WavEC: Creating Synergies in the Blue Economy
CHARACTERISTICS OF THE ECONOMIC ACTIVITIES AT SEA

- Have a specific common aspect that distinguishes them from all other economic activities
- Significant diversity of objectives and sub-sectors
- Sea Economy is only efficient and viable when a sufficient number of activities are present
- Intervention and planning has to be made seeing the sector as a whole
- Similarly to onshore, success depends on the existence of suitable infrastructures
OECD, THE OCEAN ECONOMY IN 2030
(2016)

Lists the areas for incremental development in the coming years

- Advanced materials
- Biotechnology
- Subsea Engineering
- Sensors and imaging
- Satellite technologies
- Big data analytics
- Autonomous systems

Common to all sea economy activities
WAVEC AS A SUPPLIER IN THE OCEAN ECONOMY

• Synergies in the ocean economy make:
  ➢ WavEC competences highly transferable to areas outside the offshore renewable energy
  ➢ Developments in offshore renewable energy create opportunities for all the sea economy

• Services outside offshore renewables were 30% of WavEC’s services in 2015 (growth expected in 2016)
2015-2016 YEARS OF DIVERSIFICATION

Jan 2015
WavEC’s first Spin-off (Pro-Drone)

Nov 2015
First Service in Aquaculture Hydrodynamics

Aug 2016
WavEC’s first Patent

Oct 2016
First Service in Subsea Engineering

Jul 2015
First commercial ROV Inspection Service

May 2016
First R&D project in Aquaculture (Artifex)

Set 2016
First Service in Coastal Protection
Early identification of innovative products and services

Activities and daily operations

- Participation in several marine renewables projects and identification of opportunities

- Offshore work and knowledge of the marine environment

- Development of products, services, prototype development and testing
The Kraken Project

Robotic arm to be used in smaller ROVs to reduce costs of offshore O&M (IP protected)

The project ARTIFEX (Innovation Norway), funds the application of Kraken to the aquaculture, particularly to net repair operations

The OCEANERANET project Kraken will fund the development of the prototype, its testing and the development of further IP
STUDIES OF BIOFOULING AND SCALING TESTING OF MATERIALS IN MULTIPLE APPLICATIONS

- WavEC has been developing marine growth studies since 2012 in Aguçadoura, Pico and BIMEP

- A test site is currently set up at Peniche to test several paint solutions in the scope of the OCEANIC project.

- The methodology is being applied to other projects with heated surfaces and different materials
Pro-drone is a WavEC spin off that develops technology for the inspection of wind turbine blades with UAVs.

Created having in mind offshore wind inspections, it has onshore wind as an equally important market.

- Autonomous flight
- Object tracking
- Collision avoidance
- Collects data automatically
- Downloads data from UAV
- Verifies data validity
- Compiles metadata
- Creates packages for cloud update
- Collects and processes data
- Data display with scale
- Damage marking and report generation
Key Achievements

One of the most promising companies in wind turbine inspection

- IP - PCT
- Prizes TBB and ENEL Green Power
- LOI from 4 major players
- MVP ready for launch
- 240k€ raised to date
- Paid Pilot contract with EDPR
OPENING OPPORTUNITIES AT SEA

- WavEC has been developing numerical, experimental and economical modeling work for CORPOWER since 2012.
- CORPOWER has grown to be one of the leading companies in the wave energy sector, with over 12 M€ raised to date.
- Through its contracts in Portugal, CorPower contracted Composite Solutions (Aveiro, Portugal) to produce a part scale model to be tested at EMEC, Scotland.
THANK YOU

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