

MUSICA @ European Experiences in Climate Change Adaptation on Islands

29 April, 2021

Presenter: Gordon Dalton
Role: MUSICA Project Coordinator
Lead Institute: UCC MaREI



MUSICA

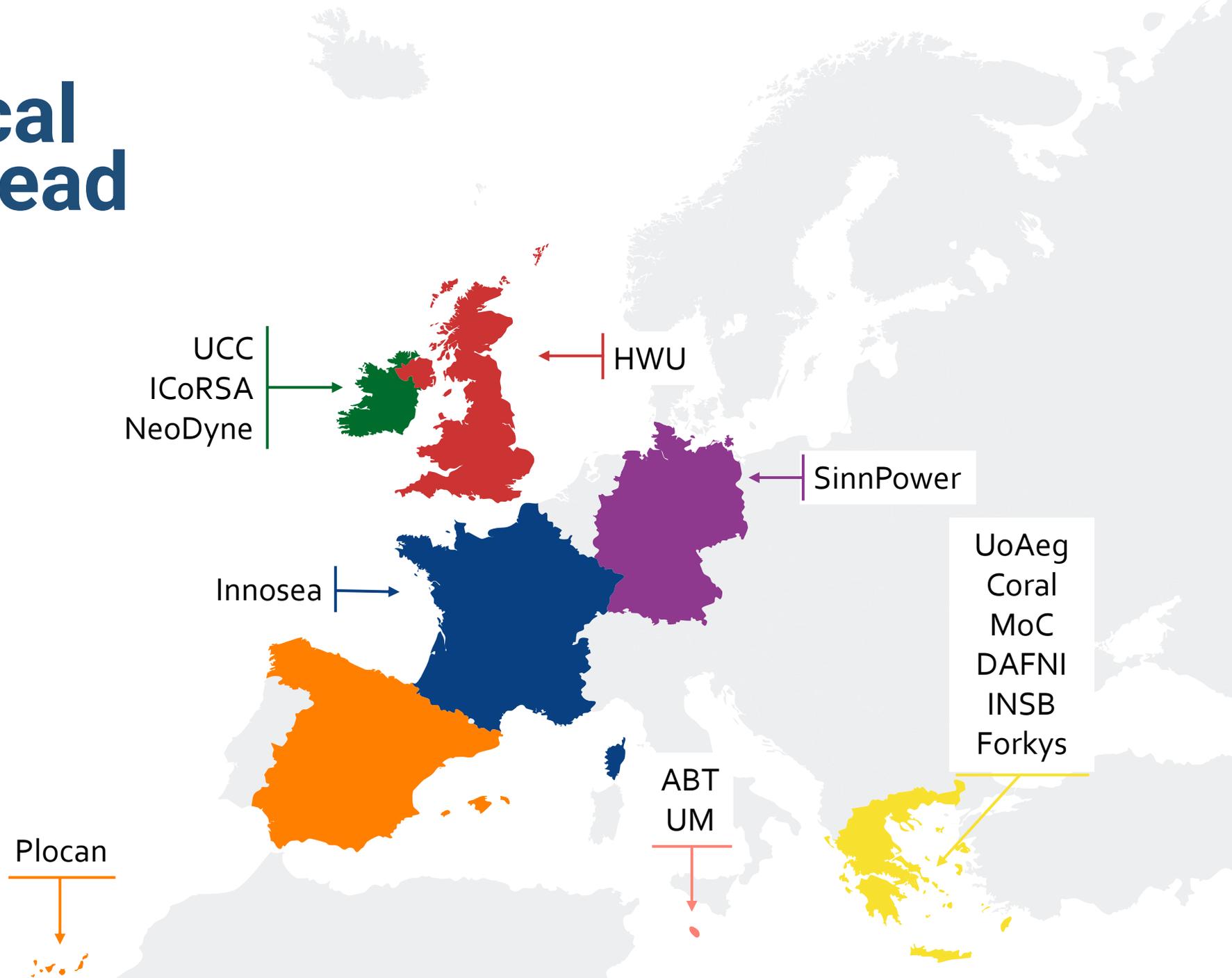


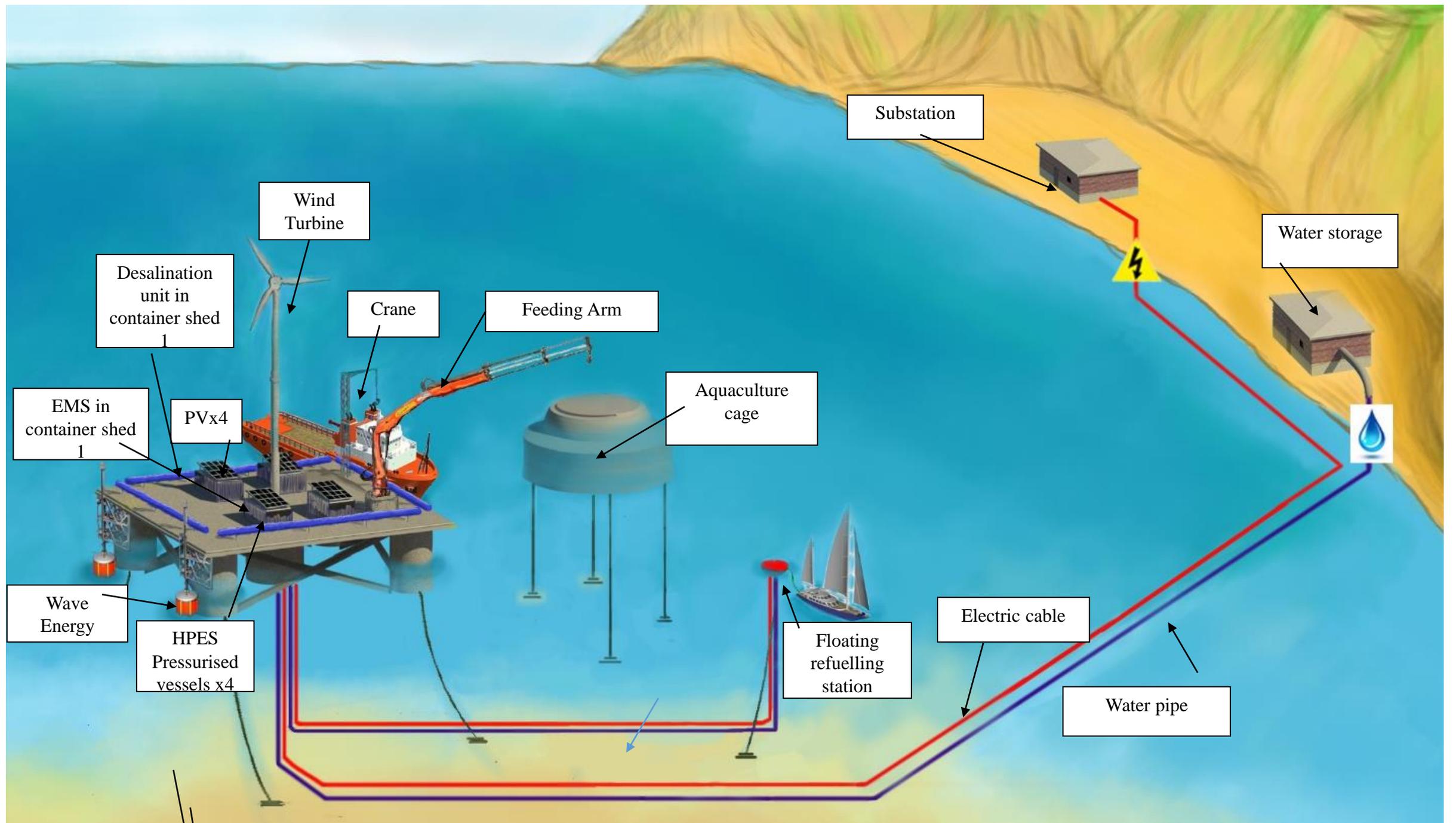
This project has received funding from the European Union's Horizon 2020 research and innovation Programme under grant no 862252



Geographical partner spread

| Partner Count | |
|---------------|---|
| UK | 1 |
| Ireland | 3 |
| Greece | 6 |
| France | 1 |
| Spain | 1 |
| Germany | 1 |
| Malta | 2 |
| <hr/> | |
| total 15 | |





MUSICA Project

Multiple use of Space for Island Clean Autonomy



"Multi-use of the marine space, offshore and near-shore: pilot demonstrators". BG-05-2019

▼

The overall project aim of **MUSICA** is to decarbonise the energy systems of small islands, including their marine (economy/ ecosystems/ territorial waters/ surrounding seas).

▼

MUSICA will achieve this by utilising sea-based multiple-use platform (MUP) and multiple-use of space (MUS), to form a mobile Marine Technology Park solution, supporting a mixture of Blue Growth industries.

▼

9million
over 5 years
amongst 15 partners

MUSICA Project Objectives



Objective 1:

Contribute to achieving high levels of local renewable energy sources penetration

Objective 2:

Provide a complete smart energy system including a highly integrated and digitalised smart grid

Objective 3:

Achieve a very significant reduction of the use of hydrocarbon-based energies and fossil fuel consumption

Objective 4:

Provide innovative energy storage facility on the MUP for the island energy management using system created by NeoDyne Ireland.

MUSICA

Project Objectives



Objective 5:

Develop innovative **effective business models** for the **MUSICA solution** which will enable **economically viable replication** immediately to Chios, Gozo of Malta and El Hierro of Gran Canaria and to at least 40 EU islands by 2050.

Objective 6:

Address key **non -technical barriers and challenges** including environmental, regulatory, legal aspects, data (security, protection, management and digitisation) and health and safety.

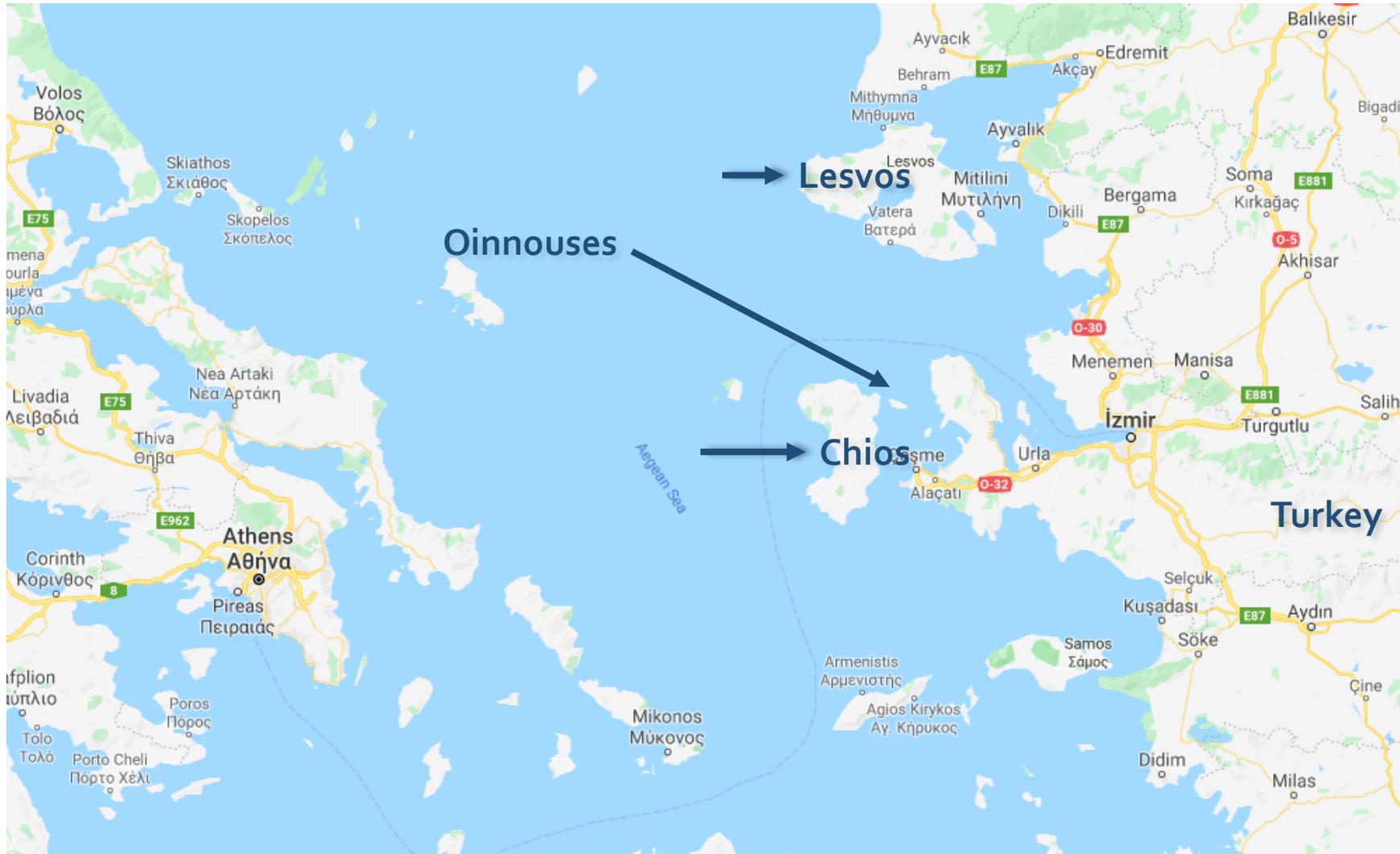
Objective 7:

Maximise the **acceptance and use of RES and the decarbonisation plans** by the islanders by **embedding the principles of Responsible Research and Development (RRI)**.



MUSICA
Multiple Use of Space for a Clean Island Autonomy

Project Location - Oinnouses



- Population 800
- Grid connected to Chios; connection unreliable
- Imports fresh water
- Most of Public office services provided by Municipality of Chios

What is the benefit of MUSICA to Oinousses community



- Reduce the frequency of blackouts and electricity shortages.
- During the test phase of the project, MUSICA will provide:
 - Free electricity to the island
 - Free desalinated water to islanders
- After the project is finished, the platform will become available to the island community.
- MUSICA will provide training workshops on career opportunities in floating offshore renewable energy platforms.

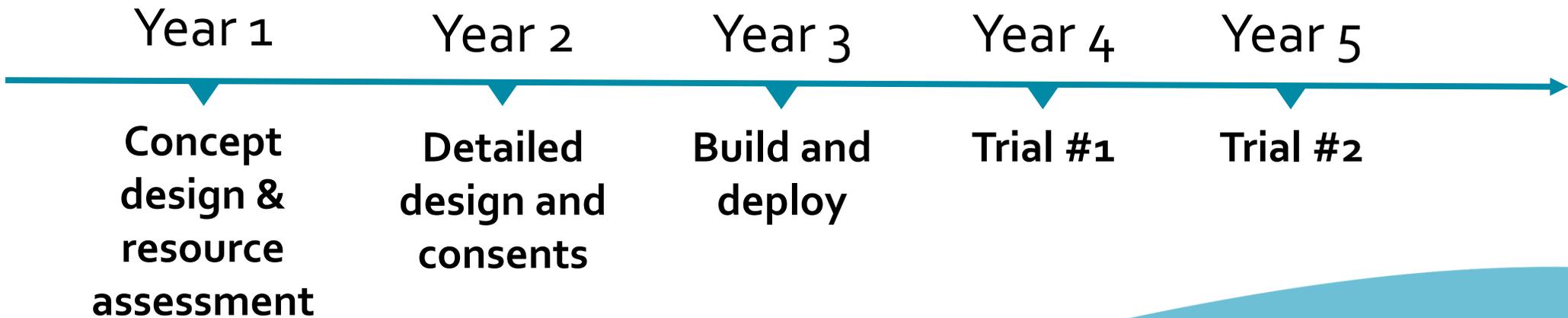
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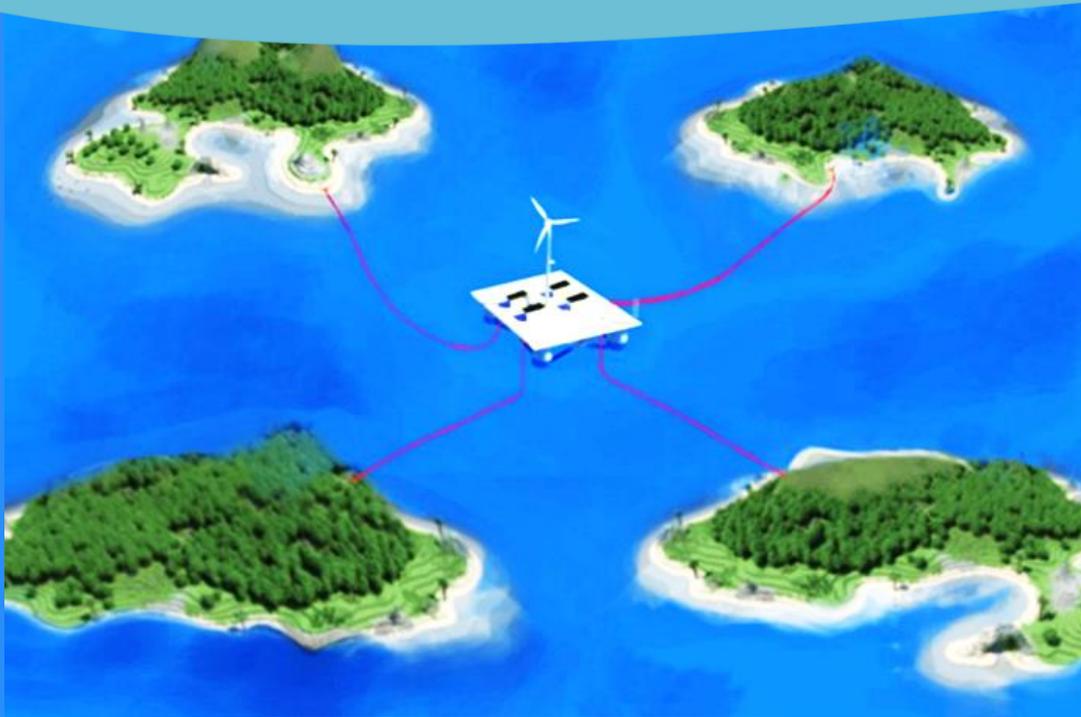
- Aquaculture can be moved further offshore. Advantages:
- More opportunities for new locations for cages offshore that are more acceptable for islanders
 - Less pollution
 - More jobs in the industry

- Floating refuelling station:
- More yachts and tourists pass by
 - Future revenue for the island after the project end.

MUSICA Project Challenges



Potential: Paths to commercialisation



One MUSICA MUP serves 4 small islands



One large island served by 4 MUSICA

Potential: Paths to commercialisation



5 MUSICA MUP in an array



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Multiple Use of Space for a Clean Island Autonomy



European
Commission

Policy Officer for MUSICA
(Ivan Conessa-Alcolea)
declared the MUSICA
project as one the EC
'flagship projects'

Clean energy

The European
Green Deal

MUSICA project listed in
the examples of "EU-
funded research projects
already producing results
that will help deliver the
European Green Deal"

<https://ec.europa.eu/info/research-and-innovation/strategy/european-green-deal/>

December 2019
#EUGreenDeal

Thank you!

<http://musica-project.eu>

