DIH INNOVAMARE PROJECT

D 1.2.3 Innovamare platform profiles

A1.2 Mapping of examples of good practice in cooperation of private and scientific sectors and applied research to market in marine technologies and raise awareness on them

Project identification
Project id: ITHR0200416
Name of the lead partner organisation: Hrvatska gospodarska komora
Name of the lead partner organization in English: Croatian Chamber of Economy
Project title: Cross-border digital innovation Hub for innovative marine technology
Project acronym: DIH InnovaMare
Programme priority: Sustainable growth in the blue economy
Specific objective 1.1: Developing and enhancing research and innovation capacities and the uptake of advanced technologies
Project duration in months: 30
Work package: WP1 Innovation capacity building for implementation of marine technologies
Activity title: A1.2. Mapping of examples of good practice in cooperation of private and scientific sectors and applied research to market in marine technologies and raise awareness on them
Expected date: 31st October 2024
Activity description: Mapping examples of good practice will give us a clear overview of what blue economy sectors we have most implemented marine technological solutions, who are the stakeholders involved in this cooperation and what are the marine technologies that are mostly used. With this mapping, we are expanding our map of excellence and bringing new actor profiles into our ecosystem that we will use for further activities.
Partner responsible: UCV and CCE
Dissemination level: CO - Confidential
Status: Draft
Version: V1
Date: 31st October 2024

Questionnaire

WP1 Innovation capacity building for implementation of marine technologies – A.T. 1.2. – D.1.2.3.

Introduction:

One of the main aims of the DIH InnovaMare project is to enhance the framework conditions at a cross-border level and promote cooperation between companies, and scientific-research institutions, and to raise awareness about cooperation among private and scientific sectors and applied research to market in marine technologies.

Within this activity, mapping of examples of good practice we will get a clear overview of what blue economy sectors we have most implemented marine technological solutions, who are the stakeholders involved in this cooperation and what are the marine technologies that are mostly used. With this mapping, we are expanding our map of excellence and bringing new actor profiles into our ecosystem that we will use for further activities.

Moreover, the DIH InnovaMare project emphasizes the importance of cross-border collaboration, recognizing that the challenges faced by the marine industry are global in nature and require coordinated efforts across regions. The project will also focus on creating a dynamic ecosystem that encourages continuous learning and adaptation, ensuring that the latest advancements in technology are effectively integrated into the marine sector.

Key components of the project include:

- Collaborative research and development: facilitating joint projects between researchers and companies to drive innovation;
- Technology Transfer: ensuring that new technologies developed in research settings are effectively transferred to and adopted by the industry;
- Capacity Building: providing training and development opportunities for young researchers to enhance their skills and knowledge;
- Sustainability Focus: promoting technologies and practices that contribute to the sustainability of marine environments;
- Networking and Partnerships: Building strong networks and partnerships to support ongoing collaboration and knowledge exchange.

Through these efforts, the DIH InnovaMare project aims to create a strong and resilient marine technology sector that can effectively respond to current and future challenges, while also providing significant economic and environmental benefits.

1. Contact information
- Name of the Institution
- Type of institution (public/private):
    o Private company
    o Reseach institution
    o Public institution (e.g. government)
    o NGO (non-governmental organization)
    o Other (please specify)
- Address (Street, Postal code, City, Country)
- Employees (in total) - Turnover (only for private companies)
- Sector of activity according to EU unified "NACE rev.2" - European Classification of Economic Activities (if applicable)

Source: https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF

2. Overview of the institution:
- Brief history and primary focus area

3. Value drivers
Public and private organizations:

- Key ACTIVITIES: description of the activity/ies that the company/institution performs in concrete and specific relation to the sector of marine technologies (see a list below).

Please specify whether the organization
a) provides marine technologies (Tech provider)
b) adopts marine technologies (user)

Only Private organization

- Affiliation: within Marine Strategy Framework Directive's 11 descriptors (*annex 1).*
- Affiliation: Blue economy sectors (see below)[1]
- Affiliation: Blue Economy new and emerging sectors (see below)[2]

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[1] https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-sectors_en
[2] https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-sectors_en

TRADITIONAL SECTORS OF BLUE ECONOMY (please choose one or more if appropriate)

1. **Fisheries and Aquaculture**: this sector involves the farming, harvesting, processing, and marketing of aquatic plants and animals, such as fish, shrimp, and shellfish.

2. **Maritime Transportation**: this sector includes shipping, ports, and related services, such as logistics, freight forwarding, and cargo handling.

4. **Tourism and Recreation**: this sector includes activities such as coastal tourism, recreation, and marine wildlife watching.

5. **Coastal Infrastructure**: this sector involves the construction and maintenance of infrastructure, such as coastal protection and erosion control, as well as the development of marine-based renewable energy infrastructure.

EMERGING BLUE ECONOMY SECTORS (please choose one or more if appropriate)

1. **Marine Renewable Energy**: This includes ocean energy, floating solar energy, and offshore hydrogen generation. These sources are crucial for sustainable growth and align with the European Green Deal's ambitious goals.

2. **Blue Biotechnology:** Particularly focusing on algae, blue biotechnology involves the use of marine resources to develop products that could be used in pharmaceuticals, cosmetics, and food industries. The algae sector in particular shows strong market dynamics and socio-economic potential.

3. **Desalination:** desalination is commonly recognized as an emerging sector within the blue economy, providing critical solutions for fresh water.

4. **Maritime Defence, Security, and Surveillance:** this sector includes activities that ensure the safety and security of maritime zones.

5. **Research and Infrastructure:** this includes the development of submarine cables and marine robotics, which are essential for improving the resilience and technological capabilities of maritime activities.

Question For Technology Providers: Description of the Technology: please specify the type of technology you are providing. You can select from the following categories based on a shared technology classification:

a) **Autonomous Surface Vehicles (ASVs) and Unmanned Surface Vehicles (USVs):** these are robotic boats that can be used for a variety of tasks, such as surveying, monitoring, and mapping the ocean.

b) **Underwater Gliders:** these are autonomous underwater vehicles that use changes in buoyancy to move up and down through the water column, allowing them to cover large areas while collecting data on temperature, salinity, and other oceanographic parameters.

c) **Marine Biotechnology:** technologies related to the use of marine organisms for various applications, such as pharmaceuticals, biofuels, and environmental monitoring;

d) **Ocean Energy:** technologies that harness energy from ocean currents, tides, and waves are becoming more advanced and efficient, making it possible to generate electricity from these sources.

e) **Marine Robotics:** advancement in the design and construction of robots for deep sea exploration, monitoring, and maintenance of marine facilities.

f) **Blue carbon:** methods to sequester carbon dioxide from the atmosphere in coastal ecosystems such as mangroves, salt marshes, and seagrasses.

g) **Advanced imaging and sensing technologies:** technologies such as LiDAR, imaging spectroscopy and synthetic aperture sonar are being used to create high-resolution maps of the seafloor and detect objects underwater with great accuracy;

h) **Other:** If your technology does not fit into the categories listed above, please provide a description in the "Additional Technologies or Applications" section below.

Additional Technologies or Applications:
We recognize that the field of marine technology is constantly evolving. Please provide details of any technologies or applications that are not included in our list. Describe the following:

- Technology/Application Name: provide a name or title for the new technology or application.

- Description: offer a brief description of the technology or application, including its main features and functions;
- Benefits and Impact: explain the potential benefits and impact of this technology or application on the blue economy;
- Examples of Use: share any examples or case studies where this technology or application has been successfully implemented.

Capabilities and Applications in the Blue Economy:

Describe the specific capabilities of your technology and how it can be applied within the blue economy. Consider the following aspects:

- Environmental Monitoring: How does your technology contribute to monitoring and protecting marine ecosystems?
- Resource Management: How can it aid in the sustainable management of marine resources, such as fisheries and minerals?
- Operational Efficiency: How does your technology improve the efficiency and effectiveness of marine operations, such as shipping, oil and gas exploration, and aquaculture?
- Safety and Risk Management: In what ways does your technology enhance safety and reduce risks in marine activities? Innovation and Development: How does your technology drive innovation and development in marine industries?

4.Map of key issues

4.1 Key RESOURCES: list of the key resources in the sector of marine technologies that the company/institution would like to communicate to potential business and research partners. Maximum of 5 resources. Among the possible resources are:
- infrastructures (R&D labs; testing labs; Fablabs; etc.);
- technologies (laser cutter; 3D metal printer; lidar technologies; etc.);
- intellectual property rights (patents; trademarks, etc.);
- technologies in which the organization has patents/ applied for patents.

4.2 Key INDIVIDUALS: list of the key persons (5-10 people) working in the marine technologies considered:
- name

- contact information (email)
- specialization (main competence; for example: "software development for underwater navigation" and education; for example "Ph.D. in informatics")
- ERC scientific domain (only 1) source: https://erc.europa.eu/sites/default/files/document/file/ERC_Panel_structure_2020.pdf (only for research organizations).

4.3 Key RESEARCH PROJECTS: list the main projects the organization has been involved in within the last 3-5 years concerning the marine technologies of specialization.
- project name
- project length
- project aim
- project type (e.g.: research; development; education, etc.)
- project website
- list of partners (if not available from a website)
- list the marine technologies the project is focused on (see above list), the stage of development, and/or application.

4.4 FUNDING AND SUPPORT – explain how the implementation of the technology was funded:
- Sources of funding for the technology (e.g., EU grants, private investment)
- Support programs or incentives provided by governmental or international bodies.

4.5 Key PARTNERS:
List of most relevant business or research partners (suppliers, universities, NGOs/associations, venture capital, equity funds, Business Angels, etc.) they have collaborated with in the last five years related to the production of marine technologies and for application/test, also concerning the above-mentioned projects and information provided in previous questions:
- type of partner (supplier, client, university, consultant, other)
- name of the partner
- activity carried out by the partner
- internal contact of the partner
- does your organization share patents with this organization?

4.6 Key IMPACTS:

Impact for users: describe the main impacts obtained in terms of
- Economic/financial results
- Market / customers
- Product innovation
- Process improvement
- Environmental sustainability
- Competitive advantage (if applicable)
- other

Provide/mention any documented improvements or innovations driven by technology.

Impact on the environment: describe the most relevant impacts achieved through the above-mentioned projects/applications of marine technologies (see DNSH – Do Not Significant Harm principle) (from 1_low relevance for the project/application to 5_high relevance)
Climate change mitigation
Climate change adaptation
Sustainable use and protection of water and marine resources
Circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems
- Describe the geographical scale of the project/application (urban, regional, country)

4.7 Key CHALLENGES/LIMITATION:
For technical providers and users: Describe any challenges faced during the implementation (technology provider) or usage (for users) of the technologies considered (please answer by distinguishing between different technologies/applications)

Describe the main limitations in terms of

- Scalability

- Costs

- Technical constraints

and any other issue that may impact the effectiveness or widespread adoption of the technology.

4.8 Key PROJECTS WHERE CIVIL SECTOR WAS INVOLVED: please briefly describe the top 5 projects/public initiatives you (co)organized involving the civil sector or society (NGOs, citizens, students…) in the last five years related to the sector of marine technologies and blue economy (for example, organization of maker fairs, public speeches, public events for citizens, educational events for students, etc.).

Conclusion

The primary objective of this methodology was to create a comprehensive overview of blue economy sectors, identifying the implementation of marine technologies, stakeholders involved, and the predominant technologies in use. This mapping expanded the existing "Map of Excellence," integrating new actor profiles into our ecosystem to foster future activities. We mapped a minimum of 20 stakeholders from academia and industry, with at least 3-5 stakeholders from each project partner. The list of mapped companies is enclosed. As we have mapped companies/institutions we have also enlarged our Map of Excellence available on the Mairos platform, www.mairos.org, with new stakeholders who created their profiles and stay open for new collaborations. Here is an example and the rest are available in the Mairos platform, in the map of excellence section. https://mairos.org/map-of-excellence/.

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