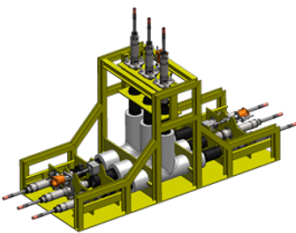


## Subsea Smart Hubs JIP

### Towards the standardization of alternative IAC architectures for floating wind

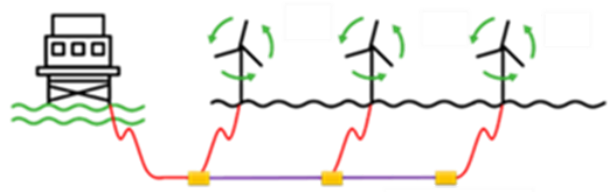
**SuperGrid Institute, Aventa and SCM join their force to take a step towards the cost and risk effectiveness of alternative inter-array cabling solutions based on subsea hubs for floating wind.**



The current development of subsea hubs opens the door to alternative inter-array cabling approaches that will cut down floating wind farm LCOE by reducing IAC CAPEX and wind farm OPEX and offering new risk management opportunities through operational flexibility.

Building upon a complementary expertise, SuperGrid Institute, Aventa and SCM are launching a joint study to align the value chain on design and operational principles of alternative IAC architectures for the future commercial farms:

- Set layout, installation, operations, maintenance and repair principles.
- Set subsea hubs target functions (including electrical system and connection system) & prices.
- Evaluate costs, risks & production gains of alternative inter-array cabling solutions.



#### A POOL OF COMPLEMENTARY EXPERTISE



**High Voltage Electrical Systems Specialists**  
*European leading innovation partner*



**Subsea Power Cables & Marine Renewable Energy Specialists**  
*Engineering services provider*



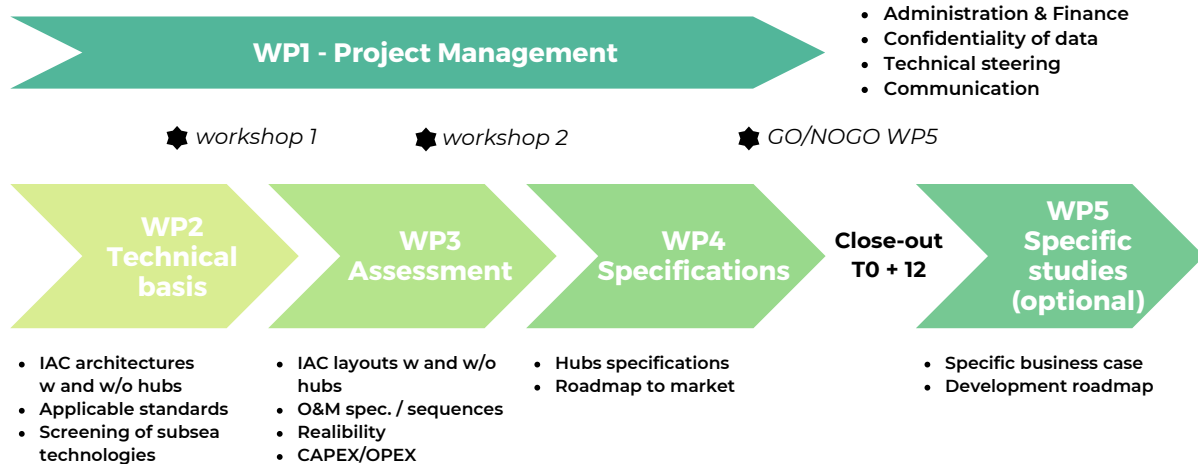
**Subsea High-Voltage (dry- & wet-mate) Connector Specialists**  
*World leading provider of subsea Connection Systems for harsh environments*

#### PROJECT OVERVIEW

- Sponsoring / Participation / Full access to results: open for farm developers
- Advisory: 4 Developers already registered - open for more
- Format: desktop works, regular 1-to-1 interviews, industry workshops, synthesis reports
- Duration: Sept 2024 - Sept 2025
- Project budget: 400 k€
- Planning: Launched in September 2024
- Participation fee: 60 k€



## PROJECT STRUCTURE



## WORK PACKAGES OVERVIEW

The **Project Management package (WP1)** will cover administrative, legal and financial activities as well as technical steering, project delivery quality control and communication.

The **Technical Basis package (WP2)** will synthesize market trends and current approach of field layout design, installation, operations, maintenance, cable repair, review and gap analysis of applicable standards (design, qualification) related to subsea cables and subsea connections, review subsea technologies (power & optical connectors, subsea electrical equipment, wet-mating technologies) with respect to functions, maturity, prices, reliability, system integration specificities.

It will lead to the definition of : target IAC cabling candidates (loop, fishbone and star architectures), target hub properties (mating mechanism, HV electrical systems, ...) and target project conditions (farm size, voltage, site conditions, ...). An initial high-level pros & cons analysis will be delivered.

Based on the framing effort and initial comparison of WP2, the **Assessment package (WP3)** will iteratively detail IAC cabling candidates (layout, installation principles, O&M specifications and strategies, including normal & failure modes management, preliminary methods statement) ; evaluate the candidates (CAPEX/OPEX, operational flexibility, installation, maintenance and repair time) ; and select best candidates at each step (funnel approach).

The **Specifications package (WP4)** will synthesize specifications, main gaps (technologies, standards, supply chain ...) of best IAC cabling candidates as well as target subsea hubs functions, prices and time-to-market.

The **Specific Studies package (WP5)** is optional and dedicated for participants interested to explore specific business cases or engage in further alternative IAC deployment roadmap.

### Get in touch!

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