Establishment of Eastern Mediterranean Regional Network: pooling, sharing, development of innovative face-to-face and digital training/mentoring tools for the maritime sector

EMFF-02-2018 Blue Careers No. 863551

D4.1 Assessment & Effectiveness Report of Workshops and Summer Schools – Part A	
Deliverable Number	**D4.1**
Deliverable Title	**Assessment & Effectiveness Report of Workshops and Summer Schools – Part A**
Nature[1]:	**R**
Dissemination Level [2]:	**PU**
Author, Institution:	**UCY**
Editor, Institution:	**UCY**
Leading Partner:	**UCY**
Participating Partners:	**UCY, NTUA, CCCI, EVALION, CMMI, APOPSI SA**
Official Submission Date:	**30/04/2021**
Actual Submission Date	**30/04/2021**

[1] **R**=Document, report; **DEM**=Demonstrator, pilot, prototype; **DEC**=website, patent fillings, videos, etc.; **OTHER**=other

[2] **PU**=Public, **CO**=Confidential, only for members of the consortium (including the Commission Services), **CI**=Classified, as referred to in Commission Decision 2001/844/EC

This work is part of the Sea of Experience project. This project has received funding from the European Union's "European Maritime and Fisheries Fund (EMFF)", one of the five European Structural and Investment (ESI) Funds under Grant Agreement No. 863551

Table of Contents

Modification History

Date	Version	Description	Edited by
18/12/2020	1	Table of Contents	Anastasios Matsikaris, UCY
17/01/2021	2	First Draft of the Report	Anastasios Matsikaris, UCY
30/01/2021	3	Second Draft of the Report	Anastasios Matsikaris, UCY
19/02/2021	4	Third Draft of the Report	Anastasios Matsikaris, UCY
22/04/2021	5	Fourth Draft of the Report	Alexandros Rammos, NTUA
27/04/2021	5	Final Draft of the Report	Anastasios Matsikaris, UCY

Acronyms and Abbreviations

AB	Advisory Board
CCCI	Cyprus Chamber of Commerce and Industry
CMMI	Cyprus Marine and Maritime Institute
DCS	Dissemination and Communication Strategy
EASME	Executive Agency for Small & Medium Enterprises
EC	European Commission
EMFF	European Maritime and Fisheries Fund
EMReN	Eastern Mediterranean Regional Network
EU	European Union
NTUA	National Technical University of Athens
PC	Project Coordinator
SoE	Sea of Experience
UCY	University of Cyprus
WP	Work Package

List of Figures

List of Tables

Executive Summary

This document is dedicated to the 'Assessment & Effectiveness Report of Workshops and Summer Schools – Part A' of the ''Sea of Experience'' project. The aim of the deliverable is to report the results from the Workshops conducted after the first year of the project and describe the outline of the summer schools that will be conducted later in the project. The feedback from the participants is also included. The objective of these events is to involve the SoE stakeholders and familiarize them with SoE activities and their achieved results.

Within the first year of the project, two workshops were organized, aiming to maximize the awareness of SoE stakeholders. The workshops had two parts and provided information on current challenges and future trends of the blue careers from professionals and the Advisory Board (AB) of SoE. The intention was to inform about the current outcomes of the project, (e.g., Demonstration of the Sharing – Pooling platform and Criteria for profiling an effective mentor/ teacher). The objective of the events was accomplished through the project's communication channels, with the interactive participation from stakeholders.

The National Technical University of Athens (NTUA) organized the 1st Annual Dissemination and Technical Workshop (Part A) on Wednesday, the 21st of October 2020. The 1st Annual Dissemination and Technical Workshop (Part B) was held on Wednesday the 18th of November 2020, by the University of Cyprus (UCY), Cyprus Chamber of Commerce and Industry (CCCI) and the Cyprus Marine and Maritime Institute (CMMI). The first workshop attracted more than 37 participants and the second one 48. Participants were representatives from the AB of SoE and academic institutions as well as, university students, young professionals, and professionals mainly from blue sectors. The current situation and future trends of blue careers at a regional level were discussed. These were accompanied by presentations of blue careers and professions, current and future trends.

Moreover, the organization of both aforementioned online events achieved to capture the interest as well as the engagement of the SoE stakeholders in the overall design and preview of the sharing-pooling e-platform as well as the criteria for profiling an effective mentor/teacher.

In terms of the summer schools, the outline of the events planned for the near future, as well as their programs and objectives, are given in the report.

1. Introduction

1.1. Background

Sea of Experience is a regionally-oriented project that aims at creating, promoting and supporting a training/mentoring network; the Eastern Mediterranean Regional Network (EMReN), for professionals and youngsters related to maritime transport, shipbuilding and ship repair, ports and the cruise industry; it also aims at introducing a holistic and innovative way for mentoring in these fields. The EMReN network will consist of entities that represent the education, industry, and public authorities and therefore promote multiple pooling of resources, best practices as well as the mobility of teachers and learners amongst partners. By bringing together teachers and mentors with industrial stakeholders, potential employers, and policymakers, the Sea of Experience network will strengthen human's capita capacities, skills and attitudes to follow a successful career path in professions within the selected industries.

This report is part of Work Package 4, Face to Face Sharing (Storytelling), Task 4.1 - Organisation of workshops and Summer Schools. The main objective of this task is the organisation of Workshops and Summer Schools, as tools for delivering the common courses developed in Task 2.2 and for raising awareness and sharing knowledge (i.e., mentoring) regarding job opportunities and career paths in the maritime domain. These activities will be beneficial for both, maritime professionals as well as students. Students will benefit from the direct contact with maritime professionals that will expose them to actual professional opportunities (e.g., internships, job offers etc.) and the skills required by their potential future employers. Professionals will benefit from the network, which will be established through the activities, towards promoting new synergies and facilitating the cooperation between education/training institutions and maritime industry stakeholders.

During the planning of the Workshops and Summer Schools, the focus was given to the educational activities that are relevant to the Sea of Experience selected professions; deck officer, engineering officer, electro/technical officer, stevedore, harbor master, cook, hotel attendant, naval architect, welder and marine surveyor.

Within the first year of the project, two workshops were organized, in order to maximize the awareness of SoE stakeholders, and will be discussed in this report. The Workshops are conducted annually in the countries represented by the consortium (i.e., Greece and Cyprus) and their duration is one day. The total number of these workshops is 6, 3 in Greece and 3 in Cyprus. These workshops aim at promoting professional networking and fostering transnational mobility of students and mentors between Greece and Cyprus (at least 15 students and 6 mentors will be exchanged for all 6 Workshops). The workshops also provide valuable feedback for identifying the profile and implementing the pooling of mentors/teachers (Task 2.3). Furthermore, a video recording from each Workshop is uploaded on the sharing-pooling e-platform (Task 3.2) and provide input for the Digital Sharing Repository (Task 5.1).

Dedicated Summer Schools will be held by the academic institutions of the Consortium (i.e., NTUA and UCY) and their duration will be 3 days. The goal is to conduct 4 Summer Schools in total, 2 in Greece and 2 in Cyprus. Summer Schools will offer participants (i.e., students and maritime professionals) new and high-quality training/mentoring opportunities (including career guidance) that will allow them to acquire new and/or improve their skills required for a job in the maritime domain, to be familiarized with possible career pathways, and broaden their technical understanding. The Summer Schools will combine

fundamental science with behavioural competencies, soft skills, and business development (innovation and commercialisation of research results). Additionally, part of the established common training/mentoring educational items will be presented during the Summer Schools. Therefore, the Summer Schools will also contribute to the pooling and sharing of resources among the different educational institutes and companies at a national and trans-national level, by exchanging participant and lecturers. Moreover, at least 15 experienced maritime professionals will be invited to teach/mentor at the Summer Schools to provide information on new career pathways in other EU countries. As a result, the Summer Schools will contribute to enhancing job mobility of maritime professionals within the EU.

The SoE Consortium is supported by an AB that consists of 6 members; the coordinator of the project and five more members that have been selected from a pool of 10 educational, industrial and public authorities that have provided Letters of Support (LoS) namely; Celestyal Ship Management Ltd and Latsco Marine Management Inc. (two large shipping companies operating cruise ships, tankers and bulk carriers), ATHINA Maritime Learning and Development Centre (the training centre of the shipping company MINERVA MARINE), Ministry of Maritime Affairs and Insular Policy of Greece and Shipping Deputy Ministry of Cyprus (public authorities), the BCC of the Mentor Project (an educational network of the East Med and the Black Sea), Arab Academy for Science, Technology and Maritime Transport in Egypt and Jordan Academy For Maritime Studies (2 marine/maritime academies) and AL- Manar University of Tripoli in Lebanon and Istanbul Technical University in Turkey (universities). With this structure, Sea of Experience ensures that the content of the common educational items that will be presented during the summer schools will bridge the gap between the demanded and offered skills and competencies for Blue Economy industries.

1.2. Purpose and scope

The aim of this report is to provide all the necessary information that is linked with the organization and evaluation of both workshops and describe the outline of the summer schools. The objective is to involve SoE stakeholders and familiarize them with SoE activities and their achieved results.

As it is already mentioned, within the first year of the project, two (2) workshops were organized, to maximize the awareness of SoE stakeholders. The workshops were performed in two parts, in such a way as to provide information on current challenges and future trends of the blue careers from professionals and the Advisory Board (AB) of SoE. The intention was to inform on the current outcomes of the project, (e.g., Demonstration of the Sharing – Pooling platform and Criteria for profiling an effective mentor/ teacher). The objective of the events was accomplished through the project's communication channels by reaching stakeholders as well as through their interactive participation in the two workshops.

2. First Annual Workshop (Greece and Cyprus)

2.1. Objective

The technical and dissemination workshops were held together as an online event with 2 separate parts, one held in Greece and one in Cyprus. This report will emphasize on the technical parts of the workshops, as the dissemination workshops have been analyzed in a previous deliverable of WP6.

The two parts of the First Annual Technical Workshop were organized to provide an update on blue careers. These were accomplished online via Cisco WebEx. The first one was organised by the NTUA on the 21st of October 2020 and the second part was organised by the Cyprus partners, namely UCY, CCCI and CMMI, on the 18th of November 2020.

2.2. First Workshop – Greece (Part A)

2.2.1 Agenda of the Workshop

For the 1st part of the Annual Dissemination and Technical Workshop registrations were made via Google forms, to create a database of the attendees. The invitation that was disseminated through social media and personal emails and is shown in **Error! Reference source not found.**.

Figure 1 The invitation of the 1st Annual Dissemination and Technical Workshop

The agenda of the workshop was defined as follows in Table 1:

9^{50} – 10^{05}	**Welcome & Online Registration**	
Part A Dissemination Workshop		
10^{05} – 11^{30}	**Dissemination Workshop**	
Part B Technical Workshop		
11^{30} – 11^{35}	**Introduction of the Technical Workshop** Associate Prof. Nikolaos P. Ventikos, Project Coordinator	**NTUA**
11^{35} – 11^{50}	**Demonstration of the Sharing – Pooling Platform** George Voulkas, Business Development Manager	**APOPSI SA**
11^{50} – 12^{05}	**Criteria for profiling an effective mentor/teacher** Despina Davidou, Managing Consultant	**EVALION LTD**
12^{05} – 12^{30}	**Discussion (Fuelled by Questions)**	**ALL**

Table 1 Agenda of the Workshop Part A

2.2.2 Description of the Content

The Part A of the 1st Annual Technical Workshop of the Sea of Experience project took place on Wednesday 21st of October 2020 via remote teleconference.

After an introduction of the Technical Workshop by the Associate Prof. Nikolaos P. Ventikos, Project Coordinator, George Voulkas, Business Manager Development of APOPSI SA, presented the **Demonstration of the Sharing – Pooling Platform**. The platform has been developed as an integrated software application – an IT system - that allows the design, monitoring and administration of mentoring / coaching projects. The system is offered as a web application that is accessible by all parties that are involved (directly or indirectly) in a mentoring / coaching project. This includes mentees, mentors,

supervisors, project coordinators, et al. The purpose of the system is to provide these users with all the functionalities that are deemed as necessary to support the procedures and processes that are part of a mentoring / coaching project.

The system supports workflows regarding the creation, overview and management of a variety of innovative learning and training mentoring / coaching activities, focusing on ease of sharing and offering a multitude of asynchronous and synchronous communication and collaboration capabilities. These functionalities and workflows were assembled in operational groups and were developed accordingly. These groups can be perceived as units that contain similar functionalities, or functionalities that are related to the same logical procedures. Systemically, these groups were developed as modules of the system. All modules, although discreet in their functionalities, are fully integrated within the system and are accessible via a unified, adaptable, and intuitive interface.

The system incorporates a fully integrated web conferencing system that enables the scheduling and implementation of online mentoring/coaching sessions, an instant messaging module with 2-way, ad hoc file-sharing capabilities, a structured E-Library with properly documented and easily shareable items, and capabilities for creation, administration, delivery, and reporting of various psychometric tools and other specialized questionnaires. Furthermore, the platform includes a subsystem that enables the design, delivery and reporting of surveys or evaluation questionnaires.

Following this presentation, Despina Davidou, Managing Consultant of EVALION presented the Criteria for **profiling an effective mentor/teacher.** SoE has been rooted on the vision of guiding students and newcomers towards career paths in the Blue Economy. To achieve that, it relies on the skills and capabilities of mentors to overcome professional barriers and enable mentees to succeed. Therefore, defining the required criteria for a Mentor to provide proper career-guidance and to establish effective communication with the mentee has been a crucial step in this learning experience & developmental journey.

In order to identify the critical skills (both technical and soft skills) for mentors, the following actions have taken place:

a) extended research on the existing literature for the soft skills/competencies of mentors in general, and in the Blue Economy Sector, specifically, to create a draft Competency Model for Maritime Mentors.

b) benchmarking of the Maritime Mentors Competency Model to the Universal Competency Model of SHL, and

c) conduction of validation interviews with several active mentors to explore further and to validate the critical soft skills in the Competency Model (through content analysis). Following the steps, a thorough profile of a Maritime Mentor was derived, as presented briefly below:

• Demonstrating Active Listening

(in a two-way communication setting, where the mentee feels heard and understood)

• Providing Constructive Feedback

(where the mentee gets feedback and identifies alternative courses of action)

• Building "Together"

(in a meeting, where the mentee can open up and get relevant consultation)

• Building Trust

(in an environment where the mentee feels respected, welcomed and recognized)

• Inspiring Others

(in order for mentees to pursue personal development and growth)

• Cultivating a Positive & Growth Mindset

(where the mentee identifies the positive aspects and the learning parts of each situation)

• Applying Expertise & Technology

(along with the intention to transfer this knowledge/skill to newcomers).

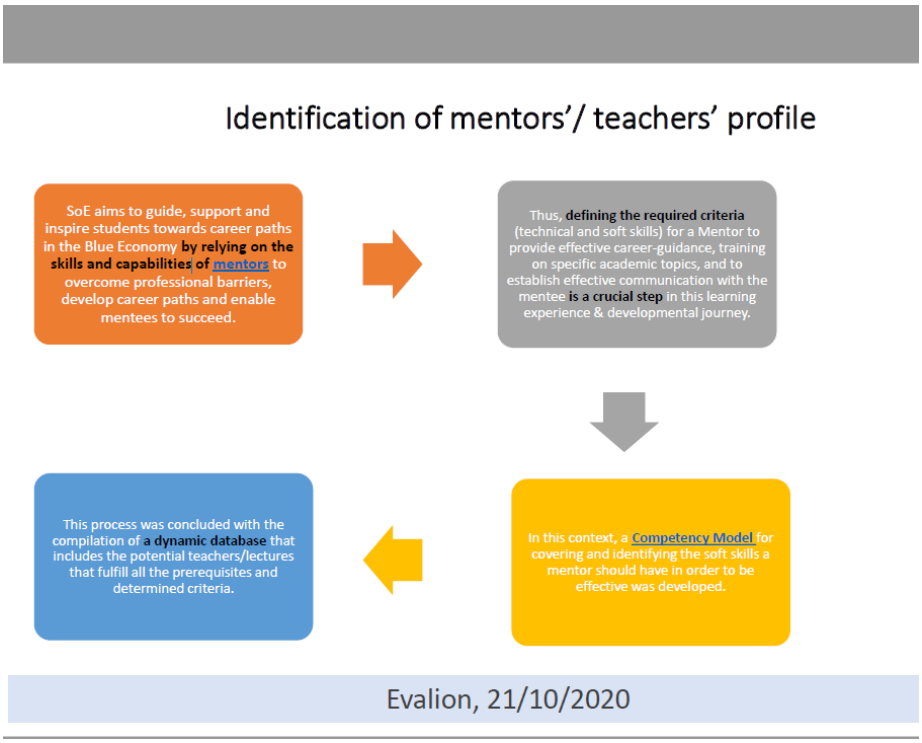

Figure 2 Identification of an effective mentor/teacher

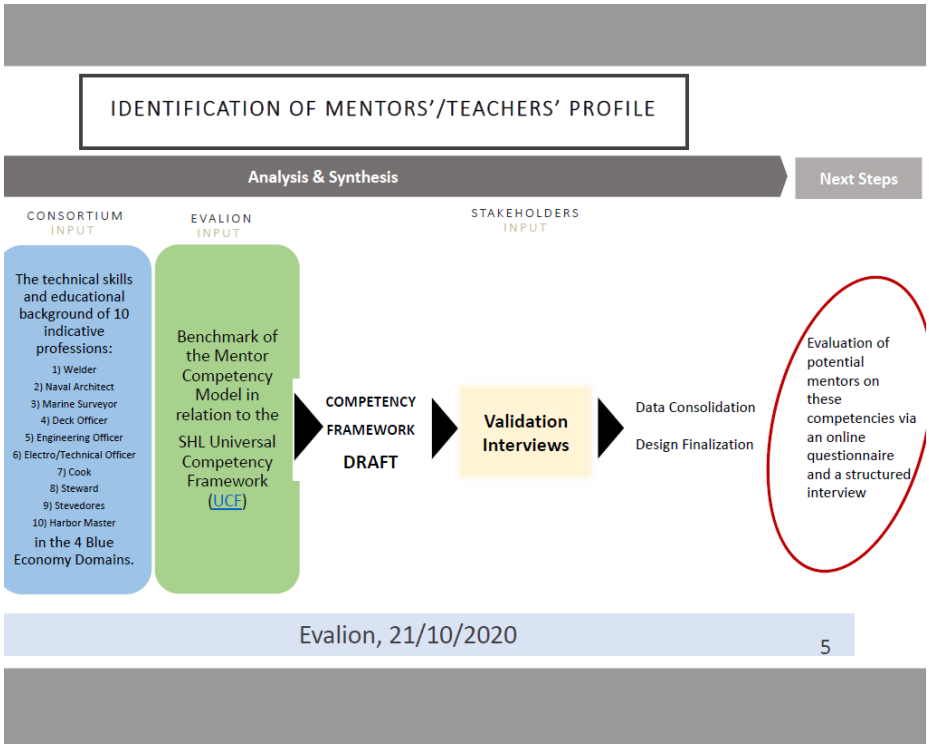

Figure 3 Identification of an effective mentor/teacher analysis

2.3. First Workshop - Cyprus (Part B)

2.3.1 Agenda of the Workshop

For the part B of the 1st Annual Dissemination and Technical Workshop registrations were made via Google forms, to create a database of the attendees. The invitation disseminated through social media and personal emails is shown below.

Figure 4 The invitation of the 2nd Annual Dissemination and Technical Workshop

The agenda of the technical workshop was as follows:

9^{45} – 10^{00}	**Welcome & Online Registration**	
Part A Dissemination Workshop		
10^{00} – 11^{15}	**Dissemination Workshop**	
Part B Technical Workshop		
11^{15}– 11^{25}	**Introduction of the Technical Workshop** Associate Prof. Nikolaos P. Ventikos, Project Coordinator	**NTUA**
11^{25} – 11^{45}	**Demonstration of the Sharing – Pooling Platform** Petros Pallis – George Voulkas	**APOPSI SA**
11^{45} – 12^{05}	**Criteria for profiling an effective mentor/teacher** Despina Davidou – Anna Polychroniadou	**EVALION LTD**
12^{05} – 12^{30}	**Discussion (Fuelled by Questions)**	**ALL**
End of Workshop		

Table 2 Agenda of the workshop Part B

2.3.2 Description of the Content

The Part B of the 1st Annual Dissemination and Technical Workshop of the Sea of Experience project took place on Wednesday 18th of November 2020 via remote teleconference. Participants of the workshop were members of the whole consortium and the AB, the Project Officer of the project and external partners. The number of the participants was 37.

In terms of the Technical Part of the Workshop, the same presentations that had been presented in the Greek workshop were repeated. The Sharing – Pooling Platform was demonstrated once again, and the criteria for profiling an effective mentor/teacher were presented. The attendees shared their views and questions on the blue sector current demands and the operation of the e-mentoring platform.

This session was concluded by an open discussion and questions relevant to the presentations by the participants. The discussion revolved around COVID-19 implications and the future skills that will be necessary in the blue sectors.

3. Assessment and Effectiveness

3.1. Feedback on the Workshops

Overall, attendees characterized the workshops as very useful. They were satisfied with the content of workshops and the topics discussed. Attendees also showed broad interest in increased awareness, knowledge gains, and collaboration of the activities of the Sea of Experience.

Attendees had specific recommendations for improving future workshops by providing more interactive discussion, background information, and documentation. In addition, there were suggestions about broadening the area of discussion on mentoring and the platform and link them with the activities with platform and mentoring of blue career at future workshops.

Even though the objectives of the SoE project were addressed, it should be a wider awareness and promotion to engage the blue human element, mentors and mentees with the objective to promote and facilitate the cooperation between education and industry in terms of diminishing the gap between the demand form the industry and the education/skills from the professionals. Sea of Experience can use innovative tools and more specific activities to explore and identify gaps between skills offer and demand.

In general, stakeholders who participated in the 1st Annual workshop (part A and B) and in the surveys provided, were not completely aware of the needs and future challenges from the specific industry and there is a positive aspect to be more involved in the development of these activities in the implementation phase. This will be a beneficial tool and means to the industry, students and professional and of course to public authorities and education.

During the two online workshops, participants were asked to respond in questions that had to do with both the dissemination and the technical part of the workshops. The first poll was given at the beginning of the workshops and consisted of two questions. The second one was given after the completion of the Dissemination Workshops and included four questions. The first two questions were the same as those of the first poll to determine if during the workshop occurred a change in the answers of the participants. The results are presented below. The attendees were highly satisfied with the organisation and content of the workshop.

Even though the attendees were interested to participate in the workshops, many participants did not provide their email. Another interesting point is that the attendees had heard that the virtual reality is used by the training process, while the same applies for mentoring. In this case, training and mentoring are each very valuable but they are different activities used to achieve a different outcome. Technology has provided a mechanism for people to interact with one another regardless of the location. E- mentoring can be supported by technology, e.g., platforms that support mentoring relationships.

In terms of the Virtual Reality aspect, taking into consideration that VR provides a level of gamification that engages employees' brains and makes the learning interactive and easier, the highlighted advantages of VR training during the workshop were:

- Training becomes visual: the learning process becomes more appealing than in the traditional way. Real-life experiences taken into the digital world.
- Remote training: Trainees do not need to travel to attend training programs and can take up courses at the point of need.
- Learning becomes more affordable: The value to a business using VR technology is immense. Since VR headsets are becoming cheaper, they can be easily bought for training purposes and implemented remotely.
- Learning is safer: Workers can gain familiarization with complex situations and risky environments and they can practice in real life scenarios until they are near perfect.

3.2. Workshops' assessment

After the completion of the workshops, an assessment was conducted to reveal the workshops' weaknesses and enrich the effectiveness of the upcoming workshops. The main recommendations were the following:

- Some comments addressed the purpose of the workshop. Recommendation for future workshops was to provide at the very beginning of the workshop a summary project activity, a clear objective for the workshop e.g., more precise title. Those things will be taken into consideration, thus engage more attendance, shape and emerge on expanding an interactive dialogue with the stakeholders and design open questions to comment on the topic of the workshop in terms of the project outcomes of each respective year.

- There were recommendations firmly stated that it would be useful to hold Annual workshops and regular dissemination material. Attendees felt that there is a sense that the topics of the workshops in the first parts should be given more time to be discussed. The issues surrounding blue career, maritime and future trends in this sector are considered to be equally important for the human element. Annual Dissemination workshops with follow-ups on the actions taken because of the workshop, presentation of accomplishments, and progress reports will contribute, to explore the circle of expansion e.g., Eastern Mediterranean Regional Network (EMReN) network and Blue Career Centers.

- Different target groups have different expectations. Therefore, 'one size fits all' is not a good principle. For instance, if we would like to attract different types of mentors and mentees from different countries, we need to circulate the invitation and/or promotional material of SoE project to this target group. Moreover, identifying appropriate mentors who match the criteria set in D2.3 "Identification of teachers'/mentors' profile" in order to have successful matchings with mentees.

- More Linkages could be established between academic institutions, public sector and industry (blue economy); promotion actions at local level in order to advance networking approaches. The training should stimulate and promote the skill of students, young professionals, and existing professionals in the blue sector. The SoE will explore the expansion of two such linkages through building up its existing network engaging MENTOR's stakeholders and through the existing SoE regional oriented project training / mentoring network; the Eastern Mediterranean Regional Network (EMReN).
- Maximize communication and dissemination activities with more publicity (e.g., journals and articles) on an EU level. This will aid to expand the circle of awareness and engage more stakeholders in other events and activities (e.g., become an expert for one day, blue summer schools etc.).
- Aim to engage successful matchings between mentors and mentees through the sharing – pooling e-platform.
- The audience needs to be considered in adapting the context to specific needs of the regional, sectoral needs of the industry.

3.3. Future Challenges

After the completion of the workshops, the following statements emerged:

- The global Coronavirus (COVID-19) outbreak in 2019-2020 has and will significantly affect not only our health and the worldwide economy, but also our project in terms of the implementation of specific activities for instance workshops, Become an Expert for a Day, Summer Schools. These activities can be organised to be online, but the factor of the social distancing is playing a crucial point, and also the fact that the SoE stakeholders need to be more interactive with digitalised era.
- Provisions to host the activities planned for 2021 in a virtual environment due to a prolonged new lockdown, depending on the global situation faced then, and the epidemic statuses of the two countries involved, Greece and Cyprus.
- In case of a virtual hosting of the above events, all presentations will be recorded live and shown to the audience via our sharing – pooling e-platform and SoE YouTube channel.

In conclusion, alternative solutions must be kept in mind in case future activities need to be hosted in virtual reality circumstances. Due to COVID 19 implications during 2020, even though what was foreseen by the SoE activities has already been performed, there is a common understanding that the dissemination and communication should be more dynamic in order to strongly support the presence and active engagement of maritime professionals in its activities., e.g., dissemination, sustained effort in updating the materials, and reaching all possible target audiences. Building up a network with a critical mass of mentors and mentees and even more the engagement of students, teachers, and professionals

along with the involvement of key stakeholders in the AB to follow the rapid evolvement of the market. Hence the consortium can continuously update/ incorporate the emerging needs of the market in the process of training / mentoring and the developed educational courses.

Finally, there is a broaden area to invite more stakeholders that can be associated with the objectives and the overall aim of the project activities. A consideration of the factor that usually, training and mentoring are applied separately but their proven complementary nature dictates their combined implementation in the context of SoE for maximizing their efficiency and impact and therefore promote multiple pooling of resources, best practices, and the mobility of teachers and learners amongst the network, is strengthen human's capita capacities, skills and attitudes to follow successful career path in professions within the respective industries. All the potential stakeholders should represent the EMReN network (entities form industry education and public authorities) and within 2021 this should be elaborated in a more concise way. It is important to organize annual workshops to engage all potential stakeholders with an expanded visibility and engagement.

4. Outline of the Summer Schools

4.1. Summer Schools objectives

Dedicated Summer Schools will be held by the academic institutions of the Consortium (i.e., NTUA and UCY) and their duration will be 3 days. The goal is to conduct four (4) Summer Schools in total, two (2) in Greece and two (2) in Cyprus. Summer Schools will offer participants (i.e., students and maritime professionals) new and high-quality training/mentoring opportunities (including career guidance) that will allow them to acquire new and/or improve their skills required for a job in the maritime domain, to be familiarised with possible career pathways, and broaden their technical understanding. The Summer Schools will combine fundamental science with business development (innovation and commercialization of research results), behavioral competencies, soft skills, and best practices. Behavioral competencies and soft skills will also be considered during the selection of the mentors and mentoring activities involved in the Summer Schools.

Through the Summer Schools, SoE aims to actively involve and gather key stakeholders, related to the four preselected sectors of the Blue Economy, to share the experience and expertise of the Blue Growth Community. All experts, mentors, professors and participants who will attend come from different countries of the Mediterranean region and the aim is to provide the participants with a general overview and a better understanding of the state-of-the-art challenges and opportunities in an outstanding international context.

Regarding the academic content, there will be a multidisciplinary approach that will allow participants to combine interactive workshop sessions and rigorous academic training with unique technical expertise. Through specific thematic courses, workshops and working labs, the Summer Schools will encourage young people to get involved in Blue Economy sectors by offering high-quality technical knowledge, fostering their entrepreneurial spirit and reinforcing the attractiveness of maritime jobs, as well as the employability of graduates.

Additionally, part of the established common training/mentoring educational items will be presented during the Summer Schools. Therefore, the Summer Schools will also contribute to the pooling and sharing of resources among the different educational institutes and companies at a national and trans-national level, by exchanging participant and lecturers.

There will be exchanging of participant and lecturers. At least 15 experienced maritime professionals will be invited to teach/mentor at the Summer Schools to provide information on new career pathways in other EU countries. As a result, the Summer Schools will contribute to enhancing job mobility of maritime professionals within the EU. This means at least 4 professionals in each school, 2 during the 2nd day and 2 in the 3rd day of the schools. The general target groups will be students (ages 15-18), undergraduate and postgraduate students, young and senior professionals from the East Mediterranean region, but are further described for each activity in the following chapter.

Parts of the videos that were produced in the Mentor project can also be presented during the Summer Schools; the videos regard: Maritime Transport e-course – Professionals, Maritime Transport e-course –

Students, Cruise Tourism e-course – Professionals, Cruise Tourism e-course – Students, Fish Tourism e-course, Aquaculture e-course – Professionals, Aquaculture e-course – Students, Offshore Oil and Gas e-course – Professionals, Offshore Oil and Gas e-course – Students.

4.2. Summer Schools' programs

The proposed Summer Schools will cover the Maritime Transport and Port Operations domains. The Summer Schools will be conducted in both Cyprus and Greece during the Summer of 2021 and the Summer of 2022 for a total of four Summer Schools. In case of a continuation of the restrictions due to the covid-19 pandemic, the two summer schools of 2021 will be held virtually, and will therefore need to have a different form and a shorter duration, of 1 or 2 days, compared to the initial plan of 3-day summer schools. In this case, the 3-day summer schools will take place the year after. Otherwise, if conditions permit it, all summer schools will follow the initial planning.

The summer school format is described in Table 3 below and includes 3 different options. The structure of the Summer Schools, including the relevant thematic areas that can be addressed, are presented in tables 4 and 5.

Table 4 presents the online format that will be followed in 2021 if restrictions due to covid-19 apply. The online format can be either a 1-day event with a morning and afternoon session, or a 2-day event, depending on the duration of the sessions. In the latter case, the morning and afternoon sessions will be presented as the first and second day of the event, respectively.

Table 5 presents the 3-day format that will be followed if restrictions are lifted. In this case, each day will cover two or three thematic areas, chosen from the options described below. Among others, the thematic areas that will be analyzed in the summer schools include: Combining theoretical and practical knowledge, Human factors and Safety concerns onboard ship, Sustainable Ports and Ports of the Future, Careers in Maritime Transport and Ports, Mentors-Audience Discussion, New and emerging technologies in the maritime industry, Intermodal & Multimodal Transportation.

Each consecutive Summer School will be updated and enhanced according to the feedback received. The first two days of the Summer School, if held in the initially planned format, focus on the Maritime Transport domain, while the third one focuses on port operations.

Table 3 Summer schools' proposed options

Options	Duration in days	Format
Option 1	3	Face to Face
Option 2	2	Online
Option 3	1	Online

Table 4 Summer School: Seafarer 2021, 1-day format

Name	Seafarer 2021
Domain	Maritime Transport, Port Operations
Time	Summer 2021
Type	Summer School
Indicative Target Audience	Senior students & Young professionals
Speakers	Members from the list in Chapter 3.4
Duration (days)	1
Host	Virtually, one by NTUA (GR), and one by UCY (CY)
Partner - Facilitator	Shipping Company
Infrastructure used	Video with Bridge Simulator, Engine (NTUA)
Material to be provided	SoE Brochures, Summer School specific brochures
Language	English
Morning session	
Thematic Area 1.1	Combining theoretical and practical knowledge
The scope of this thematic area is to allow the participants to get familiar with the daily activities of the crew members, including the Sea of Experience relevant careers. This will include presentations from the identified mentors on their respected careers (past experiences as a Deck Officer or Engineering Officer, or Electro Technical Officer) as well as generic presentations on the shipping industry. The need of high-level education will be stressed and the relation of rapidly growing demands on ship and crew will underline the need for continuous and high-level training on crew. Material from the Mentor project will be exploited and presented along with videos developed under the Sea of Experience project. Some of the following, indicative presentations can be included: • Shipping industry – An overview • Respective videos • New challenges imposed on ship crews emerging form new legislation	
Thematic Area 1.2	Human factors and Safety concerns onboard ship
This option includes presentations coupled with audiovisual material regarding the emergency response in case of an accident. The audiovisual material may be comprised of videos showing the firefighting efforts of an incident response team. This activity aims to familiarise the audience with an emergency onboard a ship. Indicative content: • Zero-casualty shipping • Ship evacuation & emergency response trends	
Thematic Area 1.3	Real-life demonstration videos
This thematic area will include videos from real-life demonstrations and the everyday environment that the seafarer is required to cope with. These will include the: • Bridge simulator video: The realism of a ship bridge simulator has a decisive impact on the value to be gained from utilizing a virtual environment for training, practicing, and planning. The realistic environment of the simulation acts as a great way to make first contact with the equipment onboard, including the various alarms and controllers. The visit will be filmed. • Engine testbed (Start the engine) video:	

This will include a real-life demonstration (start-up) of a marine diesel engine (6-cylinder CAT engine) or an auxiliary marine engine. The aim of this exercise is to familiarise the audience with the conditions inside a ship engine room. Prior and post experiment, relevant presentations regarding the specifications of the engine and the experimental procedure will be given.	
Afternoon Session	
Thematic Area 2.1	Sustainable Ports and Ports of the Future
The scope of this thematic area is to allow the participants to get an insight on how we can make ports more sustainable, the concept of green ports, pollution in ports, the amount of waste to the oceans, as well as is to inform the audience on the concept of Smart ports, new technologies and autonomous technologies in ports, the familiarisation of existing personnel with new technologies that will be soon implemented in ports, etc. Indicative content: • Sustainable ports: key elements, tools & technologies • Preparing for the port of the future • Digital twin port • Liabilities & Responsibilities	
Thematic Area 2.2	Careers in Maritime Transport and Ports
The aim of this thematic area is to inform the audience on the career opportunities regarding the fields of maritime transport and port operations. Both mentors and members of the advisory board will be invited to discuss the available career paths and their respective challenges in 2020s. Material from the Mentor project will be exploited and presented along with videos developed under the SoE project. Indicative content: • Career paths in shipping • Required soft skills • Past experiences as a Stevedore or a Harbor Master	
Thematic Area 2.3	Mentors-Audience Discussion
The scope of this exercise is to allow the audience to hold a structured, but not rigid, form of discussion regarding their experiences in the Summer School. The audience will have the opportunity to ask for specific guidance on their subject(s) of interest, promoting the collaboration of students and young professionals with industry experts.	

Table 5 Summer School: Seafarer 2021, 2022, 3-day format

Name	Seafarer 2021, 2022
Domain	Maritime Transport, Port Operations
Time	Summer 2021, Summer 2022
Type	Summer School
Indicative Target Audience	Senior students & Young professionals
Speakers	Members from the list in Chapter 3.4
Duration (days)	3
Host	Athens, NTUA (GR), Nicosia, UCY (CY)
Partner - Facilitator	Shipping Company
Infrastructure used	Bridge Simulator, Engine (NTUA)

Material to be provided	SoE Brochures, Summer School specific brochures
Language	English
Day 1	
Thematic Area 1.1	Combining theoretical and practical knowledge
The scope of this thematic area is to allow the participants to get familiar with the daily activities of the crew members, including the Sea of Experience relevant careers. This will include presentations from the identified mentors on their respected careers (past experiences as a Deck Officer or Engineering Officer, or Electro Technical Officer) as well as generic presentations on the shipping industry. The need of high-level education will be stressed and the relation of rapidly growing demands on ship and crew will underline the need for continuous and high-level training on crew. Material from the Mentor project will be exploited and presented along with videos developed under the Sea of Experience project. Indicative content: • Shipping industry – An overview • Duties of a Deck Officer • Respective videos • New challenges imposed on ship crews emerging form new legislation	
Thematic Area 1.2	New and emerging technologies in the maritime industry
This thematic area will cover new and emerging technologies that are expected to advance the maritime transport domain. Such technologies should include autonomous ships, the use of AI (Artificial Intelligence), the capitalization of sensory information (IoT – Internet of things), big data analytics, cybersecurity. In addition, the presentations will cover the specific challenges for the implementations of these technologies in the maritime domain. Indicative content: • Autonomous vessels • Cybersecurity: threat & risks • Green shipping • Alternative fuels	
Thematic Area 1.3	Training
Today, seafaring is a job that demands highly trained and qualified personnel. This thematic area will include presentations about the importance of maritime training. From the first days at sea and throughout a seafarer's career, there is a need for recurrent and continuous training, depending on the new requirements and technologies. Conventional methods of training and new methods, i.e., utilizing VR/AR, will be presented. Indicative content: • Current trends in maritime training • Is e-learning feasible? Improvement of ship operational safety as a result of utilizing AR/VR simulating technologies	
Thematic Area 1.4	Bridge simulator visit
The realism of a ship bridge simulator has a decisive impact on the value to be gained from utilizing a virtual environment for training, practicing and planning. The aim of this thematic area is to facilitate familiarisation with the everyday environment that the seafarer is required to cope with. The realistic environment of the simulation act as a great way to make first contact with the equipment onboard, including the various alarms and controllers.	

Day 2	
Thematic Area 2.1	Human factors and Safety concerns onboard ship
This option includes presentations coupled with audiovisual material regarding the emergency response in case of an accident. The audiovisual material may be comprised of videos showing the firefighting efforts of an incident response team. This activity aims to familiarise the audience with an emergency onboard a ship. Indicative content: • Zero-casualty shipping • Ship evacuation & emergency response trends	
Thematic Area 2.2	Engine testbed (Start the engine)
This will include a real-life demonstration (start-up) of a marine diesel engine (6-cylinder CAT engine) or an auxiliary marine engine. The aim of this exercise is to familiarise the audience with the conditions inside a ship engine room. Prior and post experiment, relevant presentations regarding the specifications of the engine and the experimental procedure will be given.	
Thematic Area 2.3	Engine Room Machinery - video
This will include a set of presentations on several equipment components aiming to familiarise the participants with the engine room of a vessel. The presentations will be coupled with relevant videos from WP5 as well as any other available audiovisual material. Indicative content: • Ship machinery, installation & arrangement	
Thematic Area 2.4	Career opportunities
The aim of this thematic area is to inform the audience on the career opportunities regarding the field of maritime transport. Both mentors and members of the advisory board will be invited to discuss the available career paths and their respective challenges in 2020s. Indicative content: • Career paths in shipping • Required soft skills in the field	
Thematic Area 2.5	Mentors-Audience Discussion
The scope of this exercise is to allow the audience to hold a structured, but not rigid, form of discussion regarding their experiences in the Summer School. The audience will have the opportunity to ask for specific guidance on their subject(s) of interest, promoting the collaboration of students and young professionals with industry experts.	
Day 3	
Thematic Area 3.1	Intermodal & Multimodal Transportation
The scope of this section is to allow the audience to understand the concepts of Intermodal & Multimodal Transportation and show them how the differences between Multimodal and Intermodal transport is important for shippers to optimize routing and total shipping costs. It will include information about a combination of different transport carriers, explain how to achieve best total shipping cost, and include discussion about logistics coordination. Indicative content: • Transportation explained • Supply chain: Blockchain & IoT	
Thematic Area 3.2	Human Factor in Port Operations

The human factor plays a significant role in the operation of ports and docks since the vast majority of incidents are attributed to human error. This thematic area aims to feature different aspects of the human element in port operations. Indicative content: • Human factors and safety culture in port operations	
Thematic Area 3.3	Careers in Port Operations
The scope of this thematic area is to allow the participants to get familiar with the day-to-day duties and responsibilities of an employee in the ports and how a day in a port (WP5) looks like. This will include presentations from the identified mentors on their respected careers (past experiences as a Stevedore or a Harbor Master). Material from the Mentor project will be exploited and presented along with videos developed under the Sea of Experience project	
Thematic Area 3.4	Safety in Port Operations
Information about Safety in Port Operations and accidents that have occurred over recent years. The importance of the accuracy and the level of information in dangerous and polluting goods (HAZMAT) reports. How to allocate and provide incident response measures. Indicative content: • Port management • Safety & health in ports • Transport & handling dangerous cargoes in port areas	
Thematic Area 3.5	Port Visit
Educational visit to a port, providing experience with Loading/Unloading, Cargo Handling, etc. In case the visit cannot be conducted in one country, the partner who can successfully implement this activity will provide audiovisual material from their experience.	
Thematic Area 3.6	Sustainable Ports
The scope of this thematic area is to allow the participants to get an insight on how we can make ports more sustainable, the concept of green ports, pollution in ports, and the amount of waste to the oceans. Presentations can show focus on how to decrease ship fuel usage, improvements in port waste facilities, their clean energy offerings, their efficiency, and why all these are important. Indicative content: • Sustainable ports: key elements, tools & technologies • Energy management in ports • Climate change and ports	
Thematic Area 3.7	Port of the Future
The aim of this thematic area is to inform the audience on the concept of Smart ports, new technologies and autonomous technologies in ports, the familiarisation of existing personnel with new technologies that will be soon implemented in ports, etc. Indicative content: • Preparing for the port of the future • Digital twin port • Liabilities & Responsibilities	

ANNEXES

1. Annex I: 1st Annual Technical Workshop: Attendant list and photos

Table 6 List of attendees (Greece)

List of Participants			
No.	**LAST NAME**	**FIRST NAME**	**AFFILIATION**
1.	**Ventikos**	**Nikolaos**	**NTUA**
2.	**Sotiralis**	**Panagiotis**	**NTUA**
3.	**Rammos**	**Alexandros**	**NTUA**
4.	**Kapetanis**	**Giorgos**	**NTUA**
5.	**Zagkliveri**	**Theano**	**NTUA**
6.	**Koimtzoglou**	**Marios**	**NTUA**
7.	**Annetis**	**Manolis**	**NTUA**
8.	**Siokouros**	**Panagiotis**	**NTUA**
9	**Danopoulou**	**Anastasia**	**NTUA**
10	**Lazaraki**	**Vera**	**NTUA**
11	**Voulkas**	**George**	**APOPSIS**
12	**Kalomoiri**	**Dimitra**	**APOPSIS**
13	**Pallis**	**Petros**	**APOPSIS**
14	**Zafeiropoulou**	**Sofia**	**APOPSIS**
15	**Stavrou**	**Orfeas**	**EVALION**
16	**Davidou**	**Despina**	**EVALION**

17	Polychroniadou	Anna	EVALION
18	Matsikaris	Anastasios	UCY
19	Georgiou	Georgios	UCY
20	Andreou	Monica	CMMI
21	Kamenou	Maria	CMMI
22	Papaioannou	Marina	DNV GL Maritime Academy Hellas
23	Karasavvidou	Sonia	EC-EASME
24	Ktenas	Panagiotis	CORAL
25	Volakis	Stelios	MINERVA MARINE
26	Sdoukopoulos	Lefteris	Hellenic Institute of Transport – CERTH
27	Venizelou	Georgia	CCCI
28	Kalantidis	Dimitris	LATSCO
29	Dimitriadis	Panagiotis	Naval Architect
30	Phitides	Aris	
31	Stavrou	Andreas	
32	Marava	Nektaria	
33	Giannitsoudi	Argyro	
34	Fragiadakis	Nikos	MERCHANT MARINE ACADEMY OF ASPROPYRGOS
35	Constantinou	Christos	
36	Chatzinikolaou	Stefanos	RINA

37	Kotsakis	Nikos	Naval Architect

Photos

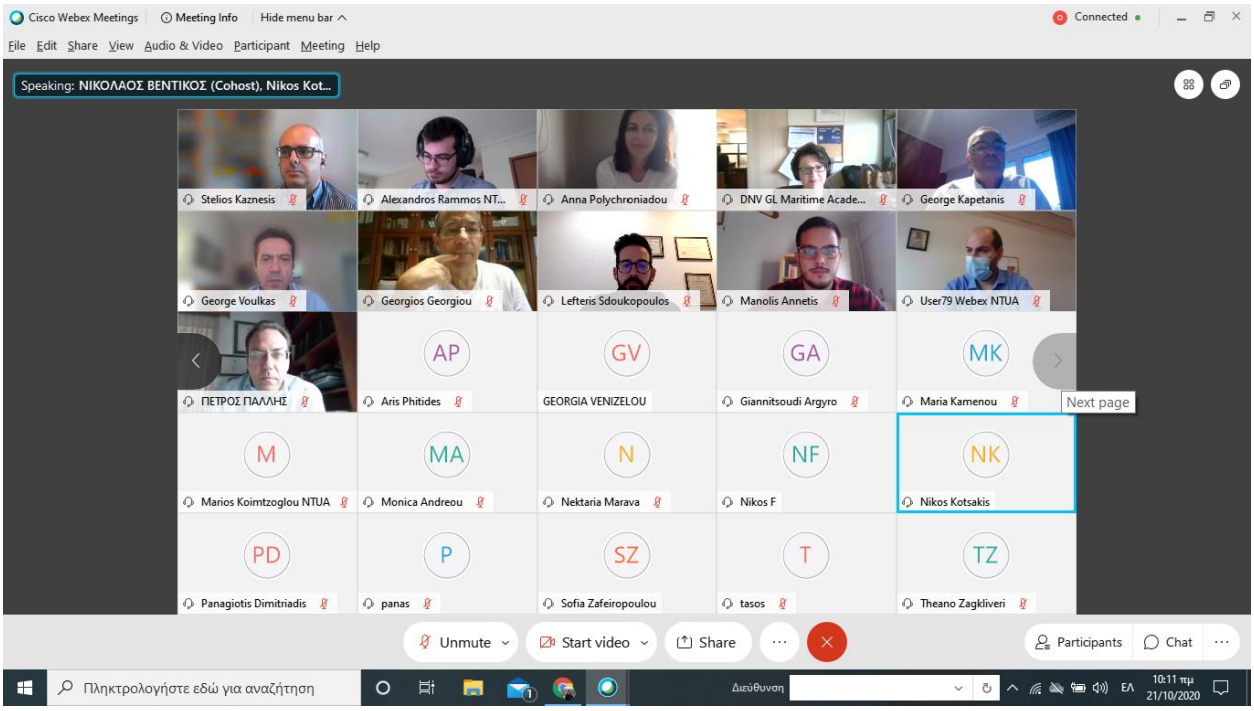

Figure 5 Photos of the 1st Technical Workshop (Part A)

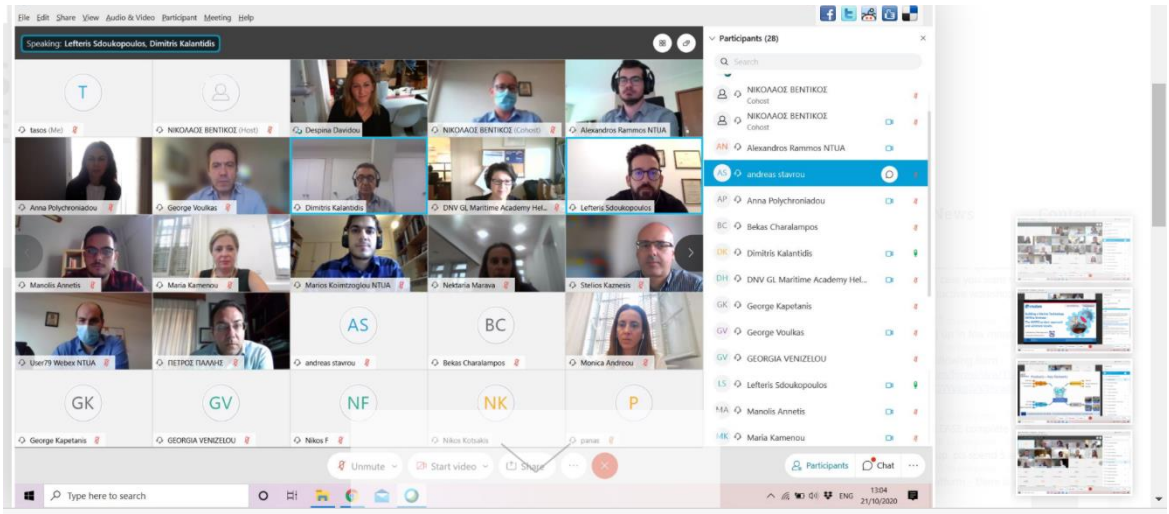

Figure 6 Photos of the 1st Technical Workshop (Part A)

2. Annex II: 2nd Annual Technical Workshop: Attendant list and photos

Table 7 List of attendees (Cyprus)

List of Participants			
No.	**LAST NAME**	**FIRST NAME**	**AFFILIATION**
1.	**Ventikos**	**Nikolaos**	**NTUA**
2.	**Sotiralis**	**Panagiotis**	**NTUA**
3.	**Rammos**	**Alexandros**	**NTUA**
4.	**Kapetanis**	**Giorgos**	**NTUA**
5.	**Zagkliveri**	**Theano**	**NTUA**
10	**Lazaraki**	**Vera**	**NTUA**
11	**Voulkas**	**George**	**APOPSI SA**
13	**Pallis**	**Petros**	**APOPSI SA**
14	**Stavrou**	**Orfeas**	**EVALION**
15	**Davidou**	**Despina**	**EVALION**
16	**Polychroniadou**	**Anna**	**EVALION**
17	**Matsikaris**	**Anastasios**	**UCY**
18	**Georgiou**	**Georgios**	**UCY**
19	**Andreou**	**Monica**	**CMMI**
20	**Siokouros**	**Zacharias**	**CMMI**
21	**Karasavvidou**	**Sonia**	**EC-EASME**
22	**Venizelou**	**Georgia**	**CCI**

23	Parisinou	Niovi	CCI
24	Claire	Andreou	CCI
25	Katsos	Panagiotis	External
26	Annetis	Manolis	External
27	Siokouros	Panagiotis	External
28	Danopoulou	Anastasia	External
29	Delenta	Stauroula	External
30	Josephides	Alexandros	CSC
31	Capt. Faouzi	Fradi	Columbia Shipmanagement
32	Demosthenous	Stelios	External
33	Konstantinides	Dimitris	External
34	Dinisiuc	Denis	External
35	Palaonda	Demetra	CCCI
36	Magirou	Constantina	UCY
37	Atalianis	Christos	External
38	Evagoras	Isaias	External
39	Nikolaidis	Georgios	External
40	Mavris	Kyriakos	External
41	Panagidou	Xenia	External
42	Konstantinidou	Myrto	External
43	Ellinas	George	External

44	**Agamy**	**Kazem**	**External**
45	**Silitziotis**	**Costas**	**External**
46	**Kokarakis**	**Emmanuel**	**External**
47	**Efthymiou**	**Chrysostomos**	**External**
48	**Maragkidou**	**Sofia**	**CMMI**

Photos

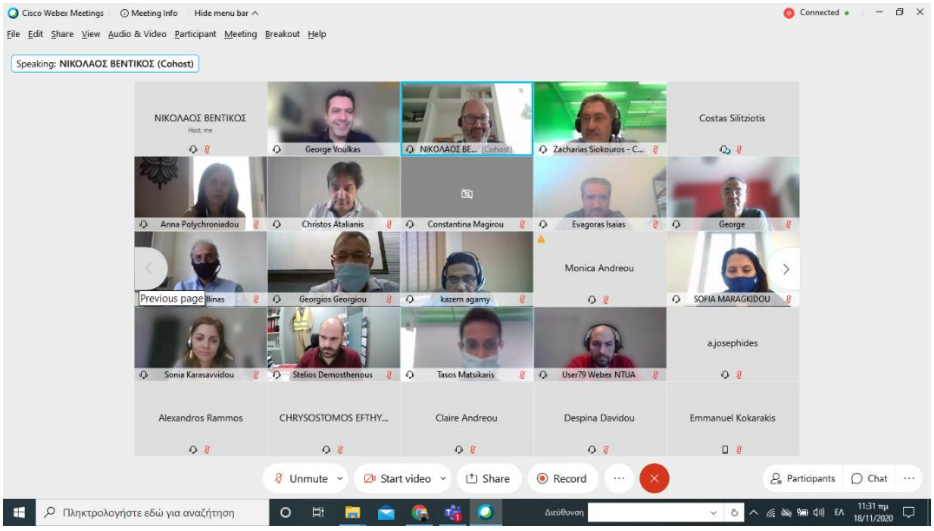

Figure 7 Photos of the 1st Technical Workshop (Part B)

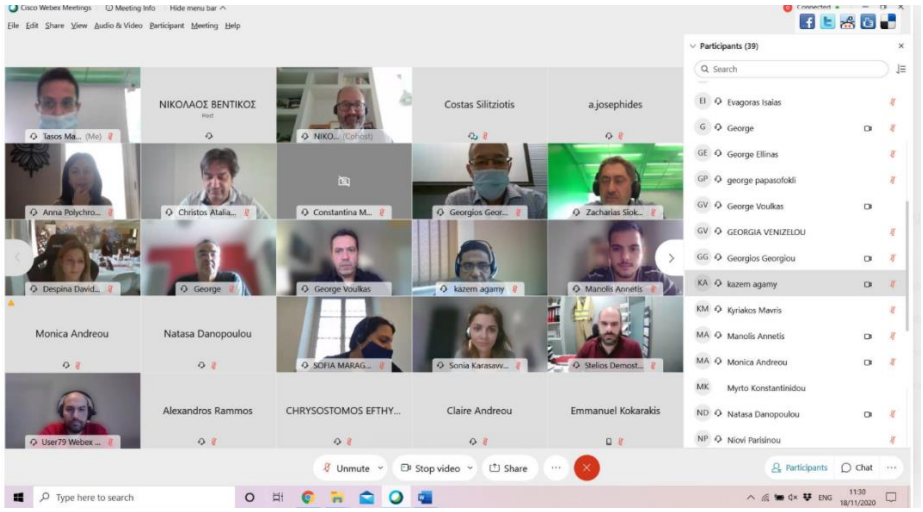

Figure 8 Photos of the 1st Technical Workshop (Part B)