

RESILIENCE

Strategic Framework October, 2024

RESILIENCE Center for Regional Resilience and Sustainability Mission Statement, Core Values, and Vision for 2025-2030

Mission Statement

The Center for Regional Resilience and Sustainability Regional (RESILIENCE) aims to develop innovative solutions and good practices to foster overall resilience and sustainability of regions at national and international levels. This R&D unit is expected to have great importance for activities related to applied research, experimental development, training, and scientific and technological dissemination in areas like Business Science, Engineering, and Technology. RESILIENCE is an R&D unit recently constituted, of the Instituto Politécnico de Setúbal (IPS), which allows the access to an important set of resources, from laboratories and equipment, to software and databases, crucial to the development of the necessary skills to promote a (i) resilient and sustainable management; (ii) develop sustainable technologies; (iii) identify and assess risks and vulnerabilities that affect society; and (iv) promote knowledge transfer and shared skills, important for making sustainable decisions within society.

Core Values

Core values are the values that should be an integral part of the RESILIENCE and of the members. The six core values critical to the success of the RESILIENCE are:

1. **Rigor and Scientific Integrity:** Upholding the standards of integrity and conduct in all research and development (R&D) activities.
2. **Collaboration and Knowledge Sharing:** Commitment to establishing an environment that recognises diversity among groups in society and academia, collaborating in the sharing of knowledge at all levels of the R&D process.
3. **Excellence and Performance:** Achieving excellence and performance in all RESILIENCE activities, even as scaling to ever greater heights at the forefront of knowledge frontier.
4. **Sustainability and Responsibility:** Adopting practices in all areas of work that advocate responsible management and use of resources.
5. **Respect and Social Commitment:** Demonstrate respect for individuals from all walks of life, while maintaining a dedication to responsibility and community engagement.
6. **Adaptability and Continuous Learning:** Embracing adaptability in R&D fostering learning to enhance strategies and outcomes consistently.

Vision for 2025-2030

Over the next five years, the RESILIENCE Center ambition is to:

- **Become an International Key Player in Regional Sustainability:** Achieve a position as an international key player driving regional sustainability by being recognized for our new approaches and efficient solutions.
- **Expand International Collaborations:** Strengthen global alliances through creating and deepening collaborations that enrich our research capacity and open to different parts of the world.
- **Enhance Research Infrastructure:** Scale up our research infrastructure considerably, buying state-of-the-art facilities as well as equipment that enable cutting-edge research and attract excellence.
- **Drive Regional and International Impact:** Undertake critical projects directly contributing to the enhancement of sustainability, and resilience within communities influencing policies and practices at both global levels.
- **Foster a Thriving Research Community:** Cultivate a lively supportive research space that attracts top-notch scientists, students with different professional experiences, and diverse cultural backgrounds.
- **Lead in Knowledge Dissemination:** Playing a leading role in knowledge dissemination within our field that shapes academia, the industry as well as policy; publishing articles, attending conferences, and engaging the public.

Implementation Strategy

To achieve RESILIENCE ambition, we will:

- **Invest in Talent and Training:** Strengthen recruitment and provide relevant training to increase capacity and knowledge in sustainability and resilience.
- **Strengthen Funding Mechanisms:** Promote various funding streams, including grants, partnerships, and broad philanthropic efforts to support such ambitious R&D projects.
- **Monitor and Evaluate Progress:** Regularly take stock of the achievement of the goals and objectives set, adjusting where necessary to stay on course towards the vision.

Strategic axis of action

1. Enhancing Research Impact and Collaboration

- **Establish Specialized Research Hubs:** Create focused research groups within RESILIENCE's main areas, such as sustainable technologies and resilient management, to develop deep expertise and promote innovative research outputs.
- **Strengthen International Collaborations:** Build partnerships between global research institutions and industries whose goals resonate with those of this center to enable visibility increase and resource sharing.
- **Implement Regular Research Symposia:** Organize annual conferences and workshops with invited international experts which would promote exchange of knowledge while enabling cooperative research opportunities.

2. Stimulating Research and Innovation

- **Incentivize Interdisciplinary Projects:** Promote projects that involve different fields of study within RESILIENCE thereby taking a comprehensive approach to sustainability issues and resilience challenges.
- **Seed Funding for Pilot Projects:** Provide initial financial support for promising projects that can test new concepts, thus having the potential to attract more grants from outside sources.
- **Enhance Participation in Grant Proposals:** Conduct workshops on grant writing and management aimed at enhancing success rates in national as well as international funding bids.

3. Development Programs for Center Members

- **Mentorship Programs:** Establishment of a structured mentorship program that teams experienced researchers with junior members for skills development and career advancement.
- **Skills Development Workshops:** Organization of periodical training in advanced R&D methodologies, project management, and soft skills to enhance the competency of researchers.
- **Post-Doctoral Fellowship Programs:** Promote to foster competitive post-doctoral programs, in partnership, for drawing fresh PhD graduates with available resources to develop independent research within RESILIENCE.

4. Cultivating a Culture of Active Participation

- **Internal Innovation Competitions:** Host regular competitions to solve real-world problems that align with the center's mission, encouraging innovation and practical application of research.
- **Community Engagement Initiatives:** Engage local communities and other organizations toward the application of research for local benefit; it enhances the societal impact the center's work will have.

- **Open Days and Public Lectures:** Invite public engagement in open days and public lectures, whereby the process of showcasing research progress and innovations can be made accessible to wider society.

5. Utilizing Technology and Infrastructure

- **Leverage Existing Infrastructure:** To conduct higher-level research, the center's laboratories and databases should be well utilized and the staff members trained on how to best make use of such facilities.
- **Digital Platforms for Collaboration:** Creation or modification of digital platforms for virtual, seamless collaboration among researchers, including remote collaboration tools.

6. Monitoring and Evaluation

- **Implement a Research Impact Assessment Framework:** Regularly evaluate the impact of research projects and programs to align them continuously with the center's strategic goals.
- **Feedback Mechanisms:** Establish channels for regular feedback from all center members to refine strategies and address any emerging challenges promptly.
- **Regular meetings to present some work developed, such as journal clubs.** Online Platform to feed with activities.

This strategic plan aims to propel RESILIENCE towards becoming a leading center in sustainability and resilience research by fostering an innovative, collaborative, and highly skilled research community.

Success Metrics

Activities/Indicators 1 – Publications and presentations at scientific meetings

- -Scientific articles Article in an indexed journal (WoS or Scopus – highest Q)
- Special edition of an international journal indexed in WoS/Scopus Special edition of a national journal indexed in WoS/Scopus
- Books published by an international publisher with peer review
- Book published by a national publisher with peer review
- Book editor for an international publisher
- Book editor for a national publisher
- Book chapter in an international publisher
- Book chapter in a national publisher
- Communications at conferences
- Communication at an international conference with presentation, peer-reviewed
- Communication at a national conference with presentation, peer-reviewed
- Publication of articles in conference proceedings of international conferences, peer-reviewed
- Publication of articles in conference proceedings of national conferences, peer-reviewed
- Scientific refereeing Member of scientific committees of international conferences
- Member of scientific committees of national conferences
- Member of the organizing committee for an international scientific event
- Member of the organizing committee for a national scientific event Review of scientific articles indexed in WoS and/or Scopus
- Networks and Development of R&D Projects
- Lead researcher of a project with international funding Lead researcher of a project with national funding (by external entities)
- Collaborator on a project with international funding
- Collaborator on a project with national funding (by external entities)
- Reviewer of international research projects for external entities
- Reviewer of national research projects for external entities
- Participation in proposals for internationally funded projects
- Supervision and refereeing (jury) of research works and projects
- Supervision and/or co-supervision of doctoral thesis
- Supervision and/or co-supervision of master's thesis/project/internship
- External examiner on a doctoral thesis jury
- External examiner on a master's thesis/project/report jury
- Jury for other academic assessments for polytechnic or university teaching staff competitions (aggregation, specialist title, etc.)
- Registered patents
- Spin-off
- Copyrights and other licenses according to the intellectual property regulations of IPS

- Completion of a doctoral thesis (for future integrated members and in the evaluation year)
- Participation in demonstration, dissemination, and dissemination of results activities

SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Diverse Expertise: Leveraging a wide range of expertise from various disciplines within the center, promoting interdisciplinary research that can tackle complex sustainability and resilience challenges. Highly skilled researchers and staff with specialized knowledge in their fields. • Access to Resources: Utilizing the extensive infrastructure of the Instituto Politécnico de Setúbal, including advanced laboratories, equipment, and databases, which are crucial for cutting-edge research. • Community and Academic Engagement: Strong connections with both the academic community and the local and regional stakeholders, enhancing the practical impact and relevance of research outcomes. Members are enthusiastic and willing to work for the several Resilience' goals • Internal Support for Research: The IPS provides internal support mechanisms such as RAADRI, SABIN, and opportunities for lecturing time reduction. The IPS institution has been committed to incentivize research providing funding for conferences and open access publication. • Enriched Expertise and Networking Potential: The RESILIENCE Center benefits from the addition of members who have transitioned from other prestigious research institutions. These members bring with them a wealth of knowledge, extensive experience, and significant networking potential. Their prior affiliations and collaborations can open up new avenues for funding, further collaborative projects, and enhance the center's capabilities in securing and managing large-scale research initiatives. This infusion of talent not only boosts the center's research capacity but also elevates its standing in the academic and scientific communities, attracting more opportunities for innovation and growth. 	<ul style="list-style-type: none"> • Geographical Dispersion: The physical separation of team members across different campuses can hinder effective communication and collaboration. • Resource Limitations: Despite access to good facilities, there is a notable gap in maintaining state-of-the-art equipment and technologies when compared to leading global research centers. • Integration Across Disciplines: While interdisciplinary potential exists, current operational structures may not adequately support seamless integration and collaboration across different research areas.

Opportunities	Threats
<ul style="list-style-type: none"> • Technological Advancements: Adopting emerging technologies such as AI, IoT, and big data analytics to drive research innovations and applications in resilience and sustainability. Leveraging advancements in data analysis, machine learning, or cloud computing to enhance research capabilities. • Expansion of International Networks: Increasing global collaborations not only in academia but also with industry partners, enhancing both the scope and the impact of research projects. Collaborating with private institutions for applied research and commercialization of findings. Increasing opportunities for collaboration with international research institutions and universities. • Policy Influence: Utilizing research outputs to shape local, national, and international policies on sustainability and resilience, establishing the center as a thought leader in these critical areas. Different areas of expertise to produce more substantiated work • Strategic Regional Influence: As a key institution in the territory, the RESILIENCE Center, along with IPS, holds a pivotal role in driving sustainability initiatives that can significantly impact the local and regional environment and economy. This strategic positioning offers a unique opportunity to shape sustainability policies and practices. By collaborating with local governments, businesses, and communities, the Center can leverage its research outcomes to implement real-world solutions that foster sustainable development. This engagement not only boosts the Center's influence but also positions it as an essential stakeholder in regional planning and development, opening up further opportunities for funding, partnership, and policy influence. 	<ul style="list-style-type: none"> • Competitive Funding Landscape: Facing intense competition for research funding from more established centers and universities, which could limit the scope of future projects and initiatives. • Rapid Technological Changes: Keeping up with the pace of technological advancement may require continuous investment in new technologies and training, straining limited resources. • Economic Uncertainties: Global and regional economic fluctuations can impact funding opportunities and priorities, potentially affecting long-term research agendas and collaborations.

Strategic Planning

1. **Enhance Collaboration Tools:** Implement state-of-the-art digital collaboration tools to mitigate the impact of geographical dispersion. Regular network meetings to generate synergies.
2. **Focus on Core Competencies:** Develop niche areas of expertise where the center can truly lead and differentiate itself from competitors.
3. **Strengthen Industry Partnerships:** Forge stronger ties with industry to enhance applied research opportunities and to secure alternative funding sources.
4. **Invest in Next-Gen Technologies:** Proactively upgrade technological capabilities and infrastructure to stay ahead in a rapidly evolving research environment.
5. **Risk Management Strategies:** Develop strategies to manage economic uncertainties and funding variability, including building a more robust financial buffer and diversifying funding sources.
6. **Research capacity building:** develop a strong training and development strategy aiming at all levels of expertise in research, focusing on core competencies for research as well as funding and development of projects.