

Student Sustainable Entrepreneurship in Action: Design thinking and Co-Creation on Ouessant, France as a part of the INTERREG FREIIA Project

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Abstract

FREIIA, Facilitating Resilience Embracing Islands Innovation, is a INTERREG project financed by the European Union running from 1. October 2022 until 31. December 2025. The project consists of 14 partners from 6 countries, Netherlands, Denmark, Sweden, Germany, France and Norway.

The aim of this project is to help 6 island communities in the European Union to create competences, capabilities & structures that support the public sector in becoming successful in the green transition, through the involvement of community, young entrepreneurs and students.

Østfold University College is responsible for Work Package 4 (WP4), which focuses on fostering student entrepreneurship. The main objective of WP4 is to integrate entrepreneurship students into the strategic governance of island innovation, strengthening their role in green transitions. When referring to the FREIIA project in this paper, it refers to WP4 of the FREIIA project.

This paper outlines the process of identifying innovation gaps on the Island Ouessant in France, utilizing students from the participating universities alongside local stakeholders. The subsequent phase will focus on addressing these gaps by developing new solutions through innovative approaches such as design thinking.



Figure 1, Students participating the workshop

Ouessant

Île d'Ouessant is an island located in the Atlantic Ocean off the western coast of Brittany, France. It is the westernmost point of continental France and lies approximately 20 km from the mainland. Covering an area of around 15.5 km², Ouessant is renowned for its dramatic coastline, powerful waves, and rugged landscapes shaped by the harsh maritime climate.

As of 2023, Ouessant had a permanent population of around 800 residents. Like many island communities in the region, the population increases significantly during the summer months due to seasonal tourism. The local economy relies primarily on summer tourism, public services, and small-scale agriculture. Historically, Ouessant has maintained a strong maritime identity, with many residents connected to the sea through seafaring and lighthouse keeping, which have played a key role in shaping the island's cultural heritage.

Figure 2



Figure 2, Ouessant

Visitors are drawn to Ouessant for its untamed natural beauty, scenic coastal trails, and rich biodiversity. The island is home to several protected natural areas and serves as an important nesting site for rare seabird species. Due to limited car traffic and well-maintained roads, many tourists choose to explore the island by bicycle, allowing for an immersive and sustainable experience of the landscape.

Access to Ouessant is typically via ferry from Le Conquet or Brest, with travel times ranging from one to two hours depending on the departure point. There is also a small airport with flights to and from the French mainland, though most visitors prefer traveling by sea.

In recent years, discussions around sustainable development and environmental conservation have become increasingly important for the local community. Authorities, residents, and organizations are working together to promote a model of tourism that supports long-term ecological balance and preserves the island's cultural identity. Efforts include initiatives to reduce the environmental impact of tourism and protect the island's natural heritage for future generations.

Introduction

Ouessant Island, a remote and windswept outpost off the western coast of Brittany, France, stands as a symbol of resilience in the face of both natural and socio-economic challenges. Known for its dramatic cliffs, powerful tides, and longstanding maritime traditions, the island has historically depended on seafaring, lighthouse keeping, and, in more recent decades, seasonal tourism. Today, like many small island communities, Ouessant faces a shifting landscape, economically, demographically, and environmentally.

As part of the FREIIA project, we have explored the innovation dynamics of Ouessant by working in close collaboration with local stakeholders and students. This partnership has allowed us to map out the island's unique assets and identify key challenges and opportunities for sustainable development. Our aim is to uncover how communities like Ouessant adapt and innovate within tight ecological and logistical constraints.

Unlike mainland regions where access to markets, labor, and infrastructure is more abundant, Ouessant's insularity presents a distinctive set of limitations. Effective solutions must not only be contextually grounded and practically feasible, they must also be deeply anchored in the local population. Community engagement and ownership are crucial to ensure long-term relevance and sustainability. Without the trust and involvement of residents, even the most technically sound interventions risk falling short. Therefore, fostering inclusive processes that center the voices and knowledge of Ouessant's inhabitants is essential in any pathway forward.

Methods & Process (Design thinking)

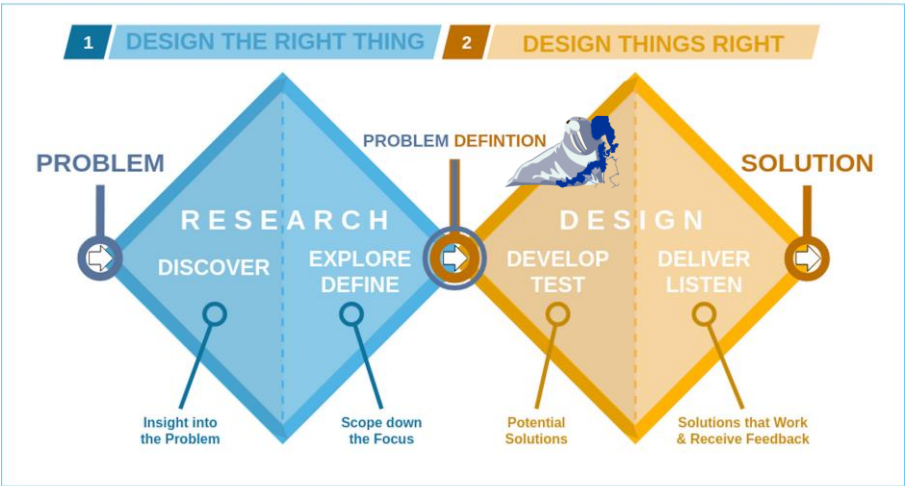


Figure 3, Double Diamond framework

The second phase of the FREIIA project on Ouessant (V2) was structured as an intensive, student-led innovation workshop grounded in the Double Diamond framework. This workshop shifted the project from exploration and insight (V1) into ideation and early concept development. The core objective was to build on the problem areas identified during V1 and use design-driven methods to prototype ideas that could be further developed by local stakeholders.

The session was facilitated by students from Østfold University College and followed a structured progression through various phases of the design thinking process. These included creative warm-ups like "The Worst Possible Idea" exercise, a method particularly well-suited for student-driven innovation. This technique encourages participants to deliberately generate bad or unrealistic ideas as a way of lowering the fear of failure, reducing judgment in group dynamics, and fostering creative risk-taking. By embracing absurdity, students are often able to access more original ideas, which can then be flipped or refined into viable concepts. This makes it an effective tool for overcoming creative blocks and energizing collaborative settings, especially when participants are new to co-design environments. followed by idea flipping, matrix analysis (effort vs. impact), and hands-on prototyping (Interaction Design Foundation, 2024).

The workshop was supported by visual tools, collaborative canvases, and short presentation cycles that enabled quick iteration and reflection.

Due to peak tourist season and limited ferry access, few local stakeholders were able to participate directly. As such, the workshop was conducted by the student group, focusing on speculative yet grounded solutions that could later be shared and discussed with the island community.

Each student group chose one of five predefined problem statements to focus on. These statements were presented at the beginning of the workshop and represented key challenges relevant to the island's sustainable development: Some focused on housing and infrastructure, while others explored energy

transition, cultural resilience, food system challenges, or democratic participation. The available problem statements included:

1. How might we make temporary housing more accessible and affordable for seasonal workers?
2. How can the island community accelerate the transition to renewable energy without creating conflict with residents or visitors?
3. In what ways can children and young people be empowered to influence their families and wider community to adopt sustainable practices?
4. How might we preserve Ouessant's cultural identity while encouraging innovation and modernization?
5. How can residents take a more active role in shaping the island's future through participatory governance structures?

Each group worked through a design process supported by tools such as idea flipping, impact-effort matrices, and visual prototyping. While traditional 'How Might We' formulations were not used, the groups framed and explored their selected problem statements through discussion, brainstorming, and collaborative sketching. This enabled them to build concrete, visual ideas grounded in the challenges they had chosen to address. Each group was also required to develop a simple prototype of their proposed solution, helping to anchor the process more firmly within the Double Diamond framework and ensure a tangible, testable outcome of their ideation.

Results & discussion

The workshop resulted in early-stage solution proposals addressing development issues on Ouessant. Below is a summary of the three developed ideas:

1. Seasonal Housing for Temporary Workers



Figure 4, Prototype group 1

The group identified that temporary workers often struggle to find accommodation during peak seasons, sometimes commuting by ferry due to high rental costs. Their solution involved creating an island-owned network of renovated housing dedicated to seasonal workers, managed as part of an "Ouessant Wealth

Fund." Revenue generated would be reinvested in local services, increasing the island's self-sufficiency while strengthening local acceptance of change.

Steps proposed included:

- Engaging local house owners
- Collaborating with the mayor and renovation professionals
- Pitching the idea to residents to create engagement and trust
- Immediate actions identified: assessing legal and taxation frameworks and initiating a pilot phase through dialogue with the municipality.

2. Energy Culture Through Education



Figure 5, Prototype group 2

- This group focused on cultural resistance to renewable energy initiatives. Their concept centered around long-term behavioral change by embedding sustainability education in schools. They proposed:
 - A rotating teacher or local ambassador leading active, hands-on workshops
 - Field trips to renewable infrastructure like water turbines
 - Peer mentorship, where older students guide younger ones

The aim was to normalize change by nurturing environmentally responsible attitudes from a young age, ultimately influencing family behavior and wider community norms.

Both concepts were placed within an effort-impact matrix and further developed into simple prototypes, including user journeys and implementation plans.

3. Island Council for Local Dialogue and Governance



Figure 6, Picture from group 3` s presentation

Another group addressed the challenge of limited community engagement and the need for more inclusive decision-making on the island. Their proposal was to establish an "Island Council", a local advisory board composed of representatives from various community segments.

The proposed structure included:

- Sending all residents a formal invitation by mail to attend an initial community meeting
- Creating thematic working groups where individuals could sign up based on interest (environment, infrastructure, youth)
- Electing two representatives from each group to form the Island Council
- Hosting monthly council meetings to ensure cross-community communication and shared decision-making

The goal of the Island Council is to strengthen democratic participation, build trust between citizens and authorities, and ensure that development initiatives reflect a broad range of voices. The group emphasized that such a structure could also create a greater sense of shared ownership over the island's future.

Although the absence of island stakeholders limited immediate feedback, the workshop succeeded in generating actionable, imaginative proposals with clear next steps. It also demonstrated how student-led innovation can produce tangible outcomes even in complex and resource-limited settings. The results from V2 now form a springboard for further dialogue, testing, and potential piloting in collaboration with Ouessant's community actors.

Conclusion

The V2 phase of the FREIIA project on Ouessant demonstrates the value of structured, student-driven innovation in fostering sustainable development in small island communities. Despite logistical challenges that limited local stakeholder participation, the students successfully engaged in a full design thinking cycle, using the Double Diamond framework to transition from insight to ideation and early-stage prototyping.

The three main ideas developed, seasonal worker housing managed through a local wealth fund, sustainability education to influence long-term cultural change, and a representative Island Council, each

address core concerns voiced by the community during the V1 phase. While these proposals are not final solutions, they represent informed, well-structured starting points for continued development.

This phase not only provided practical, innovative concepts, but also gave students valuable real-world experience in collaborative design. The process highlighted the importance of flexibility, creativity, and local relevance in sustainable development.

Ultimately, the Ouessant V2 workshop reinforces FREIIA's core ambition: to build bridges between knowledge, action, and community through inclusive, cross-disciplinary innovation.

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