



# Space Activity Working Group & S-124 Development

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Coordinator**



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# AGENDA

International  
Hydrographic  
Organization

- Space Activity
  - Space Activity Working Group History
  - Participants
  - Current Process
  - Future Process
- S-124 Navigational Warning Development
  - S-100 Data Model
  - S-124 Progress to Date
  - Current S-124 work initiatives
    - Data Classification and Encoding Guide
    - Test Cases
    - S-124 Validation
  - Next Steps for S-124
- Marlin by NGA Demonstation
- Questions and Open Forum



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WWNWS14

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Agreed to establish a collaborative group to investigate navigational warnings on space activity throughout the WWNWS and how organizations handle Space MSI.

- Operational Challenges faced by the Seafarer
- Operational Challenges faced by Maritime Safety Information Providers
- Space Operator Obligations
- Un-planned Re-entry procedures
- Source Templates



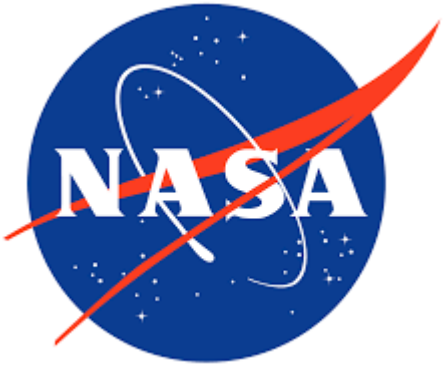
# IHO PARTICIPANTS

International  
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Organization

- 13 NAVAREA Represented
- 4 National Coordinators
- 8 Space Operators
- 3 Other Attendees such as aviation administrations



GILMOUR SPACE



MACHC MSIWG – Dec 12<sup>th</sup>, 2024



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# **ISSUES RAISED - SOLUTIONS**

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## **Issues Raised**

- Space warnings are incredibly complex
- Numerous launch scrubs leading to multiple cancellations and reissuing of new warnings
- Exponential increase of space hazard areas globally.
- Large hazard areas concerning space debris
- Different formats from different space operators

## **Solutions Identified**

- Space operator to strive to minimize coordinates in hazard areas
- MSI providers to only cancel warnings when outside the initial date range or a positional change
- Space operators to strive to minimize hazard areas for space debris
- MSI providers and space operators agreed to the space activity worksheet to improve consistent information between providers



# IHO NEXT STEPS

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- Geospatially displaying data via an easy to access platform
- S-124 warnings for space operators
- Detailed analysis of how seafarers operate in areas in which they may encounter space hazards
- Educational outreach to new space providers to provide the knowledge of the framework of the World-wide Navigational Warning Service



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# S-124 NAVIGATIONAL WARNINGS

- Part of the S-100 Data Model

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# S-124 NAVIGATIONAL WARNINGS

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- Work to date
- S-124 PT chaired by Canada has been diligently working on progressing the standard over the past years
  - S-124 was approved to a version 1.0 standard (test standard) at HSSC15 this past June.
  - Due to IHO/IMO timelines the version 2.0 standard (operational standard) is expected to be presented to HSSC 16 for approval in June 2024.

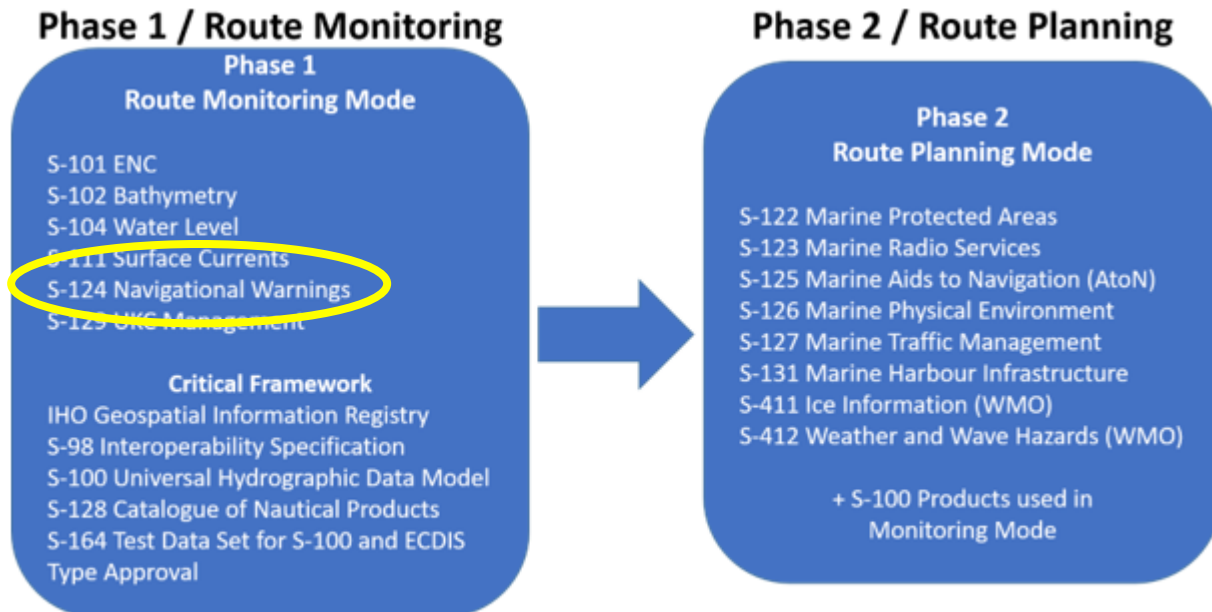


Figure 2 The IHO Navigational Package, for S-100 ECDIS, to be handled by the Interoperability Specification S-98. Additional layers and Phases may be added in the future.

- IMO approved new ECDIS performance standards at MSC 106 in 2022
- To meet these deadlines to IMO, IHO has developed phase 1 and phase two product specifications.
- IHO has designated S-124 Navigational Warnings as phase 1.

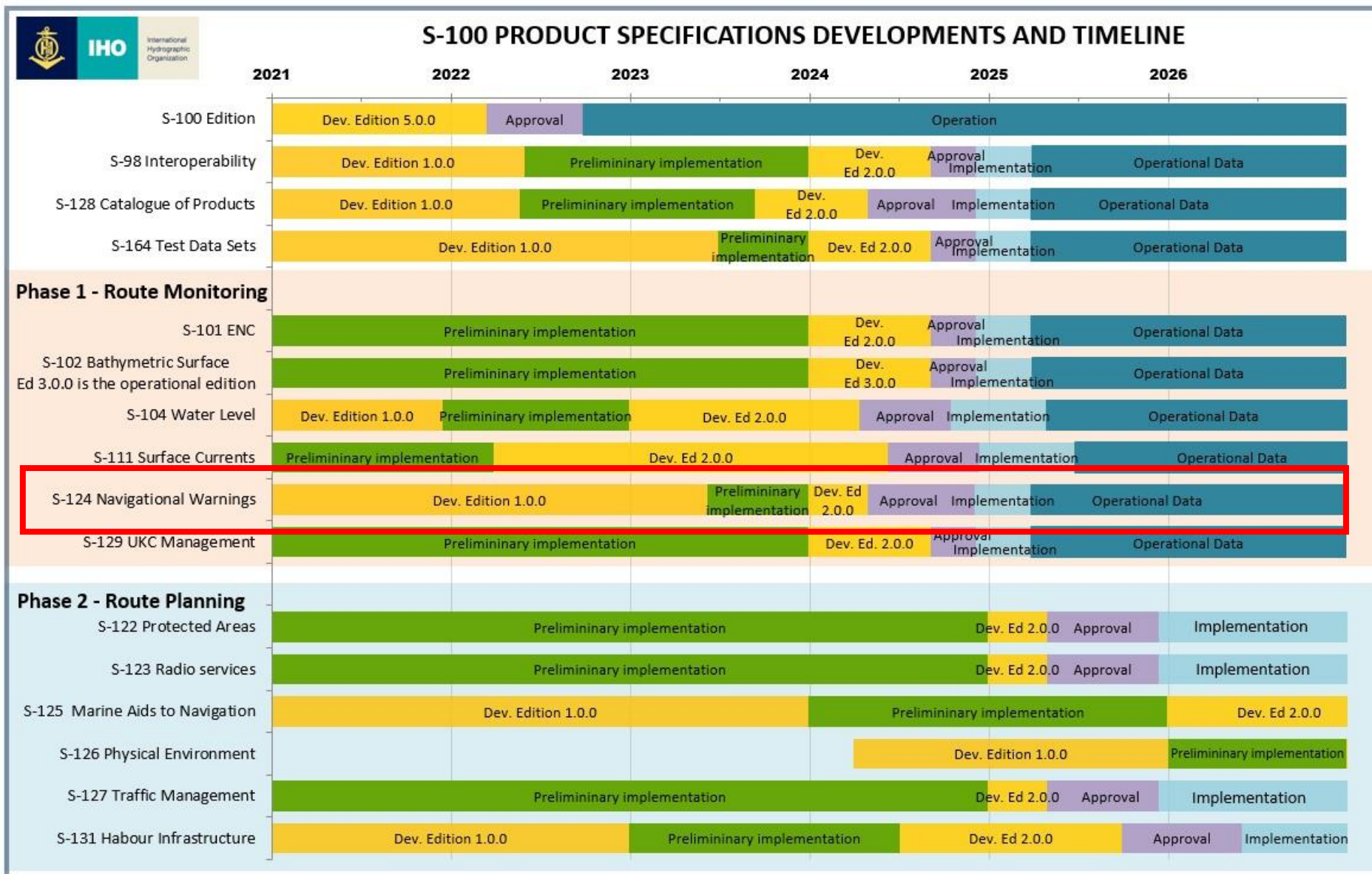




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# S-124 NAVIGATIONAL WARNINGS

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# **S-124 NAVIGATIONAL WARNINGS**

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## **How can you get involved?**

- Participate in the S-124 PT
  - Test Cases
  - Test review sessions
  - Data Classification and Encoding Guide
  - Validation Check Expansion
  - **We need to understand everyone's experiences.**

## **Open Source Software to aid in S-124 production**

- NIS (Canada – English)
- PING (France, French potentially Spanish)

**Development of the MACHC wide S-124 implementation plan.**



# IHO **ANY QUESTIONS**

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