

IALA COUNCIL

74<sup>th</sup> session

13-17 December 2021

IALA Headquarters

## 10 – TECHNICAL ACTIVITIES

### 10.8 Digital@Sea

#### 10.8.1 – Highlights of the D@S AP 2021 conference

Note by the Secretariat

#### 1 INTRODUCTION

The first edition of the Digital@Sea Asia-Pacific Conference, which replaces the former e-Navigation Underway Conference Asia-Pacific (ENUW AP) from 2017 to 2020, was virtually held under the theme “Leading Digitalization of Maritime Industry” on 8 to 9 September 2021, in Sejong City, Republic of Korea. 805 participants from more than 50 countries participated in the conference.

Wishing to increase international cooperation in harmonizing and facilitating maritime digitalization and decarbonization industries for the sake of enhancing maritime safety and efficiency as well as shared growth among regions,

Noting that Digital@Sea Initiative under the umbrella of IALA consists of a series of Digital@Sea conferences replacing the former series of e-Navigation underway conferences (ENUW), Digital@Sea Clusters and Capacity Building Workshops,

#### 2 HIGHLIGHTS

The conference adopted its highlights as follows:

1. The conference discussed the cutting-edge technologies and industries related to maritime digitalization, focusing on global harmonization, data connectivity, and inter-operability among them as well as decarbonization through them; mainly e-Navigation, MASS, cyber security, maritime informatics, and maritime connectivity platform.

##### 1.1. Opening Session

When setting the theme for the conference, the importance of digitalization, digital data exchange and international collaboration in the maritime domain were highlighted.

##### 1.2. Session 1 – Maritime Digital Transformation for De-Carbonization

In the first session, the correlation between digitalization and the efforts for de-carbonisation of shipping was illustrated. It was made clear that the digital transformation, especially with aspects of Sea Traffic

Management and the advent of Just-In-Time arrivals in ports will support the environmental footprint reduction of the maritime transport sector.

### 1.3.Session 2 – Platform; Focus on Informatics

When looking at existing and evolving platforms enabling digital data exchange, the aspect of interoperability across the globe was highlighted. This is not seen as a pure technical issue, but cooperation between organizations, above and beyond regulatory requirements, will be needed. This in conjunction with interoperable platforms like MCP and the use of international standards, e.g. for Port Call Messages and Route Exchange, will be paramount for success. This collaboration is necessary to include the reference to the IMO reference data model.

### 1.4.Session 3 – Core Technology and Standardization

Digital data exchange, a prerequisite for e-Navigation and for MASS implementation need high bandwidth communication and as such additional frequency band allocations are required for Maritime Mobile Services. Cyber Risk need to be addressed as digitalization requires resilient systems. Academic research in the new Maritime Informatics discipline underlines the need for global cooperation to gain the benefits of digitalization.

### 1.3.Session 4 – Harmonization on the Maritime Digital Transformation

IMO regulations and other documents, like the IMO Compendium, are essential tools to ensure global interoperability of digital solutions in maritime transport. The Maritime Digital Transformation also need precise position information, like Galileo High Accuracy Service (HAS).

The implementation of the new technology and processes only will be successful, if the people involved, are properly trained. It has to be realized that full digitalization, expected as Maritime 4.0 in about 2035 will have to include non-SOLAS vessels. Maritime digital implementation needs a global operating cluster, starting with a cluster between Europe and Korea.

2. The conference recognized the necessity to build international and inter-regional testbed clusters as a digital maritime ecosystem. The cluster will validate and verify emerging maritime digital technologies onboard ships operating between the participating regions. It established collaboration and increases harmonization of maritime digitalization globally.

3. The conference recognized that maritime digitalization should align with IMO's vision as expressed in the e-Navigation Strategy Implementation plan, but also the work on JIT, IMO Compendium and other aspects. It also needs to use the IALA technical service guideline and IHO's S-100 standards as the basis for the Common Maritime Data Structure (CMDS) and in conjunction with the IMO Compendium so as to maximize the benefits of digitalization to all stakeholders, and the test-beds need to be goal-based cooperation under the MOU for implementing the tested digital technologies in maritime sectors and placing them in IMO's documents.

4. The conference recognized the need for increased collaboration across stakeholders, countries and regions to support the realization of benefits of digitalization, especially safety, efficiency and de-carbonization of maritime transport.

5. The conference realized that educated, well-trained people – the human capital, are essential for sharing data, effectively using technology and implementing procedures.

6. The conference recognized that the SMART Navigation in Korea established e-Navigation and expanded it into the non-SOLAS domain.

7. Discussions during the conference suggested bringing the concept of Digital@Sea Initiative to the attention of IMO with the aim of providing an opportunity for more countries to participate in this initiative.

### **3 THE COUNCIL IS REQUESTED TO**

**NOTE** the information provided in this document.