# marinerg-i





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# **Abbreviations**

ESFRI	European Strategy Form on Research Infrastructures				
ERIC	Energy Research Infrastructures Consortium				
ORE	Offshore Renewable Energy				
R&D	Research and Development				
DRI	Distributed Research Infrastructure				
CEO	Chief Executive Officer				
CMO	Central Management Office				
STQEAC	Scientific, Technical, Quality and Ethical Advisory Committee				
EC	Executive Committee				
AM	Assembly of Members				

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#### 1. Introduction

Emerging Offshore Renewable Energy (ORE) technologies that capture power from waves, tidal streams and offshore wind are showing great potential to become mainstream global energy supply systems. To fully realise this potential, research is required on technology development and optimisation, specifically in systems supporting technology installation and maintenance, improvement in balance of power plant efficiencies, together with the production of standardisation methods to enable quantification of performance assessment and bench marking.

Europe is currently regarded as the sector lead with a significant amount of research and development work and commercial deployment being undertaken. This is being complemented with the development of supporting infrastructures and personnel capacity to meet the demand for new expertise and up-skilling. In order to galvanise investment and technology developments, whilst supporting the evolution and delivery of a global offshore renewable energy sector, an ESFRI (European Strategy Forum on Research Infrastructures), Distributed Research Infrastructure (DRI) is necessary to facilitate the timely delivery of a sustainable offshore renewable energy sector.

As outlined in the MARINERG-i Value Proposition (D7.8) most of the research infrastructure needed to undertake the scientific studies to address the identified research agendas already exists as a result of significant investment by member states. However, working individually, member states do not have the capability to support the scientific work that needs to be undertaken to address the Strategic Research Agendas identified for the EU.

In order to integrate these DRIs with a common purpose to support the emerging European offshore renewable energy sector, the MARINERG-i DRI will be established. This will be a modern, efficient, high quality, state-of-the-art ecosystem of DRIs comprising a cross section of members and stakeholders pre-eminently equipped to undertake cutting-edge research. The MARINERG-i network will include DRIs where fundamental ocean and offshore wind research and energy technologies can be tested with varying levels of complexity across the full range of Technology Readiness Levels (TRLs) 1-8. MARINERG-i members will be united to form a partnership of testing facilities with clear common foundational objectives and a highly evolved cooperation model.

The value and integrity of the MARINERG-i proposition have already been recognised as an emerging project on the ESFRI roadmap. There is now meaningful consensus among participating Member States (MS) and their respective infrastructures, that MARINERG-i is necessary to facilitate the timely delivery of a sustainable offshore renewable energy sector. The partners have also agreed that the European Research Infrastructure Consortium (ERIC) structure provides the optimal legal framework.

The corporate governance and operational structure will ensure MARINERG-i has the stability, legal governance and a means to become a globally recognised and sustainable leader operating a range of pan-European ORE research infrastructures and services. This unique platform will empower and support the scientific development and accelerate the impact of research outputs to realise clean energy extraction from European coastal waters.



## 2. MARINERG-i Legal Framework

The framework and legal governance for the MARINERG-i DRI has been extensively evaluated and reported in project Deliverables 5.2 and 5.6. These reports have defined an ERIC as the legal framework against which the ESFRI DRI will be structured and registered. The ERIC will be grounded in legal statutes as reported in Deliverable 5.7 'Statutes of MARINERG-I ERIC' with all associated contracts governed by the European Legal Convention and enacted under the legal laws of Ireland.

The country of registration for the MARINERG-I ERIC will be Ireland, with the laws of Ireland taking precedence in all operations and corporate reporting. While the MARINERG-i DRI will legally operate as a pan-European ERIC, all contracts and agreements shall be governed by and construed in accordance with Irish law. Therefore, all parties entering into contract with the MARINERG-i DRI will submit to the jurisdiction of the Irish Courts.

### 3. MARINERG-i Corporate Governance

The corporate governance requirement for the MARINERG-i ERIC is that it is a Not-For-Profit entity. As such, all surplus capital has to re-invested in its operations and/ or infrastructure upgrades. Governance reporting of all ERIC related cash flows and operations will be undertaken on an annual basis to the authoritative body, the Assembly of Members which is formed from Government representation of member countries signed up to the ERIC. The reporting is in accordance with Article 17 of EC no. 723/2009 and under the responsibility of the ERIC DRI Chief Executive Officer.

The operational structure of the MARINERG-i DRI and how it interacts and engages is shown in Figure 3.1. This is further described below.

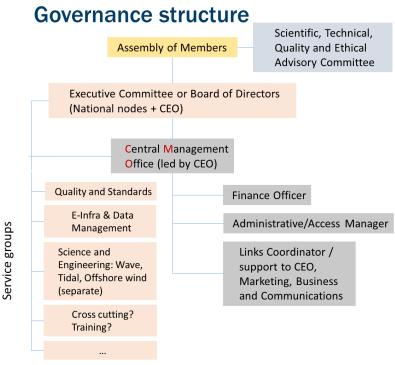


Figure 3.1: MARINERG-i Governance Structure



- **3.1** The Assembly of Members (AM) will govern the MARINERG-i DRI and acts as the ultimate decision making body. The AM will be formed and become operational once the MARINERG-i DRI is established as an ERIC. The AM will assume the role of a non-executive body overseeing and reviewing the implementation of the MARINERG-i DRI against predefined objectives. The AM will be composed of delegates of member states, 1 per member country (as per the draft statutes D5.7). The AM will receive strategic advice on the direction and success of attainment of the MARINERG-i DRI from the Scientific, Technical, Quality and Ethical Advisory Committee
- **3.2** The Scientific, Technical, Quality and Ethical Advisory Committee (STQE AC) will be responsible for expressing opinions on the matters of scientific, technical, quality and ethical nature which may influence the work being carried out. To give the STQE AC credibility, its members will be internationally recognised experts with the necessary experience. They will be appointed by the agreement of member countries of the AM. The AM, with the advice of the STQE AC, will take on the role of the regulatory body to ensure the MARINERG-i DRI is fully compliant in its implementation.
- **3.3** An Executive Committee (EC) will be collectively appointed by the AM and consist of representatives of the research institute that will serve as the National Node in each country respectively. The EC will assume executive responsibility on advising and structuring the development and implementation of MARINERG-i DRI. It will appoint a CEO who will assume day-to-day operational responsibility in order to meet the MARINERG-i DRI objectives. The Chief Executive Officer (CEO) will report to the EC and assume responsibility for a Central Management Office.

# 4. MARINERG-i Operational Structure

- **4.1** The Central Management Office (CMO) is the vital operational component of the MARINERG-i DRI, being responsible for the day-to-day operations and supporting the EC in implementing the decisions of the AM. Within the first three years of formation of the MARINERG-i DRI on the ESFRI 2021 Roadmap (2022- 2025), the CMO will assume executive powers. During this period, the CMO will act primarily as the operational and strategic arm in establishing the MARINERG-i DRI as an ERIC. Once the MARINERG-i DRI is registered and functioning as an ERIC, the CMO will be vital in promoting:
  - the MARINERG-i DRI as an ERIC;
  - as a brand to other countries and to stakeholders;
  - the launching a streamlined and integrated range of services for users;
  - in spurring innovation partnerships and securing new funding from different sources for the operation, maintenance, expansion;
  - strategic development of the combined facilities within the overall portfolio of DRI;
  - marketing, business development & communications, promoting the MARINERG-i brand worldwide to facilitate the exchange of information inside the scientific community and to attract new users and stakeholders.

Roles within CMO include: Chief Executive Officer (CEO); Finance Officer (FO); Administrative and Access Manager (AAM); and Links Coordinator (LC).

The role of the CEO will include responsibilities for day-to-day operations of the CMO, management of all staff working in the CMO, planning, coordination and ensuring delivery

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of the CMO activities, and reporting progress and future developments to the Executive Committee.

The FO will report to the CEO and manage the financial business of the operations of the MARINERG-i DRI. The FO will ensure the cash flows of the MARINERG-i DRI are sufficient to attain the objectives of the MARINERG-i DRI. They will provide 1/4ly financial statements associated with business operations together with identification of opportunities to attain financial sustainability at the earliest opportunity.

The AAM will be responsible for the linkage between the MARINERG-i CMO and the DRI's. They will be the liaison person between the CMO and the DRI and will work with the DRI's to coordinate access. They will take on the role of the public interface and actively promote and advertise the capabilities and services offered by the MARINERG-i DRI. The AAM will be the contact point for all new DRI's looking to become involved in the MARINERG-i DRI and manage the integration of new/ additional infrastructures joining.

The LC will be responsible for the linkage between the MARINERG-i CMO the wider offshore renewable energy research and industry communities and Government agencies responsible for the policy development supporting ORE. They will be the linkage to the ORE industry and use this to inform business development of the MARINERG-i DRI. The will also lead in International engagement, promoting the expansion of and collaborative opportunities with the MARINERG-I DRI.

- **4.2 Service Groups (SG)** are specialist subject specific groups structured to provide expert support to those who wish to physically or virtually access infrastructure and/or data archives for testing or other R&D purposes. The SG will also provide subject specific expert support to the CMO and EC in the implementation of the MARINERG-i scientific research agenda e.g. identifying emerging research challenges and new scientific areas as well as new/emerging infrastructures to be included when expanding the MARINERG-i DRI. Appropriate experts will be appointed to a SG's by the CMO/ EC and the number and subject of each SG will be created as needed. Subject specific SGs to be initiated upon the MARINERG-i DRI launch will include the following:
  - Quality and Standards: develops and implements the MARINERG-i quality and standards policy and procedures, and is responsible for strategic standardization planning processes, auditing and compliance.
  - e-Infrastructure and Data Management: is responsible for developing and implementing the MARINERG-i data policy to ensure effective curation and controlled access to data & analytical services (including remote access). This SG will also collate and manage exemplar hi-resolution scientific big-data basis collated and populated from infrastructure testing practices.
  - Science and Engineering: is responsible for supervising implementing and reviewing technological, engineering and standardisation practices across the distributed infrastructure. This Service Group works thematically across wave, tidal and offshore wind to implement interoperability & best practice, and to foster convergence towards mature technologies and develop improved testing & operating methods.

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 Cross Cutting and Training: is responsible for supporting, implementing and reviewing technological, engineering and standardisation practices across the distributed infrastructures for supporting technologies and new topic areas. These include station keeping, balance of plant, new materials development and new engineering solutions.

**4.3 National Nodes (NN)** act as conduits between the MARINERG-i DRI and interested parties and stakeholders within individual Country members. NN's will engage with the National bodies with responsibilities for the development of ORE within their respective countries and the LC to provide feedback on National policy focus and development. This will enable the MARINERG-i DRI management to develop and evolve operations to inform and enhance the effectiveness of the MARINERG-i DRI in the delivery of ORE development as it strives to become a commercial industry. NN's will also engage with national ORE infrastructures, including those not currently aligned to the MARINERG-i DRI. This is to keep each of these updated on MARINERG-i DRI developments, engagement opportunities and routes to participation/ membership. The NN's will provide feedback to the MARINERG-i DRI on national policy developments in order to evaluate both impact and opportunities for the MARINERG-i DRI evolution. Working with the LC, the NN's will look to align national research frameworks with those of the MARINERG-i DRI and identify opportunities for research collaboration across the DRI's together with co-funding mechanisms.

#### 5. Conclusion

This deliverable provides an overview of the Country legal framework the MARINERG-i DRI will be registered within and obliged to operate under, together with the governing laws of the land ERIC registration and contracting will be governed. This also reports the Corporate Governance structure that will be implemented together with the regulatory framework the MARINERG-i DRI will operate against. The operational hierarchy for effective operations is defined, while the activities and responsibilities of each of the roles within the MARINERG-i DRI is identified. This will enable the MARINERG-i DRI to operate highly effectively from its launch to becoming self-sustaining within 10 years of acceptance onto the ESFRI roadmap.