



University of  
**Strathclyde**  
Glasgow

# INTEGRATED OFFSHORE PLATFORMS FOR OCEAN ENERGY, AQUACULTURE and LOGISTIC SUPPORT

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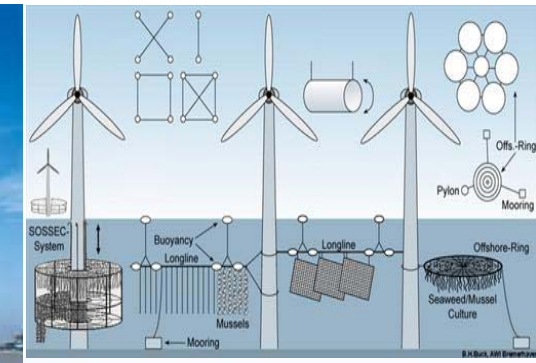
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# Objectives

- to develop innovative integrated offshore platform designs for harvesting ocean energy, aquaculture and logistic support
- assess the technical, economical and environmental feasibility of constructing, installing, operating, servicing, maintaining and decommissioning of the integrated platforms proposed



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# Description of Work

1. **Requirements for integrated offshore platform concept design**
  - a. Possible scenarios and stakeholders and their requirements
  - b. Constrains, criteria for design selection
  - c. Demand for energy, food etc
  - d. Spatial study (Selection of the geographical areas)
2. **Subsystem reference designs**
3. **Concept design of integrated offshore platform systems**

# Description of Work

## 4. Evaluation of integrated offshore platform system designs for each of the selected reference areas

### 4.1 Technical evaluation

4.1.1. Energy and food production performance

4.1.2. Construction, installation and decommissioning

4.1.3. Operation, servicing, maintenance

### 4.2 Environmental impact assessment (benchmark to non multi-use solutions)

### 4.3 Economic evaluation

i. Levelised cost

ii. Net present value analysis

iii. Cost-benefit analysis (benchmark to non multi-use solutions)

### 4.4 Additional uses of the integrated system

### 4.5 Risk assessment and mitigation

## 5. Experimental validation of proposed offshore platform systems



# Consortium

- Universities : Greece, Portugal, Norway and UK
- Renewable Energy Centres : Greece and UK
- Offshore Platform Design and Consultancy: UK
- Ocean Test Facility: Norway
- Marine Environmental Assessment: UK
- Wind Turbine Design and Consultancy : UK, Norway
- Wind Turbine Construction: UK
- Aquaculture Harvesting : UK
- Aquaculture Engineering : Norway
- Offshore Platform Construction (to be appointed)
- Shipping (Logistic) : Greece
- Electricity Generation and Supplier Company: UK
- Classification Society : Germany