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Summary- relevant IALA e-NAV meeting(s) / work

And of the e-Navigation services (MSP) developments

Jon Leon Ervik
Head of Pilotage and VTS Department

– Vi tar ansvar for sjøvegen

Opportunities in e-navigation

E-navigation is the harmonised collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment.

5 Agreed e-Navigation Solutions

Solution S1	Improved, harmonized and user-friendly bridge design
Solution S2	Means for standardized and automated reporting
Solution S3	Improved reliability, resilience and integrity of bridge equipment and navigation information
Solution S4	Integration and presentation of available information in graphical displays received via communication equipment.
Solution S9	Improved Communication of VTS Service Portfolio.

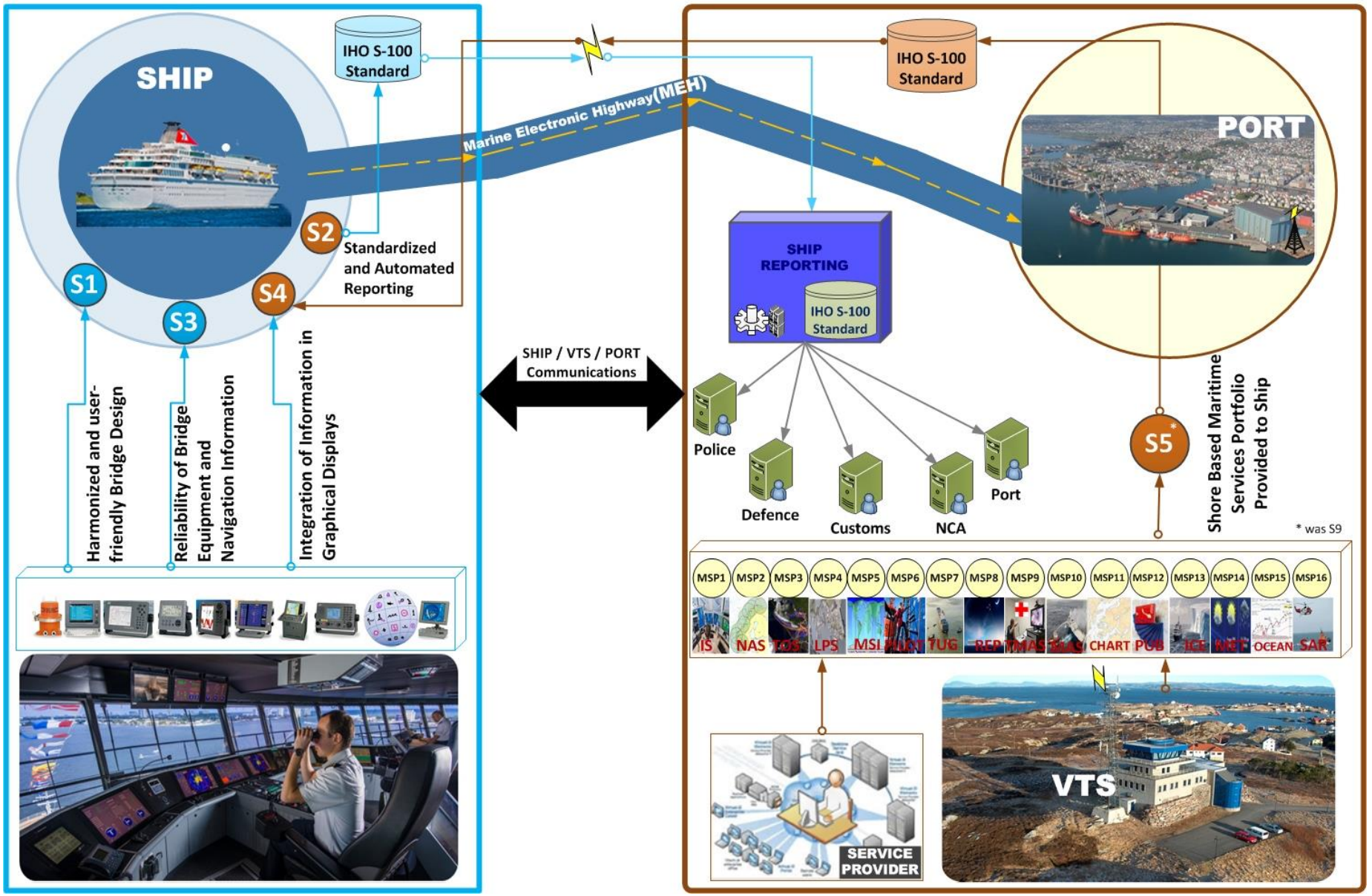
Example of Maritime Service Portfolio (MSP)

MSP1	VTS Information Service (IS)
MSP2	Navigational Assistance Service (NAS)
MSP3	Traffic Organization Service (TOS)
MSP4	Local Port Service (LPS)
MSP5	Maritime Safety Information (MSI) Service
MSP6	Pilotage Service
MSP7	Tugs Service
MSP8	Vessel Shore Reporting

MSP9	Telemedical Maritime Assistance Service
MSP10	Maritime Assistance Service (MAS)
MSP11	Nautical Chart Service
MSP12	Nautical Publications Service
MSP13	Ice Navigation Service
MSP14	Meteorological Information Service
MSP15	Real-Time Hydrographic and Environmental Information Services
MSP16	Search and Rescue (SAR) Service

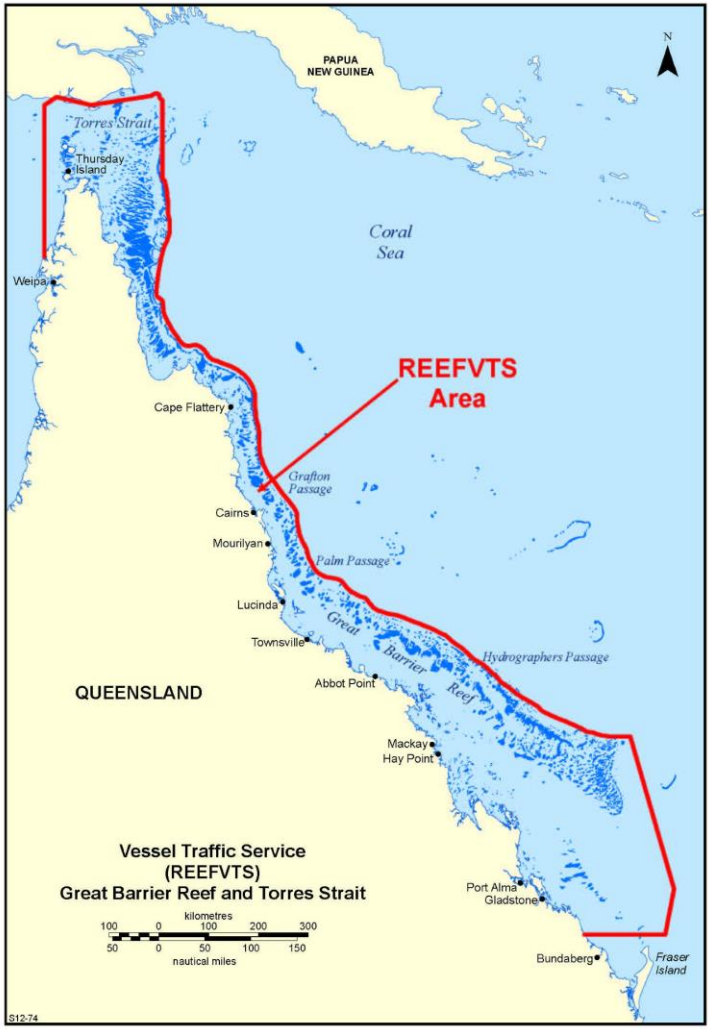
The objective of the MSP concept is to align global maritime services with the need for information and communication services in a clearly defined operational area.

e-navigation Concept



The shore side

REEFVTS



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NAVIGATION
- Shipping management
- Services
- Information resources
- Incident reporting
- Registered users
- Forms, fact sheets and publications

Home > Navigation > Services > Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS)

Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS)

About REEFVTS

The Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS) is a coastal Vessel Traffic Service created by the Australian and Queensland Governments to protect the environment and improve the safety and efficiency of vessel traffic.

On this page

What is a Vessel Traffic Service?

REEFVTS is operated under joint arrangements between the Australian Maritime Safety Authority (AMSA) and Maritime Safety Queensland (MSQ). Its purpose is to:

- enhance navigational safety by providing shipping with improved information on potential traffic conflicts and other navigational safety hazards
- minimise the risk of a maritime accident and the consequential ship-sourced pollution and damage to the marine environment
- help coordinate and facilitate a rapid response in the event of a safety or pollution incident.

REEFVTS Area.

Key responsibilities

AMSA

As the Competent Authority for VTS, AMSA is responsible for Australia's obligations under SOLAS Regulation V/12 and the Guidelines adopted by the International Maritime Organization (IMO), as amended.

In particular, AMSA is responsible for ensuring a VTS Authority complies with its legal requirements.

AMSA has authorised MSQ as the VTS Authority to provide a vessel traffic service for the Great Barrier Reef and Torres Strait (REEFVTS).

While AMSA maintains a high level strategic role which includes senior officers participating on the Governance Board, AMSA is not directly involved in the day to day operations of REEFVTS.

AMSA contributes funding to the operation of REEFVTS.

Maritime Safety Queensland

MSQ is responsible for:

– Vi tar ansvar f

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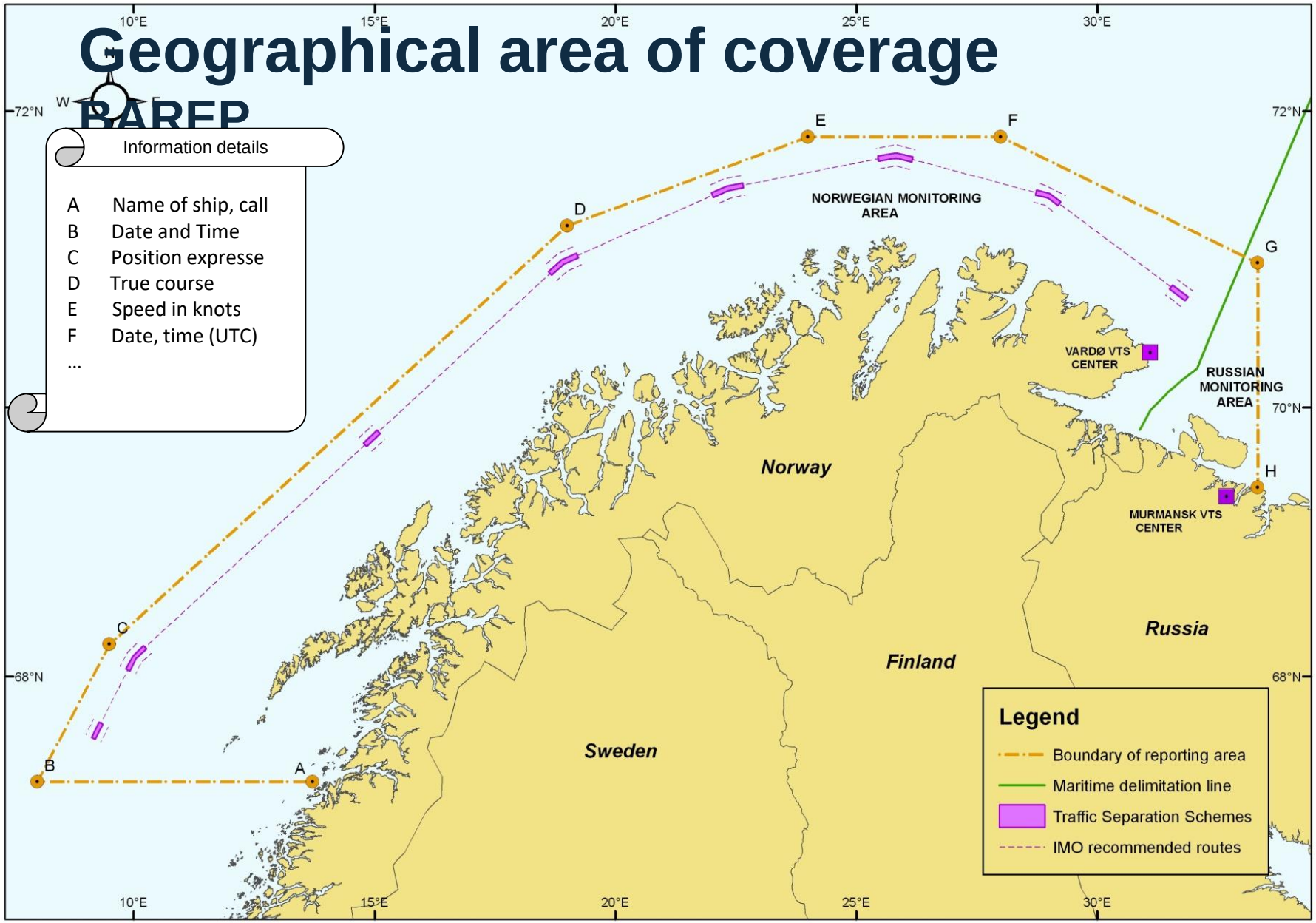
Geographical area of coverage

BAREP



VARDØ VTS

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INTERNATIONAL
MARITIME
ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

SN.1/Circ.318
4 December 2012

NEW MANDATORY SHIP REPORTING SYSTEM "IN THE BARENTS AREA (BARENTS SRS)"

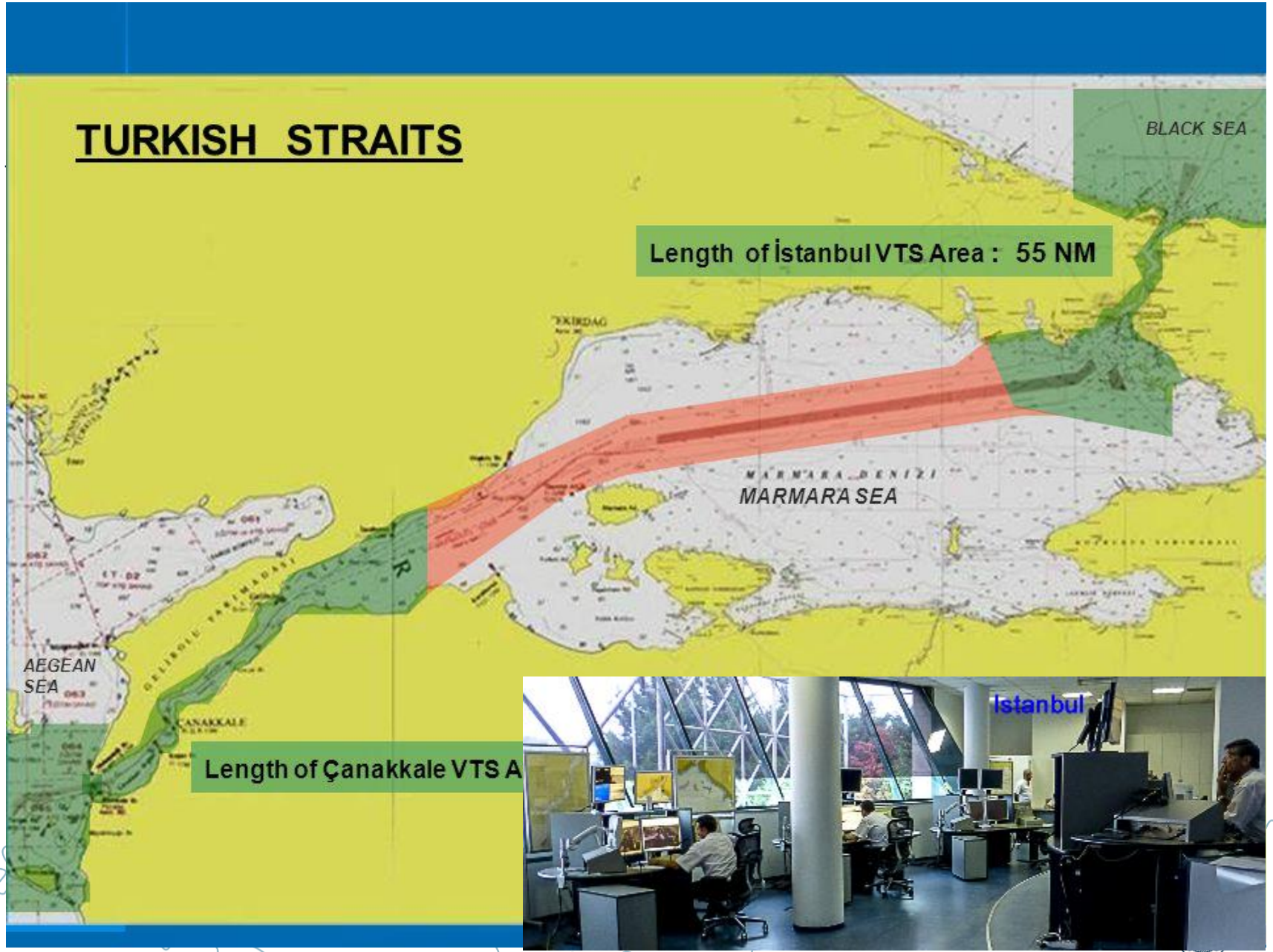
1 The Maritime Safety Committee, at its ninety-first session (26 to 30 November 2012), adopted, in accordance with the provisions of resolution A.858(20), the following new mandatory ship reporting system "In the Barents Area (Barents SRS)", as set out in the annex.

2 The new mandatory ship reporting system "In the Barents Area (Barents SRS)" will be implemented at 0000 hours UTC on 1 June 2013.

3 Member Governments are requested to bring the attached information to the attention of masters of ships under their flags and advise them that they are required to comply with the requirements of the adopted ship reporting system, in accordance with regulation V/11.7 of the International Convention for the Safety of Life at Sea, 1974, as amended.

***

TURKISH STRAITS



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IMO Resolution A857 (20)

2.3 VTS services

The following guidance concerning the services that are rendered by a VTS should be taken into account:

2.3.1 The *information service* is provided by broadcasting information at fixed times and intervals or when deemed necessary by the VTS or at the request of a vessel, and may include for example reports on the position, identity and intentions of other traffic; waterway conditions; weather; hazards; or any other factors that may influence the vessel's transit.

2.3.2 The *navigational assistance service* is especially important in difficult navigational or meteorological circumstances or in case of defects or deficiencies. This service is normally rendered at the request of a vessel or by the VTS when deemed necessary.

2.3.3 The *traffic organization service* concerns the operational management of traffic and the forward planning of vessel movements to prevent congestion and dangerous situations, and is particularly relevant in times of high traffic density or when the movement of special transports may effect the flow of other traffic. The service may also include establishing and operating a system of traffic clearances or VTS sailing plans or both in relation to priority of movements, allocation of space, mandatory reporting of movements in the VTS area, routes to be followed, speed limits to be observed or other appropriate measures which are considered necessary by the VTS authority.

2.3.4 When the VTS is authorized to issue instructions to vessels, these instructions should be result-oriented only, leaving the details of execution, such as course to be steered or engine manoeuvres to be executed, to the master or pilot on board the vessel. Care should be taken that VTS operations do

E-Navigation Forum Final Report

2017

Marina Bay Sands
26 April 2017
Singapore

MPA SINGAPORE

KYSTVERKET NORWEGIAN COASTAL ADMINISTRATION

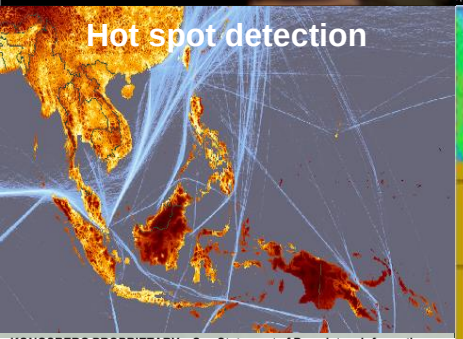
IALA

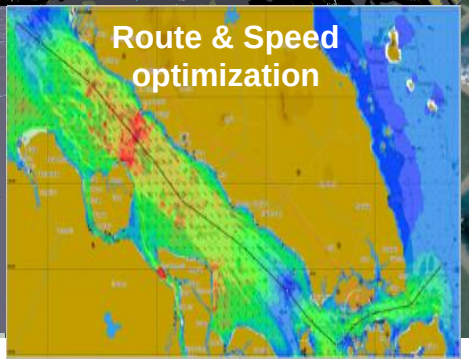
SESAME Straits

VTS suggestions evaluated

Suggestion for a new route and speed

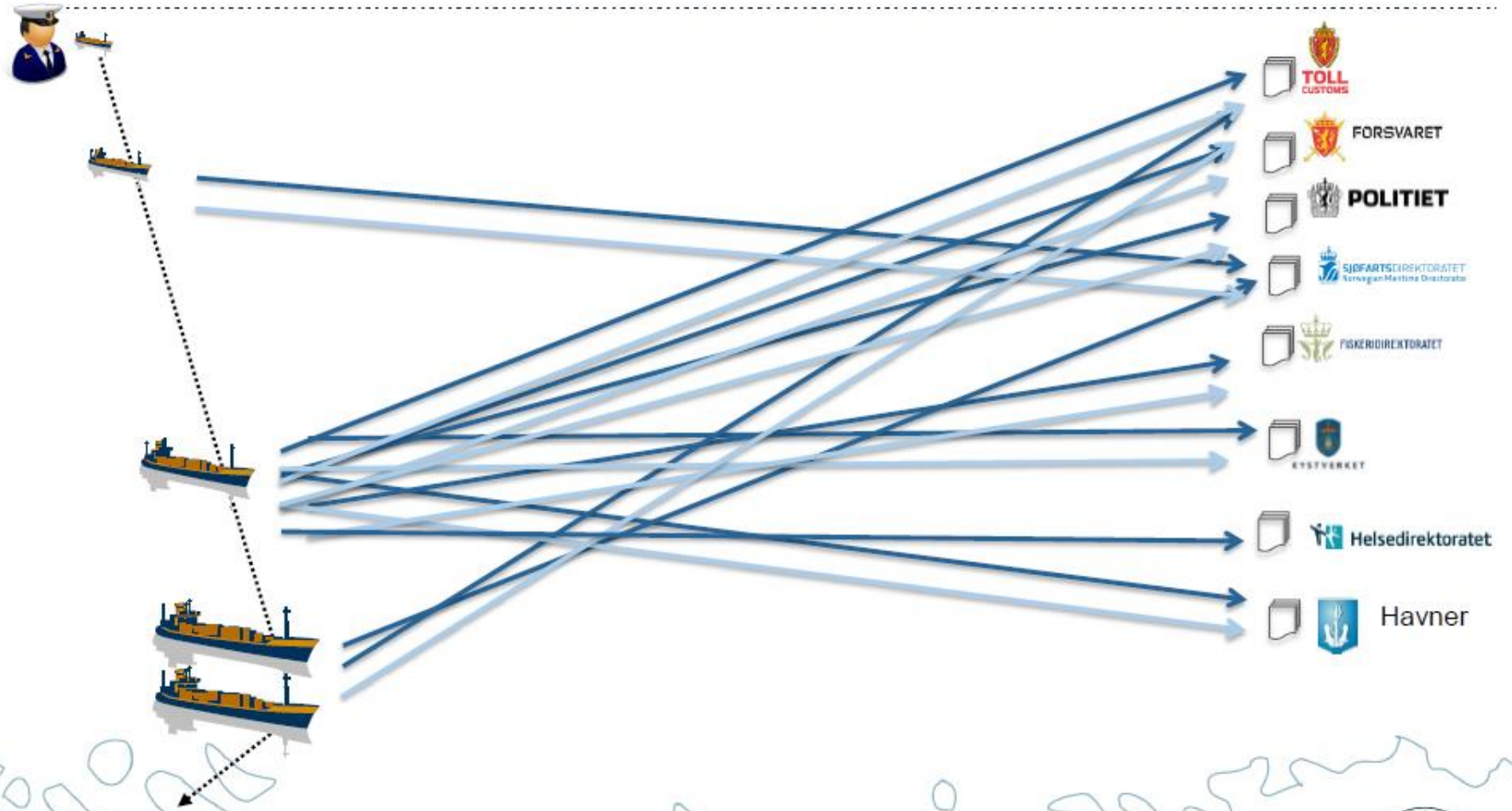
Ship reduces speed and changes route



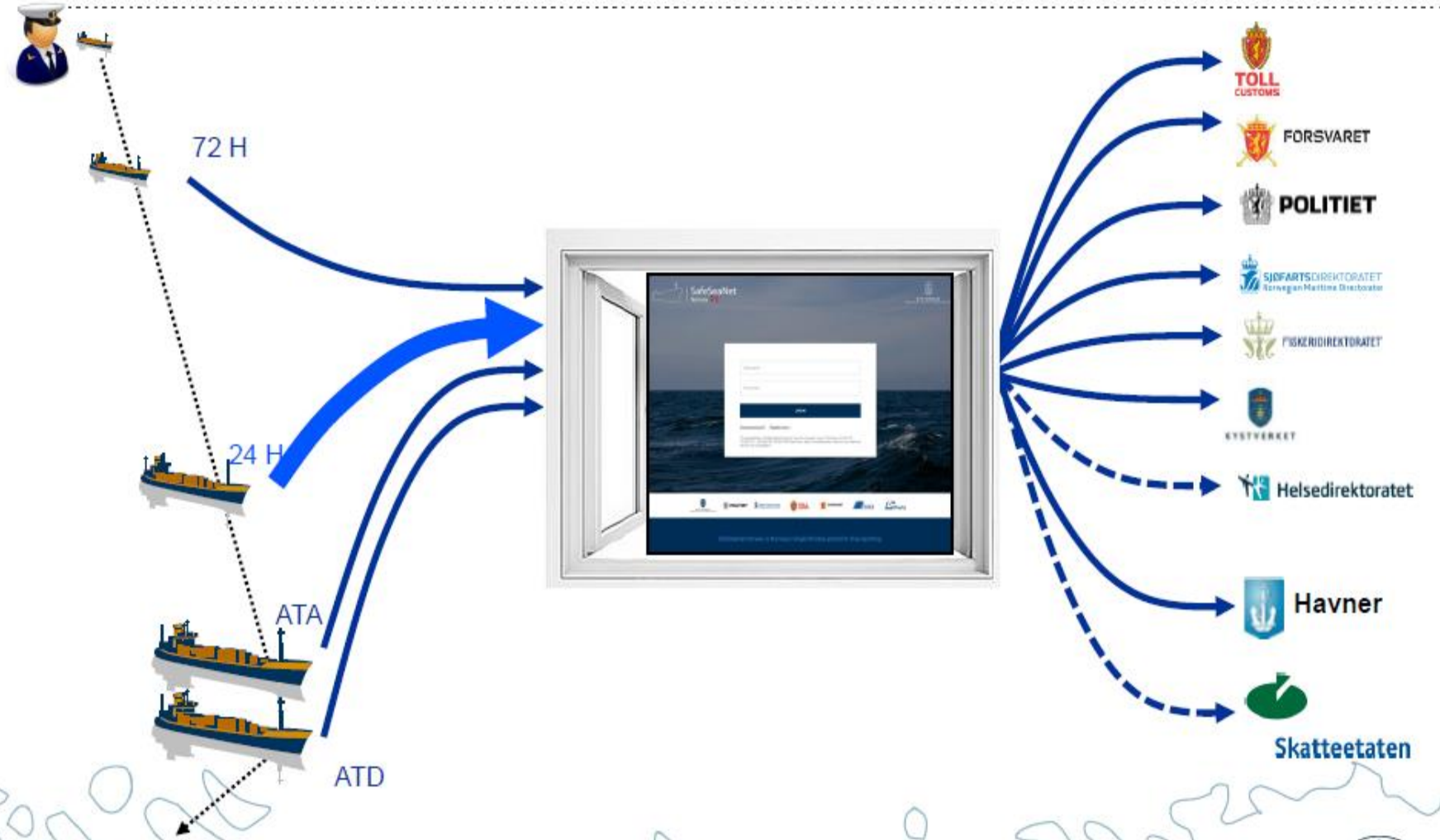


- **Shared situational awareness**
- **Collaborative decision support**
- **Just-in-time arrival**
- **Optimal transit speed**
  - Reduced ship bunkers
  - Efficient traffic flow
  - Reduced navigation risk
  - Reduced fuel comsumption
  - Reduced CO2 emissions
  - Better utilization of port resources

Before Single Window



Single Window reporting



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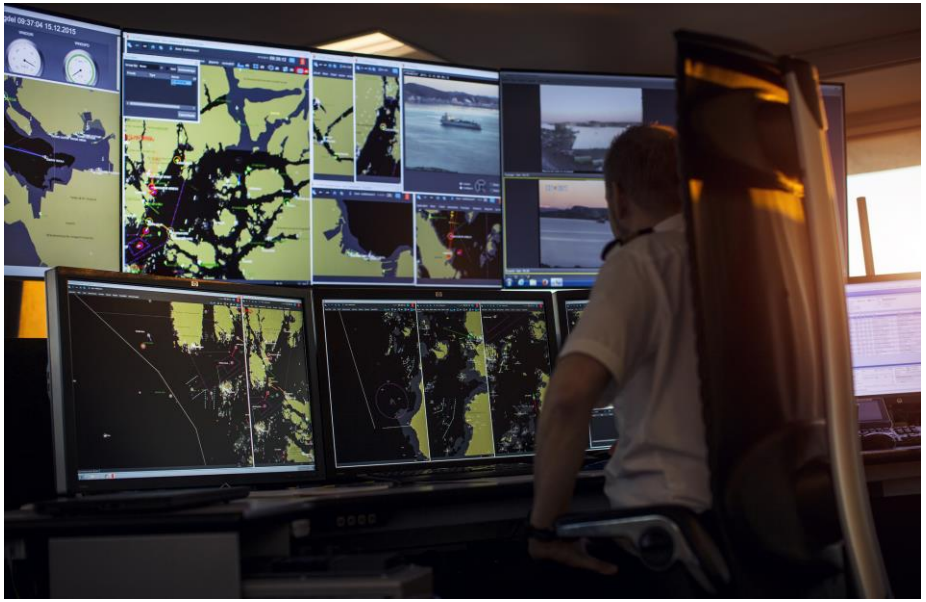
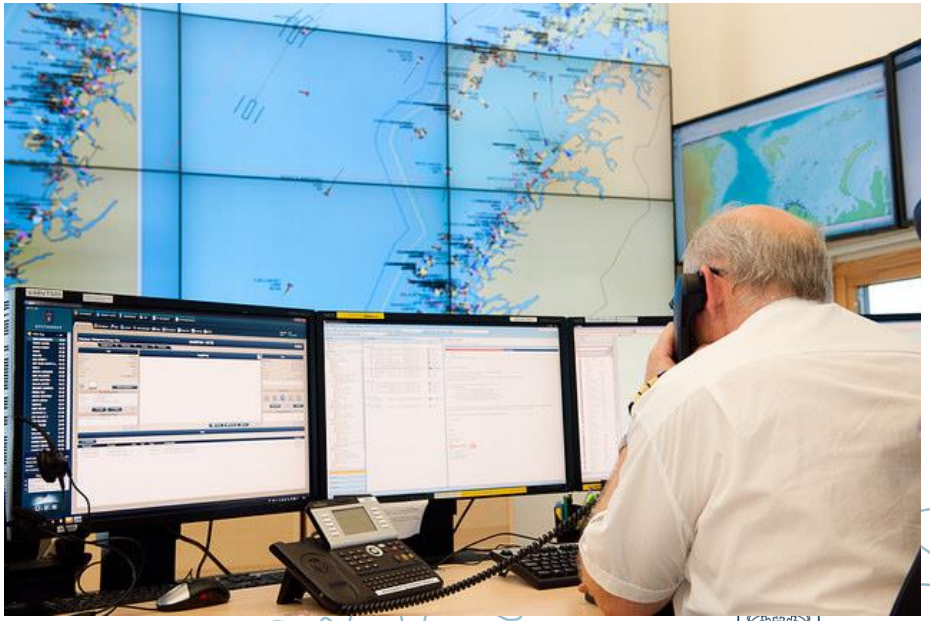
Providing guidance …

IALA Documentation

- Recommendations
- Guidelines
- Manuals

IALA VTS MANUAL
2012





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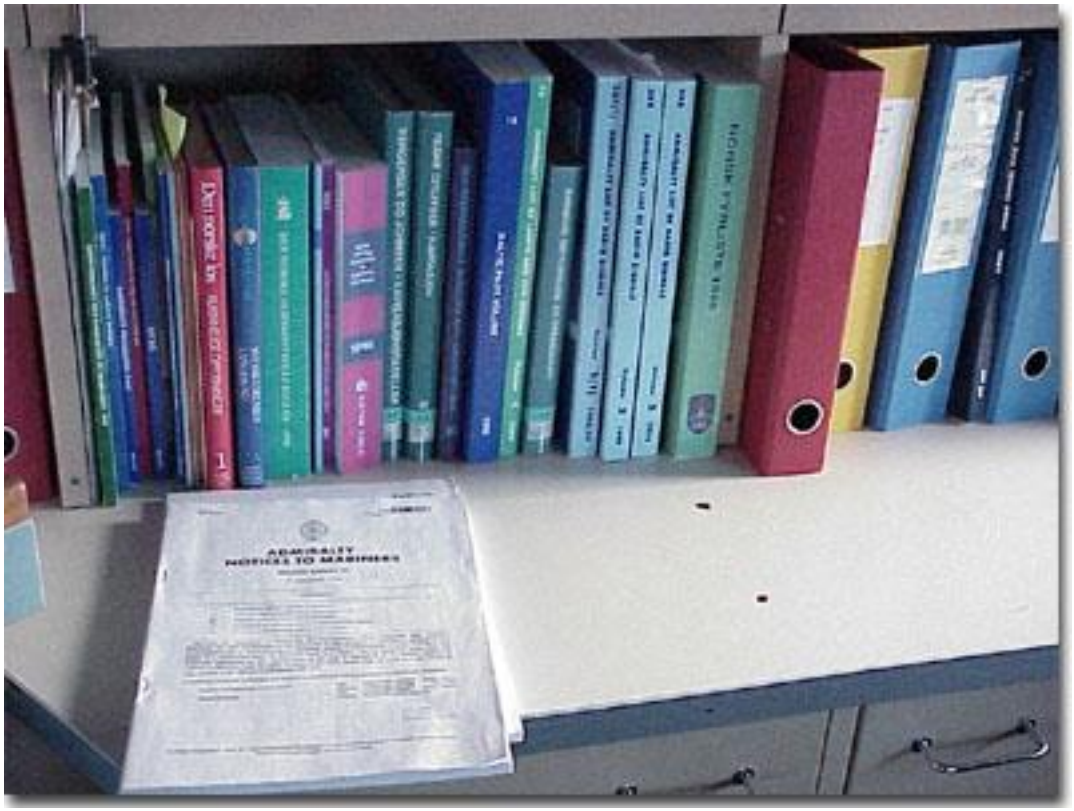
From paper to digital and user friendly information



IMO NCSR 4 established a correspondence group on Guidelines for Display of navigation information received via communication equipment (GL) under the co-ordination of Norway.

7 Functional requirements for the harmonized display of information
8 Harmonization with GMDSS
9 INS
10 Display and presentation of Navigation related information
11 Presentation
12 Portrayal of information
13 Display Configuration.
14 Display requirements
15 Location and Configuration of Displays.
16 Overlaying information
17 Scaling.
18 Priority
19 Indicators

REPORT OF THE 20TH SESSION OF THE IALA E-NAVIGATION (ENAV) COMMITTEE

13 to 17 March 2017

The IALA e-navigation Committee

- 137 people from 29 countries and 5 sister organizations, attended the 20th session.
- 5 WG
- WG 1 Harmonization and WG 4 Services is relevant
- WG2 Implementation ?? Focus on test-bed

WORKING GROUP 1 – HARMONISATION (WG1)

GUIDELINE 1087, PROCEDURES FOR THE MANAGEMENT OF THE IALA DOMAIN UNDER THE IHO GI REGISTRY

GUIDELINE 1106-0, PRODUCING AN IALA S-200 SERIES PRODUCT SPECIFICATION

WORKING GROUP 1 – HARMONISATION (WG1)

GUIDELINE 1087, PROCEDURES FOR THE MANAGEMENT OF THE IALA DOMAIN UNDER THE IHO GI REGISTRY

GUIDELINE 1106-0, PRODUCING AN IALA S-200 SERIES PRODUCT SPECIFICATION

WORKING GROUP 1 – HARMONISATION (WG1)

Approval of new Edition 3.0 of IHO S-100

The Committee thanked the IHO for its work on S-100.

The new edition will be used for future revisions of IALA S-200 series of Product Specifications.

In parallel to the ENAV Committee meeting, IALA was invited to propose a section in S-100 on data streaming services.

Action
Work will be conducted intersessionally to provide an input paper regarding S-100 data streaming services or ENAV21.

Progress / statrus for the ENAV Committee work plan for 2014-2018 progress

Task	Progress Indicator			Status Overview
	Green	Yellow	Red	
1 TD#1 – Data modelling and message systemsS	☐	☒	☐	All tasks progressing per current plan except Tasks 1.3.2, 1.2.1
2 TD#2 - e-Navigation communications	☒	☐	☐	All tasks progressing per current plan
3 TD#3 - Shore technical infrastructure	☐	☒	☐	All tasks progressing per current plan except 5 tasks which are scheduled for completion at ENAV21
4 TD#4 - e-Navigation test beds	☒	☐	☐	All tasks progressing per current plan
5 TD#5 - Maritime Service Portfolios	☐	☐	☒	Development of an MSP Guideline is delayed. Task 5.1.10 is delayed due to lack of expertise in the Committee while other MSP tasks are not in the IALA Domain.

WORKING GROUP 4, SERVICES (WG 4)

ONE GUIDELINE: MARITIME SERVICE PORTFOLIOS: DIGITISING MARITIME SERVICES

Shore services need information from different standards

IHO: S-101 to S-199 – *OHI : S-101 à S-199*
IHO S-101 ENC
IHO S-102 Bathymetric Surface
IHO S-103 Sub-surface Navigation
IHO S-104 Tidal Information for Surface Navigati
IHO S-111 Surface Currents
IHO S-112 Dynamic Water Level Data
IHO S-121 Maritime Limits and Boundaries
IHO S-122 Marine Protected Areas;
IHO S-123 Radio Services
IHO S-124 Navigational Warnings
IHO S-125 Navigational Services
IHO S-126 Physical Environment
IHO S-127 Traffic Management
IHO S-128 Catalogues of Nautical Products
IHO S-1xx Marine Services
IHO S-1xx Digital Mariner Routeing Guide
IHO S-1xx Harbour Infrastructure
IHO S-1xx (Social/Political)

IALA: S-201 to S-299 – *AISM : S-201 à S-299*
IALA S-201 Aids to Navigation Information
IALA S-210 Inter-VTS Exchange Format
IALA S-230 Application Specific Messages
IALA S-240 DGNSS Station Almanac
IALA S-245 eLoran ASF Data
IALA S-246 eLoran Station Almanac

Various: S-401 to S-… - *Divers : S-401 à S-…*
IEHG S-401 Inland ENC
JCOMM S-411 Ice Information
JCOMM S-412 Weather Overlay

BUT?

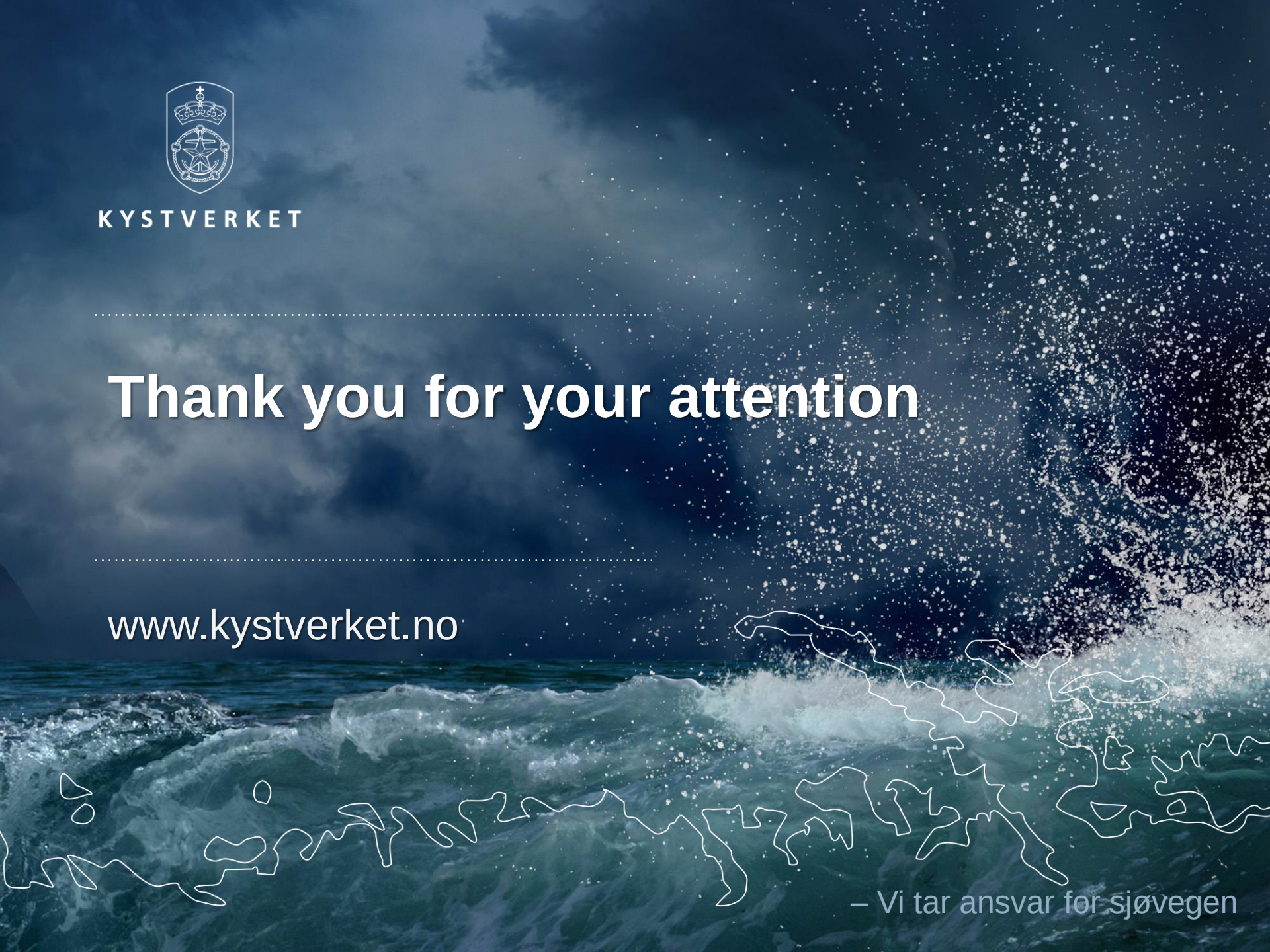
Can we manage to deliver one holistic, practical and user-friendly standard for e-navigation portfolios to the maritime world ?

And only one standard, protocol and specification?

Can we manage to coordinate the work ?

Do we need to know who is doing what?

Do we need a roadmap?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