



S-124 progress

Product Specification

for Navigational Warnings (NW)

IRCC/World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)

HSSC 6

The S-124 Correspondence Group

- A subsidiary of WWNWS-SC created in October 2013 (WWNWS 5)
- Objective :

To develop a S-100 PS for NWs to improve dissemination and integration within bridge systems and shore systems via a digital format.

The S-124 is expected to contribute to the technical infrastructure of the e-navigation as designed by IMO and to the modernization of the Global Maritime Distress and Safety Systems (GMDSS).



Relationship with HSSC (S-124 CG TOR)

- The S-124 CG should liaise with the future S-100 WG of the HSSC
- The final draft of the product specification should be submitted by WWNWS-SC to HSSC for endorsement
- The WWNWS-SC will provide information updates to HSSC

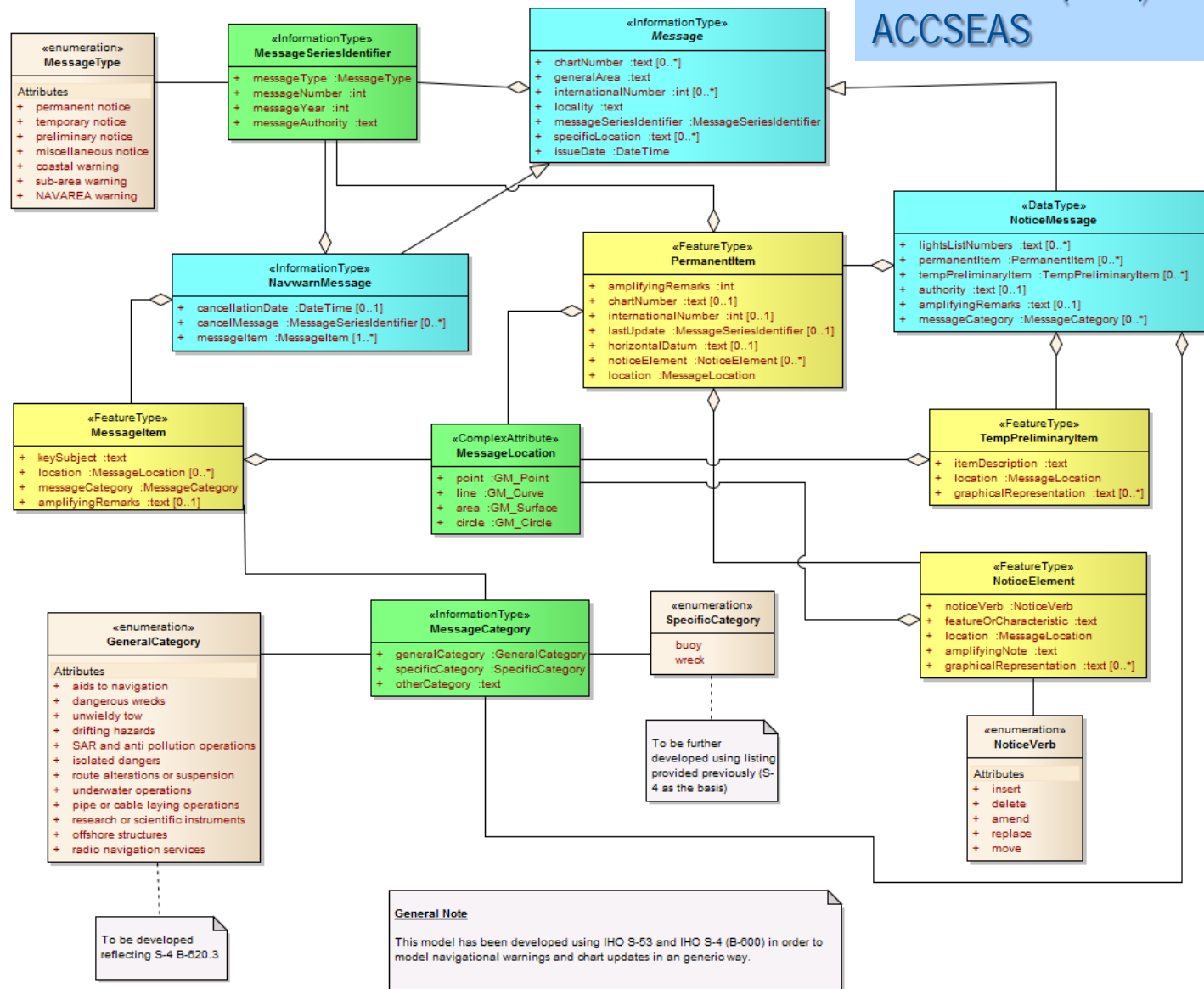


Membership

- Member States (9)
 - Australia, France (leader*), Greece, Japan, New-Zealand, Norway, Sweden, United-Kingdom, United States
- Expert Contributor Organisations (2)
 - CIRM
 - Danish Maritime Authority (DMA)
 - Korea Research Institute of Ships and Ocean Engineering (KRISO)

(*): Yves Le Franc





Membership

- Other participants are welcomed !
 - So that other projects feed the CG of their ideas and find a normative outlet in them works



Activities during the reporting period (1/4)

- Draft TORs and Overview of tasks drawn up (December 2013)
- Key elements of the e-navigation collected and published on the CG web pages for consideration (March 2014)



Development of S-124 and IMO e-navigation background (1/2)

- Participates decisively in the response to several strong e-navigation's needs and gaps
- In accordance with the prioritized solutions S4 and S9
 - *S4: integration and presentation of available information in graphical displays received via communication equipment*
 - *S9: improved communication of VTS service portfolio (not limited to VTS stations)*



Development of S-124 and IMO e-navigation background (2/2)

- Contributes to the Risk Control Options (RCO) 6 and 1
 - RCO 6: *improved shore-based services*
 - RCO 1: *integration of navigation information and equipment including improved software quality assurance*
- In the scope of tasks T13, T14 and T17 of the Strategy Implementation Plan (SIP) submitted to the approval of IMO MSC (November 2014)



Tasks 13, 14, 17 of the SIP (NCSR 1/9)

Task No	Task	Expected Deliverable	Transition Arrangements	Prioritized Implementation Schedule
T13	Develop guidelines showing how navigation information received by communications equipment can be displayed in a harmonized way and what equipment functionality is necessary.	Guidelines on the harmonized display of navigation information received from communications equipment.	None	2019
T14	Develop a Common Maritime Data Structure and include parameters for priority, source, and ownership of information based on the IHO S-100 data model. Harmonization will be required for both use on shore and use on the ship and the two must be coordinated (Two Domains). Develop further the standardized interfaces for data exchange used on board (IEC 61162 series) to support transfer of information from communication equipment to navigational systems (INS) including appropriate firewalls (IEC 61162- 450 and 460).	(a) Guidelines on a Common Maritime Data Structure. (b) Further develop the IEC standards for data exchange used onboard including firewalls.	None Use latest IEC standards	2017 2019
T17	Further develop the MSPs to refine services and responsibilities ahead of implementing transition arrangements.	Resolution on Maritime Service Portfolios.	National/Regional Arrangements	2019

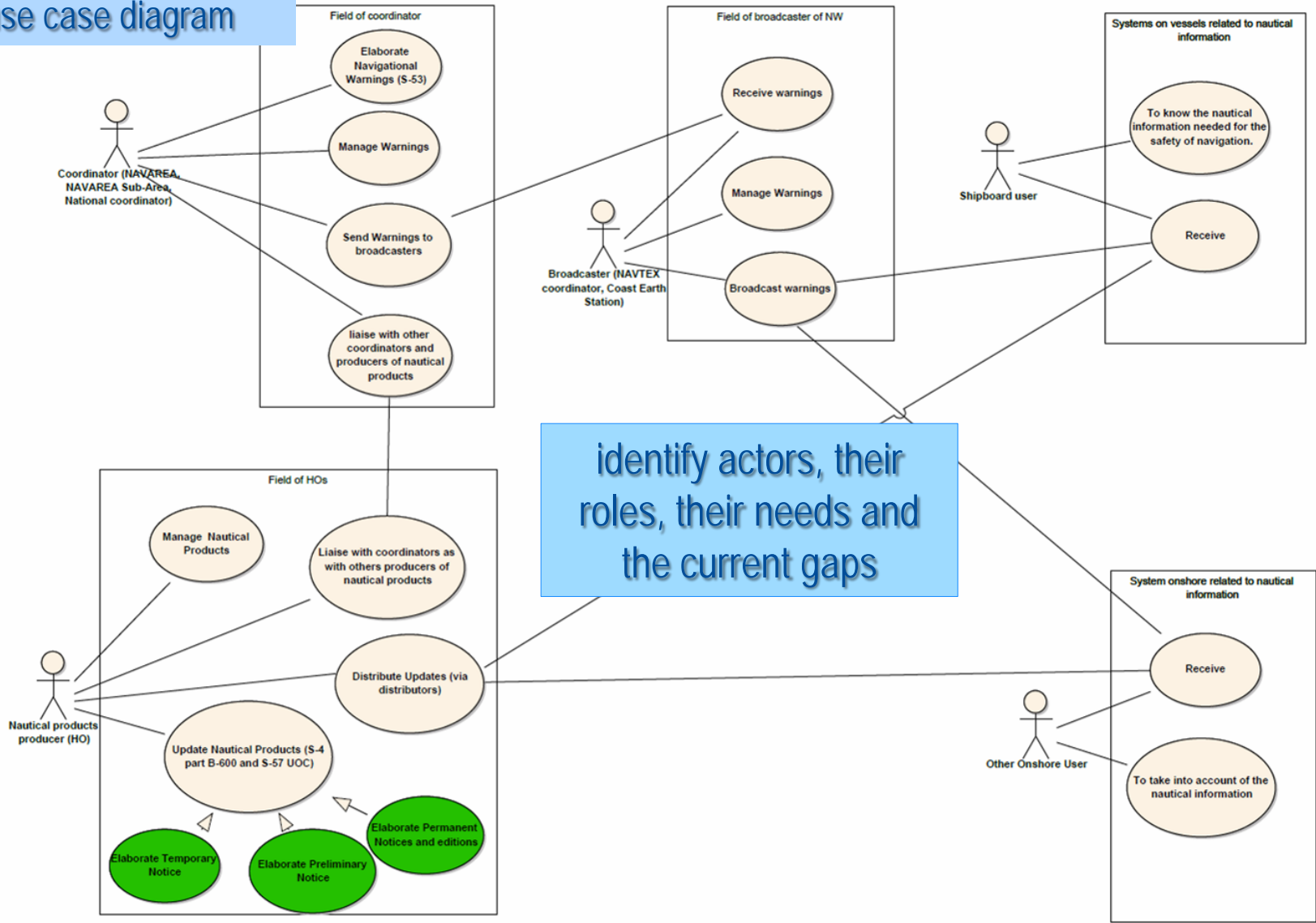


Activities during the reporting period (3/4)

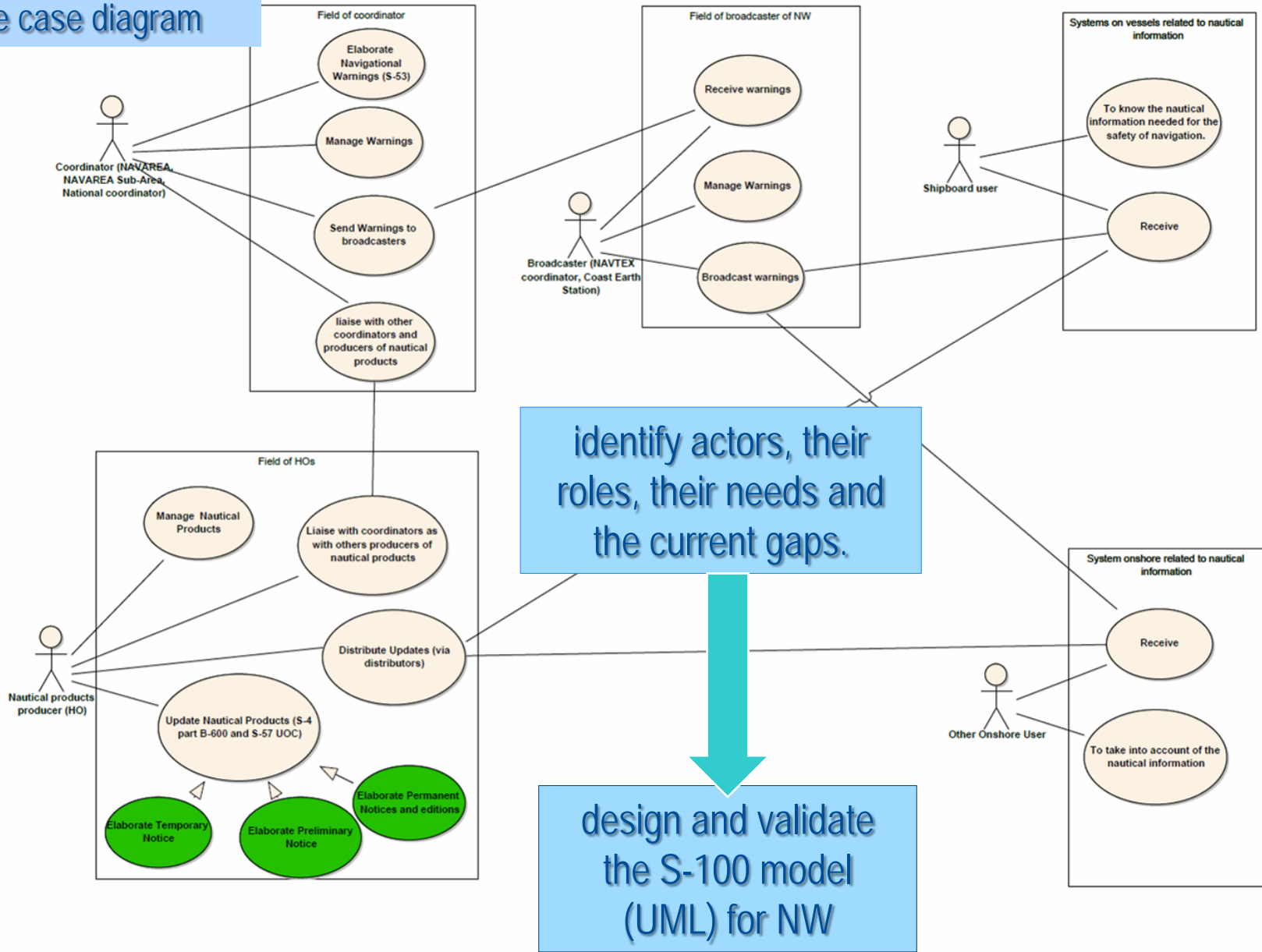
- Definition of the method to follow in the S-100 modeling of NW (April – May 2014)
 - The method adopted is based on use case diagram and associated scenario



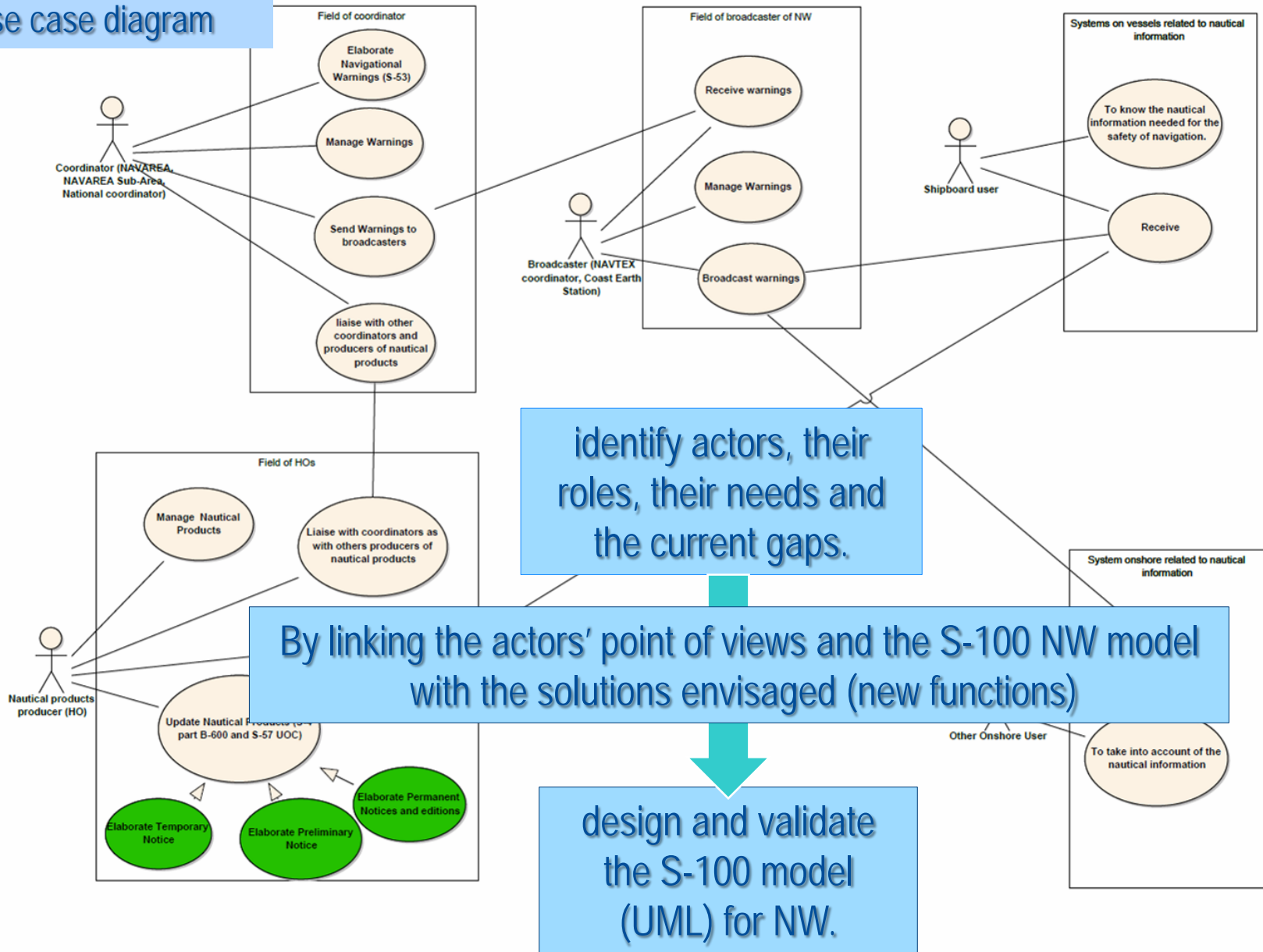
The use case diagram



The use case diagram



The use case diagram



Activities during the reporting period (4/4)

- Definition of the method to follow in the S-100 modeling of NW
- The CG has reviewed the needs and gaps for each actor on the basis of the elements of the IMO e-navigation background



Way ahead (1/4)

- Consider the background of the modernization of the GMDSS (on going)
- Identify basic functions that should or could apply to digital NW (onshore and aboard) in accordance with new ways of operations (see § New ways of operations)



Way ahead (2/4)

- 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 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 in relation with other relevant organizations



Way ahead (3/4)

- Define the portrayal of the NW in relation other relevant organizations
- When the draft S-124 will be mature enough, proceed to a test-bed to refine it and to prove its technical value before approval and implementation



Way ahead (4/4)

- Reach a consensus on the project of S-124
 - by demonstrating its contribution to the development of solutions
 - by assessing the impact on the stakeholders
- Enlarge as appropriate the membership and relationships with other entities
- Submit S-124 PS for endorsement



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



Specific points to be considered at this stage

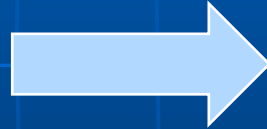
- 1- New ways of operations



*Information and communication
new technologies*

**Standardized digital NW
and
other new technical components**

Allow



New ways of operations

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



*Information and communication
new technologies*
Standardized digital NW
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Allow



New ways of operations

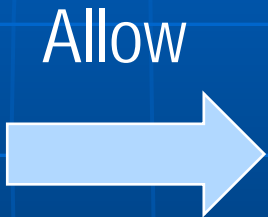
- NW on the navigation display
- production,
- communication, dissemination,
- use,
- management,
- storage

Specify



T17 of SIP: **define the MSPs**
including the **MSI MSP**
+ Scenario of transition

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Standardized digital NW
and
other new technical components



New ways of operations

- NW on the navigation display
- production,
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S-124 CG



WWNWS SC and others...

T17 of SIP: **define the MSPs**
including the **MSI MSP**
+ Scenario of transition

*Information and communication
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Allow



New ways of operations

- NW on the navigation display
- production,
- communication, dissemination,
- use,
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- storage

Specify



S-1XX WG



Reflexions on MSPs
(to be organized)

Define the MSPs
+ Scenario of transition



Standardized digital product
and
other new technical components

Allow



New ways of operations



Specify



Specific points to be considered at this stage

- 2- A global approach
 - A way to consider to improve and harmonize Nautical Information



Nautical information

MSI

Events

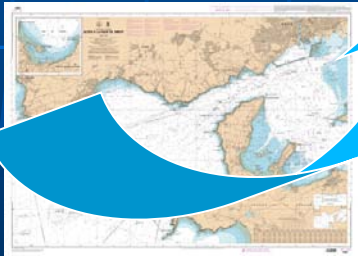
Navigational Warnings

T&P Notices to Mariners (to be noted on the charts by the mariners - ENC ER)

Permanent corrections to nautical charts and publications (NtMs – ENC ER)

Nautical charts and publications (new editions)

Hydrographic informations (tide, currents, ...)



Harmonization of NW and Preliminary and Temporary Notices to Mariners

- NWs and T&P NMs often contain similar information
(EVENT + POSITION)
- NWs and T&P NMs should be displayed on the ECDIS
- Often a T&P NM relays a NW (via another media i.e. the slower flow of charts updates)
- The usefulness of these T&P NMs should be examined when NWs will be stored aboard and displayed on the chart



Harmonization of NW and T&P NMs

IHO recommends converting paper charts T&P NMs in ENC updates (ER) as it is the best way currently and for next years.

But

- it is an heavy task for HOs
- the temporary or preliminary aspect of the information is not well reflected when using ER



Harmonization of NW and T&P NMs

- The two concepts contribute to the same user need for safety related information
- They could be reviewed together as a new global and harmonized information system within MSPs (harmonization of nautical information services)
- T&P NMs in a new digital form could contribute to the solution



Actions Required of HSSC

- The HSSC is invited to:
 - note this information
 - include a new item in the S-100 WG program to support S-124 development



Thank you for your attention

