

Manage risks and opportunities for the timely and effective operationalization of S-101

Release history for the document

Date	Comments
21-01-20	Template - first version
21-02-17	Inputs from meeting with DQWG Chair (Rogier Broekman), Hans Engberg and Patrik Nilsson from the Swedish Maritime Administration
16-08-21	Update to refelect decisons made at ISO 9001 cell focus group VTC meeting on 12AUG2021.
16-11-21	Update to refelect decisons made at ISO 9001 cell focus group VTC meeting on 16NOV2021.
03-03-22	Update to refelect decisons made at ISO 9001 cell focus group VTC meeting on 03MAR2022.
28-09-22	Update to refelect decisons made at ISO 9001 cell focus group VTC meeting on 27SEP2022.
03-02-23	Update to refelect decisons made at ISO 9001 cell focus group VTC meeting on 03FEB2023.
29-08-23	Update to reflect strong dependencies with S-98 & S-164. These 2 standards are now part of the ISO 9001 cell scope. This document has been updated to reflect related risks and opportunities identified at meeting on 29AUG2023.

1. Purpose

To manage risks and opportunities of the development of S-101 to the operational version 2.0.0 according to the ISO 9001 principles (6.1). Based on direct dependencies, this document will also track S-98 and S-164 progress.

2. Responsibility

S101PT Chair & S100WG Chair

3. Risks

					If Evaluation = high or medium			
Description	Origin	Impact	Evaluation*	Date of review**	Actions to reduce risk	Resp. For action	Effectiveness of the action	Action taken and date
Lack of available human resources	internal	Delay in S-101 Ed 2.0.0	High	Sep 2022	-Raise awareness among MS on the importance of allocating the necessary resources	HSSC	Targeted communication to MS	Chair action PLANNED S-101PT Letter 5 of 2021 sought volunteers and indications of capacity. (13012022) Some improvement in contributions but pool of active contributors remains insufficient. (20022023) Contributions in Portrayal group have improved and some support to Test Datasets has been provided but the active contributions remain very limited to a small group.
					-Organize regular remote meetings to maintain a good level of participation	S-101 chair /DQWG chair /NCWG chair	Remote meetings organized	ONGOING Schedule of regular meetings to be set out in Jan 2022. (20022023) Two physical PT meetings set for 2023 to maintain momentum. (TR - 20240918) Two meetings now planned for 2024 Feb and June noting HSSC approval timeframes.
Delay to draft & validate the different components mandatory for TRL 2,3,4	internal		Medium	Feb 2023	implement a regular and shared monitoring of actions	S-101 chair	GANTT diagram	S-10PT chair team/ISO cell continue to have regular meeting to review progress, prioritise work and develop strategies to keep the project within high-level timeframes. Downgraded to Medium
Delay in reviewing S-101 (FC, Encoding Guide, DQ Checks) Ed 1.n.n	internal		Medium	Feb 2023	Harmonize timeframe, program reviewing & allocate resources	DQWG chair	GANTT diagram	A cross check has been conducted by DQWG but did not use the very latest DCEG version. Further review planned for 1.2.0 focusing on changes to reduce effort required.
Delay in reviewing portrayal catalog	internal		Medium	Feb 2023	Harmonize timeframe, program reviewing & allocate resources	IHO Registry DCB	IHO registry reflects changes introduced in S100 Ed 5.0.0 New proposals are actioned within S-99 established timeframes	Risk level remains Medium until evidence exists that the ISO 9001 cell recommendations to the IHO Sec. regarding DCB staffing and processing timeframes are in place.
Overreliance on external support for the implementation and maintenance of the S100 GI Registry	External		Medium	Feb 2023	IHO to enter in more formal arrangements with KHOA in order to be able to influence requirements and UAT. It may require financial investment.	HSSC	IHO can influence design and functionalities of the IHO managed S100 GI Registry. IHO staff performs UAT and approves the release of enhancements and/or	Risk level remains Medium until evidence exists that the ISO 9001 cell recommendations to the IHO Sec. regarding the implementation of more detailed and formal agreements with MS/Industry partners are in place.

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							new versions.	
Insufficient clarity in the DF-ECDIS performance.	Internal		Medium	Feb 2023	Approve and publish clear guidelines	HSSC	S-101PT is able to progress or delay the development and implementation of new proposals in a timely manner.	DF-Governance document has been endorsed by HSSC13. Practical implementation is still to be tested. Retain as medium until evidence exists the guidance provided is enough to drive development decisions.
Insufficient time to test Dual Fuel concept in S100 ECDIS prototypes	External		High	Feb 2023	Allocate resources to develop DF-S100 ECDIS able to ingest and manage S-57 and S-101 ENC by mid 2023.	S100TSWG; HSSC	DF-S100 ECDIS exists and is utilized in a rigorous testbed environment by June 2023.	DF-ECDIS prototypes started to emerge and are participating in UKHO-SHOM testbed. Although S-164 document likely to be endorsed by HSSC15 in June 2023, OEMs do not yet have access to the corresponding DF Test datasets. No DF-ECDIS system available to S-164 development group. Iterative process adopted for exchange set implementation and release plan adopted to end 2023. Communication between subgroups working well (JP – 29/8/23). Little practical progress - Upgrade risk level to High.
Lack of systems implementing full S-100 for iterative testing for inclusion in S-164	External		Medium	September 2023	Possible to adopt Partial simulation/validation approach in absence of full systems. Work with existing providers.	S164WG, S100WG	Workarounds giving confidence in absence of full system availability	Resources have been made available to the S-164 subgroup for validation of data intended for S-164. DF system developers engaged to produce DF input to S-164 in 2023 timescales (JP 29/8/23).
S-98 Annex C untested (in some areas) and incomplete	External		High	September 2023	Dialogue with implementers (in-principle implementation) and outreach to other working groups	S164WG, S100WG	Endorsement by implementers for most risky elements of standard	September 2023. Outreach to other working groups, meetings and OEMs is under way. More S-98 content is being captured and mitigations for the most untested parts are beginning to be in place. There is much to do though. Implementers active in S-164/S-98 WG. Test Data required (JP 29/8/23)
Insufficient time to test S-98 interoperability in S100 ECDIS prototypes	External		High	Sep 2023	Allocate resources to develop S100 ECDIS able to ingest and manage all S100 products and interoperability catalogue by the end of 2023.	S100TSWG; HSSC	S100 ECDIS, necessary products and interoperability catalogue exist and are utilized in a rigorous testbed environment by December 2023.	It has been confirmed that KHOA will build the S-98 catalogue and IHO Sec have requested that the current draft be made available. Still awaiting this. This has been announced but not received yet, copy requested from IHO. No ECDIS available yet. Unlikely full testbed will be available by December 2023 (JP 29/8/23)
IHO implementation of the security scheme	External		Medium	May 2024	Implement and test Security Scheme to enable testing towards operationalisation of S-100.	IHO Sec.	IHO Security Scheme and procedures are available for testing by May 2024.	NEW (20/9/23) – Responsibility of S100SSPT (refer to HSSC15 Action 15/29). The 1st objective of the PT is to develop the S-100 appointment and termination process for data servers, OEMs and ENDS service providers. A VTC is planned for Sept/October 2023. No evidence of progress so far. It's important to note that this issue is one of implementation, and drawing together the standards with internal policy and procedures <u>within the secretariat</u> . The ISO 9001 Cell believes resourcing in Monaco to be a significant issue. Risk level set to Medium. HSSC Vice Chair to follow up with Tom Mellor.

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Management and distribution of S100 Catalogues	External		Medium	May2024	Establish a process for the management and distribution of S100 catalogues (FC, PC, IC).	IHO Sec.	A process for the effective and timely management of S100 catalogue versions (including release and stakeholders' notification protocols) are in place by August 2024.	NEW (20/9/23) – The task could be linked to the scope of the ICEPT. No evidence of progress on this topic so far. Risk level set to Medium. HSSC Vice Chair to follow up with KHOA (PT Chair).
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*Evaluation = high / medium / low

** to be reviewed at least annually

4. Opportunities

Description	Benefits	Actions (to seize opportunities and limit risks)	Responsible	Deadline	Effectiveness of the action	Action taken and date
Participation in the various Uses Cases organised in collaboration with the OEMs	Integrate feedbacks during development	Promote Uses cases	HSSC	-	Positive feedback from OEM Meeting deadlines (no extensive re-testing due to late consideration of feedbacks)	Linked to testbed reports. Awaiting final reports to assist HSSC develop good stories about S-100 implementation benefits.
Establish long term mariners review service agreement with IHO-Singapore Innovation laboratory in support of proposed new S-101 ECDIS portrayal and performance requirements in both, DF-ECDIS and post S-57 ENC retirement.	Objective, transparent and user driven process to accept/discard proposals related to the look and behavior of S-101 ENCs and the performance S-100 ECDIS.	Prepare and establish long term support task with clear workflows and agreed timeframes for reporting findings and recommendations. Action S-101PT8-11 also refers.	IHO Sec.	October 2023 (?)	Request are processed within agreed timeframes.	Reliance on mariners engagement by each testbed. Consider S101PT CL to HSSC Chair ??.
The wider understanding of S-100 benefits could be improved through communication and supporting evidence.	Gives clarity to stakeholders and supports their investment in S-101/S-100.	Develop materials which clearly describe the impacts and benefits of S-101. Expand this using outcomes from testbeds.	HSSC?	October 2023 (?)	Graphical material (physical and/or online) is produced by the IHO highlighting major difference between S-57/S-52 and S-101.	Dependency with first row. S-101PT chair has started an S-101 Overview slide deck, Consider S101PT CL to HSSC Chair ??.

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5. Performance indicators of S-101 PS process

Progress on milestones from S-101 Ed 1.0.0 to Ed 2.0.0		
Goal	Monitor progress to meet deadlines	
Measurement field (KPI)	Milestones	Progress Status
	Submit Edition 1.1.0 for S100WG Approval before HSSC15	Completed
	Submit Edition 1.2.0 for S100WG Approval by November 2023	At Risk (Low)
	Submit Edition 2.0.0 for HSSC Endorsement by May 2024	At Risk (High)
Method and presentation of results	GANTT Diagram	
Update periodicity	3 months	
Accountable	S101PT Chair & S100WG Chair	

It is important to note that S-164 and S-98 Annex C are considered to be in the critical path for an operational DF-ECDIS from 2026.

GANTT Diagram

Currently managed in MS Project