

S3 Partnership on Marine Renewable Energies: Best practices and lessons learned

Smart Specialisation for Sustainable Blue Economy

Brokerage Event on marine renewable energy

Santander – 10th May 2022

- ❖ **Based on** previous work of one of the Vanguard Initiative (VI) pilot actions “Advanced Manufacturing for Energy Related Applications in Harsh Environments” (**ADMA Energy**) → Most participants already working together since 2014.
- ❖ Established to **identify and solve key industrial challenges**, the pilot initiative seeks to make the EU the global leader in manufacturing robust high integrity components for marine renewables and offshore energy applications.
- ❖ Led by the Basque Country (ES) and Scotland (UK). Comprises 16 regions:

- Andalusia (ES)
- Asturias (ES)
- Basque Country (ES)
- Brittany (FR)
- Cornwall and Isles of Scilly (UK)
- Dalarna (SE)
- Emilia-Romagna (IT)
- Flanders (BE)
- Lombardy (IT)
- Navarra (ES)
- Norte (PT)
- Ostrobothnia (FI)
- Scotland (UK)
- Skane (SE)
- Sogn and Fjordane (NO)
- Southern Denmark (DK)



- ❖ To support European companies to become competitive suppliers of products, services and solutions for the Marine Renewable Energy sector by defining and configuring a collaborative framework at interregional level
- ❖ To pursue the vision of the EU as global leader in the development and production of robust, high integrity equipment and components for applications related to marine renewables
- ❖ Facilitating to European companies the best partnerships in order to address and solve specific challenges at the technological level in the different markets and segments:
 - ❖ For offshore wind energy the challenges include increased water depths, more remote and distant site locations, corrosion of towers and foundations and larger size of components, with a resultant increase in logistical challenges for installation, operation and maintenance.
 - ❖ For ocean energy (wave and tidal), the current biggest challenge is the survivability of the marine devices.

MAIN INDUSTRIAL CHALLENGE

TECHNOLOGY CHALLENGES

ADDED VALUE AT COMPETITIVE COST

IMPACT IN INVESTMENT
COSTS

IMPACT IN OPERATING
COSTS

MANUFACTURING OF
LARGE COMPONENTS

SENSING,
INSTRUMENTATION AND
MONITORING

POWER TRANSFER AND
CONVERSION

O&M OPTIMISATION

CORROSION IN WATER

TESTING AND DEMONSTRATION IN REAL ENVIRONMENT

Previous demonstration cases and projects

North Sea Solution for Innovation in Corrosion for Energy



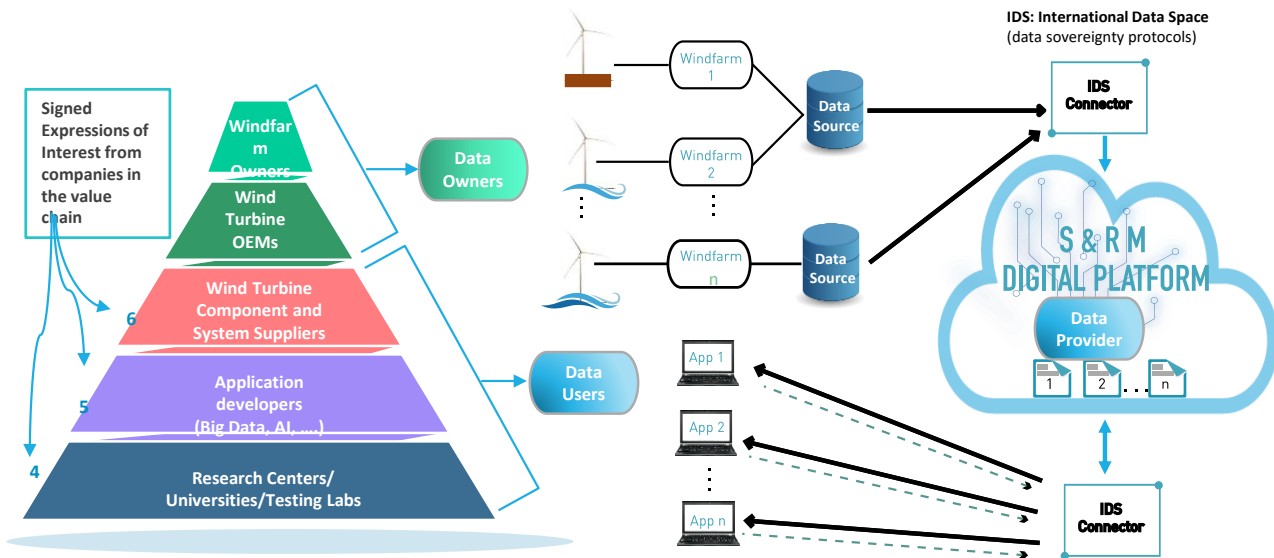
- Develop three offshore renewable solutions
- Accelerate the deployment and cost reduction of wave, tidal and offshore wind device
- Support the project to access public and private investment

Sensing, Instrumentation and Remote Monitoring



- Reduce the risk of operating at sea
- Explore the potential in sensing and instrumentation technologies
- Uncover the potential of data analytics in the digitisation of offshore windfarms

Sensing and Remote Monitoring (S&RM) in Marine Renewable Energy (MRE): Development of the “S&RM DIGITAL PLATFORM”



Challenge: Only *Windfarm Owners* and *Wind Turbine OEMs* have access to the data collected from the wind energy turbines in operation and therefore value extracted out of data is only at the “top of the value chain”. S&RM business case aims to **facilitate access to data produced in critical components of offshore wind turbines under real operating conditions**, in order to generate value for companies at all levels of the value chain, with a special focus on the *Wind Turbine Component and System Suppliers*.

Investment project: digital platform (*data provider*) which will allow sharing of offshore windfarms data among *data owners* and *data users* creating benefits for companies all along the value chain. Companies in the MRE value chain (*data users*) will be able to use the data and services accessible through the platform and provide unique and innovative solutions to the *data owners*, through monitoring and data analytics applications.

From networking to investment



Thematic Platforms

13 Interregional Innovation Investments

Pilot Projects

Learn

Connect

Demonstrate

Commercialise

Scale-up

Methodological manual

Self-assessment toolkit to evaluate key ingredients for a well performing partnership and investment projects



Political support



Shared vision

- Clear Scoping Note: governance structure & working areas
- Clear link with the S3 in partner regions
- Significant level of ambition (political and financial commitment)
- Mapping of competencies: regional capabilities & gap analysis

Engagement from key stakeholders

- Engage with industry and other stakeholders on a continuous basis
- Anticipate the evolution of the industry globally
- Assess the challenges and opportunities that are likely to emerge
- Industry Cooperation : Matchmaking events (RTOs, Academia, SMEs,..)

Lessons Learned

- No handbook on successful cooperation. Learning by doing.
- Trust is one of the main drivers to a successful cooperation
- Interregional cooperation takes time and it will create benefits only in the mid-term
- Coordination is critical. Ensure the main coordinator is supported by a counterpart in each partner region.
- Working with other regions/stakeholders - Differences among European regions:
 - Different types of clusters or SME intermediaries (Strategic partners – Individual partners)
 - Different regional maturity and industrial background
- Need for a strong steering to bring the partnership forward.



More information?



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