D.3.3.1 ROUNDTABLES WITH POLICY MAKERS REPORT

InnovaMare project

Blue technology - Developing innovative technologies for sustainability of Adriatic Sea

WP: 3 – Enhancement of framework conditions by development of innovation ecosystem

Project References

Call for proposal 2019 Strategic – InnovaMare
Project number: 10248782
Work package: WP3 - Enhancement of framework conditions by development of innovation ecosystem
Activity title: A3 Policy and stakeholder dialogues (policy recommendations)
Deliverable title: D3.3.1. Roundables with policy makers report
Expected date: M11
Deliverable description: Two events organized in Rijeka (Zadar) and Venezia involving policy makers as well as other key stakeholders (focus on business and research institutions) to sustain presentation of best practices concerning underwater robotics and sensors implementation and use for multiple purposes and by multiple actors at the national and international level.
Partner responsible: Union Camere del Veneto and University of Rijeka, Department of Biotechnology
Dissemination level: CO - Confidential
Status: Final
Version: V1
Date: 15th June 2021

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the Regional Union of Chambers of Commerce of Veneto Region, PP1 of InnovaMare project (Roberta Lazzari), with the support of MERAKI Srl (Valentina Colleselli, Ilaria Marcolin), the University of Padua (Eleonora Di Maria, Umberto Velluso) and the University of Rijeka, Department of Biotechnology, PP11 of InnovaMare project (Petra Karanikić), with the support of University of Rijeka, Faculty of Maritime Studies (Edvard Tijan)

1. Objectives of InnovaMare Roundtables

InnovaMare strategic project - Blue technology - Developing innovative technologies for sustainability of Adriatic Sea, coordinated by the Croatian Chamber of Economy, is co-financed by the European Union, ERDF (European Regional Development Fund), through Interreg VA Italy-Croatia Programme (2014-2020). Its aim is to enhance framework conditions at cross-border level by reinforcing capacities, both at strategical and operational level, to develop an innovation ecosystem promoting breakthrough technologies for the environmental sustainability of the Adriatic Sea, with a focus on underwater robotics and sensors. Expected outputs will contribute to the achievement of the objectives of the EU Strategy for the Adriatic and Ionian Region (EUSAIR), with particular reference to Pillar 1 “Blue Growth”, Topic 1 “Blue Technologies”.

In the framework of WP3 “Enhancement of framework conditions by development of innovation ecosystem” of InnovaMare project, the partnership has foreseen the organization of two Roundtables, mainly addressed at Policy-makers (but also involving other key stakeholders, with a quadruple-helix approach), to foster dialogue and exchange of best practices in the field of Blue Economy and innovative blue technologies, enhancing cross-sectoral cooperation to support the creation of a cross-border innovation ecosystem enabling growth, competitiveness and technological leadership in the field of underwater robotics and sensors.

Unioncamere del Veneto (PP1) has been in charge of organizing the first Roundtable (held online due to COVID-19 emergency measures), while the University of Rijeka, supported by the Croatian Chamber of Economy (LP), has hosted the second one, which used a mixed format (online and in presence).

As said, the aim of this specific project activities has been that of kicking-up a conversation on the challenges, priorities and strategic success factors for the implementation of an innovation ecosystem focused on underwater robotics and sensor (used mainly to improve and increase the sustainability of our seas, but also in other promising application fields, due to their flexibility). Project partners have brought together policy-makers, academia, private companies and civil society to engage in a cross-border debate boosting favourable framework conditions for the development of blue economy and blue technologies, with a focus on key enabling technologies such as underwater robotics and sensors (considering the importance of the sector for the sustainable and innovative growth of the Italy-Croatia Programme area).

2. First InnovaMare Roundtable: 18-19/02/2021

2.1 Key topics addressed

The first InnovaMare Roundtable, organized by Unioncamere del Veneto (PP1), has been a 2-days online event, held through ZOOM Platform on 18-19/02/2021.

The first working day (18/02) addressed the main challenges and opportunities related to the sustainability of our seas and the needed further development of blue economy and blue innovation, highlighting the strategic role played in this field by underwater robotics and sensors. The aim of this session was to fuel a debate on the current main strategic topics, identified also taking into consideration the Report of the EU Mission Board Healthy Oceans, Seas, Coastal and Inland Waters.

In the morning, three main thematic issues were addressed by selected high-level experts:

- vulnerability of marine habitats in EU policies and the key role of Blue Economy:
  this part was focused on presenting the EU priorities for the protection of marine habitats, as well as explaining to invited stakeholders and policy makers the strategic impact of blue innovation for increasing the sustainability, biodiversity and good ecological status of our seas.
- Zero pollution strategies and tools for the Adriatic Sea:
  the discussion first focused on the Adriatic Sea, the natural border between Italy and Croatia, providing participants with a clear picture of the main existing pollutant sources (chemical pollution, microbiological pollution, plastic pollution, invasive organisms, nutrients), also showcasing practical examples. Secondly, blue innovative technologies contributing to solving the presented challenges were introduced, with a focus on underwater robotics and sensors.
- application of robotics and sensors for the protection of underwater cultural heritage:
  considering the multiple application fields where underwater robotics and sensors can be effectively used, a new issue, related to the protection and conservation of submerged cultural heritage, was presented, enabling participants to better understand the great potential and economic impact of blue innovation.

The afternoon session was dedicated to explore possible effective solutions to the challenges shared during the morning. In particular, three main topics were addressed by high-level speakers:

- better governance of the Adriatic in the 2021-2027 period:
  considering the strategic importance of an effective and shared governance model of the Adriatic region, in line with EU policies, macro-regional strategies and national priorities, an updated situation of the ongoing negotiations has been shared.

- creating ecosystems favouring innovation and technology transfer:
  policy-makers and other involved stakeholders were provided with key inputs and examples showcasing the main features of a Digital Innovation Hub (DIH), as well as the steps needed to create and put in place an effective innovation ecosystem.

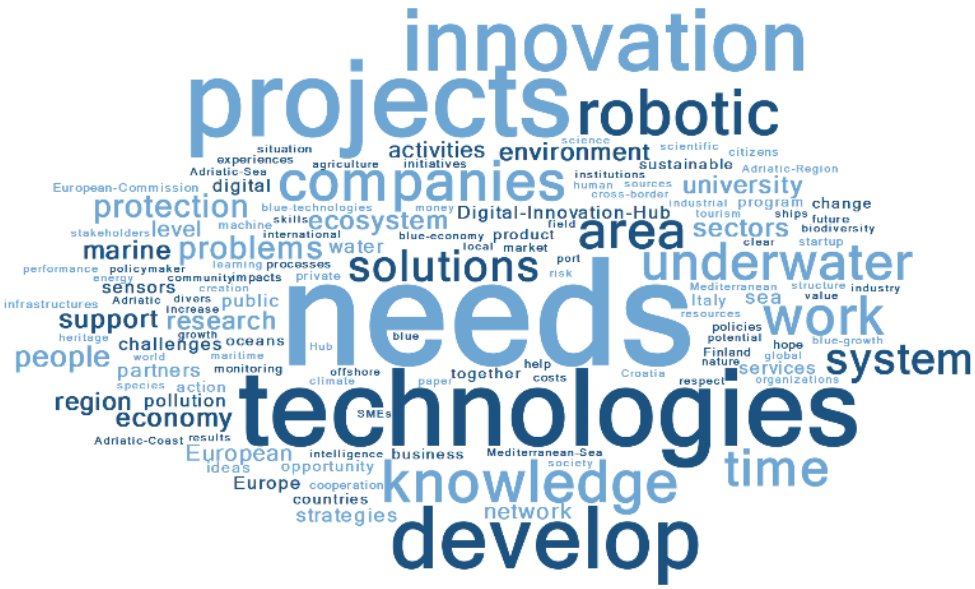
- engaging, inspiring and motivating citizens to care for our seas:
  a real change towards a more sustainable Adriatic Sea needs a cultural and behavioural change in civil society, enabling citizens to carry out shared actions or make informed choices in their everyday life, contributing to the improvement of the ecological status of our seas. Therefore, the EU4Ocean Coalition for Ocean Literacy was presented, as well as the main projects developed by the Italian NGO Legambiente.

The second day (19/02) was completely dedicated to showcase best practices and examples (at Italian, Croatian but also European level) in the following fields, which the partners consider strategic for boosting the development of blue innovation and for laying the foundations for an effective cross-border innovation ecosystem:

- sea monitoring and prediction through underwater robotics and sensors
- ports and offshore plants surveillance through underwater robotics and sensors
- services and impacts related to Innovation Ecosystems and DIHs

This working session has allowed key stakeholders involved to have a better understanding both of:
- the practical applications of underwater robotics and sensors, acquiring knowledge on what is being achieved at cross-border level by academia and private companies (both start-ups and big corporates);
- the services offered and the impact generated by innovation ecosystems and DIHs.

The following word cloud highlights the main keywords and topics emerged during the 2-days event.



2.2 Target groups reached

Thanks to the Roundtable, it has been possible to involve a wide range of key stakeholders, covering the different typologies of target groups identified by InnovaMare strategic project.

Invited high-profile speakers were the following:

n.	Surname	Name	Company / Organization
1	Nikolić	Vedran	European Commission, DG Environment, Unit D3 Nature Protection
2	Hatziyanni	Eleni	European Commission, DG for Maritime Affairs and Fisheries, Sea-basin strategies, Maritime Regional Cooperation and Maritime Security
3	Cukrov	Neven	Ruđer Bošković Institute – Division for Marine and Environmental Research
4	Vatta	Lorna	ARTES 4.0, Competence Centre on Advanced Robotics and enabling digital technologies & systems
5	Auriemma	Rita	University of Salento
6	Petrioli	Chiara	University La Sapienza, Spin-off W SENSE Srl
7	Franco	Anna	Veneto Region
8	Žiža	Nevenka	Croatian Ministry of Sea, Transport and Infrastructure, Department of Supervision from the Maritime Administration
9	Gherardi	Lodovico	Emilia Romagna Region, Coordinator of the Managing Authority for ADRION Programme 2014-2020
10	Moslavac Forjan	Davorka	Innovation Center Nikola Tesla (ICENT)
11	Galanti	Marco	T2i Trasferimento Tecnologico Innovazione S.c.a.r.l.
12	Strosser	Pierre	ACTeon
13	Scocchera	Elisa	Legambiente
14	Palunko	Ivana	University of Dubrovnik
15	Grassi	Michele	Elements Works srl (spin-off)
16	Bibuli	Marco	CNR National Centre of Research
17	Gelli	Stefano	Leonardo S.p.A.
18	Ricco	Mario	MEDISDIH – Apulian Mechatronics Technological Cluster and Digital Innovation Hub
19	Moslavac Forjan	Davorka	Innovation Centre Nikola Tesla (ICENT)
20	Ludvigsen	Martin	Norwegian University of Science and Technology, Applied Underwater Robotics Laboratory
21	Gassen	Glenn	Enter Espoo Oy
22	Banci	Elena	AREA Science Park

Such qualified pool of experts enabled the partnership to engage a discussion with high-level figures representing the four main groups of stakeholders to be actively involved in a fruitful dialogue on innovation ecosystems (political institutions, academia, private sector, civil society).

Furthermore, the high number of registered online participants to the event (documented in the enclosed Lis of participants), further allowed to effectively involve in the Roundtable, with a

quadruple-helix approach, a wide range of key European, Croatian and Italian stakeholders, coming from:

- European Union DGs
- Croatian National Government
- Italian regional governments representatives and Croatian counties representatives
- Croatian and Italian Universities, Research Centre, Competence Centres
- Chambers of Economy and Commerce
- Development and Environmental Agencies, Port Authorities, Energy Fund
- Innovation Ecosystems, Digital Innovation Hubs, Technology Transfer institutions
- Spin-offs and start-ups
- Large corporates
- NGO (engaged in environmental issues), representing civil society.

2.3. Outcomes and lessons learnt

The main lessons learnt during the 2-days first InnovaMare Roundtable, aimed at providing key cross-border stakeholders with a deeper understanding of the needs, potentials and shared solutions for a more sustainable Adriatic Sea, thanks to the application of innovative blue technologies (underwater robotics and sensors), are illustrated hereafter.

EU priorities for the protection of marine habitats – Vedran Nikolić, European Commission, DG Environment, Unit D3 – Nature protection

The EU Biodiversity Strategy 2030 is a reference programming document and one of the main priorities of the EU Green Deal. It addresses key issues such as "Protect Nature", "Restore Nature", "Enable Transformative Change" and "EU For An Ambitious Global Agenda", setting important objectives to be achieved.

The EU State of Nature report, in fact, has highlighted that 81% of habitats and 63% of species have a poor or bad conservation status in Europe. The biodiversity level is not satisfactory and marine species, in particular, are deteriorating at an unprecedented rate.

One of the most urgent needs is represented by the practical control and effective management of activities at the sea (and the EU Restoration Plan sets legally-binding restoration targets, comprising also marine habitats, which will need an effective innovation ecosystem to be put in place).

The main opportunities for innovation for a more sustainable marine environment are:

- monitoring pressures (real-time pollution, fishing, modelling; regulating visitors boating, anchoring etc.)
- innovative fishing gears (not harmful for marine species)
- reducing underwater noise and collisions with cetaceans
- disaster prevention (oil spills), control of invasive alien species
- stronger cooperation between science, industry and authorities
- access to funding opportunities (Horizon Europe 2021-2027, LIFE programme, EMFAF, etc.).

Underwater robotics and sensors can play an effective role in exploiting most opportunities, creating a successful innovation ecosystem driving sustainable economic growth.

The strategic role of Blue Economy and blue technologies – Eleni Hatziyanni, European Commission, Directorate-General for Maritime Affairs and Fisheries - Sea-basin Strategies, Maritime Regional Cooperation and Maritime Security

Blue Economy counts for an important percentage of the Mediterranean GDP. The EU Green Deal advocates for a sustainable transformation across all sectors and Blue Economy can make a difference contributing to the achievement of many Green Deal priorities. Therefore, there is a huge potential for translating European Green Deal Priorities into Blue Economy Sectors. Furthermore, a new Roadmap for Sustainable Blue Economy calls for a greener post-COVID 19 future for the maritime sector. Blue technologies and blue innovation play a key role in this field, particularly systems for ocean observation, sensors, robotics, satellite systems, data collection in fisheries, technologies for tracking the distribution and migration of species, real-time pollution monitoring and so on.

The achievement of the policy goals set at EU level need a coherence of strategies and actions at sea-basin level, and a clear cost-effectiveness of results. Therefore, it is important to align cross-border and national and regional strategies with EUSAIR (the macroregional strategy for the Adriatic-Ionian Region). In this field, S3 (Smart specialization strategies) are key enablers of huge blue innovation potential, so it is very important for S3 of the sea-basin to comprise a focus on Blue Economy and blue growth.

The pollution of the Adriatic Sea – Neven Cukrov and Marina Mlakar, RUĐER BOŠKOVIĆ INSTITUTE – Division for Marine and Environmental Research (Partner of InnovaMare)

The pollution of the Adriatic Sea is caused by: chemical pollution (toxic metals, oils and hydrocarbons, radioactivity, organic – sources are Industry, Agriculture, Tourism, Maritime transportation); microbiological pollution (whose sources are Tourism and Waste waters); plastic pollution (Floating litter, microplastic, in particular from tourism, wastewater, agriculture, open sea); invasive organisms (Plankton, Algae, Fishes, deriving from Maritime transportation , Global warming); nutrients (Nitrates , Phosphates, Amonia produced by agricultural products and practices).

For example, in the Krka River Estuary the copper concentration in the summer is 22 times higher than in other periods of the year (due to anti-fouling paint used for nautical tourism purposes)

Concerning Adriatic sediments, floating litter only counts for less than 50% of the total, while most part goes at the bottom.

Blue technologies and ICT systems play an essential and pivotal role in monitoring marine ecosystems, identifying and tracking pollutants and allowing to put in place mitigations measures, as well as facilitating the development of scenarios to support adequate strategies and policies.

Tools for the environmental monitoring of the Adriatic Sea – Lorna Vatta, ARTES 4.0, Competence Centre on Advanced Robotics and enabling digital Technologies & Systems

ARTES 4.0 is a highly specialized network in the areas of Advanced Robotics and Enabling Digital Technologies such as Communication Networks, Big Data, Data Mining, Cybersecurity, Cloud, Industrial Internet, Internet of Things, Additive Manufacturing, Simulation and Models of Business Integration. Ocean Economy 4.0 is one of their main application areas, considering the strategic potential of blue innovative technologies for sea monitoring and prediction. In particular, key systems and devices are bio-inspired aquatic robots, submarine robotics for exploring the underwater world, platforms and industrial sites, autonomous underwater vehicles (development of AI systems for autonomous sea vehicles, human machine interfaces and human robot interactive systems: autonomous guidance, precise navigation, obstacle detection and avoidance).

The UNESCO Convention on the Protection of the Underwater Cultural Heritage – Rita Auriemma, University of Salento

The UNESCO's Convention on the Protection of the Underwater Cultural Heritage 2001 established that in situ preservation has to be considered as first option. Blue technologies are strategic innovation allowing the deployment of in situ preservation. Furthermore, it is very important to involve stakeholders in the management and protection of underwater cultural heritage, creating alliances and collaborations among professional archaeologists and policy makers in the field of

underwater cultural heritage. Finally, underwater tourism is becoming increasingly popular, with successful examples in Greece and Italy.
In situ preservation involves key enabling technologies such as sonar, buoys, satellite monitoring, various geophysical methods that monitor the appearance and changes occurring underwater.

Underwater robotic and sensing systems for Cultural Heritage discovery, conservation and in situ valorisation – Chiara Petrioli, University La Sapienza, W•SENSE S.r.l.
The spin-off W•SENSE S.r.l. of the Italian University La Sapienza showcased the successful implementation of underwater robotics and sensor for the discovery, conservation and in situ valorisation of submerged cultural heritage. It coordinated ARCHEOSUb project, aimed at developing products and services in support of the discovery of new Underwater Cultural Heritage (UCH) sites and of the surveying, conservation, protection, and valorisation of new and existing ones. It used an in-situ underwater sensor network deployed at a site for real-time monitoring and surveillance. The network comprised low-cost Autonomous Underwater Vehicles (AUVs), relying on the network nodes for accurate localization.

Better governance of the Adriatic in the 2021-2027 programming period

Anna Franco, Veneto Region, Territorial Cooperation and EU Marco-regional strategies
A massive use of the objective Governance challenges related to cooperation is expected for the new 2021-2027 programming period. Furthermore, an important percentage of the budget for transnational programmes will be allocated on macro-regional strategies objectives (for instance EUSAIR macroregional strategy for ADRION Programme). The intention is to embed Macro-Regional Strategies in mainstreaming programmes. Veneto Region represents Italian regions, together with Molise Region, at "Thematic Steering Group 1 - Blue Growth (TSG 1)" coordinated by Greece and Montenegro. Veneto took part in the definition of the list of flagships for embedding in ESI and IPA funds. Flagships are intended to be solutions for the main challenges of macro-regional importance consistent with national needs as well as with the EU policy objectives for a greener, low-carbon and more connected Europe. Proposed Flagship on topic 1.1 is "Blue technologies": Fostering quadruple helix ties in the fields of marine technologies and blue bio-technologies for advancing innovation, business development and business adaptation in blue bioeconomy. It is expected as an outcome a strengthening of quadruple helix ties in the field of blue technologies in the region through stronger RDI and cooperation among SMEs and between SMEs, large enterprises and research centres.

Nevenka Žiža, Croatian Ministry of Sea, Transport and Infrastructure - Department of Supervision from the Maritime Administration
The intervention highlighted the role of Ports as strategic tools for the development of Blue Economy. In the 2021-2027 period, investments are expected to reach a value approximately equal to that of the previous programming period, with a special attention focused on green investment and digitalization and synergy of investments in different sectors, primarily energy. Legislative activity comprises EMSW Directive, New EU Strategy for Sustainable and Smart Mobility, FuelEUMaritime, Alternative Fuels Infrastructure Directive, revision of EU ETS system.

Lodovico Gherardi - Coordinator of the Managing Authority Unit of the Adriatic Ionian Programme 2014-2020, Emilia-Romagna - Region

This presentation was focused on ADRION Programme 2021-2027, also stressing on the importance to align ESI and IPA funds with macroregional strategies. For instance, in line with EUSAIR, ADRION will support the realization and implementation of plans ensuring security and environmental protection; CBC Programmes will support to the realization of specific CBC infrastructures/ tools, while Mainstream/IPA programmes will support the training, purchase of equipment, direct support to companies involved in the sector.

December 2021 is currently the last deadline for the Cooperation Programme submission. Among future strategic topics to be addressed there are PO1 a smarter Europe by promoting innovative and smart economic transformation, as well as PO2 a greener, low carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management.

Lodovico Gherardi could not attend the event but shared his presentation.

What is a a Digital Innovation Hub (DIH)? -Davorka Moslavac Forjan, Innovation Centre Nikola Tesla (ICENT)

Currently in Croatia 23.2% of companies are highly digitised. The average of 23.2% means: 5% for construction companies, 77.6% for consultancy information services. Digital Innovation Hubs (DIHs) are key to drive change and support the development of an innovation ecosystem.

A DIH is a support facility that helps companies to become more competitive by improving their business/production processes as well as products and services by means of digital technology. It is also a one-stop-shop serving companies within their local region and beyond to digitalise their business. Finally, a DIH also helps customers address their challenges in a business-oriented way, offering services that would not be easily accessible elsewhere.

DIHs have the following main functions:

- creating an Innovation ecosystem and networking opportunities
- developing skills and offering high-level training experiences and programmes
- allowing companies to “test before invest” thanks to access to advanced technologies and dedicated R&D infrastructure
- supporting companies to find investments to grow and scale-up

The creation of a DIH – Marco Galanti, T2i Trasferimento Tecnologico Innovazione S.c.a.r.l

t2i was one of the first Digital Innovation Hubs recognised in Italy, in the framework of the I4MS initiative. t2i mission was always focused on supporting SMEs towards innovation, and especially in the digital transformation. The creation of a DIH is a complex process that involves raising awareness among policy-makers and key stakeholders on the importance of putting in place an innovation ecosystem enabling growth and competitiveness of SMEs. Furthermore, it requires the active collaboration of academia, key investments in R&D infrastructure, the creation of dedicated training programmes and business accelerators, promoting the start-up and scale-up of promising innovative companies, a strong international network of partners to exchange best practices and experiences.

EU4Ocean Coalition for Ocean Literacy – Pierre Strosser, ACTeon

EU4Ocean started from the recognition of the importance of the marine challenges (degradation of ecosystems, pollution, overuse of resources, climate change, etc.), of the need to achieve a change in the behaviour of civil society to support climate and ecological transition in general, of the key role of knowledge and understanding of the human-sea interactions, of the lack of integration among literacy initiatives and communication (calling for collective and coordinated efforts in capacity-building, communication, social media, education…).

EU4Ocean is an initiative supported by DG MARE to strengthen ocean literacy in Europe, and it acknowledges the importance to engage citizens and the wider audience to care for our seas, in order to achieve durable and sustainable impacts.

It comprises EU4Ocean Platform (which brings together organisations, initiatives, people), Youth4Ocean Forum (involving so-called Changemakers 16-30 years old), a Network of European Blue Schools (addressed to primary, secondary, technical & vocational training). The engagement and active participation of citizens and communities is promoted by means of:

- advocacy campaigns (connected to EU4Ocean coalition #MakeEuropeBlue)
- Blue Challenges for Schools (including by joining the EU Network of Blue Schools)
- supporting citizen mobilisation in ocean projects and activities
- supporting the organisation of an EU4Ocean OL cruise
- development of MOOCs for Universities
- launching Ocean Art events and initiatives
- supporting the establishment of a Mediterranean Ocean Literacy Network
- developing a Med marine podcast series (synergies to Arctic Podcasts)
- developing “ocean literacy” material for Mediterranean decision-makers
- Developing ocean literacy products and initiatives around sea product and service value chain (food from the sea, sustainable tourism)

Citizens’ Engagement activities of Legambiente in Italy - Elisa Scocchera, Legambiente

Legambiente is an Italian NGO engaged in environmental protection actions and projects, involving communities, individual citizens or groups. Marine pollution has become increasingly important for the organization over the last years, stimulating the implementation of targeted initiatives, such as “Goletta Verde” (addressing microbiological pollution from wastewater), Clean up the Med, Beach Litter, Plastic pellets, Fishing for litter (with fishermen).

The key concepts exploited by the NGO is Citizen science, participatory model used to actively engage citizens, combined with a widespread presence across the country (18 regional branches, 600 local clubs).

Sea monitoring and prediction through underwater robotics and sensors

Marine Robotics for sea monitoring in the Adriatic Sea – Ivana Palunko, University of Dubrovnik

The University of Dubrovnik is engaged in several projects and researches focused on the application of innovative blue technologies for sea monitoring and prediction. Advanced technologies are used to monitor aquaculture, plankton, marine pollution, marine litter.

Litter mostly comes from the open sea and approximately 95% of it gets underwater. Divers can be effectively employed to clean shallow waters, but deeper waters pose challenges and threats.

Thanks to H2020 SEACLEAR project, the University has been able to define automated litter tracking and identification solutions (autonomous surface vehicle, robot - recognizing litter from lifeforms - grabbing litter and putting it into a basket, which is then transported to the shore). Such solution has 80% success rate in classification, 90% in collection and achieves 70% in the reduction of costs.

netH20 Smart Buoy – Michele Grassi, Elements Works S.r.l.
The company develops and commercializes a smart buoy, called netH20, for data acquisition and transmission from remote locations in water bodies (maritime surveillance, data security). It is a key enabling technology contributing to the growth of blue economy. This solution allows for deploying a large number of autonomous devices, and is able to operate unattended for a long period of time (monitoring remote water bodies, aquatic sport sites, tourist sites, etc.).
It is a cost-effective solution gathering data at various depths. It can be deployed in swarms or arrays, in moored or drifted configuration. It is currently being used in a pilot action in the gulf of Trieste, in the framework of FishAgroTech project.

Ports and offshore plants surveillance through underwater robotics and sensors

R&D for surveillance of ports and offshore plants - Marco Bibuli, CNR National Centre of Research
The Institute of Marine Engineering of CNR researches and develops pilot solutions for Ports and offshore plants surveillance through underwater robotics and sensors, integrating efficiency, cost-effectiveness, human safety and environmental protection.
Current technologies use for instance Robotic platforms (employment of ROVs for coastal and offshore operations) enabling for deep water operations with extensive duration, precise exploration/observation, execution of complex tasks by means of redundant manipulators. Barriers are represented by the need to employ skilled crew, the presence of the tether, complex logistics.
Nowadays it is mandatory to develop offshore activities in a sustainable way, mitigating the effect of anthropization on the surrounding environment. The future will lead from submerged tools to autonomous robots, shifting from ROV to AUV (autonomous underwater vehicles).

Technological innovation for above water and underwater surveillance – Stefano Gelli, Leonardo S.p.A.
Leonardo S.p.A. is an Italian multinational company specialising in aerospace, defence and security. Headquartered in Rome, the company has 180 sites worldwide and is one of the largest defence contractors in the world. The company both studies and develops Above Water Surveillance of Ports and Offshore Platforms (Radar Systems, Long Range EOS Image Classification) and Underwater Surveillance advanced technological solutions (Integration of underwater TV Cameras and Acoustic Sensors, V-FIDES).
The deployment of innovative technologies is strategic for the protection of key infrastructures (such as harbours), coastal surveillance for defence purposes (with detection of surface as well as air targets), offshore plants, underwater modular protection system for sensitive targets (access areas to port installations, off shore platforms, military sites or industrial on coasts) against multiple threats (underwater) divers included. In 2015 Leonardo S.p.A. designed and delivered V-FIDES, an underwater drone mainly used for environmental Monitoring and underwater exploration and

surveillance. It can operate both as AUV or ROV and is equipped with 8 engines and a complete sensors suite (sonars, acoustic sensors, chemical sensors, geo-magnetic sensors).

Services and impacts related to Innovation Ecosystems and DIHs

MEDISDIH Apulian Mechatronics Technological Cluster and Digital Innovation Hub – Mario Ricco
MEDISDIH is the former Mechatronics Technological Cluster, which has integrated DIH strategies since 2018. It focuses on supporting the digitization of Apulian SMEs mainly in manufacturing, energy-environment-mobility, health and agri-food sectors. Its members are both public (research centres) and private. MEDISDIH offers a wide range of services, comprising digital maturity assessment, innovation ecosystem, training and education, analysis of needs, opportunities and I4.0technological options, Brokerage, access to public and private, national and European projects and funding, incubation and mentoring services, consulting on Industry 4.0 (intellectual property, tax, business modelling, evaluation of investment projects).
The DIH contributes to the strategic monitoring and planning of joint, sustainable and circular development Adriatic Region activities
The most strategic service resulted to be the support for companies to fully understand the purpose and impact of the innovation they have developed, also sharing and integrating complementary competences thanks to the facilities of the DIH.

CROBOHUB Croatian Robotics Digital Innovation Hub - Davorka Moslavac Forjan, Innovation Centre Nikola Tesla (ICENT)
CROBOHUB was launched in 2016 and is hosted and orchestrated by ICENT. The University of Zagreb, Faculty of Electrical Engineering and Computing (FER) is the owner and main partner. It is a networked organization, without formal structure, applying a project-based approach. It focuses on the advanced technical competences related to Robotics and Artificial Intelligence, mainly addressing sectors such as manufacturing, agriculture and public services e.g. health, public procurement.
CROBOHUB currently employs 15 people and counts on a network of around 100 experts. Offered services are: awareness creation, ecosystem building, brokerage, networking, collaborative research, concept validation and prototyping, incubator/accelerator support, technology and business mentoring, education and skills development.
It carried out strategic EU research projects and incubates innovative robotics companies.

Norwegian University of Science and Technology, Applied Underwater Robotics Laboratory - Martin Ludvigsen
NTNU presented a best practice of Innovation Ecosystem from Norway. NTNU has its headquarters in Trondheim and has consolidated a scientific high profile in science and technology. It has established a fruitful collaboration with SINTEF (contract research, ranked as n. 1 in the world, THE)
The interaction model is based on extensive collaboration with businesses and public administration, thanks to joint projects and research centres. NTNU TTO counts on 2075 received ideas (1729 from employees and 347 from students), 239 patent applications, 146 spin-offs (69 from employees and 77 from students), 163 licence agreements. The ecosystem provides start-ups push-up, laboratories, scientific feedback, offices, support for soft and hard investments.

The Applied Underwater Robotics Lab was founded in 2011 and is an inter-faculty collaboration to promote the application and use of underwater robotics in basic engineering and research across a wide variety of scientific disciplines and industries. It develops and maintains a pool of robotic platforms for marine research, including: Remotely Operated Vehicles (ROVs), Autonomous Underwater Vehicles (AUVs), and Autonomous Surface Vehicles (ASVs).
The most important services are considered to be Incentivizing Ideas (NTNU organizes calls for ideas: a potential applicant can meet the Technology Transfer Office (TTO) and qualified staff will evaluate the innovation potential of the idea) and Training. The most challenging and most useful contribution is encouraging to move from a technically feasible idea to an economically sustainable and marketable solution.

Enter Espoo Oy (Finland) - Glenn Gassen
ESPOO's innovation ecosystem in Finland is complex and integrated, and aimed at achieving sustainable growth thanks to the involvement and collaboration of key stakeholders.
The core of the ecosystem is represented by Aalto University, VTT Technological Institute, big private players such as Nokia, Fortum, Neste and Microsoft, the City of Espoo and Business Espoo, start-ups hubs and accelerators. Almost half of the value in the stock exchange of Finland is inside Espoo. The main services offered to companies are: Landing Services (to help finding business opportunities), Innovation Search, Growth Services, Visits & Programs.
They organize CORPORATE STARTUP ONLINE WEEKS, bringing together big international corporations and local start-ups, with the aim of starting collaborations.
They also promote Knights of Nordics Online, Nov 18 20, 2020 (with the participation of 101 international investors from Germany, Singapore, Japan, UK, France, Switzerland, India, China, Sweden, Norway and Netherlands; 37 start-ups and scaleups from Finland, Denmark and Sweden; 177 one-to-one meetings)
The biggest push to the launch of the innovation ecosystem has been a huge investment of the Finnish government in the 1950s, while in more recent years the greater contribution to development and growth comes from involved international big players and Aalto University and its students (start-up events encouraging entrepreneurship, EU's largest Hackathon, Venture Capital Fund, etc.).
Glenn Gassen thinks that the public sector should create favourable framework conditions and legal framework, then the private sector and academia will follow, realizing the change and continuing it in the future.

BLUEAIR project, Blue Growth Smart Adriatic Ionian S3 - Elena Banci, AREA Science Park
AREA Science Park (Italian Innovation Agency) is partner of BLUE GROWTH SMART ADRIATC IONIAN S3 project (ADRION 2014-2020 Programme), which brings together innovation agencies, universities and research centres, public administrations, chambers of economy.
The main goal of BLUEAIR project is enhancing institutional capacities of ADRION countries/regions in the definition of a common approach towards the implementation of the S3 policy on Blue Growth at macroregional level.
The partnership will collaborate for the improvement of the competences of quadruple helix actors in defining the innovation policies on Blue Growth; the identification of Blue Growth sectors of

macro-regional interest and exploitation of potentials for transnational cooperation; the support to the development of a Macro-Regional S3 on Blue Growth in the Adriatic- Ionian area.
Some main outcomes will comprise very useful results, which will be valuable inputs also for the capitalization of the activities of InnovaMare project: setting a “Blueair Innovation Community” based on a quadruple helix approach, developing a Blue growth smart strategy, Innovation Strategy and Action Plan for Innovation Investments in Blue Growth, developing a Technology foresight, Pilot EDP for Blue Growth.

2.4 Documentation related to the event

Agenda

Screenshots


Interreg
Italy - Croatia
InnovaMare
InnovaMare
Blue technology -
Developing innovative technologies
for sustainability of Adriatic Sea
DIVE INTO THE DEPTH
OF OPPORTUNITIES
Online Roundtable for Policy-Makers: 18-19/02/2021
European Regional Development Fund
www.italy-croatia.eu/innovamare

Interreg Italy - Croatia InnovaMare EUROPEAN UNION

INNOVAMARE PROJECT

InnovaMare strategic project - Blue technology - Developing innovative technologies for sustainability of Adriatic Sea, coordinated by the Croatian Chamber of Economy, is co-financed by the European Union, ERDF (European Regional Development Fund), through Interreg VA Italy-Croatia Programme (2014-2020). Its aim is to enhance framework conditions at cross-border level by reinforcing capacities, both at strategical and operational level, to develop an innovation ecosystem promoting breakthrough technologies for the environmental sustainability of the Adriatic Sea, with a focus on underwater robotics and sensors. Expected outputs will contribute to the achievement of the objectives of the EU Strategy for the Adriatic and Ionian Region (EUSAIR), with particular reference to Pillar 1 "Blue Growth", Topic 1 "Blue Technologies".

THE IMPORTANCE OF BLUE ECONOMY FOR SUSTAINABLE GROWTH AND COMPETITIVENESS

The Blue Economy includes all those activities that are marine-based or marine-related. Marine-based activities comprise Marine living resources (capture fisheries and aquaculture), Marine minerals, Marine renewable energy, Desalination, Maritime transport and Coastal tourism. Marine-related activities are linked for instance to Seafood processing, Biotechnology, Shipbuilding and repair, Port activities, technology and equipment, Digital services, etc.
As stated in the EU Blue Economy Report 2020, the Blue Economy is embedded in the overall EU economy, and the contribution of this strategic sector to the EU-28 economy in 2018 was 1.3 % in terms of GVA and 2.2 % in terms of employment. Improving the ecological status of the Adriatic Sea is a key priority both in Italy and Croatia: it is an opportunity to improve the sustainability of the cross-border territory, as well as to increase the competitiveness of enterprises, creating a technological leadership in this field. Marine pollution concerns different types of pollutant input (chemical and toxic substances, plastics and nutrients, underwater noise and other inputs from energy).
The role of underwater robotics solutions and sensors has a paramount importance for monitoring and predicting sea pollution and surveilling ports and plants, as well as natural and cultural heritage but, to fully unlock the existing potential, an effective innovation ecosystem has to be put in place, involving key stakeholders with a quadruple helix approach.

INNOVAMARE FIRST ROUNDTABLE FOR POLICY MAKERS

In the framework of WP3 "Enhancement of framework conditions by development of innovation ecosystem" of InnovaMare project, the Regional Union of the Chambers of Commerce of Veneto Region (UCV) organizes this Roundtable addressed at Policy-makers, to foster dialogue and exchange best practices in the field of Blue Economy and innovative blue technologies, enhancing cross-sectoral cooperation to support the creation of favourable framework conditions for a cross-border innovation ecosystem enabling growth, competitiveness and technological leadership in the field of underwater robotics and sensors. The first working day (18/02) will be dedicated to plenary sessions for policy-makers, favouring debate on main strategic topics, identified also taking into consideration the recent Report of the EU Mission Board Healthy Oceans, Seas, Coastal and Inland Waters. During the second day (19/02), thematic cross-sectoral focus groups will be organized, stimulating sharing of best practices for solving identified challenges, involving representatives from public bodies, academia and private sector.

ORGANIZER OF THE ROUNDTABLE: Regional Union of the Chambers of Commerce of Veneto Region (UCV)
Contact person of UCV: Roberta Lazzari, Phone: +39 041 099 9411, E-mail: roberta.lazzari@eurosportelloveneto.it
With the support of MERAKI srl, Ilaria Marcolin and Valentina Colleselli, E-mails: progetti@merakisrl.eu, v.colleselli@merakisrl.eu

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THURSDAY, 18/02/2021 – Morning session

11.00 – 11.20 **Welcome greetings** - Opening speech by *Roberto Crosta, Secretary General of Regional Union of the Chambers of Commerce of Veneto Region (partner of InnovaMare project)*
Presentation of InnovaMare project – *Mateo Ivanac, Croatian Chamber of Economy (Lead Partner of InnovaMare project)*
Introduction to the agenda by the moderators - *Guido Bortoluzzi (UNITS - University of Trieste, partner of InnovaMare) and Martina Rossi (Mare FVG, partner of InnovaMare project)*

11.20 – 11.40 **Vulnerability of marine habitats in EU policies and the key role of Blue Economy**
Marine habitats are very complex and fragile ecosystems, vulnerable to pollution, overfishing and other human activities interfering with their sustainability. Ecosystems regeneration enables halting the loss of biodiversity, while at the same time impulsing the development of key Blue Economy sectors
EU priorities for the protection of marine habitats – *Vedran Nikolić, European Commission, DG Environment, Unit D3 – Nature protection*
The strategic role of Blue Economy and blue technologies – *Eleni Hatziyanni, European Commission, Directorate-General for Maritime Affairs and Fisheries - Sea-basin Strategies, Maritime Regional Cooperation and Maritime Security*

11.40 – 12.00 **Zero Pollution strategies and tools for the Adriatic Sea**
The Adriatic Sea's sustainability and good ecological status is linked to the reduction of the presence of plastics and micro plastics, persistent organic and non-organic pollutants, spillages, wastewaters. Monitoring of key indicators allows for designing appropriate mitigation measures
The pollution of the Adriatic Sea – *Nevan Cukrov and Marina Mlakar, RUĐER BOŠKOVIĆ INSTITUTE – Division for Marine and Environmental Research (Partner of InnovaMare)*
Tools for the environmental monitoring of the Adriatic Sea – *Loma Vatta, ARTES 4.0, Competence Centre on Advanced Robotics and enabling digital Technologies & Systems*

12.00 – 12.20 **Application of robotics and sensors for the protection of underwater cultural heritage**
The UNESCO Convention on the Protection of the Underwater Cultural Heritage calls on States to better protect their submerged cultural heritage, investing in research, development and innovation in this field. Robotics and sensors can be exploited also in this key application field.
The UNESCO Convention on the Protection of the Underwater Cultural Heritage – *Rita Auriemma, University of Salento*
Underwater robotic and sensing systems for Cultural Heritage discovery, conservation and in situ valorization – *Chiara Petrioli, University La Sapienza, WiSENSE S.r.l.*

12.20 – 12.30 **Questions&Answers and closure of the morning session by the moderators**

THURSDAY, 18/02/2021 – Afternoon session

14.00 – 14.10	**Introduction to the working session by the moderators** - *Guido Bortoluzzi (University of Trieste, partner of InnovaMare) and Valentina De Marchi (University of Padua)*
14.10 – 14.40	**Better governance of the Adriatic in the 2021-2027 programming period** The need to strengthen European capacity to pre-empt and address environmental challenges affecting people, activities, habitats and infrastructure in the maritime domain, calls for integrated strategies and capacity-building actions *Anna Franco, Veneto Region, Territorial Cooperation and EU Macro-regional strategies* *Nevenka Žiža, Croatian Ministry of Sea, Transport and Infrastructure - Department of Supervision from the Maritime Administration* *Lodovico Gherardi - Coordinator of the Managing Authority Unit of the Adriatic Ionian Programme 2014-2020, Emilia-Romagna - Region*
14.40 – 15.00	**Creating Ecosystems favouring innovation and technology transfer** Digital Innovation Hubs (DIHs) can help ensure that every company, small or large, high-tech or not, can take advantage of digital opportunities. DIHs are one-stop shops that help companies become more competitive with regard to their business/production processes, products or services using digital technologies. DIHs provide access to technical expertise and experimentation, so that companies can "test before invest" with a quadruple helix approach What is a a Digital Innovation Hub (DIH)? -*Davorka Moslavac Forjan, Innovation Centre Nikola Tesla (ICENT)* The creation of a DIH – *Marco Galanti, T2i Trasferimento Tecnologico Innovazione S.c.a.r.l*
15.00 – 15.20	**Engaging, inspiring and motivating citizens to care for our Seas** Citizens need to consider waters as a common good. Civil society participation is key to ensure a successful effort to improve the sustainability of the Adriatic Sea EU4Ocean Coalition for Ocean Literacy – *Pierre Strosser, ACTeon* Citizens' Engagement activities of Legambiente in Italy - *Elisa Scacchera, Legambiente*
15.20 – 15.30	**Summary of key challenges and opportunities** The moderators will summarize the main challenges that cross-border policy makers will have to cope with, in preparation for the thematic working groups which will present best practices and possible solutions to tackle identified problems

FRIDAY, 19/02/2021 – PRESENTATION OF BEST PRACTICES ON UNDERWATER ROBOTICS AND SENSORS AND INNOVATION ECOSYSTEMS

11.00 – 11.10	**Introduction to the agenda and rules for participation** – *Mateo Ivanac (Croatian Chamber of Economy, LP of InnovaMare) and Martina Rossi (Mare FVG)*
11.10 – 11.30	**Sea monitoring and prediction through underwater robotics and sensors** Presentation of best practices from academia and private sector Marine Robotics for sea monitoring in the Adriatic Sea – *Ivana Palunko, University of Dubrovnik (Partner of InnovaMare)* netH2O Smart Buoy – *Michele Grassi, Elements Works S.r.l.*
11.30 – 11.50	**Ports and offshore plants surveillance through underwater robotics and sensors** Presentation of best practices from academia and private sector R&D for surveillance of ports and offshore plants - *Marco Bibuli, CNR National Centre of Research (10 minutes)* Technological innovation for above water and underwater surveillance – *Stefano Gelli, Leonardo S.p.A. (10 minutes)*
11.50-12.00	Questions&Answers and closure of the morning session for the lunch break
14.00 – 14.50	**Services and impacts related to Innovation Ecosystems and DIHs** Presentation of best practices in Italy, Croatia and Europe (10 minutes each) MEDISDIH Apulian Mechatronics Technological Cluster and Digital Innovation Hub – *Mario Ricco* CROBOHUB Croatian Robotics Digital Innovation Hub - *Davorka Moslavac Forjan, Innovation Centre Nikola Tesla (ICENT)* Norwegian University of Science and Technology, Applied Underwater Robotics Laboratory - *Martin Ludvigsen* Enter Espoo Oy (Finland) - *Glenn Gassen* BLUEAIR project, Blue Growth Smart Adriatic Ionian S3 - *Elena Banci, AREA Science Park*
14.50 – 15.00	**Final debate coordinated by the moderators** *Mateo Ivanac, Croatian Chamber of Economy. Valentina De Marchi (UNIPD)*


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WEB: www.italy-croatia.eu/innovamare
E-MAIL: innovamare@hgk.hr
CONTACT PERSON: Mateo Ivanac, Project Manager
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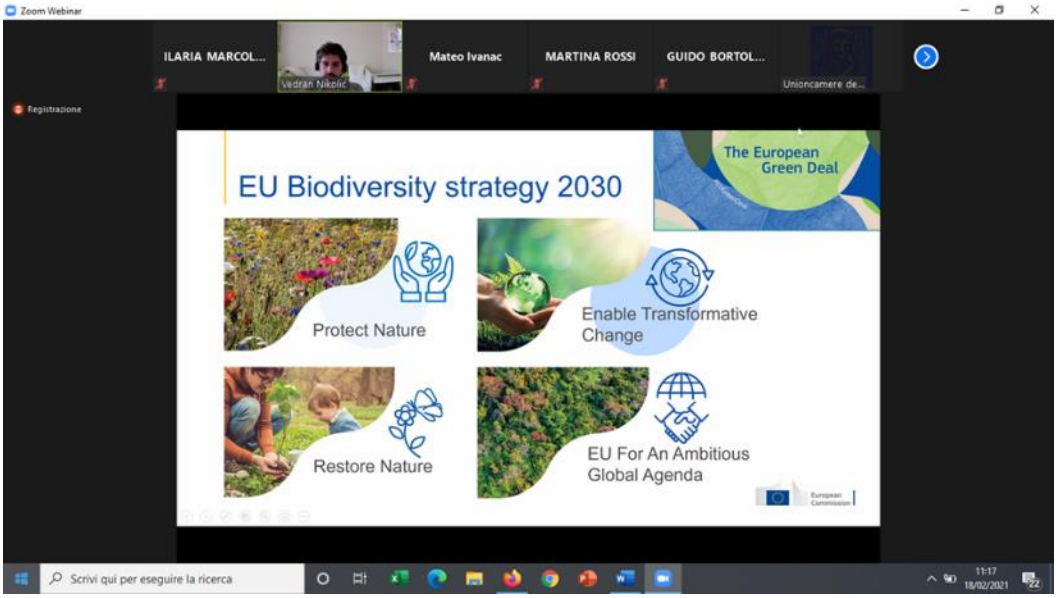
SCREENSHOTS




Zoom Webinar
ILARIA MARCOL...
Eleni Hatziyanni
Mateo Ivanac
MARTINA ROSSI
Vedran Nikolić
GUIDO BORTOL...
Registrazione
Blue Economy
The strategic role of Blue Economy and Blue Technologies
Eleni Hatziyanni
European Commission, DG MARE
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Partecipanti
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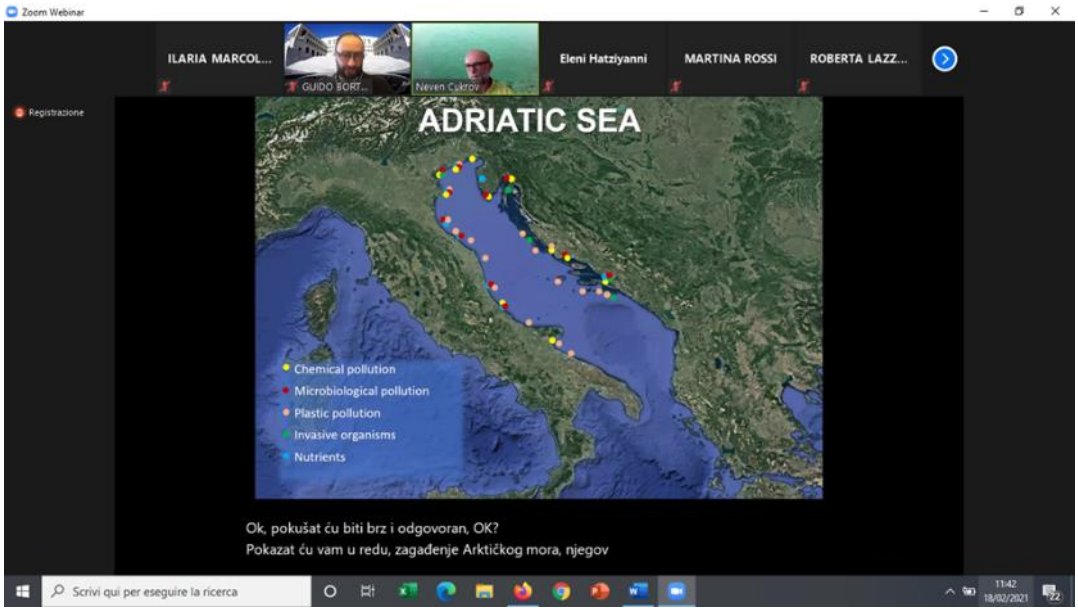
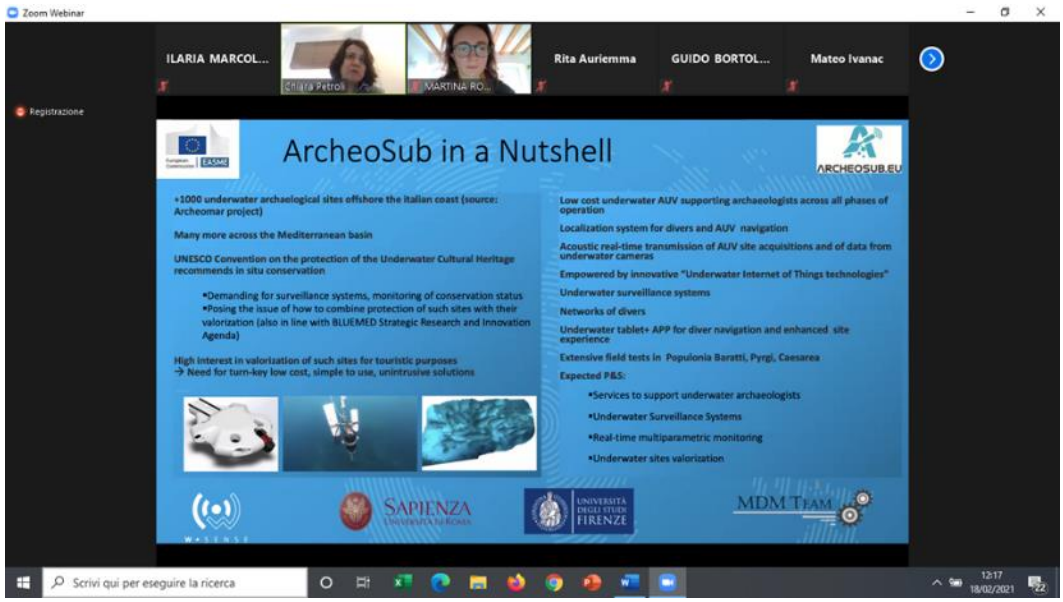
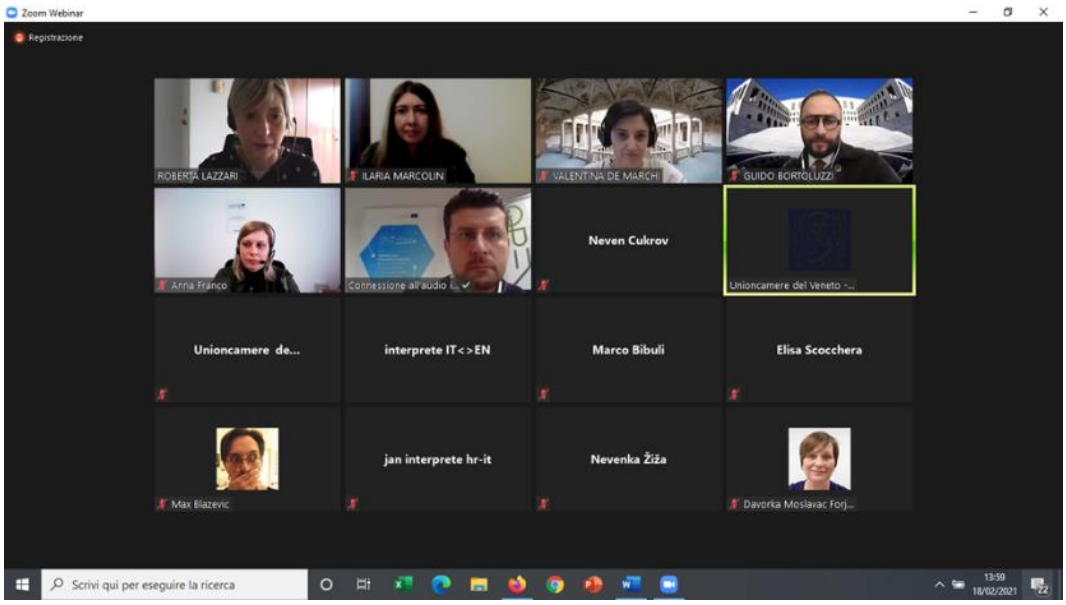

Zoom Webinar
ILARIA MARCOL...
GUIDO BORT...
Neven Cukrov
Eleni Hatziyanni
MARTINA ROSSI
ROBERTA LAZZ...
Registrazione
ADRIATIC SEA
Chemical pollution
Microbiological pollution
Plastic pollution
Invasive organisms
Nutrients
Ok, pokušat ću biti brz i odgovoran, OK?
Pokazat ću vam u redu, zagađenje Arktičkog mora, njegov
Scrivi qui per eseguire la ricerca


Zoom Webinar
ILARIA MARCOL...
Neven Cukrov
MARTINA ROSSI
ROBERTA LAZZ...
Chiara Petroli
Registrazione
Objective: Improve Technology Transfer to effectively overcome the "Valley of Death"
"Valley of Death"
Universities and National Laboratories
Corporations
Supportare il livello prototipale, accompagnare fino allo sviluppo commerciale
1 Basic Principles Observed
2 Technology Concept Formulated
3 Experimental Proof of Concept
4 Technology Validation in lab
5 Tech. valid in relevant environment
6 Demonstration in relevant environment
7 Demonstration in operational environment
8 System complete and qualified
9 Successful mission operations
Lascia


Zoom Webinar
ILARIA MARCOL...
Rita Auriemma
GUIDO BORTOL...
Mateo Ivanac
Registrazione
ArcheoSub in a Nutshell
ARCHEOSUB.EU
+1000 underwater archaeological sites offshore the Italian coast (source: Archeomar project)
Many more across the Mediterranean basin
UNESCO Convention on the protection of the Underwater Cultural Heritage recommends in situ conservation
•Demanding for surveillance systems, monitoring of conservation status
•Posing the issue of how to combine protection of such sites with their valorization (also in line with BLUEMED Strategic Research and Innovation Agenda)
High interest in valorization of such sites for touristic purposes
→ Need for turn-key low cost, simple to use, unintrusive solutions
Low cost underwater AUV supporting archaeologists across all phases of operation
Localization system for divers and AUV navigation
Acoustic real-time transmission of AUV site acquisitions and of data from underwater cameras
Empowered by innovative "Underwater Internet of Things technologies"
Underwater surveillance systems
Networks of divers
Underwater tablet+ APP for diver navigation and enhanced site experience
Extensive field tests in Populonia Baratti, Pyrgi, Caesarea
Expected P&S:
•Services to support underwater archaeologists
•Underwater Surveillance Systems
•Real-time multiparametric monitoring
•Underwater sites valorization
SAPIENZA
MDM TEAM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Registrazione
ROBERTA LAZZARI
ILARIA MARCOLIN
VALENTINA DE MARCHI
GUIDO BORTOLUZZI
Anna Franco
Neven Culcrov
Unioncamere del Veneto -...
Unioncamere de...
interprete IT<>EN
Marco Bibuli
Elisa Scocchera
Max Blazevic
jan interprete hr-it
Nevenka Žiža
Davorka Moslavac Forj...
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Registrazione
Interreg
30 years together
REGIONE DEL VENETO
Interreg
Italy - Croatia
InnovaMare
Roundtable
February 18th 2021
Interreg's role in the
Adriatic governance 2021-2027
Anna Franco - Veneto Region
Interreg MED Programme Regional Representative
Territorial Cooperation and Macroregional Strategies Unit
Joint Programming Department
ILARIA MARCOL...
VALENTINA DE MAR...
GUIDO BORTOLUZZI
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Avvia video
Partecipanti
Chattare
Condividere lo schermo
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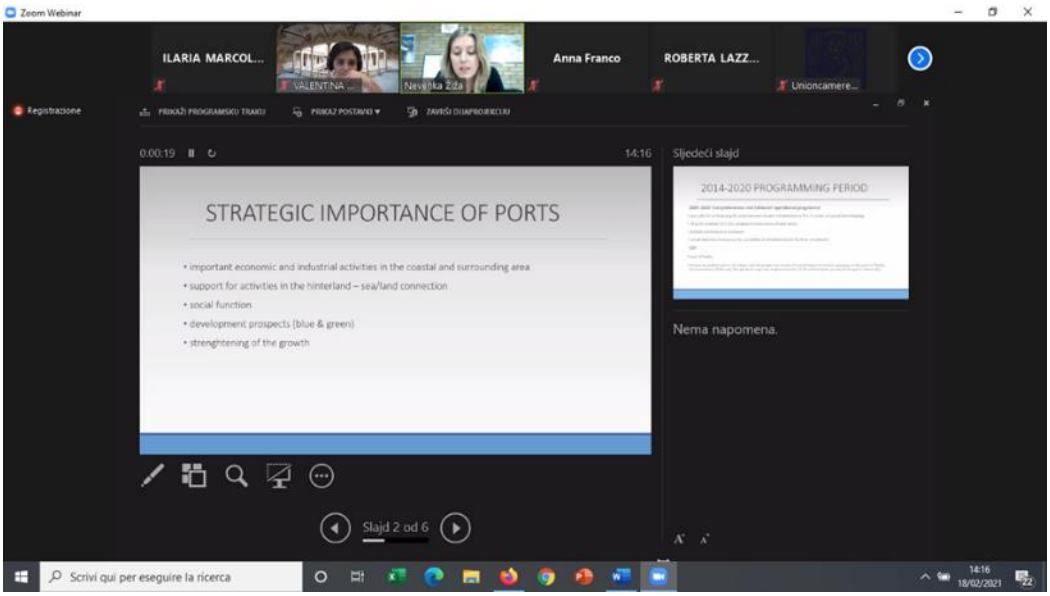
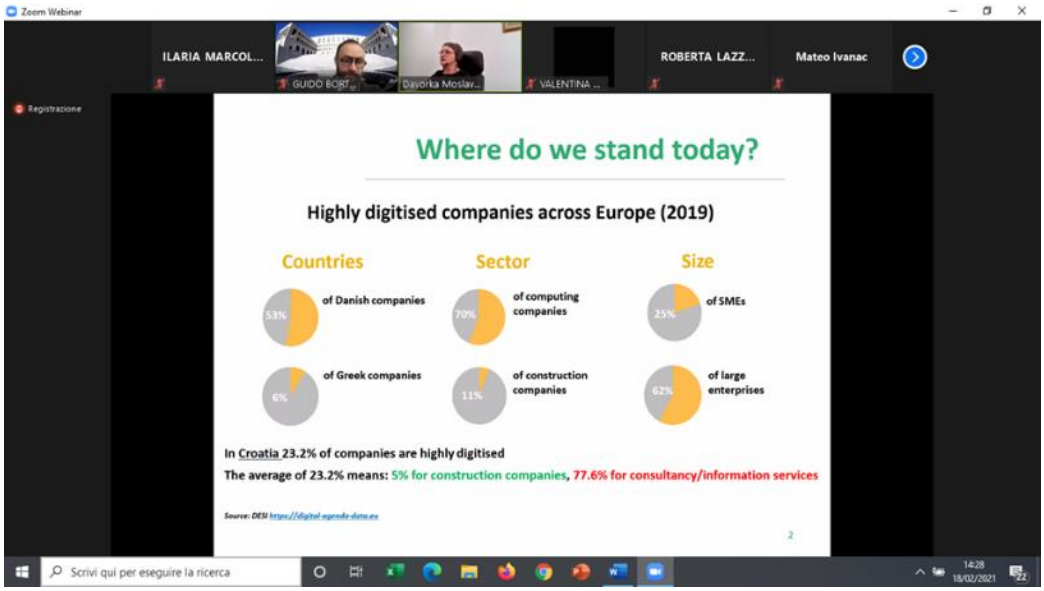

Zoom Webinar
ILARIA MARCOL...
Anna Franco
ROBERTA LAZZ...
Unioncamere...
Registrazione
0:00:19
14:16
Sljedeći slajd
STRATEGIC IMPORTANCE OF PORTS
• important economic and industrial activities in the coastal and surrounding area
• support for activities in the hinterland – sea/land connection
• social function
• development prospects (blue & green)
• strenghtening of the growth
2014-2020 PROGRAMMING PERIOD
Nema napomena.
Slajd 2 od 6
Scrivi qui per eseguire la ricerca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ROBERTA LAZZ...
Mateo Ivanac
Registrazione
Where do we stand today?
Highly digitised companies across Europe (2019)
Countries
Sector
Size
53%
of Danish companies
70%
of computing companies
25%
of SMEs
6%
of Greek companies
11%
of construction companies
62%
of large enterprises
In Croatia 23.2% of companies are highly digitised
The average of 23.2% means: 5% for construction companies, 77.6% for consultancy/information services
Source: DESI
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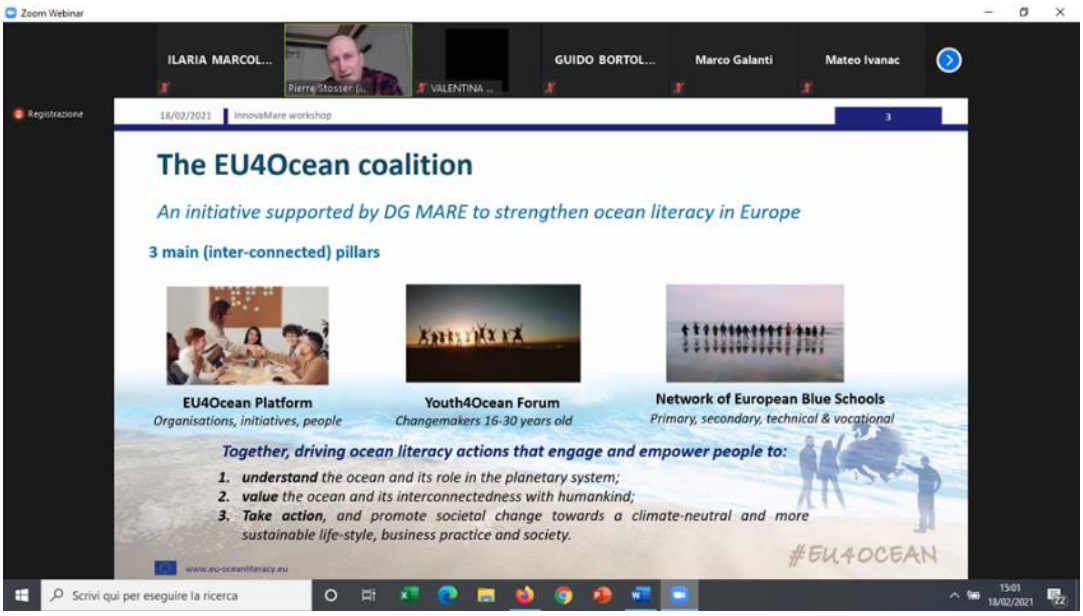
Zoom Webinar
ILARIA MARCOL...
GUIDO BORTOL...
Marco Galanti
Mateo Ivanac
Registrazione
18/02/2021
InnovaMare workshop
3
The EU4Ocean coalition
An initiative supported by DG MARE to strengthen ocean literacy in Europe
3 main (inter-connected) pillars
EU4Ocean Platform
Organisations, initiatives, people
Youth4Ocean Forum
Changemakers 16-30 years old
Network of European Blue Schools
Primary, secondary, technical & vocational
Together, driving ocean literacy actions that engage and empower people to:
1. understand the ocean and its role in the planetary system;
2. value the ocean and its interconnectedness with humankind;
3. Take action, and promote societal change towards a climate-neutral and more sustainable life-style, business practice and society.
#EU4OCEAN
www.eu-oceanliteracy.eu
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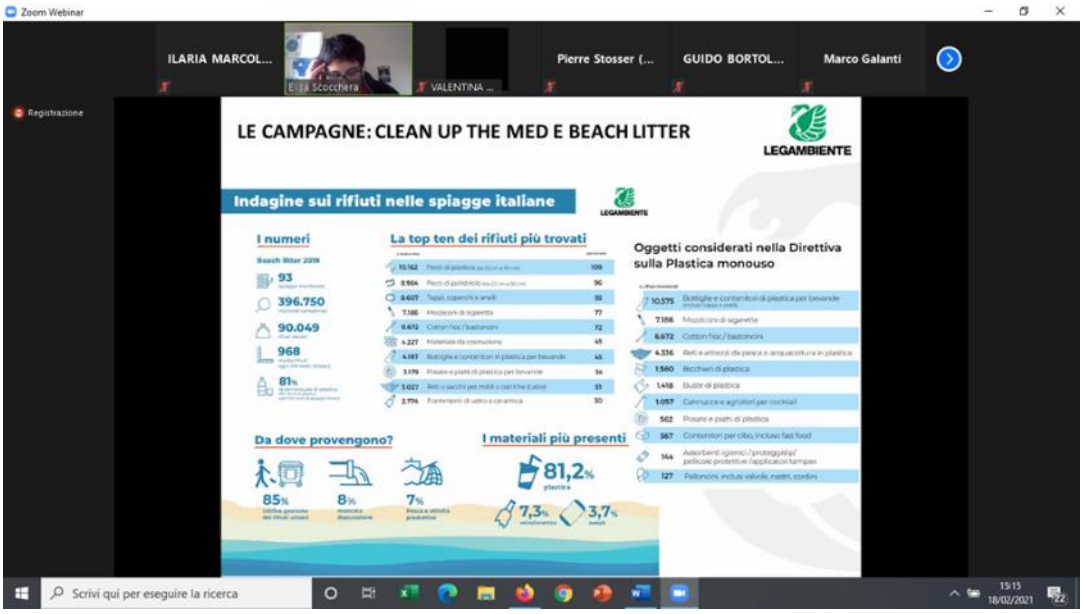
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Pierre Stosser (...
GUIDO BORTOL...
Marco Galanti
Registrazione
LE CAMPAGNE: CLEAN UP THE MED E BEACH LITTER
LEGAMBIENTE
Indagine sui rifiuti nelle spiagge italiane
I numeri
La top ten dei rifiuti più trovati
Oggetti considerati nella Direttiva sulla Plastica monouso
Da dove provengono?
I materiali più presenti
81,2%
7,3%
3,7%
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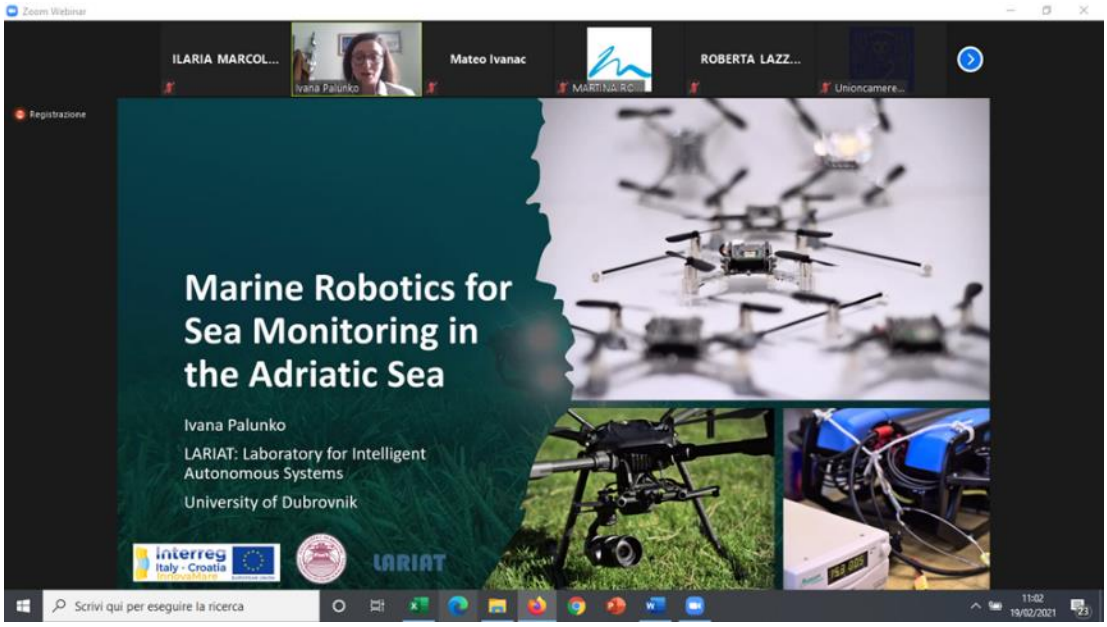
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Ivana Palunko
Mateo Ivanac
MARTINA RO...
ROBERTA LAZZ...
Unioncamere...
Registrazione
Marine Robotics for Sea Monitoring in the Adriatic Sea
Ivana Palunko
LARIAT: Laboratory for Intelligent Autonomous Systems
University of Dubrovnik
Interreg Italy - Croatia InnovaMare
LARIAT
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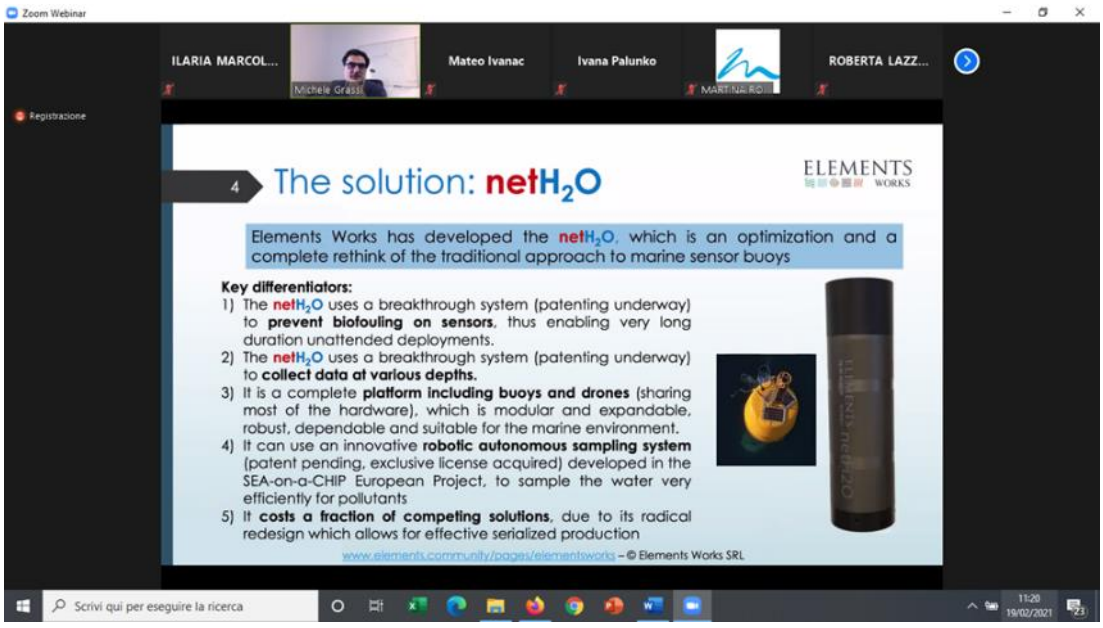
19/02/2021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Michele Grassi
Mateo Ivanac
Ivana Palunko
MARTINA RO...
ROBERTA LAZZ...
Registrazione
4
The solution: netH2O
ELEMENTS WORKS
Elements Works has developed the netH2O, which is an optimization and a complete rethink of the traditional approach to marine sensor buoys
Key differentiators:
1) The netH2O uses a breakthrough system (patenting underway) to prevent biofouling on sensors, thus enabling very long duration unattended deployments.
2) The netH2O uses a breakthrough system (patenting underway) to collect data at various depths.
3) It is a complete platform including buoys and drones (sharing most of the hardware), which is modular and expandable, robust, dependable and suitable for the marine environment.
4) It can use an innovative robotic autonomous sampling system (patent pending, exclusive license acquired) developed in the SEA-on-a-CHIP European Project, to sample the water very efficiently for pollutants
5) It costs a fraction of competing solutions, due to its radical redesign which allows for effective serialized production
www.elements.community/pages/elementsworks – © Elements Works SRL
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11:20
19/02/2021


Zoom Webinar
ILARIA MARCOL...
Marco Bibuli
MARTINA ROSSI
Michele Grassi
ROBERTA LAZZ...
Ivana Palunko
Registrazione
Ports and offshore plants surveillance
through underwater robotics and sensors
Marco Bibuli
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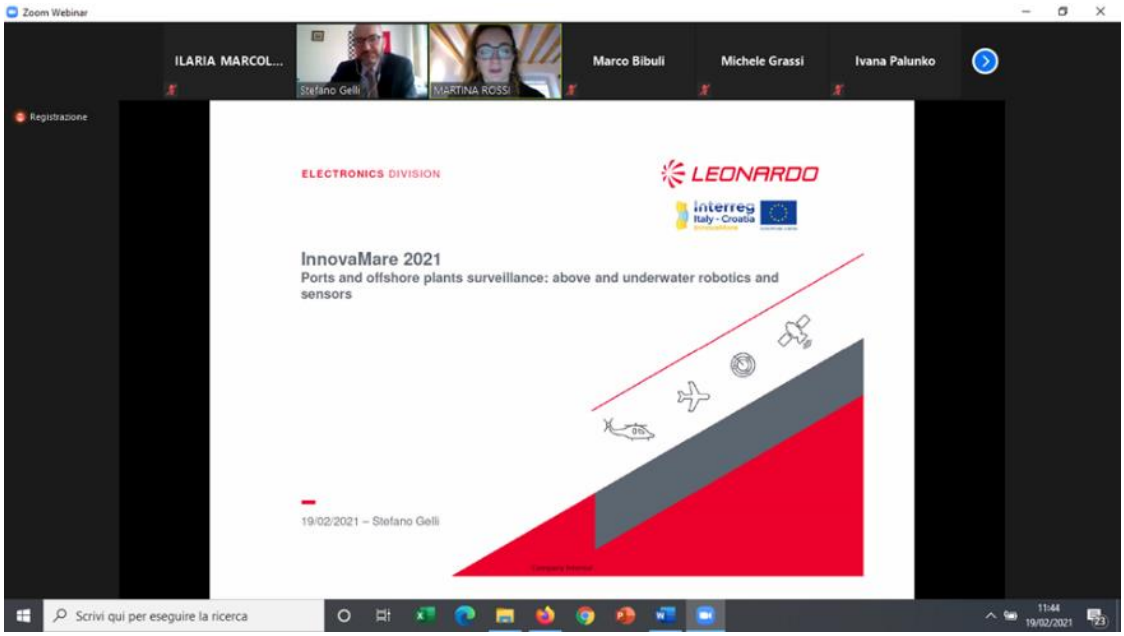
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Stefano Gelli
MARTINA ROSSI
Marco Bibuli
Michele Grassi
Ivana Palunko
Registrazione
ELECTRONICS DIVISION
LEONARDO
InnovaMare 2021
Ports and offshore plants surveillance: above and underwater robotics and sensors
19/02/2021 – Stefano Gelli
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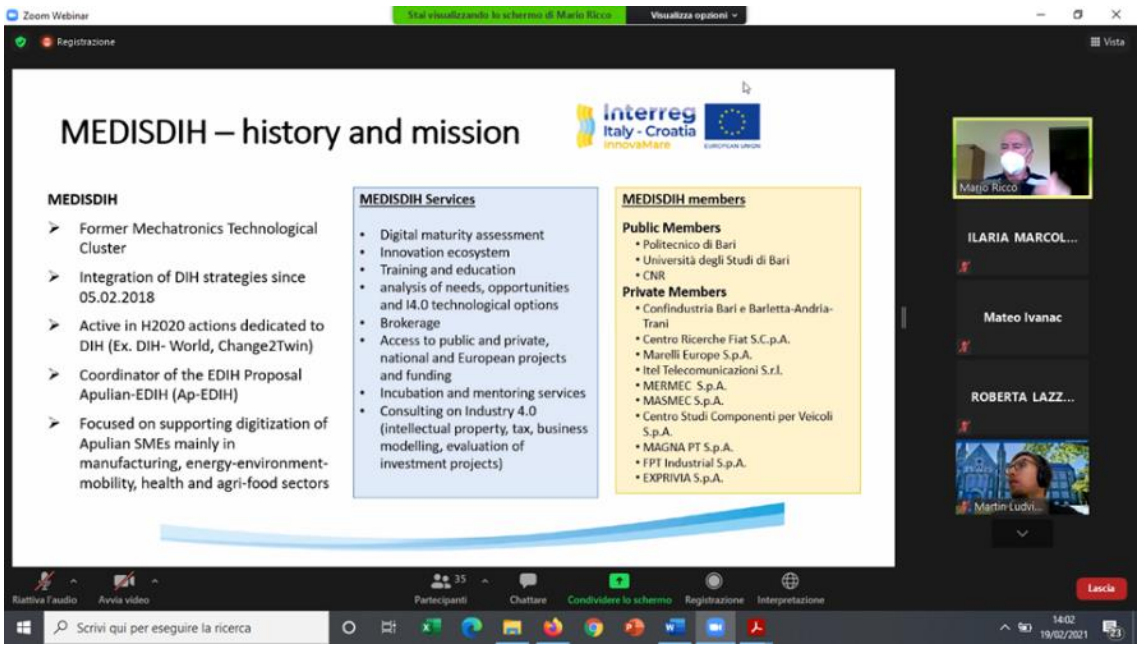
Zoom Webinar
Registrazione
MEDISDIH – history and mission
MEDISDIH
Former Mechatronics Technological Cluster
Integration of DIH strategies since 05.02.2018
Active in H2020 actions dedicated to DIH (Ex. DIH- World, Change2Twin)
Coordinator of the EDIH Proposal Apulian-EDIH (Ap-EDIH)
Focused on supporting digitization of Apulian SMEs mainly in manufacturing, energy-environment-mobility, health and agri-food sectors
MEDISDIH Services
Digital maturity assessment
Innovation ecosystem
Training and education
analysis of needs, opportunities and I4.0 technological options
Brokerage
Access to public and private, national and European projects and funding
Incubation and mentoring services
Consulting on Industry 4.0 (intellectual property, tax, business modelling, evaluation of investment projects)
MEDISDIH members
Public Members
Politecnico di Bari
Università degli Studi di Bari
CNR
Private Members
Confindustria Bari e Barletta-Andria-Trani
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Itel Telecomunicazioni S.r.l.
MERMEC S.p.A.
MASMEC S.p.A.
Centro Studi Componenti per Veicoli S.p.A.
MAGNA PT S.p.A.
FPT Industrial S.p.A.
EXPRIVIA S.p.A.
Mario Ricco
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Mateo Ivanac
ROBERTA LAZZ...
Martin Ludvi...
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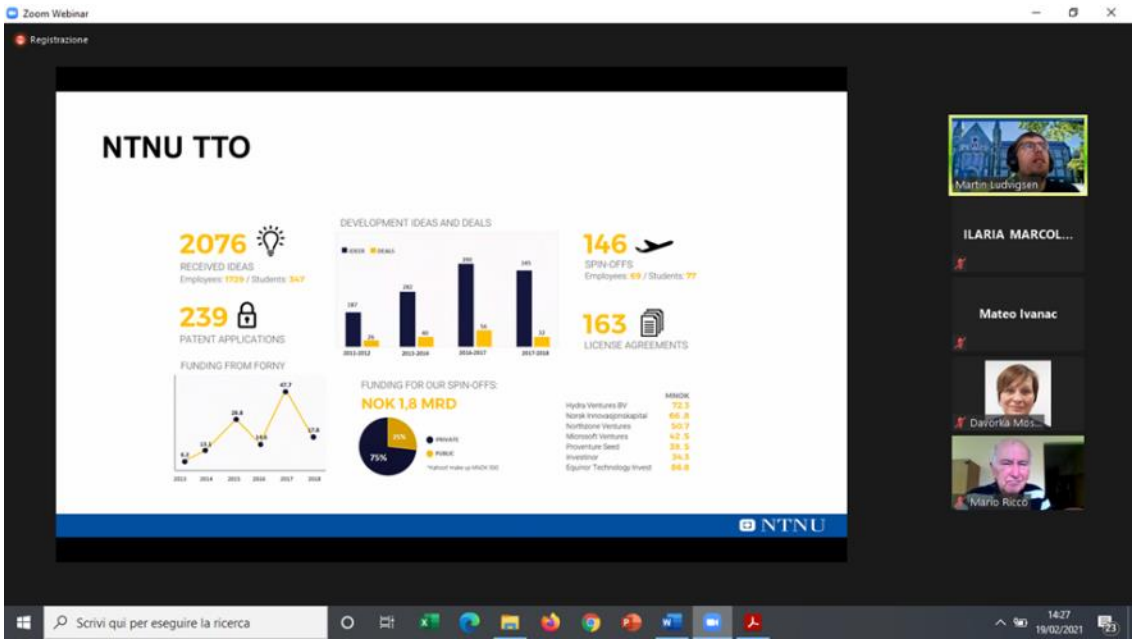
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146
SPIN-OFFS
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LICENSE AGREEMENTS
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Martin Ludvigsen
ILARIA MARCOL...
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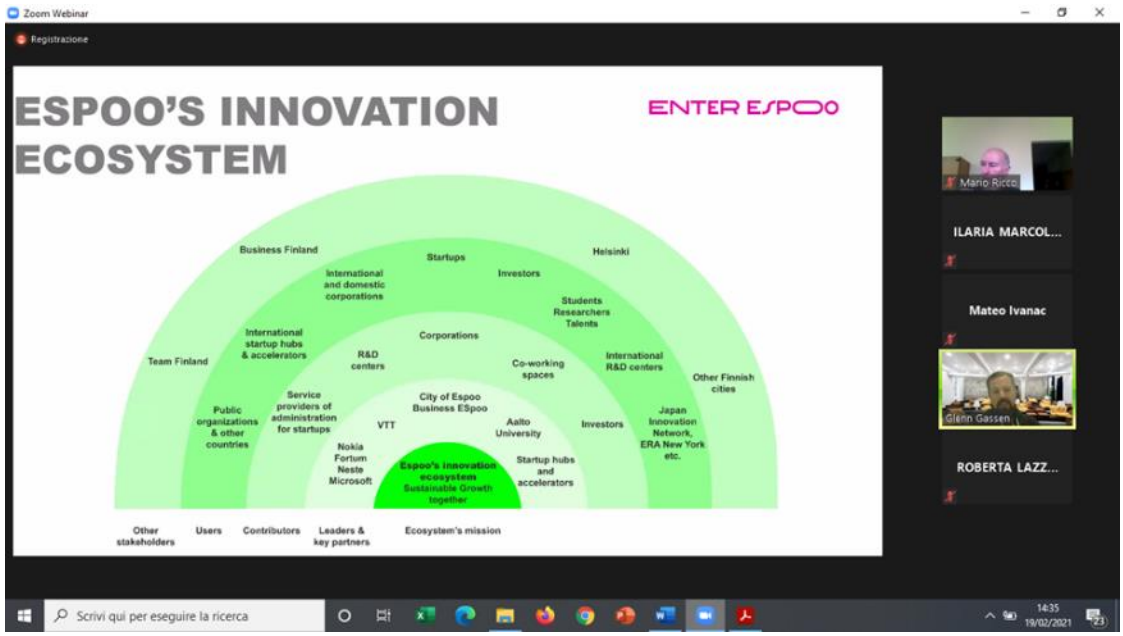
Zoom Webinar
Registrazione
ESPOO'S INNOVATION ECOSYSTEM
ENTER ESPOO
Business Finland
Startups
Helsinki
International and domestic corporations
Investors
Students Researchers Talents
International startup hubs & accelerators
Corporations
Team Finland
R&D centers
Co-working spaces
International R&D centers
Other Finnish cities
Service providers of administration for startups
City of Espoo Business ESpoo
Public organizations & other countries
VTT
Aalto University
Investors
Japan Innovation Network, ERA New York etc.
Nokia Fortum Neste Microsoft
Espoo's innovation ecosystem Sustainable Growth together
Startup hubs and accelerators
Other stakeholders
Users
Contributors
Leaders & key partners
Ecosystem's mission
Mario Ricci
ILARIA MARCOL...
Mateo Ivanac
Glenn Gassen
ROBERTA LAZZ...
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14:35
19/02/2021


Zoom Webinar
Registrazione
BLUEAIR: main activities
interreg ADRION
- Identification of best practices available on Blue Growth innovation policies
- Organization of mutual learning events
- S3 Improvement Toolkit (Guidelines for BG S3 improvement, Recommendation paper)
- Developing a Technology foresight, Pilot EDP for Blue Growth
- Setting a "Blueair Innovation Community" based on a quadruple helix approach
- Developing an Innovation Strategy and Action Plan for Innovation Investments in Blue Growth
- Capitalization events (Blue Growth weeks, Community enlargement actions..)
- ...
AREA
interreg ADRION
Mario Ricci
ILARIA MARCOL...
Elena Banci
ROBERTA LAZZ...
Mateo Ivanac
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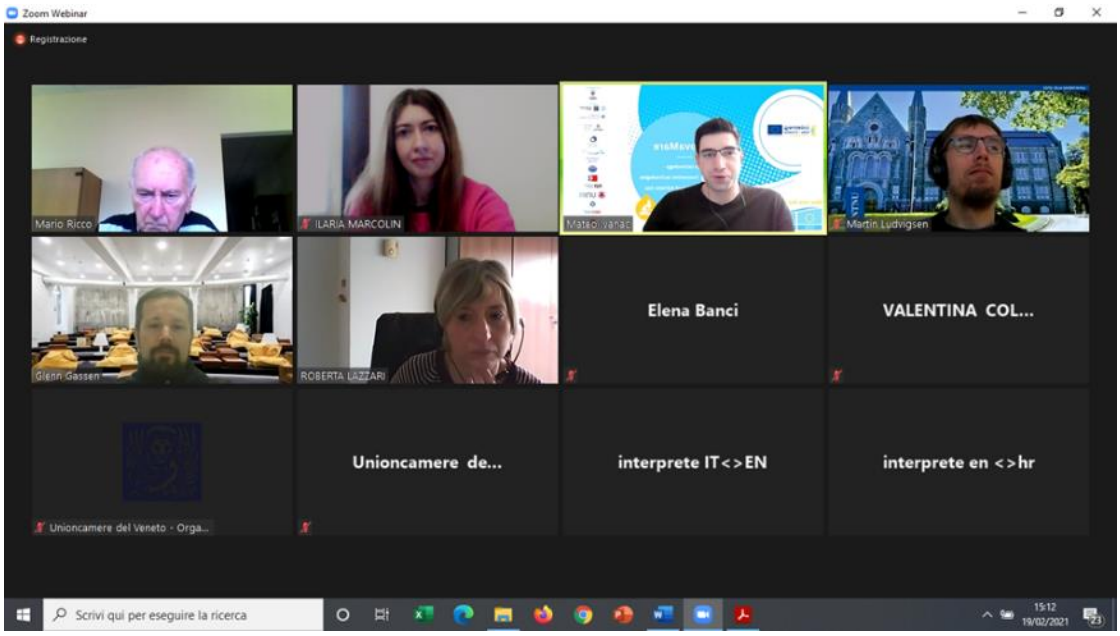
19/02/2021


Zoom Webinar
Registrazione
Mario Ricco
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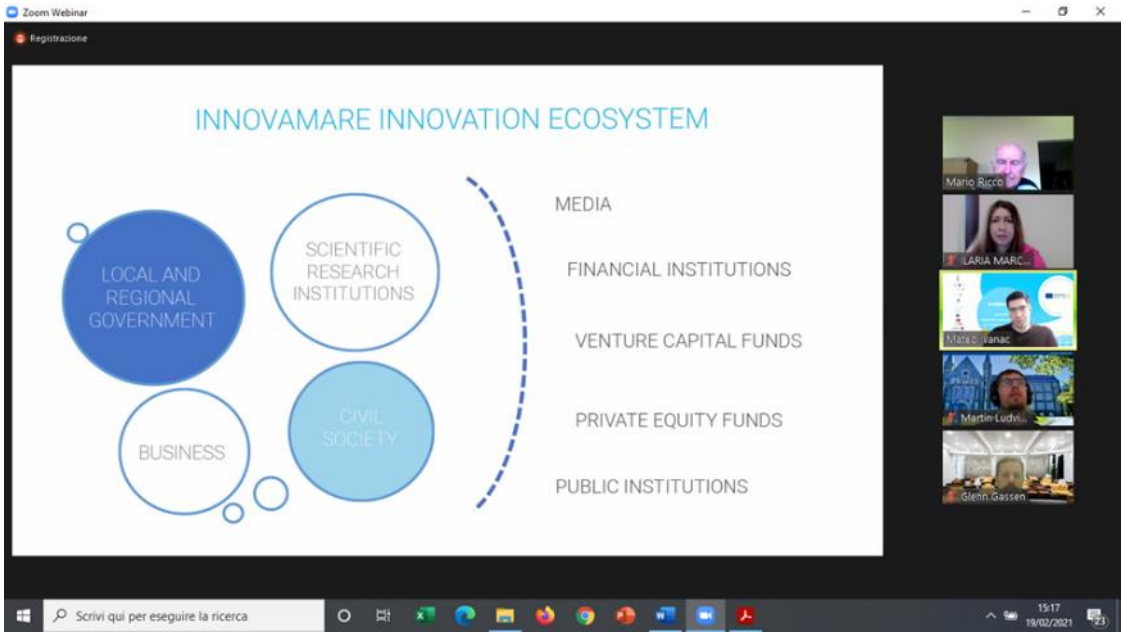
Zoom Webinar
Registrazione
INNOVAMARE INNOVATION ECOSYSTEM
LOCAL AND REGIONAL GOVERNMENT
SCIENTIFIC RESEARCH INSTITUTIONS
BUSINESS
CIVIL SOCIETY
MEDIA
FINANCIAL INSTITUTIONS
VENTURE CAPITAL FUNDS
PRIVATE EQUITY FUNDS
PUBLIC INSTITUTIONS
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3. Second InnovaMare Roundtable: 27-28/04/2021

3.1 Key topics addressed

The focus of this event was to gather the relevant stakeholders as decision makers on national, local and regional level as well as scientific and research community and to open a discussion on development of innovative solutions through building and utilizing an innovation ecosystem in blue growth area.

The aim was to combine knowledge, experience and information both from strategic and operational level with aim on development of new innovative solutions thru innovation ecosystem with mission on sustainability of Adriatic Sea.

The event was organized as offline & online event. Some of the speakers and participants have joined live in Zadar, while others have joined online.

The event was divided in two main parts, followed by presentation and discussion sections. In the end, a Questions&Answers session was held, followed by the photo exhibition "Portrait, life and energy of the Adriatic" related to the project.

Part 1: "How decision makers and policies can support development of innovation ecosystem?" (Moderator: Mateo Ivanac, InnovaMare project manager, Croatian Chamber of Economy, Lead Partner of InnovaMare project). The presentation and discussion panel focused on EU funding opportunities for development of innovative solutions in blue growth sectors from the perspective of local, regional and national decision-makers.

Part 2: "The role of science in generating a stronger innovation ecosystem" (moderator: Edvard Tijan, PhD, University of Rijeka, Faculty of Maritime Studies). Presentation and discussion: Best practices and newest technological solutions in maritime sector?

The Part 2 of the Roundtable "The role of science in generating a stronger innovation ecosystem", focused on 4 subtopics, as follows:

1. How Centres for Technology Transfer (for example, EC Competence Centre for Technology Transfer) and incubators support the innovation ecosystem development and the interplay of science and innovation?

2. The role of universities in the development of innovative solutions – technology transfer from academia to industry.

3. The role of innovation centers, and key limitations in connecting the academia and industry.

4. Implementation of scientific research outputs – case studies. Example: can the research institutions assist in the development of advanced calibration models of photo/video processing, which is too expensive for individual enterprises?

3.2 Target groups reached

Part 1:
"How decision makers and policies can support development of innovation ecosystem?"
(Moderator: Mateo Ivanac, InnovMare project manager, Croatian Chamber of Economy, Lead Partner of InnovaMare project)
1. dr.sc. Tomislav Radoš, Vice President for Industry and Sustainable Development, Croatian Chamber of Economy
2. Josip Bilaver, State secretary, Ministry of Sea, Transport and Infrastructure
3. Šime Erlić, State secretary, Ministry of Regional Development and EU Funds
4. Goran Pauk, County Prefect, Šibenik-Knin County
5. Božidar Longin, County Prefect, Zadar County
6. Ante Šošić, prefect deputy, Split Dalmatia County

Presentation and discussion
EU funding opportunities for development of innovative solutions in blue growth sectors
1. Marija Rajaković, Head of Sector for financial monitoring and strategic reporting, partnership dialogue and coordination of fulfillment of conditions that enable the implementation of EU funds, Ministry of Regional Development and EU Funds
2. dr. sc. Vlatka Godinić Mikulčić, National Contact Point for Food safety, sustainable agriculture and forestry, marine, maritime and inland water research and bioeconomy HORIZON 2020, Agency for Mobility and EU Programmes

Part 2:
"The role of science in generating a stronger innovation ecosystem"
(Moderator: Edvard Tijan, PhD, University of Rijeka, Faculty of Maritime Studies)
1. Petra Karanikić, PhD, Assistant Professor, University of Rijeka, Department of Biotechnology
2. Frane Šesnić, Director – Zagreb Innovation Centre ZICER
3. Goran Vukelić, PhD, Vice dean for research, University of Rijeka, Faculty of Maritime Studies
4. Nebojša Stojčić, PhD, Vice rector for business affairs, University of Dubrovnik
5. Stavros Kalognomos, Executive Secretary, Balkan and Black Sea Commission
6. Elena Andonova, Policy Officer, EU Commission, DG Joint Research Centre (JRC)
7. Prof. Dr. Nikola Mišković, Vice Dean for Research at University of Zagreb, Faculty of Electrical Engineering and Computing, Head of LABUST
8. Saša Aksentijević, PhD – Aksentijević Forensics and Consulting
9. Josip Rukavina, Vectrino ltd.
10. Lovro Maglić, PhD, director, Center for Maritime Technologies, University of Rijeka, Faculty of Maritime Studies
11. Nikola Balić, University of Split, Head of Department for science and innovation

Presentation and discussion: Best practices and newest technological solutions in maritime sector?

1) GALO INDUSTRIES j.d.o.o.
2) Geolux d.o.o.
3) SeaCras j.d.o.o.
4) CBRO project

The event had a great success and enables the involvement of a wide range of key stakeholders for InnovaMare project:

Type of participant	**Number**
Business incubator	1
Business support organisation	7
Chamber of Commerce	8
Enterprise	27
Innovation Agency	1
NGO	17
Public authority	32
Regional and local development agency	23
Research institution	26
University	133
Other	41
TOTAL NUMBER OF PARTICIPANTS	**316**

3.3. Outcomes and lessons learnt

Part 1: „How decision makers and policies can support development of innovation ecosystem?"

The Vice President of the Croatian Chamber of Commerce for Industry and Sustainable Development, Tomislav Radoš, pointed out in the introduction that investing in innovation is crucial for the development of the economy. "The question is how to create a system that will maximize the commercial potential of innovation. In the Adriatic, economic activity is largely related to the sea, so we must be careful to protect it from pollution, or create a system that will preserve the ecology and create new value. We want to establish an innovation ecosystem that will become a central place to encourage cooperation between the private and scientific research sectors, strengthen technology transfer, digitalization, all in the direction of developing marine technologies to address challenges in the blue economy sectors. This is, among other things, one of the main goals of the InnovaMare strategic project."

Zadar County Prefect Božidar Longin agreed that cooperation between the private and public sectors has a key role in the implementation of the InnovaMare project. "Cooperation with Italy is quite logical when it comes to the Adriatic, it has its own unique ecosystem that requires great attention and care in order to successfully balance between exploitation for economic purposes and preservation of ecology. Zadar County has always lived for the sea and from the sea, we have a developed fisheries and nautical sector, and in this context, the protection of the Adriatic is vital. This project will enable our descendants to live from it."

Goran Pauk, Prefect of Šibenik-Knin County, emphasized that the area has many natural sites that define them as an ecological location, so sustainable development is their ongoing goal. "We are working on a number of projects that are compatible with the innovation ecosystem, and that is why we are especially proud to sign this letter of intent."

Šime Erlić, State Secretary at the Ministry of Regional Development and EU Funds, said the issue was key to restructuring the economy, which the EU is also seeking. "Increasing innovation capacity and competitiveness is the goal of all relevant strategies. We are still lagging behind, but we are increasing the share of R&D investment in GDP and trying to improve support institutions. The new European envelope is turning to new types of financial instruments, moving away from grants. This opens up the possibility of projects being commercial and the money being obtained immediately. The implementation process is much simpler, part of the principal is written off if the project is successfully implemented, so a step can be made in this area as well. "

Damir Brčić from the Split-Dalmatia County emphasized that they have turned from investing in infrastructure to creating and implementing concrete projects and building an entrepreneurial mindset among young people. "Through our universities and support institutions, we invest millions of kunas to facilitate market success for small and medium-sized companies with new products. We listen to any market and encourage innovation that has concrete applications. We have also launched the Digital Dalmatia platform, within which we provide startup education, i.e. we give new

companies the space and the opportunity to more easily commercialize their ideas. The emphasis is always on working directly and paving their way to the market. "

Nina Perko from the Ministry of the Sea, Transport and Infrastructure pointed out that the projects they are working on are aimed at the development of innovative green technologies in maritime transport. "The second segment is that when awarding concessions, new technologies and environmental protection are additionally valued, and that we thus have a positive impact on the life that takes place on our coast. The Ministry will, in accordance with the European Green Plan, strive to reduce emissions by 50 percent by 2050 through the modernization of the maritime transport fleet."

Iain Shepherd from DG MARE also joined the discussion by presenting some examples of good environmental practices at Union level. "Our Blue Invest platform helps small businesses realize their ideas related to the blue economy. We have secured capital because it is the blue economy that will make a big contribution to the Green Deal. It is an opportunity for companies to innovate and reduce plastic pollution and complete the production process while reducing greenhouse gas emissions. The Adriatic has many points important for biodiversity, our goal is to protect 30 percent of its surface."

According to the latest report of the European Commission on the so-called blue economy, this sector in Croatia employs more than 170 thousand people and generates about 3.6 billion euros of gross value added. At EU level, it has a turnover of € 750 billion and € 218 billion in gross value added.
The Adriatic Sea is facing major impacts from overfishing and pollution by plastic objects and oil. Of particular concern is the fact that the amount of waste in the Adriatic Sea is two to five times higher than in other seas, which, along with direct wastewater discharge, is a key negative factor for the degradation of coastal and marine ecosystems. Therefore, projects like InnovaMare are extremely important for the conservation of biodiversity and the economic potential of the Adriatic.

Part 2: **„The role of science in generating a stronger innovation ecosystem"**

Edvard Tijan, professor at University of Rijeka, Faculty of Maritime Studies, raised several important issues and questions in the introduction, for example how Centres for Technology Transfer and incubators support the innovation ecosystem development and the interplay of science and innovation, what is the role of universities in the development of innovative solutions, and the role of innovation centers, and key limitations in connecting the academia and industry.

Frane Šesnić, director of Zagreb Innovation Centre ZICER stated that the mutual task and priority goal should be to preserve the Adriatic Sea, but also to impact the Croatian economic potential through it. Through more intensive cooperation, an ecosystem that creates sustainable knowledge-based solutions needs to be established. With a comprehensive approach and support for startups and their innovations in the field of robotics and sensors, in addition to influencing the creation of

environmental sustainability, becoming commercially viable will be possible. There is the potential in this area every year through projects that are developed through acceleration programs.

Nikola Balić, head of Department for science and innovation at University of Split emphasized that Croatia desperately lacks serious strategic and political dedication to knowledge and technology transfer. There is a need of smart disruption to jump start the innovation ecosystem. Croatia can't just rely on "lone shoots", as even they need a flourishing ecosystem.

Petra Karanikić, Professor at University of Rijeka, Department of Biotechnology explained that technology transfer is a complex process which requires a lot of preconditions, infrastructural and regulative, and relevant skills. In recent years the focus is on the Third Mission of the universities. Science has an important role not only in developing the innovation ecosystem of every country, but universities are an important part of the national innovation ecosystem. Scientists and researchers and technology transfer offices as facilitators of the technology transfer process are the core actors in the overall technology transfer ecosystem. A quality technology transfer ecosystem needs to be built that will then compliment the overall national innovation ecosystem. It is very hard to achieve an effective technology transfer process, especially in countries that are at the beginning of building up their technology transfer system. All available resources (from EU programs, best practices and implementing projects like the InnovaMare project) need to be used that will contribute to the development of both technology transfer and national innovation system.

Nikola Balić, head of Department for science and innovation at University of Split pointed out that technology transfer in not such a complex process, but requires dedicated financial resources. It is a long-term investment and someone has to invest in it, and show the dedication and produce results. In Croatia there is a lot of successes and lot of failures. We also had a lot of capacity building, but at the same time we lost most of that capacity. The biggest challenge for technology transfer in Croatia is its sustainability. A typical successful technology transfer project requires more time than a mandate of a university rector, dean of the faculty or a politician, who are decision makers. The technology transfer activities are mostly financed through projects and this presents a huge compromise for technology transfer professionals. Despite these problems, a lot of activities are implemented. Sustainability and dedication to the technology transfer process and activities are crucial.

Frane Šesnić, director of Zagreb Innovation Centre ZICER further added that the investments in technology transfer in Croatia are minimal, the return on investment is not very visible, and this trend should be reversed. There are a lot of gaps in the technology transfer process and there is no clear idea what should be end of the process – a concrete product or service on the market. There is no value-chain and there is a lack of managing skills in the technology transfer process. Another missing element for successful technology transfer process is the non-existence of the technology transfer business model. ZICER supports the technology transfer ecosystem through the program Startup Factory where inputs are ideas developed by teams and the outputs are established startup companies. There is a need of more communication with R&D institutions. The focus should be on building the interest of researchers to change their perspective on entrepreneurship, as well as on developing the entrepreneurial skills and capabilities at universities.

Stavros Kalognomos, Executive Secretary of Balkan and Black Sea Commission provided the perspective of regional authorities and their cooperation with universities. Regional authorities and the local authorities within the Adriatic-Ionian region usually work hand-in-hand when it comes to the implementation of different solutions to answer to the existing challenges and problems. Regional authorities are there when they have to negotiate and secure funding for universities, and their cooperation with the regional and local authorities. From this perspective, universities are always there either to implement the objectives and even political priorities of the regional authorities. An example of such collaboration between regional authorities and universities is the Blue Growth Community Project financed through Interreg MED Programme that demonstrates how universities and regional authorities are working together in creating links and promoting technology transfer.

Professor Nikola Mišković Vice Dean for Research at University of Zagreb, Faculty of Electrical Engineering and Computing pointed out that university professors need to be excellent in teaching and science, but also be excellent in entrepreneurship. However, this if difficult to achieve and for this reason there are professionals and experts in technology transfer who can assist university professors not to be excellent entrepreneurs, but to teach and help them how to transfer their technologies that come as a result of the research process to the market. In the last two years, Faculty of Electrical Engineering and Computing started the student entrepreneurship programme that provides students with entrepreneurial knowledge and allows students who have the willingness to become entrepreneurs to gain knowledge on how to succeed on the market. Faculty of Electrical Engineering and Computing started a year ago the entrepreneurial education for researchers and university professors and it was surprising that there was an interest for this education not only from the Faculty of Electrical Engineering and Computing, but also from other faculties from the University of Zagreb. This was a clear indicator that there are excellent research groups led by excellent scientists interested in not in becoming entrepreneurs, but in transferring of their research results to the market. Most of the researchers joined the program with the aim of meeting the people who have the knowledge on technology transfer they don't have. There is a huge potential in Croatia when it comes to the transfer of the research results to the market, but an ecosystem needs to be created that will ensure that research technologies reach the market as new products and services.

Professor Nebojša Stojčić, Vice rector for business affairs at University of Dubrovnik emphasized that when looking at the existing innovation policy in Croatia, especially the dominance of instruments, it is evident that what prevails is the supply side instruments, whether talking about universities or businesses. Securing the financial resources for technology transfer is a secondary issue. The real problem lies is in information – the matching between the universities and the business sector. There is a significant amount of misunderstanding between the universities and businesses on capabilities of each side and especially on how they can benefit from each other. This leads to another important aspect, beside the technology transfer. Knowledge transfer is still not incentivized enough by the existing structures within the innovation system.

Elena Andonova, Policy Officer at EU Commission DG Joint Research Centre said that the challenges Croatia is facing related to technology transfer process are very similar to other economies in the Balkan Region. There are three important elements to consider related to the successful technology transfer process. Without funding from the national (government) level, it will be very challenging for Croatian universities and research organizations to allocate financial resources for technology transfer activities. It is not only about financing the patents or spin-off companies' creation, but about funding the structures of technology transfer such as TTOs to be able to continuously develop and to grow and support the researchers in the implementation of technology transfer activities. TT activities can be unlocked when the government provides funding for technology transfer activities. The second element are universities and their responsibility in steering the process and in preparing of their intellectual property strategies, policies and structures, and this doesn't depend a lot on the Government. The local technology transfer ecosystem is the responsibility of universities and research institutions. The third element is the culture. It is not necessary for all researchers to be entrepreneurial, but to have 20-25% of the researchers as entrepreneurs. However, what needs to be ensured is a system where it is possible to the match universities with the private sector. Pushing the researchers to be more entrepreneurial, to be managers/CEOs in the spin-off companies, increases the risk of researchers leaving the academia, and this is something that is not affordable in countries like Croatia, since there is a need for strong scientists to continue researching.

Goran Vukelić, Vice dean for research at University of Rijeka, Faculty of Maritime Studies pointed out that there is a tremendous influence of university professors in teaching, science, technology transfer and overall society. It is very difficult for a professor to be excellent in all these parts. The institutional focus and recognition should be put on those professors who want to get involved in technology transfer and help them in the implementation of their ideas to the industry. There are professors that are very good in teaching, professors who are excellent in science and professors that have the business aspiration. What an institution can do is to give them an opportunity to do what they do best.

Professor Saša Aksentijević (Aksentijević Forensics and Consulting) stated that in the case of external co-financing with European funds for project development of projects with a scientific research component, timely start of the whole process is crucial for commercialization, because 5-6 years may pass from the preparation of documents on which the co-financing project is implemented, through project application, evaluation, to contracting and implementation, which is today a very long period of time given the exponential speed of technical development, which reduces the possibility of success of the final product on the market. He also pointed out that in Croatia, other sources of financing such as venture capital or "financing by relatives and friends" are very poorly developed, while financing of such projects by banks and other financial institutions, despite all efforts, is almost non-existent. It is financed either from own resources, or co-financed projects are implemented. This places serious limits on the type and dynamics of research projects that can be carried out. Furthermore, there is a serious inconsistency of the employment model of highly productive research staff, such as doctoral and postdoctoral students, in relation to the dynamics of project implementation, and even the projects on the basis of which they are employed. The most common risk that arises in the implementation of co-financed projects is the

departure of project associates, and even project managers, which often endangers the projects, especially those where there is no good substitution for new equivalent project associates. In conclusion the key control point in the life cycle of future co-financed projects is the administrative verification and the project quality assessment, which is often performed by external experts, sometimes foreign, who do not necessarily know the local situation and market. Therefore, it is possible that very promising projects for Croatia will be poorly evaluated and consequently not co-financed, contracted and implemented.

Josip Rukavina, owner and manager of Vectrino ltd. elaborated on the implementation of scientific research outputs, presenting several case studies, and asked practical questions, for example can the research institutions assist in the development of advanced calibration models of photo/video processing, which is too expensive for individual enterprises, etc. He stressed that he would like to have people of all relevant professions in his company. The company originally started in civil engineering, but later on expanded to mechanical engineering, advanced visual technologies etc. if someone from the university would like to join, it is important that they have some experience of being involved in projects implemented by scientific institutions. If they have a basic knowledge on project implementation, for example student projects, later on they can be easily incorporated into the company. It is amazing to see what students can do and the results they can achieve. Students can help in strengthening the innovation ecosystem. Interdisciplinary studies are very important for the entrepreneurs.

Professor Lovro Maglić, director of Center for Maritime Technologies Rijeka emphasized that one of the approaches to enhance and ease the technology transfer process is matching specific academic and industry subjects based on their field of business/research, interests and objectives. In that respect the Center for Marine Technologies brings together constituent units of the University of Rijeka and public and industry sector to cooperate on an educational and scientific level related to research, exploitation and protection of the sea, marine environment and seabed. The support includes all fundamental aspects, including basic funding, adequate infrastructure, specific research equipment and activities to inform, attract and involves all interested academic staff.

3.4 Documentation related to the event

Agenda

Screenshots

INNOVATIVE SOLUTIONS

FOR SUSTAINABILITY OF ADRIATIC SEA

Focus of this event is to gather stakeholders as decision makers on national, local and regional level as well as scientific-research community and to open a discussion on development of innovative solutions thru innovation ecosystem in blue growth area. This event is organized together by strategic project Innovamare and project Sushi-Drop that are both financed by Interreg program Italy-Croatia.

Aim of this collaboration is to combine knowledge, experience and information both from strategic and operational level with aim on development of new innovative solutions thru innovation ecosystem with mission on sustainability of Adriatic Sea.

Event will be organized as offline & online event. Some of the speakers and participants that are available will join us in Zadar and other will join us online.

Day 1 – Tuesday 27 April	
10.30-10:40	*Welcome speech and Introduction to the agenda of the event*
10:40-10:50	*InnovaMare project and Sushi Drop project video*
10.50-12:15	***ROUNDTABLE 1:*** *„How decision makers and policies can support development of innovation ecosystem?"* (moderator: Mateo Ivanac, InnovMare project manager, Croatian Chamber of Economy, Lead Partner of InnovaMare project) 1. *dr.sc. Tomislav Radoš, Vice President for Industry and Sustainable Development, Croatian Chamber of Economy* 2. *Josip Bilaver, State secretary, Ministry of Sea, Transport and Infrastructure* 3. *Šime Erlić, State secretary, Ministry of Regional Development and EU Funds* 4. *Goran Pauk, County Prefect, Šibenik-Knin County* 5. *Božidar Longin, County Prefect, Zadar County* 6. *Ante Šošić, prefect deputy, Split Dalmatia County*

12:15-13:00	*Presentation and discussion* *EU funding opportunities for development of innovative solutions in blue growth sectors!* 1. *Marija Rajaković, Head of Sector for financial monitoring and strategic reporting, partnership dialogue and coordination of fulfillment of conditions that enable the implementation of EU funds, Ministry of Regional Development and EU Funds* 2. *dr. sc. Vlatka Godinić Mikulčić, National Contact Point for Food safety, sustainable agriculture and forestry, marine, maritime and inland water research and bioeconomy HORIZON 2020, Agency for Mobility and EU Programmes*
13:00:14:00	*Break*
14.00-15:30	*ROUNDTABLE 2:* *„The role of science in generating a stronger innovation ecosystem"* (moderator: Edvard Tijan, PhD, University of Rijeka, Faculty of Maritime Studies) 1. *Petra Karanikić, PhD, Assistant Professor, University of Rijeka, Department of Biotechnology* 2. *Frane Šesnić, Director – Zagreb Innovation Centre ZICER* 3. *Goran Vukelić, PhD, Vice dean for research, University of Rijeka, Faculty of Maritime Studies* 4. *Nebojša Stojčić, PhD, Vice rector for business affairs, University of Dubrovnik* 5. *Stavros Kalognomos, Executive Secretary, Balkan and Black Sea Commission* 6. *Elena Andonova, Policy Officer, EU Commission, DG Joint Research Centre (JRC)* 7. *Prof. Dr. Nikola Mišković, Vice Dean for Research at University of Zagreb, Faculty of Electrical Engineering and Computing, Head of LABUST* 8. *Saša Aksentijević, PhD – Aksentijević Forensics and Consulting* 9. *Josip Rukavina, Vectrino ltd.* 10. *Lovro Maglić, PhD, director, Center for Maritime Technologies, University of Rijeka, Faculty of Maritime Studies* 11. *Nikola Balić, University of Split, Head of Department for science and innovation*

15:30-15:45	*Coffee break*
15:45-16:30	*Presentation and discussion* *Best practices and newest technological solutions in maritime sector?* *1) GALO INDUSTRIES j.d.o.o.* *2) Geolux d.o.o.* *3) SeaCras j.d.o.o.* *4) CBRO project*
16:30-16:45	*Questions&Answers*
16:45-16:55	*Portrait, life and energy of the Adriatic*

Day 2 – Wednesday 28 April	
10.00-10.10	*Introduction to the agenda and rules for participation-Martin Bućan, The County of Split and Dalmatia*
10.10-10.20	*Introduction to the SUSHIDROP project* *Luca De Marchi, Alma Mater Studiorum -University of Bologna, Department of Electronics, Computer Sciences and Systems*
10.20-10.35	*SUSHIDROP UUV/ROV* *Systems and Control Engineering* MASSIMILILIANO MENGHINI, Alma Mater Studiorum-University of Bologna, Department of Electrical, Electronic and Information Engineering
10.35-10.50	*Cabled deep sea acoustic observatories: Science and technological applications* GIORGIO RICCOBENE, PhD, Laboratori Nazionali del Sud-INFN
10.50-11.10	*Marine robotics, sensors and environmental monitoring equipment-market requirements and their widespread application over the next decads* Alan Ivan Blaženković, *director, PRIMOTRONIC d.o.o.*
11.10-11.30	*The sea through the fisherman's eyes* Joško Pedišić, *Fisherman, Croatian Chamber of trades and crafts, Šibenik-Knin County*
11.30-12.00	*Questions&Answers*
12.00-13.30	*Break*
13.30-13.40	*Portrait, life and energy of the Adriatic* *Ivana Miletić, Artist, Member of the International Federation of Photographic Art*
13.40-13.55	*Southern Adriatic Biodiversity Conservation* *Aleksandar Joksimović, director, Institute of Marine Biology, Montenegro*

13.55-14.10	*Mediterranean marine protected areas-examples of good practises* *Mosor Prvan, WWF Adria, Marine Program Manager* *Danijel Kanski, WWF Adria, Marine Program Manager*
14.10-14.30	*Protection mechanisms of biodiversity conservation in „ Jabučka kotlina"* *doc.dr. Igor Isajlović, Laboratory of Fisheries Science and Management of Pelagic and Demersal Resources, Institute of Oceanography and Fisheries*
14.30-14.50	*Invasive species in the Adriatic* *prof.dr.sc. Jakov Dulčić, Laboratory for Ichthyology and Coastal Fishing, Institute of Oceanography and Fisheries*
14.50-15.00	*The importance of seagrass in climate change mitigation and adaptation* *Ivan Sekovski, UNEP MAP PAP/RAC, PhD in Marine and coastal management*
15.00-15.30	*Questions&Answers*

Dear Sirs,

through the development of the InnovaMare project we have mapped you as a key stakeholder to whom we want to provide new information, knowledge and cooperation in the direction of developing innovative solutions in the field of underwater robotics and sensors, and with the mission of sustainability of the Adriatic Sea.

Accordingly, we hereby invite you to a two-day event **"Innovative solutions for the sustainability of the Adriatic Sea"** (April 27-28, 2021), which will be held in Zadar and through an online platform due to epidemiological measures.

The focus of this event is to bring together stakeholders - **decision makers at the national, local and regional level**, as well as the **scientific and research community** and open a discussion on the development of innovative solutions through the innovation ecosystem in the field of blue growth.

We consider the event is an excellent opportunity to learn from first hand, but also to influence the direction of development and improvement of conditions for the sustainability of the Adriatic Sea. We believe that **only by involving stakeholders at all levels can we make the changes** that are necessary. First of all, it is necessary to create an environment that will encourage the development of the private sector in the creation of innovative solutions and services essential for the preservation of the sea.

We invite you to join us and give your contribution in this area.

The organizers of this round table / conference are the University of Rijeka, Department of Biotechnology and the Croatian Chamber of Economy, partners in the InnovaMare project, with the Split-Dalmatia County and Alma Mater Studiorum - University of Bologna, partners in the SUSHI DROP project as a result of successful cooperation within the Interreg program Italy - Croatia in the field of blue economy.

To register for the event, please follow the link https://hgk.hr/project-innovamare-roundtable-najava

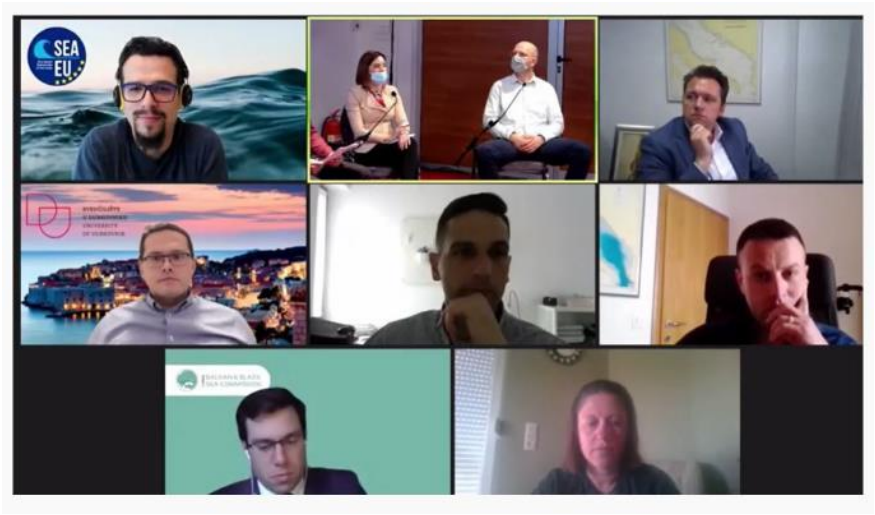
We are enclosing the Event Program, and we will provide you with additional information and instructions for online connection to the event in the following days.

We also note that a simultaneous translation service is planned and the event will be filmed.

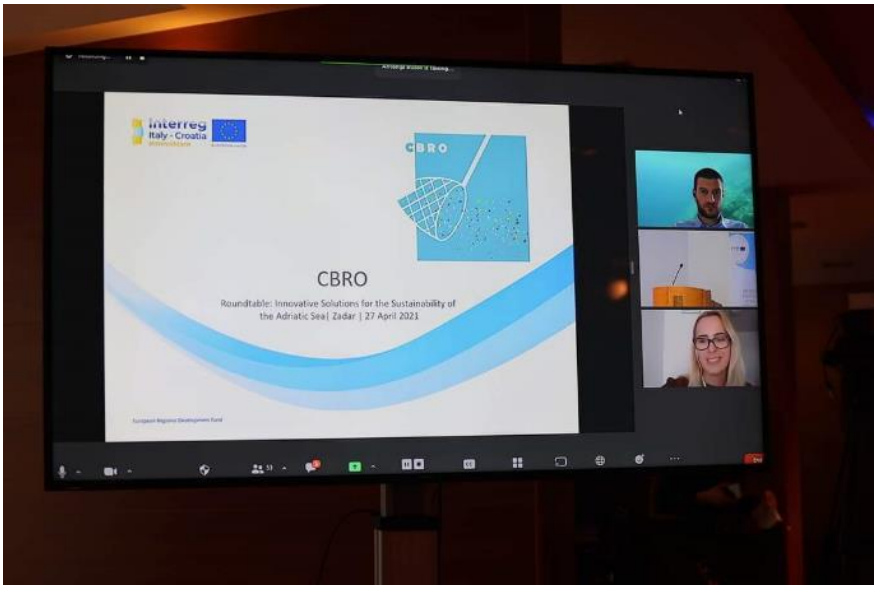
If you are interested in technology transfer, cooperation with the private or scientific research sector, have a product or service related to marine technologies, join us in creating an innovation ecosystem in underwater robotics and sensors - InnovaMare.

SCREENSHOTS


stronger innovation ecosystem




PARTNERSHIP
We have established initial partnership with Cromaris d.d.
Communicating with other fish farming companies in Croatia
Our aim is to develop project with all relevant stakeholders in the field of aquaculture
Project C.A.G.E.
ZADAR
Cromaris
GALOindustries


CBRO
CBRO
Roundtable: Innovative Solutions for the Sustainability of
the Adriatic Sea| Zadar | 27 April 2021

4. Final conclusions

The great number of participants to the two InnovaMare Roundtables has revealed that there is a strong interest, at cross-border level, related to the creation of an Innovation Ecosystem focused on underwater robotics and sensors for the sustainability of the Adriatic Sea.

Policy-makers have paid particular attention to this specific topic, considering the significant contribution that blue innovation can bring to the sustainable and competitive development and growth of the Adriatic region. Representatives from DGs of the European Union Commission have highlighted the most compelling challenges and threats posed to our ecosystem, which our territories are called to address and solve in the near future.

Academia, research and competence centres have showcased their research findings and pilot applications, mostly related to sea pollution monitoring and prediction, as well as above water and underwater surveillance. Spin-offs, SMEs and large companies have also taken part to the debate, introducing marketable solutions able to solve the environmental challenges that our oceans are facing. Their products and systems integrate advanced enabling technologies, comprising artificial intelligence, autonomous vehicles, robotics, sensors. Such wide specialized knowledge creates a strong and qualified basis to build a competitive Innovation Ecosystem, counting on skilled researchers and experts and technology providers capable of offering valid and proven solutions to the problems that public administrations and civil society need to overcome.

The need to engage civil society has also been addressed, considering that a real change can only be achieved and maintained if each individual embraces a cultural change in his/her everyday life.

Since demand and offer exist, and are clear, strong and have a concrete potential to create synergies, collaborations and drive innovation and growth, the Adriatic area is ready to lay the foundations for the development of an effective cross-border Innovation Ecosystem, addressing the challenge of the sustainability of our seas through the exploitation of underwater robotics and sensors. Anyway, there is a need to facilitate the creation of such ecosystem, promoting favourable framework conditions and facilitating cross-fertilization and collaboration among all involved stakeholders, with a quadruple-helix approach.

In this phase, decision makers and policies play an important role, since they are key enablers of the process, that can be further developed with the help of academia, private sector and civil society.

The cross-border added value is a strategic element to be duly considered, since the Adriatic sea basin and the Adriatic blue economy can only be adequately promoted with a collective effort, with the collaboration of Italian and Croatian stakeholders, in line also with the priorities of EUSAIR macroregional strategy.

The main aspects which emerged as key drivers for competitiveness and innovation, are the following:

- effective cross-border cooperation, embedding EUSAIR priorities in the national and regional mainstreaming programmes;
- integration of blue economy growth in S3 (Smart Specialization Strategies);
- strong collaboration among public and private sector to identify the guidelines and the process to be undertaken to create a successful innovation ecosystem;
- creation of targeted policies and policy instruments setting up favourable framework conditions and support schemes;
- involvement of stakeholders (public sector, private companies, academia, civil society) in the definition of a shared Action Plan;
- mobilization of public investments (at least in the start-up phase);
- creation of dedicated financial instruments, grants but also financing schemes facilitating market deployment and capital;
- mobilization of private investments (involving key players at international level, interested in collaborating with cross-border researchers and entrepreneurs with a challenge-oriented approach);
- creation of education and training programmes to develop talent;
- strengthen technology transfer, boosting the industrial application and later market uptake of promising research results;
- creation of networking and matchmaking opportunities (as well as pitch events with potential investors)
- availability of incubation and acceleration programmes supporting companies (mostly spin-offs and start-ups) in their early stages (also with dedicated mentoring programmes);
- availability of R&D infrastructure for «test before invest», so that companies can demonstrate their technologies / products before planning big investments to scale-up;
- appropriate communication and engagement activities with schools and citizens in general, to raise awareness on the importance to care for our seas, promoting behavioural change in everyday life.