Our Ocean Space Odyssey

Establishing the Cyprus Marine & Maritime Institute (CMMI)

MaRITeC-X Project

The plan for the establishment of the Cyprus Marine & Maritime Institute – CMMI

ECMAR Technology Day
11 October 2018

www.maritec-x.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 763815

HORIZON 2020

MaRITeC-X

MaRITeC-X is an EU project aiming to create an independent, international, scientific and business centre of excellence in marine and maritime activities in Cyprus; **that will be driven by the needs of industry and society**

MaRITeC-X

Marine and Maritime Research Innovation and Technology Centre of Excellence

Driven by the Needs of Industry and Society

MaRITeC-X Consortium:

Political and Industrial Agenda Setting, and Civic Engagement

- The UN's Sustainable Development Agenda and Goals
- IMO's Strategic Directions & the Climate Change Strategy for Shipping
- UNESCO's One Planet, One Ocean theme
- FAO's Priorities on Fisheries & Aquaculture
- The EU's Integrated Maritime Policy - DG MARE
- The Union for the Mediterranean Priorities
- The Commonwealth's Blue Charter
- The Cyprus Smart Specialization Strategy priorities

United Nations

IMO INTERNATIONAL MARITIME ORGANIZATION

UNESCO United Nations Educational, Scientific and Cultural Organization

FAO FIAT PANIS

European Commission MARITIME AFFAIRS AND FISHERIES

EUROMED

The Commonwealth Blue Charter

S3CY

MaRITeC-X

Main contributing factors to the attractiveness of a city or region as a global maritime center

- The presence of substantial local ship ownership and ship-management activity
- Well established financial, legal and other sophisticated business services
- The existence of significant port and logistics infrastructure
- **A tradition of maritime technology associated with R&D, innovation, education and availability of talent**

- **Science and higher education**
- Owners and headquarters
- **R&D – product and technology development**
- Financial, legal and other sophisticated business services

EY Building a better working world

MENON ECONOMICS

MaRITeC-X

Organizations dealing with RTDI activities are the least mobile in the maritime industry

- The fight to attract maritime companies is tough, especially for shipping, being the most highly mobile sector within the maritime industry
- Specialized knowledge-based services are probably the least mobile companies in the maritime industry. The reason being that knowledge-based companies often have links to universities and are deeply embedded in the local milieu; for example, in their reliance on specialized local competence

MENON ECONOMICS

MaRITeC-X

EU performance on Science, Research and Innovation

- Economic prosperity and the social model in the EU rely on innovation
- The EU is a global leader in scientific excellence and needs to turn this leadership into more impactful innovation and entrepreneurship
- Europe must ensure that the whole of society contributes to and benefits from innovation
- Changing dynamics in innovation means Europe must renew its policies by adopting a mission-oriented approach and better support the scale-up of breakthrough innovations that create new markets

5 Global Challenges Clusters (GCC)

Maritime Trade and Transport

Marine Bioresources

Energy and Subsea Resources

Climate and the Environment

Society and Governance

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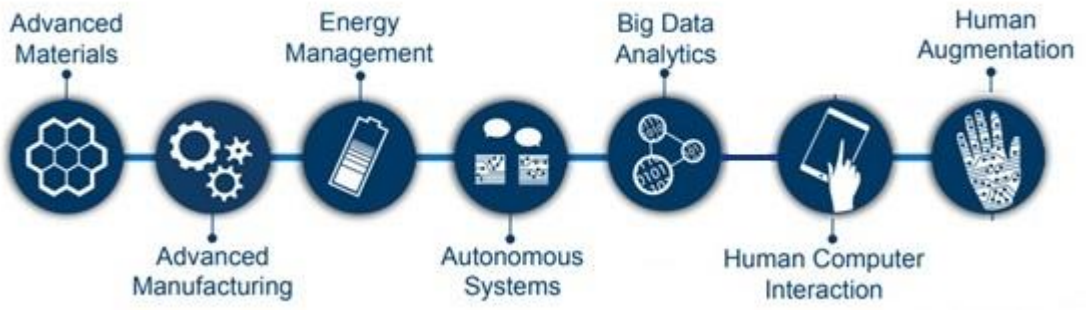
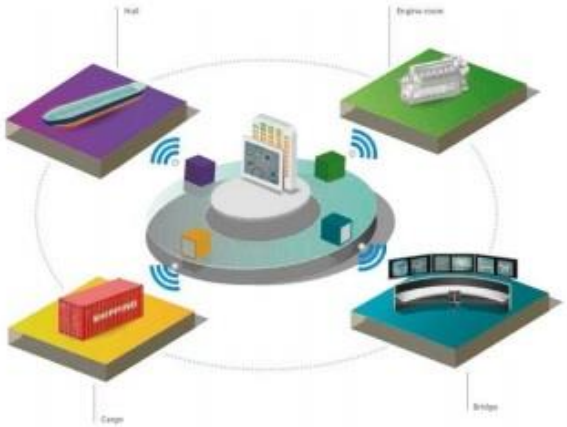
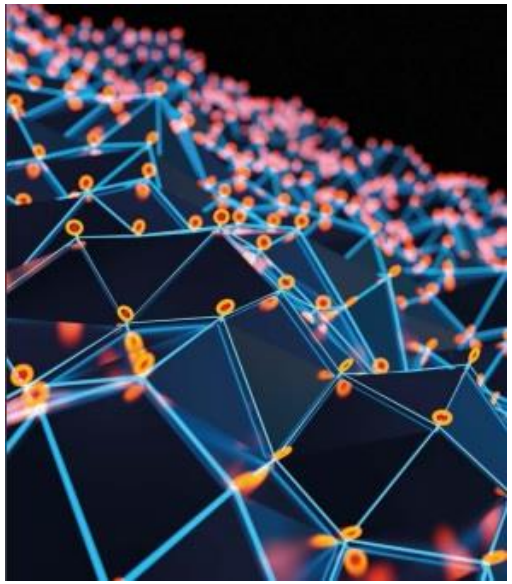
Transformational Technologies

- Advanced Materials
- Sensors
- Marine Biotechnology
- Big Data Analytics
- Deep Ocean Mining
- Cyber Security
- Robotics
- Communications
- Internet of Things
- Autonomous Systems
- Human–Computer Interaction
- Human Augmentation
- Shipbuilding
- Propulsion and Powering
- Advanced Manufacturing
- Carbon Capture and Storage
- Energy Management
- Sustainable Energy Generation







Source - Global Marine Technology Trends 2030

Cyprus Marine & Maritime Institute – CMMI
Powered by MaRITeC-X

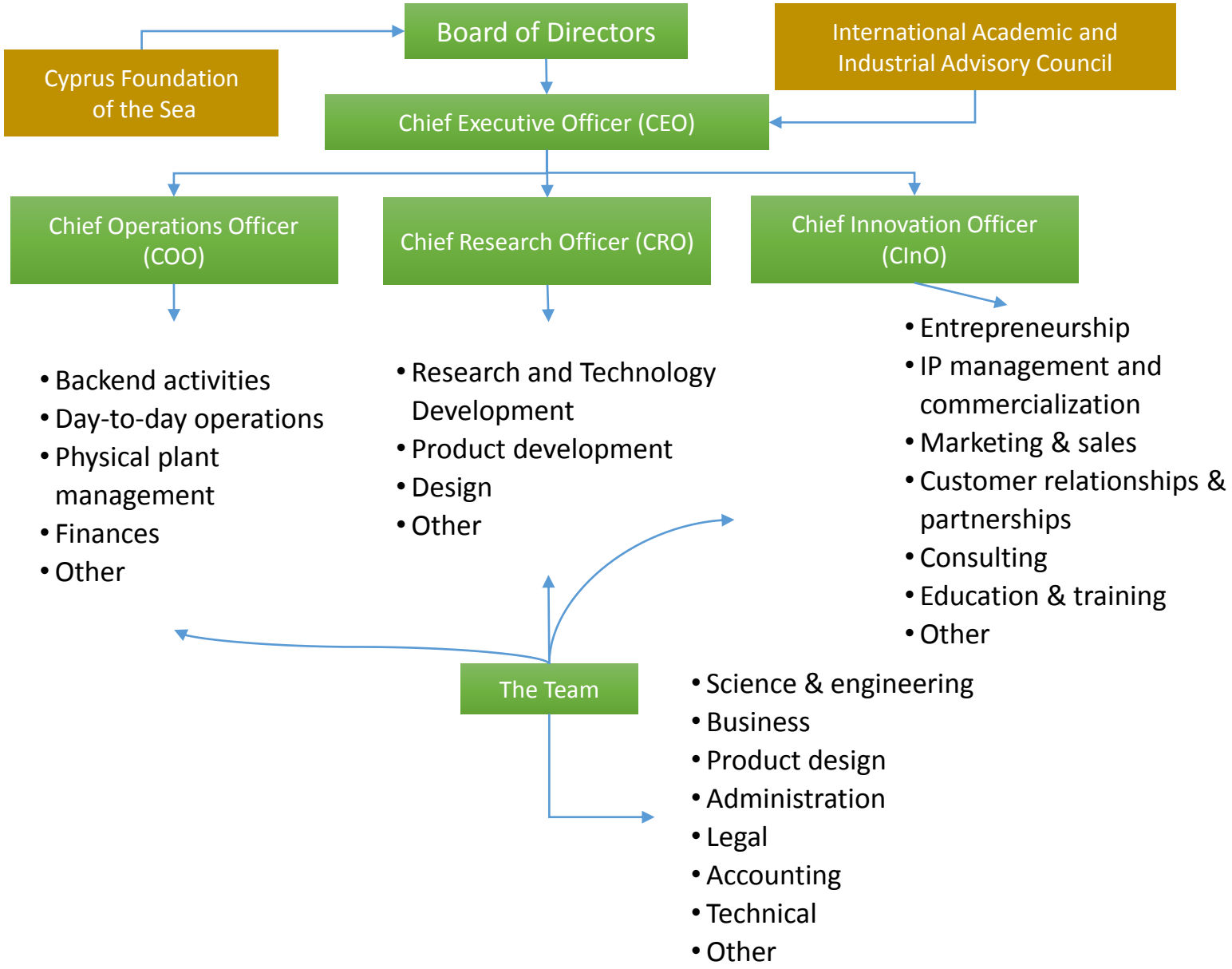
- A Not-for-Profit Limited liability company
- Incorporated under Cyprus law
- Public equivalent body status (as defined by the EU)
- The International Academic & Industry Advisory Council composed of distinguished stakeholders from the public, private and academic sectors
- Who can participate as members in CMMI?: relevant public authorities, academic institutions and the private sector. Contribute with funds or in kind

Our Vision: Ocean-Space 2051- Tackling the Threats – Exploring the Opportunities

Oceans are the key to the future of the earth. They cover more than two thirds of the surface of the earth. Millions of species call them home. They provide humans with one of their key sources of protein. The oceans are fundamental in regulating our climate. Humanity relies on them for its existence yet they are severely challenged by human activities.

CMMI will carry out research, technological development, and innovation activities (RTDI) in order to provide practical solutions that the marine and maritime industry and society face or will face in the future.

The Organization Structure of CMMI



10 Key Areas of Expertise

- Big Data and Cybersecurity
- Robotics and Autonomous Systems
- Materials, Structures and Testing
- Environmental Modelling and Mapping
- Energy and Subsea Resources
- Vessel Design and Performance
- Marine Bio-resources
- Tourism, Ports, and Logistics
- Safety, Risk and Regulation
- Cultural Heritage

Marine Institute
Foras na Mara

SMARTBAY
IRELAND

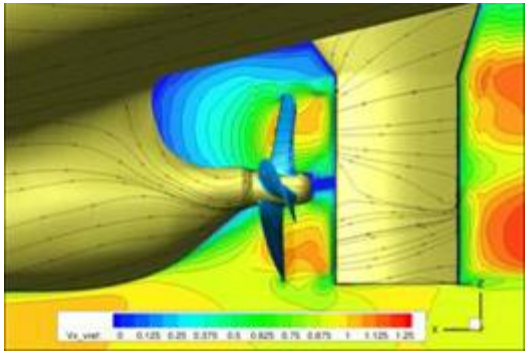
UNIVERSITY OF Southampton

Applied Research to meet
the real needs of Industry and Society

MaRITeC-X

Physical Plant and Infrastructure of CMMI

- Robotics and autonomous systems
- Materials, structures, and testing
- Marine technology for infrastructure
- Towing Tank and wind tunnel
- Human Factors
- Marine biology and research aquarium
- Environmental technologies, efficiency, and emissions
- Imaging and non-destructive testing
- Large scale computing systems



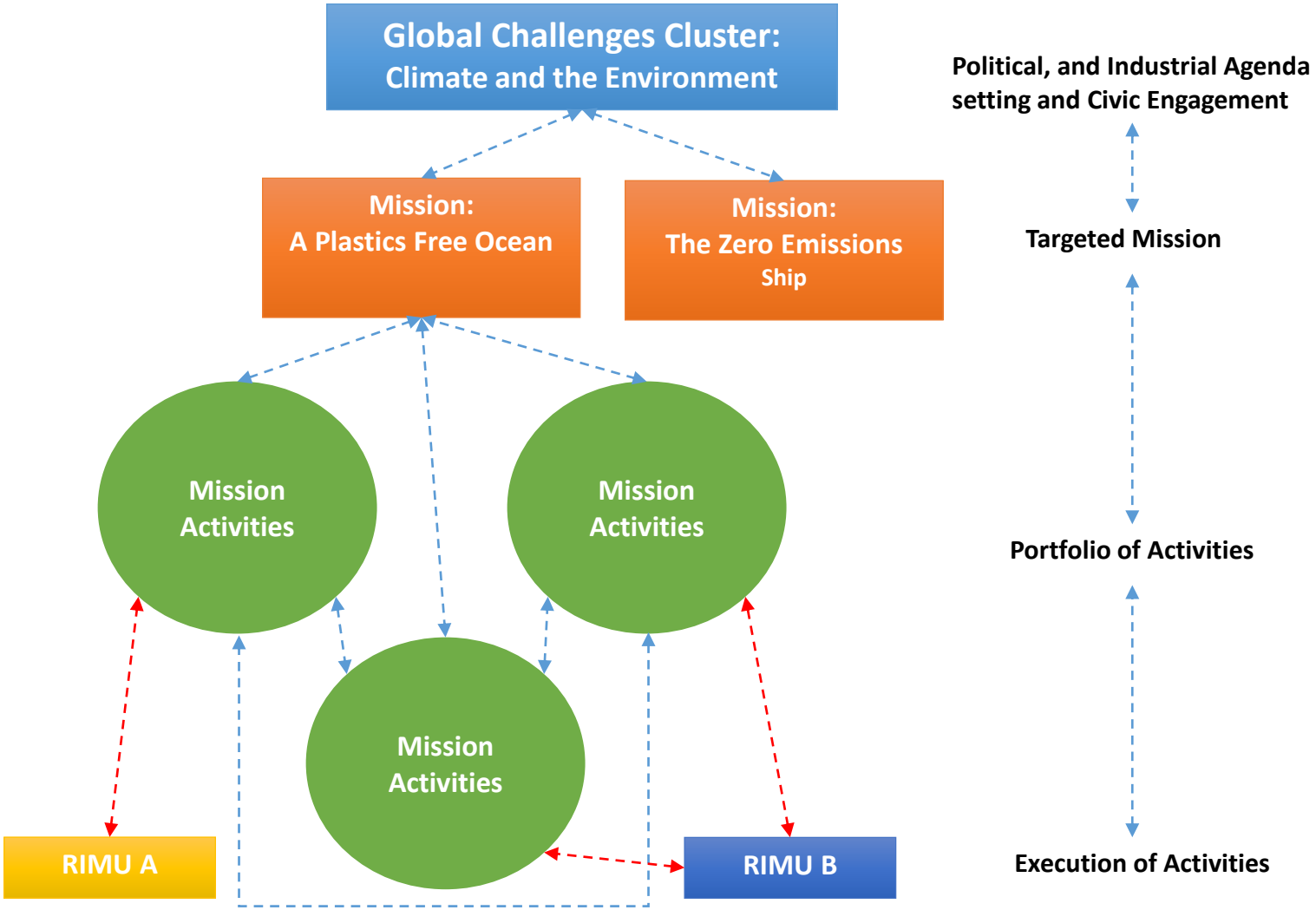
Missions in R&I

- EU fundamental research is doing great. How to convert fundamental knowledge into innovative products is what we need to improve
- Rethink the way we fund innovation. It is about industry telling us what they want to do

“Missions, such as plastic-free oceans, are seen as a powerful way to create an impact in research and innovation. Ambitious ideas are good but they should also be realistic and actionable. The outputs from the mission need to be measurable and achievable within a set timeframe, and ideas which cross boundaries into other disciplines are welcome. Missions should have the potential to transform science, technology, industry and society while also capturing people's imaginations.”

Carlos Moedas
European Commissioner for Research, Science and Innovation

From Global Challenges Clusters.. to Missions.. to Initiatives.. to Solutions



Missions of the CMMI

GCC	Mission
Maritime Trade and Transport	The Autonomous Ship (steps: Smarter Ship, Remotely Controlled Ship)
	The Argonauts of the Future – The operators of future ships
	The Port of the Future – "Future Ship", "Future Supply Chain Services"
Marine Bioresources	Ocean Food – Feeding the world from the Ocean
	PharmaSea – Medicines from the Ocean
Climate and the Environment	A Plastics Free Ocean – Tackling the threat of the plastics in our Ocean
	The Zero Emissions Ship (steps: Optimized Ship, Low Carbon Ship)
	Smart Coast – Monitoring the land-ocean interface
Energy and Subsea Resources	SmartInSea – Smart Infrastructure for Safety, Resilience, Sustainability
	Seanergeia – Harvesting the energy in the Ocean
	SeaBed – Mapping the seabed
Society and Governance	Mediterranean 2051 – Regional cooperation
	SeaPeoples – Building a civic relationship with the Ocean

MaRITeC-X

Benefits of CMMI: For Cyprus

- Attracting foreign investment in marine and maritime technology-related activities
- Strengthening the competitiveness of the marine and maritime sectors throughout the whole value chain
- Development of the maritime education, training and research and technology development landscape in the country
- Creation of an innovation ecosystem focused on the blue economy
- Support blue entrepreneurship, the creation of new companies, and the expansion of SMEs
- Employment and economic growth
- International visibility

Benefits of CMMI: For the Eastern Mediterranean region, the EU, and the rest of the world

- Creation of a fertile ground of equal opportunities for European and international researchers, academics and professionals
- Strengthened cooperation and synergies between the marine and maritime industry and the academia worldwide
- Affordable access to technology and innovation for the global marine and maritime industry
- Creation of a regional innovation hub acting as an entry point for the EU and the MENA (Middle East, North Africa) region
- Creation of a regional and international maritime technology cluster to enhance innovation and the development of practical solutions to industrial and societal problems

Timeline & Funding

- August 2018, the business plan of CMMI was submitted. This will be followed in November 2018 by a Phase 2 proposal. Successful proposals will receive **15 million euros from the EU as well as an equal amount of matching funds from national sources.**

- If the Phase 2 proposal is successful, MaRITeC-X will have 7 years to set up CMMI and in particular its physical plant, its scientific and human infrastructure, all its activities, and become financially sustainable. It is expected that this new Entity will be able to engage in income generating activities within its first year of operations.

Join Forces with CMMI!

The new entity is open to all blue economy stakeholders in Cyprus, and globally. By partnering with CMMI you have the possibility to:

- Shape the future research and technology development priorities of CMMI
- Have a say in the governance of CMMI
- Be the first to know about critical research results, new technologies, and innovation activities
- Take advantage of technology commercialisation possibilities
- Co-design, and develop, activities for mutual benefit
- Outsource solution development for your problems, products and services, by capitalising on our state-of-the-art facilities and people
- Find new partners and customers for your activities, products, and services

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Thank you for your attention

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