*Annex A to the Report of the IHO HSSC to the Council 7 –
Draft Revision of Annex 2 to the
Roadmap for the S-100 Implementation Decade (2020-2030)*

Roadmap for the S-100 Implementation Decade (2020 – 2030), Annex 2

S-100 Timelines
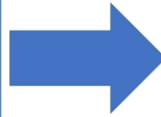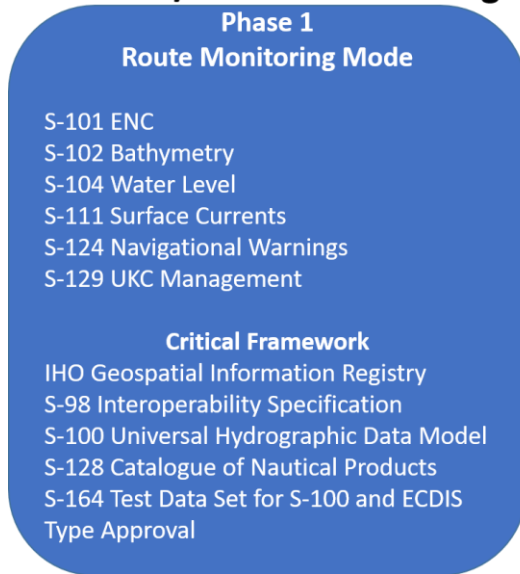
Version 3.0 Dated: 12 July, 2023

S-100 Implementation Priorities

For the first edition of S-98, which will handle interoperability between different layers in the future S-100 ECDIS, priority will be given to layers used in Phase 1/ Route monitoring mode. In Phase 2 layers used in route planning mode will be included. In order to achieve usage of S-100 products in future S-100 ECDIS it is critical to also develop the supporting framework in accordance with the S-100 timeline and even in some cases to speed up this development. The critical S-100 framework consist of the IHO Geospatial Information (GI) Registry, the S-100 Universal Hydrographic Data Model, the Interoperability Specification (S-98), the Catalogue of Nautical Products (S-128) and the Test Data Set for S-100 and ECDIS Type Approval (S-164). It should be noted that priorities given to the products used in route monitoring mode and the critical S-100 framework does not prevent route planning products to be developed in parallel to the once in the first step. In addition to the route monitoring products, also S-122, S-127 and S-131 should be operational 2026.

Table A – IHO list of S-100 products with special focus	
Phase 1 / Route monitoring	
S-101	Electronic Navigational Chart (ENC)
S-102	Bathymetric Surface
S-104	Water Level Information for Surface Navigation
S-111	Surface Currents
S-124	Navigational Warnings
S-129	Under Keel Clearance Management
Critical Framework	
	IHO Geospatial Information Registry
S-98	Interoperability Specification
S-100	Universal Hydrographic Data Model
S-128	Catalogue of Nautical Products
S-164	Test Data Set for S-100 and ECDIS Type Approval
Phase 2 / Route planning	
S-122	Marine Protected Areas
S-123	Marine Radio Services
S-125	Marine Aids to Navigational (AtoN)
S-126	Marine Physical Environment
S-127	Marine Traffic Management
S-131	Marine Harbour Infrastructure
S-411 (WMO)	Ice Information
S-412 (WMO)	Weather and Wave Hazards

Figure 1 The S-100 Implementation Priorities. Phase 1 is product specifications for Route Monitoring which must be supported by the Critical S-100 Framework. Product specifications for Route Planning will be developed as the phase 2.

Phase 1 / Route Monitoring

Phase 2 / Route Planning

Phase 1
Route Monitoring Mode

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

Critical Framework
IHO Geospatial Information Registry
S-98 Interoperability Specification
S-100 Universal Hydrographic Data Model
S-128 Catalogue of Nautical Products
S-164 Test Data Set for S-100 and ECDIS
Type Approval

Phase 2
Route Planning Mode

S-122 Marine Protected Areas
S-123 Marine Radio Services
S-125 Marine Aids to Navigation (AtoN)
S-126 Marine Physical Environment
S-127 Marine Traffic Management
S-131 Marine Harbour Infrastructure
S-411 Ice Information (WMO)
S-412 Weather and Wave Hazards (WMO)
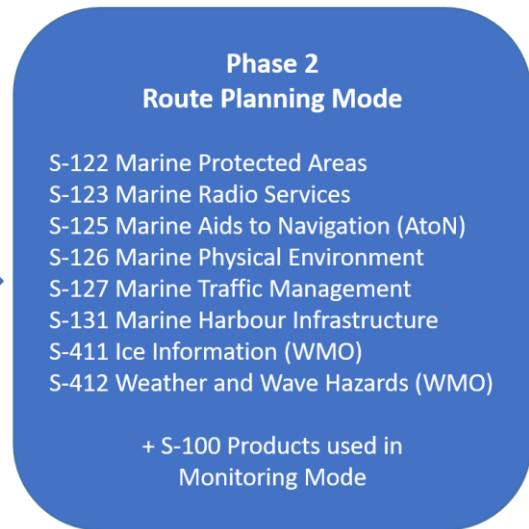
+ S-100 Products used in
Monitoring Mode

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.

S-100 Timeline for the prioritized IHO Product Specifications

The S-100 timeline is maintained by the IHO Secretariat as a version controlled Gantt Diagram and is updated and reported annually to the IHO Council.
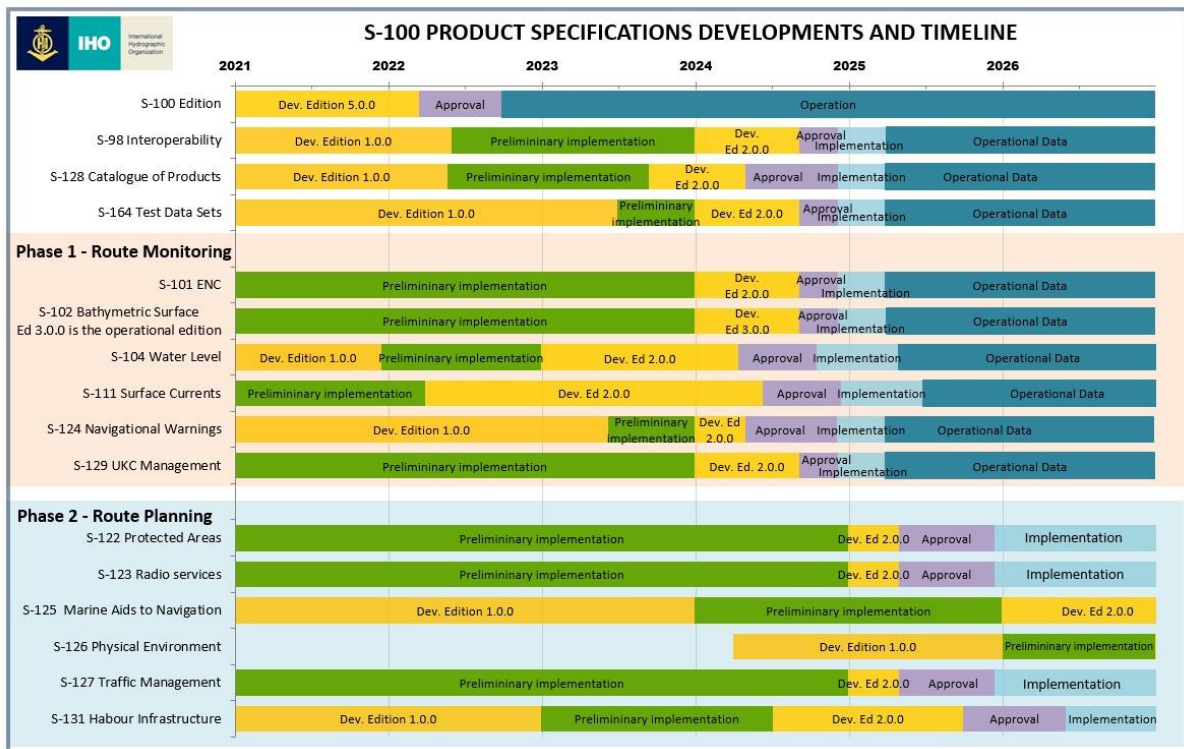

Figure 3 This S-100 timeline is updated: 9 July, 2023.

Synoptic Diagram on Options for HOs for Parallel Production of S-101 and S-57 ENCs

It is concluded that the preferred option for HOs would be to produce their ENCs from a database driven production system since it is expected that production systems software companies will include support for parallel ENC production (S-57 and S-101) when using a database driven system. However, HSSC has prepared a synoptic diagram to show other possible options for HOs in regards to parallel production.
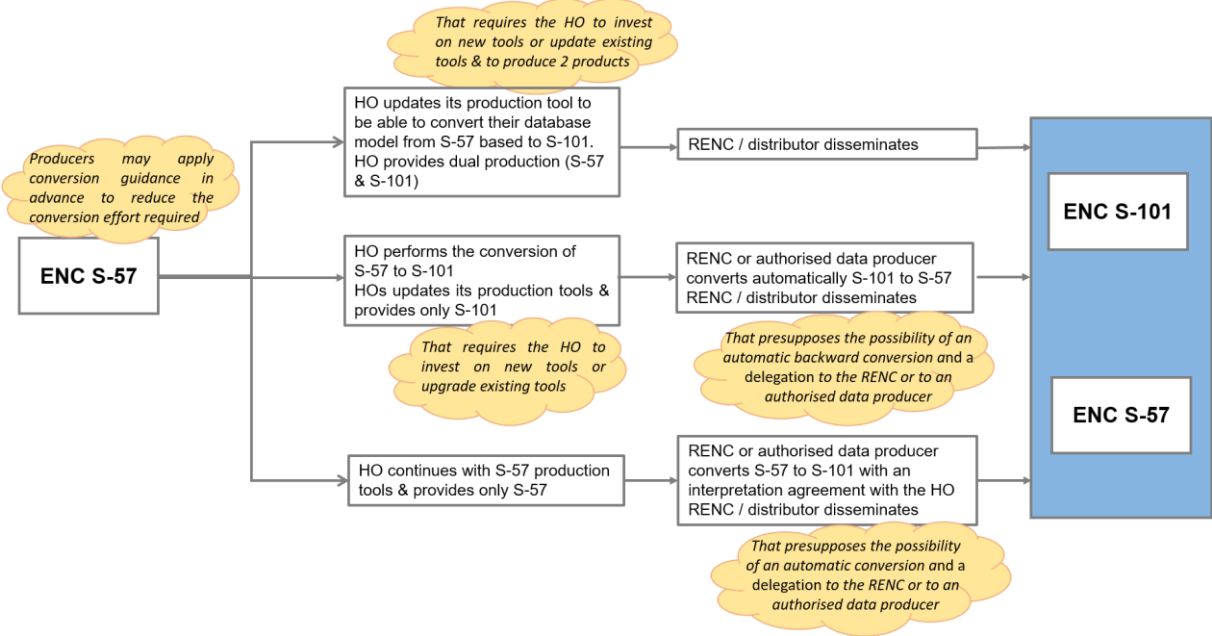

Figure 4 Potential options for HOs for future production of S-101 ENCs in conjunction with S-57 maintenance/production