



WEBINAR: MARINERG-i Testing Services & Opportunities

14th October 11:00-12:00 CET

The MARINERG-i_PP project has received funding from the European Union's Horizon Europe INFRADV programme under grant agreement No. 101128668

Introduction



- **Introduction**
- **Testing services**
- **RISEnergy**
- **Q&A**

Vision



MARINERG-i will be an **independent legal entity of distributed testing infrastructures**, an integrated centre for delivering Offshore Renewable Energy (ORE).



By **consolidating expertise, investment and access to infrastructures**, the MARINERG-i Distributed Research Infrastructure (DRI) will foster innovation across ORE technologies at all stages of development.



As the only integrated ORE platform of this scale worldwide, it will be the **epicenter of this developing industry**.

Mission



Technical de-risking & increasing investor confidence through the development and implementation of **best practices; quality metrics; standards.**

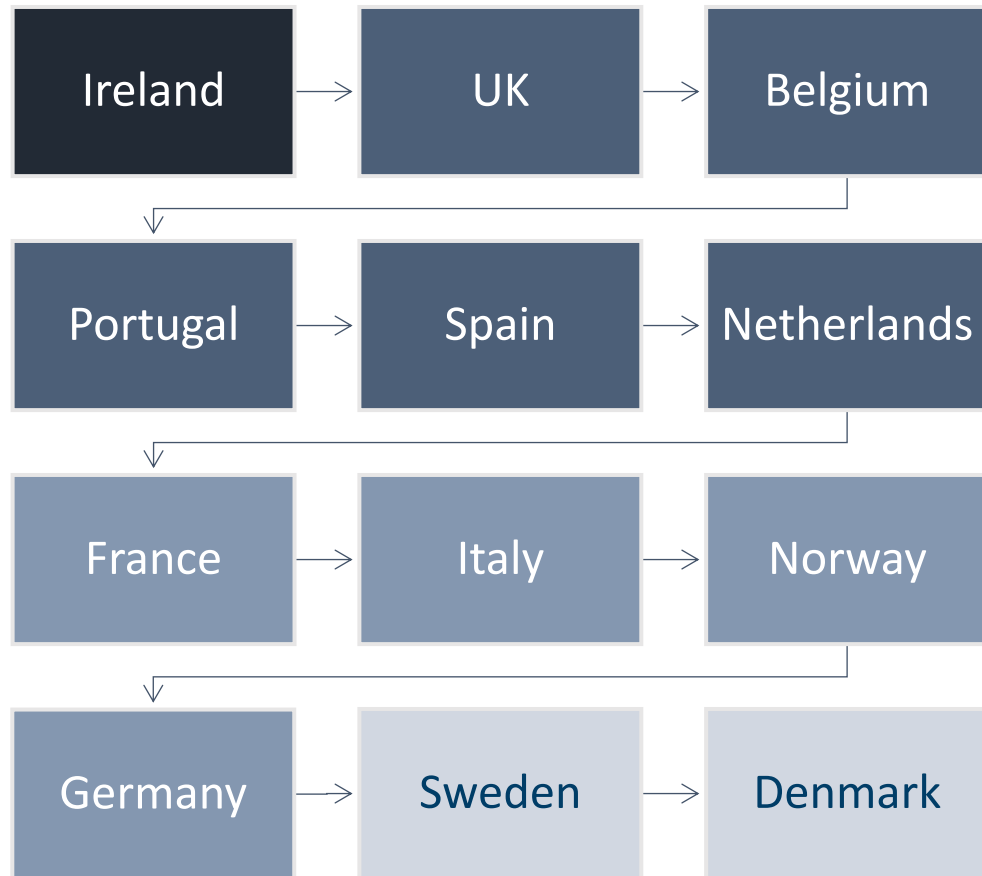


Leverage existing local knowledge and capabilities to accelerate the development of the ORE industry.



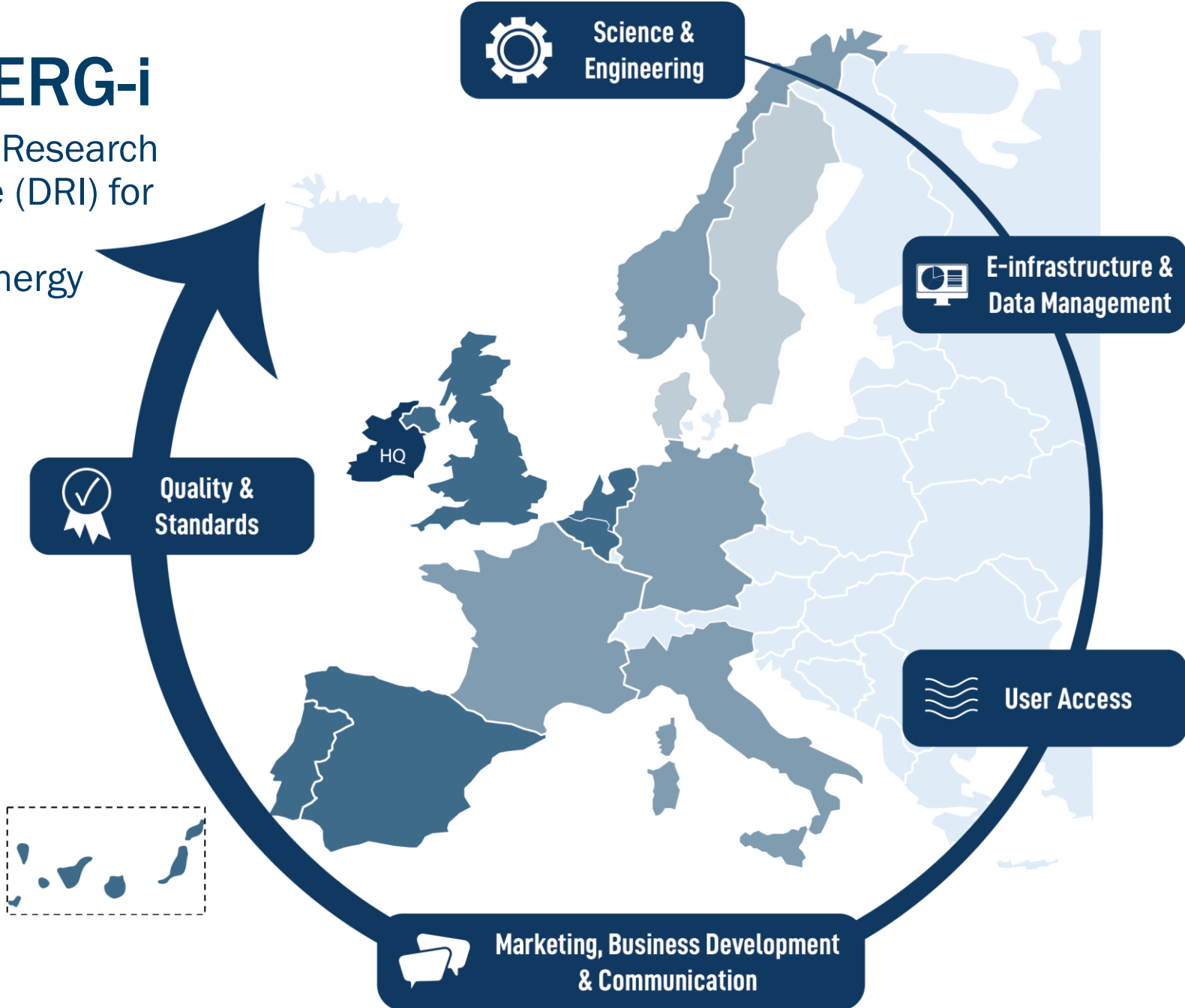
Informing national and EU **policy** and **investment strategies** and consolidate European leadership in the ORE sector.

Membership



MARINERG-i

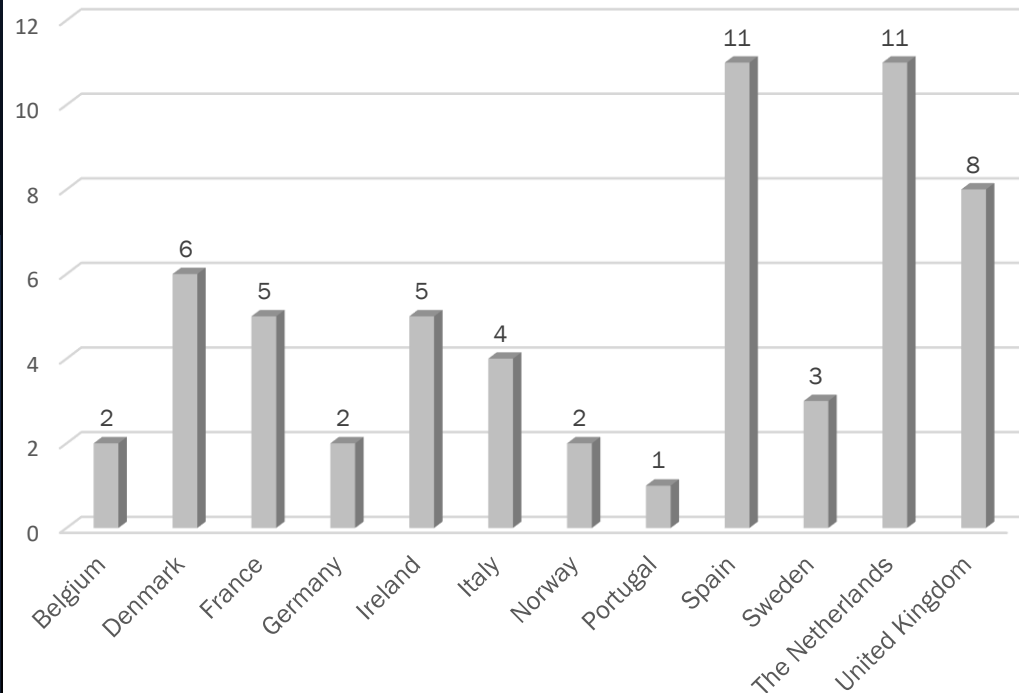
A Distributed Research Infrastructure (DRI) for the Offshore Renewable Energy (ORE) sector



Facilities

60 Facilities with 160 Research Infrastructures

- 38 Facilities in member countries i.e. confirmed political support
- 13 Facilities where countries engaged in becoming members



What services will we offer?



STREAMLINED
ACCESS FOR
TESTING



DATA ACCESS,
CURATION &
PROCESSING



KNOWLEDGE
BASED
DISSEMINATION



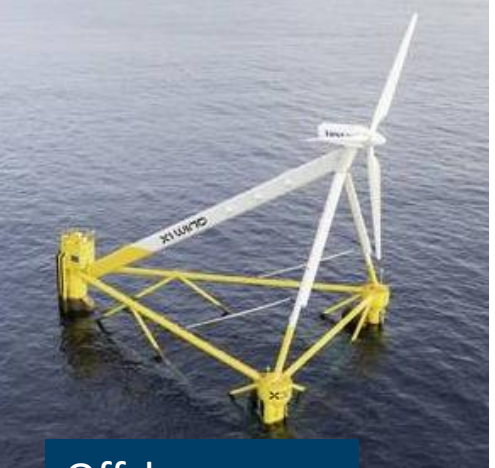
FACILITY
SELECTION



TECHNOLOGY
DEVELOPMENT
GUIDANCE



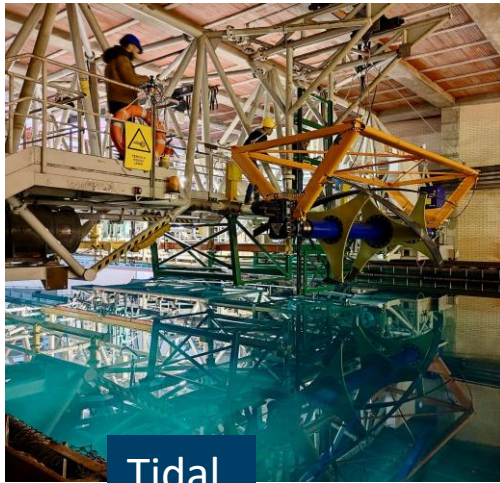
TRAINING



Offshore wind



Wave



Tidal



Floating solar



Mooring systems, anchors & components



Electrical: power quality, performance & grid integration



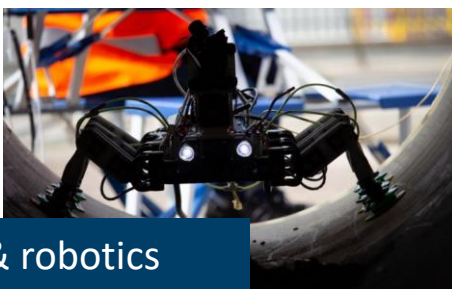
Drivetrains, Generators & Electrical components



Device Components



Logistics & robotics



Structures, Materials, Geotech & Manufacturing



MARINERG-i e-infrastructure

- About:
 - Mission & Vision
 - Members & Participants
- News & Events
- Contact us
- Links

Website



- Common Science Plan
- Research Projects
- Collaboration activities international/industry
- Outreach activities

Science & innovation



- Document store & archive
- Task assignment/tracking
- Internal communications system
- Internal training/staff exchange programmes

Member & Participant portal



- Facility details
- Common Vocabularies
- Document extracts e.g. best practices & standards
- Network & community

Community Portal



- Access application and management
- Training
- Other services TBC

Services Portal



- Datasets available per facility
- Data tools e.g. APIs to access datasets & dedicated vocabulary server
- Virtual Research Environment

Data Portal



Added value



Access

Streamlined services to world-class facilities, tailored to end-user requirements



Standards & Quality

Establish best practices and common standards for testing, ensuring the quality of facilities, & the consistency and comparability of results.



Reducing Risks & Increase Investment

MARINERG-i certification, increased investor confidence - > funding, faster commercialisation & supply-chain development



Collaboration & Networking

Facilitate the scientific integration of centres, augmenting existing expertise and producing new synergies. Expand capacities of individual facilities & foster strategic specialisation.



Planning & Efficiency

Promote strategic planning and operational efficiency to make best use of infrastructures and conduct targeted research to accelerate the development of the ORE industry.



Informing Policy

Develop an integrated knowledge centre that can inform policy and drive innovation to meet targets and consolidate EU leadership in the sector



Increase Funding

EU funding programmes to be channeled through ERICs; Leveraging our network to apply for projects & funding

Question 1 – What is your field of activity in the ORE sector?

- Technology developer - wind energy
- Technology developer - wave energy
- Technology developer - tidal energy
- Technology developer - floating PV
- Technology developer - other (OTEC, salinity gradient,...)
- Project developer - wind energy
- Project developer - wave energy
- Project developer - tidal energy
- Project developer – floating PV
- Project developer - other (OTEC, salinity gradient,...)
- Supply chain service provider - Component provider (sub-components, anti-fouling etc.)
- Supply chain service provider - Substructure (steel etc.)
- Supply chain service provider - Cable and connector provider
- Supply chain service provider - Consultancy services
- Supply chain service provider - Survey services
- Supply chain service provider - Marine operation services (installation, O&M, decommission)
- Supply chain service provider - Onshore logistics
- Researcher - academic
- Researcher - commercial
- Investor
- Other

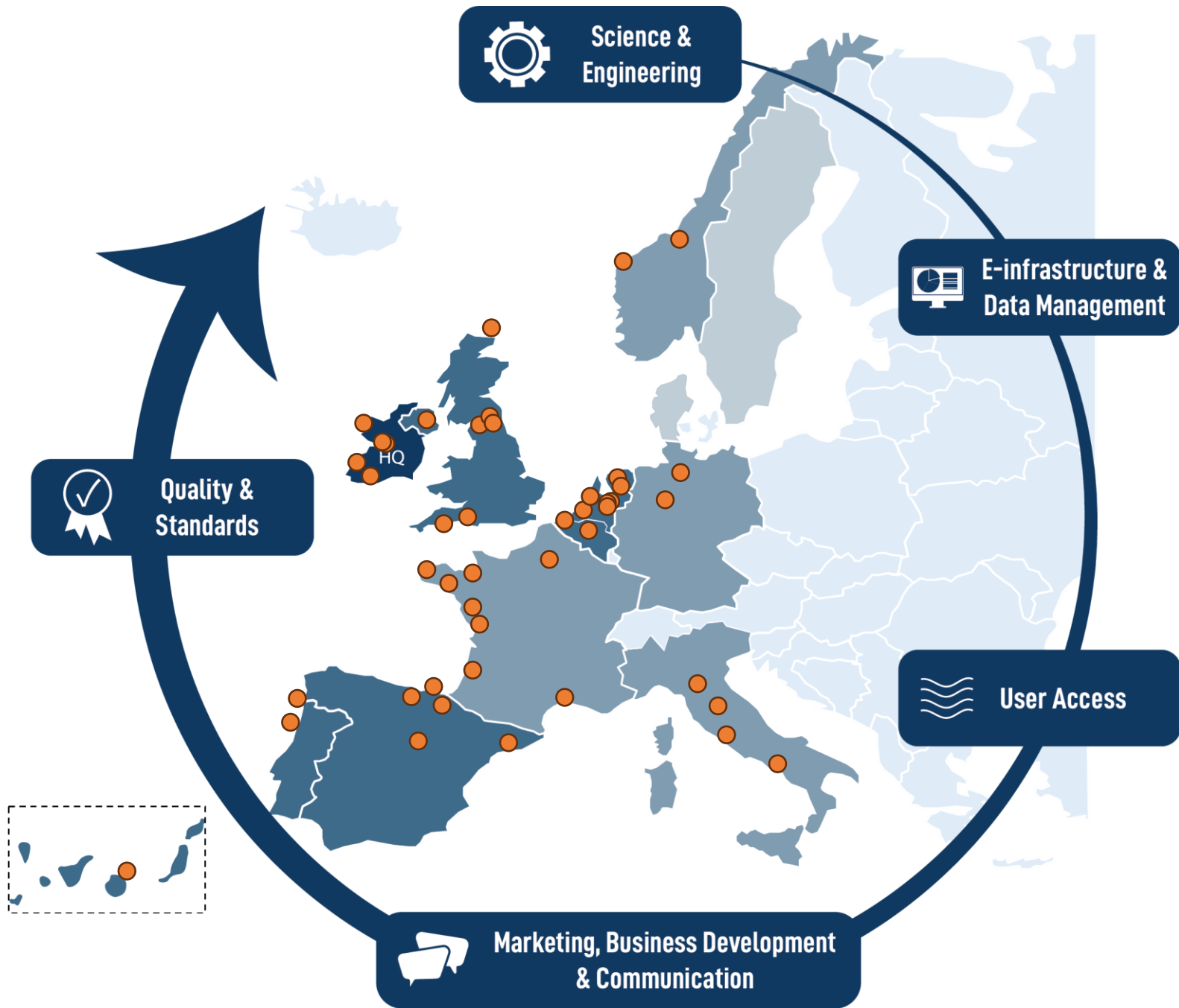
Question 2: What Technology Readiness Level is your concept?

- Options based on standard definition of each TRL (EU version):
 - 1 - Basic principles observed
 - 2 - Technology concept formulated
 - 3 - Experimental proof of concept
 - 4 - Technology validated in lab
 - 5 - Technology validated in relevant environment
 - 6 - Technology demonstrated in relevant environment
 - 7 - System prototype demonstration in operational environment
 - 8 - System complete and qualified
 - 9 - Actual system proven in operational environment
- N/A

Question 3: Have you used any European testing facility?

Testing Services





Science & Engineering



E-infrastructure & Data Management



Quality & Standards



User Access



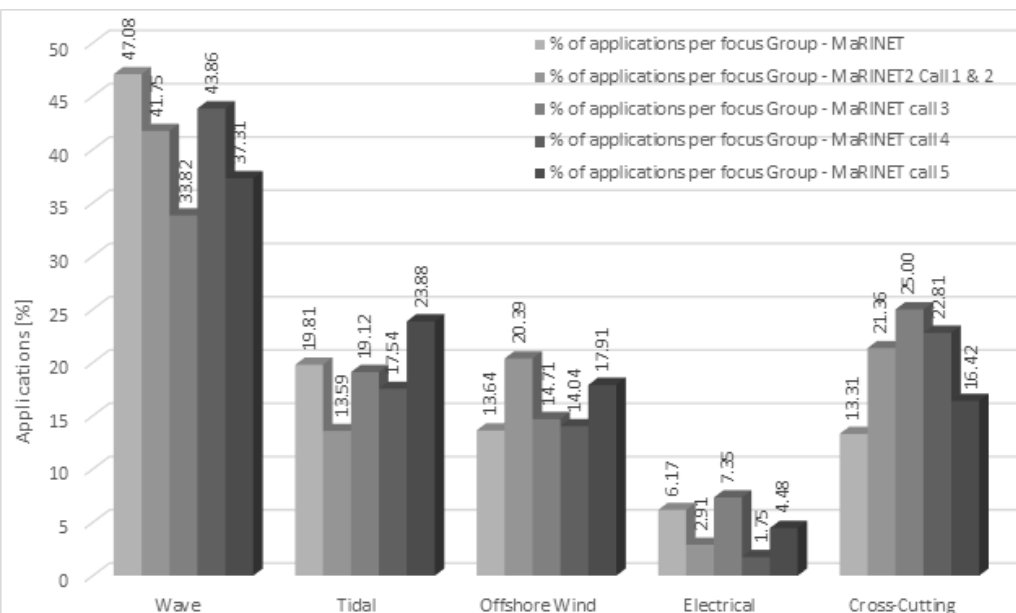
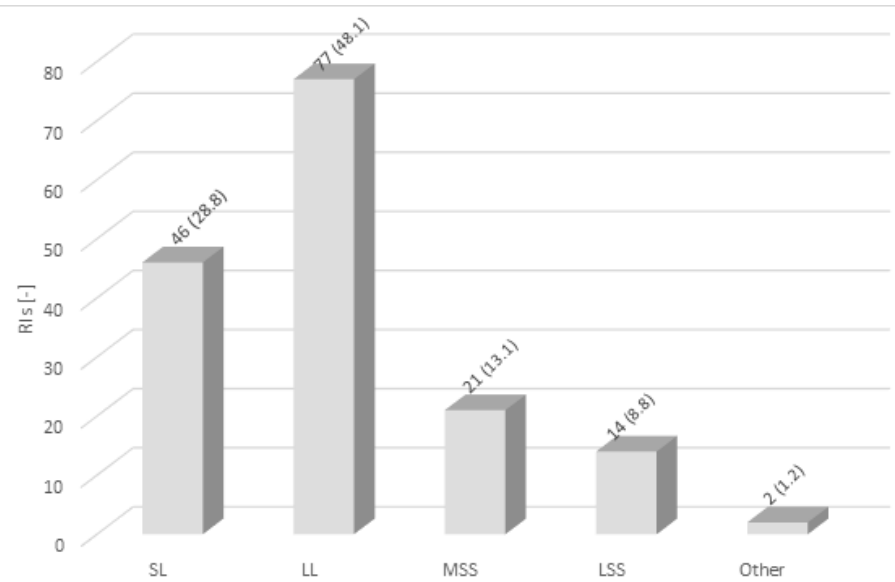
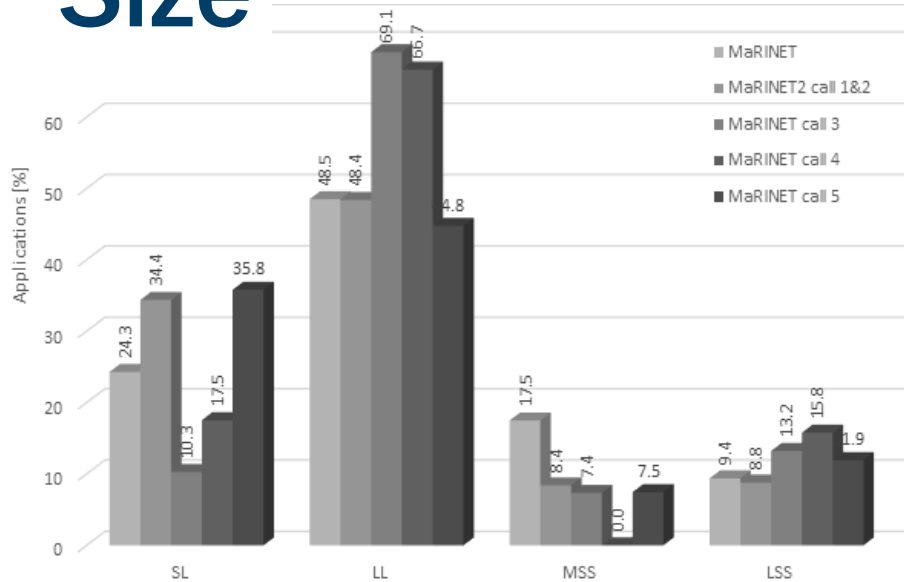
Marketing, Business Development & Communication



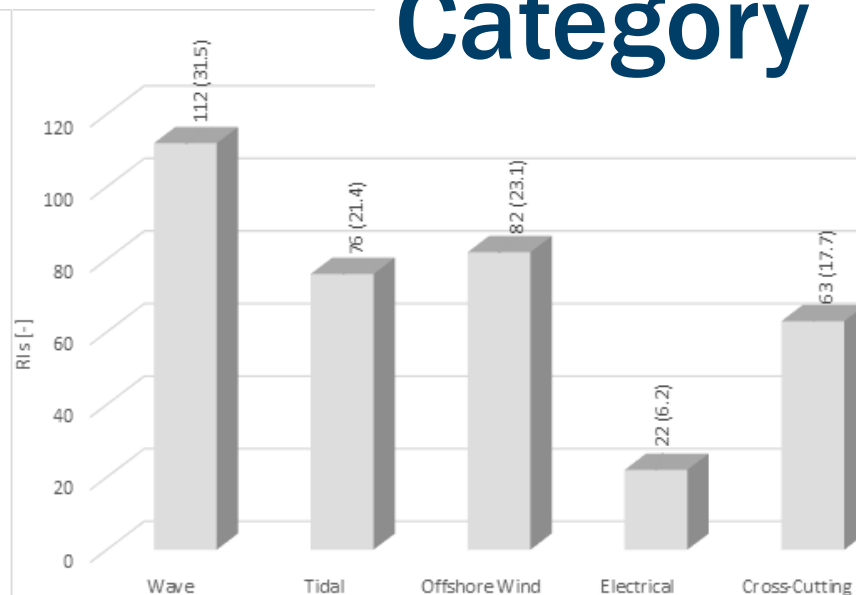
| Facility Scale | Focus Group | | | | | |
|--|---------------------------------------|--------------------------------------|--------------------|---------------------------------------|--------------------------------|---|
| | Wave | Tidal | Offshore wind | Solar (PV) | Electrical and Grid connection | Cross-Cutting |
| Small Lab (TRL1-3) | Wave flume | Current flume | Wind tunnel | Wave flume | Turbine emulator | Material testing bench |
| | | | | | Wave flume | |
| | | | | | PTO testing bench | |
| Large Lab scale (TRL1-4/5) | Wave basin | Current flume | Wind tunnel | Wave basin | Turbine emulator | Material testing bench, corrosion tanks |
| | | | Wave basin | | Wave basin | |
| Medium Scale open sea test site (TRL5-8) | Sheltered bay Low-energetic test site | Sheltered strait or channel | Sheltered bay | Sheltered bay Low-energetic test site | PTO testing rig | Coastal corrosion testing facility |
| | | | | | Sheltered bay | Sheltered bay |
| Large Scale Open Sea test site (TRL8-9) | Offshore open area | Offshore open area Strait or channel | Offshore open area | Offshore open area | Offshore open area | Offshore open area |

Need based on experience

Size



Category



Small-scale laboratory



Kelvin Hydrodynamics
Wave and Tow Tank



Ghent University Wave
Flume



Lir NOTF Wave and Current
Flume; Wavewatch flume;
Electrical Test Rigs &
Microgrid



UNIFI-LABIMA flume tanks



Sintef Ocean Circulating
water Tunnel



IHCantabria Wave-Current
Flume (COC); Directional
Wave Tank



LIM/UPC CIEMito - Small
scale wave flume and
LaBassa Wave Basin



Deltares Pacific Basin;
Delta Basin; Delta Flume

Small-scale laboratory



Marin Concept Basin;
Shallow Water Basin;
Depressurised Wave
Basin; Simulators



NIOZ Test facility for
component- and
supporting technology
testing



TNO; Structural Dynamics
Laboratory; hydrogen and
materials lab; Small scale
air/water flow lab



WUR Flume tank facilities;
Acoustic and telemetric
monitoring techniques



TU Delft Several small
wind tunnels; Structures
and Material lab



FASTBLADE Structural
Composites Research
Facility



DNW Low-speed wind
tunnel LST



SWEET Lab Structural
component test rig and
Drivetrain test rig

Large-scale laboratory



COB wave basin and towing tank



ECN hydrodynamic and ocean engineering tank and towing tank



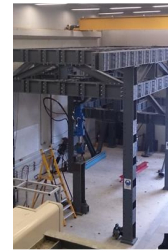
IFREMER Deep wave Basin; Wave-Current Flume; Material testing facility



UGE's geotechnical centrifuge, cable fatigue test bench and mechanical test bench



Leibniz Universitaet Hannover Large Wave Flume



NUIG Structural Research Laboratory



LIR Deep Ocean Basin & Ocean Basin



CNR-INM Towing & Waves Tanks (TWT) and Circulating water channel (CWC)

Large-scale laboratory



Federico II University
Wave/Towing tank



Sintef Ocean Marine
Structures Laboratory;
Smartgrids; Ocean Basin
and Towing Tanks



CEHIPAR Seakeeping Tank



CENER Wind Turbine Test
Laboratory



IHCantabria Coastal and
Ocean Basin and Wave-
Current-Tsunami Flume



CIEM - Large scale wave
and currents flume



Deltares IOS basins incl.
header for pump (sump) research
and Ship Lock facility incl. fresh
and saltwater facilities



DNW Large Low Speed
Wind Tunnel Facility

Large-scale laboratory



MARIN Marine Offshore Basin;
Seakeeping and Maneuvring
Basin



TU Delft Wave Flume; Stream
Flume; Stream Tank; SAM|XL



ORE Catapult Marine Test Site;
Blade Test; Powertrain
facilities; CPTC Energy Link Lab;
HV Lab



FloWave



COAST lab



University of Exeter DMaC

Medium-scale test sites



Seeneoh

Sainte-Anne Test Site



UL Marine Robotics
Laboratory



Runde Environmental Test
Centre



Royal Netherlands
Institute for Sea Research
(NIOZ) research vessel
fleet



TNO facilities - Offshore
LiDAR; Radar; RE Ecology
field lab; Floating solar
energy lab etc.



EMEC wave and tidal scale
test sites (Scapa flow and
Shapinsay sound)



Queen's University Belfast
tidal and wave test sites:
Strangford Lough,
Portaferry and Marfield



University of Exeter
FabTest

Large-scale test sites



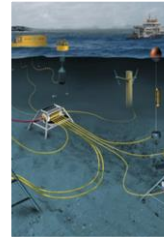
Aguçadora



Mistral; SEMREV;
Paimpol-Brehat



Atlantic Marine Energy
Test Site (AMETS)



SmartBay



Biscay Marine Energy
Platform (BIMEP)



PLOCAN Test Site



TNO wind turbine test
sites



EMEC Tidal (Fall of
Warness) and Wave (Bilia
Croo) Full Scale test sites

Question 4: What kind of experimental testing will you require in the next 5-10 years?

- Testing for proof of concept
- Performance evaluation and validation
- Medium scale testing of developed technology
- Trialing of prototype technology
- At sea demonstration of developed technology
- At sea testing of material and components
- Verification of methodologies and techniques (deployment,...)
- Deployment/development of monitoring sensors and instrumentation
- Improving planning and permitting processes

Question 5: What test infrastructure would you consider using over the next 5-10 years?

- Wave Basin
- Wave Flume
- Current Basin
- Current flume
- Wind tunnel
- Open sea testing site
- Full scale testing site
- Material testing facility
- Blade test facility
- Electrical component testing facility
- OTHER

Question 6: How do you plan to fund your future tests or access to these facilities?

- Public funding
- Private funding
- Mixed public/private funding
- OTHER

MARINERG-i_PP User Profiling



<https://forms.office.com/e/R37k9SnnjY>

OPPORTUNITIES



RISEnergy

Introduction to first call for funded test programme

Dr. Jimmy Murphy

Senior lecturer & LIR NOTF manager, University College Cork

RISEnergy Details

- Horizon Europe funded project
- Coordinated by Karlsruhe Institute of Technology (KIT),
- Budget of EUR 14.5 million
- Started on March 1, 2024 and has a duration of four and a half years
- 69 technology institutes, universities, and industry partners from 22 countries.
- 84 research infrastructures from 19 European countries
- Includes following renewable energy technologies: Photovoltaics, Concentrated Solar Power, Hydrogen, Biofuels, Wind Energy, Ocean Energy, as well as Integrated Grids, Energy Storage, Materials Research, Information and Communication Technologies



RISEnergy Services to the renewable energy sector

- **Transnational Access** - This project supports research and innovation activities across a wide range of renewable energy technologies, including **biomass, concentrated solar power, energy storage, hydrogen, information and communication technology, materials for energy, ocean energy, photovoltaics, offshore wind, and smart grids.**
- **Virtual Access** - These services, which include simulation tools and databases for renewable energy technologies, are provided “as-a-service” and are **made freely available to industrial and academic researchers** through the project website
- **Innovative Collaborative Services** - evaluate the potential and technological advancements of new / under development technologies and / or solutions or systems





First Transnational Access Call



Call topic: Innovative solutions to improve energy systems and/or reduce the cost of energy technologies enabling a wider use of renewable energy.



Call open to **researchers from academia and industry**



Application deadline: 30 November 2024



Learn more and
apply



The RISEnergy project has received funding from the European Union's Horizon Europe Research and Innovation Programme under Grant Agreement N. 101131793

Transnational Access

Introduction

Financial Coverage and Eligible Expenses

Application Process

Supporting Documents

The RISEnergy project offers **industrial and academic researchers** easy, seamless, and free-of-charge access to a selection of the **best scientific infrastructures and services** related to renewable energy technologies in Europe.

This project supports research and innovation activities across a wide range of renewable energy technologies, including **biomass, concentrated solar power, energy storage, hydrogen, information and communication technology, materials for energy, ocean energy, photovoltaics, offshore wind, and smart grids.**

Researchers and innovators can gain access to RISEnergy's state-of-the-art facilities through the Transnational Access (TA) programme which offers opportunities to work on these research areas via a transparent evaluation process and common access modalities.

The full list of the RISEnergy Research Infrastructures (RI) can be found [here](#).



 Copy

RISEnergy TA Application form

Please read the 'General Rules' and 'Access Policy' (on [Homepage - \(risenergy-project.eu\)](http://risenergy-project.eu)) of RISEnergy TA before filling in the form.

If you need further guidance please make an enquiry to risenergy@for.kit.edu.

| | |
|---------------------------|--|
| TA Call No. | |
| Date of submission | |

Proposal resubmitted:
 Yes No

| | |
|--|-------------------------|
| Preferred host research infrastructures | 1 st option: |
| | 2 nd option: |
| | 3 rd option: |
| Proposed starting date for the Access | |
| Expected Access duration (in days/weeks) | |



Research Infrastructure Services for Renewable Energy (RISEnergy)

Transnational Access Application

[Register New](#)

Project Time: 11th Oct 2024, 12:39:39pm CEST

ConfTool Project Administration

Please login to be able to **submit your application**.

If you did not establish a user account before, please create a new account.

Account Login

[First time here?](#)

[Create account and submit application](#)

Registered users

E-mail or user name:

[Forgotten your user name?](#)

Password:

[Forgotten your password?](#)

Mobile View

Submission of an Application - Step 1

In order to submit your application, please fill in the following form. The next step allows you to upload the required files to the server. You have to fill in all fields marked with an asterisk (*).

Once saved, you can return to and update this abstract at any time before the abstract submission deadline (30th Nov 2024, 11:59:59pm CEST).

Information on this application

Submitting Author Dr. Jimmy Murphy (User ID: 1028)

Application Type RISEnergy TA Call 1

Application Details

| * Submitted by | ORCID of Author | First & Middle Name/s | Last Name | E-Mail |
|----------------|----------------------|------------------------------------|-------------------------------------|--|
| | <input type="text"/> | <input type="text" value="Jimmy"/> | <input type="text" value="Murphy"/> | <input type="text" value="jimmy.murphy@ucc.ie"/> |

* **Organization**

* **Title**

* **Keywords**
Please enter up to five keywords for your application here, separated by commas.

* **Preferred host Research Infrastructure (RI)**
Please provide your preferred RISEnergy Research Infrastructure from the 3 options indicated in the application form (complete list here: <https://risenergy-project.eu/research-infrastructure-ri-platform/>)

Remarks on This Application

Remark / Message to the Chairs of the Selection Board

Proceed ==>

Submission of an Application - Step 2

You now have the option of uploading the files required for your application to the server. If you wish to submit a document at a later time, please click on "Complete submission, skip upload". **Please note that your file must successfully be uploaded to the server prior to the submission deadline!**


Please check your entries before you submit your application.

Once saved, you can return to and update this abstract at any time before the abstract submission deadline (30th Nov 2024, 11:59:59pm CEST).

Application Details

Application Type: RISEnergy TA Call 1

RISEnergy TA Call 1, Dr. Jimmy Murphy

[Jimmy Murphy](#) 

Organization: UCC, Ireland

Submitted by: Dr. Jimmy Murphy (UCC, IE), ID: 1028

Keywords: wave energy

Preferred host Research Infrastructure (RI): TA84

Upload File(s) Later

[Return to Step 1](#)

[Complete application, skip upload](#)

If you wish to upload your file now, please use the form below.

Upload File(s) to Server

Deadline for file uploads 30th Nov 2024, 11:59:59pm CEST

Time left 50 days 8 hours

Application Type RISEnergy TA Call 1

Details Please fill every page. Only fully filled in applications will be evaluated.

The maximum file size allowed is 10 megabytes.

1st file: pdf

Please Note Upload here the application form

File Types The following file extensions are allowed: pdf

Select File [Choose a file...](#) No file selected.

No upload yet.

[Upload File\(s\) and Save Submission](#)

MARINERG-i facilities in RISEnergy



Consiglio Nazionale
delle Ricerche

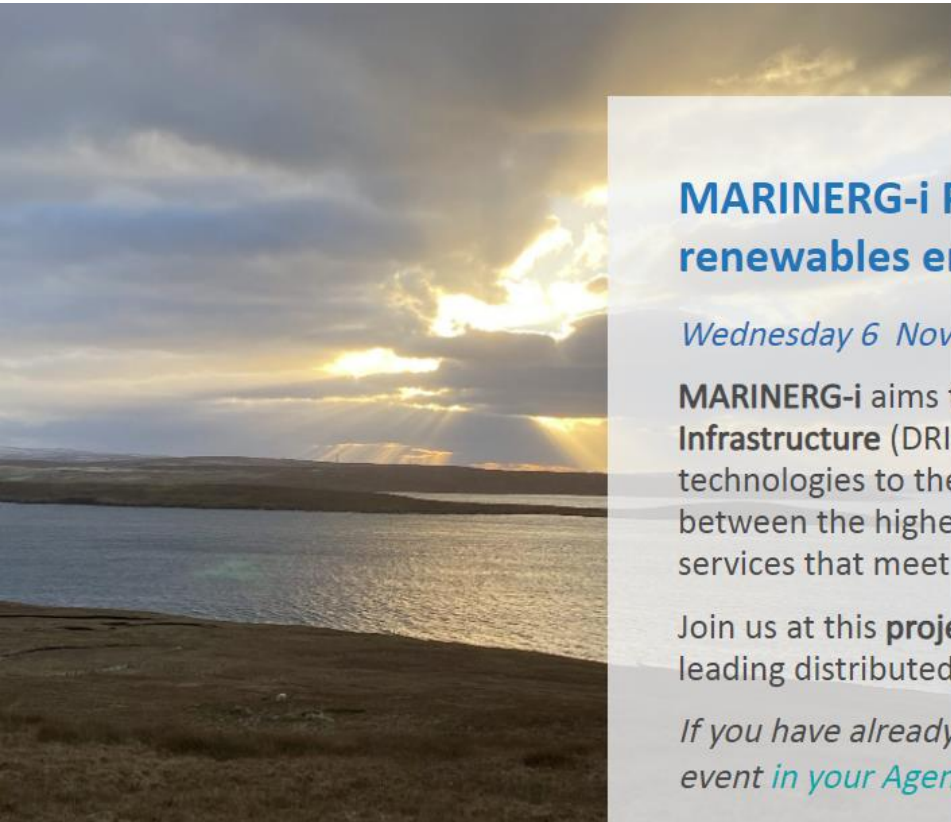


THE UNIVERSITY
of EDINBURGH



Plataforma Oceánica
de Canarias

OEE 2024 MARINERG-i side-event



MARINERG-i Project - Shaping the future of offshore renewables energy testing in Europe

Wednesday 6 November, 16:00 – 17:30

MARINERG-i aims to create an integrated European Distributed Research Infrastructure (DRI) in Europe, for delivering Offshore Renewable Energy (ORE) technologies to the market. It will be a long-term, sustainable partnership between the highest quality testing facilities, providing a coordinated set of services that meet current and future end-user requirements.

Join us at this **project launching event** to learn more what this future world's leading distributed infrastructure will offer to the ORE sector.

If you have already registered you can modify your registration to add this event [in your Agenda](#).

2024 OCEAN ENERGY EUROPE

5-6 November, Aviemore, Scotland



REGISTER NOW



Thank you for your attention