



# USCHC Gap Analysis

USCHC45

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(updated June 9)



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## Gap Analysis

International  
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- USCHC has drafted an **IHO SP** gap analysis **applied to the Commission**
- This analysis benefits greatly from the analysis and distillation conducted by the Arctic Regional Hydrographic Commission (ARHC)
- USCHC gap analysis table summarized in USCHC45\_09A
  - **26 pages, 15 page table- three goals and SPIs with comments on each SPI**
  - **Includes most recent C-55 entries for US and CA pertaining to INT Region A**
- A gap analysis ‘takeaways’ document is available for this meeting to help summarize and show general observations. **see USCHC45\_09c**

# USCHC IHO Strategic Plan Gap Analysis

## USCHC – IHO Strategic Plan 2021-2026: GAP Analysis

Date of last edit 2022-05-26 (Ref: IHO Strategic Plan 2021-2026)

GOAL 1	Target	Current State	Gap	Actions
Goal 1: Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation	<p>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</p> <p>1.2 Develop standards, specifications and guidelines in the areas of data assurance, including cyber security and data quality assessment</p> <p>1.3 Use capacity building and training to develop and increase the ability of Member States to support safety and efficiency of maritime navigation</p>	n/a	n/a	<p><b>Highlights/observations:</b></p> <ul style="list-style-type: none"> <li>-Both USCHC (US and CA) Member States (MS) are active in IHO bodies which are responsible for the development of standards, specifications, and guidelines for products, services, and data quality.</li> <li>-They work with each other, participate in the IHO WENDWG and/or are members of RENCs in an effort to coordinate the production and the secure delivery of quality national, regional and global products and services. US is a member of IC-ENC and CA has a Digital Super-dealer agreement with PRIMAR.</li> <li>-Both MS are capable of supporting safe and efficient navigation in most of their waters, however, in some areas of INT Region A, there still exist shortcomings in the quality and coverage of hydrographic data.</li> <li>-MS are generally well advanced with respect to their capacities for deliver hydrographic services. Both MS actively support capacity building (CB) efforts both in terms of the IHO 3-phase CB Strategy and other CB-related projects such as e-learning development and the IHO project on <i>Empowering Women in Hydrography</i>.</li> <li>-Training (in-person and on-line) is an ongoing activity for CA and US.</li> <li>-Ultimately, a dashboard indicating the progress of the all SPIs in the Strategic Plan should be developed.</li> <li>-MS are promoting the use of S-xxx to other potential data providers.</li> </ul>
<p><b>Strategic Performance Indicators</b></p> <p><b>1.1.1</b></p>	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	100%	0%	<p><b>Highlights/observations:</b></p> <ul style="list-style-type: none"> <li>-This SPI requires a better definition (see Questions below).</li> <li>-Both MS have done some preliminary development on products and services for the 'First Step' noted in the <i>Roadmap for the S-100 Implementation Decade, Annex 2</i> plan and are confident they will</li> </ul>

# Selected Takeaways from the USCHC IHO SP Gap Analysis

## Goal One

**Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation**

### Administrative and organizational

- Generate and maintain active list on the IHO WGs where US and CA have members.
- Create a dashboard of how USCHC is moving on the IHO SP.
- USCHC determine which routes in Region A might lend themselves to autonomous shipping
- Seek clarification from HSSC on “autonomous shipping and emission reduction.” How should we report out?

### Discussion and Decision

- SPI discussion: “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%)”. Define “operational”. What is 100%? Cite the “framework” document.
- List the S-100 roadmap deliverables by 2026 and assess US and CA prospects. Need reference document.
- S-101 alone will not be enough for users to update their systems.
- What is S-128 (“catalog of nautical products”)?
- Cybersecurity discussion:
  - Have the cyber-security specifications been finalized?
  - How is the denominator in this equation calculated?



- Using the gap analysis, for each IHO SP goal, takeaways were divided into “administrative and reporting” and “discussion and decision”
- Related - U.S. paper submitted to IRCC
  - Uncertainty in interpreting coastal state indicators
  - Seeks broader discussion, definition and common understanding of six SPIs, which are anchored in Member State reporting
  - Seeks clarification of assumptions to build a standardized reporting process
  - **See IRCC14-08B**
- Overall, in the USCHC gap analysis, many points came up that are worthy of discussion



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## Discussion

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- Highlighting four key points today for consideration:
  1. Suggest action to task the USCHC Secretariat to address the “administrative or organizational”-type takeaways
  2. Discuss today ??:
    - Goal One: a common understanding of SPI 1.3.1 (“Ability and capability of Member States to meet the requirements and delivery phases of the S-100 implementation plan”) and/or wait for wait for guidance from the IHO Secretariat, IRCC, or other body.
    - Goal Two: Does USCHC need a strategy and communications plan to accelerate and increase coverage to support increasing MSDI and/or improved appreciation of value of hydrographic data in the region?
    - Goal Three: Consider whether USCHC wants a UNDecade of Ocean Science engagement strategy and what that would look like. This could be related to the previous point and development of a regional MSDI.

Next slides address each one of these





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# Discussion

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## Goal One

**Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation**

Discuss a common understanding of SPI 1.3.1 (“Ability and capability of Member States to meet the requirements and delivery phases of the S-100 implementation plan”) and/or wait for guidance from the IHO Secretariat, IRCC, or other body?

- Does ability and capability require actual delivery?
- S-100 implementation plan citation?
- How to measure the target: « 2026: 50% »
  - 50% of member states say « yes »?
  - 50% of milestones per the S-100 rollout timeline achieved by each member state?
  - Other



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# Roadmap for the S-100 Implementation Decade (2020 – 2030) Version 1.0 Rev 1\*

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<b>S-101</b>	Electronic Navigational Chart (ENC)
<b>S-102</b>	Bathymetric Surface
<b>S-104</b>	Water Level Information for Surface Navigation
<b>S-111</b>	Surface Currents
<b>S-122</b>	Marine Protected Areas
<b>S-123</b>	Radio Services
<b>S-124</b>	Navigational warnings
<b>S-129</b>	Under Keel Clearance Management

8 S100 product specifications are “prioritized”

Ref: \*[https://iho.int/uploads/user/About%20IHO/Council/S-100\\_ImplementationStrategy/S100\\_Roadmap\\_Decade\\_v1Rev1\\_EN\\_16Nov2020.pdf](https://iho.int/uploads/user/About%20IHO/Council/S-100_ImplementationStrategy/S100_Roadmap_Decade_v1Rev1_EN_16Nov2020.pdf)





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# Roadmap for the S-100 Implementation Decade version 2.0 December 16 2021\*

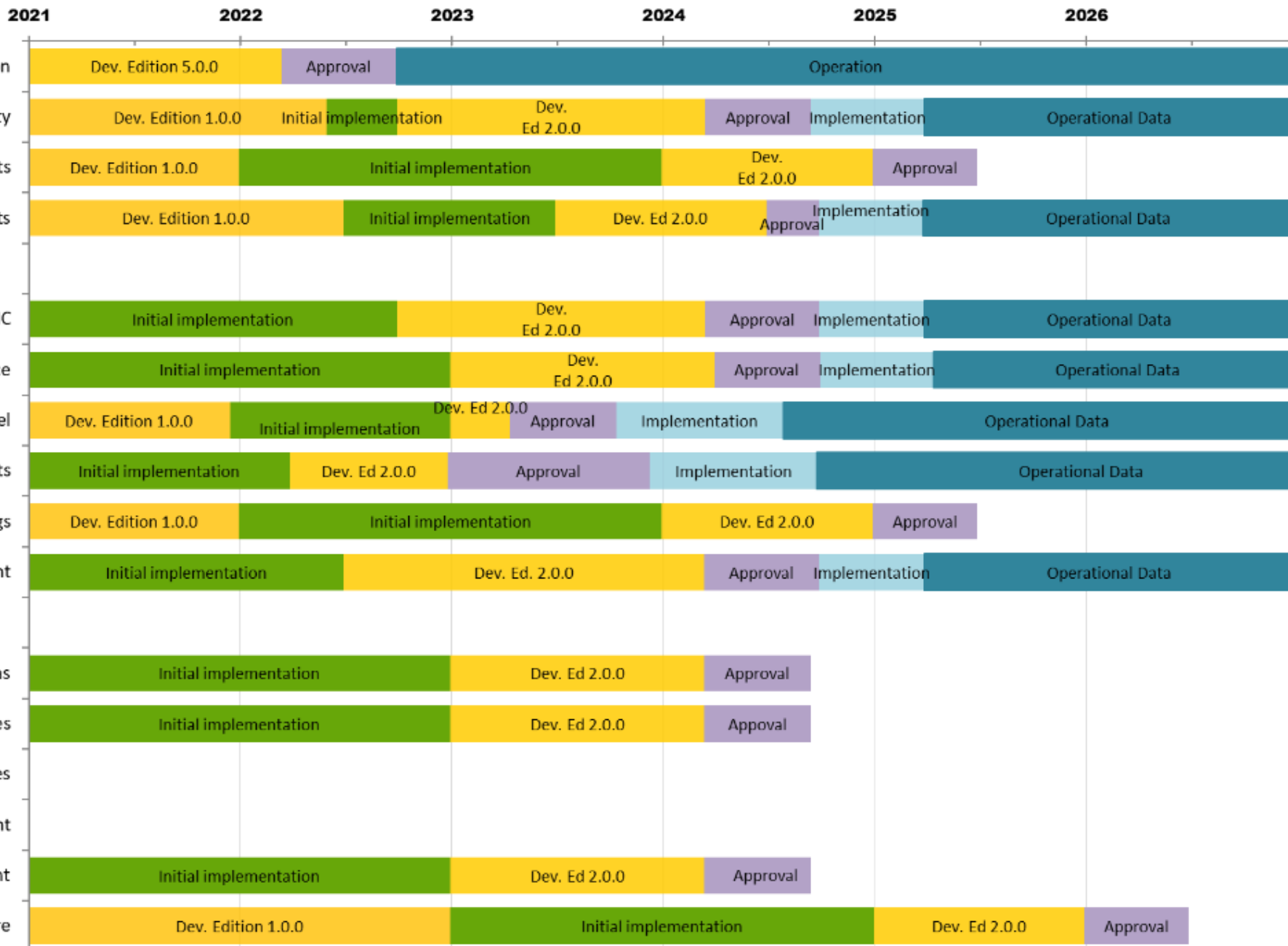
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The referenced Meetings of the IHO Council confirmed repeatedly the decision to task the chairs of the Council, HSSC, IRCC and the Secretary-General, supported by subject matter experts and Member States as appropriate, to maintain the Roadmap as an incremental version-controlled document (including narrative and timelines) on an annual basis.

1. Operational infrastructure
2. Technical standardization
3. Coordinated implementation of services
4. Synchronization with IMO
5. Collaboration with industry
6. Capacity Building of Hydrographic Offices
7. Development of Global Distribution Capability

\*[https://iho.int/uploads/user/About%20IHO/Council/S-100\\_implementationstrategy/S-100\\_Roadmap\\_Decade\\_v2.0\\_EN\\_16Dec2021.pdf](https://iho.int/uploads/user/About%20IHO/Council/S-100_implementationstrategy/S-100_Roadmap_Decade_v2.0_EN_16Dec2021.pdf)

# S-100 PRODUCT SPECIFICATIONS DEVELOPMENTS AND TIMELINE



Draft Working Version of Timeline (roadmap?)  
June 2022

Goal One

Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation

Discuss a common understanding of SPI 1.3.1

*“Ability and capability of Member States to meet the requirements and delivery phases of the S-100 implementation plan”*

and/or wait for guidance from the IHO Secretariat, IRCC, or other body?



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## Discussion

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### Goal Two

Increasing the use of hydrographic data for the benefit of society

Does USCHC need a strategy and communications plan to accelerate and increase coverage to support increasing MSDI and/or improved appreciation of value of hydrographic data in the region?

- What is the intended outcome?
- Who is the audience?
- What resources are required?
- How does this relate to global audiences and other regional initiatives?
- ...



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**Discussion**

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### **Goal Three**

**Participating actively in international initiatives related to the knowledge and the sustainable use of the Ocean**

Consider whether USCHC wants a UNDecade of Ocean Science engagement strategy and what that would look like. This could be related to the previous point and development of a regional MSDI.