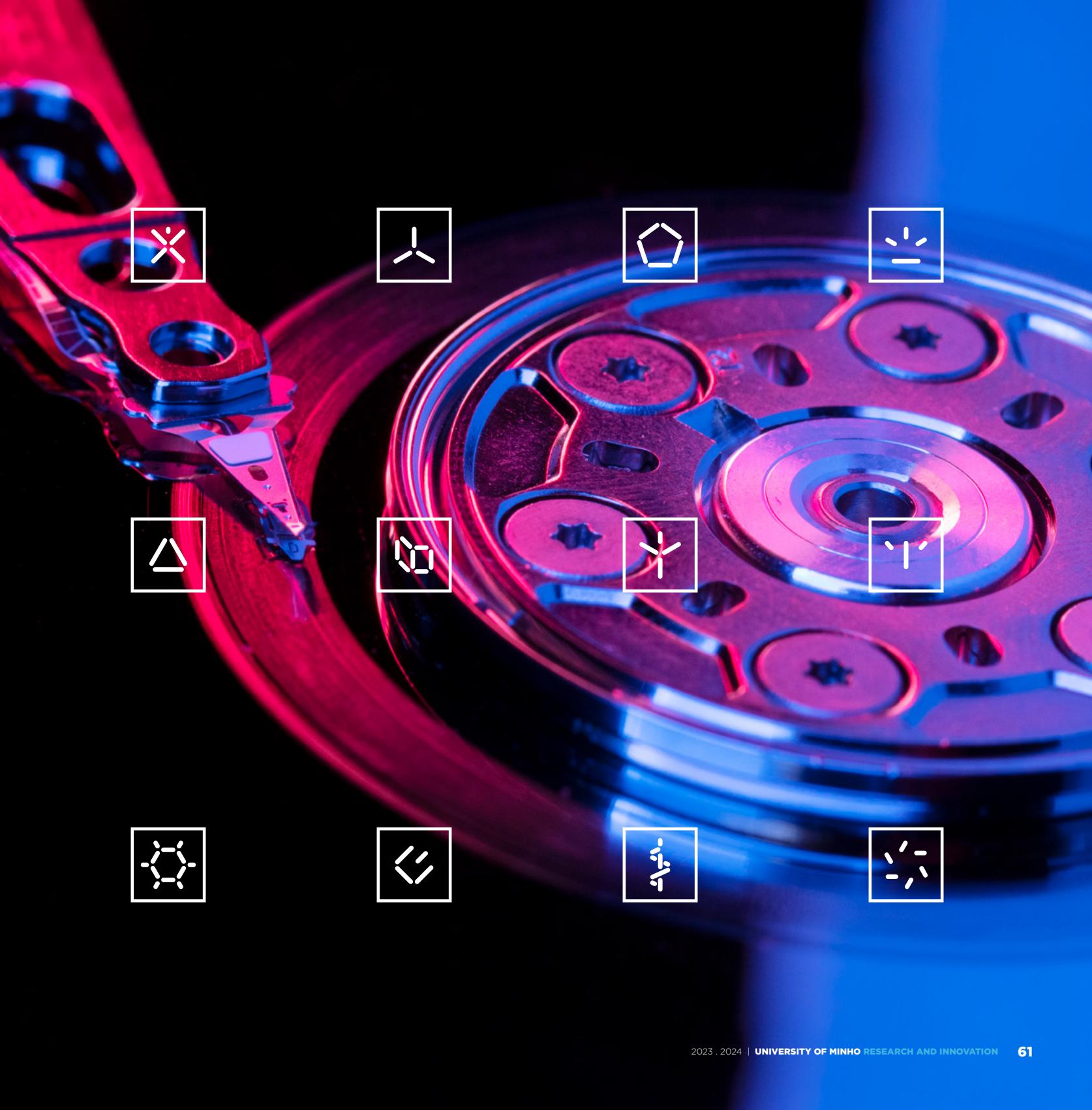
## DESCRIPTION

STAND4HERITAGE ambitiously introduces new standards for safeguarding built cultural heritage for the next generations. Most masonry buildings are only designed to withstand gravity loads and are vulnerable to seismic actions, resulting in brittle out-of-plane failures, acknowledged as the main cause of losses and injuries to people. The project follows a stochastic approach because both material heterogeneity and seismic characteristics variation result in highly scattered seismic capacities. S4H will generate novel integrated stochastic-based models of seismic signals, datasets of masonry dynamic behaviour evaluated through shaking-table campaigns, computationally efficient numerical approaches, and an integrated analytical tool for the out-of-plane seismic assessment of heritage buildings. Finally, the methodology supported by the application of the developed tools will play an important role in the new code generation towards the definition of optimal intervention techniques.

## MAIN ACHIEVEMENTS

The main achievements of the project so far include multiple proposals for seismic code changes, including e.g. experimental thresholds for limit states based on over 2000 shaking table tests. Unique experimental datasets have been obtained, together with a novel tool for masonry pattern generation and fast cloud-based multiple simulations manuals. Three PhD theses and three MSc dissertations were finalized. About ten keynotes and forty international journals papers have been published, with over 500 citations. The National Museum of Archaeology, Lisbon, Bagan, Ukraine and Peru were used as case studies in the project.

The design and instalment of tilting, settlement and shaking tables together with a six-camera digital image correlation system turned the laboratory of UMinho into one of the most advanced facilities for the dynamic testing of structures. These allowed studying masonry corners, dry-joint interfaces, free and forced rocking blocks, a vertical strip spanning wall and U-shape specimens, intensively tested to obtain unique experimentally informed seismic fragility curves.





# HIGHLY CITED RESEARCHERS

Each year, the Highly Cited Researchers™ list by Clarivate™ shines a spotlight on the world's most influential scientific minds—those whose research publications consistently rank among the top 1% by citations in their field and year. This prestigious recognition spans 21 disciplines and highlights individuals whose work has shaped the direction of science and society over the past decade.

At the University of Minho, excellence in research continues to resonate on the global stage. Between 2023 and 2024, three outstanding researchers earned their place among this elite group:

- In 2023, António Vicente from the Centre of Biological Engineering (CEB), was recognized for his sustained contributions to the scientific community.
- In 2023 and 2024, José António Teixeira from the Centre of Biological Engineering (CEB), and Rui L. Reis from the 3B's Research Group, were both recognized for their sustained contributions to the scientific community.

These accolades reflect not only individual brilliance but also the collaborative and innovative spirit that defines research at UMinho. The recognition by Clarivate underscores the university's commitment to producing high-impact science that transcends borders and disciplines.

For more on the methodology behind the Highly Cited Researchers list, visit:  
[Clarivate Methodology](#)

For more on the methodology behind the Highly Cited Researchers list, visit:

[Clarivate Methodology](#)

The following table shows the numbers of HCRs for 2023-2024 period:

	2023	2024
<b>WORLD</b>	6849	6886
<b>PORTUGAL</b>	19	18
<b>UMINHO</b>	3	2

# ANTÓNIO AUGUSTO VICENTE



## DESCRIPTION

Antonio Vicente is a Full Professor at UMinho since January 2022, and vice-Dean of the School of Engineering of UMinho since October 2019, following his previous appointment as Head of the Department of Biological Engineering of UMinho. Since January 2022 he is also Director of the Doctoral College UMinho. From an early stage of his career, he has kept a close contact with the food industry and he is/has been involved in >60 research projects, both national and international, together with industrial partners both as participant and as project leader.

His main research interests are:

- micro and nanotechnology applied to Food Technology;
- *in vitro* dynamic digestion system;
- food processing by ohmic heating/moderate electric fields;
- edible films and coatings for food products;
- bioreactor technology.

## MAIN ACHIEVEMENTS

He supervised/is currently supervising 35 PhD theses; he has also supervised/is currently supervising over 70 MSc theses and 20 post-doctoral fellows. He has published ca. 400 research articles in international peer-reviewed journals, 5 books, 5 patents and over 35 book chapters in international books, yielding an h-index of 94 (Scopus) and ca. 22 000 citations.

He is member of evaluation panels in several EU calls, and for National Research Agencies of over 15 countries around the Globe. He is also member of the Jury of the National Agriculture Prize in Portugal, since its institution in 2012. He has been considered a Highly Cited Researcher (Clarivate Analytics) in the area of Agricultural Sciences every year since 2018.

# JOSÉ ANTÓNIO COUTO TEIXEIRA



## DESCRIPTION

José António Teixeira is currently Professor at Biological Engineering Department, University of Minho. He has a degree in Chemical Engineering from University of Porto (1980) and a PhD in Chemical Engineering also from University of Porto (1988). At UMinho he was, for several years, Head of the Department of Biological Engineering and Head of Centre of Biological Engineering from 2012 to 2016. Currently is the Program Director of the PhD Program in Food Science and Technology and Nutrition. He has been involved in several research projects, both national and international, several of them involving close collaboration with industrial partners. His main research interests are focused on two main areas - Industrial Biotechnology and Food Biotechnology.

## MAIN ACHIEVEMENTS

José Antonio Teixeira is author/co-author of over 800 peer reviewed papers corresponding to an Hindex (Scopus) - 106 and has been named Highly Cited Researcher since 2018 (<https://orcid.org/0000-0002-4918-3704>) and, since 2012, he has been included in the Stanford/Elsevier Top 2% Scientists. He was also recognized with Lifetime Achievement Award by IBA (International Bioprocessing Association).

From the research projects coordinated, the coordination of the MSCA Doctoral Network PROCRYSTAL must be highlighted together with the coordination at University of UMINHO of three projects funded by PRR.



## DESCRIPTION

The Highly Cited Researchers 2024 list from Clarivate Analytics includes three scientists from the University of Minho, among them Rui L. Reis, featured for the third consecutive year (2022–2024) with 71,272 citations. President of I3Bs, founder of the internationally renowned 3B's Research Group, and Director of the ICVS/3B's PT Associated Laboratory, he is a world reference in biomaterials, tissue engineering, and regenerative and precision medicine. His distinguished career is marked by prestigious international awards, leadership roles in major scientific societies, and editorship of top-ranked journals.



## MAIN ACHIEVEMENTS

Rui L. Reis is particularly recognized internationally “for contributions to biomaterials and tissue engineering in regenerative medicine” as stated in the election citation by the US National Academy of Engineering (NAE), using original natural origin polymers and different types of stem cells. This line of work lead to an all range of major international awards.





# COLLABORATIVE LABORATORIES

Collaborative Laboratories—known as CoLABs—represent a forward-thinking model of research and development (R&D) cooperation in Portugal. These non-profit entities bring together the dynamism of private companies with the academic rigor of higher education institutions, alongside technological interface centres and other intermediary organizations. Their mission? To bridge the gap between knowledge creation and real-world application.

## STRUCTURE AND PARTNERSHIPS

Each CoLAB is built on a foundation of collaboration, requiring at minimum:

- One company from the private sector
- One R&D unit affiliated with a higher education institution and funded by FCT, I.P.

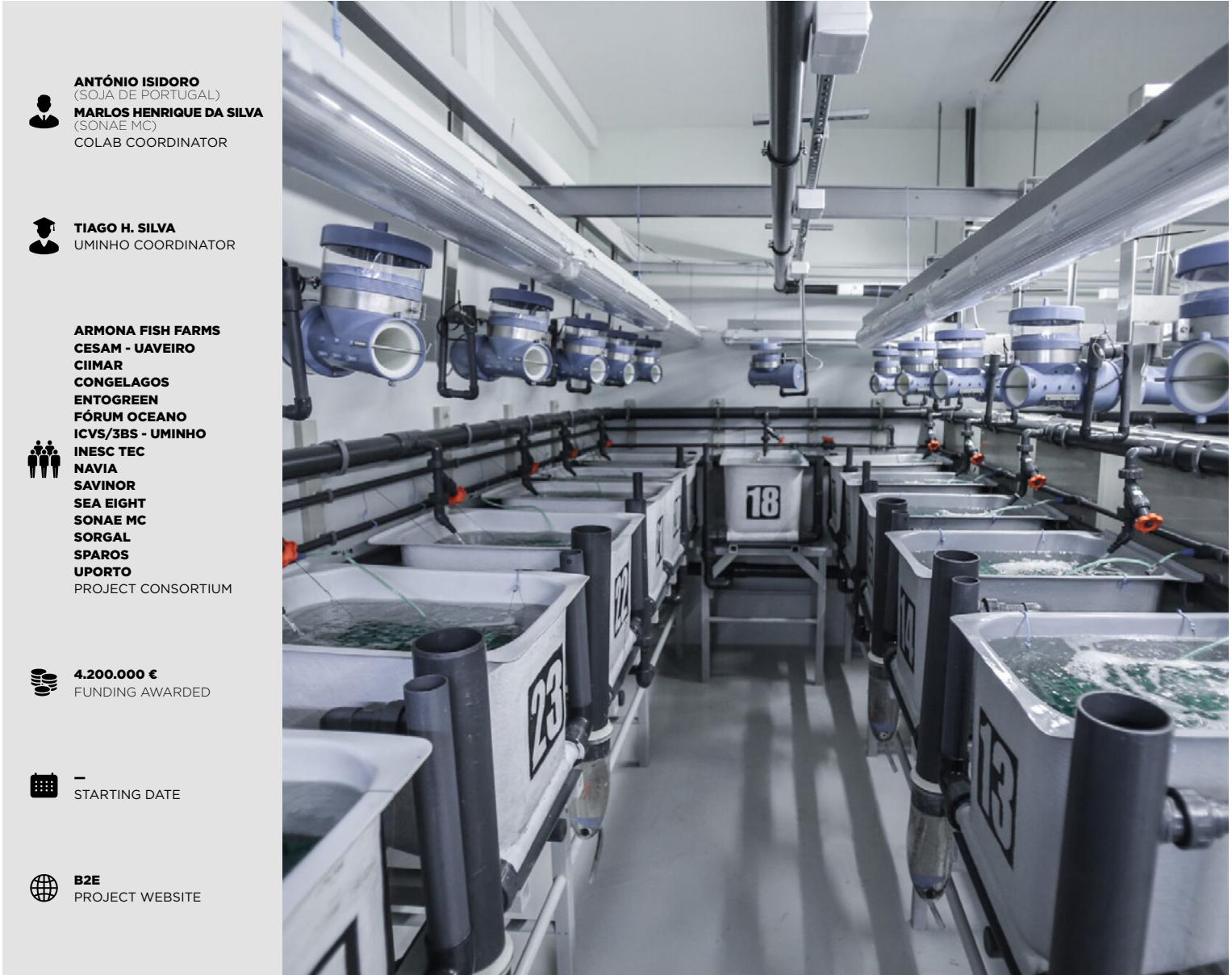
Many CoLABs emerge from existing technology interface centres, evolving into robust ecosystems of innovation. When R&D units lack legal personality, their host institutions step in as formal partners, ensuring seamless integration and accountability.

## STRATEGIC PURPOSE

Supported under the Interface Programme, CoLABs are designed to fuel Portugal's scientific and economic growth. By implementing targeted research and innovation agendas, they aim to:

- Generate high-quality, sustainable employment
- Promote scientific careers and retain talent
- Deliver tangible economic and social value

In essence, CoLABs are more than collaborative spaces—they are engines of transformation, driving Portugal's transition into a knowledge-based economy.



 **ANTÓNIO ISIDORO**  
(SOJA DE PORTUGAL)  
**MARLOS HENRIQUE DA SILVA**  
(SONAE MC)  
COLAB COORDINATOR

 **TIAGO H. SILVA**  
UMINHO COORDINATOR

 **ARMONA FISH FARMS**  
**CESAM - UAVEIRO**  
**CIIMAR**  
**CONGELAGOS**  
**ENTOGREEN**  
**FÓRUM OCEANO**  
**ICVS/3BS - UMINHO**  
**INESC TEC**  
**NAVIA**  
**SAVINOR**  
**SEA EIGHT**  
**SONAE MC**  
**SORGAL**  
**SPAROS**  
**UPORTO**  
PROJECT CONSORTIUM

 **4.200.000 €**  
FUNDING AWARDED

 **—**  
STARTING DATE

 **B2E**  
PROJECT WEBSITE

## MISSION AND VISION

B2E aims to stimulate the active participation of national scientific, business and public communities in the analysis and solution of complex problems related to the sustainable use of marine biological resources. It will promote the creation of qualified jobs, actively contributing to increase the economic and social value of products and services associated to new uses and valorization of those resources, including internationalization of scientific and technological capacity.

## DESCRIPTION

The Association for the Blue Economy – B2E pursues the definition and implementation of research and technology transfer agendas, promoting economic and social development in two of the Blue Growth sectors with highest potential: Biotechnology and Aquaculture. Under the motto “Inspired by the Ocean - Driven by the Market - Powered by Knowledge, B2E realizes its mission by launching mobilizing projects on a national or global scale, promoting collaboration between knowledge centers and companies, encouraging the sharing of knowledge between Associates, supporting the integration in international networks and access to the global market, supporting applications for public structural funds and European calls, as well as carrying out promotional activities with national and international investors. These activities are being developed under the scope of 3 thematic areas: 1) valorization of marine biological resources, 2) marine biotechnology, 3) sustainable aquaculture.

## MAIN ACHIEVEMENTS

The non-profit association constituting the B2E CoLAB was formalized in February 2019, enabling the start of operation. Together with the establishment of the governing bodies, B2E was installed at UPTEC Mar in Matosinhos, under the patronage of the local municipality, and the direction elaborated an application for funding (under PT2020) envisaging the recruitment of highly qualified human resources. The first recruitment processes were initiated, targeting the selection of the Technical-Scientific Director and Innovation Technician, who should be hired at the beginning of 2020. The corporative image of B2E was developed, with the creation of logo, registration of web domain and set-up of official contacts and social network accounts. The technical work was initiated, by starting the design of a research agenda, with contributions from the associates, under the established 3 thematic lines.

# BUILT COLAB

COLABORATIVE LABORATORY FOR  
THE FUTURE BUILT ENVIRONMENT



## MISSION AND VISION

BUILT CoLAB aims to develop research, innovation, and knowledge transfer activities, with a view to increasing productivity, competitiveness, and sustainable growth of the Ecosystem of the AEC sector – Architecture, Engineering, and Construction, promoting the digital and ecologic transformation of buildings and infrastructures, making them adaptable, intelligent, resilient and sustainable.

## DESCRIPTION

BUILT CoLAB is guided by a “Technology to Market” approach between knowledge centres, industry and end-users in a co-creation environment, promoting the Twin Transition (digital and ecological) and the transformation of the Built Environment of the Future.

Its R&D agenda covers the Life Cycle of the Built Environment, including architecture, design, and data-driven manufacturing, and ultimately deconstruction and recycling, promoting the use of Digital Twin of the entire AEC ecosystem based on BIM methodology and technologies.

## MAIN ACHIEVEMENTS

BUILT CoLAB has several successful milestones in the first years of activity: the approval of the “Missão Interface” project (base funding project until 2027), the approval of DIGITALbuilt (European Digital Hub), an approved “Agenda Mobilizadora” (PRR) – Sustainable Stone, the development of the “National Construction Circularity Plan” (<https://circularidade.builtcolab.pt/>), and the conclusion of the “Future of Construction”, a SIAC funded project with a very successful and impactful final event.



 **JOÃO MIGUEL NUNES**  
COLAB COORDINATOR

 **LÍGIA RODRIGUES**  
UMINHO COORDINATOR

 **AQUITEX**  
**BLC3**  
**ISQ**  
**LIPOR**  
**LNEC**  
**MOTA-ENGIL**  
**RAIZ**  
**TMG**  
**UAVEIRO**  
**UCOIMBRA**  
**UCATÓLICA P**  
**UMINHO**  
**UNLISBOA**  
**UPORTO**  
PROJECT CONSORTIUM

 **3.200.000 €**  
FUNDING AWARDED

 **FEB 2020**  
STARTING DATE

 **CECOLAB**  
PROJECT WEBSITE

## MISSION AND VISION

CECOLAB aims to develop sustainable market solutions in a Circular Economy model for strategic national value chain, with high impact on other economy value chains. Its mission is to support the transition from a linear economy model to a more responsible economy towards resources and people; more efficient in its life cycle; develop and transfer knowledge and technology to the market; create scientific jobs; and assume Portugal's leadership and position in the Circular Economy.

## DESCRIPTION

CECOLAB is a private, non-profit institution, headquartered in Oliveira do Hospital, Portugal. Started its activities in February 2020 and is an integral part of the National Roadmap for Research Infrastructures of National Strategic Interest. It provides high quality innovation management consulting services, advice and knowledge transfer to corporations, investors, governments, associations, NGOs and universities, adding value and enabling economic growth at all levels.

CECOLAB innovation pipeline includes technological platforms (Industrial Biotechnology; Sustainable Separations Process and Green Chemistry; Ecodesign) to develop knowledge with high impact in Circular Economy; support activities of the value chains (Life Cycle, Market; Artificial Intelligence; Resource Use) to increase its innovations competitiveness; and innovation value chains focus (Forest; Agroindustry; Urban; Water; Manufacturing Industry; Construction; Servitization) to increase impact in the market.

## MAIN ACHIEVEMENTS

- Established and trained the team to prepare and lead European projects;
- Created highly skilled job opportunities engaging a number of new team members;
- Submitted several proposals to national (e.g., PRR, PT2020) and European funding (31% success rate);
- Approved and started the StartUp Zero project which is the 1<sup>st</sup> national program to support start-ups in the field of Circular Economy;
- Consolidate its commercial activities as services provider and started the implementation of the NP4457 innovation standard;
- Developed new products, services (e.g., circular economy platform) and internal projects (e.g., 2<sup>nd</sup> Life).



#### DESCRIPTION

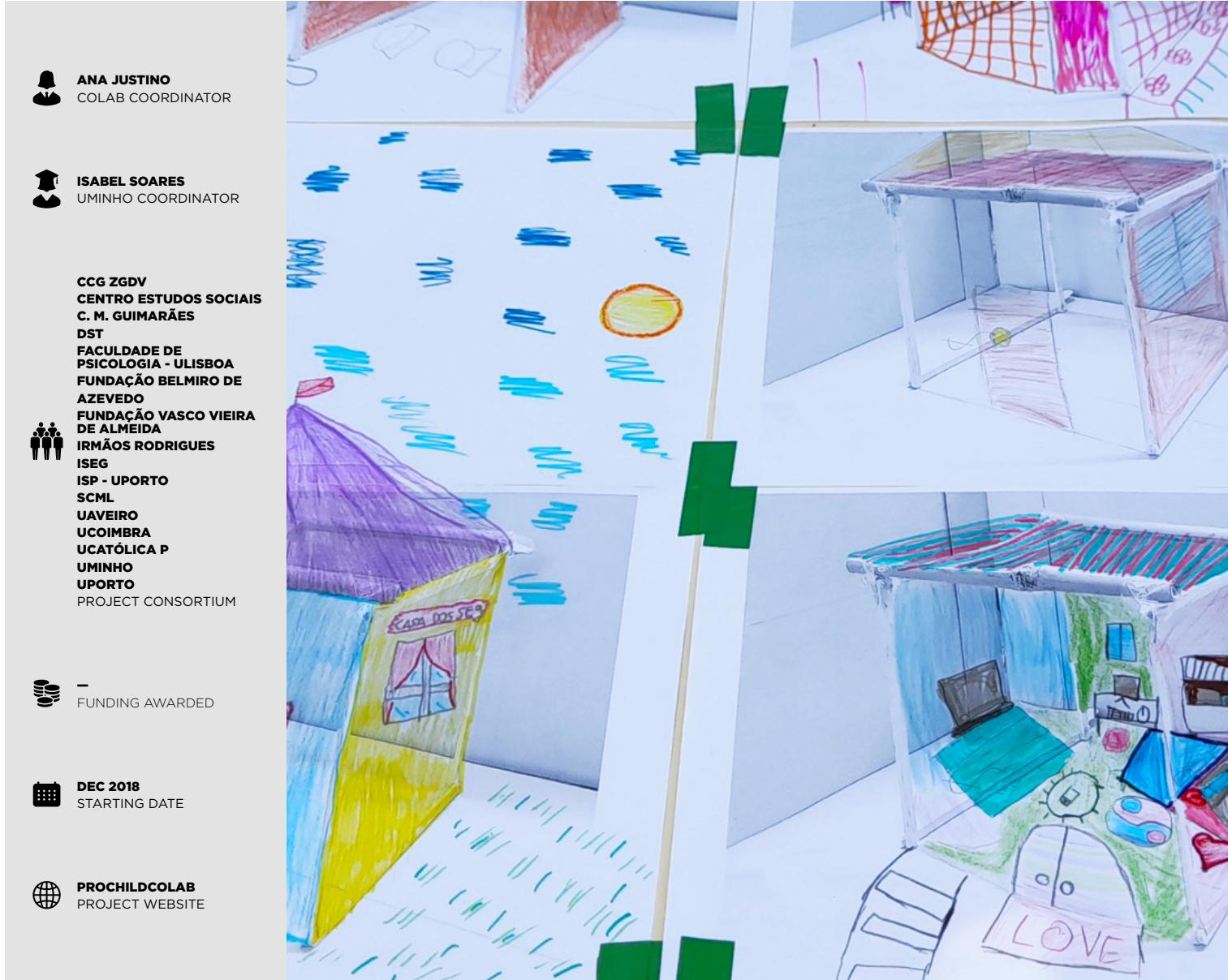
DTx is a non-profit private association, undertaking applied research in digital transformation. It aims to create/implement holistic approaches in the conception and development of CPS, with complexity and multidisciplinary of knowledge, promoting innovation and sustainability in the creation of products, services and interfaces in cyber-physic technologies. DTx assesses the impacts from the digital transformation in the industrial and organizational fields and promotes cooperation academy - industry.

#### MAIN ACHIEVEMENTS

- Completed 11 collaborative innovation projects with the shareholders;
- Launched 7 (2<sup>nd</sup> gen) collaborative innovation projects with the shareholders;
- Implemented and embedded a Project Management Office;
- Optimized organizational structure to improve scalability and multidisciplinary in projects;
- Successful Missão Interface application;
- Member of 5 Agendas Mobilizadoras para Inovação Empresarial, totaling 16M€ in funding - PRR (EU Recovery and Resilience Program);
- Founding member of 5 Digital Innovation Hubs (3 with European seal of excellence, one of which with EU funding).

# PROCHILD COLAB

PROCHILD COLAB AGAINST POVERTY AND  
SOCIAL EXCLUSION – ASSOCIATION



 **ANA JUSTINO**  
COLAB COORDINATOR

 **ISABEL SOARES**  
UMINHO COORDINATOR

 **CCG ZGDV**  
CENTRO ESTUDOS SOCIAIS  
C. M. GUIMARÃES  
DST  
FACULDADE DE  
PSICOLOGIA - LISBOA  
FUNDAÇÃO BELMIRO DE  
AZEVEDO  
FUNDAÇÃO VASCO VIEIRA  
DE ALMEIDA  
IRMÃOS RODRIGUES  
ISEG  
ISP - UPORTO  
SCML  
UAVEIRO  
UCOIMBRA  
UCATÓLICA P  
UMINHO  
UPORTO  
PROJECT CONSORTIUM

 **FUNDING AWARDED**

 **DEC 2018**  
STARTING DATE

 **PROCHILDCOLAB**  
PROJECT WEBSITE

## MISSION

Develop a strategy against child poverty and social exclusion, framed in a transdisciplinary scientific approach, articulating the public and private sectors, promoting children's well-being both at the economic and social interface and contributing to public policies to stand upon their rights.

## VISION

To be the national reference institution.

## DESCRIPTION

ProChild CoLAB is a private non-profit Association aiming to develop a strategy against child poverty and social exclusion. By placing children at the centre of R&I, and through an articulated intersectorial collaboration, ProChild CoLAB's alliance between social intervention and technological innovation allows for more effective co-creation of programs, products and services tailored to fit children, families and professionals' needs, and to contribute scientifically-informed public policies.

## MAIN ACHIEVEMENTS

- Creation of highly qualified scientific employment;
- Development of transdisciplinary R&I projects and programs;
- Implementation and validation of tailored intervention models;
- Creation of innovative products, services and solutions in the childhood field;
- Promotion of organizations' CSR agendas;
- National and international scientific publications and communications;
- Training, supervision and content provision to professionals and community agents;
- Contribution to scientifically-informed local/public policies.

# COLAB4FOOD

LABORATÓRIO COLABORATIVO PARA  
A INOVAÇÃO DA INDÚSTRIA AGROALIMENTAR



 **MIGUEL ABREU TEIXEIRA**  
COLAB COORDINATOR

 **JOSÉ ANTÓNIO TEIXEIRA**  
UMINHO COORDINATOR

 PROJECT CONSORTIUM

 **2.000.000 €**  
FUNDING AWARDED  
(FINANCIAMENTO BASE VIA  
MISSÃO INTERFACE)

 **MARCH 2023**  
STARTING DATE

 **COLAB4FOOD**  
PROJECT WEBSITE

## MISSION

Increase the competitiveness and sustainability of the Portuguese agrifood sector fostering collaboration between academic and business entities.

## VISION

Become the key-platform for collaborative innovation & knowledge transfer in the National agrifood sector representing Portugal in the innovation ecosystem.

## DESCRIPTION

Colab4Food is an entity within the Innovation, Research and Development (I&R&D) food sector, actively contributing to increase its competitiveness through a collaborative strategy between academic and business entities.

Colab4Food promotes more sustainable food processes, innovative food solutions and circular economy concept, while providing R&D consultancy, troubleshooting and services. This is supported by a highly qualified team of experts with a large experience in several areas, ranging from food science and technology to microbiology, through biotechnology and engineering.

## MAIN ACHIEVEMENTS

CoLab4Food launched 12 R&D projects, engaging over 40 partners, which contributed to the development of over 55 trade-secrets to Portuguese and International companies. Extended its base of Associates to 26 partners as well as its team up to 32 highly qualified researchers. Hosted 20+ knowledge and tech transfer events with particular emphasis on the Dare2Change Congress which joins academic and industrial needs, goals and entities. These achievements strengthened its role as a national hub for sustainable food innovation and industry-science collaboration.

# COLAB BIOREF

LABORATÓRIO COLABORATIVO  
PARA AS BIORREFINARIAS



**FRANCISCO GÍRIO**  
COLAB COORDINATOR

**LUCÍLIA DOMINGUES**  
UMINHO COORDINATOR

**LNEG**  
**A4F**  
**HYCHEM**  
**DOUROGÁS**  
**BLC3**  
**SYSADVANCE**  
**SILICOLIFE**  
**BIOTREND**  
**RAIZ**  
**TRATOLIXO**  
**GALP**  
**TAP**  
**TÉCNICO DE LISBOA**  
**ULISBOA**  
**UPORTO**  
**POLIT. DE PORTALEGRE**  
**UMINHO**  
**UNLISBOA**  
**UAVEIRO**  
**UTAD**  
**REN PORTGAS**  
**PRIOR**  
**LIPOR**  
PROJECT CONSORTIUM

**11.400.000 €**  
FUNDING AWARDED

**MAY 2020**  
STARTING DATE

**COLAB BIOREF**  
PROJECT WEBSITE

## MISSION

CoLAB BIOREF's mission is to improve the competitiveness of the biorefinery sector and bio-based products in Portugal and Europe, contributing for a very low carbon economy, generating new value chains, job creation, and boosting bioeconomy. We aim to reform the current economic development paradigm by using the potential of biomass as a renewable resource.

## VISION

CoLAB BIOREF's vision is to be an international reference in biorefining technologies, multiproduct, multipurpose.

## DESCRIPTION

The CoLAB BIOREF connects highly qualified knowledge and innovation with the industrial sector.

At CoLAB BIOREF, we work to promote a market-oriented Research and Innovation Agenda that focuses on two strategic domains: Bioenergy & Renewable Gases and Sustainable Bioeconomy. The focus is on the development of highly valuable technological solutions for market implementation, by contributing with circular economy solutions both for energy production from biomass, renewable gases for mobility and industry, and bio-based products.

## MAIN ACHIEVEMENTS

CoLAB BIOREF is paving the way to be recognized as the benchmark institution in the field of biorefineries.

Concerning R&I projects, we are working in 2 PRR agendas: H2DRIVEN and Moving2Neutrality, and 3 HE projects, HyFuelUp, Icarus and Pyragraf.

Significant progress was made in the construction of the new BIOREF Research & Innovation Center, which is Pilot and Demo facilities set to enhance our operational capacity.

In addition to submitting competitive proposals and providing services, CoLAB BIOREF played an active role in supporting public policies, and was the entity responsible for drawing up the Portuguese Biomethane Action Plan, which was published under RCM n° 41/2024.



 **ROSA AMADOR**  
COLAB COORDINATOR

 **HERNÂNI V. GERÓS**  
UMINHO COORDINATOR

 **ADVID**  
INESC TEC  
INIAV  
ISA  
UCATÓLICA P  
UMINHO  
UTAD  
PROJECT CONSORTIUM

 **2.100.000 €**  
FUNDING AWARDED

 **JUL 2019**  
STARTING DATE

 **COLABVINESANDWINES**  
PROJECT WEBSITE

## MISSION AND VISION

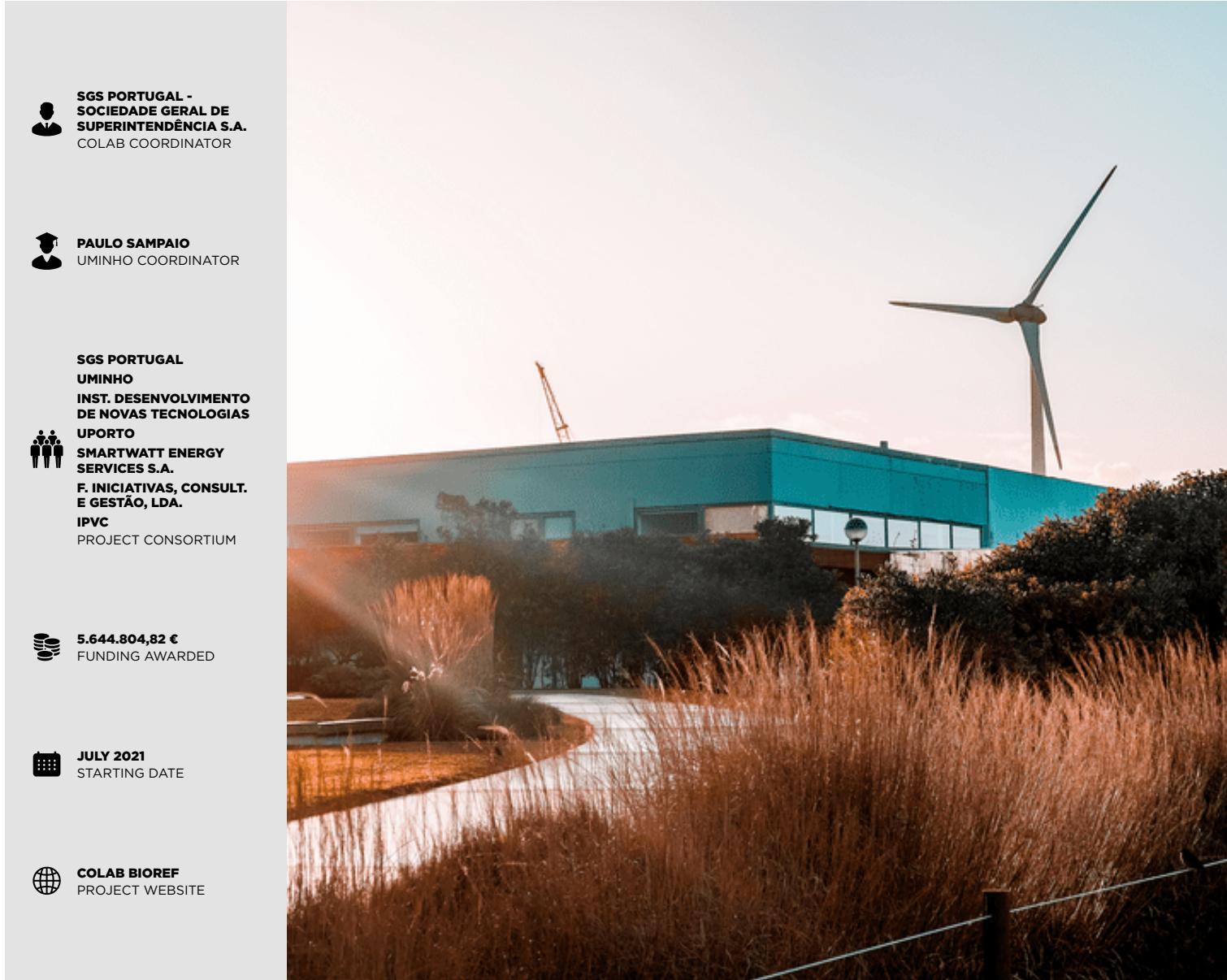
- to generate and communicate knowledge and technology that enhances the expressed ambition of the sector to increase the export value;
- supports the ambition expressed by the sector to increase the export value of portuguese wines;
- ensures that the portuguese wine system becomes more efficient, resilient and flexible in order to respond to climate, demographic and economic challenges.

## DESCRIPTION

CoLAB VINES&WINES, an initiative led by ADVID – the Association for the Development of Viticulture in the Douro Region which is the national Vine and Wine Cluster, together with the portuguese viticulture ecosystem, aims to be the ideal partner in the innovation of products, processes and services of companies in the Portuguese wine sector.

## MAIN ACHIEVEMENTS

Associates of Colab Vines&Wines include University of Minho, University of Trás-os-Montes e Alto Douro, Instituto Superior de Agronomia, Universidade Católica Portuguesa, Instituto Nacional de Investigação Agrária e Veterinária and INESC TEC which actively collaborate with ADVID and its associates in many R&D strategic projects <https://www.colabvinesandwines.pt/en/#projectswine> sector.



 **SGS PORTUGAL -  
SOCIÉDADE GERAL DE  
SUPERINTENDÊNCIA S.A.**  
COLAB COORDINATOR

 **PAULO SAMPAIO**  
UMINHO COORDINATOR

 **SGS PORTUGAL  
UMINHO  
INST. DESENVOLVIMENTO  
DE NOVAS TECNOLOGIAS  
UPORTO  
SMARTWATT ENERGY  
SERVICES S.A.  
F. INICIATIVAS, CONSULT.  
E GESTÃO, LDA.  
IPVC**  
PROJECT CONSORTIUM

 **5.644.804,82 €**  
FUNDING AWARDED

 **JULY 2021**  
STARTING DATE

 **COLAB BIREF**  
PROJECT WEBSITE

## MISSION AND VISION

Data CoLAB vision is to develop a cross sectorial ecosystem with multiple stakeholders that will use data to reshape the way we produce, consume and live. To achieve this vision Data CoLAB will provide data-driven services to citizens, enterprises, and the public sector, actively contributing to their digital transformation.

## DESCRIPTION

The CoLAB BIREF connects highly qualified knowledge and Private non-profit association recognized as a collaborative laboratory, founded in 2021 as a joint initiative of private companies, higher education institutions, and research units. The organization aims to bring emerging knowledge and technologies closer to market needs through the development and implementation of data-driven solutions.

Data CoLAB operates across the entire data value chain, providing services to citizens, companies, and the public sector, actively contributing to their digital transformation.

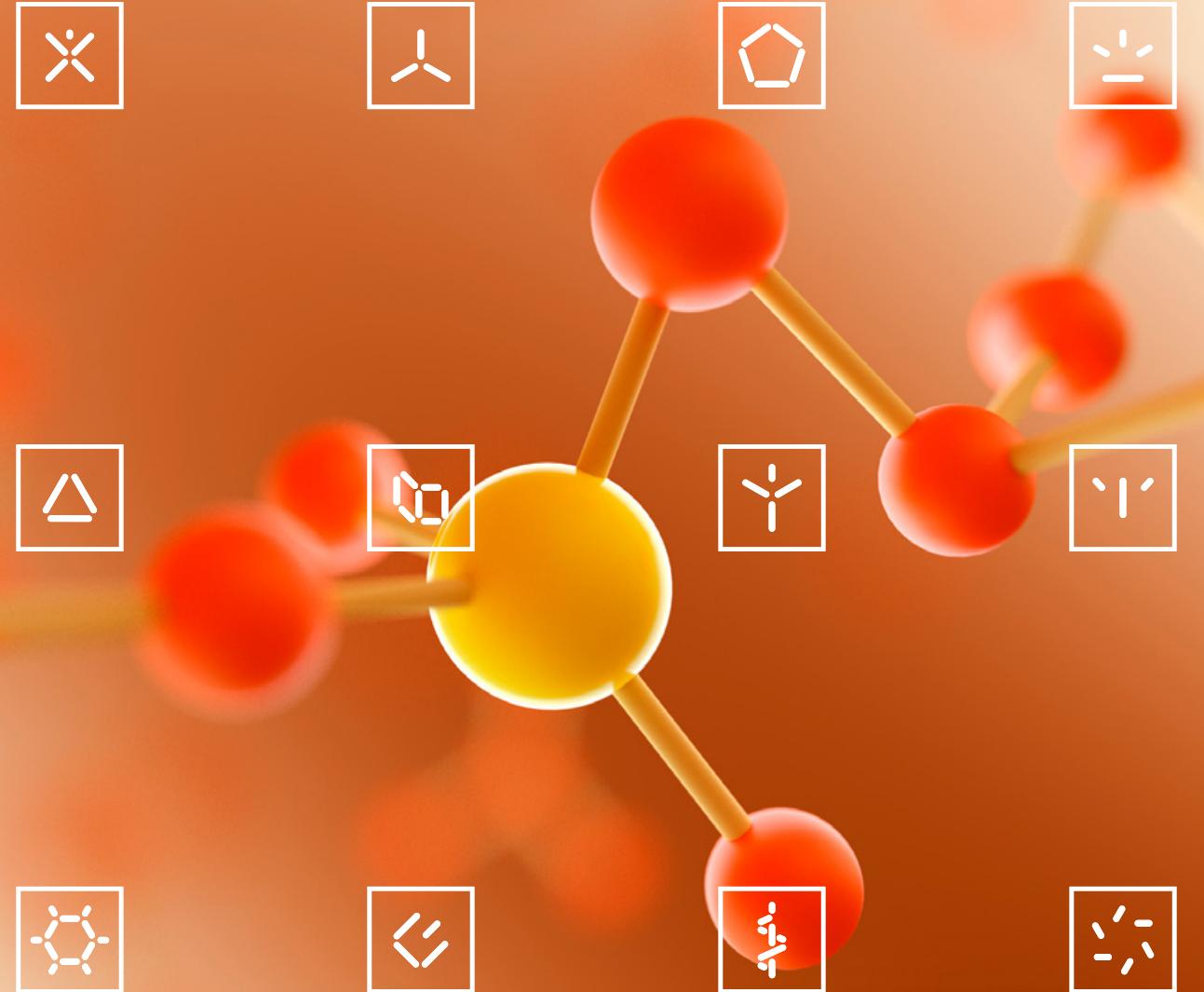
In terms of skills and technical capabilities, it carries out processes such as data acquisition, database management and data sharing, data analysis and intelligence, data traceability, data compliance and integrity, decision support services, standardization and interoperability, cybersecurity activities, and training.

## MAIN ACHIEVEMENTS

In 2023 and 2024, Data CoLAB reinforced its position as a national and international reference in data-driven innovation. Key achievements include the launch of the Portuguese Data Academy (DGERT-certified), the public presentation of the Territorial Intelligence Center, and active participation in international networks such as GAIA-X and IDSA—earning 2nd place at the Tech-X Hackathon 2024.

The organization also secured several national and European funded projects, expanded its capacity with new High Performance Computing (HPC) infrastructure, and established strategic partnerships with companies to co-develop innovative solutions. Data CoLAB now comprises around 35 staff members, reflecting continuous growth in expertise and impact.

# INTERFACE UNITS



## A DECADE OF DEEPENING CONNECTIONS

Over the past ten years, UMinho has significantly expanded its collaborative footprint, forging research partnerships across society—from private enterprises and public institutions to healthcare providers and cultural organizations. This surge in engagement has positioned UMinho as a pivotal force in regional innovation, actively shaping the future through direct collaboration with local stakeholders.

## UNIVERSITIES AS ECONOMIC ENGINES

As the global knowledge economy accelerates, universities are no longer seen solely as research hubs—they are now vital contributors to real-world economic development. UMinho embraces this evolving role, not just as a generator of ideas, but as a strategic actor in regional innovation policy.

At its heart, the University of Minho (UMinho) is committed to generating, sharing, and applying knowledge—anchored in freedom of thought and a diversity of critical perspectives. Guided by humanistic values, UMinho fosters higher education as a cornerstone of societal progress, where creativity, innovation, and knowledge fuel sustainable development, wellbeing, and solidarity.

## STRATEGIC INTERFACE UNITS: A NEW ORGANIZATIONAL PARADIGM

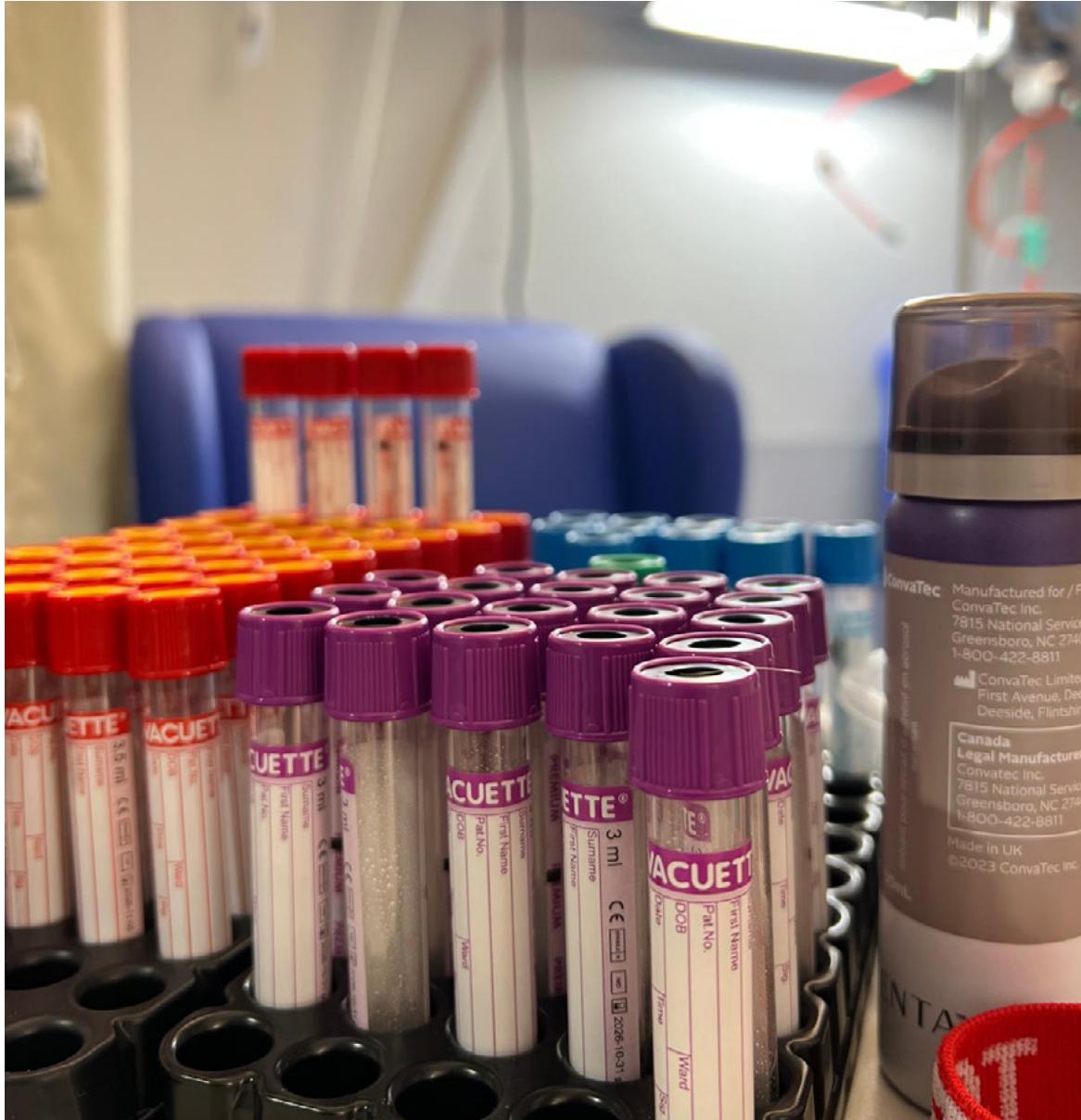
To meet these emerging demands, UMinho has reimaged its organizational structure, giving rise to Strategic Interface Units. These multidisciplinary, networked entities—often structured as private non-profit associations, public-interest cooperatives, or foundations—serve as bridges between academia and society. They align university expertise with societal needs, fostering innovation and development across sectors.

## SCOPE AND IMPACT

The activities of these interface units span a wide spectrum:

- Development and commercialization of products and services;
- Execution of cutting-edge R&D projects;
- Delivery of specialized training programs;
- Management of science and technology parks;
- Support for entrepreneurship and business incubation;
- Promotion of cultural initiatives and regional development.

These units are not peripheral—they are central players in the regional research and innovation ecosystem. A recent study by the European University Association (EUA) highlighted UMinho's leadership in this domain, underscoring its strategic role in shaping regional futures.



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 **JORGE PEDROSA (P)**  
**DOMINGOS SOUSA (VP)**  
CHAIRMAN SINCE 2024

 **NUNO SOUSA (P)**  
**JOÃO P. OLIVEIRA (VP)**  
CHAIRMAN 2023-2024

 **MÓNICA GONÇALVES (ED)**  
ADMINISTRATOR

 **CLÍNICAL RESEARCH**  
AREAS OF INTERVENTION

 **40**  
STAFF MEMBERS

 **18**  
RESEARCH PROJECTS

 **5.553.629,30 €**  
TOTAL FUNDING

## DESCRIPTION

The Clinical Academic Center-Braga (2CA-Braga) is a non-profit partnership between the University of Minho (UMinho), the Unidade Local de Saúde de Braga-EPE and Hospital Cuf Porto. Founded in 2012, and headquartered at Hospital de Braga (Braga, Portugal), the 2CA-Braga has as its corporate purpose the development of clinical research, framed in an environment of health care provision, promotion and knowledge, in order to make clinical care more effective and, thus, improving the quality of assistance.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

The proximity and complementarity of partners allows an integration of the different services, skills and researchers, promoting the 2CA-Braga as an ideal environment for the development of clinical and translational research activities. The partner Hospital de Braga supports the 2CA-Braga in services such as Imaging, Pharmacy, Clinical Pathology, Pathologic Anatomy and Nuclear Medicine. On the other hand, the EM/ICVS provides support in statistical analysis, research methodologies and data management, as well in information and technology services. The 2CA-Braga has a unique and privileged position to combine the clinical research with clinical practice, maximizing the development of innovative biomaterials, diagnostic strategies, regenerative approaches and therapeutic products. Its mission is focused on clinical research, clinical care, education and training of research teams. The infrastructure has dedicated areas to the management of the Clinical Research Unit, and areas to support the participants in clinical studies and technical areas - specifically: (i) Management area (Provisioning Room; Equipment's Room; Collection and Processing Sample Room; Archive Room and Coordination Room); (ii) Supporting area to the participants (Reception and Waiting Room and Refectory); and (iii) Technical areas (Medical Offices; Day Hospital Room; Sleep Lab, Nurse Room and Pharmacist Room).

## MAJOR ACHIEVEMENTS

The 2CA-Braga clinical/scientific research encompasses: (i) trials (both industry- and investigator-driven); (ii) observational studies (both industry- and investigator-driven); (iii) translational research projects; (iv) clinical validation studies (for procedures or devices). During the year of 2024, a total of 278 clinical research studies were carried out in the 2CA-Braga, divided as follows by study type: 117 investigator-driven clinical studies (9 clinical trials, 87 observational studies and 21 medical device clinical studies) and 161 industry-driven clinical studies (149 clinical trials, 11 observational studies and 1 medical device clinical study). The 2CA-Braga is a highly dynamic and results-oriented institution, firmly rooted in the clinical research arena in Portugal and with a strong reputation among its partners and stakeholders. After 12 years of growth and consolidation, and since opening its Phase 1 Clinical Trials wing and, with the partner ICVS, the 2CA it is one of the few units in the Iberian Peninsula to be able to conduct research throughout the entire drug development pipeline, from cells and animal models to clinical trials. Member of the national scientific system, integrating national and international clinical research networks, 2CA-Braga is certified Caspe Healthcare Knowledge Systems (CHKS).



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	<b>NUNO JORGE CARVALHO DE SOUSA</b> CHAIRMAN
	<b>CLINICAL UNIT</b> <b>HEALTH PROMOTION UNIT</b> <b>RESEARCH AND DEVELOPMENT UNIT</b> <b>IT UNIT</b> DEPARTMENTS
	<b>18 (2003)</b> <b>16 (2024)</b> STAFF MEMBERS
	<b>5 (2003)</b> <b>6 (2004)</b> RESEARCH PROJECTS
	<b>154.000,00 € (2004)</b> <b>227.501,52 € (2003)</b> TOTAL FUNDING

## DESCRIPTION

The Association P5 Digital Medical Center (ACMP5) is a non-profit association resulting from an initiative by the School of Medicine of University of Minho and its association of former students, Alumni Medicine. It was founded in 2018 and has its headquarters in the School of Medicine of University of Minho.

ACMP5 is a digital healthcare provider with a set of services that range from clinical triage and counselling, health promotion initiatives, psychotherapy to multidisciplinary programs in domains such as chronic pain, palliative care and sleep. It has also an incorporated research unit that support the development and validation of health solutions and the impact of its use in the community.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

ACMP5 is a non-profit organisation dedicated to improving The ACMP5 is a non-profit organisation founded in 2019 to improve population health through digital technologies. It bridges research and practice by developing and deploying innovative digital health tools that promote access to care and healthier behaviours. Working with public, academic and social partners, it delivers person-centred programmes in areas such as chronic disease, mental health, and health literacy, while fostering training opportunities for young professionals and driving the digital transformation of healthcare.

## MAJOR ACHIEVEMENTS

Since 2019, ACMP5 has advanced digital health services through partnerships with the municipalities of Paredes de Coura, Guimarães and Braga, expanding access to care. It has built strong collaborations with healthcare and private partners, launched innovative digital tools, and achieved user satisfaction above 4.8/5. In 2024, ACMP5 signed a new clinical protocol with ULS Alto Ave and secured over €1 million in R&D funding, leading to solutions such as the Digital Palliative Care Consultation.



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 ISABEL SILVA  
CHAIRMAN

 ISABEL SILVA  
ADMINISTRATOR

 PSYCHOLOGICAL  
INTERVENTION UNIT  
PROFESSIONAL TRAINING  
AND DEVELOPMENT UNIT  
PROJECTS AND  
INNOVATION UNIT  
ADMINISTRATIVE  
DEPARTMENT  
DEPARTMENTS

 49  
STAFF MEMBERS

 9  
RESEARCH PROJECTS

 255.343,25 € (2004)  
316.128,51 € (2003)  
TOTAL FUNDING

## DESCRIPTION

The Association of Psychology at the University of Minho (APSi-UMinho) is a service-oriented organization that promotes and develops psychology-related projects in collaboration with the local community. APSi-UMinho is an association headed by the School of Psychology that disseminates scientific knowledge, offers professional services, and fosters training activities, emphasizing evidence-based practices.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

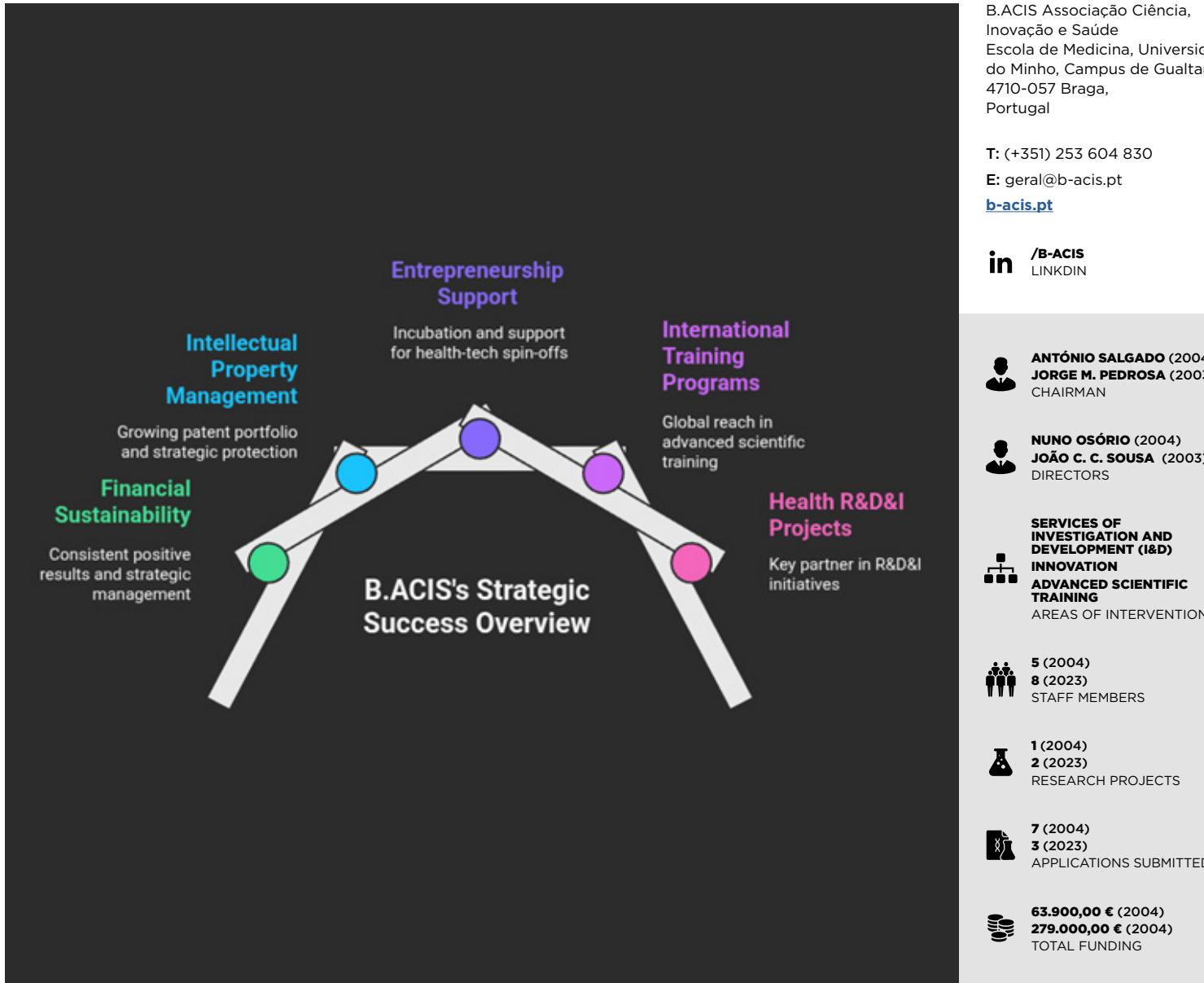
APSi-UMinho demonstrates a strong commitment to knowledge transfer and interaction with society across all its activities. The scope of its programs and projects is broad, addressing diverse areas of Psychology, from Sports and Organizational Psychology to Clinical and Health Psychology. Thus, in addition to individual and group psychological interventions, it also includes organizational and community interventions, aimed not only at society in general but also at the UMinho community itself.

The APSi-UMinho also develops the following activities:

- Webinars and Workshops
- Partnerships and Collaborations
- Research and Evaluation
- Innovation and Funding Applications

## MAJOR ACHIEVEMENTS

Some of the major achievements of APSi-UMinho include comprehensive programs, manuals, and webinars on various topics; psychological support during crises; projects for positive adolescent development; participation in international initiatives; events for reflection and knowledge exchange in psychology; and the provision of specific interventions for emotional and behavioral problems in children. Additionally, APSi-UMinho has successfully implemented specialized psychological consultations, providing individual support to individuals in need, including collaborations with social support entities and municipal councils.



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LINKEDIN

## DESCRIPTION

B.ACIS – Center for Health Innovation, serves as a dynamic interface for the University of Minho, dedicated to the economic valorization of knowledge in the health and life sciences. The center operates across three core pillars: providing specialized R&D services to corporate partners, driving innovation through comprehensive intellectual property management and dedicated support for new spin-offs, and delivering a diverse calendar of advanced scientific training to a global community. By actively participating in strategic R&D projects and fostering robust collaborations between academia and industry, B.ACIS is pivotal in translating scientific breakthroughs into tangible market solutions, thereby strengthening the regional and national health innovation ecosystem.

**ANTÓNIO SALGADO** (2004)  
**JORGE M. PEDROSA** (2003)  
CHAIRMAN

**NUNO OSÓRIO** (2004)  
**JOÃO C. C. SOUSA** (2003)  
DIRECTORS

**SERVICES OF INVESTIGATION AND DEVELOPMENT (I&D) INNOVATION**  
**ADVANCED SCIENTIFIC TRAINING**  
AREAS OF INTERVENTION

**5** (2004)  
**8** (2023)  
STAFF MEMBERS

**1** (2004)  
**2** (2023)  
RESEARCH PROJECTS

**7** (2004)  
**3** (2023)  
APPLICATIONS SUBMITTED

**63.900,00 €** (2004)  
**279.000,00 €** (2004)  
TOTAL FUNDING

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

### 2024

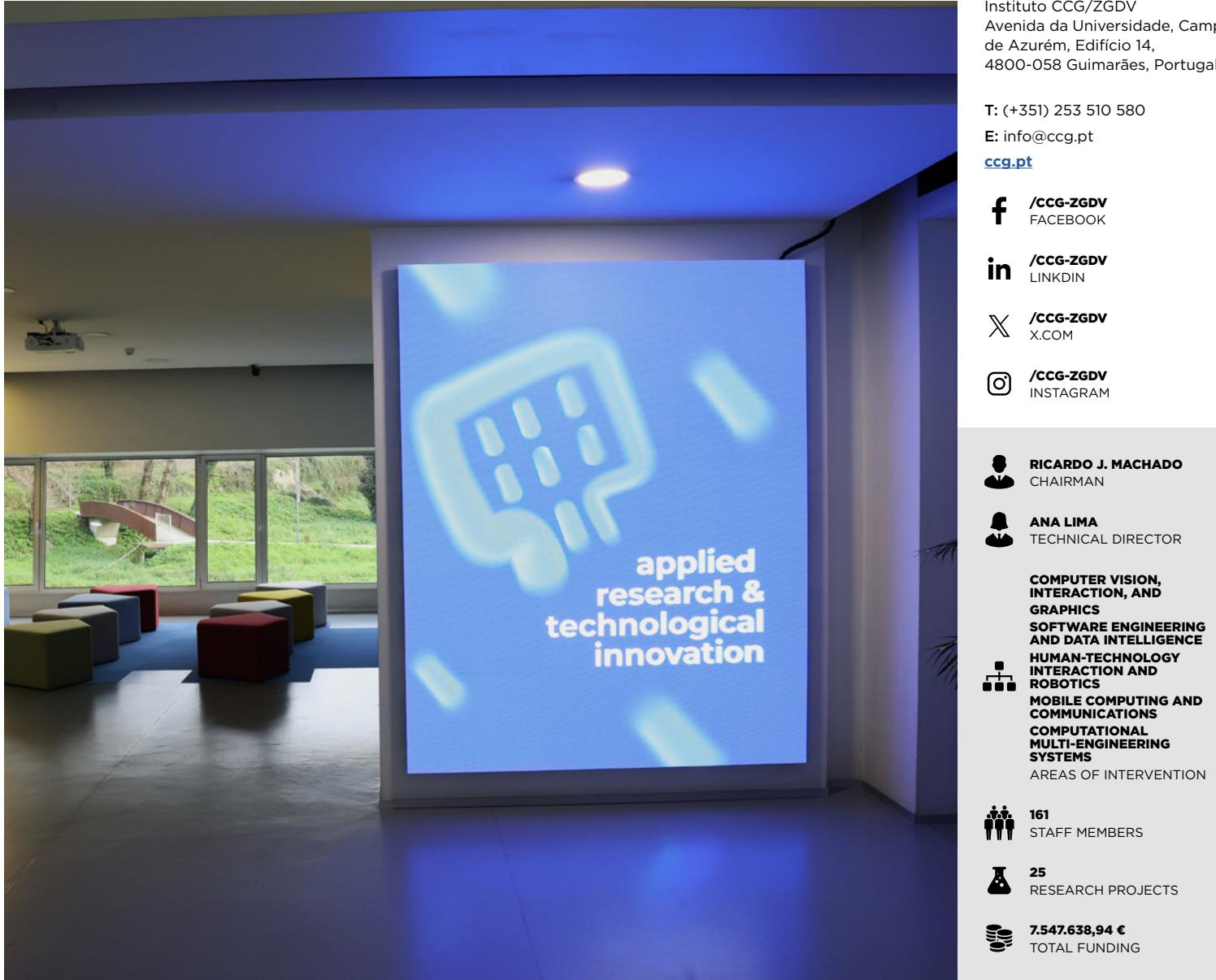
- Managed a portfolio of 36 patents.
- Submission of 5 new patent applications (3 Provisional, 1 PCT, 1 European).
- Supported the creation of 1 new spin-off, Screen4Health, and provided incubation support to external companies.
- Organized 19 advanced training courses and events, involving 595 participants from 24 countries and 258 speakers.
- The institutional website recorded 21,553 visits.

### 2023

- Managed a portfolio of 33 patents.
- Recognized submission of 3 new patent applications (2 Provisional, 1 PCT).
- Organized 28 advanced training courses and events, engaging 669 participants from 26 countries and 269 speakers.
- The institutional website recorded 23,260 visits.

## MAJOR ACHIEVEMENTS

During this period, B.ACIS achieved strong operational and financial performance, sustaining growth through diversified R&D services, competitive projects, and specialized training. It expanded its intellectual property portfolio, filing multiple patent applications and supporting the creation of the Screen4Health spin-off, while attracting external “spin-ins”. Internationally, B.ACIS consolidated its reputation by delivering advanced medical training and leading major collaborative R&D projects, reinforcing its role as a national catalyst for health innovation.



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 **RICARDO J. MACHADO**  
CHAIRMAN

 **ANA LIMA**  
TECHNICAL DIRECTOR

**COMPUTER VISION,  
INTERACTION, AND  
GRAPHICS**  
**SOFTWARE ENGINEERING  
AND DATA INTELLIGENCE**  
**HUMAN-TECHNOLOGY  
INTERACTION AND  
ROBOTICS**  
**MOBILE COMPUTING AND  
COMMUNICATIONS**  
**COMPUTATIONAL  
MULTI-ENGINEERING  
SYSTEMS**  
AREAS OF INTERVENTION

 **161**  
STAFF MEMBERS

 **25**  
RESEARCH PROJECTS

 **7.547.638,94 €**  
TOTAL FUNDING

## DESCRIPTION

With 32 years' experience and a unique history at the interface between the research ecosystem and the business world, CCG/ZGDV is: (i) a Research and Technology Organisation (RTO), legally constituted as a private Non-Business Entity, which develops and leads science, technology and innovation activities, through the creation and transformation of knowledge and the demonstration of advanced concepts in digital and computational technologies, aimed at solving emerging global challenges; (ii) an entity with Public-Interest, as an entity of the National Scientific and Technological System (SCTN), recognised by the Presidency of the Council of Ministers; (iii) a Technology and Innovation Centre (CTI), recognised by the Ministry of Economy/Innovation Agency.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

The CCG/ZGDV strategically promotes knowledge transfer and interaction with various sectors of society, namely through the sharing of scientific and technological knowledge, collaboration with the business community, and the promotion of co-creation and open innovation initiatives.

In this regard, over the last year, it has promoted more than 20 events of its own, including workshops, webinars, open days, and technical sessions, aimed at disseminating knowledge, training professionals, and bringing together the academic, business, and institutional communities. It has been actively involved in more than 20 highly relevant national and international events, such as the Smart City Expo World Congress (Barcelona), FIMAP, Encontro Ciéncia, AED Days, MEDICA, 360 Tech Industry, FIA, among others.

## MAJOR ACHIEVEMENTS

CCG/ZGDV consolidated its growth as a Research and Technology Organisation with the creation of the Setúbal Hub, the strengthening of its research team, and significant advances in strategic areas, including generative artificial intelligence, cognitive robotics, high-performance computing, cybersecurity, and Building Information Modelling. It reinforced the role of specialised training through the Tech Training Hub and reached a new level of internationalisation, evidenced by the high number of European applications submitted, which contributed to financial results that exceeded those of the previous year.



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 **ELIZABETH FERNANDEZ**  
CHAIRMAN

 **VARIOUS FIELDS OF LAW**  
AREAS OF INTERVENTION

 **3**  
STAFF MEMBERS

 **-**  
RESEARCH PROJECTS

 **-**  
TOTAL FUNDING

## DESCRIPTION

The CEJUR - Centro de Estudos Jurídicos do Minho was established in 1993, the year in which the Law degree program was opened at the University of Minho. Its purpose is the development of legal studies, promoting various initiatives, namely, establishing study groups, conducting research work, and organizing conferences and seminars.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

With the objective of contributing to the deepening of legal knowledge, CEJUR carries out various activities such as organizing seminars and courses, and publishing legal publications.

In addition, CEJUR maintains a close relationship with law students and graduates, organizing initiatives aimed at acquiring, renewing or updating knowledge in various fields of law.

Thus, since its creation, CEJUR has played a fundamental role in promoting and developing legal studies in the Minho region, contributing to the training of qualified jurists and advancing knowledge in the field of law.

## MAJOR ACHIEVEMENTS

CCG/ZGDV consolidated its growth as a Research and Technology Organisation with the creation of the Setúbal Hub, the strengthening of its research team, and significant advances in strategic areas, including generative artificial intelligence, cognitive robotics, high-performance computing, cybersecurity, and Building Information Modelling. It reinforced the role of specialised training through the Tech Training Hub and reached a new level of internationalisation, evidenced by the high number of European applications submitted, which contributed to financial results that exceeded those of the previous year.



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**MARIA CÂNDIDA LOBO  
GUERRA VILARINHO**  
CHAIRMAN

**JORGE ARAÚJO (CEO)**  
ADMINISTRATOR

**BIOENERGY AND  
RESOURCES**  
**ECO-INNOVATION,  
CIRCULARITY AND  
SUSTAINABILITY**  
**BIOTECHNOLOGY AND  
BIOREFINERY**  
**ENVIRONMENT AND  
GREEN TECHNOLOGIES**  
**KNOWLEDGE  
DISSEMINATION**  
**NEWENERGYTECH**  
**ECORECIRCLETECH**  
**BIOGREENTECH**  
AREAS OF INTERVENTION

**18**  
STAFF MEMBERS

## DESCRIPTION

CVR, a Technology and Innovation Center with 18 staff (7 PhDs expected by 2024), advanced waste valorization through more than 100 R&D projects, specialized services, and 7 state-of-the-art laboratories covering more than 2,000 m<sup>2</sup>. Since 2002, it has issued more than 15,000 certificates and supported more than 1,700 clients. Main areas: NewEnergyTech, EcoRecircleTech, BioGreenTech. Mission2GG and the Wastes International Conference reinforced excellence, industrial impact, and societal value.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

Knowledge transfer is at the core of CVR's mission, connecting research, innovation, industry, and society. Over 23 years, CVR has promoted sustainable technologies and circular economy models, supporting over 1,700 companies and issuing 15,000+ certificates. It provides consultancy, accredited lab services, and expert advice to industries and public entities. Through conferences, training, and student integration in projects, CVR fosters innovation, eco-efficiency, and environmental responsibility, strengthening the green transition at all levels.

## MAJOR ACHIEVEMENTS

### 2024

In 2024, CVR advanced Mission2GG (PRR, €572k), strengthening research in bioenergy, biorefinery, and eco-products. Staff is expected to reach 7 PhDs by year-end, ensuring stronger scientific capacity. With 7 laboratories across >2,000 m<sup>2</sup> facilities, CVR expanded technology transfer, deepened international collaborations, and reinforced its impact on sustainable industrial transformation and environmental innovation.

### 2023

In 2023, CVR consolidated its role as a Technology and Innovation Center with 18 staff (4 PhDs). It surpassed 15,000 certificates issued, supported more than 1,700 clients, and developed more than 100 R&D projects since 2002. A key milestone was hosting the Wastes: Solutions, Treatments and Opportunities 2023 International Conference, reinforcing knowledge transfer and industrial collaboration in waste valorization and circular economy.

# FIBRENAMICS ASSOCIATION

INSTITUTE FOR INNOVATION IN FIBRE  
AND COMPOSITE MATERIA



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 RAUL FANGUEIRO  
CHAIRMAN

 LUÍS OLIVEIRA  
ADMINISTRATOR

 ARCHITECTURE  
CONSTRUCTION  
SPORTS  
MEDICINE  
DEFENCE  
MOBILITY  
AREAS OF INTERVENTION

 44  
STAFF MEMBERS

 21 (2004)  
11 (2003)  
RESEARCH PROJECTS

 1.450.000,00 € (2004)  
1.270.000,00 € (2003)  
TOTAL FUNDING

## DESCRIPTION

Founded in 2011, Fibrenamics – Institute for Innovation in Fibrous and Composite Materials – is an interface platform connecting academia, industry and society. With a multidisciplinary approach, it develops advanced solutions in architecture, construction, sports, medicine, protection, defence and mobility, transforming scientific knowledge into market-ready technologies.

Recognized by the European Commission as a benchmark in knowledge transfer for advanced materials and nanotechnology, Fibrenamics drives disruptive innovation to strengthen business competitiveness and generate societal impact. Its model integrates science, technology and business development, fostering sustainable growth and positioning itself as a global reference in applied research and innovation.

## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

Fibrenamics drives knowledge transfer through collaborative R&D projects and a comprehensive set of initiatives that connect academia, industry and society. This includes organising national and international scientific conferences, such as AUXDEFENSE – World Conference on Advanced Materials for Defense and the International Conference on Natural Fibers (ICNF), alongside workshops and webinars that promote the dissemination of scientific and technological knowledge to a broader audience.

Complementing this, Fibrenamics curates strategic events like IMPULSE, Open Day and the Ignite Sessions, designed to foster market-driven innovation and strengthen strategic networking between stakeholders. A continuous programme of technology intelligence and trend surveillance underpins these actions, ensuring that knowledge transfer aligns with emerging opportunities and societal challenges.

Through this integrated approach, Fibrenamics transforms advanced research into practical, high-impact solutions with tangible economic and societal benefits.

## MAJOR ACHIEVEMENTS

Fibrenamics is a leading academic-business collaboration model, recognised by the European Commission as a benchmark in knowledge transfer. In 2022, it was formally acknowledged as a Technological and Innovation Centre by the Portuguese National Agency for Innovation.

Over the past years, Fibrenamics has strengthened its international positioning through strategic partnerships in the USA – with MIT and UMass Lowell – and in Brazil, consolidating its status as a global reference in fibrous and composite materials innovation.

At a national level, the launch of the Fibrenamics Innovation Hub – Defence & Protection created a strategic platform connecting industry, research and end-users, fostering dual-use technologies and reinforcing Portugal's innovation ecosystem in defence and security.

Through R&D, technology transfer and market-driven innovation, Fibrenamics continues to translate advanced scientific knowledge into solutions that generate economic value and societal impact.



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#### DEPARTMENTS/AREAS OF INTERVENTION

The Design Institute hosts a wide range of laboratories, workshops and studios where students, designers and researchers can develop their activity, taking advantage of the most diverse and modern technological means. The Advanced Ceramics R&D Lab ([www.aclab-idegui.org](http://www.aclab-idegui.org)) stands out among these laboratories. It aims to explore the integration of digital additive manufacturing (AM) techniques in the architectural design and production processes of ceramic elements for building envelopes.

#### DESCRIPTION

The Design Institute of Guimarães is a Technology Transfer and Valorisation Centre dedicated to design research, to the incorporation of design in product development, to specialized training, as well as to the promotion and dissemination of design driven industrial products. It is also an open hub for the cooperation among industry, designers and researchers with the aim of promoting economic development through design.

#### KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

Since its creation in 2012, IDEGUI has manifested its vocation to serve companies by providing them with differentiating capabilities and valuing their industrial products with the incorporation of design, constituting an important partner in the modernization and competitiveness of the productive fabric.

#### RESEARCH PROJECTS

IDEGUI's participation in the MIT-Portugal Program Exploratory Project KERAMOS - "Additive manufacturing of innovative and multifunctional Ceramic products for architectural systems" made evident the great benefits of the AM of advanced and customizable ceramic products. It will encourage the wider use of innovative ceramic products in architectural systems by exploring the potential of tailoring their multiple properties and the great benefits of AM advanced ceramic customized and sustainable products.

#### MAJOR ACHIEVEMENTS

The most recent achievement is the prototype shown at the 'Critical Practices Exhibition' during the ICSA2025 - 6th International Conference on Structures and Architecture, held in Antwerp, Belgium. The exhibition aims to uncover and showcase work that breaks boundaries and demonstrates engagement with the frictions inherent in architectural and engineering practice. It is framed as the avant-garde of knowledge and method creation in applied modes of working, such as applied research or research by design.

*Pulpbaffle* is an example of a modular wall prototype consisting of acoustic blocks made using additive manufacturing techniques and natural materials such as cellulose, starch, and cork. Designed to adapt to different spaces, the prototype aims to absorb or reflect sound, offering a sustainable and flexible solution for acoustic control in interior environments.



PIEP - Pólo de Inovação em  
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 **NUNO GUIMARÃES**  
CHAIRMAN

 **CLÁUDIA CRISTÓVÃO**  
ADMINISTRATOR

 EXTRUSION, COMPOUNDING  
AND ADVANCED MATERIALS  
PRODUCT DESIGN AND  
DEVELOPMENT

 ADVANCED MANUFACTURING  
PROCESSES WITH COMPOSITES

 ADVANCED MANUFACTURING  
PROCESSES WITH POLYMERS

 TESTS AND FAILURE ANALYSIS  
DIGITALISATION, AUTOMATION  
AND ADVANCED PROGRAMMING

 CIRCULAR ECONOMY AND  
ENVIRONMENT

AREAS OF INTERVENTION

 +90  
STAFF MEMBERS

 18  
RESEARCH PROJECTS

 18.572.785,00 €  
TOTAL FUNDING

## DESCRIPTION

Founded on December 13, 2000, the Centre for Innovation in Polymer Engineering (PIEP) is a private association, with a technological and scientific matrix with a business management model. PIEP aims to provide a prompt response in the delivery of products, processes and services, oriented to the Research, Development and Innovation needs of companies in the plastics and related sectors, through innovation activities, technology transfer, technical-scientific consultancy, and services provision, materializing the vocation of converting ideas into smart and sustainable products, processes and services. Based on the promotion of the principles of sustainable development, PIEP seeks to create value on an ongoing basis, fostering the economic development and industrial competitiveness.

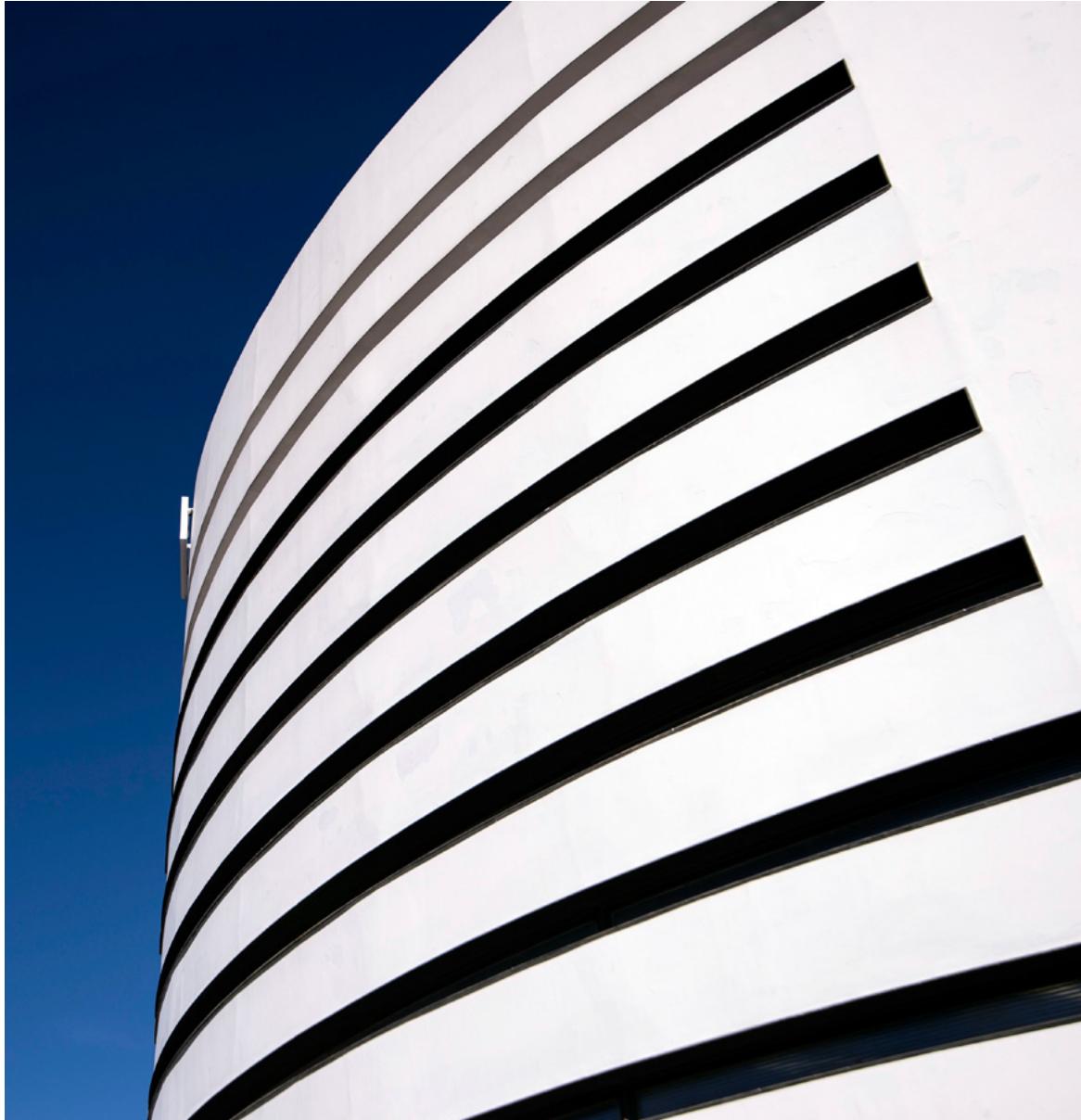
## KNOWLEDGE TRANSFER AND INTERACTION WITH SOCIETY

PIEP is strongly committed to knowledge transfer and societal engagement, ensuring that its research in polymer engineering generates real-world impact. Through workshops, conferences, open days, webinars, MSc and training programmes, it promotes education and awareness among students, professionals, and policymakers. In close collaboration with the University of Minho and industry partners, PIEP develops innovative polymer-based solutions addressing current and future needs, advancing sustainability and technological progress.

## MAJOR ACHIEVEMENTS

There were several major achievements for PIEP between 2023 and 2024. Here are some of the most notable ones:

- ISO 9001 certification maintenance;
- NP 4457 certification maintenance;
- Application for accreditation tests by IPAC in accordance with standard NP EN ISO/IEC 17025:2018;
- Recognition as a certification body by RecyClass;
- Certified collaborators as verifiers for the issuance of Environmental Product Declarations by EPD;
- Launch of the PIEP Academy with the DGERT certification (more than ten training programs);
- 6 new associates;
- Almost 100 people working full-time;
- Distinguished by the Commission for Equality in Work and Employment, for its good practices in promoting equal pay between women and men for equal work or work of equal value;
- + 30 technical-scientific publications;
- 1.75M€ of investment in new equipment and infrastructure;
- Turnover of 9.5M€ (2023/2024).



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CHAIRMAN

 **FERNANDO RIBEIRO**  
INTERIM ADMINISTRATOR

 **21**  
STAFF MEMBERS

 **63**  
RESEARCH PROJECTS

 **2.600.000 €**  
TOTAL FUNDING

## DESCRIPTION

TecMinho is the interface of UMinho responsible for managing its Intellectual Property and supporting Knowledge Transfer. This is achieved through licensing, strategic partnerships with industry, the setting-up of knowledge-intensive spin-offs, and continuous training and organisational development. TecMinho is a private, non-profit organisation, with an extensive track record spanning 30 years of experience.

TecMinho is a certified training organisation accredited by DGERT (Portuguese Directorate-General for Employment and Work Relations). Its main purpose is to support services in the fields of innovation and new technologies and deliver continuous, advanced and specialised training and strategic information.

## DEPARTMENTS/AREAS OF INTERVENTION

### TRAINING & DEVELOPMENT

Continuous, advanced and specialised/professional education and training for individuals and companies; e-learning training services; research and innovation in education and training, organisational development projects, career and professional development service.

### TECHNOLOGY TRANSFER & INNOVATION WITH EMPHASIS ON INTELLECTUAL PROPERTY RIGHTS

Promotion of national and European initiatives aimed at the transfer of experience and technological innovation between academia and industry; research and technological development; diffusion of scientific and technological information; patent research, industrial property and registration; and support in specialised services.

### ENTREPRENEURSHIP

Acceleration programmes, business start-ups and university spin-offs. TecMinho has a large experience in these fields and has collaborated in over 170 European and international projects, worked with approximately 900 European and international partner institutions (HEI, companies, business associations, NGOs, local authorities, etc.) from over 40 countries worldwide.

## MAJOR ACHIEVEMENTS

- Project Erasmus+ “OptimTex - Software Tools for Textile Creatives”;
- European Innovative Teaching Award 2021, for the project Erasmus+ “TAD - The Ability Advisor”.

# UMINHO PRIZE FOR INITIATION IN SCIENTIFIC RESEARCH

Established in 2020, the UMinho Prize for Initiation in Scientific Research continues to serve as a gateway for first-cycle students to explore the world of scientific inquiry. By integrating them into active research teams across the university, this initiative offers hands-on experience and fosters early engagement with UMinho's vibrant research ecosystem.

## FIVE EDITIONS, OVER 200 STUDENTS, COUNTLESS IDEAS

Now in its fifth edition, the Prize has involved more than 200 students from a wide range of UMinho Research Centers. These young researchers have participated in supervised projects that spark curiosity, build foundational research skills, and encourage critical thinking and collaboration.

By investing in students from the very beginning of their academic journey, UMinho reinforces its commitment to nurturing the next generation of scientists, thinkers, and changemakers.

## A LAUNCHPAD FOR ACADEMIC AND SCIENTIFIC GROWTH

More than just an introduction, the Prize acts as a springboard. Many participants go on to pursue advanced study cycles where research plays a central role, gradually taking on leadership in the generation of new knowledge and innovation.

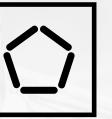


**EDITOR AND PROPERTY**

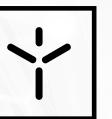
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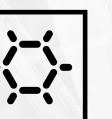
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