ETIPOCEAN

European Technology & Innovation Platform for Ocean Energy

Strategic Research & Innovation Agenda (SRIA)

First Webinar: Demonstration of wave energy devices and PTO

11 June 2020

EERA European Energy Research Alliance Ocean Energy

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THE UNIVERSITY of EDINBURGH

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Ocean Energy Europe

Strategic Research and Innovation Agenda for Ocean Energy

May 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 826033.

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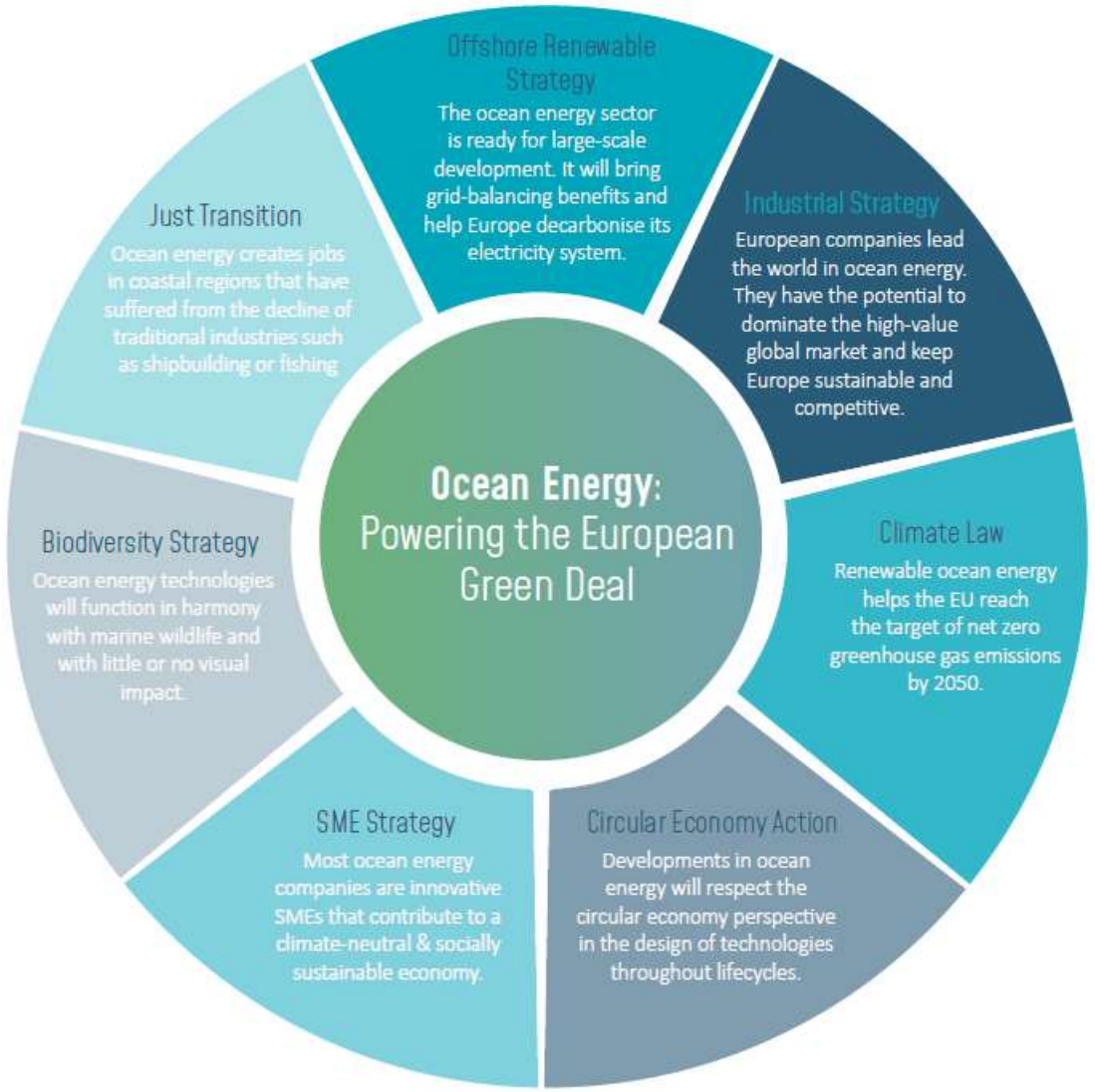
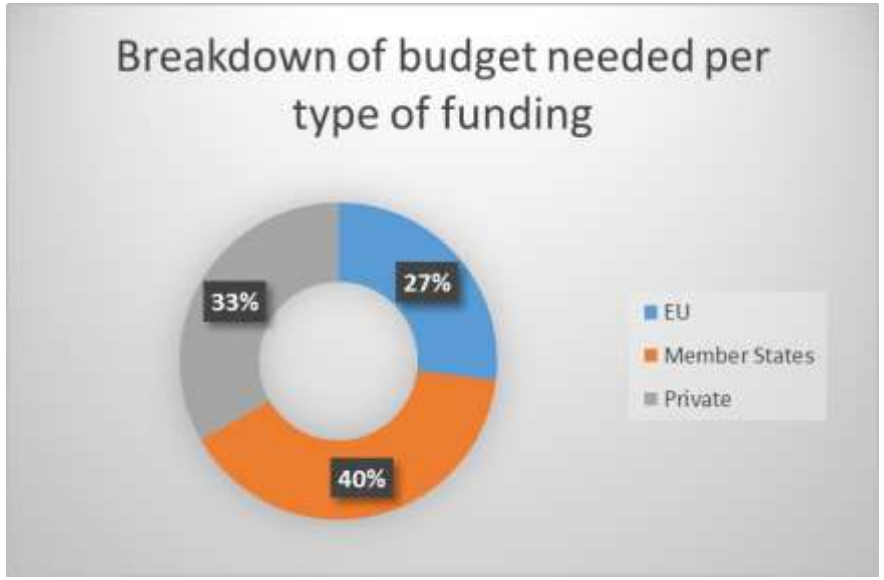
- A reference document for the whole ocean energy sector and specifically for **public funding organisations** (EC, Member States and Regional Agencies) with the aim of inspiring research calls.
- Updates **key priority challenge areas** for research, technology development and innovation from the previous strategic agenda in 2016
- Defines specific objectives and actions to carve the path towards **Ocean Energy commercialisation**
- Developed in close cooperation with **sector stakeholders**
- **To be officially launched on June 19th**

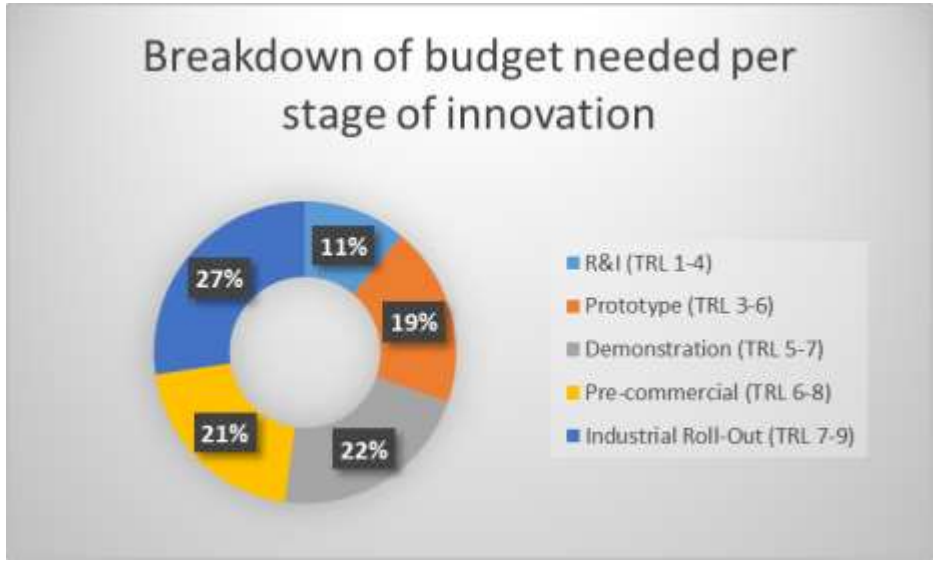


Ocean energy for a 100% decarbonised Europe and aligned with the objectives of the Green Deal

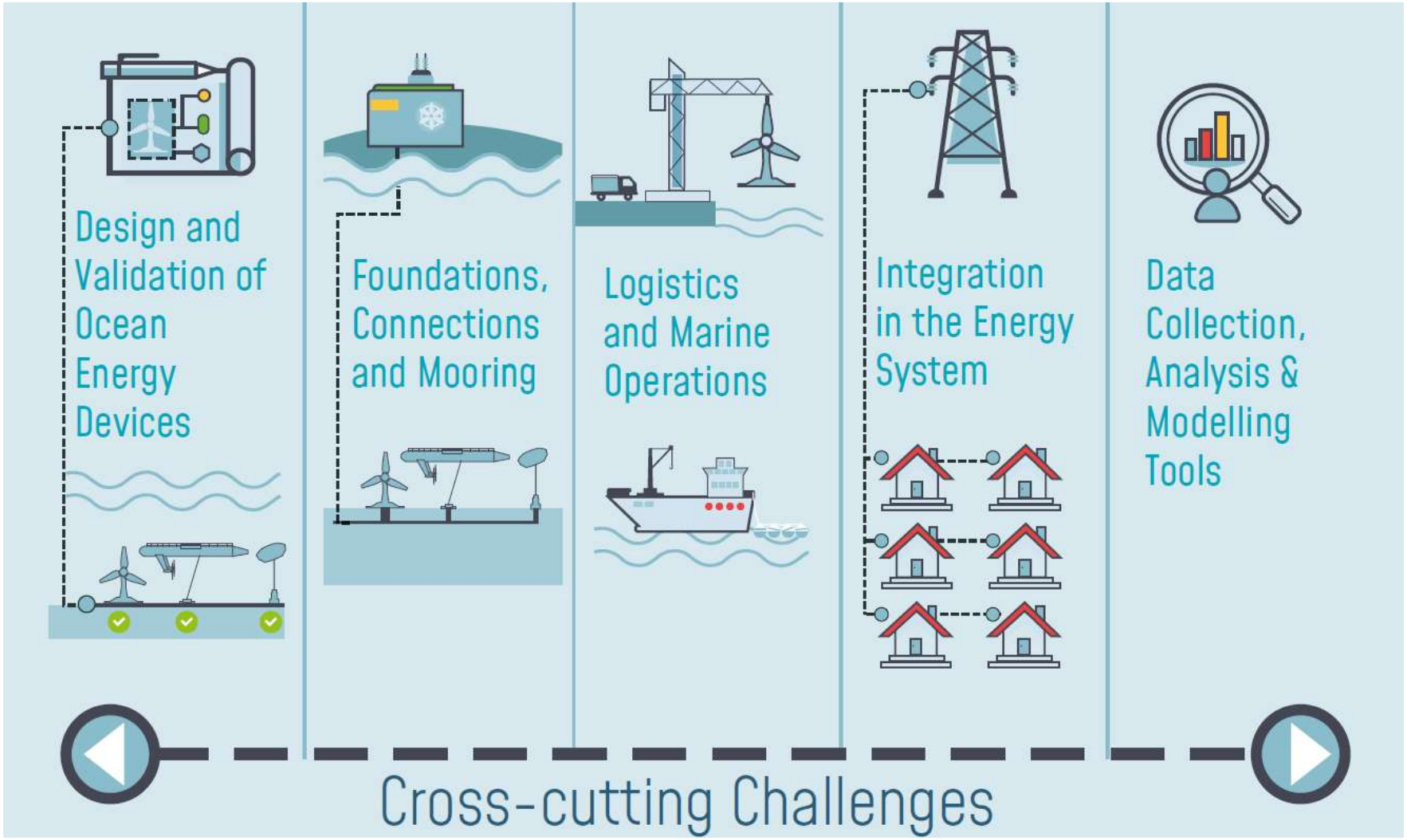
Public funding will leverage private investment

The right EU and national level public funding at the right stages of development can attract and unlock significant volumes of private investments. **€671m of public funding** allocated to the identified innovation actions will leverage about **€335m of private investment**





Challenge Areas



Priority Topics

DESIGN AND VALIDATION OF OCEAN ENERGY DEVICES

Demonstration of ocean energy devices to increase experience in real sea conditions
Demonstration of ocean energy pilot farms
Improvement and demonstration of PTO and control systems
Application of innovative materials from other sectors
Development of novel wave energy devices
Improvement of tidal blades and rotor

FOUNDATIONS, CONNECTIONS AND MOORING

Advanced mooring and connection systems for floating ocean energy devices
Improvement and demonstration of foundations and connection systems for bottom-fixed ocean energy devices

LOGISTICS AND MARINE OPERATIONS

Optimisation of maritime logistics and operations
Instrumentation for condition monitoring and predictive maintenance

INTEGRATION IN THE ENERGY SYSTEM

Developing and demonstrating near-commercial application of ocean energy in niche markets
Quantifying and demonstrating grid-scale benefits of ocean energy

DATA COLLECTION & ANALYSIS AND MODELLING TOOLS

Marine observation and modelling to optimise design and operation of ocean energy device
Open-data repository for ocean energy

CROSS-CUTTING CHALLENGES

Improvement of the environmental and socioeconomic impacts of ocean energy
Standardisation and certification

Design and Validation of Ocean Energy Devices

Priority Topics	WAVE	TIDAL	OTEC/SALINITY	TRL
Demonstration of ocean energy devices to increase experience in real sea conditions	✓	✓		MEDIUM-HIGH
Demonstration of ocean energy pilot farms	✓	✓		HIGH
Improvement and demonstration of PTO and control systems	✓			MEDIUM-HIGH
Application of innovative material from other sectors	✓	✓		MEDIUM-HIGH
Development of novel wave energy devices	✓			LOW-MEDIUM
Improvement of tidal blades and rotor		✓		MEDIUM-HIGH
Development of other ocean energy technologies			✓	LOW-MEDIUM

For each priority topic, the SRIA defines:

- Scope
- Applicability: (wave, tidal, others)
- Actions
- Expected impact
- TRL (entry/exit)
- Budget Required (number and size of projects)

Thank you

Pablo Ruiz-Minguela, Jose Luis Villate – TECNALIA

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