

CLASS4.0 Project

WP3 Activity 3.3 Deliverable 3.3.6

C2C Think Tank Diary

1. Introduction to the document

The document represents an overview of the cluster scouting action made at Adriatic level that led, subsequently, to the creation of the panel for the cluster-to-cluster event in Venice on June 6th 2023. The preparation, the implementation and the follow up of the event brought inputs that were collecting in the perspective of designing a plan for a Single Innovation Ecosystem.

2. Report of the Scouting action

CLASS 4.0 is born on the fertile ground laid by the BEAT project and grows as its straightforward prosecution. It is also worth mentioning the “Blue Tech” project, whose results the BEAT Project capitalized on, and in turn laid the foundations for the study of the of a macro regional Cluster development in the green shipbuilding technologies sector in the Adriatic-Ionian area. In relation to the scouting action the primary aim of this activity was to map and involve the reference clusters present in the Adriatic area stable involved in the maritime sector and also related and complementary sectors in order to provide and integrated scenario for the reference players. A general background for the value chain was the analysis carried out withing BEAT project on reference structure for the shipbuilding. From that point of view the following clusters were identified, while a selection of them was mapped with a desk analysis.

Italy: Friuli Venezia Giulia - Maritime Technology Cluster FVG, DITEDI, COMET; Emilia Romagna - Clust-ER Greentech; Clust-ER Mech, Marche - Cluster Marche

Croatia: MARINN Cluster

Montenegro: Blue Growth Cluster Montenegro

Slovenia: TECES Green Tech Cluster

CLUSTER mareFVG	
Name of the cluster	Maritime Technology Cluster FVG S.c.ar.l. - mareFVG
Territorial dimension of the cluster	Region Friuli Venezia-Giulia, National
Reference economic sectors	Technologies related to ship and boat building, offshore and respective production chains, transport, logistics, navigation services and pleasure crafting,

	marine robotics
Description of activities	<p>Networking: build connections among local and extra regional expertise, enhancing opportunities for collaboration, mutual growth and facilitating the matching between demand and offer of innovation.</p> <p>Support: support the Blue Economy actors in designing innovation projects, with project management and diffusion and dissemination of research results.</p> <p>Training: organize vocational activities to promote maritime jobs and technology and management-related events and workshops; support the design and implementation of professional master courses at university level and advanced training courses for workers and teachers.</p> <p>Observatory: analyze the maritime territorial framework starting from the innovation attitude of the enterprises, the occupational and training needs; provide matching and incoming activities for the extra regional businesses, interested to get in contact with the potentiality of our territory.</p>
Description of services provided	Support to associates and stakeholders for project development and partner seek activities, guidance for participation to calls, drafting project proposals, relations with funding agency, support in project management, results dissemination and communication activities.
Description of main networking processes	Set up and continuous monitoring of maritime technologies regional forums, finalized to provide constant update of regional smart specialization strategy. Coordination role of the Working Group Maritime Mobility in the “National Transport Cluster Italia 2020” framework, member in the National Cluster Blue Italian Growth. Participation and support to BLUEMED Initiative activities and to cooperation activities in the Adriatic-Ionian, Black Sea and Eastern Mediterranean areas. Support the regional administration in being active in EU related cooperation platforms. Active members of Pack for Skills at European level in Shipbuilding and Offshore Renewables. Active members in Waterborne platform.
Involvement in the Blue Digital Sectors	Main involvement in updating the smart specialization strategy with references to innovation connecting digital and blue sectors. Involvement in animation activity for innovation and competences in the targeted fields. Participation in cooperation

	projects and support of RDI projects.
Best practices for cluster improvement	Benchmarking activities with other clusters, involvement in tailored networks and platforms at wider level, establishing of operative cooperation programs.

CLUSTER DITEDI	
Name of the cluster	Digital Cluster of FVG Region
Territorial dimension of the cluster	Regional
Reference economic sectors	ICT applications (including manufacturing)
Description of activities	Cluster animation activities and business services: promote the image of the ICT Cluster, encourage contamination between ICT and manufacturing companies, support the digital transformation into traditional companies thanks to the ICT network. Growth evens to promote and support development of ICT companies. Promotion of digital culture.
Description of main networking processes	Workshops and training for companies Meetings, Open-Days, orientation events in schools Courses and seminars on digital technologies for citizens
Involvement in the Blue Economy sectors	Cooperation and bridging with clusters on common innovation and education topics connecting maritime and digital technologies.
Best practices for cluster networking	Be involved in targeted events as the Startup Week, an event to promote FVGs startups and create networking opportunities between startups and traditional businesses and encourage open innovation.

CLUSTER COMET	
Name of the cluster	Mechanical Engineering Cluster of Friuli Venezia Giulia

Territorial dimension of the cluster	Regional
Reference economic sectors	Metal production, plastics, mechanical components, thermo-electromechanics industry.
Description of activities	Key interlocutor / stakeholder for the mechanical engineering industry by the Regional Administration. Launch and manage projects for all the mechanical engineering companies. Carry out institutional activities on the behalf and in the name of FVG Regional Administration. Business activities: trade fairs and missions, internationalization, training and education, financing, business networks, EU projects.
Description of main networking processes	Involvement in networks at regional level, inclusion in national technology clusters.
Involvement in the Blue Economy sectors	Involvement in technical cooperation projects on mechanical engineering activities connected to the blue sectors with specific reference to shipbuilding and robotic applications.
Best practices for cluster networking	Involvement in National Clusters, joint participation on targeted events

CLUST-ER GREEN TECH	
Name of the cluster	Energy and Sustainable development Clust-ER GREENTECH
Territorial dimension of the cluster	Regional, Emilia Romagna Region
Reference economic sectors	Low Carbon Economy to foster the transition of the regional economy towards a higher environmental sustainability, reducing the dependence on fossil sources. Environmental Sustainability and Ecosystem Services to improve the management of degraded and/or vulnerable ecosystems and the environmental control in all its compartments (air, water, soil) through the development of remediation and mitigation technologies with a circular approach.
Description of activities	Multiply innovation opportunities through a collaborative approach, as they focus

	their activity in R&D strategic sectors. Together with the Technopoles and the High Technology Network laboratories, they are one of the key players in the regional innovation ecosystem coordinated by ART-ER, the Emilia-Romagna Joint Stock Consortium Company for innovation and the sustainable growth.
Description of main networking processes	Joint participation in EU funded projects.
Involvement in the Blue Economy sectors	Green applications for the maritime sectors
Best practices for cluster networking	Joint collaboration on targeted initiatives or actions.

CLUST-ER MECH	
Name of the cluster	Mechatronics and motoristics cluster of the Emilia Romagna Regions
Territorial dimension of the cluster	Regional, Emilia Romagna Region
Reference economic sectors	Mechatronic and motoristic applications to the target value chain: Digital and Advanced Manufacturing, Automation and Robotics, Safe, efficient, sustainable engines and vehicles, Advanced Materials for Motoristics and Mechatronics Avionics and Aerospace, Nautical, Fluidpower, Mobile Electrification Systems
Description of activities	Multiply innovation opportunities through a collaborative approach, as they focus their activity in R&D strategic sectors. Together with the Technopoles and the High Technology Network laboratories, they are one of the key players in the regional innovation ecosystem coordinated by ART-ER, the Emilia-Romagna Joint Stock Consortium Company for innovation and the sustainable growth.
Description of main networking processes	Joint participation in EU funded projects.
Involvement in the Blue Economy sectors	Mechanical and motoristic applications in the regional nautical and sea robotic value chain.

Best practices for cluster networking	Joint collaboration on targeted initiatives or actions.
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CLUSTER MARCHE	
Name of the cluster	Fondazione Cluster Marche
Territorial dimension of the cluster	Regional, Marche Region
Reference economic sectors	Food Farming, ambient intelligence, industrial innovation, creativity innovation
Description of activities	Development of collaborative research and technology transfer activities. Support to the activities of the adhering Regional Technological Clusters (CTRs). Partner for dissemination and exploitation activities of the results of the four collaborative technology platforms of the Region: i-Labs Jesi (with its 2 projects), Marche Biobank Ancona, and Marlic Camerino.
Description of main networking processes	Organization and participation to thematic tables at different levels. Participation to National Clusters and to European platforms.
Involvement in the Blue Economy sectors	Support the reference players of the regional blue ecosystem in particular in the boatbuilding field with cross cutting competences in complementary areas.
Best practices for cluster networking	Participation in platforms at EU level.

MARINN	
Name of the cluster	MARINN – MARITIME INNOVATION CLUSTER
Territorial dimension of the cluster	Kvarner region, national (Republic of Croatia)
Reference economic sectors	Technologies related to autonomous vehicles, clean technologies with an emphasis on hydrogen, transformation of waste into energy, and smart, green and self-sustaining marinas based on the implementation of "digital twin" technology.

Description of activities	<ul style="list-style-type: none"> • Development of research, business and educational infrastructure, • Identification and preparation of strategic projects aimed at improving the competitiveness and innovation of the shipbuilding sector and related industries, • Support for the development of human resources and the training of specialized workforce for the jobs of the future in the shipbuilding sector and related industries, • Education of the cluster membership about the possibilities of using programs and funds of the European Union, • Promoting topics from the area of activity of the cluster during the creation of a legislative and strategic framework at the regional, national and EU level, • Achieving cooperation with domestic and foreign partner institutions and horizontal sectors.
Description of main networking processes	<p>Cross-sectoral networking and internationalization of the shipbuilding sector and related industries and cooperation with international partner institutions and associations. Networking and partnership through Interreg projects and cooperation with other national and international clusters.</p> <p>Strong connection with Academia, cooperation with Croatian universities, but also with institutes and universities in Austria and Germany.</p>
Involvement in the Blue Economy sectors	<p>Involvement in RDI projects in maritime industry focusing on digitalization, digital twin, big data, AI, 5G networks and cyber security. Acceleration of digital start-ups in maritime industry, development of smart and green marina with focus on digital twin and new technologies.</p>
Best practices for cluster networking	<p>Joint development with education organization of tailored education paths and microcredentials on digitalization.</p>

BLUE GROWTH CLUSTER MONTENEGRO	
Name of the cluster	Montenegro Blue Growth Cluster - MBGC
Territorial dimension of the cluster	Montenegro, National
Reference economic	Fisheries, mariculture, maritime transport, shipbuilding, maritime surveillance,

sectors	tourism
Description of activities	<p>Communication: Promotion of all Blue Growth sectors at the national and international level.</p> <p>Cooperation: Participation in national and international associations dealing with all or certain blue technologies. Participation in project calls at the national level on the international level.</p> <p>Consultancy: Providing consultations, advice and recommendations regarding legal issues and the realization of business ideas. Preparation of studies in the field of blue technologies (fisheries, mariculture, maritime transport, shipbuilding, maritime surveillance, research of marine resources, research of renewable energy sources from the sea and more).</p> <p>Networking: Cooperation with all state and local institutions in Montenegro to improve all forms of cooperation between members of the association and local and state institutions.</p>
Description of main networking processes	<p>Participation in national working group for setting up conditions for the construction of processing capacities in the fisheries sector in the industrial zone of the municipality of Kotor (the Montenegrin REGROW project).</p> <p>Networking with IT companies for setting up conditions for development cluster digital platform.</p>
Involvement in the Blue Economy sectors	<p>Involvement in development MBGC Digital Platform - a software platform that allows MBGC members to sell products or services online. Involvement in development RDI projects focusing on digitalization, data management and blue growth skills development through tailored education.</p>
Best practices for cluster networking	<p>Joint cooperation on specific cluster related activities.</p>

3. C2Cluster Think Tank Event

The event was held on 6th June 2023 in the premises of the Cultural Centre Don Orione Artigianelli in Venice and was structured in a half day starting at late morning and ending in the early afternoon. The morning session started at 11:00 am with the opening by the organizer the Maritime Technology Cluster FVG that introduced the C2C event and the related purposes of having in the same place the reference clusters of the Adriatic area in order to start thinking together on clear possibilities for mutual cooperation. The final agenda came up after the mapping and collecting information on the reference clusters on the territory, considering directly the blue sector and also complementary sectors that may contribute and integrate the features and the blue innovation chains. A selection of the main clusters was made, and the final agenda grouped the networks that was available on the specific date and in relation to their respective agendas.

The opening intervention of the project coordination the technology transfer T2i shed light on CLASS 4.0 features overviewing project partnership, structure and objectives and stressed on the dynamics and importance of data in many phases of the innovation processes in the blue value chain. Challenges and threats are arising and there is the need to have a wider involvement of all stakeholders.

The University of Trieste – Faculty of Naval Architecture opened the session with a keynote on digitalization in the maritime and shipbuilding sectors overviewing the most important topics. Reference and diversification were applied to design and operation phases. When considering the ship design process, we should refer to challenges connected to ship as complex integration of subsystems and tailored innovations could help to better manage them. Specific reference was made to software's for computer systems integrators relying on a database that enables to take care of design, drawing management, production, aftersales assistance, materials list management, schedule management and budget management. An additional tool virtual prototypes of ship systems with reconnected applications of virtual and augmented reality. With regard to ship operations the primary topics are in the field of monitoring performances with digitalization of vessels for online monitoring, fleet management notification and monitoring and prediction of critical issues. Tools to be implemented are supporting decision systems (DSS), mobile applications for passenger security in emergency situations.

The Maritime Technology Cluster of the Friuli Venezia Giulia region opened the session with a presentation of its features, activities and role on the territory. Particular attention was dedicated to networks in the Adriatic and the Mediterranean developed along the last 10 years and emphasis was made on the cluster scenario in the Mediterranean, the opportunities offered by bilateral and macroregional funding and tools for clusters networking as ECCP platform, EU platforms and aggregation groups. In term of best practices, the cluster referred to innovation challenges, the joint organization of technical conference and workshops, the agreements for cooperation and the transfer or competences and capacity building. Main challenges for clusters described are connected to finding reliable partners for running together cooperation activities,

to diversify the offer of services, define internally a clear and stable governance structure, be able to deal with threats that may affect innovation and production chains and to bridge regional administrations.

The forthcoming session was dedicated to introducing blue innovation hotspots in the Adriatic, the organizers invited all the players of the scouting actors in order to have a wide representation of all the territories. In relation to the availabilities and agendas were able to attend MARINN Maritime Innovation Cluster from Croatia presented by Ms Ana Odak that highlighted the progressing activities of the cluster with particular reference on green on digital vision of the maritime industry, the priority areas of autonomous vessels, smart and green marinas, green technologies and clean drive, reference was made to the network and the growing relations of the cluster at local and international level. Ms Michela Pivetta presented COMET the mechanical engineering cluster of the Friuli Venezia Giulia, a reference to the solid sector of manufacturing and with a perspective on the regional ecosystem relying on structured framework and made reference to activities developed in the field of maritime sectors and robotic applications. Mr Radoje Lausevic gave an overview on the newly established, in 2022, Montenegro Blue Growth Cluster, its activities and member and involvement on fishing sector, digital platform and blue economy training center. The last contribution from Ms Silvia Rondi gave an overview on the Cluster ICT of the Friuli Venezia Giulia focusing the importance of contamination and networking activities leveraged by actions live growth events for promotion and development of companies and promotion of digital culture.

After the lunch break the attendants meet again and was involved in a workshop to overview together what are the most interesting topics to be pursued in terms of cooperation and the related actions that should be implemented. Two groups were created with a respective coordination that proceeded in the management of the interventions and to aggregate the outputs, that was consequently aggregated together and will be shared in the dedicated deliverable 3.3.5.



4. Conclusions – the plan for a Single Adriatic Framework

The CLASS4.0 project members have been supported by the partner *Maritime Technology Cluster FVG* during the whole progress of activities and in particular during the Cluster 2 Cluster Think Tank held in Venice on 6th June 2023. Thanks to the direct input gathered on this event, the partners aroused the direct need to initiate and launch a first action for the creation of the Adriatic Innovation Ecosystem linked to the Adriatic MoU signed during the above-mentioned event.

Target players, in particular the clusters participating in the event in Venice, highlighted the need for aggregation players to be present in the reference territories of the Adriatic Ionian Region with the role to witness and to represent respective innovation and production chains connected to the blue economy. The parts acknowledged how diversified the scenario is in the targeted macro region and how competitiveness and collaboration are the key words to face future challenges. The main assumptions were the following:

- There is a concrete need to establish a community in the blue economy in the Adriatic Sea;
- The best option would be the creation of a community of communities and the presence of a cluster or a local aggregation player as a reference ambassador;
- In a world perspective the single regions are too small to compete and there is a need for cooperation and harmonization of practices;
- There is a requirement for having a constant update on activities, opportunities, needs and priorities;
- It's difficult to set up an organization because it would be time consuming in establishment and management.

With reference to the assumptions, the parts proposed to rely on an existing platform: the purpose is to create a targeted place to share the information needed and to start interacting each other on the blue priorities of the Adriatic, as a pilot of a stronger cooperation.

The Adriatic Innovation Ecosystem will be launched for project partners and reference clusters at the end of June 2023 and will be the first step. In a future perspective, development and progressing will influence the establishment of a dedicated framework. In primary instance the flexibility and the financial/organizational aspects are the most important in this field and establishing a structure on rotating coordination with activities less time consuming that could be reconnected to participant and clusters targeted activities is a primary consideration. Later the eventual governance and eventual structure should be regulated under specific agreements and documents that will establish rules and conditions for growing of this ecosystem.