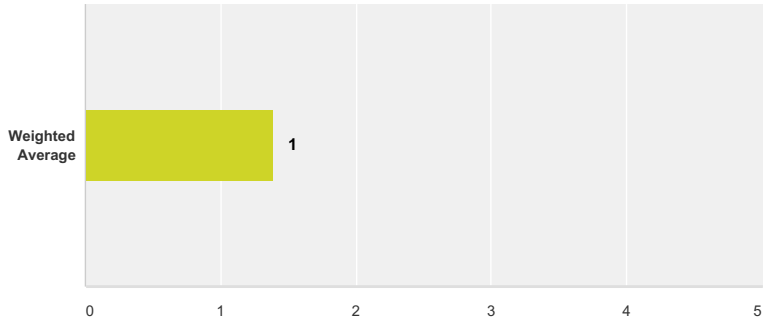
## Q1 Which part of the hydrographic world do you represent?

Answered: 26 Skipped: 0

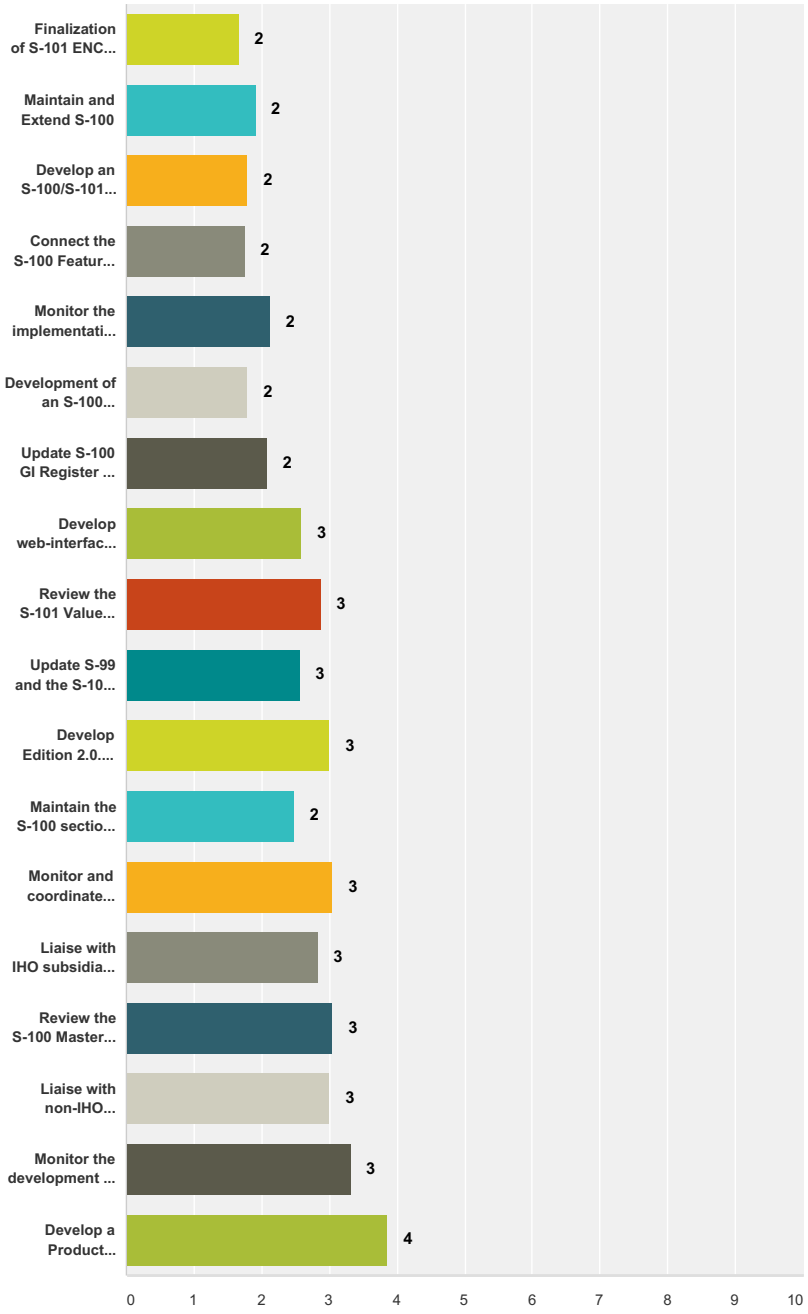



| Answer Choices | Responses | |
|---|---|---|
| Hydrographic Office | **50.00%** | 13 |
| Software Developer | **15.38%** | 4 |
| ECDIS/ECS Manufacture | **19.23%** | 5 |
| Academia | **0.00%** | 0 |
| NGO | **0.00%** | 0 |
| Other (please specify) | **15.38%** | 4 |
| **Total** | | **26** |

| # | Other (please specify) | Date |
|---|---|---|
| 1 | RENC | 4/22/2016 9:16 AM |
| 2 | ENC Service provider | 4/15/2016 12:16 AM |
| 3 | Research Institute | 3/31/2016 11:58 PM |
| 4 | Geospatial services company | 3/29/2016 4:35 PM |

## Q2 Please pick assign a ranking to each of the S-100 Workplan items

Answered: 25 Skipped: 1



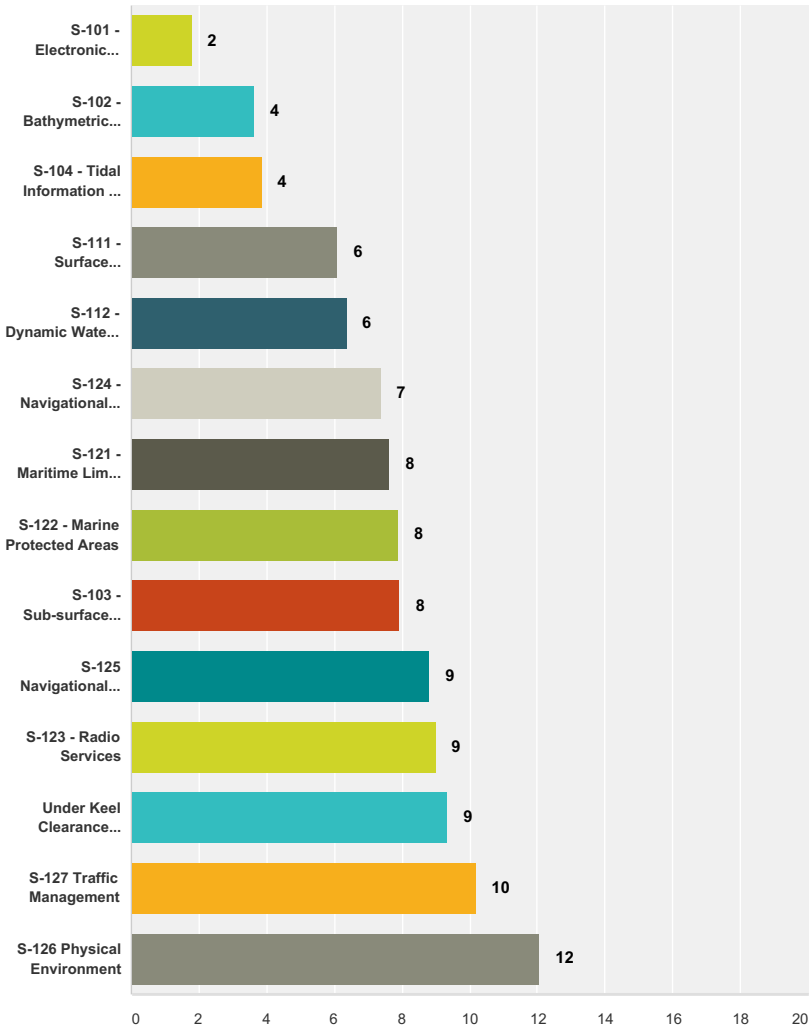

| | Most Important | Very Important | Important | Not So Important | Least Important | N/A | Total | Weighted Average |
|---|---|---|---|---|---|---|---|---|
| Finalization of S-101 ENC Product Specification | 64.00% 16 | 8.00% 2 | 24.00% 6 | 4.00% 1 | 0.00% 0 | 0.00% 0 | 25 | 1.68 |
| Maintain and Extend S-100 | 52.00% 13 | 12.00% 3 | 32.00% 8 | 0.00% 0 | 4.00% 1 | 0.00% 0 | 25 | 1.92 |
| Develop an S-100/S-101 Test Strategy and Test Bed | 48.00% 12 | 24.00% 6 | 28.00% 7 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 25 | 1.80 |
| Connect the S-100 Feature Catalogue Builder to the S-100 GI Register | 44.00% 11 | 32.00% 8 | 20.00% 5 | 0.00% 0 | 0.00% 0 | 4.00% 1 | 25 | 1.75 |
| Monitor the implementation of the 1st draft of S-101 ENC product specification | 44.00% 11 | 12.00% 3 | 32.00% 8 | 12.00% 3 | 0.00% 0 | 0.00% 0 | 25 | 2.12 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Development of an S-100 Interoperability Specification | **40.00%** 10 | **40.00%** 10 | **20.00%** 5 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | 25 | 1.80 |
| Update S-100 GI Register to edition 2.0.0 and re-build the web-interfaces | **36.00%** 9 | **24.00%** 6 | **28.00%** 7 | **8.00%** 2 | **0.00%** 0 | **4.00%** 1 | 25 | 2.08 |
| Develop web-interfaces to propose new symbology to the S-100 Portrayal Register | **20.00%** 5 | **20.00%** 5 | **40.00%** 10 | **12.00%** 3 | **4.00%** 1 | **4.00%** 1 | 25 | 2.58 |
| Review the S-101 Value Added Roadmap annually | **20.83%** 5 | **12.50%** 3 | **33.33%** 8 | **25.00%** 6 | **8.33%** 2 | **0.00%** 0 | 24 | 2.88 |
| Update S-99 and the S-100 Registry pages for the registration of S-100 product specifications | **16.67%** 4 | **25.00%** 6 | **41.67%** 10 | **8.33%** 2 | **4.17%** 1 | **4.17%** 1 | 24 | 2.57 |
| Develop Edition 2.0.0 of S-102 Bathymetric Content Specification. | **16.00%** 4 | **20.00%** 5 | **20.00%** 5 | **28.00%** 7 | **12.00%** 3 | **4.00%** 1 | 25 | 3.00 |
| Maintain the S-100 section of the IHO website | **16.00%** 4 | **32.00%** 8 | **40.00%** 10 | **12.00%** 3 | **0.00%** 0 | **0.00%** 0 | 25 | 2.48 |
| Monitor and coordinate interactions with OGC and IOGP, to ensure proper harmonization in the development of standards | **12.00%** 3 | **24.00%** 6 | **16.00%** 4 | **28.00%** 7 | **12.00%** 3 | **8.00%** 2 | 25 | 3.04 |
| Liaise with IHO subsidiary bodies and subordinate organs, e.g. WWNWS-SC, NIPWG, ENCWG, etc. | **12.00%** 3 | **28.00%** 7 | **28.00%** 7 | **20.00%** 5 | **8.00%** 2 | **4.00%** 1 | 25 | 2.83 |
| Review the S-100 Master Plan annually | **8.00%** 2 | **24.00%** 6 | **24.00%** 6 | **36.00%** 9 | **4.00%** 1 | **4.00%** 1 | 25 | 3.04 |
| Liaise with non-IHO constituents, e.g. IALA E-nav Committee, IEHC, JCOMM Expert Teams, DGIWG, ISO, marine navigation and GIS industry, etc. | **8.00%** 2 | **28.00%** 7 | **24.00%** 6 | **28.00%** 7 | **8.00%** 2 | **4.00%** 1 | 25 | 3.00 |
| Monitor the development of other related international standards | **4.00%** 1 | **16.00%** 4 | **36.00%** 9 | **32.00%** 8 | **12.00%** 3 | **0.00%** 0 | 25 | 3.32 |
| Develop a Product Specification for Underkeel Clearance Management (UKCM) Information. | **0.00%** 0 | **8.00%** 2 | **16.00%** 4 | **44.00%** 11 | **20.00%** 5 | **12.00%** 3 | 25 | 3.86 |

| # | Other (please specify) | Date |
|---|---|---|
| 1 | Mentioning NIPWG and ENCWG in the same context should be reconsidered because the first is related to S-100 and the latter to old standards, such as S-57 and S-52 | 4/26/2016 1:10 AM |
| 2 | We are only really interested in S-101. | 4/22/2016 9:23 AM |
| 3 | Maintain a public transition plan with ALL interested parties for how e.g. S101 and S57 both will be "effective standards" for ENC data. Many different implications depending on if you are a HO, RENC, distributor, ECS/ECDIS, GIS manufacturer, end-user. How will S57 and S101 co-exist for a foreseeable time? | 4/15/2016 1:20 AM |
| 4 | To get in contact with mariners in order to have clear indications on what are the real needs for products interoperability | 4/14/2016 7:57 AM |

## Q3 What S-100 based Product Specifications currently under development by the IHO interest you the most from either a hydrographic office perspective or from an software developer/equipment manufacturer perspective? (1 being the most important and 14 being the least important). Note, only one response per column is allowed.

Answered: 25 Skipped: 1

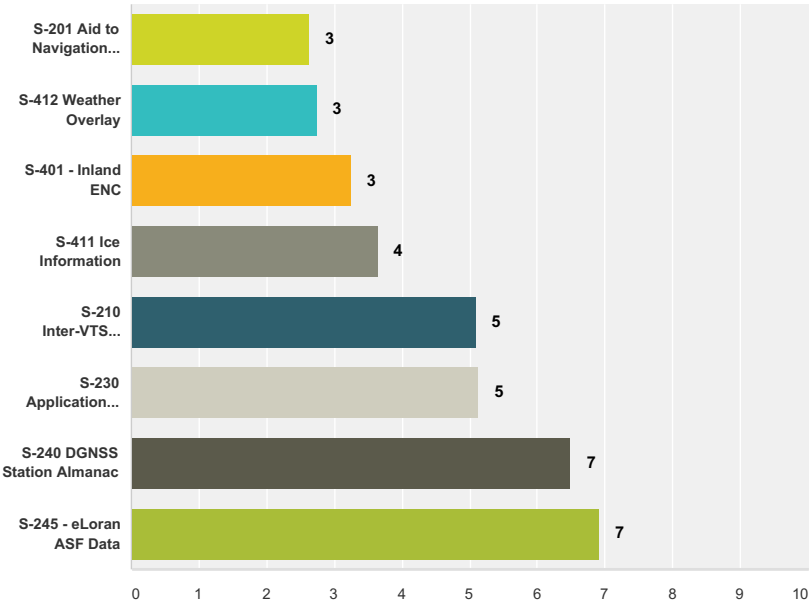



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | N/A | Total | Weighted Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-101 - Electronic Navigational Chart | 84.00% 21 | 8.00% 2 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 8.00% 2 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 25 | 1.80 |
| S-102 - Bathymetric Surface | 8.33% 2 | 45.83% 11 | 8.33% 2 | 12.50% 3 | 0.00% 0 | 8.33% 2 | 8.33% 2 | 0.00% 0 | 4.17% 1 | 4.17% 1 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 24 | 3.63 |
| S-104 - Tidal Information for Surface Navigation | 0.00% 0 | 14.29% 3 | 42.86% 9 | 14.29% 3 | 9.52% 2 | 0.00% 0 | 9.52% 2 | 0.00% 0 | 4.76% 1 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 4.76% 1 | 21 | 3.90 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-111 - Surface Currents | **0.00%** 0 | **0.00%** 0 | **14.29%** 3 | **14.29%** 3 | **28.57%** 6 | **4.76%** 1 | **14.29%** 3 | **9.52%** 2 | **4.76%** 1 | **0.00%** 0 | **4.76%** 1 | **0.00%** 0 | **0.00%** 0 | **4.76%** 1 | **0.00%** 0 | 21 | 6.10 |
| S-112 - Dynamic Water Level Data | **0.00%** 0 | **8.70%** 2 | **4.35%** 1 | **17.39%** 4 | **8.70%** 2 | **17.39%** 4 | **4.35%** 1 | **13.04%** 3 | **17.39%** 4 | **4.35%** 1 | **0.00%** 0 | **0.00%** 0 | **4.35%** 1 | **0.00%** 0 | **0.00%** 0 | 23 | 6.39 |
| S-124 - Navigational Warnings | **0.00%** 0 | **4.17%** 1 | **12.50%** 3 | **4.17%** 1 | **12.50%** 3 | **8.33%** 2 | **4.17%** 1 | **8.33%** 2 | **8.33%** 2 | **25.00%** 6 | **8.33%** 2 | **4.17%** 1 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | 24 | 7.38 |
| S-121 - Maritime Limits and Boundaries | **0.00%** 0 | **4.00%** 1 | **12.00%** 3 | **16.00%** 4 | **0.00%** 0 | **4.00%** 1 | **16.00%** 4 | **16.00%** 4 | **0.00%** 0 | **0.00%** 0 | **12.00%** 3 | **4.00%** 1 | **12.00%** 3 | **4.00%** 1 | **0.00%** 0 | 25 | 7.64 |
| S-122 - Marine Protected Areas | **0.00%** 0 | **4.00%** 1 | **0.00%** 0 | **8.00%** 2 | **8.00%** 2 | **12.00%** 3 | **8.00%** 2 | **16.00%** 4 | **12.00%** 3 | **20.00%** 5 | **4.00%** 1 | **4.00%** 1 | **4.00%** 1 | **0.00%** 0 | **0.00%** 0 | 25 | 7.88 |
| S-103 - Sub-surface Navigation | **0.00%** 0 | **9.09%** 2 | **13.64%** 3 | **0.00%** 0 | **9.09%** 2 | **9.09%** 2 | **4.55%** 1 | **0.00%** 0 | **0.00%** 0 | **13.64%** 3 | **9.09%** 2 | **9.09%** 2 | **4.55%** 1 | **9.09%** 2 | **9.09%** 2 | 22 | 7.95 |
| S-125 Navigational Services | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **4.35%** 1 | **13.04%** 3 | **4.35%** 1 | **8.70%** 2 | **26.09%** 6 | **0.00%** 0 | **4.35%** 1 | **17.39%** 4 | **17.39%** 4 | **0.00%** 0 | **4.35%** 1 | **0.00%** 0 | 23 | 8.83 |
| S-123 - Radio Services | **0.00%** 0 | **0.00%** 0 | **4.76%** 1 | **4.76%** 1 | **4.76%** 1 | **9.52%** 2 | **9.52%** 2 | **4.76%** 1 | **19.05%** 4 | **9.52%** 2 | **9.52%** 2 | **9.52%** 2 | **4.76%** 1 | **9.52%** 2 | **0.00%** 0 | 21 | 9.00 |
| Under Keel Clearance Management | **4.17%** 1 | **4.17%** 1 | **0.00%** 0 | **4.17%** 1 | **12.50%** 3 | **8.33%** 2 | **4.17%** 1 | **0.00%** 0 | **8.33%** 2 | **4.17%** 1 | **8.33%** 2 | **0.00%** 0 | **8.33%** 2 | **29.17%** 7 | **4.17%** 1 | 24 | 9.35 |
| S-127 Traffic Management | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **4.35%** 1 | **0.00%** 0 | **13.04%** 3 | **4.35%** 1 | **8.70%** 2 | **17.39%** 4 | **4.35%** 1 | **0.00%** 0 | **13.04%** 3 | **21.74%** 5 | **13.04%** 3 | **0.00%** 0 | 23 | 10.17 |
| S-126 Physical Environment | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **4.55%** 1 | **0.00%** 0 | **4.55%** 1 | **0.00%** 0 | **18.18%** 4 | **22.73%** 5 | **31.82%** 7 | **13.64%** 3 | **4.55%** 1 | 22 | 12.05 |

## Q4 What Product Specifcations that are under development from outside of the IHO interest you the most from a Hydrographic Office or software developer/equipment manufacturer perspective? (1 being the most important and 8 being the least important). Note, only one response per column is allowed.

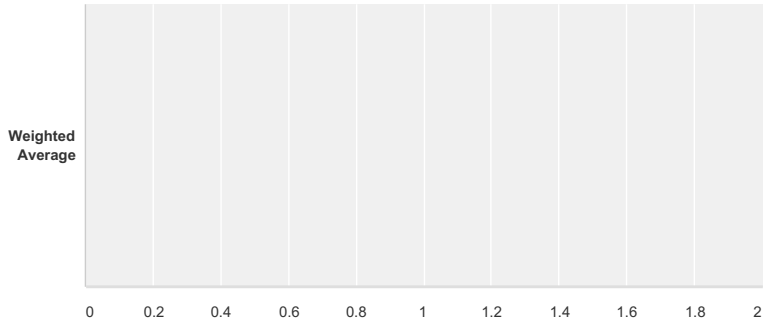
Answered: 25 Skipped: 1




| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | N/A | Total | Weighted Average |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S-201 Aid to Navigation Information | 36.00% 9 | 24.00% 6 | 8.00% 2 | 16.00% 4 | 8.00% 2 | 4.00% 1 | 4.00% 1 | 0.00% 0 | 0.00% 0 | 25 | 2.64 |
| S-412 Weather Overlay | 32.00% 8 | 20.00% 5 | 24.00% 6 | 12.00% 3 | 4.00% 1 | 0.00% 0 | 0.00% 0 | 8.00% 2 | 0.00% 0 | 25 | 2.76 |
| S-401 - Inland ENC | 21.74% 5 | 26.09% 6 | 17.39% 4 | 13.04% 3 | 0.00% 0 | 8.70% 2 | 8.70% 2 | 4.35% 1 | 0.00% 0 | 23 | 3.26 |
| S-411 Ice Information | 8.00% 2 | 20.00% 5 | 24.00% 6 | 16.00% 4 | 12.00% 3 | 0.00% 0 | 4.00% 1 | 8.00% 2 | 8.00% 2 | 25 | 3.65 |
| S-210 Inter-VTS Exchange Format | 0.00% 0 | 13.04% 3 | 8.70% 2 | 8.70% 2 | 30.43% 7 | 13.04% 3 | 17.39% 4 | 8.70% 2 | 0.00% 0 | 23 | 5.09 |
| S-230 Application Specific Messages | 0.00% 0 | 0.00% 0 | 20.83% 5 | 20.83% 5 | 12.50% 3 | 25.00% 6 | 12.50% 3 | 8.33% 2 | 0.00% 0 | 24 | 5.13 |
| S-240 DGNSS Station Almanac | 0.00% 0 | 0.00% 0 | 0.00% 0 | 4.35% 1 | 13.04% 3 | 21.74% 5 | 43.48% 10 | 13.04% 3 | 4.35% 1 | 23 | 6.50 |
| S-245 - eLoran ASF Data | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 12.50% 3 | 29.17% 7 | 12.50% 3 | 45.83% 11 | 0.00% 0 | 24 | 6.92 |

## Q5 Do you feel that TR 2/2007 adequately covers the standards development lifecycle for the IHO?

Answered: 23 Skipped: 3

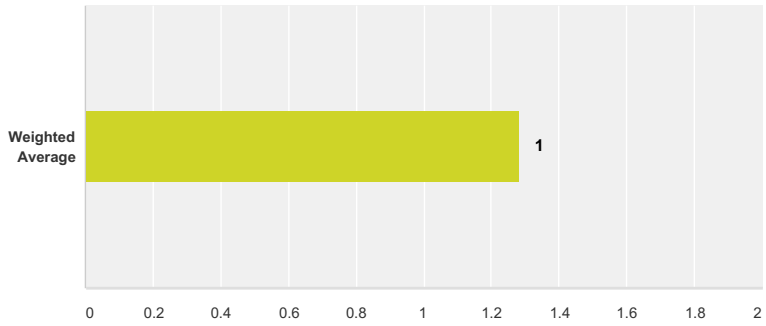



| Answer Choices | Responses | |
|---|---|---|
| Yes | **69.57%** | 16 |
| No | **30.43%** | 7 |
| **Total** | | **23** |

| # | If you answered No, please suggest some improvements | Date |
|---|---|---|
| 1 | To circumstantial for S-100, OK for Product Specs | 4/26/2016 2:34 AM |
| 2 | Emphasize transition and consequences for all stakeholders. | 4/15/2016 1:40 AM |
| 3 | Considering the growing requirements on various product specifications, it need to simplify the development life cycle. | 4/1/2016 12:03 AM |
| 4 | Allow WG to process and approve revisions, not just clarifications. Adopt streamlined standards approval processes not necessarily involving circular letters. | 3/31/2016 12:11 PM |
| 5 | The evaluation of the classification of a change to a standard (new edition vice revision vice clarification) is assumed in assignment to the committee before stakeholder engagement, or perhaps with 'soft' stakeholder(s) on the committee voicing intent and relevant impact. As most changes will have commercial impact, a period of industry assessment, possibly through an RFI process, could improve the ability of the IHO to gauge impact and potential 'ripple effects' before the work program begins. | 3/30/2016 3:25 PM |
| 6 | Life cycle does not provide timeline for phases. There is no concept of time defined. For example, what does "fast-track" mean? | 3/30/2016 6:30 AM |
| 7 | Need to establish predictable lifecycle of development. | 3/29/2016 11:46 PM |

## Q6 Do you feel that the maintenance of S-100 should be put into a timed lifecycle? For example, S-100 will publish a full new edition every X number of years that will include any new extensions.

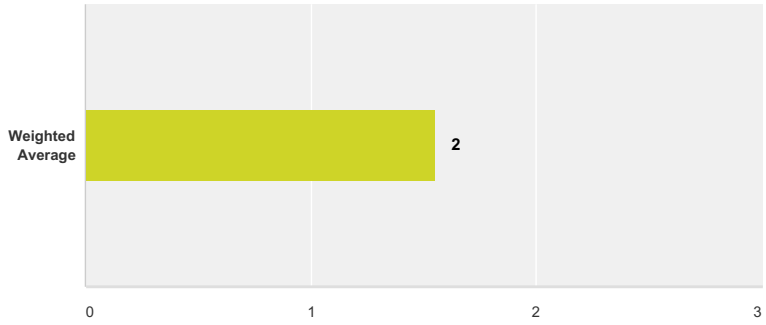
Answered: 25 Skipped: 1




| Answer Choices | Responses | |
|---|---|---|
| Yes | 72.00% | 18 |
| No | 28.00% | 7 |
| Total | | 25 |

## Q7 If you answered Yes to the previous question, what is the appropriate timespan between new editions of S-100?

Answered: 18 Skipped: 8




| Answer Choices | Responses | |
|---|---|---|
| 2 years | 38.89% | 7 |
| 3 years | 33.33% | 6 |
| 4 years | 16.67% | 3 |
| Other (please specify) | 11.11% | 2 |
| Total | | 18 |

| # | Other (please specify) | Date |
|---|---|---|
| 1 | 1 year. | 3/30/2016 3:25 PM |
| 2 | Must complete one full implementation first, i.e. S-101 then determine cycle. Best guess would be 3 year cycle at that point. | 3/30/2016 6:30 AM |

## Q8 Do you have any other comments, questions, or concerns for consideration by the HSSC Chair Group?

Answered: 8 Skipped: 18

| # | Responses | Date |
|---|---|---|
| 1 | New editions of standards should be considered as and when required. | 4/22/2016 9:28 AM |
| 2 | shipping companies require more contour lines in ENC´s | 4/21/2016 1:35 AM |
| 3 | Need to have a conscious awareness of relationships between some IHO standards today (S63, S57, S58, S65), and if/how such a relationship will be maintained with the new S10x standards and how their development will be synchronised | 4/15/2016 1:40 AM |
| 4 | in (7), I believe 3 years is a rather arbitrary number that fits the current IHO working group decision periodicity; 2 is too short for the group, and 4 is too long and likely to be offset from the IHC. New editions of S-100 should not be constrained by hardware manufacturers, and software can be updated, even with high-fidelity testing, on an annual basis. Thus, my concern is that the IHO not 'lock' the safety of navigation into a cycle of improvement that is too slow to leverage Internet of Things, the sensor 'web' in Ports, or other technologies that will impact safety of navigation. S-100 needs to be agile to adapt to these technologies, not specific hardware interfaces that are, at root, simply manifestations of software controls. | 3/30/2016 3:25 PM |
| 5 | Timing. The new S-100 based specifications could take too long to implement. We would like to see the standards in full use in less than 10 years. | 3/30/2016 2:33 PM |
| 6 | IHO technical standards Maintenance Body (MB) should attempt to harmonize technical input from all contributors. MB should be run by IHO MS neutral person. Impasse should be resolved by MB and a way forward presented in timely manner. Maintenance cycle can address issues as they arise. | 3/30/2016 6:30 AM |
| 7 | S-100WG focus on development and extension of S-100 and test bed for interoperability guideline. Also provide infrastructures to develop and harmonize S-xxx PS among the domain owners. | 3/29/2016 11:46 PM |
| 8 | Consider 4 year cycle for major updates and mandatory matters (for example changes requiring update of shipboard software installations or SOLAS-related ) and 2 year cycle for non-mandatory but "if provided" harmonization matters (for example harmonization considerations). | 3/29/2016 10:18 AM |