



LAP 24, 8-9 NOV 2022

Minsu Jeon



## 5. IALA Council 75

- Revision of the Current drivers and trends
  - The Council approved the revised Committee **work programme for 2018-2023**
  - Council approved the workshop proposal on **Digital Maritime Communication infrastructure** to be held in **20-24 Feb 2023 in Tokyo, Japan.**
  - The Council approved the change of the **heritage lighthouse of the year selection process** and agreed to apply it for the heritage lighthouse of the year 2023.
  - The council approved **Homigot Lighthouse**, the Republic of Korea, as the Heritage Lighthouse of the Year 2022.
  - The progress of the review of R1001 IALA Maritime Buoyage System.
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## 5. IALA Council 75

### **New and revised recommendations:**

- R1023 Maritime Resource Names (MRN), Ed1.0, June 2022
- R0204 Marine signal lights – determination and calculation of effective intensity, Ed3.0, June 2022
- R0141 Training and certification of Marine Aids to Navigation personnel, Ed5.0, June 2022
- R0119 Establishment of a VTS Ed4.2, June 2022

### **New and revised guidelines:**

- Revised Guideline G1018 on Risk management, Ed4.0, June 2022
  - Revised Guideline G1123 on the use of the IALA Waterway risk assessment programme or IWRAP, Ed2.0, June 2022
  - Revised Guideline G1124 on Ports and waterways safety assessment (PAWSA MK II), Ed2.0, June 2022
  - Revised Guideline G1058 on The use of simulation as a tool for waterway design and AtoN planning, Ed3.0, June 2022
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## 5. IALA Council 75

### **New and revised guidelines:**

- Revised Guideline G1135 on Determination and calculation of effective intensity, Ed 3.0, June 2022
  - Revised Guideline G1127 on Systems and services for high accuracy positioning and ranging, Ed2.0, June 2022
  - Revised Guideline G1129 on the retransmission of SBAS corrections using MF-radio beacon and AIS, Ed 2.0, June 2022
  - New Guideline G1147 on The use of enhanced radar positioning systems, Ed1.0, June 2022
  - New Guideline G1168 on Quality control of third-party AtoN service providers, Ed1.0, June 2022
  - New Guideline G1169 on Training and certification of marine Aids to Navigation personnel, Ed1.0, June 2022
  - New Guideline G1170 on Solar modules for a marine environment, Ed1.0, June 2022
  - Revised Guideline G1150 on Establishing planning and implementing a VTS, Ed3.0, June 2022
  - New Guideline G1171 on Human factors and ergonomics in VTS, Ed1.0, June 2022
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## 5. IALA Council 75

### **Revoked document**

- Revoked G1097 on Technical Features and Technology Relevant for Simulation of AtoN, Ed1.0

**Council 76 will be held 12 – 16 December 2022 in Brazil**

### **FYI Upcoming event**

- ENAV 31, 30 Jan - 03 Feb 2023 in IALA HQ
  - D@S International conference, 6-7 Feb 2023 in Copenhagen, Denmark
  - IALA workshop on Digital Maritime Communication infrastructure to be held in 20-24 Feb 2023 in Tokyo, Japan
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## 5. IALA Council 75\_Documents catalogue

<https://www.iala-aism.org/guidance-publications/>

### GUIDANCE DOCUMENTS

Please download the Technical Documents Catalogue that covers the technical guidance and contains an overall view of the standards, recommendations, guidelines, and model courses in force with a summary.

Technical documents Catalogue Ed 5.0 September 2022

Download



#### STANDARD 1030 RADIONAVIGATION SERVICES

##### 3.1 Satellite positioning and timing

###### PNT

No	N/I	Date	Title	Ed	Summary
R1017	Inf	Dec 2018	Resilient position navigation and timing (PNT)	1.1	Recommends national members conducting a risk assessment into the impact of PNT service degradation or total loss, and how PNT information can be made more resilient.

##### 3.2 Terrestrial positioning and timing

###### Terrestrial radionavigation systems

No	N/I	Date	Title	Ed	Summary
R1020	Inf	Dec 2020	Terrestrial radio-navigation systems	1.0	Recommends the members and authorities to consider the provision of terrestrial radionavigation systems which may include regional systems.

###### eLoran performance

No	N/I	Date	Title	Ed	Summary
R1011	Nor	June 2017	Performance and monitoring of eLORAN services in the frequency band 90-110 kHz	1.1	Recommends principles on the performance and monitoring of eLORAN.

###### eLoran establishment

No	Date	Title	Ed	Summary
G1125	June 2017	Technical approach to establishing a maritime eLoran service	1.0	Enables service providers to deliver, monitor and assess the performance of eLoran services in a common manner.



## 6. PAP

- PAP 45 on Maritime services in the context of e-navigation (NCSR 9/7/2)
- PAP 48 to IMO NCSR 10

1. the description of only one vessel traffic service, as the three types of vessel traffic services, mentioned in the previous resolution A.857(20): information service, navigational assistance service and traffic organization service, were deleted; and

2. a need to revise the annex of MSC.1/Circ.1610 deleting MS1 VTS Information service (INS), MS2 VTS Navigational assistance service (NAS) and MS3 Traffic organization service (TOS) and creating a new description on one Maritime Service for Vessel Traffic Service.

- Merging MS 1, 2 and 3 (VTS)
  - Develop a new MS on AtoN (ARM)
  - Develop a new MS on PNT (ENG)
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## 6. PAP

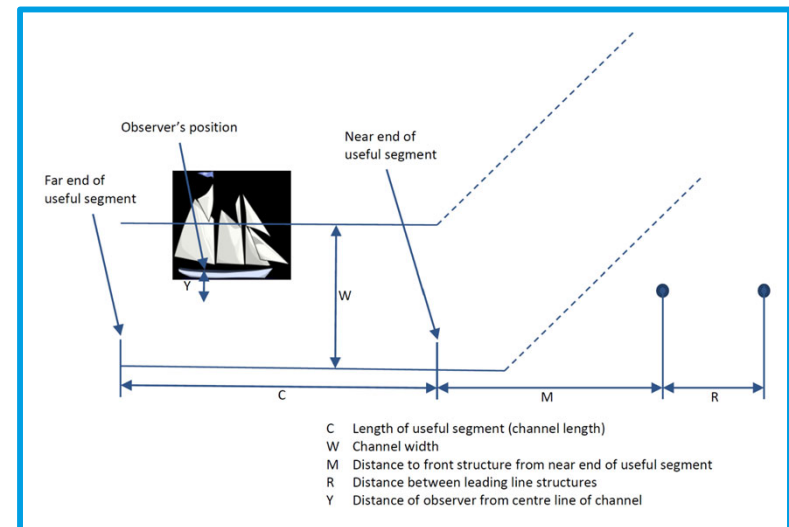
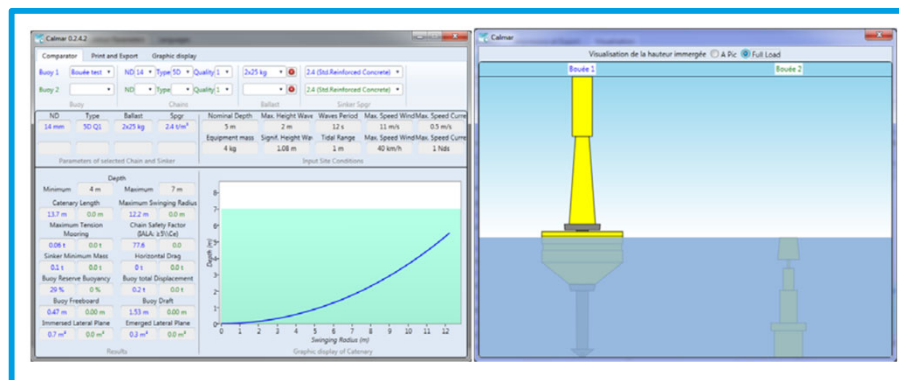
- PAP 46 List of IALA software
- Mooring line calculation Calmar
- Design of leading line and lights
- Solar sizing calculation tool
- AtoN light flash simulator



### Mooring Line Calculation Software

Appreciating that AtoN buoy mooring lines are often dimensioned with a rule of thumb and regularly end up as being too short for most site conditions, IALA has developed an easy to use numerical catenary mooring line calculator, derived from their own mooring calculators. This tool integrates a few more load parameters than IALA guidelines and other simple calculators. This tool allows users to use or input libraries of buoy models or easily built their own buoy model for calculation. It also allows user to compare the results between two different buoys or two different buoys mooring lines. This software will be offered for free distribution to IALA members.

To access, please [click here](#).







## 6. PAP

List of software (LAP24 - Agenda 8)

The draft disclaimer for IALA document read:

*“IALA is an international association that deals with Marine Aids to Navigation. The Association aim to provide information and support to its members and the maritime community through its standards, recommendations, guidelines and other documents as accurate as possible. However, the planning, implementation and operation of Marine Aids to Navigation remains the sole responsibility of the respective national members, authorities, administrations or other entities according to the respective national law including the decision to use IALA’s standards, recommendations, guidelines and other documents. Therefore, IALA shall in no event be liable for any claim, damages or other liability, whether in an action of contract, tort or otherwise, arising from, or out of or in connection with the above-mentioned documents, the use or other dealings in them.”*

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## 6. PAP

### IALA Standards revision

Organ and Date	Activity	Comment
<b>PAP 47</b> <b>2<sup>nd</sup> half 2022</b>	Review and finalises the draft standards edition 2.0 for Council approval	
<b>Council 76</b> <b>December 2022</b>	Approval of the draft Standards edition 2.0	
<b>2<sup>nd</sup> half 2022</b>	Information process to all Members	Website with explanatory info
<b>General Assembly</b> <b>May 2023</b>	General Assembly voting on the update of Standards edition 2.0	Brazil
<b>2<sup>nd</sup> half 2023</b>	Announcement of result of voting to membership and other organisations	Circular letter and IALA bulletin

## 7. Report of the committees and ongoing development

### MBS (Maritime Buoyage System)

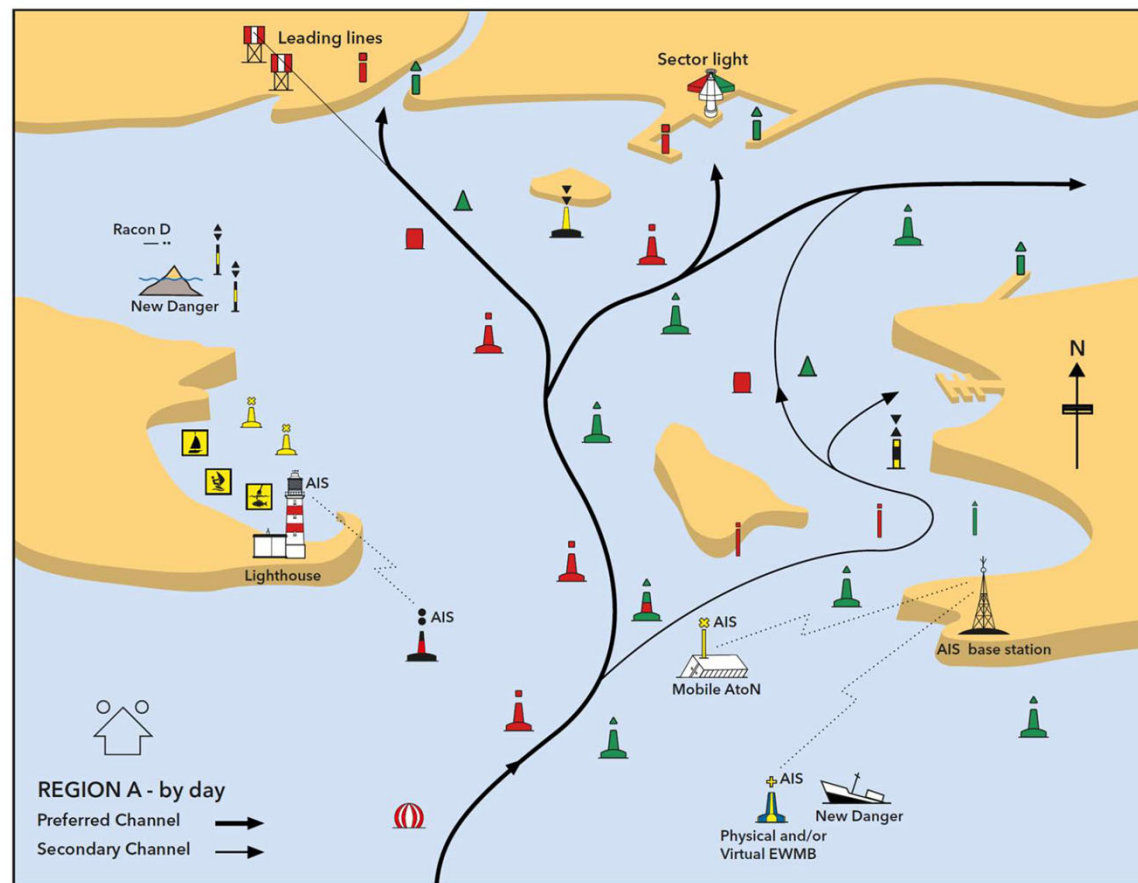


Figure 16 Region A by day



## 7. Report of the committees and ongoing development

- **IMSAS**

2005 – 2013: VIMSAS

2010 – 2015: development of IMSAS

2016- now: IMSAS A.1067 and CL.3425

➔ The number of audits is about 15- 18 a year since 2016

Resolution A.1067(28) Framework and Procedures for the IMO Member State Audit Scheme

Circular letter No.3425, 5 December 2013 on Auditor's manual for the IMO Member States Audit Scheme (IMSAS)

SOLAS, MARPOL, STCW, LL, LL PROT, Tonnage, COLREG

- **MSC 103-20-9 - IMO Member State Audit Scheme (IALA)**
  - Document sent to NCSR for inclusion into the Auditor's Manual
- **NCSR 10 – input from IALA**



## 7. Report of the committees and ongoing development

- MASS TF
  - Framework
  - Roadmap

Committee	Section to develop in the Guideline
ENAV	Overall document owner
	Communication media
	Data transfer standards
	Cyber Security
	VTs interaction with MASS
VTS	Safe and efficient operations
	Communications - operational requirements
	VTs - Portrayal Management
ARM	Portrayal
	Spatial Awareness
	Interaction with manned vessels
	Risk Management & Assessment
	PNT
ENG	Position augmentation
	Power availability
	Conventional AtoN visibility to MASS
LAP	Possible legal issues

## 7. Report of the committees and ongoing development

Heritage lighthouse of the year - Cap Spartel – Morocco





## 7. Report of the committees and ongoing development

### Committee work program 2023-2027

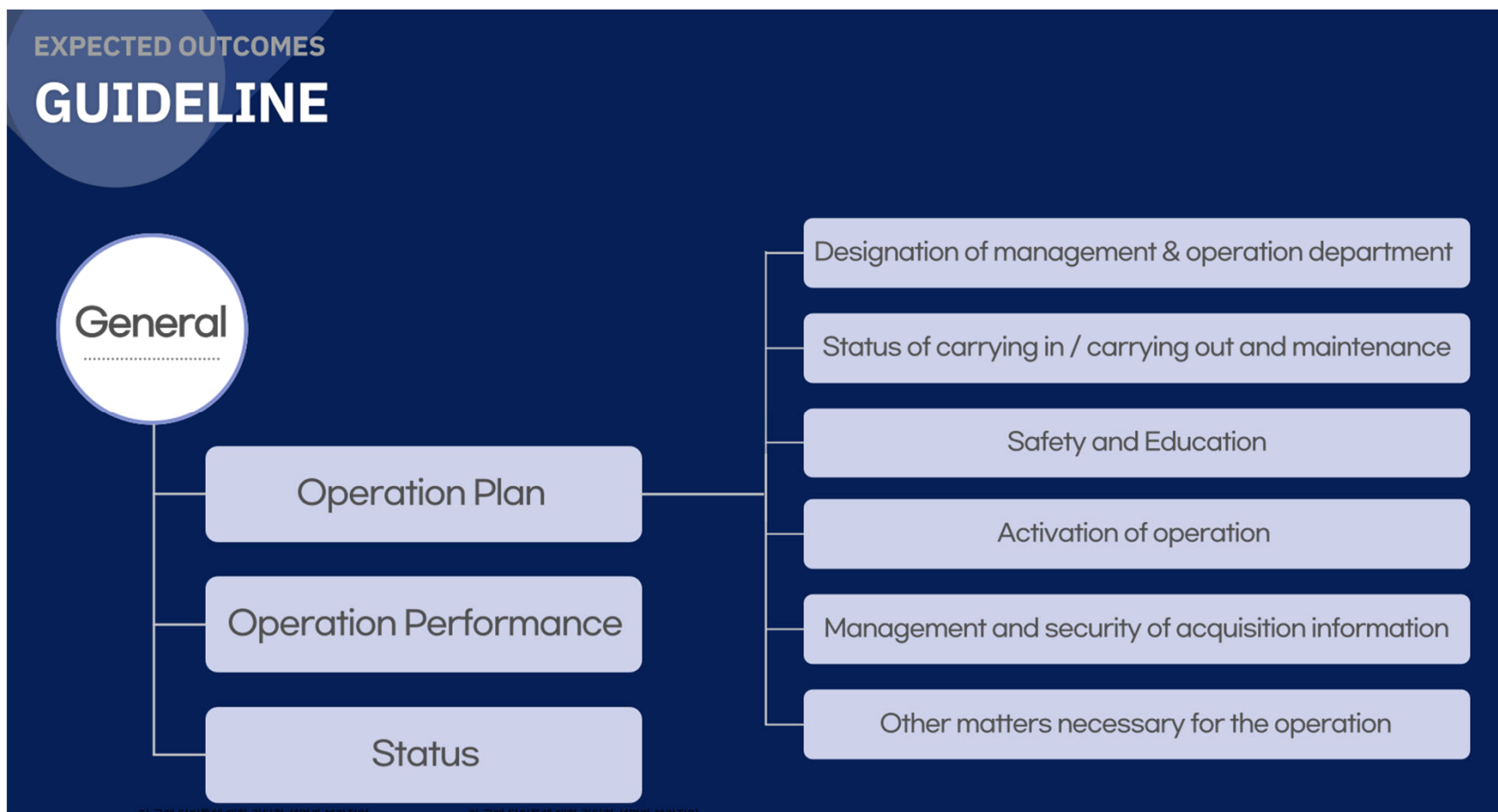
#### ANNEX A WORK PROGRAMME 2023-2027

Reference to Standards	Technical topic	Title	Description	Expected outcome	Committee	Committee work item no.	Related documents
<b>S1010</b>	1.1 AtoN planning	Compile new Guideline on AtoN Tender requirements and specification – Led by ARM with ENG support.	New Guideline on Tender requirements.	Guideline	ENG	Not assigned yet	
	1.3 Level of service		Compile a Recommendation to incorporate all references relating to the Categorisation, Availability Objectives (G1030), Availability and Reliability for Short Range Aids to Navigation (G1035), Calculation of Availability (G1004) and relevant text appearing in the 2018 & draft 2023 NAVGuides that are not cross-referenced in the aforementioned Guidelines.	Recommendation	ARM	Not assigned yet	
	1.4 Risk management	DEVELOP Guidance on Risk Assessment and Certification Methods in the context of e-Navigation	Development of guidance documents on Risk Assessment and Certification Methods in the context of e-Navigation.	Recommendation or Guideline	ENAV	ENAV-2.6.1	
<b>S1020</b>	2.1 visual signaling	Review & update guideline 1043 on Light sources and amalgamate with Guideline on modern equipment in traditional lighthouses		New amalgamated Guideline	ENG	Not assigned yet	
		Update Guideline 1048 LED Technologies and their use in signal lights		Revise Guideline	ENG	Not assigned yet	
		Develop guideline on Port Traffic Signals		New Guideline	ENG	Not assigned yet	



## 7. Report of the committees and ongoing development

### Use of drones







# IHO

## S-200 development summary table as of Sep 2022



Domain	PS	Title	Developing Committee	Edition
AtoN	S-201	AtoN information	ARM	1.1.0
	S-125	Marine Aids to Navigation <del>Maritime Navigational Service</del>	NIPWG (ARM)	
Positioning	S-240	DGNSS almanac	ENG	1.0.0
	S-245	eLoran ASF	ENG	0.7.0
	S-246	eLoran almanac	ENG	1.0.0
	S-247	eLoran reference stations	ENG	1.0.0
Comms.	S-230	Application Specific Message (ASM)	ENAV	Planned
VTS	S-210	Inter VTS exchange	VTS	Started
	S-211	Port Call Message	IPCDMC	1.0.0
	S-212	VTS digital information service	VTS	0.6.4

**200 WORLD**

The diagram illustrates the 200 WORLD system architecture, showing the flow of data between various maritime services. A yellow line represents the data backbone, connecting different components. Green binary code (0s and 1s) is scattered along the path, symbolizing digital data exchange.

**Services and Components:**

- S-240 DGNSS:** Differential Global Navigation Satellite System, represented by a satellite icon.
- S-230 ASM:** Automatic Ship Monitoring, represented by a lighthouse icon (AtoN).
- S-215 VTS:** Vessel Traffic Services, represented by a VTS tower icon.
- S-212 VTS digital information service:** Digital information service for VTS.
- S-211 Port call message:** Port call message service, represented by a port crane icon.
- S-245-7 eLoran:** Long Range Aid to Navigation, represented by a radio tower icon.
- S-201 AtoN information:** Aids to Navigation information, represented by two buildings and a double-headed arrow.
- HO and AtoN authority:** Harbor Office and Aids to Navigation authority.
- Portrayal:** Representation of the system, shown as a computer monitor displaying a map.
- Vessel:** Represented by a ship icon.
- SCC:** Ship Control Center, represented by a control room icon.
- PORT:** Represented by a port crane icon.

**Legend:**

- 201-209 : Aids to Navigation (AtoN)
- 210 – 219 Vessel Traffic Services (VTS)
- 220 – 229 Communication Systems
- 230 – 229 AIS, ASM, VDES
- 240 – 249 Positioning Systems

**Interactions:**

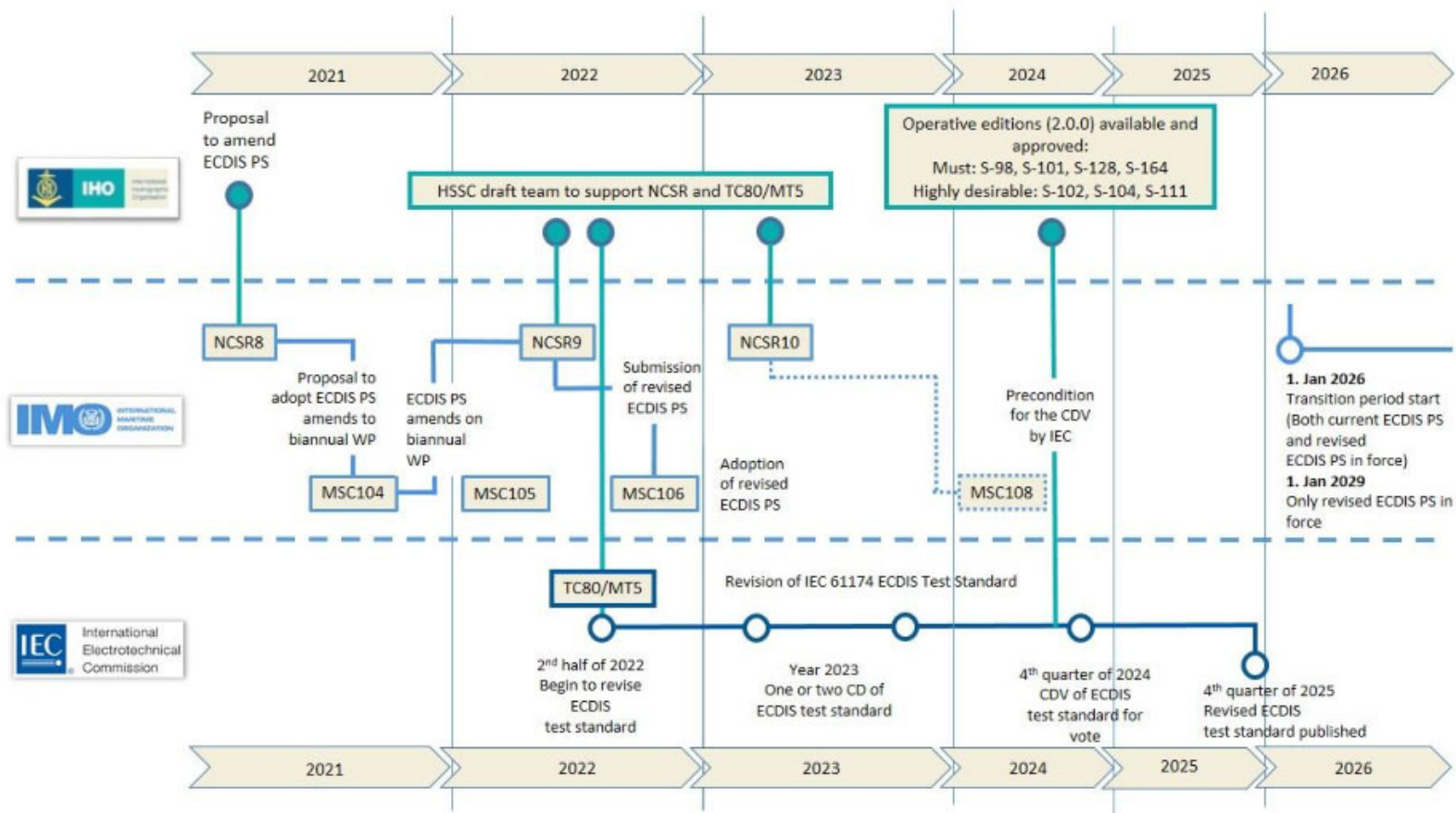
- S-210 Inter VTS data exchange:** Data exchange between VTS stations.
- S-212 VTS digital information service:** Digital information service for VTS.
- S-211 Port call message:** Port call message service.
- S-245-7 eLoran:** Long Range Aid to Navigation.
- S-201 AtoN information:** Aids to Navigation information.
- HO and AtoN authority:** Harbor Office and Aids to Navigation authority.
- Portrayal:** Representation of the system.
- Vessel:** Ship.
- SCC:** Ship Control Center.
- PORT:** Port.



# IHO

NCSR9 endorsed an implementation phase for the new resolution, including S-100 : a transition period was agreed upon :

- S-100 ECDIS will be legal to use after 1 January 2026 and
- from 1 January 2029 new systems must comply with the new IMO Resolution on ECDIS PS.





# Digital@Sea



Digital@Sea Conference series

Digital@Sea Capacity Building Workshop

Digital@Sea Cluster

## ARM16-3.3.1 2022 Final Report Digital@Sea NA

Upcoming Digital@Sea Conferences;

- Digital@Sea International in 6-7 February 2023 in Copenhagen, Denmark
- Digital@Sea North-America 18 - 19 April 2023 in Montreal, Canada



Ministry of Oceans  
and Fisheries



Canadian  
Coast  
Guard





## 7. Report of the committees and ongoing development

### ➤ List of upcoming IALA events

#### 2023

- Workshop on Digital Communication Infrastructure, 20-24 Feb 2023, Tokyo, Japan
- Heritage seminar, 27-28 May 2023, Rio de Janeiro, Brazil
- IALA conference, 28 May-3 June 2023, Rio de Janeiro, Brazil

#### 2024

- Workshop on AtoN Engineering (IALA LITE/ BATT) Oct 2024 + ENG 19
- Joint IHO/IALA workshop on S-100/S-200 Development and Portrayal, 2024, US

#### 2025

- Workshop on sustainability in the provision of AtoN, Where, 2025
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