



ACT

Aguçadoura Ocean Lab for Future Technologies

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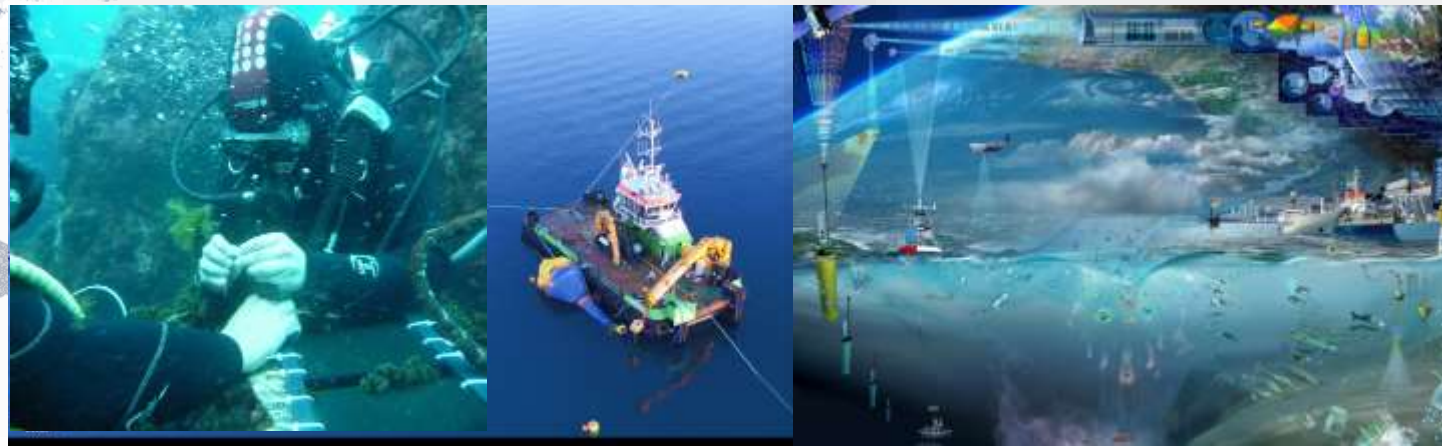
UN Decade of the
Oceans

EU Blue Growth

New Space Age

Digital World

- ✓ Will foster technology innovation that need to be tested, demonstrated and qualified in the Ocean.
- ✓ Will require an international network of test & demonstration sites in different ocean environments offering seamless access to industry.
- ✓ Combining different technology fields will enable critical mass to be attained, reducing O&M costs and facilitating adequate support infrastructure (staff, vessels, equipment, etc.).



Connecting Ocean, Energy, Data Science & Space

✓ Through ocean Labs for diverse technologies requiring validation in an ocean environment:

- Offshore Wind and Wave Energy
- Offshore Aquaculture
- Underwater Robotics
- Digital Ocean
- Ocean Observation & Surveillance
- Space-Ocean Communication
- Underwater Energy Storage
- Training



ACT –Ocean Lab for Future Technologies

De-risking by
building on

- ✓ Two existing ocean infrastructures –
Aguçadoura test site & Viana do
Castelo Pilot Zone:
 - Synergies between the two infrastructures
promote critical mass.
- ✓ National strong expertise in Marine
Renewable Energy, Underwater
Robotics, Ocean Observation and Data
Science.
- ✓ Industry and science cooperation
- ✓ Integration in an international network
of similar infrastructures

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Added-Value for Portugal

- ✓ Attraction of innovation projects:
 - 200+ M€ projects from 2019 – 2024.
 - 40+ M€ in the pipeline (2022 – 2026).
- ✓ Scientific and qualified job creation
- ✓ Qualification of Portuguese industry for international supplies
- ✓ IP generation
- ✓ Innovative products and services

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Differentiation

- ✓ Combined Aguçadoura test site and Viana do Castelo Pilot Zone offer wide TRL range (6 to 9) and access to commercial development.
- ✓ Easy access from Europe
- ✓ Quality of infrastructures and supply chain (Portugal and Galicia)
- ✓ Good resource and weather windows for O&M.
- ✓ Mix of technologic fields and companies.

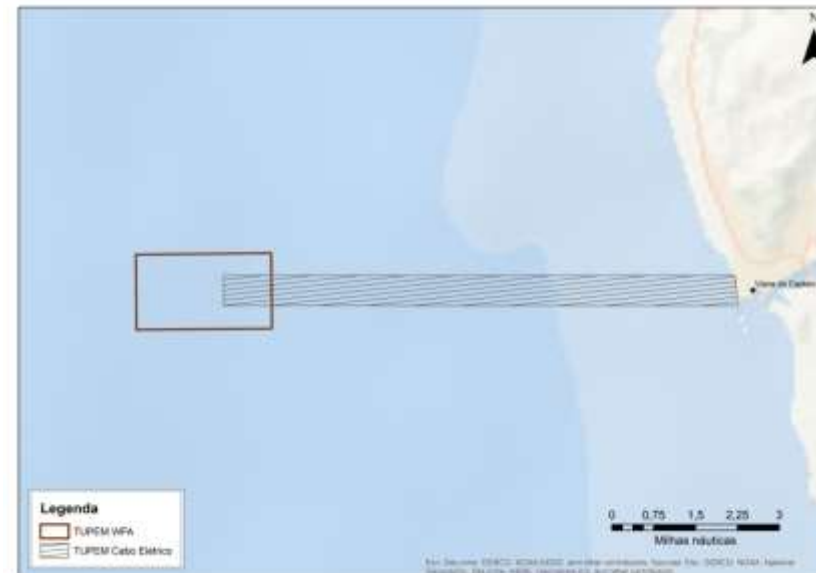
Characteristics of the **Aguçadoura** test site

- ✓ 5 km long 4 MW offshore export cable
- ✓ Marked 3.3 km² offshore area
- ✓ Onshore substation
- ✓ Licensed area for prototype testing in 45 m water depth
- ✓ Detailed resource, bathymetry and soil characterization
- ✓ Significant past prototype testing



Characteristics of the **Viana do Castelo** Pilot Zone

- ✓ 17 km long 40 -> 400 MW offshore export cable
- ✓ Marked 11.25 km² offshore area up to 100 m water depth
- ✓ Onshore substation
- ✓ Licensed area for demonstration and commercial development



Implementation Phases

- ✓ Phase I – Implementation (2019-2020, 1.3 M€):
 - Assure availability of infrastructure and logistics for the WindFloat & CorPower projects
 - Attract 2nd round of projects and funding
 - Consolidate the business model
 - Set the investment plan for the 2nd phase
 - Expand the license to other technologic fields
- ✓ Phase II – Investment (2021-2023, 5⁺M€):
 - Increase operational flexibility and reliability of the infrastructure
 - Expand infrastructure to other technologic fields
- ✓ Phase III – Regular operation (2024- , OPEX: 1.5⁺M€/year, CAPEX: 1⁺M€/year).



Connection to Galicia

✓ Ocean Lab for the West Coast of the Iberian Peninsula:

- Joint commercial promotion of test infrastructures in Portugal and Spain
- Joint O&M of test and demo infrastructures
- Critical mass attained faster for joint development of support infrastructures (vessels, monitoring equipment, crews, staff, methodologies, etc.)
- Access to transregional EC funds
- Access to structural funds from Portugal and Spain by technology developers and supply chain



Support projects

CoLab +Atlantic

Support initiatives



€2.5M Interreg project (Mar 2019 - Feb 2022)



€2M H2020 project (Jan 2017 – Dec 2019)



€10.5M H2020 project (Jan 2018 – Jun 2021)

SISMAR

€ 222.000 Fundo Azul project (Apr 2019 – Sep 2021)

Potential Partners



CoLab
+Atlantic



and many more ...



Potential Clients

✓ Offshore wind:

- Seawind
- X1 Wind
- Gicon
- Hexicon

✓ Wave energy

- Wello

✓ Offshore Aquaculture

- Nørde

✓ Underwater Robotics

- ISR
- FEUP
- INESC TEC