EuropeWave Introduction

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VIII Marine Energy Conference
Bilbao - 22 June 2022

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 883751.

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www.europewave.eu

Bridging the gap to commercialisation of wave energy technology using pre-commercial procurement

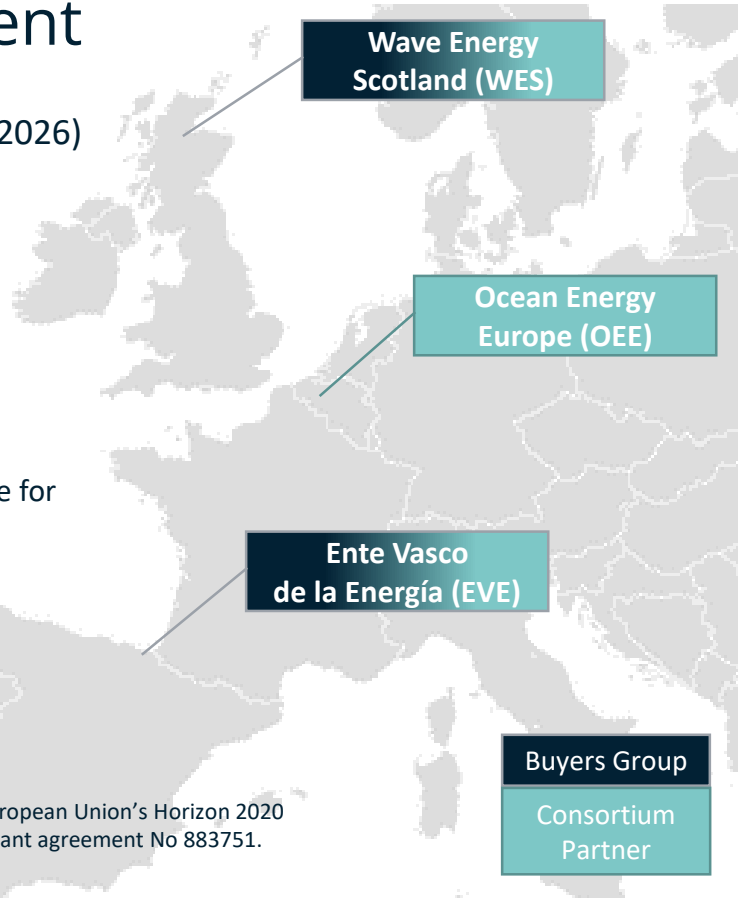
Duration: 65 months (01/01/2021 to 31/05/2026)

PCP Budget: €19,600,000

Total Budget: €22,702,112

Programme: H2020-EU.3.3.2.
[Low-cost, low-carbon energy supply]

Topic: LC-SC3-JA-3-2019
[European Pre-Commercial Procurement Programme for Wave Energy Research & Development]



wave energy SCOTLAND

ENERGIAREN EUSKAL ERAKUNDEA
ENTE VASCO DE LA ENERGÍA

Ocean Energy Europe

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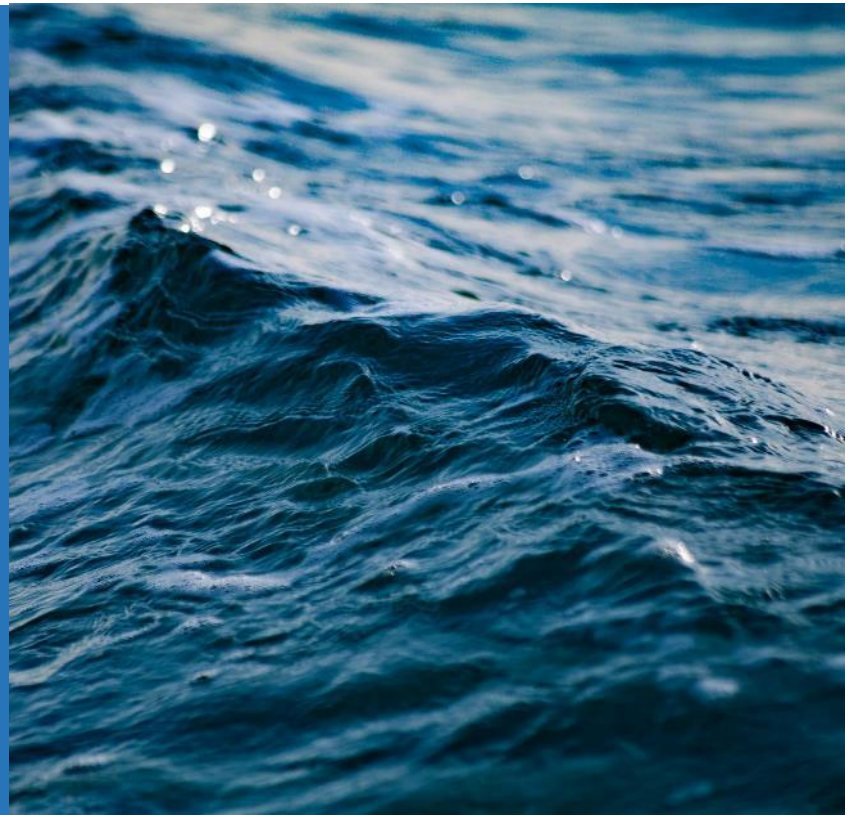
Overarching Challenge
[LC-SC3-JA-3-2019]

The design, development, and demonstration of cost-effective wave energy converter systems for electrical power production that can survive in the harsh and unpredictable ocean environment



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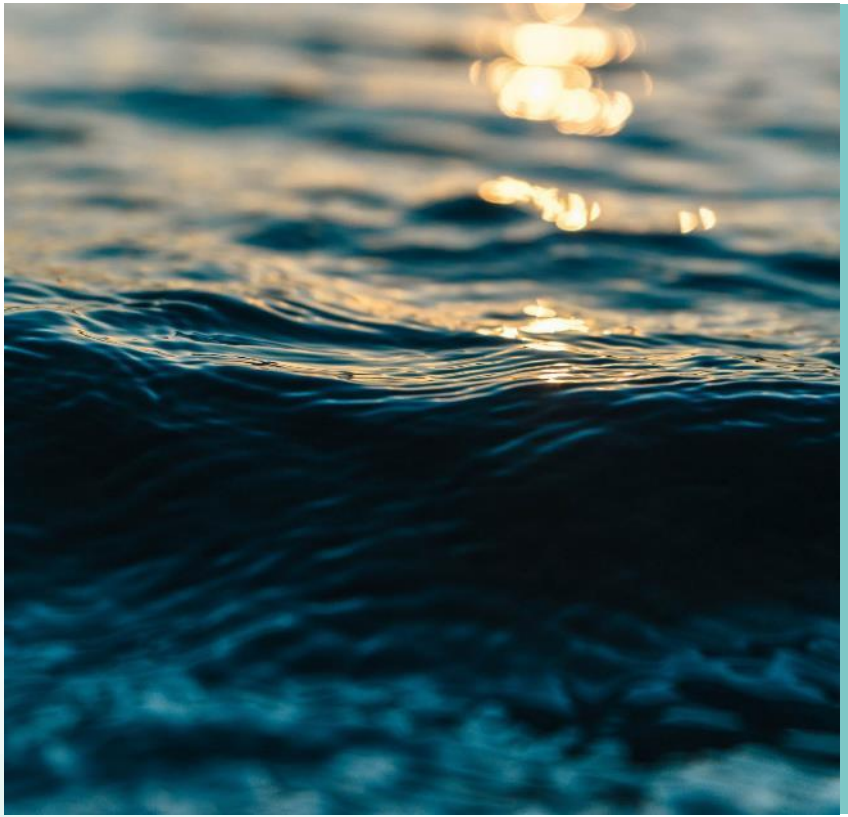

EuropeWave PCP Challenge

To advance promising wave energy converter systems to a point from which they can be developed to commercial exploitation through other national/regional programmes and/or private sector investment.

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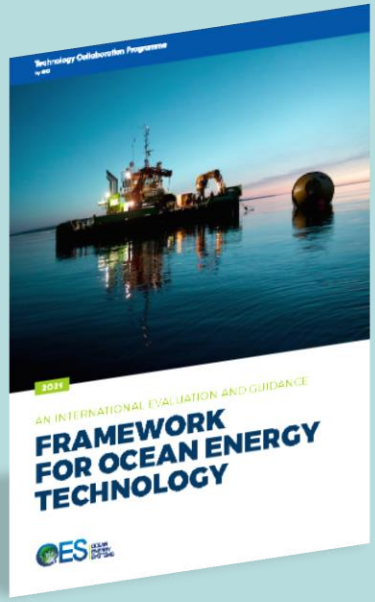
IEA Framework



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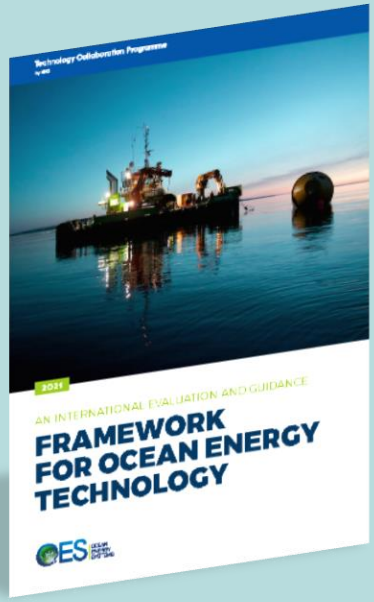
IEA Framework



A framework for technology evaluation and guidance of engineering activity throughout the technology development process

	Stage	Description	TRL
Pre EuropeWave	Stage 0	Concept creation	1
	Stage 1	Concept development	2 3
EuropeWave	Stage 2	Design optimisation	4
	Stage 3	Scaled demonstration	5 6
Post EuropeWave	Stage 4	Commercial-scale single device demonstration	7 8
	Stage 5	Commercial-scale array demonstration	9

Early (1-3)
Analytical and numerical models

Mid (3-6)
Experimental tests in controlled environment

Late (6-9)
Experimental tests in representative environment

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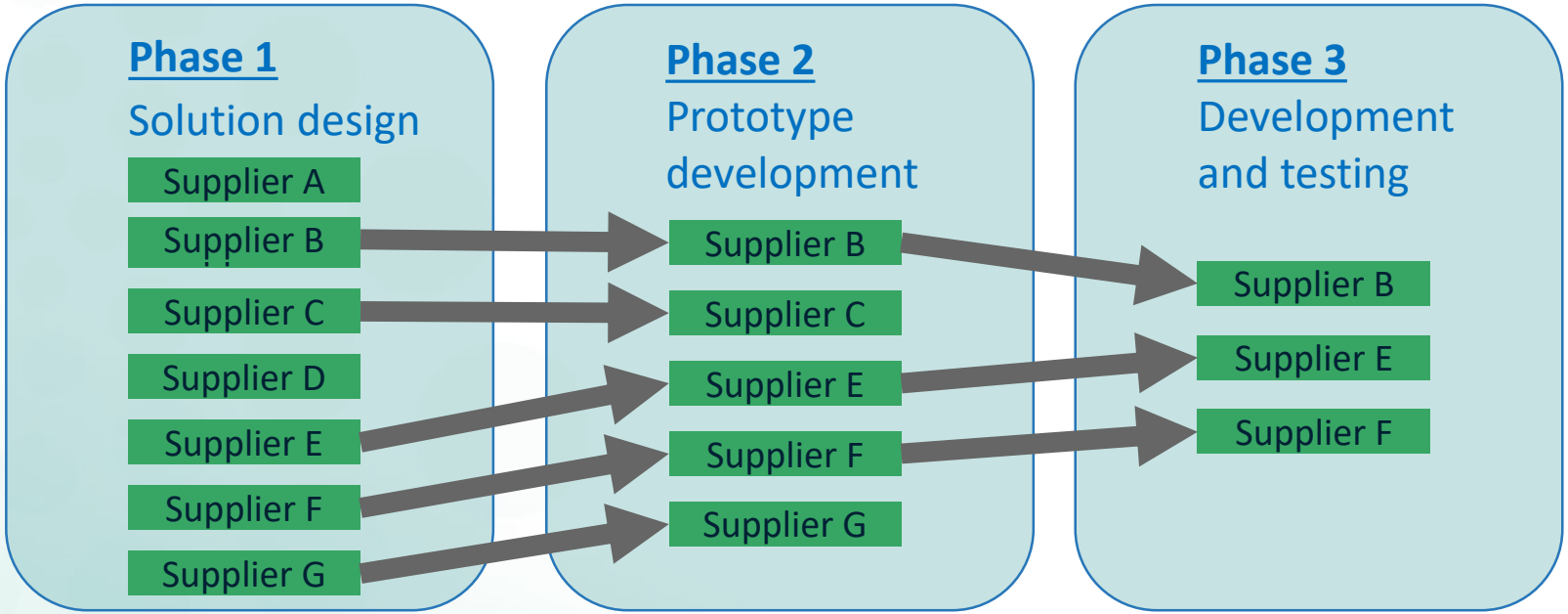
R&D Pre-commercial procurement



Ref: European Commission: H2020 Programme Guidance - PCP procurement documents

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EuropeWave PCP: Objectives

Phase 1
Concept Development

- Optimise the concept engineering design for the EuropeWave requirements
- Benchmark performance
- Estimate the Phase 3 power performance capability
- Evidence that the WEC system is on track to provide an attractive commercial offering

Phase 2
Design / modelling

- Complete FEED of the Phase 3 prototype
- Pass Critical Design Review (CDR) to begin meaningful engagement with fabrication providers
- Improve fidelity of simulation and financial modelling
- Develop and evidence appropriate planning for Phase 3 deployment
- Completion of Stage 2 of the IEA Framework

Phase 3
Open-sea deployment & testing programme

- Validate power capture and conversion capability through operational data recorded during sustained periods of operation in the energy producing sea-states
- Demonstrate the effectiveness of survival strategies
- Demonstrate achievable levels of availability
- Completion of Stage 3 of the IEA Framework

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EuropeWave PCP: Phase 3 deployment locations

EMEC
THE EUROPEAN MARINE ENERGY CENTRE LTD

BiMEP Biscay Marine Energy Platform

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EuropeWave PCP: Timeline

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Phase 1 Contractors

Lead Contractors	
AMOG Consulting	UK (England)
Arrecife Energy Systems *	Spain
Bombora Wave Power Europe *	UK (Wales)
CETO Wave Energy Ireland *	Ireland
IDOM Consulting, Engineering, Architecture	Spain
Mocean Energy	UK (Scotland)
Waveram *	Ireland

* consortium project

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Thank you!

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