

### The implementation of e-navigation – the further work on maritime single windows

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## What is the e-navigation concept?

 e-navigation is about harmonized and simplified digital information exchange between systems on board and systems on shore and systems between other ships.



# Enhanced Safety and Efficiency

- e-navigation aims to provide needed information, in electronic format, to a ship's bridge team to enhance the safety and efficiency of marine navigation.
- e-navigation will also help simplify the exchange of information between systems on board and between ships, and on shore.

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 e-navigation involves the integration of new and *existing* technologies and equipment to enable the provision of globally harmonised maritime services.

# IMO Maritime Safety Committee

- At MSC 94 in 2014 the Strategy Implementation Plan (SIP) was approved. 5 Solutions are prioritized
- For each Solution there are planned tasks (outputs) that still need to be carried out in order that they can be implemented
- Implementation period is 2016 to 2019



## The Solutions

 The concept is based on 5 solutions prioritised by IMO and represents an integrated and holistic approach to the concept of exchange of information in providing safe, secure and effective berth to berth navigation as well as protection of the marine environment

# Solution 2

 The second solution, S2, provides standardised and automated reporting of ships information for port arrival to the shore side, so that it is not necessary to use many individual ship reporting systems when arriving in a port, saving time and reducing the non-navigational workload of the navigator and increasing port efficiency



#### e-navigation Concept



### Communications

 As the e-navigation concept is primarily based on improved digital communications between ship and shore and ship and ship, communications technologies are at the core of the e-navigation strategy



# Interoperability

- E-navigation will need interoperability
- In order to do that an Universial Maritime Data Structure (UMDS) is needed
- The data structure being used for next generation of chart system, IHO S-100 data standard framework was identified as a good candidate for UMDS
- This data structure will be important for ship reporting.



#### Planned and Prioritized Outputs

#### Automatic and Standardised ship reporting (S2)

Update the Guidelines and criteria on ship reporting (see MSC Res.43(64) as amended by MSC Res.111(73) and A.851(20)) to allow standardised and harmonized electronic ship reporting, and the automated collection of internal ships data for reporting (2016-2017)



# S2 - The way forward

- Norway will coordinate further work
- Develop a document based on the reporting template set out in MSC.1/Circ.1494 (Guidelines on harmonization of testbed reporting). Submission to NCSR 3 (2016)
  - Carry out testbeds which should lead to an understanding of how the revised Guidelines and criteria for ship reporting systems can be prepared.
  - Invite NCSR 3 to providing comments of the document



### Objective

The present testbed focus specifically on the transmission of selected pre-arrival information and its purpose is to demonstrate a way forward to:

1 reduce the administrative burden on board the ship in respect to ship reporting requirements;

*2* reduce the cost of communications related to ship reporting;

*3 provide real-time access to information to relevant stakeholders in a secure manner; and* 

4 promote data harmonization at international level and acceptance of electronic certificates and documentation.



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### Scope of Automated and Standardized Ship Reporting - testbeds

The testbeds are limited to one ship and is conducted in two parts:

- .1 Mandatory ship reporting system: a Norwegian ship transiting the mandatory SRS "In the Barents Area" (Barents SRS) and reporting to Vardo VTS Centre in the Arctic (Norway).
- .2 Transmission of pre-arrival information: a Norwegian ship with destination port set to Singapore and Brazil.

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