



**Strategic Research & Innovation Agenda (SRIA)**

**Second Webinar:**

**Reliability as a critical factor in the demonstration of ocean energy devices**

**2 July 2020**



THE UNIVERSITY of EDINBURGH

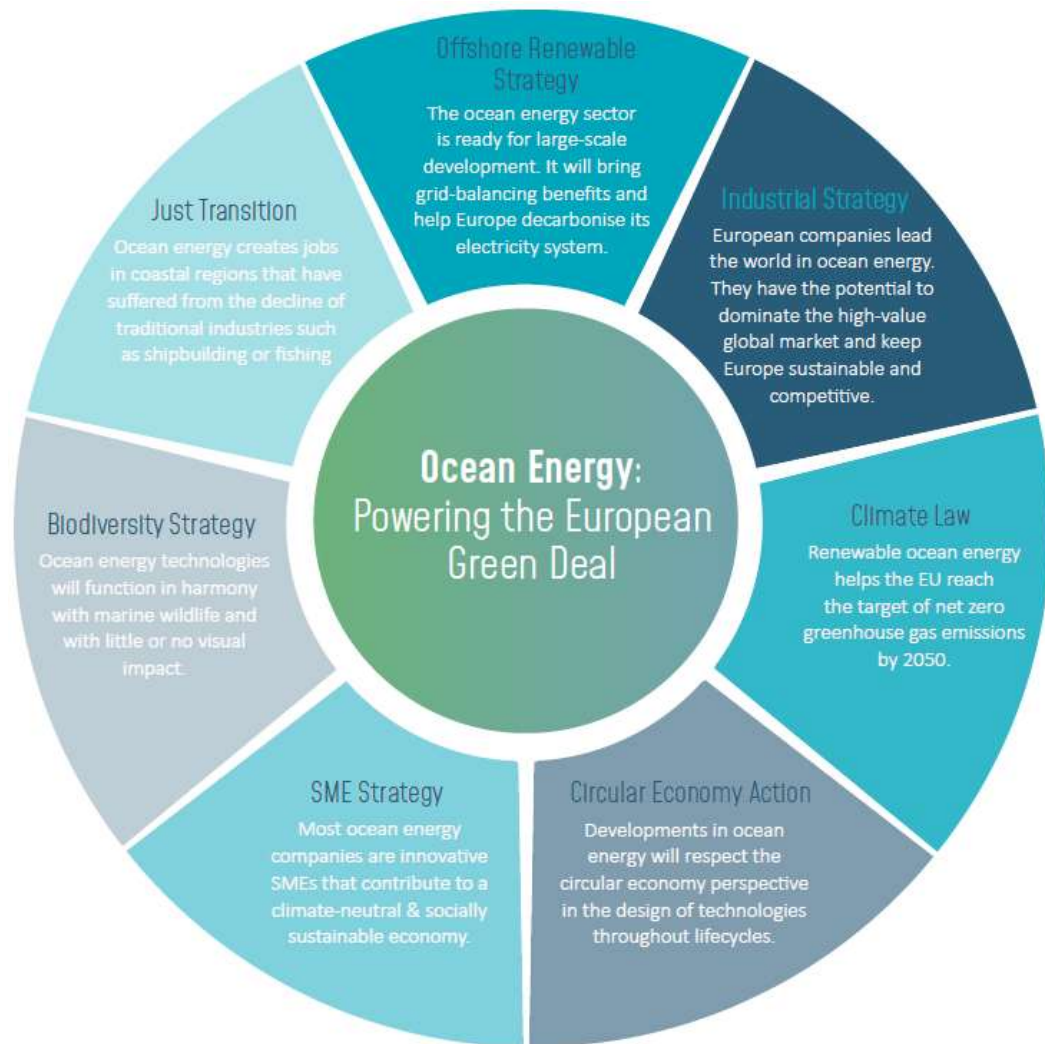






- A reference document for the whole ocean energy sector and specifically for **public funding organisations** (EC, Member States and Regional Agencies) with the aim of inspiring research calls.
- Updates **key priority challenge areas** for research, technology development and innovation from the previous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

[Link to download](#)

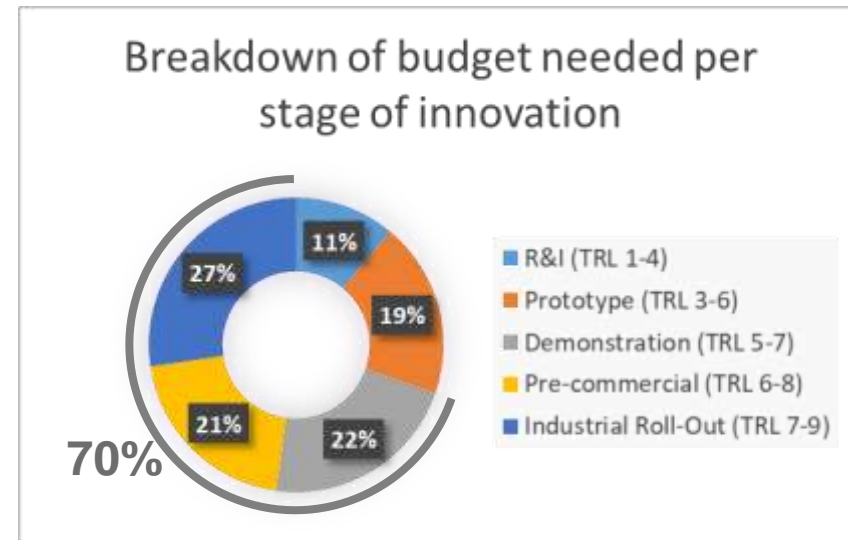
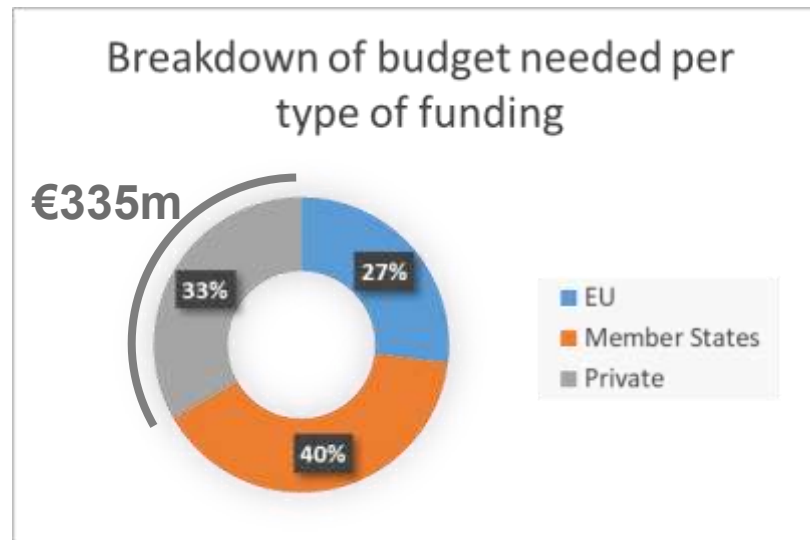
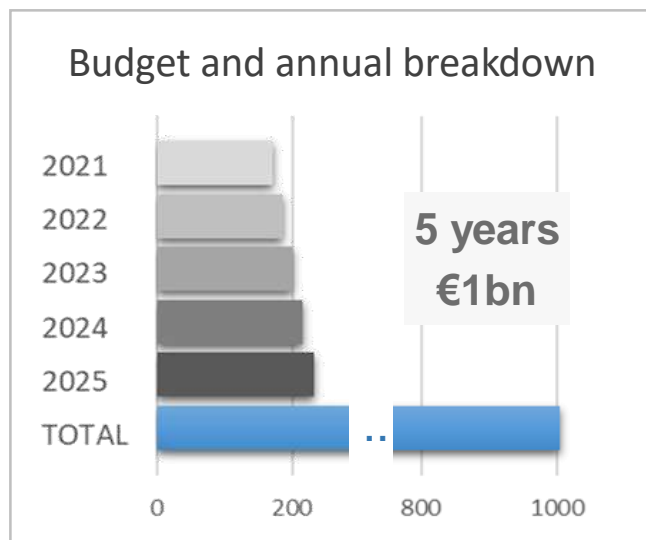


Ocean energy for a 100% decarbonised Europe and aligned with the objectives of the Green Deal

[Ocean energy: The next big thing in energy](#)

# Public funding will leverage private investment

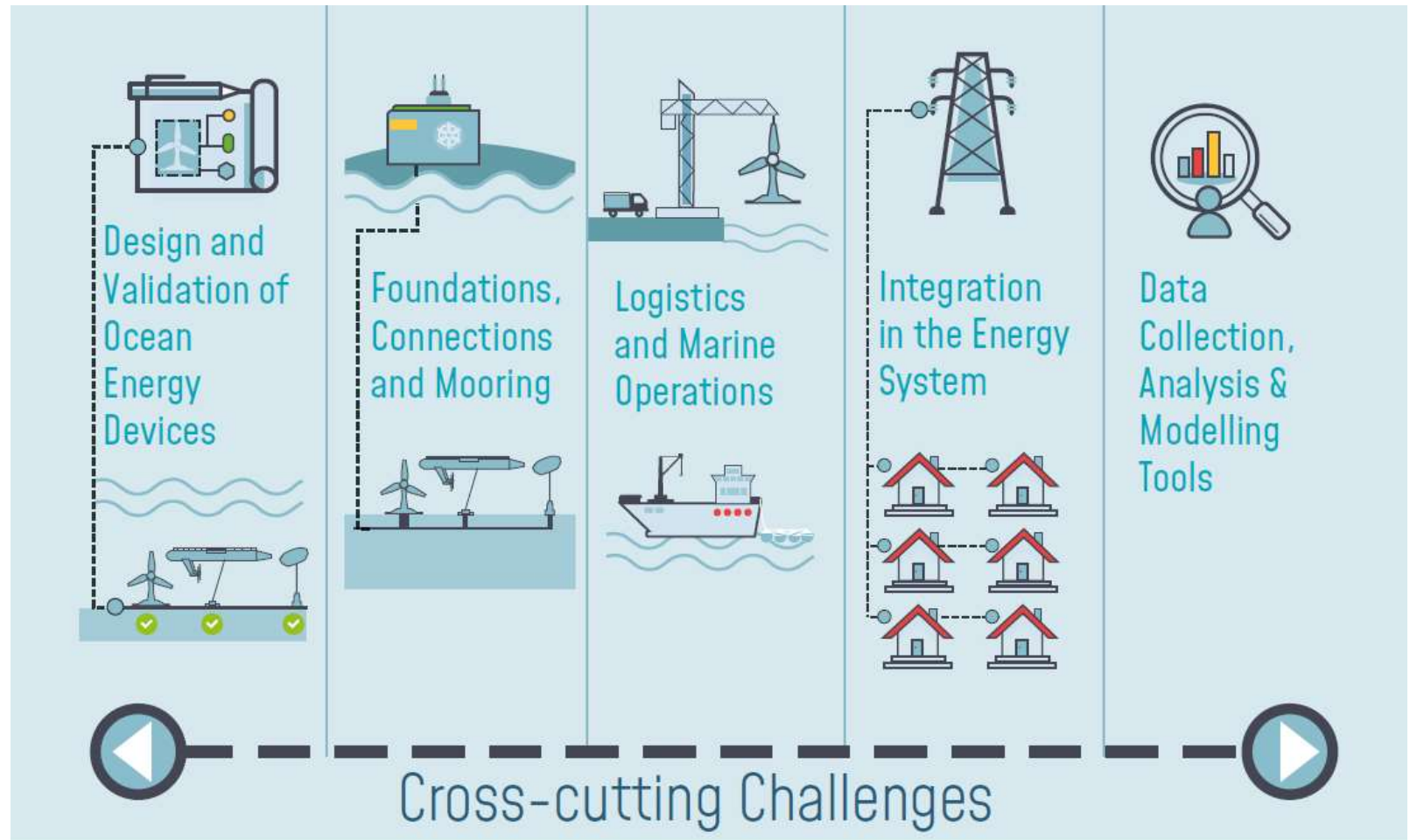
The right EU and national public funding at the right stages of development can attract and unlock significant volumes of private investments.





# Challenge Areas

- Not to be addressed in isolation
- Implementation driven by a systemic innovation approach
- Optimal balance between open data and confidentiality
- Contribute to the expected impacts described in each Priority Topic
- Demonstrate a wider impact on European Green Deal objectives



# Priority Topics

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)

## 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

# Reliability: A common challenge for ocean energy devices

Several priority topics mentions “reliability” when identifying actions or expected

Challenge Area	Priority Topic	Reliability
 Design and Validation of Ocean Energy Devices	Farms; Devices; PTO and control systems	 ACTIONS  EXPECTED IMPACT
	Innovative materials; Tidal blades and rotor; Other ocean energy technologies	 EXPECTED IMPACT
 Foundations, Connections and Mooring	Foundations and connection systems	 ACTIONS
 Logistics and Marine Operations	Instrumentation for condition monitoring	 ACTIONS
 Data Collection & Analysis and Modelling Tools	Marine and meteorological data	 EXPECTED IMPACT



# Thank you

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