



GENERA's WEBINAR

Strategies for Islands' Energy Plans

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"Strategies for Islands' Energy Plans."

31st march, 2025

**UniverCities -USE Efficiency
Association**

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GENERA PROJECT

This project was funded by the European Union under
call LIFE-2021-CET-LOCAL

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Table of contents



1. Introduction
2. Defining Island Typologies
3. Island Typology Decision Tree
4. Best Practices and Case Studies
5. Step-by-Step Guidebook for Fast Roadmap Production
6. GENERA's Energy Transition Package

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Road-mapping needs, typology, Island-specific recipes



Objective of Report:

Define typologies of islands and their specific energy transition needs

Goal:

Provide a list of tailored "recipes" to support the energy transition for the various types of touristic islands.

Scope:

1. Island typologies and tailored roadmaps (SECAPS production)
2. Best practices and specific needs identified by GENERA project partners
3. Strategies for local authorities in different stages of the energy transition



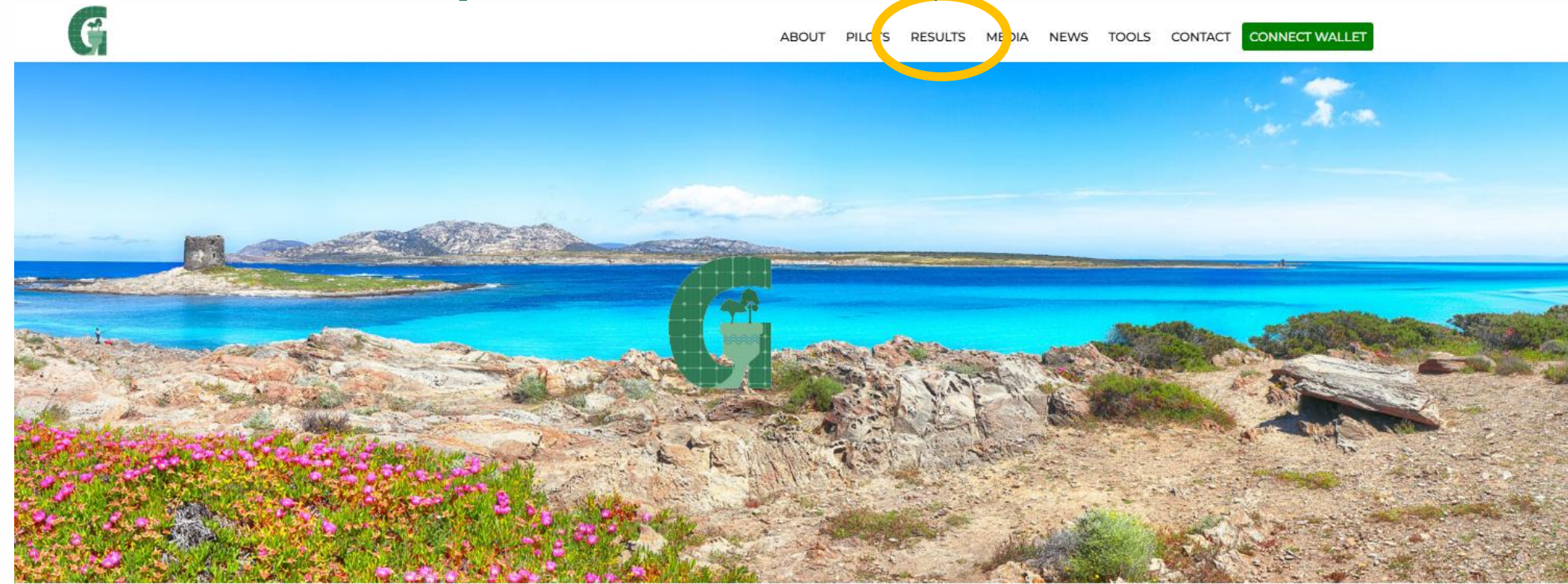


Road-mapping needs, typology, Island-specific recipes



You can find the report in the link below:

<https://life-genera.eu/deliverable/>



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Vision

-  More than 30 municipalities from Mediterranean EU islands at different stage in the energy transition paths
-  Rich group-tailored capacity building activities: training programs, MOOCs, business development activities, workshops for in-depth discussions
-  Monitoring tools: Knowledge Database, Inference Module, multicriteria decision marking process tool
-  Citizen engagement: blockchain-based serious games, digital social platform

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Characterization of Islands in the EU



- **Objective:** Analyse the characteristics of Southern European islands in terms of energy needs and transition potential.
- **Key factors analysed:**



Demography



Tourism



Economy



Energy





Definition of Island Typologies



- **Objective:** Develop a framework to categorize islands based on their characteristics and energy needs.
- **Key Typology Factors:**
 1. **Size:** Large, medium, and small islands.
 2. **Connection to Mainland:** Is the island a net energy receiver or producer?
 3. **Connection to Other Islands:** How interconnected the island is with neighbouring islands.
 4. **Demand Fluctuation:** How seasonal tourism impacts energy demand.



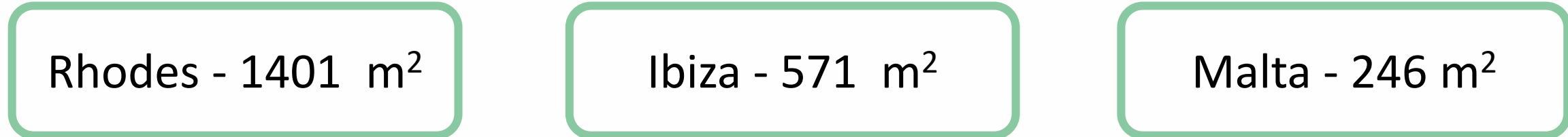


Definition of Island Typologies

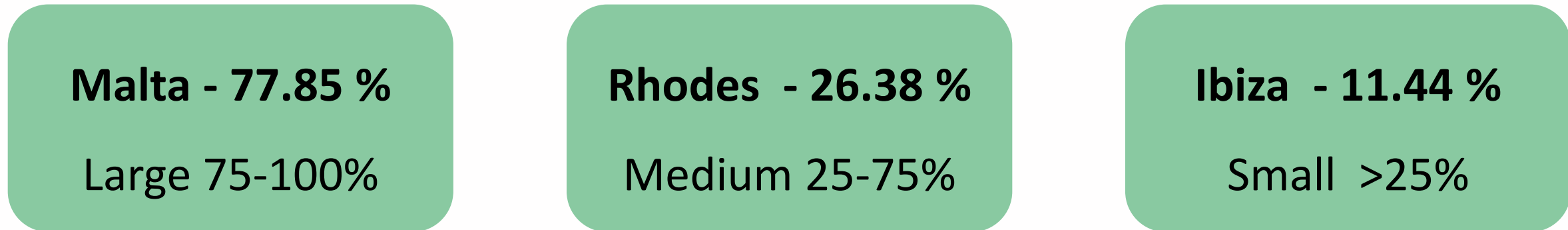


Key Questions:

- **Size**
- Connection to the mainland
- Connection to other islands
- Net energy production
- Seasonal variability



Size by % of the islands land compared to it's region area

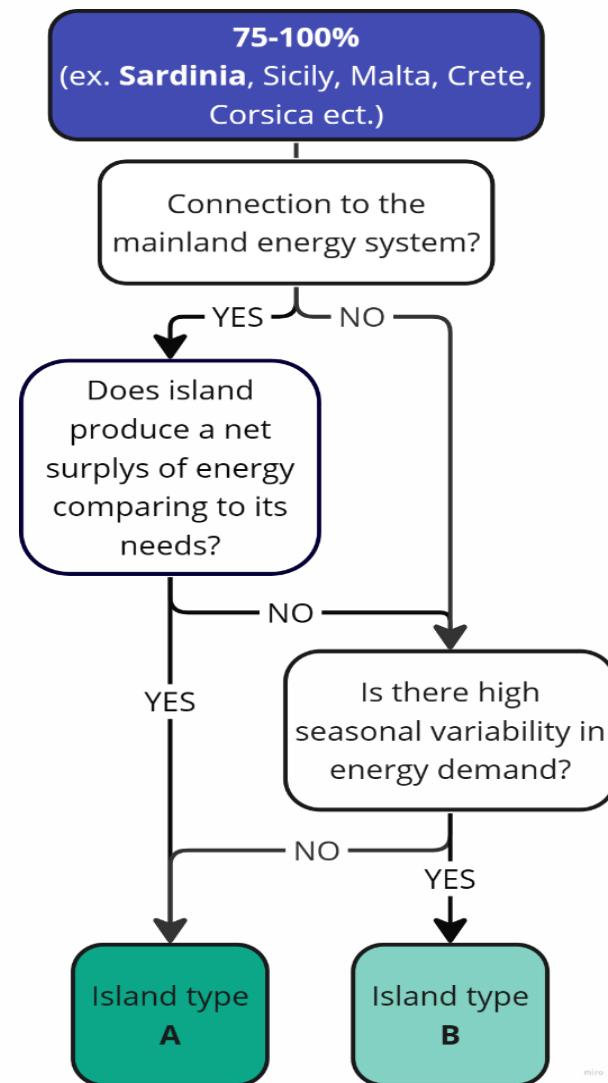




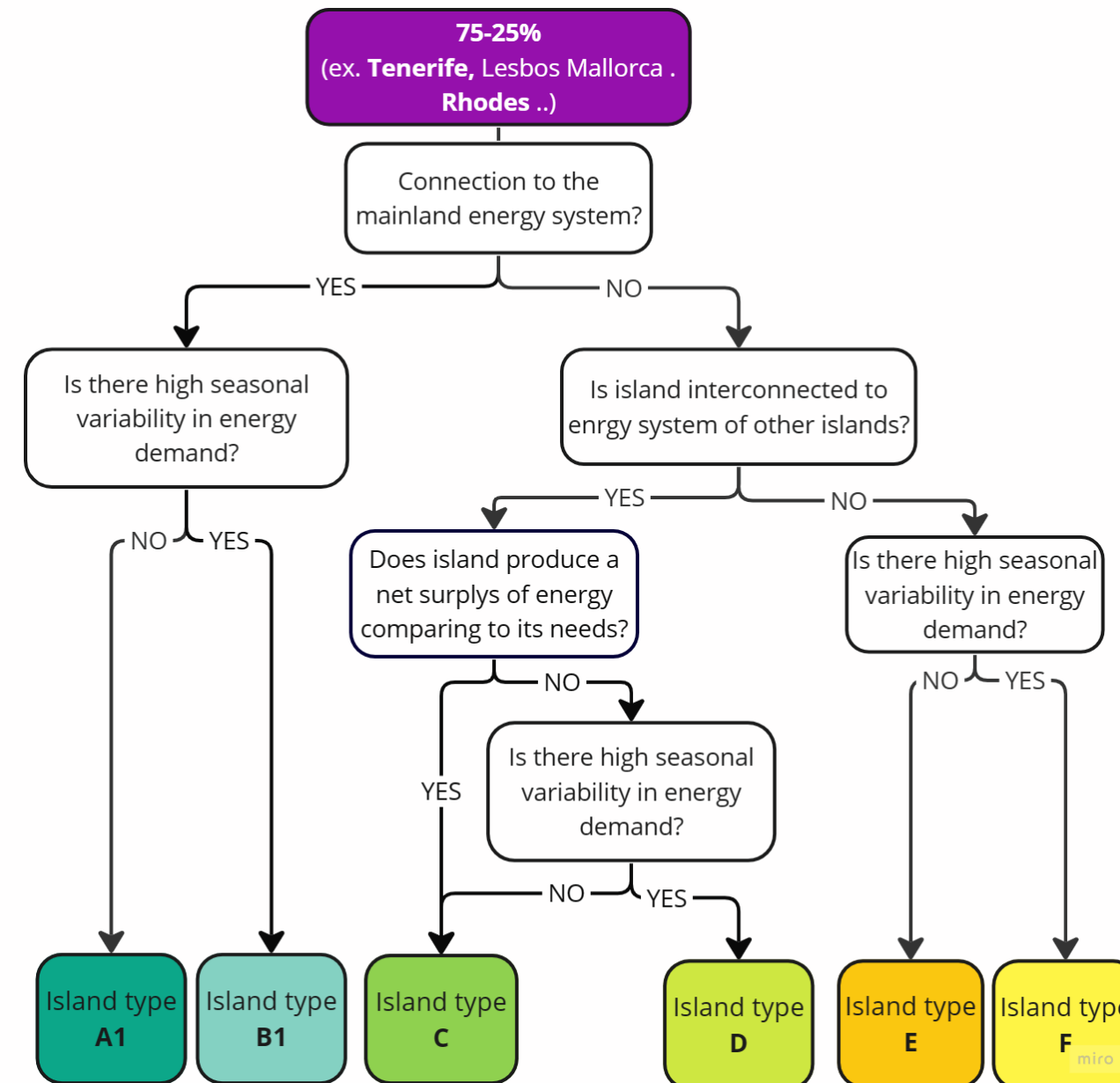
Island Typology Decision Tree



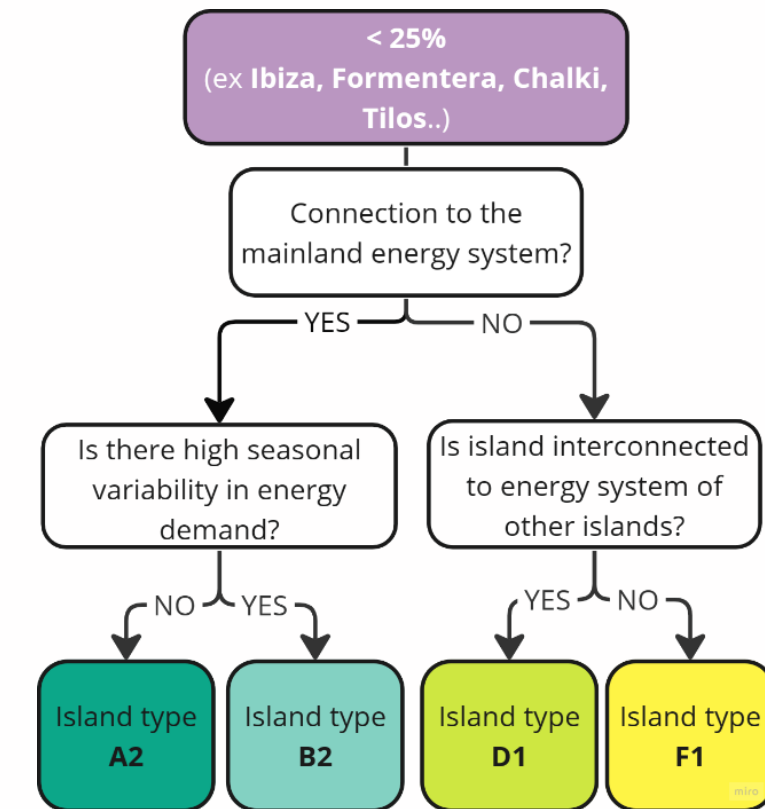
Large Islands



Medium Islands



Small Islands





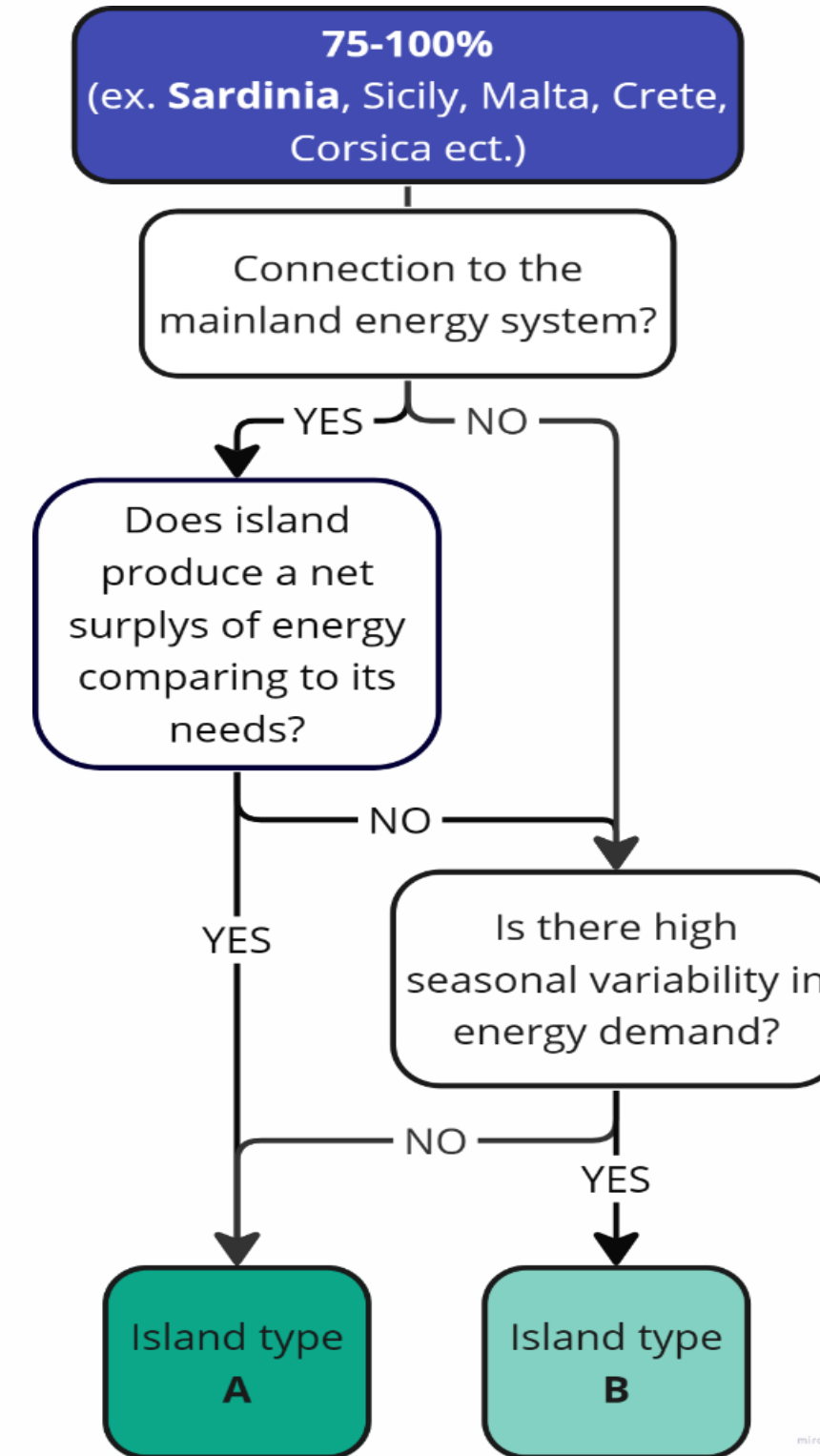
Definition of Island Typologies

Key Questions:

- Size
- Connection to the mainland
- Connection to other islands
- Net energy production
- Seasonal variability



In case of large islands we assume that in case they are not connected to the mainland, They are net energy producers



LARGE ISLANDS

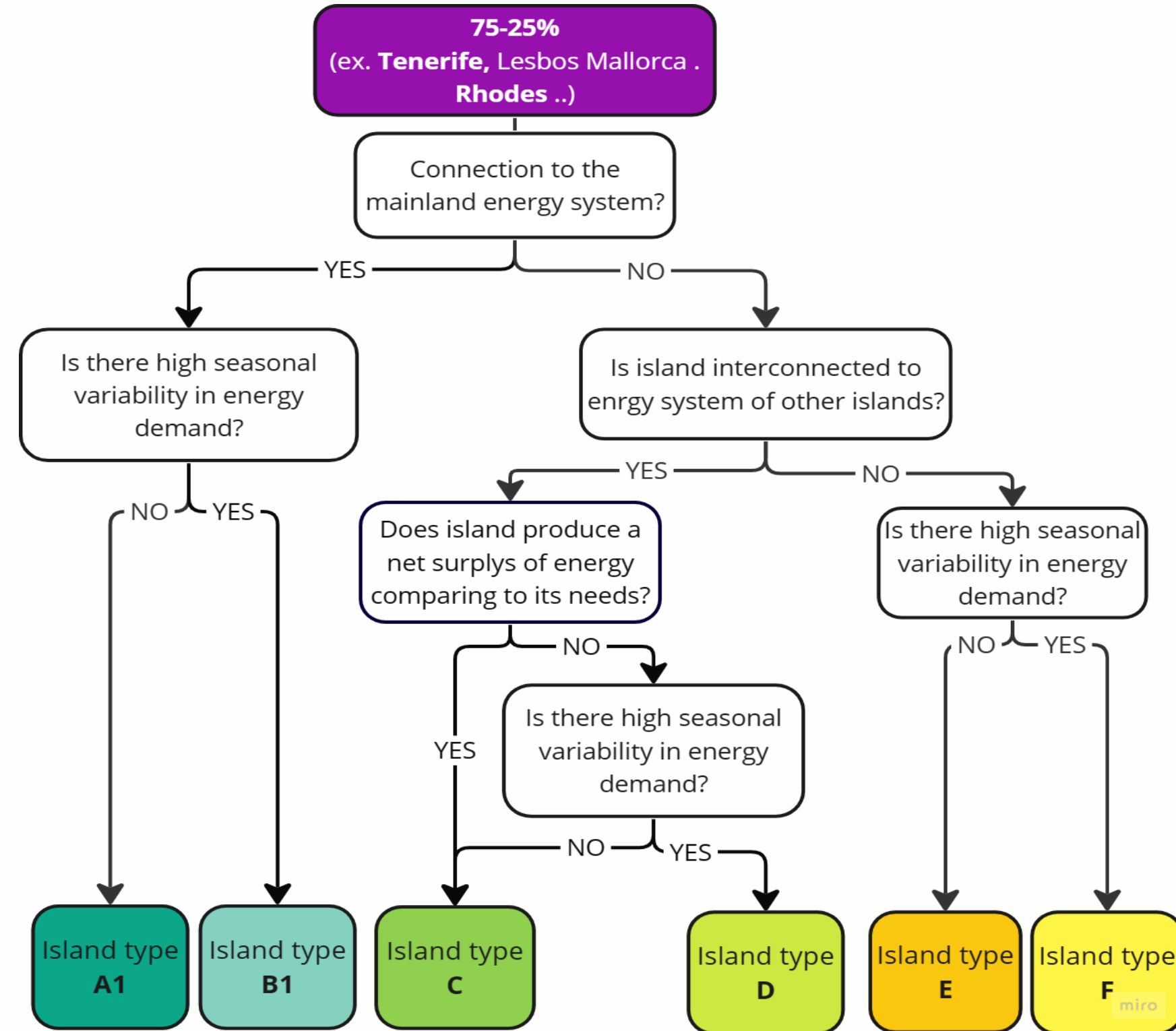




Definition of Island Typologies

Key Questions:

- Size
- Connection to the mainland
- Connection to other islands
- Net energy production
- Seasonal variability



MEDIUM ISLANDS



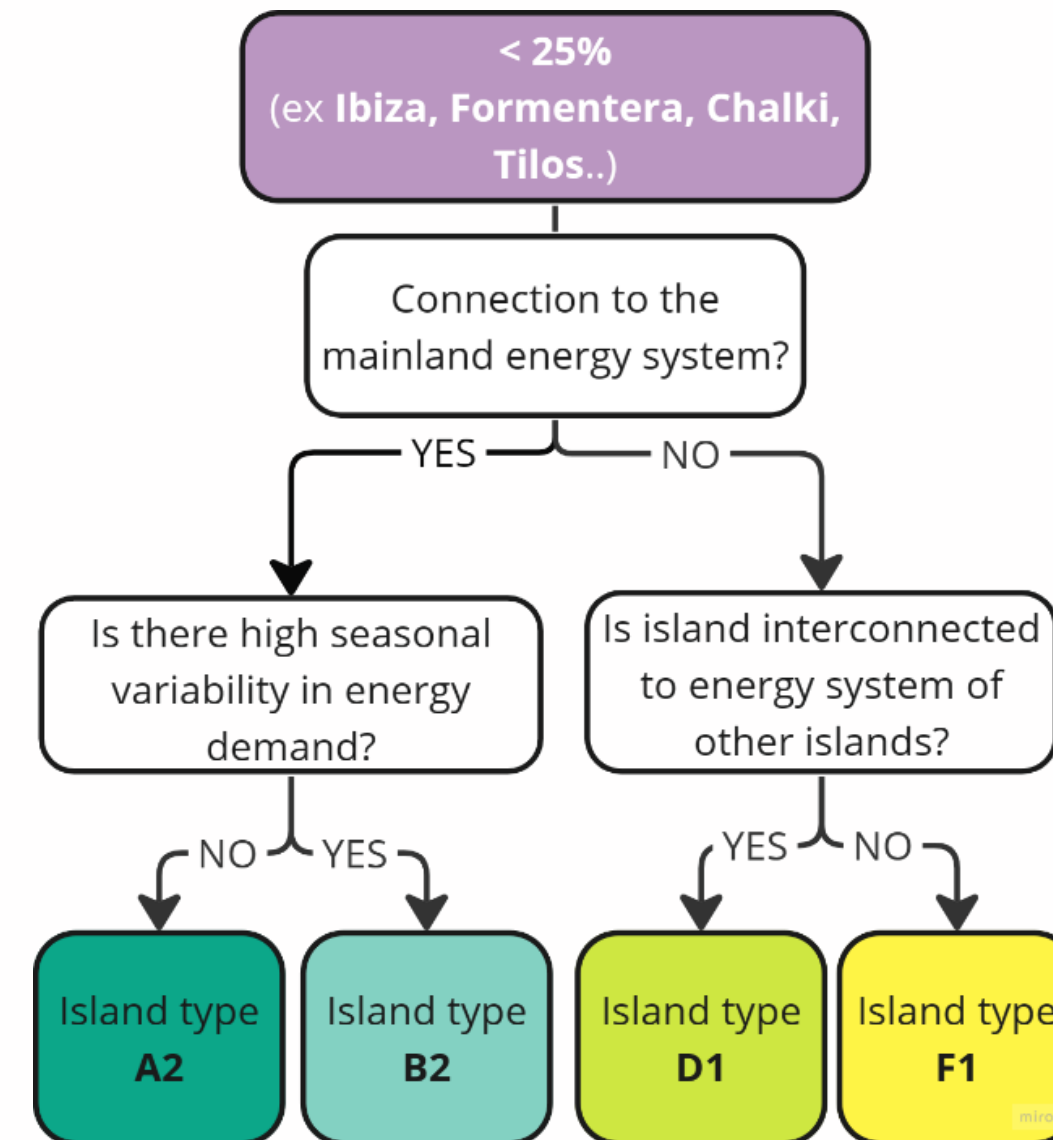


Definition of Island Typologies

Key Questions:

- **Size**
- **Connection to the mainland**
- **Connection to other islands**
- **Net energy production** →
- **Seasonal variability**

In case of small islands we assume that in case they are not connected to the mainland, but connected to other islands they are interdependent on one another



SMALL ISLANDS



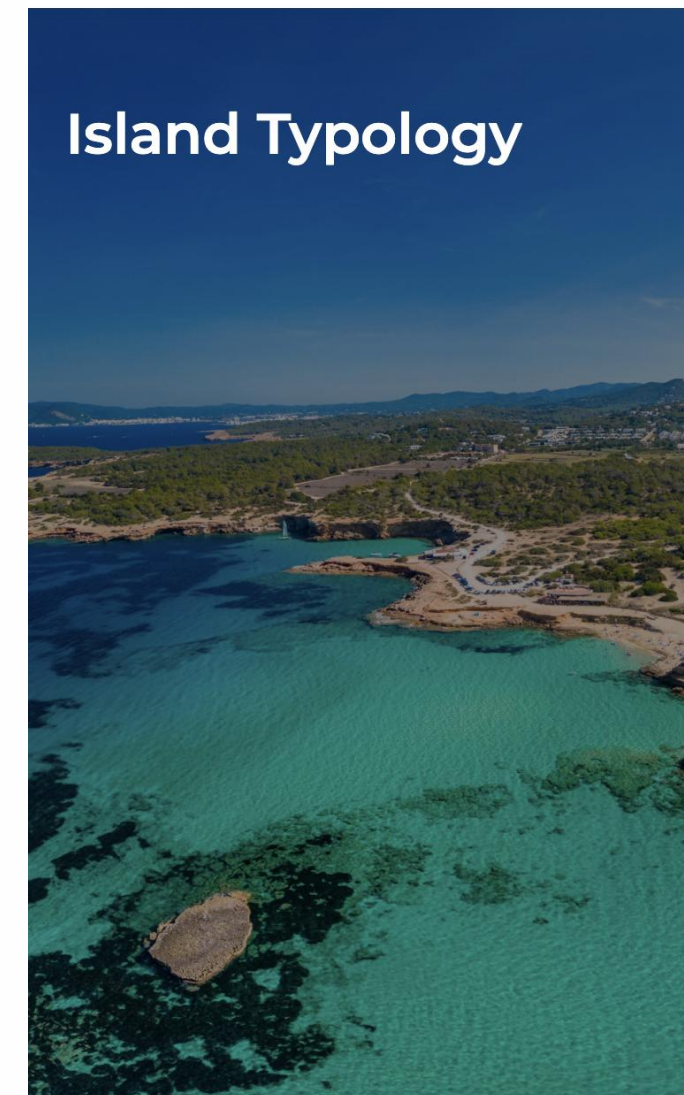


Island Typology Decision Tree



You can find the link to the tool in the link below:

<https://dsp.life-genera.eu/island-typology>



☆ Rate Monitoring Tools





Island Typology Decision Tree

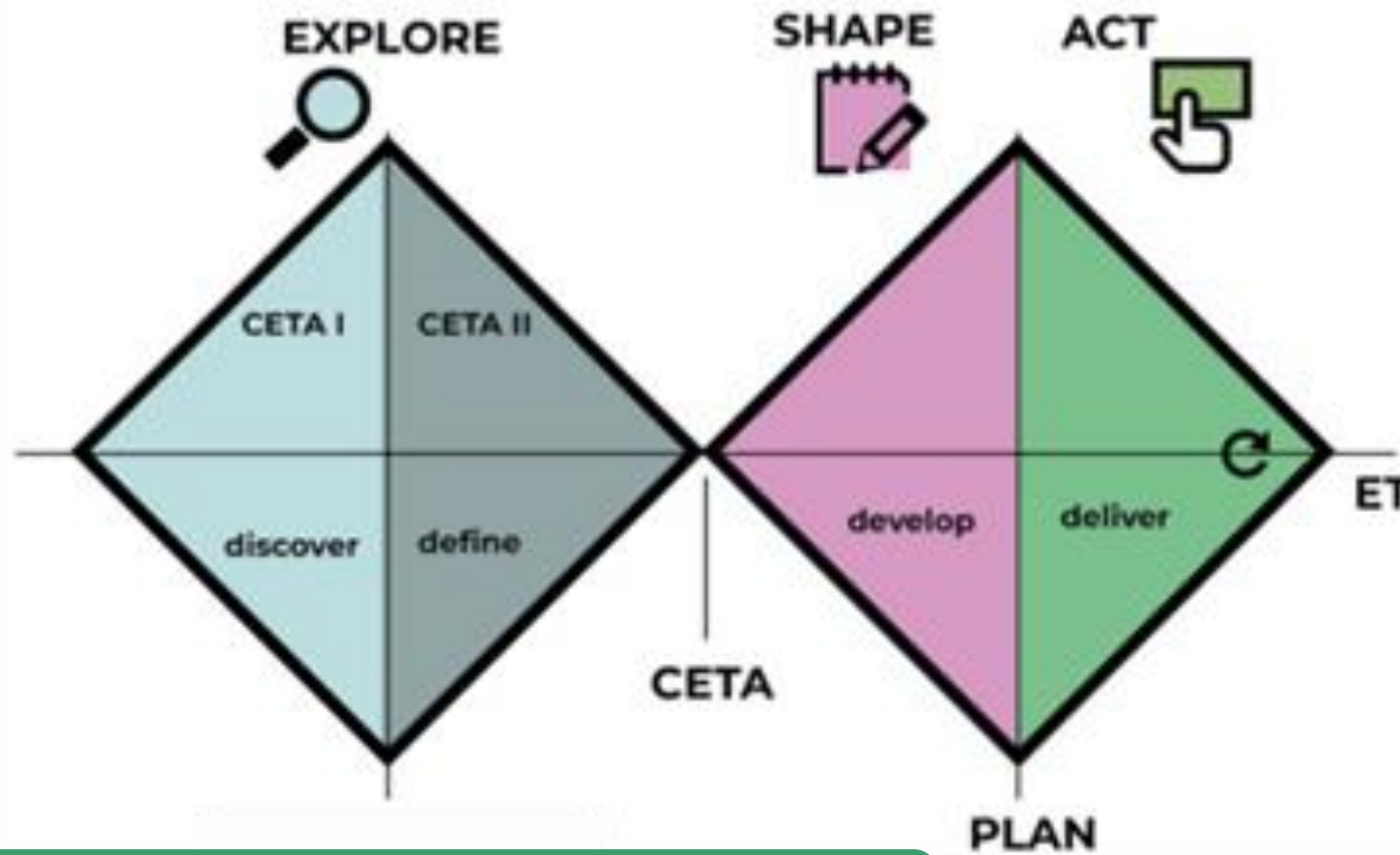


Table: Priority level of specific needs of each island typology

NEEDS	Improve Local Clean Energy Production	Curbing of the energy demand	Collaboration with other islands
Type ↓	RES	EE	Cooperate
A	high	low	low
A1	high	low	low
A2	high	medium	low
B	low	high	low
B1	medium	high	low
B2	medium	high	low
C	high	low	medium
D	medium	high	high
D1	medium	high	high
E	high	medium	medium
F	high	high	medium
F1	high	high	medium



Step-by-Step Guidebook for Roadmap Production



Key Steps

Recommended tools

Existing guidelines and tools

The identified phases are:

- 1. INITIATION** – Commitment and signature
- 2. DISCOVER** - Preliminary analysis to understand the context and elaborate the baseline.
- 3. DEFINE** - The establishment of the vision and the strategy.
- 4. DEVELOP** - The translation of the vision in a realistic and feasible plan.
- 5. DELIVER** - The implementation and the monitoring of the actions.





Clean energy for EU islands

Island Clean Energy Transition Pledge
Sign the Pledge

#CE4EUislands



Initiation



KEY Steps:

1. Establish and charge a leadership team.
2. Identify the key actors and stakeholders.
3. Signature of the formal commitment document

Recommended tools include:

- Pledge templates
- Infographics and descriptive documents

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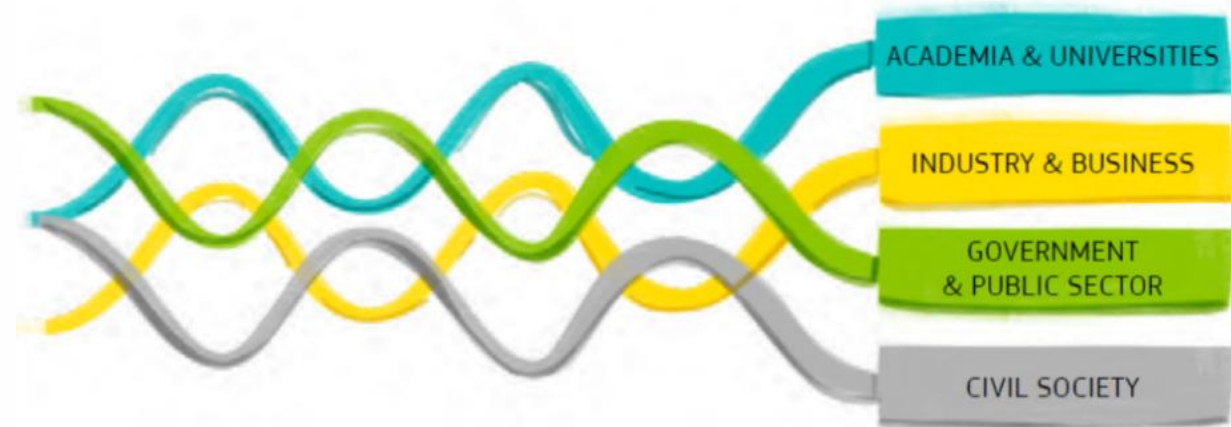


Discover



Stakeholders' Quadruple Helix

[Clean energy for EU islands secretariat]



KEY STEPS:

1. Stakeholders' mapping
2. Assess the baseline.

Recommended tools include:

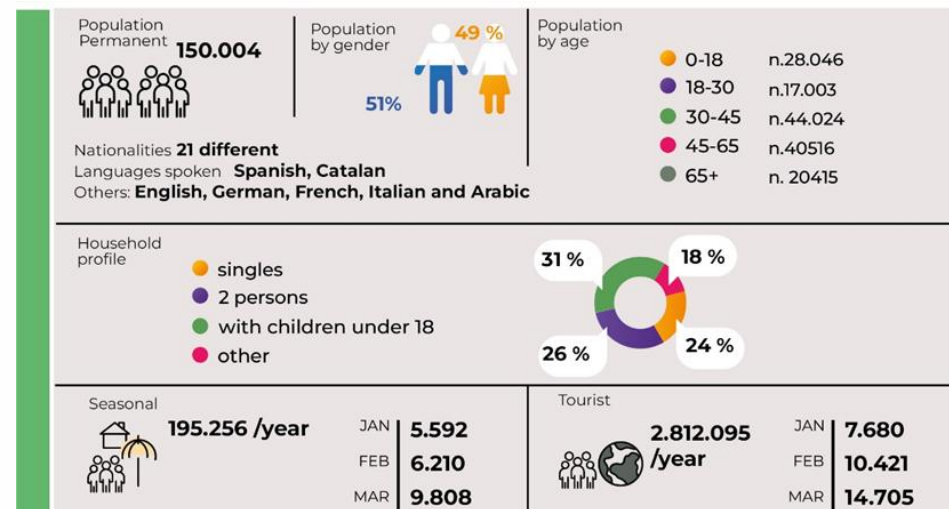
Community engagement:

- Stakeholder engagement register
- Population assessment
- Empathy map and latent needs analysis
- ...etc

Assess the baseline:

- Baseline Emission Inventory (BEI)
- Risk and Vulnerability Assessment (RVA)
- Comparative analysis of goals and objectives in the local regulations
- Self-assessment tool of Clean Energy for EU Islands
- ...etc

Demographic Assessment



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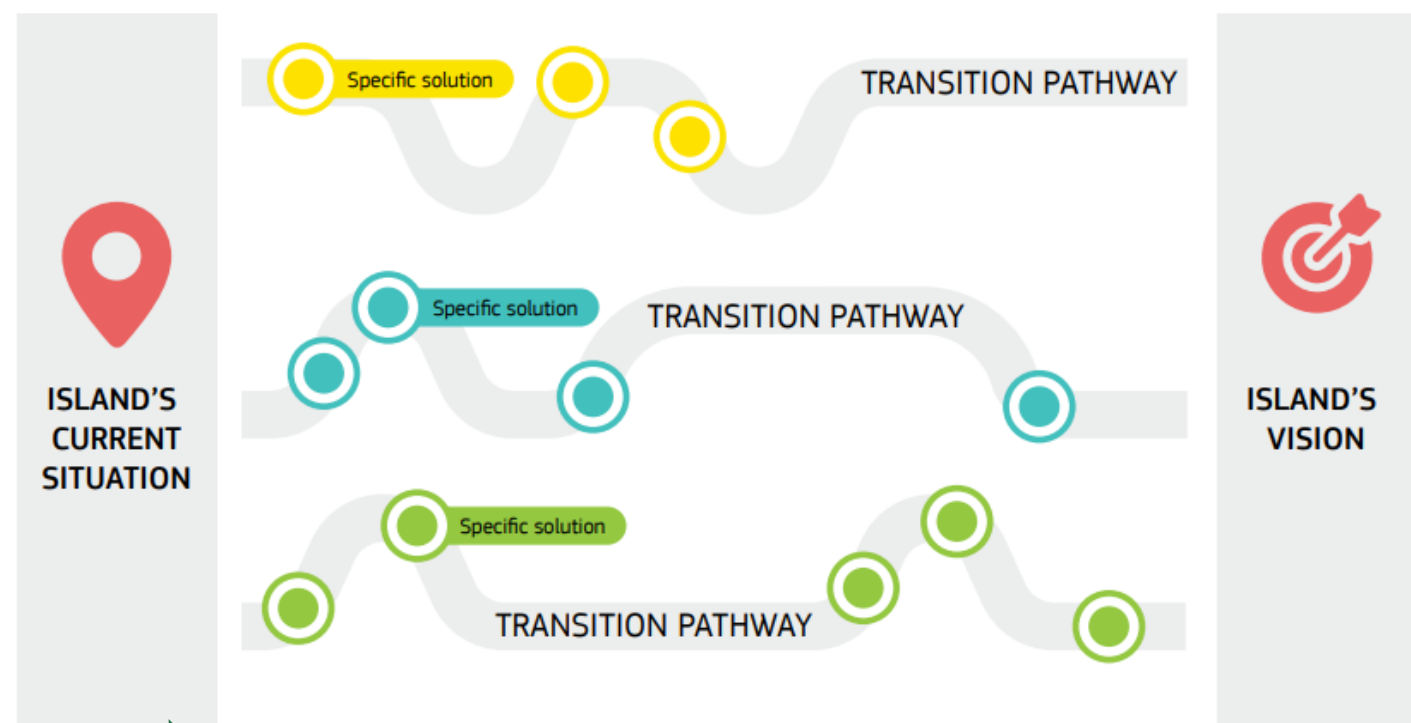
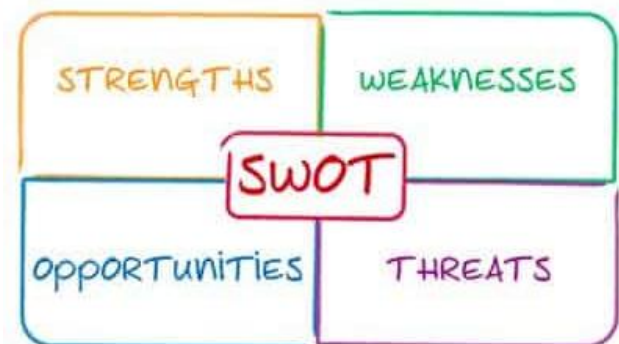
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From vision to action : how to tackle transition on EU islands? : methodological handbook | Clean energy for EU islands:

<https://clean-energy-islands.ec.europa.eu/resources/publications/vision-action-how-tackle-transition-eu-islands-methodological-handbook>

Define



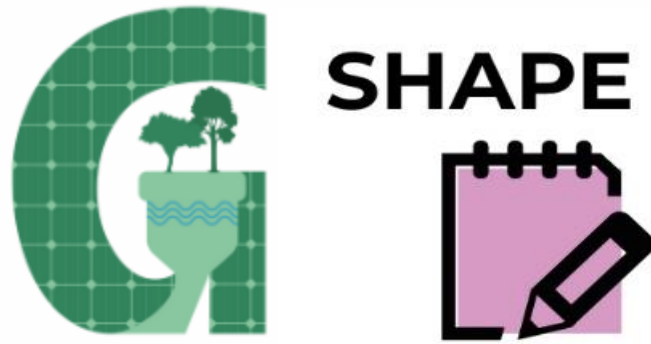
KEY Steps:

1. Establishment of a long-term vision, identifying challenges and core values.
2. Definition of governance structure
3. Setting objectives and targets
4. Elaborate scenarios
5. Define a monitoring strategy.

Recommended tools include:

- Insight survey questionnaires based on categories (of citizens and stakeholders)
- Strengths-Weaknesses-Opportunities-Threats Matrix (SWOT)
- Transition Process Timeline (GANTT chart)
- SMART targets approach: Specific, Measurable, Achievable, Realistic, and Time-bound
- Simulation models with Multiple Criteria Decision-Making approach
- Benchmarking (comparative analyses)

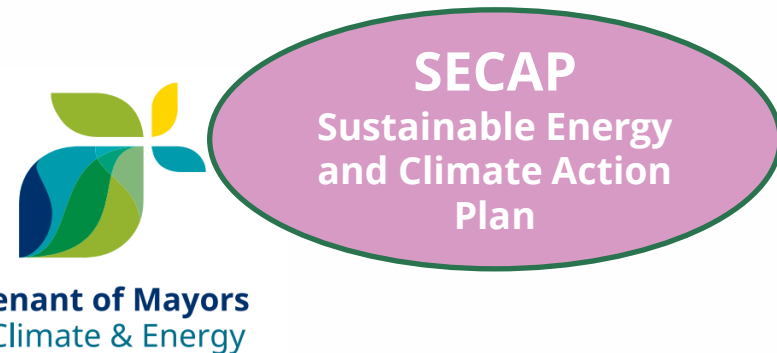
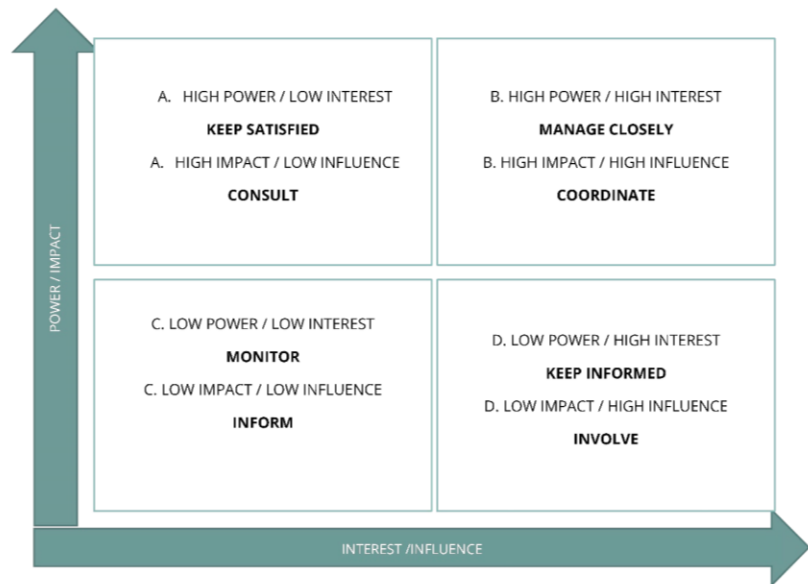
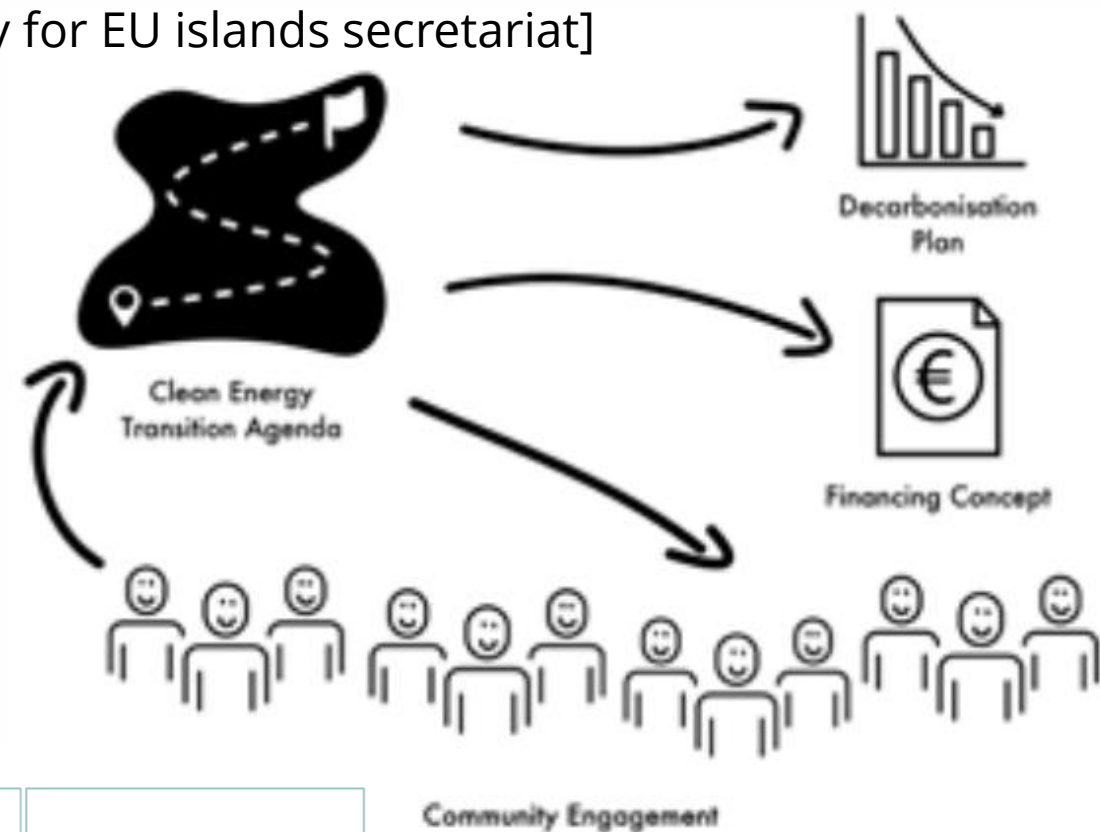




Develop

From Vision to Action

[Clean energy for EU islands secretariat]



KEY Steps:

1. Stakeholder engagement
2. Selection of the actions to implement.
3. Feasibility study
4. Business models

Recommended tools include:

Community engagement:

- Stakeholders Matrix
- Insight survey questionnaires and Latent needs analysis
- Co-creation process Evaluation form
- List of actors of the working group with definition of roles
- ...etc

Feasibility studies

- Risk and Vulnerability Assessment (RVA)
- Risk register and matrix
- Multiple Criteria Decision Making (MCDM) analysis
- Cost-Benefit Analysis (CBA)
- Business Model template

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ACT



Deliver



KEY Steps:

1. Setting up management structures
2. Definition of pilot actions
3. Conducting tenders and public procurement
4. Stakeholder and citizens follow up plan
5. Creation and delivering of training programme
6. Monitoring and risks and impacts assessment
7. Reporting and communicating

Recommended tools include:

- GANTT chart
- Co-creation process Evaluation form
- Monitoring Emission Inventory (MEI)
- Scoreboards for measures monitoring
- Reviews reports templates
- Lessons learned register and replicability plan

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Thank you!





PARTNERS



Development Agency of South Aegean Region

