



**Asia-Pacific
Economic Cooperation**

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Agenda Item: 2.1

APEC Seafarers' Excellence Network Report on Digitalisation of Seafarers

Purpose: Information

Submitted by: APEC Seafarers' Excellence Network



**Maritime Experts Group Meeting
28 October 2021**

Session 2: Report back from the Thematic Meetings on Main Policy Theme 2021



2-1 APEC SEN “Digitalization of Seafarers”

APEC SEN Secretariat
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Advancing Free Trade
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Digitalization of Seafarers

- i. Future maritime skills beyond STCW, Tine Viveka Westerberg (Norway)
- ii. New Technologies and Global Marine Trends 2030, Anwar Buftain (Kuwait)
- iii. China's Initiatives for Seafarers' Education and Training in the Digital Age, Guitang Li (China)
- iv. Digital Learning During the COVID-19 Pandemic, Jeni Legere, Cynthia Brown, Vivek Saxena (Canada)
- v. Experiences and challenges in dealing with COVID-19's impact on seafarers' education and training, Lynda Deckar (Mexico)
- vi. IT solutions for the seafarers in Chile, Daniel Sarzosa (Chile)
- vii. Digitalization of Ships, Crew and Ship Management, Yongdae Kim (Republic of Korea)
- viii. Measures of the Peruvian Maritime Authority facing the COVID-19 pandemic, Capt. Jesus A. Menacho Pierola (Peru)
- ix. Applying Technology 4.0 in Training and Teaching Seafarers, Ms. Hong Phuc Tran (Viet Nam)



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Digitalization of Seafarers (June 21, 2021)

The APEC SEN Thematic Meeting on Digitalization of Seafarers took place through a virtual meeting on June 21, 2021

with 91 participants from 17 APEC economies and 4 non-APEC economies.

The gender breakdown of the meeting was 38 female participants (40%) and 58 male participants (60%).

11 speakers from 9 economies presented on the topic of "Digitalization of Seafarers," focusing on the following areas:

- a. Current Challenges Posed by the Pandemic;
- b. Online Education in Every Economy;
- c. The Future of Maritime Education and Training in the Digital Age.



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Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

i. Tine Viveka Westerberg – Future maritime skills beyond STCW

Dr. Tine Viveka Westerberg shared her in-depth knowledge on **seafarers' competencies, current and future skills, and digitalization in the future**. She introduced the EU project 'Skillsea' and further explained **the future maritime skills for the digital era**.

ii. Anwar Buftain – New Technologies and Global Marine Trends 2030

Capt. Anwar Buftain noted that **commercial shipping in 2030 would have a significant impact on vessel system design and operation**. To align with these fast-moving trends, **seafarers must understand computers and robotic skills, general operational knowledge of smart ships, and specialized technical skills in dealing with sophisticated new equipment and technologies**.

He noted that COVID-19 had brought us unprecedented changes in the way we are doing business. It has redefined the concept of "distance." In this sense, digitalization is gaining fast ground; the determination in implementing these new trends will overcome the challenges.



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

iii. Guitang Li – China's Initiatives for Seafarers' Education and Training in the Digital Age

Mr. Guitang Li **summarized China's initiatives for seafarer's education and training.** He summarized these changes by introducing China's support policy, including developing and applying digital technology, the practice of online training for seafarers during COVID-19, and finally, the prospect of digitalization of seafarers. He also emphasized the use of digital gadgets, remote technology, and integrated information sharing platform in the daily life and work of seafarers.



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

iv. Jeni Legere, Cynthia Brown, Vivek Saxena

– Digital Learning During the COVID-19 Pandemic: Canada

Ms. Jeni Legere introduced the **Marine Training Program (MTP)** in Canada, which aims to provide greater opportunities for underrepresented groups, such as women, Indigenous Peoples, and Northerners to enter the marine labour industry by reducing barriers to marine training, and enhancing the infrastructure of existing marine training institutions throughout the economy.

Mr. Vivek Saxena noted that COVID-19 had accelerated the adaption of technology where **Canada is actively corresponding to this movement by using a wide range of measures such as distance learning, program restructuring, and securing regulatory approvals.**



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

iv. Jeni Legere, Cynthia Brown, Vivek Saxena

– Digital Learning During the COVID-19 Pandemic: Canada

Ms. Cynthia Brown recognized the importance of good communication with government administrations and partner schools to ensure that their programs align with regulatory requirements. Despite many challenges posed by COVID-19 restrictions, maritime education institutions in Canada have come up with solutions, making sure that the students are getting a fair and proper education. **Online learning management tools, remote training, online tutoring, and counselling are actively sought with close communication with Transport Canada for this process.**



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

v. Lynda Deckar – Experiences and challenges in dealing with COVID-19's impact on seafarers' education and training

Prof. Lynda Deckar described the experiences and challenges in dealing with COVID-19 impacts on seafarer's education and training in Mexico by highlighting swift measures taken by the Maritime Administration in Mexico, such as **online learning and testing schemes to promote better education and assessment for cadets and seafarers**. During her presentation, a demonstration video was shared in which the students work on the simulation test or when taking computer-based examination.



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

vi. Daniel Sarzosa – IT solutions for the seafarers in Chile

Commander Daniel Sarzosa provided a general overview of maritime education and training in Chile. The Chilean Maritime Authority is moving fast to cope with disruptive changes posed by the pandemic. One example would be developing remote solution apps by TECMAR (IT Department in Maritime Training Center and Training - CIMAR) under government authority. It is designed to deliver customized LMS services, systematic use of VCO platforms, and theoretical lectures in accordance with international regulations.



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

vi. Yongdae Kim – Digitalization of Ships, Crew and Ship Management

Mr. Yongdae Kim shared his views on the digitalization of ships, crews, and ship management. Along the way of the digital transformation amid the pandemic, significant challenges arose from crew changes to personnel training onboard. He emphasized one effective solution is to utilize remote communication technology through integrated satellite data exchange and presented some of the best practices that could ease the limitations caused by data discrepancies. He also noted that seafarers are the direct beneficiaries of the advancement of digital technology, which will eventually spur the development and growth of all industries in the end.



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

vii. Captain Jesus A. Menacho Pierola – Measures of the Peruvian Maritime Authority facing the COVID-19 pandemic

Captain Jesus Menacho shared the measures taken by the Peruvian Maritime Authority during the COVID-19 period by providing a brief overview of directorial resolutions, changing of crew procedures, and training courses. As for the regulatory frameworks, the Peruvian Maritime Authority granted an extension of certificates revalidation for seafarers to ensure the safe, efficient operation of vessels engaged in international voyages. In addition, health protections and preventive measures are also enforced to prevent the spread of COVID-19 onboard ships. **To better support this process, crews can use online administrative procedures to process their certification or relevant information.** Furthermore, the Peruvian Maritime Authority is putting great efforts into ensuring that education and training are properly conducted. For this purpose, **electronic certifications, distance learning, and pertinent theoretical lectures are utilized.**



Digitalization of Seafarers (June 21, 2021)

- Presentation and discussion mainly encompassed the following key details:

viii. Ms. Hong Phuc Tran – Applying Technology 4.0 in Training and Teaching Seafarers

As in the aviation sector, the education and training in Industry 4.0 era must create dynamic, independent people with self-study and self-research skills, and a focus to maximize the creativity of each individual. To better obtain this goal, **Vietnam Maritime Academics are taking steps to create high-standard class settings by adopting online learning systems to maximize knowledge sharing.** However, she noted that innovations should come first from lecturers themselves by training and improving their professional capacity with training courses, professional development, and practical work. In addition, international corporations are actively sought to maximize the efficient use of resources as they are one of the key components in providing a better learning experience for students.

