



Global Strategic SWOT Analysis for OSEAN

2025–2028 Strategic Action Plan

Ref. Application: 6363

R&D Unit:

OSEAN — Outermost Regions Sustainable Ecosystem for Entrepreneurship and Innovation

Submitted to:

Fundação para a Ciência e a Tecnologia (FCT)

Date:

December 17, 2024

Prepared by:

OSEAN Leadership Team

Contact Information:

Email: Eduardo.leite@staff.uma.pt | Phone: + 351 912365049

Website: <https://osean.uma.pt>

Confidentiality Notice:

This document contains proprietary and confidential information belonging to OSEAN. Unauthorized disclosure, copying, or distribution is prohibited without prior written consent.

Index

1. Introduction	4
2. SWOT Internal Dimensions	4
2.1. Strategic Strengths and Action Plans	4
2.1.1. Academic Excellence: Research & Development (R&D) Quality	5
2.1.2 Fostering Global Talent: Team Merit	7
2.1.3 Knowledge Transfer and Innovation: Strategic Vision	10
2.2. Strategic Weaknesses and Mitigation Plans	11
2.2.1 Enhancing Research Capacity and Participation (R&D Quality)	12
2.2.2 Building Research Capacity through Mentorship (Team Merit)	14
2.2.3 Enhancing Regional Collaboration and Entrepreneurial Outcomes (Strategic Vision)	16
3. SWOT External Dimensions	18
3.1. Strategic Opportunities and Action Plans	18
3.1.1. Funding Diversity and SDG Alignment	19
3.1.2. Interdisciplinary Expertise and Innovation	20
3.1.3. Outermost Regions Innovations	21
3.2. Strategic Threats and Mitigation Strategies	25
4. Conclusion	31

"In the light of reason, it is equally good to understand oneself and to understand others." — Spinoza

1. Introduction

The Outermost Regions Sustainable Ecosystem for Entrepreneurship and Innovation (OSEAN) is a pioneering multidisciplinary R&D unit dedicated to advancing research excellence, innovation, and sustainable development in the unique context of the Outermost Regions (ORs). Positioned as a leader in sustainability and entrepreneurship, OSEAN embodies a mission to address complex global challenges through interdisciplinary collaboration, strategic partnerships, and impactful research.

This application outlines a *Global Strategic SWOT Analysis (2025–2028)* as a cornerstone of OSEAN's strategic action plan. The document aligns closely with the Fundação para a Ciência e a Tecnologia (FCT) evaluation criteria, demonstrating OSEAN's commitment to delivering high-quality research outputs, fostering talent, and enhancing societal impact. Central to this analysis is the integration of Sustainable Development Goals (SDGs), Horizon Europe priorities, and emerging global trends, positioning OSEAN as a key contributor to European and global research agendas.

The SWOT analysis captures critical internal dynamics (Section 2), highlighting strengths such as high-impact publications, leadership in Horizon Europe projects, and robust knowledge transfer initiatives. Externally (Section 3), OSEAN leverages opportunities arising from the increasing global demand for SDG-aligned research, funding diversification, and the unique role of ORs as living labs for innovation. Simultaneously, the document identifies and addresses strategic weaknesses and threats, including funding dependencies, limited team capacity, and geopolitical risks, with targeted mitigation strategies.

This strategic roadmap reflects OSEAN's resilience, adaptability, and ambition. It underscores the unit's interdisciplinary expertise and its alignment with pressing global priorities, showcasing its potential to drive transformative research and societal progress. By strengthening its leadership in sustainability-focused innovation and entrepreneurship, OSEAN reaffirms its role as a catalyst for sustainable development, bridging regional challenges with global solutions.

2. SWOT Internal Dimensions

2.1. Strategic Strengths and Action Plans

OSEAN's internal strategic strengths reflect its commitment to interdisciplinary excellence, impactful research, and societal innovation. This section organizes these

strengths according to the Fundação para a Ciência e a Tecnologia (FCT) evaluation criteria: R&D Quality, Team Merit, and Strategic Vision. Each strength is examined through evidence-based insights and supported by actionable plans designed to align OSEAN's initiatives with global priorities, including the Sustainable Development Goals (SDGs).

By leveraging these strengths, OSEAN reinforces its position as a critical player in addressing global challenges while fostering regional development. The proposed strategies ensure alignment with FCT evaluation standards, reflecting the centre's mission to enhance its research capacity, societal relevance, and economic contributions.

OSEAN's action plans are designed not only to address current challenges but also to anticipate future demands. These strengths collectively build a foundation for sustainable growth, consolidating OSEAN's role as a global leader in interdisciplinary research and innovation on both regional and international scales.

2.1.1. Academic Excellence: Research & Development (R&D) Quality

Academic excellence is the cornerstone of OSEAN's mission. It drives innovation and positions the centre as a leader in sustainability-focused research. By prioritizing high-impact publications and participation in global initiatives like Horizon Europe, OSEAN demonstrates its commitment to advancing scientific knowledge and addressing critical societal challenges.

Key achievements include (Table 2.1):

1. Publication of 22 high-impact Q1/Q2 articles aligned with SDGs such as Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8), Climate Action (SDG 13), and Life on Land (SDG 15).
2. Leadership in transformative international projects, such as HORIZON-WIDERA and GENESIS, emphasizing interdisciplinary approaches to global challenges.

These achievements underline OSEAN's ability to produce world-class research while securing competitive funding. The detailed action plans in this section aim to consolidate its leadership in R&D, ensuring continued alignment with international standards and impactful contributions to global sustainability goals.

Table 2.1. Elevating Academic Excellence – R&D Quality Criterion

Strategic Priority	FCT Criterion	Strength Number	Strengths	Evidence Supporting the Strengths
Elevating Academic Excellence	R&D Quality	S1	Proven track record of high-impact publications, aligned with SDGs 4, 8, 13, and 15.	Scientific Contributions: <ul style="list-style-type: none"> • Publications: 22 Q1/Q2 articles on sustainability, entrepreneurship, and climate action. • Citations: Highlight research relevance. • Recognition: Articles listed as "most-read". Engagement with the Scientific Community: <ul style="list-style-type: none"> • Keynotes: Cutting-edge research. • Collaborations: Partnerships with top-tier institutions.
Elevating Academic Excellence	R&D Quality	S2	Proven leadership in Horizon projects, advancing SDG-aligned goals.	Successful coordination of Horizon Europe projects: <ul style="list-style-type: none"> • HORIZON-WIDERA and GENESIS showcase capacity for large-scale collaborations. • Direct SDG alignment: SDGs 4, 8, 13, and 15. • Impact: €700K+ funding, strengthening research capacity. Transformative outcomes: Advancing climate resilience and institutional innovation.

For each strength (S1 and S2) the action plans are depicted in Table 2.2 and Table 2.3 below:

Table 2.2. Action plan for strength S1: Strengthen High-Impact Publications

Category	Details
Action Plan	Strengthen and expand high-impact publications to align with global priorities and interdisciplinary goals.
Specific Actions	1. Annual Research Workshops: Focused training, mentorship from experts. 2. Collaborative Clusters: Interdisciplinary research aligned with SDGs. 3. Incentive Program: Rewards for achieving high-impact publications.
Expected Metrics	1. Publication Growth: 10 Q1/Q2 publications annually, 25% growth over three years. 2. Citations: 1,500 cumulative citations in three years. 3. Recognition: Two annual keynote invitations. 4. Engagement: 15% annual increase in "most-read/highly cited" articles.
Strategic Alignment	Supports OSEAN's global leadership in impactful, sustainability-focused research while meeting FCT criteria.

The emphasis on high-impact publications ensures OSEAN's credibility in the global academic community. By implementing targeted initiatives, OSEAN will solidify its reputation, attract collaborations, and strengthen funding opportunities.

Table 2.3. Action plan for strength S2: Capitalize on Horizon Europe Funding

Category	Details
Action Plan	Capitalize on Horizon Europe funding to lead two global SDG-aligned projects annually, enhancing OSEAN's interdisciplinary research impact.
Specific Actions	<ol style="list-style-type: none"> Grant-Writing Task Force: Specialized team to address funding calls; biannual workshops for EU proposal training. International Consortia Engagement: Lead or join EU-funded project consortia with top-tier partners (e.g., Politecnico di Milano, ETH Zurich). Funding Diversification: Explore complementary regional and private-sector funding streams.
Expected Metrics	<ol style="list-style-type: none"> Project Success: Secure €5M annually through Horizon Europe funding. Proposal Approval Rate: Achieve 40% success rate with at least 5 proposals submitted annually. SDG Contributions: Deliver measurable outcomes aligned with SDGs 4 (Quality Education), 8 (Decent Work & Economic Growth), 13 (Climate Action), and 15 (Life on Land). Capacity Building: Increase researchers in Horizon projects by 20% annually.
Strategic Alignment	Positions OSEAN as a leader in Horizon Europe initiatives and a critical contributor to global sustainability goals, reinforcing the University of Madeira's research capabilities.

By leading Horizon Europe projects, OSEAN enhances its research capacity and global influence, addressing critical challenges such as climate resilience and digital transformation.

2.1.2 Fostering Global Talent: Team Merit

Attracting and nurturing global talent is essential for OSEAN's mission. The centre's ability to integrate diverse expertise fosters innovative solutions to complex challenges.

OSEAN's interdisciplinary team includes researchers from over 12 nationalities and partnerships with leading institutions like ETH Zurich and Politecnico di Milano. This diversity strengthens the centre's capacity to deliver impactful, globally relevant research as described in Table 2.4 below.

Table 2.4. Attracting and Cultivating Global Talent – Team Merit Criterion

Strategic Priority	FCT Criterion	Strength Number	Strengths	Evidence Supporting the Strengths
Attracting and Cultivating Global Talent	Team Merit	S3	Multinational, interdisciplinary team with globally recognized experts.	<p>Global Representation:</p> <ul style="list-style-type: none"> • 12+ nationalities, with diverse expertise in sustainability, entrepreneurship, and climate science. • 50% participation in international research. <p>Renowned Experts:</p> <ul style="list-style-type: none"> • David Audretsch: Global leader in innovation research. • Jasper Tristan: Expertise in digital transformation. <p>Interdisciplinary Impact:</p> <p>Solutions for complex global challenges.</p>
Strengthening Strategic Partnerships	Team Merit	S4	Strong strategic partnerships based on the Helix Quintuple model.	<p>Active International Collaborations:</p> <ul style="list-style-type: none"> • Partnerships with ETH Zurich, Politecnico di Milano, and leading industry partners. <p>Helix Quintuple Approach: Joint projects on climate action and circular economy.</p> <p>Proven Impact: Technological innovations and policy recommendations.</p>

For each strength (S3 and S4) the action plans are depicted in Table 2.5 and Table 2.6 below:

Table 2.5. Action plan for strength S3: Enhance Contributions of Multinational Teams

Category	Details
Action Plan	Maximize contributions of the interdisciplinary and multinational team to enhance research output and global collaboration.
Specific Actions	<ol style="list-style-type: none"> 1. Strategic Recruitment: Recruit three internationally recognized researchers annually to address expertise gaps aligned with OSEAN's goals. 2. Diversity Enhancement Initiative: Promote inclusion by recruiting from underrepresented regions; establish exchange programs with partners such as ETH Zurich and Politecnico di Milano. 3. Capacity Building: Develop mentorship programs pairing junior researchers with renowned experts (e.g., David Audretsch); host interdisciplinary retreats to foster team collaboration.
Expected Metrics	<ol style="list-style-type: none"> 1. Global Representation: Expand team diversity to 15+ nationalities by 2025. 2. Renowned Researchers: Recruit 3 top-tier international researchers annually in digital innovation, sustainability, and other strategic fields. 3. Collaboration Metrics: Achieve 60% team participation in international projects by 2025. 4. Research Impact: Increase interdisciplinary co-authored publications by 20% by 2025.
Strategic Alignment	This strategy strengthens OSEAN's global reputation and aligns with FCT's "Team Merit" criteria by leveraging international talent to deliver impactful, globally relevant research.

Fostering a multinational, interdisciplinary team strengthens OSEAN's capacity to deliver innovative solutions to global challenges. By integrating diverse expertise and fostering inclusivity, OSEAN meets the FCT criteria of Team Merit while expanding its influence and collaborations. This diversity enhances creativity, drives impactful research, and positions OSEAN as a hub for addressing the complex, interconnected challenges facing the global community.

Strengthening contributions from a diverse team ensures that OSEAN remains adaptable and innovative, capable of addressing complex global challenges with cutting-edge solutions. This emphasis on inclusivity and collaboration enhances OSEAN's ability to lead in interdisciplinary research and meet evolving global demands.

Table 2.6. Action plan for strength S4: Expand Strategic Partnerships

Category	Details
Action Plan	Leverage and expand strategic partnerships to strengthen interdisciplinary research and increase societal impact.
Specific Actions	<p>1. Partnership Expansion:</p> <ul style="list-style-type: none"> - Formalize collaborations with 5 new institutions annually, targeting underrepresented regions. - Establish joint ventures with industry partners focusing on SDG-aligned solutions. <p>2. Structured Collaboration Framework:</p> <ul style="list-style-type: none"> - Develop a governance model based on the Helix Quintuple for communication and resource sharing. - Organize an annual partnership summit to align goals, showcase results, and foster collaborations. <p>3. Community Engagement:</p> <ul style="list-style-type: none"> - Collaborate with civil society organizations to address global challenges with community-driven solutions. - Enhance environmental partnerships to co-develop nature-based solutions for sustainability.
Expected Metrics	<p>1. Partnership Growth: Increase active partnerships to 15+ international institutions by 2025.</p> <p>2. Joint Initiatives: Launch 3+ new multidisciplinary projects annually involving partners across Helix Quintuple sectors.</p> <p>3. Shared Outputs: Publish 5+ co-authored publications annually and deliver 2+ policy recommendations/technological solutions.</p> <p>4. Funding and Recognition: Secure €2M+ annually through collaborative project applications.</p>
Strategic Alignment	Aligns with FCT's "Team Merit" criterion by fostering impactful, multidisciplinary, and inclusive research through strong partnerships across diverse sectors.

Expanding strategic partnerships ensures access to new resources, networks, and expertise, enabling OSEAN to scale its research impact. This supports its mission of driving socio-economic and environmental sustainability through collaborative approaches. By leveraging diverse partnerships, OSEAN enhances its interdisciplinary research capabilities and addresses critical global challenges aligned with the Sustainable Development Goals (SDGs).

Expanding partnerships will allow OSEAN to deliver joint projects with high societal impact, strengthening its role as a facilitator of interdisciplinary and collaborative innovation. These partnerships will broaden OSEAN’s influence and enhance its ability to contribute to socio-economic and environmental sustainability.

2.1.3 Knowledge Transfer and Innovation: Strategic Vision

Knowledge transfer is central to OSEAN's impact. Programs like *Poliempreende* and *Accelerate* empower researchers and entrepreneurs to create innovative solutions that align with global priorities as described in Table 2.7.

OSEAN ensures measurable outcomes, including spin-offs, start-ups, and policy recommendations, bridging the gap between research and societal needs.

Table 2.7. Fostering Knowledge Transfer and Innovation – Strategic Vision

Criterion

Strategic Priority	FCT Criterion	Strength Number	Strengths	Evidence Supporting the Strengths
Fostering Knowledge Transfer and Innovation	Strategic Vision	S5	Robust knowledge transfer initiatives through established programs.	<p>Knowledge Transfer Platforms:</p> <ul style="list-style-type: none"> • <i>Poliempreende</i>: Promotes entrepreneurship. • <i>Accelerate</i>: Capacity-building for emerging entrepreneurs. • <i>Genesis</i>: Interdisciplinary solutions. <p>Impact Metrics:</p> <ul style="list-style-type: none"> • Entrepreneurial Projects: 15+ projects annually. • Participation: 50+ researchers engaged. • Outputs: Start-ups and spin-offs creating societal and economic impact.

Table 2.8 below describes the action plan for strength number S5:

Table 2.8. Action plan for strength S5: Increase Knowledge Transfer Initiatives

Category	Details
Action Plan	Expand and enhance knowledge transfer initiatives to increase the societal and economic impact of research outputs.
Specific Actions	<p>1. Scaling Up Existing Platforms:</p> <ul style="list-style-type: none"> - Strengthen the reach of Poliempreende, Accelerate, and Genesis by integrating new technologies and methodologies. - Develop additional modules focused on digital innovation and sustainability. <p>2. Engaging More Participants:</p> <ul style="list-style-type: none"> - Increase outreach to involve 70+ participants annually, including students, researchers, and external stakeholders. - Partner with local governments and industries to provide hands-on opportunities for participants. <p>3. Start-ups and Spin-Offs Development:</p> <ul style="list-style-type: none"> - Provide targeted support for entrepreneurial projects, including seed funding and mentorship programs. - Facilitate access to incubation and acceleration services for promising initiatives.
Expected Metrics	<p>1. Participant Growth: Increase annual participation to 70+ students and researchers by 2025.</p> <p>2. Entrepreneurial Outputs: Launch 20+ entrepreneurial projects annually, with at least 5 resulting in start-ups or spin-offs.</p> <p>3. Regional Impact: Establish 3+ new partnerships annually with local governments and industries to support innovation ecosystems.</p> <p>4. Recognition Metrics: Secure regional or national awards for excellence in knowledge transfer and entrepreneurship annually.</p>
Strategic Alignment	Aligned with FCT's "Strategic Vision" criterion, this initiative underscores OSEAN's commitment to leveraging research outputs for societal and economic benefit, fostering innovation and entrepreneurship development.

OSEAN's internal strengths underscore its leadership in research, talent development, and innovation. The detailed action plans ensure alignment with global and FCT priorities, positioning OSEAN as a catalyst for impactful, interdisciplinary research and sustainable development.

2.2. Strategic Weaknesses and Mitigation Plans

This section evaluates critical areas where OSEAN faces challenges, categorized according to the FCT evaluation criteria: R&D Quality, Team Merit, and Strategic Vision. By identifying these weaknesses and proposing targeted mitigation strategies, OSEAN demonstrates its commitment to continuous improvement and sustainable growth.

Each weakness is analysed with supporting evidence, followed by detailed action plans to address the gaps, ensuring alignment with global standards and priorities such as the Sustainable Development Goals (SDGs).

The action plans outlined here focus on:

1. Strengthening research capacity.
2. Expanding engagement with regional and global partners.
3. Fostering impactful entrepreneurial ventures.

By addressing these weaknesses, OSEAN aims to reinforce its strategic positioning and maximize its contributions to research and society.

2.2.1 Enhancing Research Capacity and Participation (R&D Quality)

Limitations in producing high-impact publications and participating in Horizon Europe projects pose obstacles to OSEAN’s competitiveness and impact. Addressing these challenges is crucial for maximizing its potential contributions to global sustainability goals as portrayed in Table 2.9, such as:

1. W1: Increasing participation in high-impact outputs ensures OSEAN’s visibility and credibility, directly aligning with FCT’s R&D Quality criteria.
2. W2: Boosting Horizon Europe engagement positions OSEAN as a leader in interdisciplinary research, addressing critical global challenges through international collaborations.

R&D Quality is the backbone of OSEAN’s mission to deliver impactful and innovative solutions to global challenges. Addressing weaknesses in this domain is crucial to ensuring the centre’s continued growth and alignment with the Sustainable Development Goals (SDGs).

Table 2.9. Mitigation Strategies – R&D Quality

<i>Strategic priority</i>	<i>FCT criterion</i>	<i>Weakness number</i>	<i>Weaknesses</i>	<i>Evidence supporting the weaknesses</i>
Enhancing Research Capacity and Participation	R&D Quality	W1	Limited participation in high-impact outputs by integrated members.	Participation Metrics: 33% of integrated members contributing to Q1/Q2 publications, showing underutilized expertise. Capacity for Improvement: Junior researchers demonstrate untapped potential requiring targeted support.
Expanding Research Participation and Capacity in Horizon Europe Initiatives	R&D Quality	W2	Limited participation in Horizon projects by integrated members.	Participation Metrics: Only 20% of researchers are engaged. Comparison with Peers: Peer institutions often show 50%+ engagement. Potential for Growth: Strong Horizon track record indicates untapped potential.

OSEAN’s current participation in high-impact publications highlights significant room for improvement. The action plan (Table 2.10 and Table 2.11) focuses on mentorship and development initiatives to unlock untapped potential within the research team. By increasing participation in high-impact publications, OSEAN will solidify its position as a leader in sustainability-focused research. This will enhance the institution’s visibility in the academic community and attract greater funding opportunities, reinforcing its commitment to addressing global challenges.

Table 2.10. Action plan for Mitigating Weakness W1: Increase Participation in High-Impact Outputs

Category	Details
Action Plan	Increase participation in high-impact outputs by implementing targeted development and support programs for underrepresented team members.
Specific Actions	<ol style="list-style-type: none"> <li>1. Mentoring Program: <ul style="list-style-type: none"> <li>- Pair senior researchers with junior and mid-career team members to provide guidance on research design, publication strategies, and collaboration opportunities. <li>- Focus on interdisciplinary mentorship aligned with global priorities such as SDGs. <li>2. Capacity-Building Workshops: <ul style="list-style-type: none"> <li>- Organize biannual workshops on Q1/Q2 journal submission processes, focusing on writing, data analysis, and peer review response strategies. <li>3. Performance Incentives: <ul style="list-style-type: none"> <li>- Develop an internal rewards system recognizing contributions to high-impact publications, including funding for follow-up research or conference participation.
Expected Metrics	<ol style="list-style-type: none"> <li>1. Participation Growth: Increase the participation rate of integrated members in Q1/Q2 publications from 33% to 50% within 3 years. <li>2. Output Diversification: Ensure at least 50% of Q1/Q2 publications annually include contributions from junior and mid-career researchers. <li>3. Mentorship Engagement: Establish mentorship relationships for 70% of junior researchers by the end of year one, with quarterly progress evaluations. <li>4. Training Outcomes: Train 80% of integrated members annually through workshops, tracking their subsequent contributions to high-impact outputs.
Strategic Alignment	Aligned with FCT’s R&D Quality criterion, this action plan directly addresses underutilization of research capacity, fostering inclusive participation and leveraging the full expertise of OSEAN’s team for more balanced and impactful research outputs.

Table 2.11. Action plan for Mitigating Weakness W2: Boost Horizon Europe Engagement and PhD Supervision

Category	Details
Action Plan	Boost Horizon Europe engagement and increase PhD supervision capabilities by expanding participation and mentorship initiatives.
Specific Actions	<ol style="list-style-type: none"> 1. International Doctoral Program Consortium: <ul style="list-style-type: none"> - Launch a consortium to attract 10 PhD candidates annually, focusing on interdisciplinary research aligned with Horizon Europe priorities. - Collaborate with leading universities (e.g., ETH Zurich, Politecnico di Milano) to co-supervise doctoral students and integrate them into Horizon projects. 2. Training and Capacity Building: <ul style="list-style-type: none"> - Provide dedicated workshops for integrated researchers on Horizon proposal writing, project management, and interdisciplinary collaboration. - Establish mentorship opportunities where experienced researchers guide junior members in Horizon initiatives. 3. Targeted Recruitment: <ul style="list-style-type: none"> - Actively recruit researchers with experience in Horizon projects to fill gaps in expertise and supervision capacity.
Expected Metrics	<ol style="list-style-type: none"> 1. Participation Growth: Increase the proportion of integrated researchers contributing to Horizon projects from 20% to 50% within 5 years. 2. PhD Program Impact: Enrol 10 PhD candidates annually through the international doctoral program consortium. 3. Capacity Development: Ensure at least 70% of integrated researchers participate in training programs annually, with measurable improvement in proposal success rates. 4. Horizon Project Contributions: Achieve a 30% increase in Horizon project applications with integrated member participation over the next 3 years.
Strategic Alignment	This plan directly aligns with OSEAN’s strategic priority to expand research participation in Horizon Europe projects, addressing weaknesses in PhD supervision and researcher engagement while ensuring alignment with EU priorities.

Expanding engagement in Horizon Europe initiatives will not only increase OSEAN’s access to competitive funding but also strengthen its interdisciplinary collaborations. These actions are pivotal for building resilience and enhancing the institution’s global reputation.

Expanding OSEAN’s participation in Horizon Europe initiatives is crucial for increasing the institution’s access to competitive funding and fostering impactful collaborations. Boosting Horizon Europe engagement will expand OSEAN’s funding portfolio and strengthen its ability to lead interdisciplinary projects. This positions the institution as a critical player in tackling pressing global issues, from climate resilience to digital transformation.

2.2.2 Building Research Capacity through Mentorship (Team Merit)

Developing a robust mentorship framework and effective recruitment strategy is essential to addressing the low number of integrated members and PhD advisors.

Strengthening researcher engagement and mentorship aligns with FCT's Team Merit criterion, ensuring the long-term sustainability of OSEAN's research ecosystem.

Table 2.12. Mitigation Strategies – Team Merit

Strategic priority	FCT criterion	Weakness number	Weaknesses	Evidence supporting the weaknesses
Building Research Capacity through Integrated Membership and Doctoral Training	Team Merit	W3	Low number of integrated members and limited Ph.D. candidates mentored.	Low attraction rates: Current attraction is less than 20%. Limited Ph.D. Mentorship: Only 10% of integrated researchers act as primary advisors.

Regional collaborations represent an opportunity to align local innovation efforts with global priorities. Strengthening these partnerships will enable OSEAN to bridge the gap between academic research and practical solutions for societal challenges.

By addressing the identified weaknesses, OSEAN can build a resilient research ecosystem that fosters innovation and sustainability. The proposed action plans in Table 2.13 outline practical steps to achieve these objectives.

Table 2.13. Action plan for mitigating Weakness W3: Strengthen Researcher Engagement and Mentorship

Category	Details
Action Plan	Strengthen researcher engagement and mentorship capacity through targeted recruitment and international doctoral consortia.
Specific Actions	<ol style="list-style-type: none"> 1. Targeted Recruitment Campaigns: <ul style="list-style-type: none"> - Actively recruit researchers with strong Ph.D. supervision experience. - Prioritize international candidates with expertise aligned to OSEAN's strategic goals. 2. International Doctoral Consortia Development: <ul style="list-style-type: none"> - Partner with universities like ETH Zurich and Politecnico di Milano. - Establish a doctoral consortium enrolling 15 Ph.D. candidates annually. - Implement joint supervision across institutions to enhance training quality. 3. Incentive Programs for Mentorship: <ul style="list-style-type: none"> - Introduce incentives for integrated researchers acting as primary Ph.D. advisors. - Include funding access, sabbatical opportunities, and professional development incentives. 4. Mentorship Training: <ul style="list-style-type: none"> - Organize annual workshops to improve Ph.D. supervision practices. - Ensure alignment with international standards for mentorship.
Expected Metrics	<ol style="list-style-type: none"> 1. Recruitment and Retention: Increase attraction rate of integrated members to 30% within 3 years, reaching a retention rate of 80%. 2. Ph.D. Supervision: Increase the proportion of integrated researchers acting as primary Ph.D. advisors from 10% to 40% within 5 years. 3. Doctoral Program Expansion: Enrol 15 Ph.D. candidates annually through the international doctoral consortium. 4. Mentorship Engagement: Ensure 70% of integrated members participate in mentorship training programs annually.
Strategic Priority	Building research capacity by fostering recruitment, incentivizing mentorship, and developing international doctoral consortia. This ensures OSEAN's ability to nurture talent and expand its research ecosystem.

Expanding entrepreneurial outcomes is crucial for amplifying OSEAN's socio-economic impact. The proposed actions aim to foster innovation-driven growth and establish a thriving ecosystem for sustainable ventures.

Strengthening mentorship and expanding team capacity will not only address current limitations but also establish a foundation for long-term growth. By prioritizing these initiatives, OSEAN ensures the sustainability of its research ecosystem and alignment with global standards.

2.2.3 Enhancing Regional Collaboration and Entrepreneurial Outcomes (Strategic Vision)

Fostering regional partnerships and entrepreneurial ventures is critical for translating research into societal and economic benefits as described in Table 2.14, such as:

1. W4: Strengthening regional collaborations addresses untapped opportunities for societal impact.
2. W5: Enhancing entrepreneurial outcomes aligns with OSEAN's mission to drive innovation and sustainable economic growth.

Table 2.14. Mitigation Strategies – Strategic Vision

Strategic priority	FCT criterion	Weakness number	Weaknesses	Evidence supporting the weaknesses
Strengthening Regional Industry and Civil Society Collaborations	Strategic Vision	W4	Low engagement with local companies and civil society organizations.	Limited local collaborations: Local partnerships represent less than 10% of total collaborations.
Expanding Entrepreneurial Outcomes	Strategic Vision	W5	Lack of tangible outcomes such as spin-offs, start-ups, or entrepreneurial projects.	Limited tangible outcomes: Fewer than 5 spin-offs established in the past two years.

To mitigate weaknesses W4 and W5 the action plan is the following (Table 2.15 and Table 2.16):

Table 2.15. Action Plan for Mitigating Weakness W4: Enhance Regional Collaboration and Impact

<i>Category</i>	<i>Details</i>
Action Plan	Enhance regional collaboration and impact by strengthening partnerships with local companies and civil society organizations.
Specific Actions	<ol style="list-style-type: none"> 1. Regional Partnership Development: <ul style="list-style-type: none"> - Partner with 10+ local companies and civil society organizations annually. - Co-create projects addressing regional challenges leveraging OSEAN’s expertise in sustainability and innovation. 2. Local Innovation Hubs: <ul style="list-style-type: none"> - Develop regional innovation hubs in Madeira. - Serve as collaborative spaces for academia, industry, and civil society. 3. Community Outreach Initiatives: <ul style="list-style-type: none"> - Organize workshops, roundtables, and public events to engage stakeholders. - Launch an annual regional impact report showcasing OSEAN’s contributions. 4. Incentivize Local Collaborations: <ul style="list-style-type: none"> - Provide funding or in-kind support to researchers engaging with regional stakeholders.
Expected Metrics	<ol style="list-style-type: none"> 1. Local Partnerships Growth: Increase local collaborations from 10% to 30% within 3 years. 2. Innovation Hub Utilization: Establish at least 2 regional innovation hubs by 2025, hosting 5+ projects annually. 3. Community Engagement: Organize 10+ local engagement activities annually involving companies, civil society, and public sector stakeholders. 4. Impact Reporting: Publish an annual report with quantifiable outcomes of OSEAN’s regional collaborations.
Strategic Priority	Strengthening regional industry and civil society collaborations by fostering partnerships, creating innovation hubs, and emphasizing local impact. This aligns OSEAN’s expertise with the needs of Madeira and Portugal.

Enhancing regional collaborations will enable OSEAN to align its strategic priorities with the needs of local stakeholders, driving greater socio-economic impact. This alignment not only strengthens OSEAN’s regional presence but also reinforces its contributions to global sustainability goals.

Table 2.16. Action Plan for Mitigating Weakness W5: Expand Entrepreneurial Outcomes

Category	Details
Action Plan	Expand and enhance entrepreneurial outcomes by strengthening support structures and fostering sustainable ventures.
Specific Actions	<p>1. Incubation and Acceleration Programs:</p> <ul style="list-style-type: none"> - Establish dedicated services for mentorship, funding, and business support. - Collaborate with local and international partners to integrate services into innovation ecosystems. <p>2. Entrepreneurial Support Network:</p> <ul style="list-style-type: none"> - Connect researchers, students, and industry partners to co-develop ideas. - Focus on sustainability, digital innovation, and climate solutions. <p>3. Seed Funding and Resource Allocation:</p> <ul style="list-style-type: none"> - Allocate seed funding for high-potential projects and provide access to resources. - Partner with investors and venture capital firms for follow-up funding. <p>4. Metrics for Success:</p> <ul style="list-style-type: none"> - Develop clear metrics to track entrepreneurial progress from idea to start-up/spin-off.
Metrics	<p>1. Spin-off/Start-up Growth: Create 10+ start-ups/spin-offs over 3 years focused on sustainability and innovation.</p> <p>2. Incubation Program Utilization: Enrol 15+ projects annually in incubation/acceleration programs.</p> <p>3. Funding Impact: Secure €500,000+ annually in seed funding and external investments.</p> <p>4. Ecosystem Engagement: Increase participation in entrepreneurial activities by 20% annually.</p>
Strategic Priority	This priority bridges the gap in entrepreneurial outcomes by building robust structures, fostering collaborations, and ensuring venture sustainability. Aligned with SDGs, it positions OSEAN as a catalyst for global and regional entrepreneurship.

OSEAN's structured approach to mitigating weaknesses strengthens its capacity for sustainable growth, aligning with global standards and maximizing its research and societal impact.

3. SWOT External Dimensions

3.1. Strategic Opportunities and Action Plans

The external opportunities identified in OSEAN's SWOT analysis highlight critical factors that can be leveraged to advance research excellence, funding diversification, and global recognition. These opportunities align closely with the Fundação para a Ciência e a Tecnologia (FCT) evaluation criteria, focusing on R&D Quality, Team Merit, and Strategic Vision.

Effectively addressing these opportunities enables OSEAN to enhance its research outputs, improve funding success, and elevate its global impact, contributing significantly to the Sustainable Development Goals (SDGs).

This section organizes the opportunities in structured tables that address:

1. Strategic priorities associated with each opportunity.
2. The FCT evaluation criteria they fulfil.
3. Quantitative and qualitative evidence supporting their relevance.
4. Detailed action plans to capitalize on each opportunity.

Key Opportunities Identified

Funding Diversity and SDG Alignment (R&D Quality)

Opportunity O1: Expanding funding diversity through programs like Horizon Europe, Green Deal, FCT opportunities, and private investors.

Opportunity O2: Enhancing global alignment with SDGs to boost research visibility and societal impact.

Interdisciplinary Expertise and Innovation (Team Merit)

Opportunity O3: Addressing global demand for interdisciplinary expertise in sustainability and digital transformation.

Outermost Regions (OR) Innovations (Strategic Vision)

Opportunity O4: Leveraging the unique positioning of ORs as scalable living labs for sustainability-driven innovations.

3.1.1. Funding Diversity and SDG Alignment

Expanding funding diversity and aligning research with global SDG priorities presents an opportunity for OSEAN to strengthen its financial sustainability, increase its research impact, and position itself as a leader in global challenges such as climate resilience, digital transformation, and economic development. The rationale for these opportunities are explained in Table 3.1.

Table 3.1. Expanding Research Capacity, Funding Diversity, and Global Visibility (R&D Quality)

<i>Strategic priority</i>	<i>FCT criterion</i>	<i>Opportunity number</i>	<i>Opportunities</i>	<i>Evidence supporting the opportunities</i>
Expanding Funding Diversity and Global Research Reach	R&D Quality	O1	Growing funding diversity (Horizon Europe, Green Deal, FCT programs, Private investors).	<p>Access to significant funding:</p> <ul style="list-style-type: none"> - Annual access to €5M+ via EU programs (Horizon Europe, Green Deal). - Additional funding of €1M+ via FCT programs and private investors. <p>Alignment with global priorities:</p> <ul style="list-style-type: none"> - Sustainability, digital transformation, and AI. <p>Potential for scaling research impact:</p> <ul style="list-style-type: none"> - Leverage diverse funding streams for SDG-aligned challenges.
Enhancing Global SDG Alignment and Research Visibility	R&D Quality	O2	Emphasis on global SDG alignment enhances research visibility.	<p>Sdg alignment and visibility:</p> <ul style="list-style-type: none"> - Increasing global demand for SDG-aligned research positions - OSEAN as a sustainability leader. - Projects align with at least 3 SDGs annually (SDG 4, 8, 13, 15). <p>Global trends and research priorities:</p> <ul style="list-style-type: none"> - Horizon Europe and Green Deal focus on climate resilience, sustainability, and digital innovation. <p>Potential for impact expansion:</p> <ul style="list-style-type: none"> - Aligning SDG outputs enhances visibility and collaborations.

3.1.2. Interdisciplinary Expertise and Innovation

OSEAN’s interdisciplinary expertise aligns with the growing demand for cross-disciplinary solutions to global sustainability challenges. By expanding team capacity and fostering partnerships, OSEAN can further enhance its contributions to SDG-aligned priorities. Table 3.2 explains the rationale for this opportunity.

Table 3.2. Action plan for Opportunity O1: Leverage Emerging Funding Opportunities

Category	Details
Action Plan	Leverage emerging funding opportunities for sustainability and digital transformation.
Specific Actions	<ol style="list-style-type: none"> 1. Cross-Disciplinary Proposal Development: <ul style="list-style-type: none"> - Form interdisciplinary teams to create competitive proposals for Horizon Europe, Green Deal, and FCT calls. - Partner with industry stakeholders to ensure applicability and relevance of research proposals. 2. SDG Integration in Proposals: <ul style="list-style-type: none"> - Align all new projects with at least two SDG priorities, focusing on sustainability and digital innovation. 3. Capacity Building for Grant Applications: <ul style="list-style-type: none"> - Conduct workshops to train researchers in grant-writing with a focus on emerging funding lines.
Metrics	<ol style="list-style-type: none"> 1. Funding Growth: Secure at least 3 new funding lines annually aligned with EU and global research priorities. 2. SDG Alignment: Achieve a 20% annual growth in SDG-aligned outputs. 3. Proposal Success Rate: Attain a 30% success rate in submitted proposals for Horizon Europe, Green Deal, and FCT calls.
Strategic Priority	Expand funding diversity and OSEAN's global research reach by targeting emerging funding opportunities and forming international collaborations aligned with sustainability, digital transformation, and SDG priorities.

3.1.3. Outermost Regions Innovations

OSEAN's positioning in Outermost Regions (ORs) presents a unique opportunity to leverage these areas as living labs for scalable sustainability innovations. Table 3.3 describe the action plan for opportunity number O2.

Table 3.3. Action Plan for Opportunity O2: Align R&D with SDG Goals

Category	Details
Action Plan	Align R&D initiatives with Sustainable Development Goals (SDGs) to enhance OSEAN's visibility and impact.
Specific Actions	<p>1. Align All New Projects with SDGs:</p> <ul style="list-style-type: none"> - Develop a framework to ensure all proposals align with at least two SDG priorities. - Focus on areas addressing climate resilience, digital transformation, and sustainable development. <p>2. Expand Existing SDG-Aligned Projects:</p> <ul style="list-style-type: none"> - Leverage current projects like HORIZON-WIDERA and GENESIS to enhance alignment with EU goals. - Emphasize interdisciplinary solutions addressing multiple SDGs simultaneously. <p>3. Strengthen Communication of SDG Impact:</p> <ul style="list-style-type: none"> - Publish annual impact reports highlighting OSEAN's measurable contributions to SDGs, including publications, policy recommendations, and societal benefits.
Metrics	<p>1. SDG-Alignment of Projects: Ensure 100% alignment of new projects with at least two SDG priorities by 2026.</p> <p>2. SDG-Aligned Outputs: Achieve 20% annual growth in SDG-aligned research outputs.</p> <p>3. EU and Global Contributions: Deliver at least 3 new SDG-aligned projects annually addressing EU goals.</p> <p>4. Research Visibility: Increase representation in international conferences, panels, and advisory boards on SDG implementation by 15% annually.</p>
Strategic Priority	Strengthen OSEAN's leadership in SDG-aligned research by leveraging partnerships, fostering interdisciplinary approaches, and communicating measurable impacts to enhance global and regional visibility.

Table 3.4 explains the rationale for opportunity number O3.

Table 3.4. Enhancing Interdisciplinary Expertise for Global SDG Challenges

Strategic priority	FCT criterion	Opportunity number	Opportunities	Evidence supporting the opportunities
Enhancing Interdisciplinary Expertise for Global SDG Challenges	Team Merit	O3	Increasing demand for interdisciplinary expertise in sustainability and digital transformation.	<p>Global trends: - 20% growth in demand for SDG-aligned R&D globally (EU reports).</p> <p>Alignment with expertise:</p> <ul style="list-style-type: none"> - OSEAN's interdisciplinary team and proven Horizon record position it effectively. - Areas include SDG 13 (climate action), SDG 4 (education), SDG 9 (innovation). <p>Potential for leadership:</p> <ul style="list-style-type: none"> - Capacity to lead SDG-aligned global research through partnerships.

Table 3.5 below describes the action plan for opportunity number O3:

Table 3.5. Action plan for Opportunity O3: Expand Interdisciplinary Expertise

Category	Details
Action Plan	Expand OSEAN's interdisciplinary expertise to meet global demand for sustainability and digital transformation research.
Specific Actions	<ol style="list-style-type: none"> 1. Expand Interdisciplinary Teams: <ul style="list-style-type: none"> - Recruit experts in fields like AI, digital innovation, and climate resilience. - Establish specialized working groups to integrate cross-disciplinary expertise. 2. Develop Strategic Alliances: <ul style="list-style-type: none"> - Form partnerships with research centres in Asia, Africa, and the Americas. - Focus on SDG-aligned projects with institutions specializing in digital innovation and sustainability. 3. Enhance Team Capacity through Training and Collaboration: <ul style="list-style-type: none"> - Launch annual training programs in emerging areas (e.g., AI-driven sustainability). - Collaborate with industry stakeholders to apply research practically. 4. Create a Global Research Network: <ul style="list-style-type: none"> - Connect OSEAN researchers with international peers to co-author publications and develop funding proposals.
Metrics	<ol style="list-style-type: none"> 1. Team Expansion: Recruit 5 experts annually in sustainability and digital transformation. 2. Interdisciplinary Projects: Launch 3+ projects annually aligned with SDG priorities. 3. Global Collaborations: Establish 5+ partnerships with international centres by 2026. 4. Capacity Building: Conduct 2+ training programs annually; upskill 80% of team members. 5. Publications and Outputs: Publish 10+ interdisciplinary articles annually, co-authored with global collaborators.
Strategic Priority	Strengthen OSEAN's position as a global leader in SDG-aligned research by expanding talent, fostering alliances, and innovating interdisciplinary solutions.

The rationale for opportunity number O4 is outlined below (Table 3.6):

Table 3.6. Scaling OR-Based Innovations for Global Sustainability

Strategic priority	FCT criterion number	Opportunity Opportunities	Evidence supporting the opportunities
Scaling OR-Based Innovations for Global Sustainability	Strategic O4 Vision	The unique positioning of ORs (Outermost Regions) as living labs for innovation and sustainability.	<p>Ors as Living Labs:</p> <ul style="list-style-type: none"> - ORs provide unique environments for testing innovative sustainability solutions. - Successful projects like GENESIS and HORIZON-WIDERA demonstrate scalability. <p>Global and European priorities:</p> <ul style="list-style-type: none"> - OR-based projects address SDGs 4, 8, 13, 15, aligning with EU territorial cohesion goals. - Potential for Global Leadership: - OR innovations position OSEAN as a global leader in sustainability.

Table 3.7 below describes the action plan for opportunity number O4:

Table 3.7. Action plan for Opportunity O4: Scale OR-Based Innovations

Category	Details
Action Plan	Expand OR-based innovations to address global challenges while contributing to national and European cohesion goals.
Specific Actions	<p>1. Leverage Existing Projects for Scalability:</p> <ul style="list-style-type: none"> - Build on GENESIS and HORIZON-WIDERA successes to initiate 3+ new OR-based projects annually. - Focus on areas like climate adaptation, circular economy, and renewable energy. <p>2. Develop a Global OR Innovation Network:</p> <ul style="list-style-type: none"> - Establish a network connecting ORs with global research hubs to implement scalable solutions. - Engage international stakeholders for co-funding and dissemination. <p>3. Strengthen Local-Global Integration:</p> <ul style="list-style-type: none"> - Ensure dual-focus projects address local challenges and scale globally. - Collaborate with regional governments, EU bodies, and global organizations to align strategic priorities. <p>4. Enhance Communication and Outreach:</p> <ul style="list-style-type: none"> - Publish annual reports showcasing OR-based innovations and their global impact. - Host international conferences and workshops to position ORs as sustainability leaders.
Metrics	<p>1. Project Initiation: Launch 3+ new OR-based projects annually with SDG alignment.</p> <p>2. Global Collaboration: Form 5+ partnerships with global research centres by 2026.</p> <p>3. Policy Influence: Deliver 2+ policy recommendations annually to EU and international bodies.</p> <p>4. Visibility Metrics: Organize 2+ international events annually to showcase OR innovations.</p>
Strategic Priority	Leverage ORs as living labs for innovation and sustainability, positioning OSEAN as a global leader in SDG-aligned initiatives.

By addressing these external opportunities, OSEAN can secure its position as a global leader in sustainability-driven research and innovation. These action plans align with the FCT evaluation criteria, ensuring measurable outcomes and positioning OSEAN as a critical contributor to global sustainability goals.

3.2. Strategic Threats and Mitigation Strategies

This section identifies critical strategic threats to OSEAN and outlines mitigation strategies aligned with the FCT evaluation criteria. The threats were analysed across three domains: **funding resilience**, **research competitiveness**, and **geopolitical risks**. Each threat is accompanied by evidence and a targeted action plan to address the challenges effectively.

Overview of Key Observations:

1. **Dependence on External Funding:** OSEAN's reliance on Horizon Europe funding places the institution at risk, especially in a competitive and dynamic geopolitical context. Diversifying funding through private, regional, and global non-EU sources is essential to ensure financial resilience.
2. **Competitiveness in Research Funding:** OSEAN's ranking in Horizon and FCT calls requires significant improvement. Actions such as strengthening proposal development, fostering collaborations, and enhancing infrastructure will address gaps.
3. **Scaling Large-Scale Collaborations:** Limited team size restricts OSEAN's ability to manage multiple high-impact partnerships, reducing global visibility. Expanding the team and enhancing project management capabilities will unlock new collaboration opportunities.
4. **Geopolitical Risks:** Geopolitical instability and competition for EU funding necessitate a proactive approach to secure funding from non-EU sources like the UN and African Development Bank.

Tables 3.8, 3.9 and 3.10 below outline these threats and the strategic mitigation plans.

Table 3.8. Mitigating Funding Dependence and Enhancing Competitiveness (R&D Quality)

Strategic priority	FCT criterion number	Threat	Threats	Evidence supporting the threats	Action plan for each threat (t1 to t2)
Diversifying Funding Sources for Financial Resilience	R&D Quality	T1	Dependence on external funding (e.g., Horizon Europe).	<p>Total reliance on external funding: Currently, 100% of OSEAN's funding is sourced externally, exposing the institution to risks such as EU funding changes.</p> <p>Comparative benchmarking: Peer institutions achieve 70% external and 30% private/institutional funding, demonstrating balance.</p> <p>Potential impact: Limited funding diversity threatens sustainability of ongoing and new projects.</p>	Diversify funding sources to reduce reliance on Horizon Europe and secure private and regional funding alternatives.
Enhancing Competitiveness in Global Research Funding	R&D Quality	T2	Competition from globally well-funded institutions.	<p>Global competition: Global institutions dominate key funding opportunities.</p> <p>Current rankings: OSEAN's performance in Horizon and FCT calls shows room for improvement.</p> <p>Resource gap: Competing institutions leverage superior infrastructure, interdisciplinary teams, and global networks.</p>	Strengthen proposal quality, expand strategic collaborations, and enhance team capacity to improve funding success rates.

Table 3.9. Action plan for Threat T1: Diversify Funding Sources

<i>Category</i>	<i>Details</i>
Action Plan	Diversify funding sources to reduce reliance on Horizon Europe and external grants.
Specific Actions	<p>1. Develop Private-Sector Partnerships:</p> <ul style="list-style-type: none"> - Partner with corporate investors, foundations, and venture capital firms. - Focus on SDG-aligned projects and promote OSEAN as an innovation hub. <p>2. Launch Endowment and Philanthropy Campaigns:</p> <ul style="list-style-type: none"> - Create an endowment fund targeting contributions for global sustainability research. <p>3. Leverage Regional Opportunities:</p> <ul style="list-style-type: none"> - Collaborate with Madeira's local governments and businesses to secure regional project funding. - Align projects with EU territorial cohesion goals. <p>4. Enhance Internal Revenue Streams:</p> <ul style="list-style-type: none"> - Develop training programs, consultancy services, and industry-focused publications. - Generate additional revenue streams tailored to industry needs.
Metrics	<p>1. Funding Diversification: Reduce Horizon Europe reliance to 70% of total funding by 2026.</p> <p>2. Private Funding Growth: Secure €2M annually from private-sector partners and foundations by 2026.</p> <p>3. Regional Funding Impact: Increase local/regional funding contributions to €200K annually by 2025.</p> <p>4. Internal Revenue Streams: Generate 10% of funding internally through services by 2026.</p>
Strategic Priority	Ensuring financial resilience by diversifying funding portfolios, reducing dependency, and fostering autonomy.

Table 3.10. Action plan for Threat T2: Enhance Proposal Quality and Competitiveness

Category	Details
Action Plan	Strengthen proposal quality, expand strategic collaborations, and build capacity for research excellence.
Specific Actions	<p>1. Proposal Development Task Force:</p> <ul style="list-style-type: none"> - Form a task force to craft high-quality proposals aligned with Horizon Europe and FCT priorities. - Provide advanced grant-writing training, including peer-review simulations and EU compliance. <p>2. Expand Strategic Collaborations:</p> <ul style="list-style-type: none"> - Partner with globally ranked institutions to co-develop competitive proposals. - Build consortia leveraging OSEAN’s strengths and resources from leading collaborators. <p>3. Enhance Research Infrastructure:</p> <ul style="list-style-type: none"> - Invest in state-of-the-art facilities and tools for innovative research. - Support interdisciplinary initiatives aligned with funding priorities such as AI and sustainability. <p>4. Capacity Building for Excellence:</p> <ul style="list-style-type: none"> - Pair junior researchers with experienced academics through mentorship programs. - Organize workshops and seminars to share best practices from successful institutions.
Metrics	<p>1. Proposal Success Rate: Increase success rate in Horizon Europe and FCT funding calls to 40% by 2026.</p> <p>2. Strategic Collaborations: Establish 5+ high-impact partnerships annually with global institutions.</p> <p>3. Infrastructure Development: Complete priority research area upgrades by 2025, enhancing efficiency and capacity.</p> <p>4. Researcher Engagement: Ensure 80% participation in annual proposal training programs.</p> <p>5. Funding Growth: Achieve €3M annual growth in secured funding through improved proposals.</p>
Strategic Priority	Address competitive pressures by enhancing proposal quality, strategic collaborations, and capacity-building for excellence.

The rationale for threat number T3 is outlined below (Table 3.11):

Table 3.11 Scaling Capacity and Addressing Global Challenges (Team Merit)

Strategic priority	FCT criterion	Threat number	Threats	Evidence supporting the threats
Scaling Capacity for Large-Scale Collaborations	Team Merit	T3	Limited capacity to scale partnerships.	<p>CURRENT LIMITATIONS: OSEAN’s team size restricts it to managing <5 large-scale collaborations simultaneously, limiting its global reach.</p> <p>BENCHMARKING: Peer institutions handle 10+ collaborations concurrently, enabling broader opportunities.</p> <p>OPPORTUNITY LOSS: Missed chances for high-impact projects due to capacity constraints.</p>

The action plan for threat number T3 is the following (Table 3.12):

Table 3.12. Action plan for Threat T3: Build Capacity for Large-Scale Collaborations

<i>Category</i>	<i>Details</i>
Action Plan	Build capacity for handling large-scale collaborations by enhancing team skills and expanding project management capabilities.
Specific Actions	<ol style="list-style-type: none"> <li>1. Expand Team Size: <ul style="list-style-type: none"> <li>- Recruit 5 additional researchers annually with expertise in project management and interdisciplinary collaboration. <li>- Attract talent with a proven track record in managing large-scale international projects. <li>2. Project Management Training: <ul style="list-style-type: none"> <li>- Implement a training program for researchers and administrative staff on best practices, including tools for tracking progress, budgeting, and reporting. <li>- Partner with professional organizations to offer tailored project management certifications. <li>3. Streamline Collaboration Processes: <ul style="list-style-type: none"> <li>- Develop standardized frameworks for managing large-scale collaborations. <li>- Invest in digital tools to enhance collaboration and project tracking. <li>4. Leverage Strategic Collaborations: <ul style="list-style-type: none"> <li>- Partner with institutions experienced in managing large-scale projects to co-develop management frameworks and share best practices.
Metrics	<ol style="list-style-type: none"> <li>1. Team Expansion: Increase team size to support 10+ large-scale collaborations by 2026. <li>2. Training Impact: Ensure 80% of researchers and staff complete project management training by 2024. <li>3. Collaboration Growth: Double the number of large-scale collaborations to 10+ annually by 2026. <li>4. Efficiency Metrics: Reduce project management overhead by 15% through streamlined processes by 2025. <li>5. Project Success Rates: Achieve a 90% on-time delivery rate for all collaborations by 2026.
Strategic Priority	Enhance OSEAN's capacity to manage large-scale partnerships, ensuring scalability, competitiveness, and impactful global collaborations.

The rationale for threat number T4 is outlined below (Table 3.13):

Table 3.13 Ensuring Funding Stability Amid Geopolitical Risks (Strategic Vision)

<i>Strategic priority</i>	<i>FCT criterion</i>	<i>Threat number</i>	<i>Threats</i>	<i>Evidence supporting the threats</i>
Ensuring Funding Stability for OR-Focused Research	Strategic Vision	T4	Geopolitical and economic instability affects OR-related funding.	<p>Funding vulnerability: OSEAN’s reliance on EU funding for OR projects create vulnerability to geopolitical and economic instability.</p> <p>Global funding competition: Growing demand for EU resources and geopolitical shifts heightens competition.</p> <p>Underutilisation of non-eu opportunities: Funding from UN, Asian Development Bank, and African Union remains largely untapped.</p>

The action plan for threat number T4 is the following (Table 3.14):

Table 3.14. Action plan for Threat T4: Address Geopolitical and Economic Risks

<i>Category</i>	<i>Details</i>
Action Plan	Mitigate geopolitical and economic risks affecting OR funding by diversifying the funding portfolio and targeting non-EU funding sources.
Specific Actions	<p>1. Explore Non-EU Funding Opportunities:</p> <ul style="list-style-type: none"> - Target funding from organizations like the United Nations, Asian Development Bank, and African Union for SDG-aligned projects. - Partner with research institutions in Asia, Africa, and the Americas to co-develop proposals. <p>2. Develop a Resilience Fund:</p> <ul style="list-style-type: none"> - Establish a reserve fund to ensure financial stability during disruptions, enabling uninterrupted project execution. <p>3. Strengthen Regional Partnerships:</p> <ul style="list-style-type: none"> - Collaborate with local governments and industries in ORs to co-fund regional initiatives, reducing external dependencies. <p>4. Implement Scenario Planning:</p> <ul style="list-style-type: none"> - Create contingency plans for funding disruptions, including alternative funding routes and streamlined timelines.
Metrics	<p>1. Funding Diversification: Ensure 30% of OR project funding comes from non-EU sources by 2027.</p> <p>2. Resilience Fund: Establish a reserve fund covering 20% of annual budgets by 2025.</p> <p>3. Proposal Success Rate: Submit at least 5 proposals annually to non-EU funding calls, achieving a 40% success rate.</p> <p>4. Partnership Growth: Form 3+ new partnerships annually with non-EU organizations.</p> <p>5. Project Continuity: Reduce delays due to funding disruptions to less than 1% annually by 2026.</p>

Strategic Priority Ensure funding stability for OR-focused research by diversifying sources, building resilience, and strengthening partnerships to mitigate geopolitical and economic risks.

4. Conclusion

The Global Strategic SWOT Analysis reaffirms OSEAN's position as a forward-looking, innovative research centre, uniquely equipped to address the challenges and opportunities of the Outermost Regions (ORs). This analysis highlights OSEAN's leadership in sustainability, interdisciplinary research, and global collaboration, supported by targeted action plans that align with the Fundação para a Ciência e a Tecnologia (FCT) evaluation criteria.

Key strengths, including OSEAN's proven track record of high-impact publications, leadership in Horizon Europe initiatives, and strong strategic partnerships, establish its potential for meaningful contributions to global sustainability, socio-economic growth, and scientific progress. At the same time, the comprehensive mitigation strategies for identified weaknesses and threats reflect institutional foresight and proactive governance, ensuring resilience and adaptability.

By capitalizing on its strategic opportunities, OSEAN is positioned to:

1. Diversify its funding portfolio, reducing reliance on external grants.
2. Expand regional and international partnerships, enhancing its global reach.
3. Strengthen competitiveness in interdisciplinary research, addressing critical global challenges.

Aligned with international frameworks like the Sustainable Development Goals (SDGs) and Horizon Europe, OSEAN amplifies its relevance and impact on both local and global scales. Its steadfast commitment to innovation, sustainability, and economic advancement underscores its role as a cornerstone of transformative research and societal progress.

Furthermore, OSEAN's initiatives directly contribute to key economic and managerial outcomes, particularly in fostering job creation, entrepreneurship, and sustainable business development. By promoting knowledge transfer, supporting the development of innovative business models, and facilitating entrepreneurial ecosystems, OSEAN empowers local communities and businesses to thrive in competitive, globalized markets. Its programs, such as Poliempreende and Accelerate, act as catalysts for the

creation of start-ups and spin-offs, driving economic resilience and fostering regional growth.

OSEAN's focus on addressing pressing challenges like climate change, digital transformation, and sustainable development enhances its capacity to produce actionable solutions with direct economic benefits, including:

1. Creating employment opportunities through research-driven innovation.
2. Developing new business models aligned with sustainability and circular economy principles.
3. Strengthening regional economies by integrating local stakeholders into global innovation networks.

This document serves as a cornerstone for OSEAN's FCT application, outlining a clear and actionable roadmap for growth, resilience, and impact. By aligning its strategies with evolving global priorities, OSEAN not only demonstrates its capacity for excellence but also cements its legacy as a catalyst for sustainable change, economic advancement, and interdisciplinary leadership in management and innovation.

Funchal, University of Madeira

December 17, 2024

Eduardo Leite

Coordinator, OSEAN

To learn more about our projects and initiatives, visit:

<https://osean.uma.pt>