

## Impact study for S-101

The S-101 Project Team has been developing the S-101 Product Specification for a number of years. Work has now delivered a draft edition of this standard for approval by IHO bodies. This work forms part of the IHO S-100 Roadmap and S-101 is a foundational Phase 1 specification providing the base chart layer in S-100 ECDIS. Although it is an evolution of S-57 ENC S-101 does introduce some changes.

This initiative aligns with the procedural framework for developing new or revised standards as delineated in IHO resolution 2/2007, which emphasizes the necessity for the Committee to assess proposals while considering the impact on pertinent stakeholders. This evaluation process entails a comprehensive analysis encompassing risk and feasibility, along with an estimation of the resources requisite for implementing a new or revised standard. Such considerations extend to the Member States Hydrographic Services.

The primary objective of the current impact study lies in the identification of stakeholders and the awareness of their readiness for the formal recognition of the S-101 Product Specification. It is noteworthy, however, that given the study pertains to edition 2.0.0, the intent and scope of the investigation are relatively moderate. It is notable that mariners as the end users of S-101 have not yet been included. It is expected that once trials and testbeds are more mature a further survey will be conducted to update this information and seek to include the mariner perspective.

### Stakeholders

Given that S-101 is an Electronic Navigational Chart, the spectrum of stakeholders is notably extensive, encompassing entities ranging from data producers to equipment manufacturers. This list seeks to identify stakeholders who will produce, distribute or implement S-101; so the range of stakeholders and their perspectives is broad. As it is an evolution of S-57 ENC the stakeholders will already be familiar with S-57 ENC.

- Data producers
- Regulators
- Product/data distributors
- RENCs
- VARs
- Equipment manufacturers

## Questions

How do you see yourself (select multiple if needed)?

- Data producer
- Regulator
- Distributor
- RENC
- VAR
- Manufacturer

Do you plan to produce any S-100 datasets?

- Yes (list which specific S-1xx products)
- No

If Yes, do you plan to produce S-101 datasets?

- Yes
- No

If Yes, how confident are you that you understand how to implement S-101?

- We have fully read and understand the details of the Product Specification
- We have a reasonable understanding, and are confident we can implement
- We understand the concept, but lack confidence in full understanding
- We haven't yet studied the Product Specification
- Other (please describe)

Do you plan to process/distribute S-101 datasets?

- Yes
- Yes, under conditions (please describe)
- No

Do you plan to develop an S-100 ECDIS?

- Yes
- No

If Yes, how confident are you on the implementation of S-101 edition 2.0.0 in your software?

Do you have any other comments?

## Replies

In the following we tried to answer the questions according to the stakeholder as we see the current awareness right now.

Data producers

How do you see yourself (select multiple if needed)?

- Data producer

Do you plan to produce any S-100 datasets?

- Yes (list which specific S-1xx products)

S-101, with coverage of S-102 and S-104 in specific areas where these products have value.

If Yes, do you plan to produce S-101 datasets?

- Yes

If Yes, how confident are you that you understand how to implement S-101?

- We have a reasonable understanding, and are confident we can implement
- We understand the concept, but lack confidence in full understanding

Do you plan to process/distribute S-101 datasets?

- No

Do you plan to develop an S-100 ECDIS?

- No

Do you have any other comments?

Our capacity to prepare for S-101 is limited and we will need support in terms of training. The work to migrate our data for S-101 will present a challenge.

Regulator

How do you see yourself (select multiple if needed)?

- Regulator

Do you plan to produce any S-100 datasets?

- No

Do you plan to process/distribute S-101 datasets?

- No

Do you plan to develop an S-100 ECDIS system?

- No

Do you have any other comments?

We will need to update our national regulatory documentation for S-101 and we have concerns on the impact with regards to type approval and port state control based on experiences with the last new edition of the S-52 standard. We have concerns that relevant training will not be updated ahead of S-100 ECDIS being available there are lessons to learn from S-57 ECDIS here.

Distributor

How do you see yourself (select multiple if needed)?

- Distributor

Do you plan to produce any S-100 datasets?

- No

Do you plan to process/distribute S-101 datasets?

- Yes

Do you plan to develop an S-100 ECDIS system?

- No

Do you have any other comments?

We do not yet see end user demand for S-101.

RENC

How do you see yourself (select multiple if needed)?

- RENC

Do you plan to produce any S-100 datasets?

- Yes (list which specific S-1xx products)

S-128

If Yes, do you plan to produce S-101 datasets?

- No

Do you plan to process/distribute S-101 datasets?

- Yes

Do you plan to develop an S-100 ECDIS system?

- No

Do you have any other comments?

Validation tools are a very important capability for us and much work is needed to mature the validation checks and have software available that is tested. It is important that test datasets to support consistent implementation of checks exists and this is a lesson from experience with S-58.

VAR

How do you see yourself (select multiple if needed)?

- VAR

Do you plan to produce any S-100 datasets?

- Yes (list which specific S-1xx products)

We expect to have to create S-128 for our service as we will receive multiple S-128 datasets from RENCs and directly from those producers who do not use a RENC. We also expect to integrate Inland ENC in our service in future.

If Yes, do you plan to produce S-101 datasets?

- No

Do you plan to process/distribute S-101 datasets?

- Yes

Do you plan to develop an S-100 ECDIS system?

- No

Do you have any other comments?

We still see that a clear business case for S-100 is needed and that testing and trials are needed to support developing such business cases.

## Equipment Manufacturers

How do you see yourself (select multiple if needed)?

- Manufacturer

Do you plan to produce any S-100 datasets?

- No

Do you plan to process/distribute S-101 datasets?

- No

Do you plan to develop an S-100 ECDIS system?

- Yes

If Yes, how confident are you on the implementation of S-101 edition 2.0.0 in your software?

We have moderate confidence but due to the lack of effective testing so far and the limited maturity of S-164 and S-98 we would expect issues to arise that will result in changes to S-101.

Do you have any other comments?

It is important that comprehensive test datasets are available at an early stage to support implementation, testing and subsequent type approval.