

Highlights of HSSC 13

Hydrographic Services and Standards Committee

EAtHC 16

Magnus Wallhagen HSSC Chair

Nathalie Leidinger HSSC Vice-Chair



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Update items to be reported

- Implementation of the Strategic Performance Indicators (SPIs)
- Experimentation on the application of ISO 9001 principles on the development of S-101 PS
- Progress in the implementation of the roadmap for the S-100 decade (2020-2030)
- Potential options for HOs for future production of S-101 ENC's in conjunction with S-57
- Future S-100 ECDIS and dual-fuel concept
- Establishment of new Project Teams
- Others achievements or progress



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Strategic Performance Indicators (SPIs) allocated for HSSC (1/3)

IHO Strategic Plan

(<https://iho.int/uploads/user/About%20IHO/strategic%20plan%20summary%208.5x11%20-%2017nov20.pdf>)

| Targets | Strategic Performance Indicator (SPI)-measurement for success | Lead and Metric |
|---|--|---|
| Goal 1: Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation | | |
| 1.1 Deliver standards for hydrographic data and specifications of hydrographic products; support their regular production; and coordinate regional and global services for their provision. | 1.1.1 Percentage of Member States having operationalized production and distribution of hydrographic data products and services based on IHO Universal Hydrographic Data Model (S-100), under an implementation framework of coordination and agreed timelines (2026: 100%). | HSSC 0 % of MS distribute at least one product based on S-100 ← January 2021 60 % * of MS distribute at least one product based on S-100. ← January 2026 |
| | 1.1.2 Number of hydrographic data products and services based on Universal Hydrographic Data Model that cater for the new requirements: autonomous shipping, reduction of emission. | HSSC 0 Product Specification operational ← January 2021 10** Product Specifications should be operational (ed 2.0.0.) ← January 2026 |

* Based on that 62 of 94 IHO MS produce S-57 ENC's (March 2021)

** S-101, S-102, S-104, S-111, S-122, S-124, S-127, S-128, S-129, S-131



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Strategic Performance Indicators (SPIs) allocated for HSSC (2/3)

| Targets | Strategic Performance Indicator (SPI)-measurement for success | Lead and Metric |
|--|--|--|
| Goal 1: Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation | | |
| 1.2 Develop standards, specifications and guidelines in the areas of data assurance, including cyber security and data quality assessment. | 1.2.1 Percentage of hydrographic data products and services based on S-100 model that are covered by IHO standards, specifications and guidelines on cyber security (2026: 100%). | HSSC 0** Product Specifications (same as in SPI 1.1.2) includes cyber security and data quality assessment ← January 2021 10** Product Specifications (same as in SPI 1.1.2) includes cyber security and data quality assessment ← January 2026 |
| | 1.2.2 Percentage of navigationally significant areas (e.g. charted traffic separation schemes, anchorages, channels) for which the adequacy of the hydrographic knowledge is assessed through the use of appropriate quality indicators (2026:100%). | IRCC Supported by HSSC |

** S-101, S-102, S-104, S-111, S-122, S-124, S-127, S-128, S-129, S-131



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Strategic Performance Indicators (SPIs) allocated for HSSC (3/3)

| Targets | Strategic Performance Indicator (SPI)-measurement for success | Lead and Metric |
|--|---|---|
| Goal 2: Increasing the use of hydrographic data for the benefit of society | | |
| 2.2 Promote new tools and methods to accelerate and increase coverage, consistency, quality of surveys in poorly surveyed areas. | 2.2.1 Percentage of adequately surveyed area per coastal state. | IRCC |
| | 2.2.2 Number of new applications of the new version of Standards for Hydrographic Surveys (S-44). | HSSC Number of downloads of S-44 (Unknown - 2021) Number of downloads of S-44 – (to be determined) |

← January 2021

← January 2026



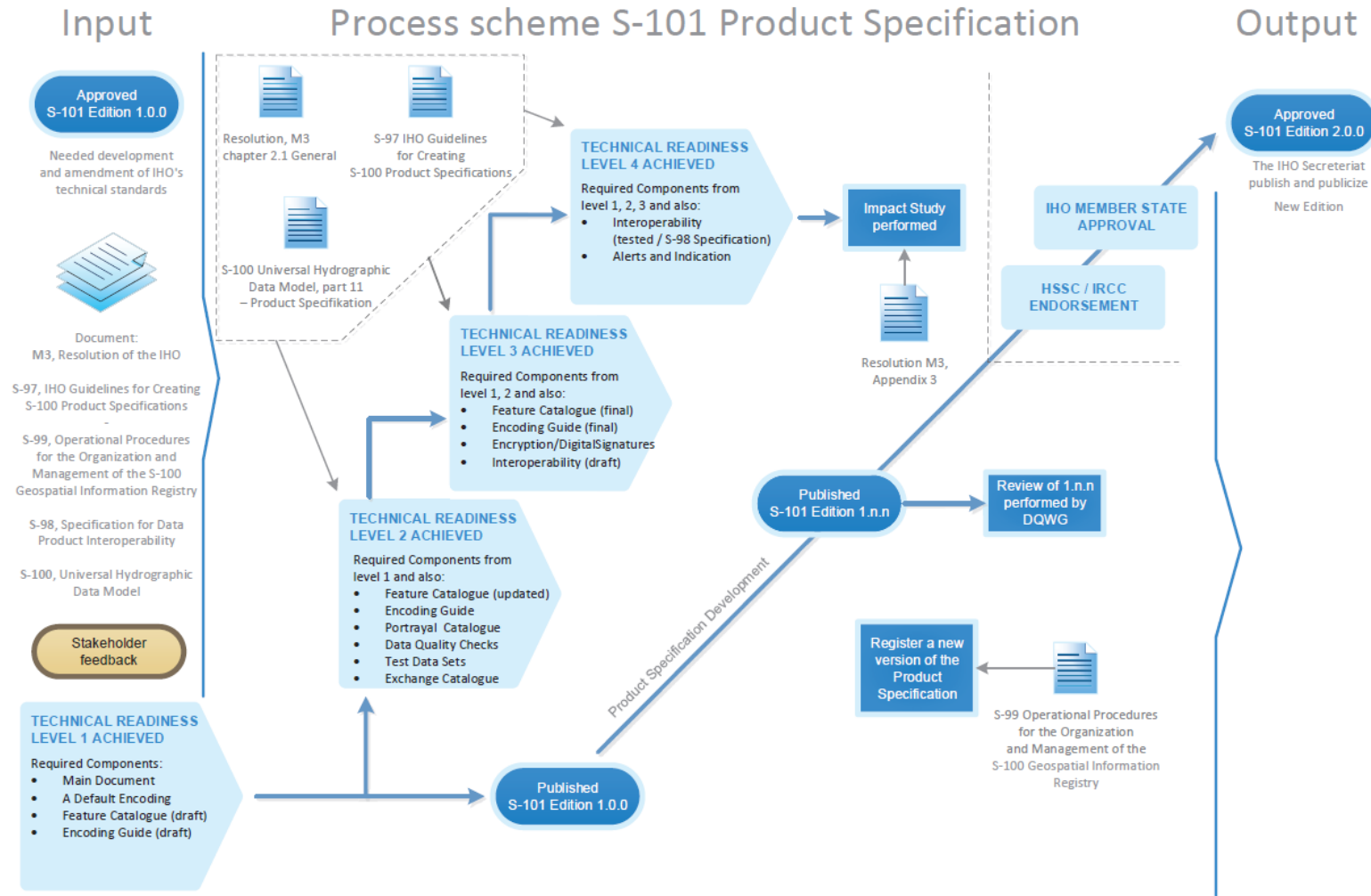
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Experimentation on the application of ISO 9001 principles on the development of S-101 Product Specification



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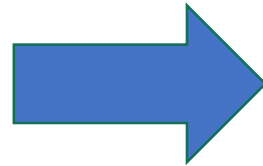
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S-100 Implementation priorities

First step

Navigational Route Monitoring Mode S-98 Edition 1.0.0

S-101 ENC
S-102 Bathymetry
S-104 Water Level
S-111 Surface Currents
S-124 Navigational Warnings
S-129 UKC Management



Next step

Navigational Route Planning Mode Future S-98 Editions

S-122 Marine Protected Areas
S-123 Marine Radio Services
S-125 Marine Navigational Services
S-126 Marine Physical Environment
S-127 Marine Traffic Management
S-131 Marine Harbour Infrastructure

+ S-100 Products used in
Monitoring Mode

S-128 Catalogue of Catalogues

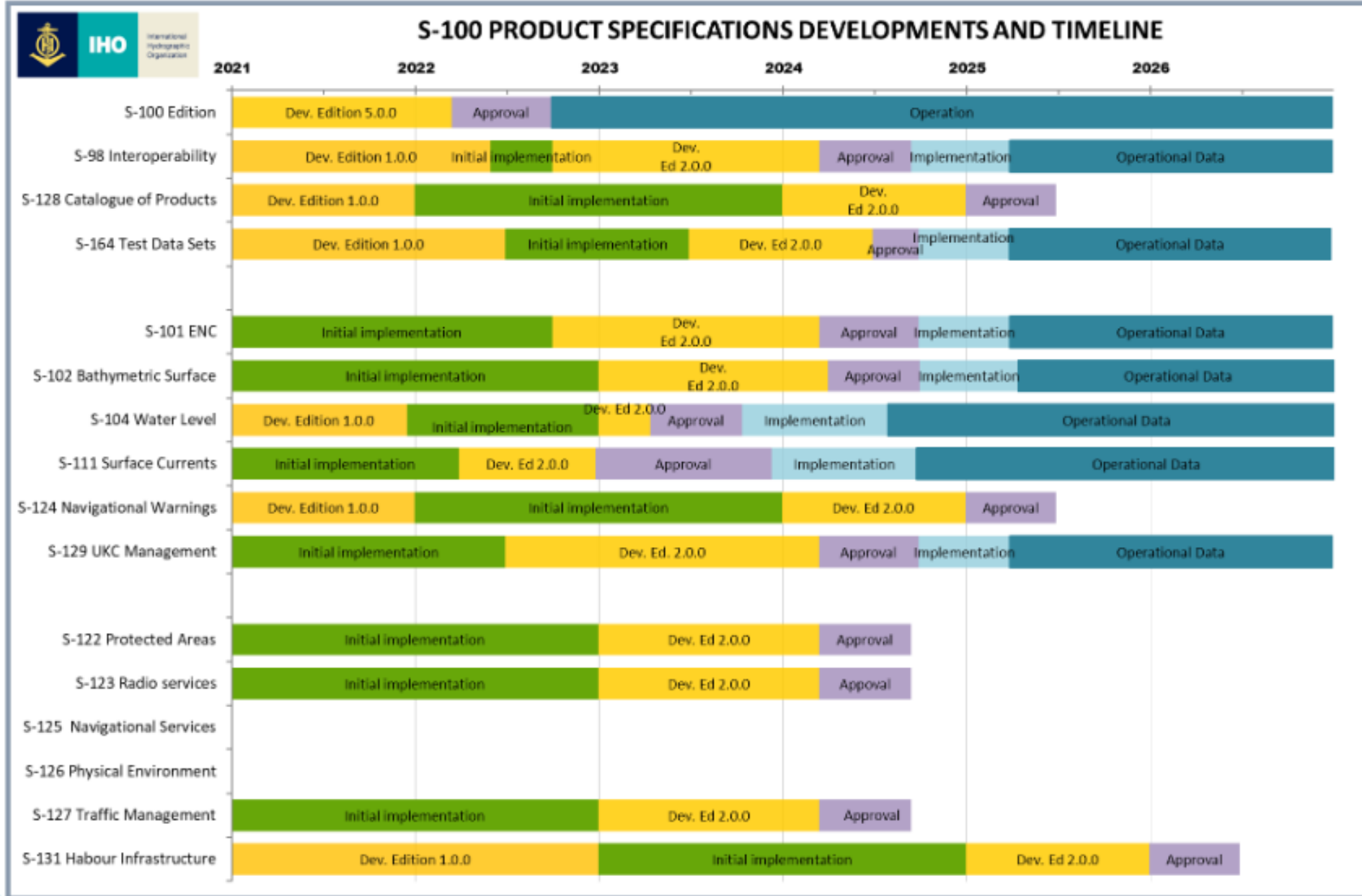


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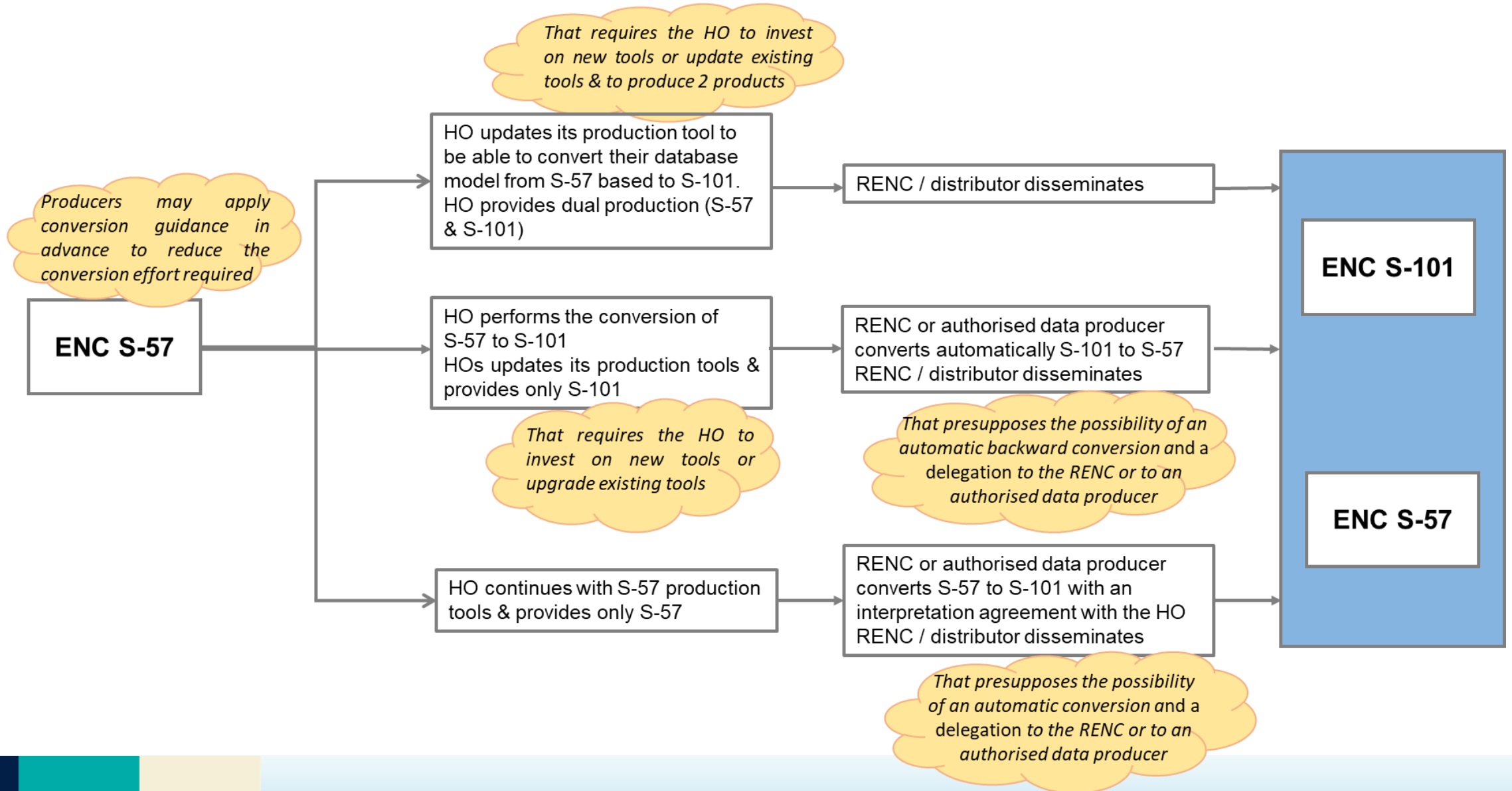
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S-100 Timeline for the prioritized IHO PS

Potential options for HOs for future production of S-101 ENC in conjunction with S-57



Future S-100 ECDIS and Dual Fuel Concept

- S-100 ECDIS
 - Revision of ECDIS Guidance for good practice (MSC.1/Circ.1503/Rev.1) and amendments to ECDIS performance standards (resolution MSC.232(82)) in the provisional agenda for NCSR 9 (2022) for approval by MSC 104
 - Co-existence of S-57 with S-100 data during the transitional period → “dual fuel concept”. S-100 ECDIS must be capable to read S-57 ENCs in addition to S-101 and other S-xxx layers.
- HSSC 13 outcome:
 - Prepare a governance document on Dual Fuel Concept (to be presented to HSSC 14)
 - Set up a drafting group (with participation of CIRM, IEC, Intertanko) to prepare propositions for the revision of the IMO ECDIS Guidance & ECDIS Performance standard and submit drafted documents to NCSR 9.



Establishment of new PTs

- **BASELINE SYMBOLOGY PT (subWG of NCWG)**
 - ➔ from the recommendations on the future of paper charts,
 - ➔ aiming to support the automated production of paper charts from S-101 data.
- **S-130 PT**
 - ➔ develop the S-130 Polygonal Demarcations of Global Sea Areas Product Specification and Dataset,
 - ➔ The scope of this Project Team under HSSC is strictly limited to technical issues only.
- **MARITIME AUTONOMOUS SURFACE SHIPS (MASS PT)**
 - ➔ to identify and prioritize MASS navigation requirements,
 - ➔ to analyse their impacts on current hydrographic standards and services,
 - ➔ to develop a set of recommendations/issues to be addressed by existing working groups.



Others achievements or progress

- The Hydrographic Surveys WG (HSWG) has been established and start to work
- Marine Harbour Infrastructure (S-131) PS will be developed in connection with the International Harbour Association & the International PortCDM Council
- Proposal on themes and project for the IHO-Singapore Innovation and Technology Lab (inauguration scheduled on 26th October 2021)
 - Test the automated conversion of S-57 to S-101 ENCs
 - support the possible establishment of a technical infrastructure within the IHO GIS Infrastructure to include a S-131 database for harbour's information registration



HSSC recommendations for EAtHC

- Note the HSSC Report
- Note the proposed metrics for the SPIs and target values for 2026, consider the contribution of EAtHC Members to the SPIs under HSSC
- Note the potential options for future production of S-101 ENC in conjunction for S-57
- Note the establishment of the new PTs and encourage MSs to participate
- Take any other action as appropriate

