



S-124: S-100 Product Specification for Navigational Warnings

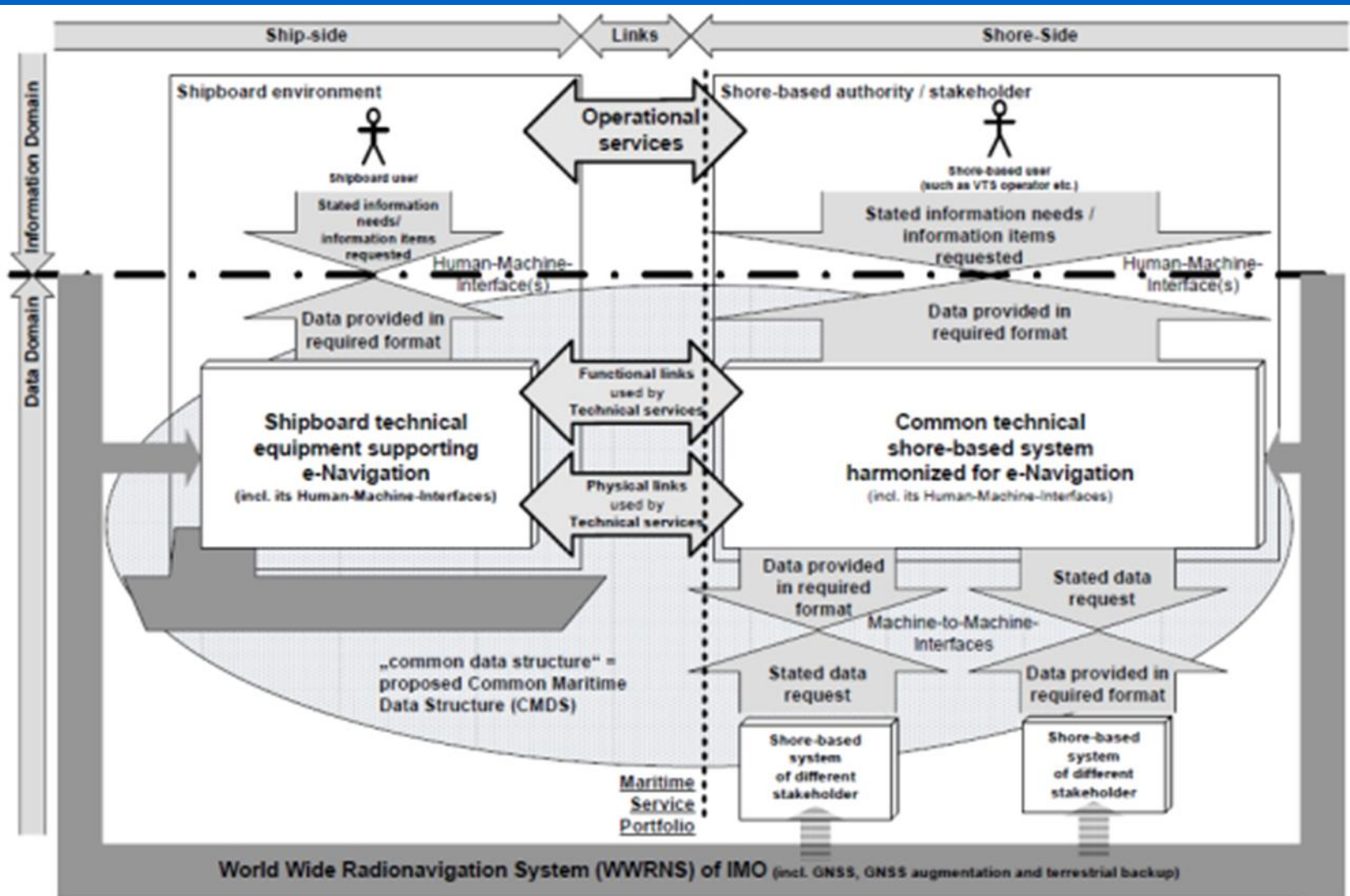
By France – Alain Rouault

Components of the IMO e-navigation strategy

- The user needs (done 2009 – NAV 55)
- The architecture (done 2011 – NAV57)
- The gap analysis (done 2012 – NAV58)
- The solutions that meet the gaps (done 2013 – NAV59)
- The cost-benefit and risk analysis for the 5 prioritized solutions (done 2013 – NAV59)
- Strategy Implementation Plan (to be approved by MSC 94 – Nov 2014)



The overarching e-navigation architecture



Note: There are operational and technical interactions between different shipboard environments. These are not shown for simplicity's sake in this figure.



Maritime service portfolios

- MSP 5: Maritime Safety Information (MSI) service;
- MSP 14: Ice navigation service;
- MSP 15: Meteorological information service;
- MSP 16: real-time hydrographic and environmental information services



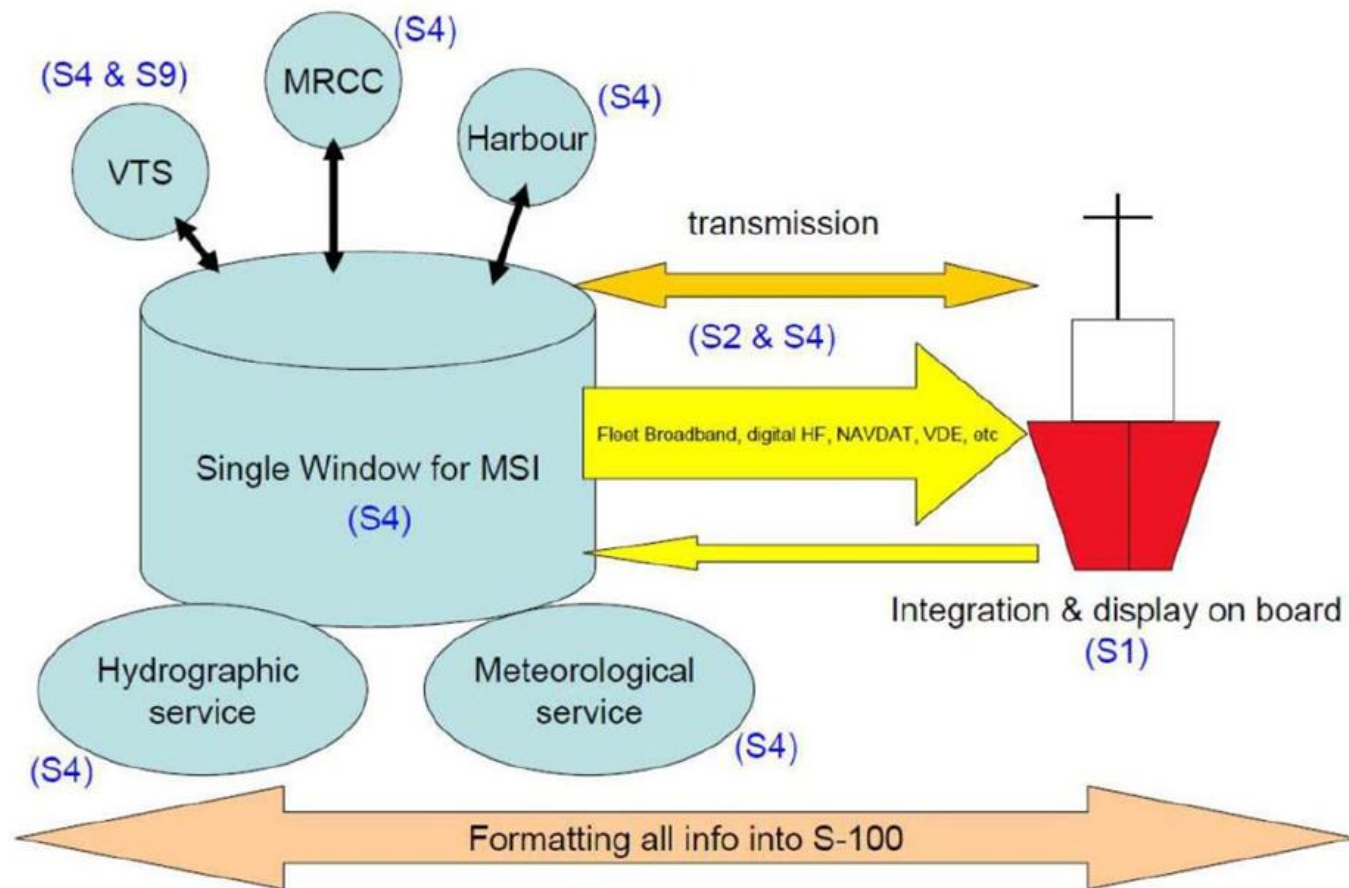
Five prioritized potential e-navigation solutions

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



A possible example: Single window for MSI

General arrangement of the technical infrastructure of a Single Window for MSI



An international MSI digital exchange format is necessary to:

- modernize MSI transmission from shore to ships;
- integrate and display MSI on bridge systems;
- integrate and display MSI on ashore systems;
- transmit and share information between ashore services involved in the information processing.



The S-124 Correspondence Group

- To meet the expectations of the e-navigation and the modernization of GMDSS related to **MSI**, WWNWS 5 decided to establish a Correspondence Group to develop a **S-100 Product Specification for Navigational Warnings (S-124)**



The S-124 Production Specification

- This PS must allow the development of solutions, by operators and industry, which meet the users needs on board and ashore, in compliance with the architecture of the e-navigation such as defined by the IMO

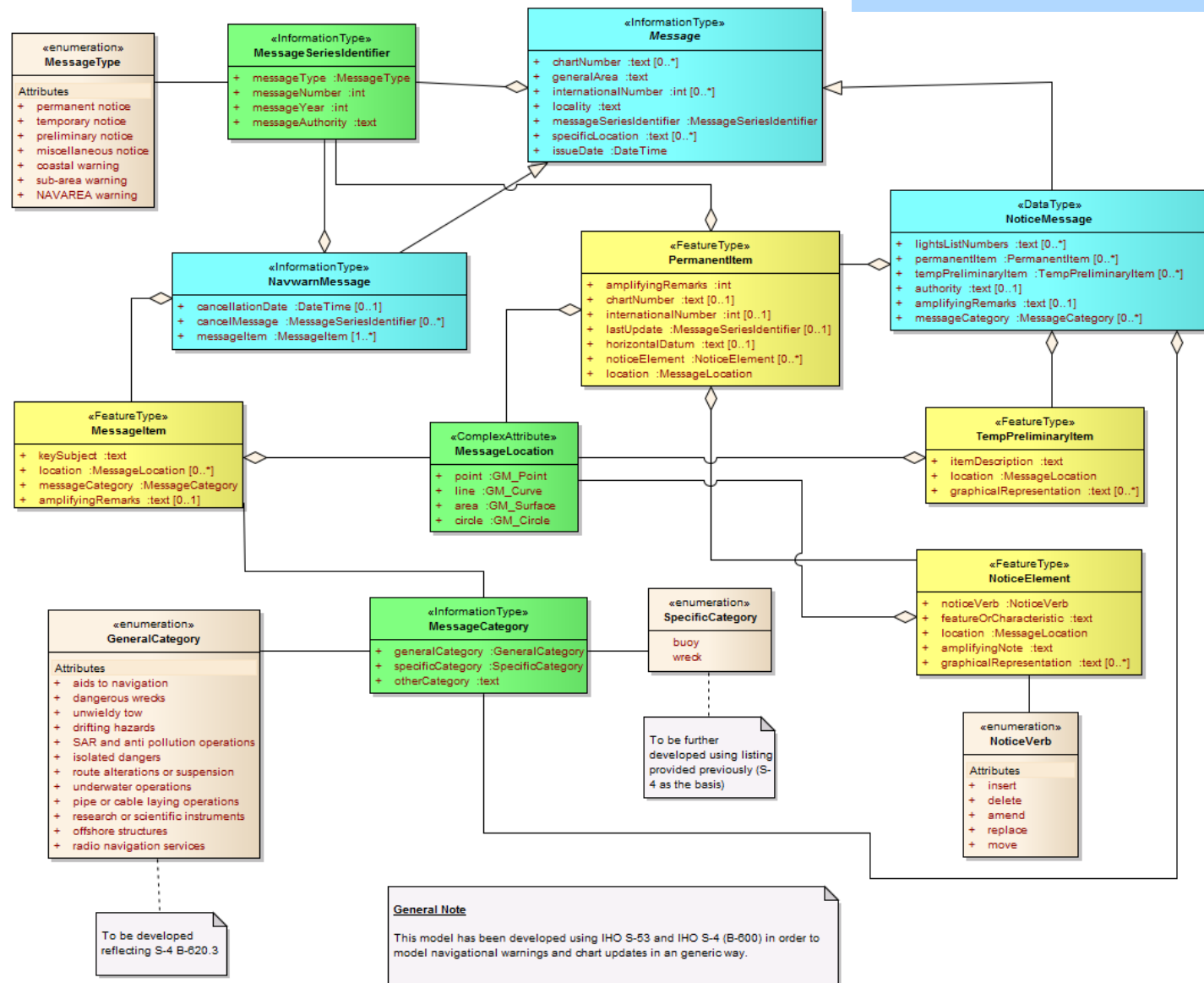


Membership

- Member States (9)
 - Australia, France (leader), Greece, Japan, New-Zealand, Norway, Sweden, United-Kingdom, United States
- Expert Contributor Organisations (2)
 - CIRM (industry)
 - Danish Maritime Authority (Input from ACCSEAS project)



class MSI-NM

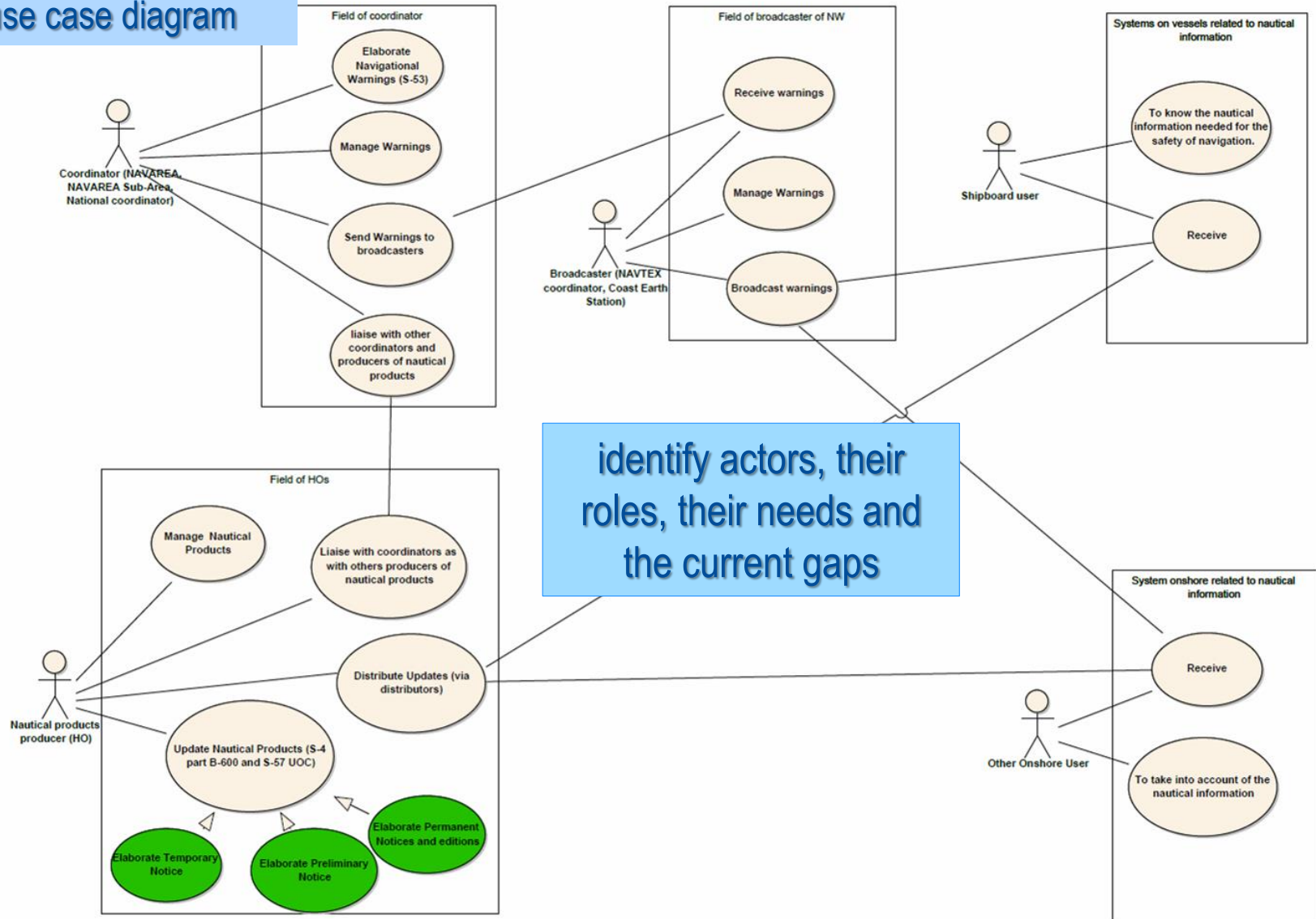


Activities since WWNWS 5

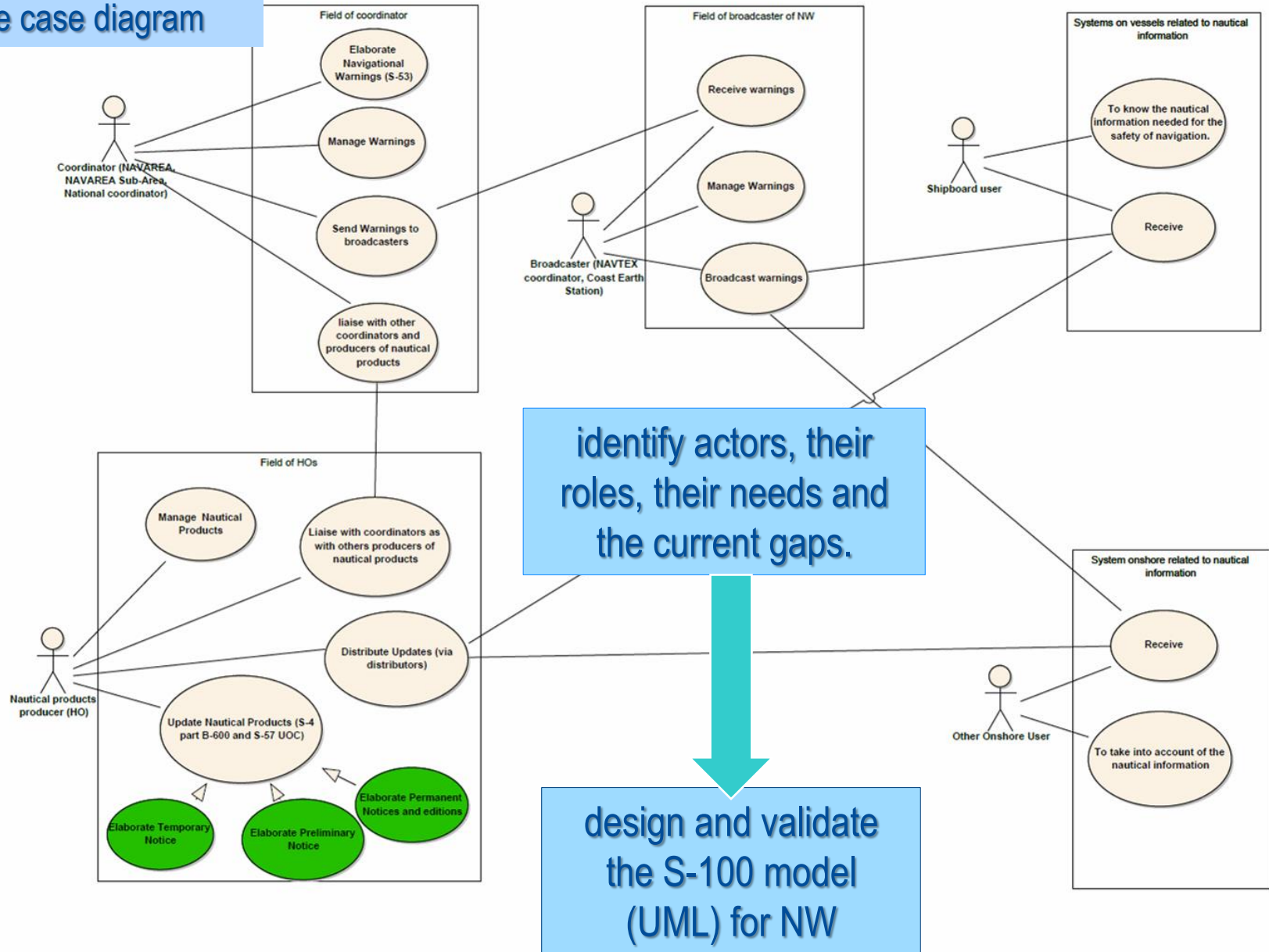
- Key elements of the e-navigation collected and published on the CG web pages for consideration (March 2014)
- Definition of the method to follow in the S-100 modeling of NW (April – May 2014)
 - The method adopted is based on use case diagram



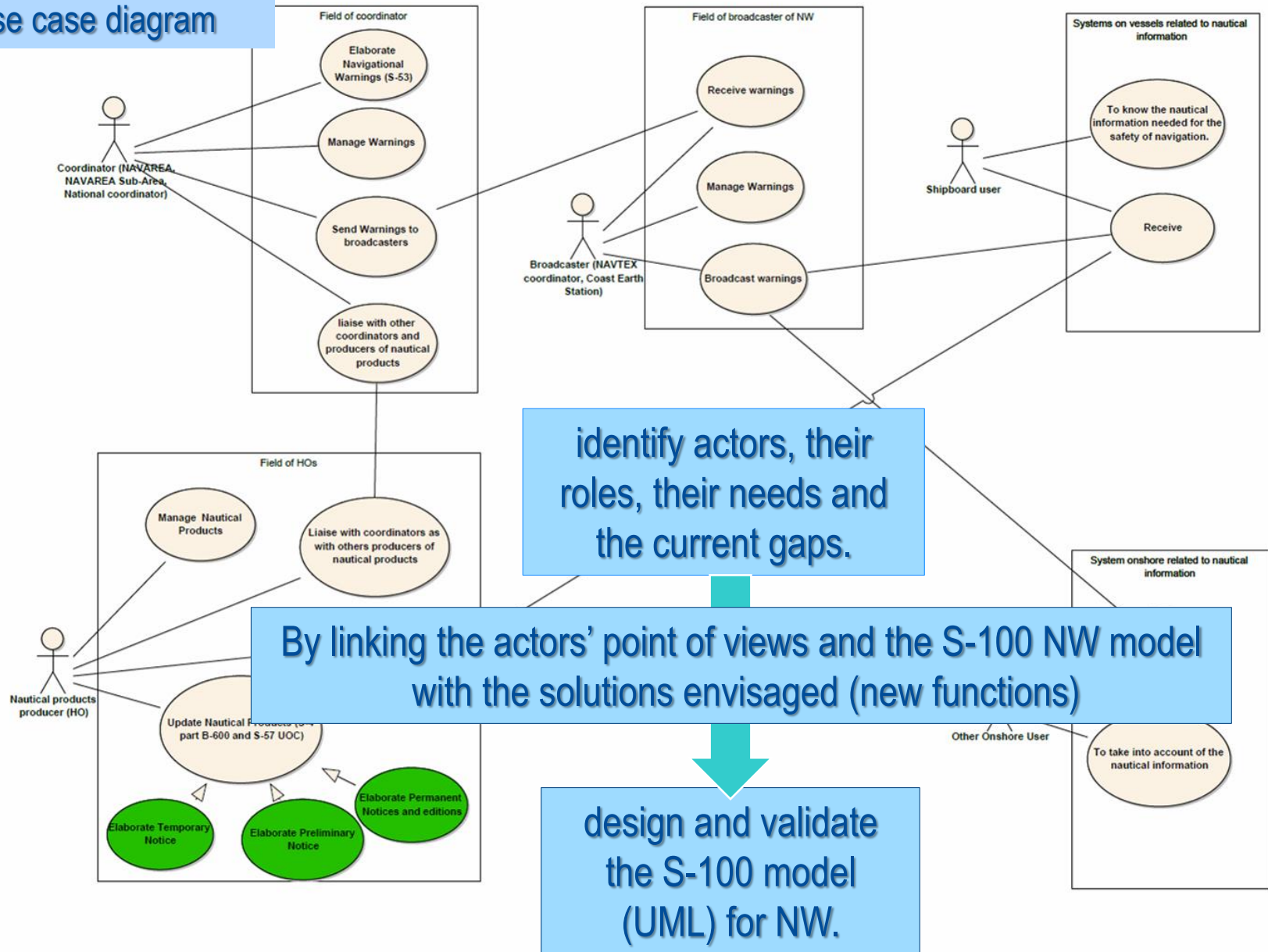
The use case diagram



The use case diagram



The use case diagram



Way ahead (1/3)

- The CG is reviewing the needs and gaps for each actor on the basis of background elements of the e-navigation and of the modernization of the GMDSS.
- Identify basic functions that should or could apply to digital NW (on board and ashore) in accordance with new ways of operations (see § New ways of operations)



Way ahead (2/3)

- Review and improve the initial model provided by DMA (using UML and other S-100 concepts)
 - to ensure that the content of the current NW (*Joint IMO/IHO/WMO manual on MSI*) is supported (dual production for the transition period)
 - to meet functions' requirements
- These functions could be the basis for new draft performances standards issued by IMO



Way ahead (3/3)

- Define the portrayal of the NW in relation with other relevant organizations
- Proceed to a test-bed to refine S-124 and to prove its technical value before approval and implementation
- Assess the impact for all stakeholders



Tentative schedule

Work Item	Date start	Date end
Define a work program		
Review needs, gaps and requirements	Feb. 2014	Nov. 2014
Identify basic functions	Dec. 2014	Dec. 2015
Improve UML model	Feb. 2015	Dec. 2015
Define the portrayal of the NW	Sep. 2015	Jul. 2016
Tests	2015	2017
Contribute to draft performances standards	2016	2017
Enlarge as appropriate the membership and relationships	2014	2017
Reach a consensus (impact on stakeholders,...)	2016	2017
Submit S124 for endorsement		2017



S-124 CG

WWNWS

Modernization of the GMDSS
via e-navigation
T17 of SIP: define the MSPs
including the **MSI MSP**
Scenario of transition

*Information and communication
new technologies*

Standardized digital NW
and
other new technical components

Allow

New ways of operations

- **NW on navigation display**
- production,
- communication, dissemination,
- use,
- management,
- storage

Specify



S124 CG web pages under the IHO/WWNWS
main page gives view on the work of the CG.



Thank you for your attention

