



Strategic Research & Innovation Agenda (SRIA)

TWG Webinar - 02 December 2019

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Introduction





Strategic Research and Innovation
Agenda (SRIA)



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

Objectives

- 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
- Defines specific objectives and actions to carve the path towards **Ocean Energy commercialisation**
- Developed in close cooperation with **sector stakeholders**
- To be published in **January-February 2020**



European Technology & Innovation Platform for Ocean Energy

Strategic Research and Innovation
Agenda (SRIA)



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

Methodology

- Formation of **Technology Working Group**
- Identification of **priority technology development topics**
- A series of webinars and consultations to **collect feedback**:
 - Validate the identification of priority areas (June)
 - Validate the SRIA structure (September)
 - Draft SRIA with challenge areas and priority topics (November)
 - Validate the draft contents of the SRIA (November, December)
- Final document to be **approved by the EC** (Dec-Jan)
- **Public version**, including editing and formatting (Jan-Feb)
- Further webinars and workshops **to subsequently exchange on the identified priority topics** (2020-2021)

Today's objective

- The purpose of this webinar is to highlight changes in the Strategic Research and Innovation Agenda to get **feedback from TWG** and to ensure it covers the sector needs
- **Why** we are bringing this work to the TWG?
 - The TWG has a broad, diverse base of knowledge and experience with which to validate the SRIA content
 - The TWG has been already consulted to validate the SRIA structure and a draft version with challenge areas and priority topics
- **What** we need from you (after the webinar)

You will receive an email directly after the webinar with this presentation, a draft version of the SRIA and a feedback questionnaire.

 1. Please review the draft SRIA.
 2. Please complete the questionnaire by 12 December.

Feedback questionnaire

Please take a look at the Priority Topics for your area of expertise under each Challenge Area and answer these questions:

Please indicate which Priority Topic you refer to:		Mark your answer with an X	Justification for your answer
1. Are the proposed actions sufficient to cover the needs of the sector?	Yes		
	No		
2. Is the proposed TRL realistic?	Realistic		
	Too high		
	Too low		
3. Is the indicated budget sufficient to tackle this challenge? <i>Please choose all that apply.</i>	Sufficient		
	More actions needed		
	Bigger actions needed		
	Smaller actions needed		
	Fewer actions needed		

Summary of changes from last draft





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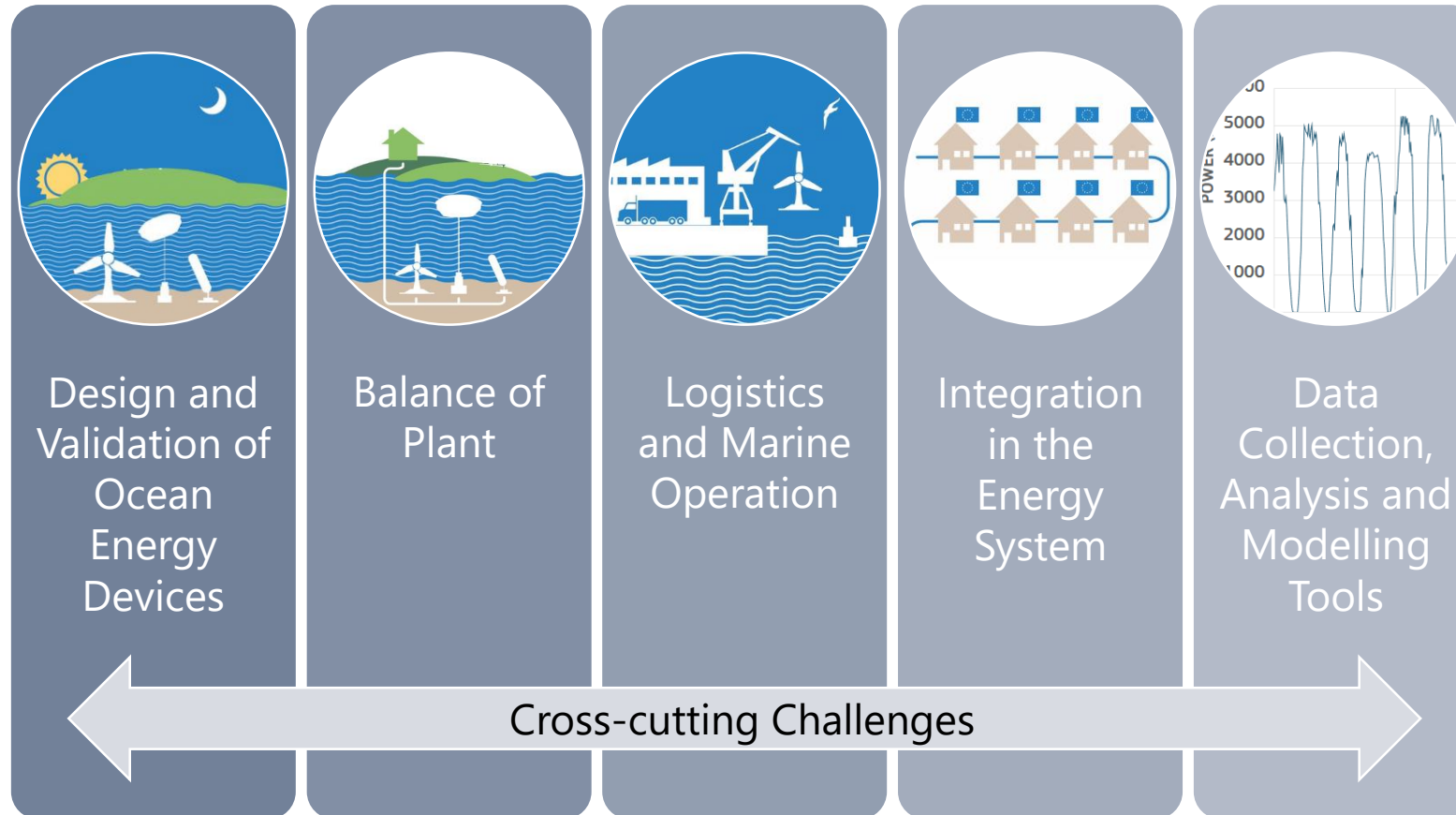
Foreword

1. Ocean Energy Opportunities and Needs
2. Description of Technology Priority Areas
 - 2.1 Design and Validation of Ocean Energy Devices
 - 2.2 Balance of Plant
 - 2.3 Logistics and Marine Operations
 - 2.4 Integration in the Energy System
 - 2.5 Data Collection, Analysis and Modelling Tools
 - 2.6 Cross-cutting Issues
4. Funding Research and Innovation
4. Future Outlook
5. References
- Annexes

SRIA Structure

- **Foreword** by the Steering Committee chairperson
- Ocean energy **context**
 - Brief state of the art on ocean energy technologies
 - Main opportunities for the ocean energy sector
 - Needs and obstacles to overcome
- Description of the prioritised **Challenge Areas**
 - Selected **priority topics**, their applicability and scope
 - **Actions**, expected impact, TRL and budget required
- **Instruments for funding** research & innovation actions (**New**)
- **Future Outlook**, i.e. indications for future updates
- Annex: Summary of the prioritisation **methodology**

Challenge Areas: Research and Innovation Priorities



Progress on SRIA contents development

Foreword: Pending, by the Steering Committee chairperson

Section 1: Drafted

1. Ocean Energy Opportunities and Needs
 - 1.1 Ocean energy technologies
 - 1.1.1 *What is Ocean Energy?*
 - 1.1.2 *Ocean Energy Technologies*
 - 1.1.3 *Technological Progress*
 - 1.2 The EU Green Deal will be powered by blue energy
 - 1.3 From vision to reality
 - 1.4 Prioritisation of RTI

Section 2: Revised according to feedback received

Section 3: New!

- Suggested during the feedback process
- Instruments for funding research & innovation actions
- Roughly outlined, for feedback

Section 4 and Annexes: Pending, final version for EC review

How we are addressing the feedback received



Sources of Feedback Sought

Stakeholder Body	SRIA Structure	Partial Draft	Full Draft
Technical Working Group (TWG)	Webinar (1) Q&A Written Feedback (6)	Webinar (1) Q&A Written Feedback (5*)	Webinar (1, today) Q&A Written Feedback
European Commission (EC)		Call (1) Q&A (6) Written Feedback (1)	Meeting (1) Q&A Written Feedback
ETIP Ocean members		Webinars (2) – wave + tidal Q&A (10 + 8) Written Feedback	
Steering Committee (SC)	Meeting (1) Q&A		Meeting (1) Q&A Written Feedback
SET Plan members			Webinar (1) Q&A Written Feedback

Overall Considerations

- Most contributions improved the quality of the document
 - Directly included (literally or by adapting the description)
- Feedback reflected in one challenge/priority but better be fitted in other
 - Moved and/or clarified the interrelationships
- Higher level reflections
 - Discussed among consortium partners and with SC
- Requests for clarifications
 - This webinar, for common issues, or individual replies if very specific

Feedback topics (1)

- A circular economy approach should drive technology development
- The challenge areas support the design and validation of devices
- Budget allocation, method for the estimation budget needs, size and number of projects
- Clarify terminology (e.g. "MRL", "action", "scope", "expected impact")
- Be less prescriptive in the description: problem vs solution
- Competition works - create market pull and solutions will emerge.
- Missing research topics (e.g. electric infrastructure, PTO for tidal, installation tools, basic research/FET, ...) vs focus on most critical aspects, not everything can be funded
- Potential overlaps between priority topics (e.g. 2.1.1 Demonstration of devices and 2.4.1 Near-commercial applications)

Feedback topics (2)

- The whole value chain should be involved
- Priority areas not equally important: different size of the challenge, previous progress, ...
- What full-scale is?
- Reliability, Availability, Survivability and Maintainability at component/system level.
- Onshore/dry testing should come first – more cost-efficient and lower risk
- New materials also relevant for moorings and foundations
- Increase knowledge on loads acting on devices and components, fatigue drivers, ...
- Develop standardised solutions (e.g. SCADA, digital twin)

Feedback topics (3)

- Importance of marine operations in cost reduction
- Is open access data a good idea?
- Early certification could stifle innovation
- LCOE should not be the only metric; focus on RAMS, FMECA?
- Suggested other benefits (e.g. less sensitive to sabotage, better LCA, security of supply)

Some clarifications to common issues

- LCOE: ultimate metric as considered in SET Plan. Also reflects the impact of better RAMS. Other aspects (reliability, manufacturability, de-risking...) also mentioned in the “Expected impact” of challenge areas and priority topics.
- Definition of Actions in the context of this SRIA:
 - A set of activities leading to a measurable impact on the priority topic of interest.
 - Depending on the level of ambition, one or several Actions could be grouped to make up a Project
- Global budget required in line with the SET-Plan Implementation Plan (period 2021-2025). The budget of each selected topic reflects the effort to overcome its specific challenges.
- The SRIA is mainly targeted to public funding organisation:
 - Limited budget & timeframe → prioritisation based on urgency and opportunity for the sector
 - It should not propose solutions but challenges and problems.
 - Individual R&D plans can include topics not prioritised in the SRIA

Thank you – Questions?

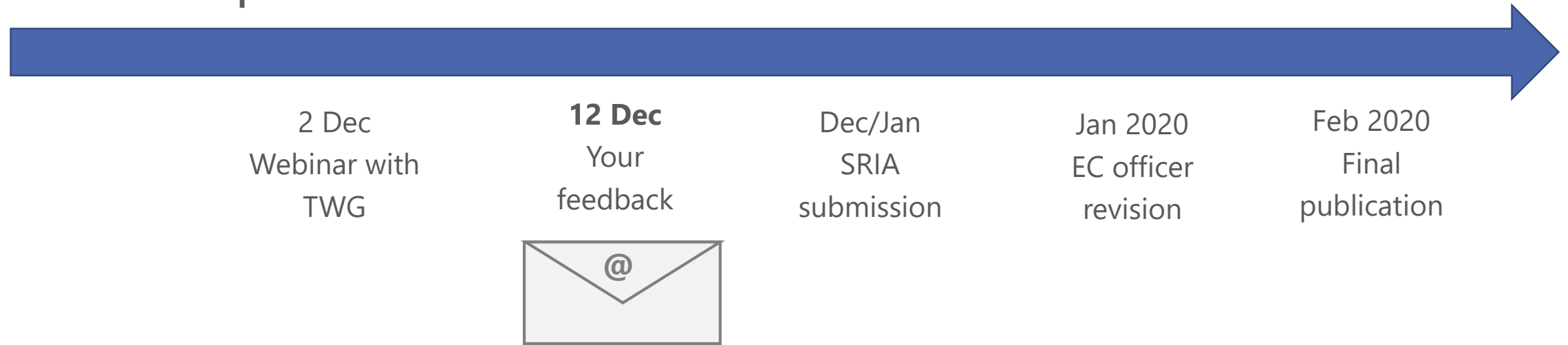
Pablo Ruiz-Minguella, Joannès Berque, Jose Luis Villate – TECNALIA



Next steps



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