

## **Student Sustainable Entrepreneurship in Action: UNIC Methodology and Innovation Gaps on Koster, Sweden 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.*

*The following paper describes the process of determining the innovation gaps on Koster islands in Sweden using students from the participating universities and stakeholders from the islands. The next step will be to resolve the gaps by finding new solutions created by innovative methods like design thinking.*



*Figure 1 Student discussions on Koster Island*

### **Introduction**

The Koster Islands are a unique community in Sweden, with rich nature and strong traditions. However, the community faces several challenges, including increasing pressure on natural resources and the need for economic development that aligns with environmental sustainability.

Through the project, the island community's current situation and challenges are mapped out as a basis for proposing measures to strengthen development capacity. Development capacity here refers to the



## Methods & Process

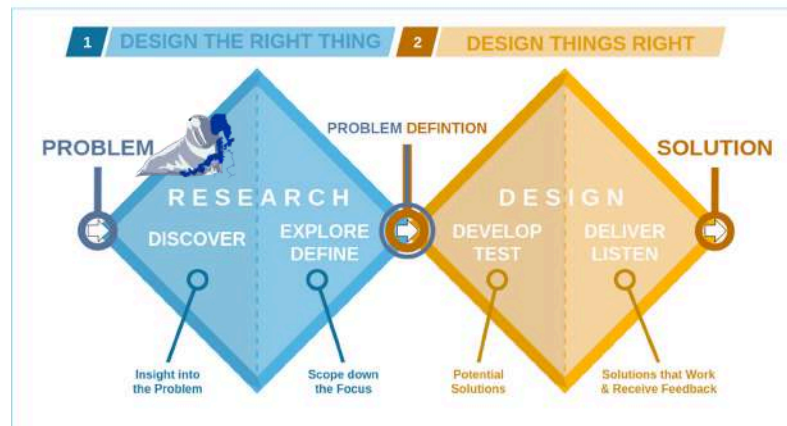


Figure 3 Design Thinking Model

Guided by the Double Diamond model, our innovation project's V1 phase focuses on researching, discovering, exploring, and defining the unique characteristics of each island (The Double Diamond Model, 2024). This phase is supported by data collection and interviews conducted by an interdisciplinary collaboration between students from the Innovation and Project Management program at Østfold University College and students from Väst University College.

In the V1 phase of our project on Koster in Strömstad, Sweden, we applied the UNIC method, a structured approach developed by Dr. Lars Hein and the UNIC Group (Diagnose på udviklingsfunktionen, 1988). This methodology, centered on “development ability at the center,” is designed to identify gaps between a community’s current state and its desired future. To do this, we conducted structured interviews with key stakeholders—including representatives from local government, business leaders, and community members—to gather both qualitative and quantitative data specific to Koster’s needs and challenges.

The interview questions were crafted to assess the island community’s current situation and challenges, while also identifying possible interventions to strengthen development capacity. Once collected, the data was carefully transcribed and analyzed using established organizational development techniques, allowing us to pinpoint critical areas for improvement. This structured analysis created a robust foundation for defining targeted problem statements and formulating feasible solutions.

- Interview guide**
1. What is your role in the island community?
  2. How would you describe the island community and its current state?
  3. What do you think are the best aspects of Bornholm?
  4. What are the major challenges the island community faces in terms of innovative development and sustainable growth?
  5. What initiatives has the island community undertaken in the past to address these challenges?
  6. How does the island community collaborate to promote innovative development and sustainable growth?
  7. How do you think the island community can improve its capacity for development?
  8. How can you and your organization contribute to enhancing the island community's capacity for sustainable growth?
  9. How can the island community better collaborate with surrounding communities and regions to achieve common goals?

Figure 4 Interview Guide

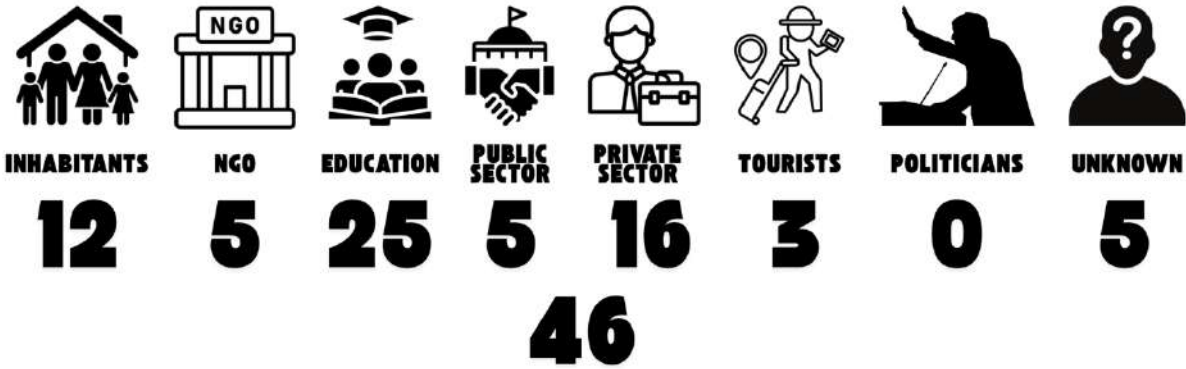
On Koster, it became evident that the existing resources and analysis methods were time-intensive, which led to delays between the V1 and V2 phases. To overcome this, we explored integrating Artificial Intelligence (AI) to streamline and improve the efficiency of our data analysis process. Although the limited timeframe restricted full implementation, this exploration opened promising pathways to enhance future phases by making findings more efficient and actionable.

**Results & discussion**



*Figure 5 interview with locals*

The findings from the initial phase of the FREIIA project on Koster Islands highlight several critical barriers and opportunities for sustainable development within the community. The qualitative data gathered from interview with key stakeholders, including residents, local government, NGO`s, tourists, and participants from both public and private sector on the island, provided us with insight into the unique challenges the Island faces.



*Figure 6 Participating stakeholders categorized (and students)*

This table provides an overview of the various stakeholders interviewed as part of the project, focusing on their involvement in innovation and sustainability initiatives on Koster. Stakeholders are grouped into categories such as residents, NGO`s, public sector, private sector, tourists, and other/unknown groups. A total of 46 stakeholders have been identified and interviewed on Koster, with participation from the private sector (16 stakeholders) and local residents (12 stakeholders). These numbers highlight strong interest and engagement among local actors in sustainability and innovation processes, along with meaningful

representation from NGO`s and other community organizations. By mapping stakeholders in this manner, the table offers valuable insight into which groups are most engaged in the dialogue about future development and which sectors may be underrepresented. This provides a solid foundation for further strategies and actions to promote sustainable innovation on Koster.

Group	Source (Interview)	Excerpt from Interview	Innovation Gap / Challenge
Inhabitants	Interview 11, 12, 23, 34	"We're soon just retirees here." "The school is closed down, making it difficult for families with children to move here."	Lack of housing for young people and families, decline in permanent residents
NGOs	Interview 11	"The sports club will try to re-establish the school."	Initiatives to strengthen community and year-round activities
Public Sector	Interview 34, 10	"Strömstad municipality is not cooperative; they don't want to spend money on the island."	Lack of municipal support for development
Private Sector	Interview 1, 23	"Those who own land here are reluctant to develop it, and high prices make it difficult to establish oneself."	High housing and land prices, restrictions for new initiatives
Politicians	N/A	-	-
Tourists	Interview 35, 23	"There are too many tourists in the summer; the roads are crowded."	Traffic and overcrowding in the summer
Others/Unknown	Interview 34	"It's too expensive, and no one wants to invest without economic profitability."	Economic barriers for development and investment

Figure 7 Finds and challenges based on stakeholders

The analysis of innovation gaps on Koster highlights several key challenges to sustainable development. One major issue is the high cost and limited availability of housing, which restricts young families and new residents from settling on the island. This barrier has contributed to a demographic shift toward an aging population, making it difficult for the community to sustain itself long-term.

Additionally, there is a perceived lack of support and cooperation from Strömstad Municipality, which limits development opportunities on Koster. This lack of municipal investment forces the island to rely heavily on tourism for economic stability, without the benefits of a diversified income base. While tourism is vital to the local economy, it also leads to seasonal overcrowding and strains infrastructure, particularly during the summer months. Increased traffic and congestion affect residents' quality of life and raise concerns over the sustainable management of natural resources.

The limited availability of essential services amplifies these issues. The closure of the local school and the lack of accessible healthcare discourage families from making Koster their permanent home, diminishing the community's vitality. Stakeholders consistently emphasized that the absence of these critical services makes it challenging to attract and retain year-round residents.

These interconnected challenges underscore the need for a coordinated approach that addresses housing, municipal support, and sustainable tourism management. The insights gathered from stakeholders will inform the next steps of the FREIIA project, focusing on strengthening Koster's capacity for sustainable, community-led growth.

## Conclusions



*Figure 8 Project dinner*

The FREIIA project's investigation into innovation gaps on Koster, has shed light on significant challenges that need to be addressed to promote sustainable development. By applying the UNIC method, this research has mapped out key barriers, including limited housing availability, demographic shifts, and an over-reliance on seasonal tourism. These findings underscore the urgent need for holistic approach to ensure the long-term viability of the community.

Building on the insight gained from stakeholders' interviews, the next phase of the project will leverage AI to conduct a more nuanced analysis of the collected data. This technological integration aims to streamline the identifications of actionable insights, facilitating a more efficient problem-solving process. The subsequent step will involve organizing a collaborative workshop, bringing together stakeholders and students from academia. This workshop will serve as a platform for co-creating solutions that address the identified gaps, fostering a participatory approach to sustainable development.

By focusing on inclusive, community-driven innovation, the FREIIA project aims to empower the Koster community to overcome its current challenges. The integration of AI and collaborative workshops will not only enhance local development capacity but also provide a replicable model for other island communities in the EU. Through continues engagement and knowledge sharing, the project strives to build a resilient foundation for sustainable, community-led growth on Koster.

## Acknowledgement

We would like to express our gratitude to everyone who has supported and contributed to the development of this document. This white paper is the result of a collective effort, and we deeply appreciate the dedication and commitment of everyone involved.

First and foremost, we extend our sincere thanks to Bjørn Gitle Hauge, our project owner, for his leadership and support throughout this process. We are also grateful to Lisa Bomble from Høgskolan i Väst, as well as Per Valter and Patrick Kakis Gabrielsen, for their guidance and involvement.

Our gratitude goes out to the students from IPL23 and Høgskolan i Väst, whose engagement and unique perspectives have brought creativity and depth to this project. We are equally thankful to Naturum Koster for their essential collaboration and support.

We also wish to acknowledge the generous hospitality of Kostergården, where we enjoyed a comfortable stay during our time on Koster. Additionally, we are grateful to Klepphagen and Tavernaen på Syd for providing us with memorable dining experiences that truly enriched our time on the island.

A special thank you is extended to the stakeholders from Koster, who willingly shared their insights and perspectives during the interviews. Their contributions have played a vital role in shaping the outcomes of this project.

To everyone who has supported this work in any capacity, thank you for making this journey both meaningful and successful.

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