



UK Hydrographic  
Office

# Future of Navigation – being built on S-100 Data Standards

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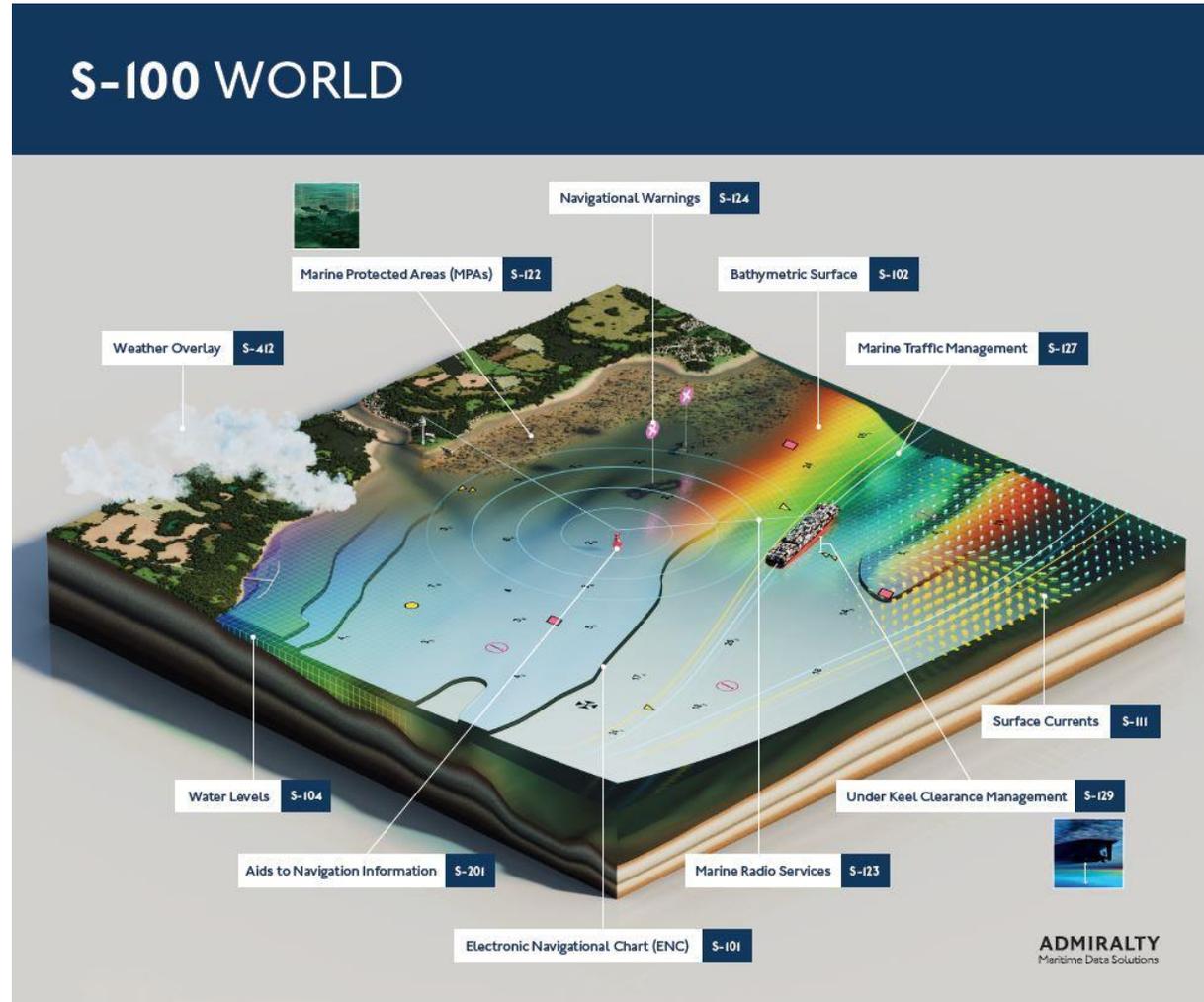
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# UK Hydrographic Office: S-100 World





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# UK Hydrographic Office: S-100 Animation





# S-100 Collaboration: UKHO & Shom (France)

- › To support improved understanding of the challenges regarding production, distribution and display of S-57 & S-101 datasets in S-100 ECDIS, we have agreed to collaborate on a joint S-100 project.
- › A key delivery of the project will be to provide evidence to the IHO community for the proposed risk assessment that navigational safety in ECDIS is ensured with the introduction of S-101 ENC. It is expected that this evidence can then also be used by IHO when reporting to IMO in support of the introduction of S-100 ECDIS.
- › The project will be based on a route between the Solent (UK) and Saint-Malo (France).
  
- › **Phase 1: Data Production** S-57 to S-101 conversion and native S-101 creation, Cell Updating, ENC scheming, Auxiliary file, ENC validation testing.
- › **Phase 2: Distribution** HO to RENC data delivery, digitally signed in accordance with S-100 part 15, RENC Validation, RENC delivery to VAR, Cybersecurity: encryption, digital signatures, licencing, compression, Distribution chain, testing Producer, RENC, VAR, Distributor, Mariner.
- › **Phase 3: Display** Involve OEM partners developing S-100 ECDIS, S-100 ECDIS sea trials, Sea trial results, HO/IMO S-100 ECDIS safety case.



# S-100 Collaboration: UKHO & BSH (Germany)

- › To ingest, process and serve up S-102 German Data Sets so we can build, measure and learn together.
- › We are expecting to gain learning and understanding, in partnership with BSH into the ingest, processing, support and usability of S-102 bathymetric surface data sets in a gridded HDF5 format.
- › The collaboration will enable us to test and build our end-to-end S-102 capability across the whole value chain from data supplier (BSH), Regional ENC centre (IC-ENC) and UKHO.
- › This is a new collaborative journey for both of us, so we are proposing an iterative approach to maximise our joint learnings and match the maturity of the data set standard with the early interest from our partners in the market in four phases:
  - › **Phase 1: Concept Development** to ingest and process a proof of concept for S-102 German Test Data Set in readiness to move towards early rounds of user testing.
  - › **Phase 2: Alpha Development** to test and gain user feedback and integrate into our early life S-100 IC-ENC Service and ADMIRALTY S-100 Data Service.
  - › **Phase 3: Beta Development** to expand the portfolio coverage and provide an updating service via IC-ENC and our ADMIRALTY S-100 Data Service in line with user feedback for testing and development with our global network of trusted partners.
  - › **Phase 4: Live Service Delivery** to provide an S-102 German Data Set which is maintained, updated and supported in line with user needs in the IC-ENC S-100 Data Service.



# S-100 Collaboration: UKHO & Hydrographic Community

- › We are working in the IHO Working Groups and Project Teams collaborating with a wide range of partners to support the development of IHO S-100 Product Specifications.
- › We are committed to collaborating with partner hydrographic domain experts to gain a deeper understanding of S-100 Standards and share learning and knowledge.
- › UKHO colleagues are participating in the following IHO Working Groups and Project Teams:
  - › **7 Working Groups:** S-100 WG, DQWG, ENCWG, NIPWG, TWCWG, NCWG, HSWG.
  - › **5 Project Teams:** S-101 PT, S-102 PT, S-121 PT, S-124 PT, S-131 PT.
  - › **1 Advisory Board:** ABLOS.
- › We are supporting ad-hoc requests from Hydrographic Office's that reach out to us. Making S-100 data sets available for testing, results of trials are fed back into the Technical Working Groups to ensure the S-100 Standard and associated Product Specifications are quality assured for the benefit of all.
- › If you want to access our freely available S-100 trial sets, they are available on the S-100 area of the [ADMIRALTY Marine Data Portal](#)

# UK Hydrographic Office: S-100 Training



## Key Information

- › The S-100 Introductory online course content and internal product testing was completed 21st Sept 21.
- › Completion of the S-100 online Introduction course will lead into the development of the established and advanced follow-on courses.
- › All training content is developed by UKHO subject matter experts (SMEs).



# S-100 Key Dates for 2021



Description	Date	Time Zone
Course Advertised*	10 <sup>th</sup> Sept 21	
Internal Test	21 <sup>st</sup> Sept 21	
Live Course (A)	05 <sup>th</sup> Oct 21 07 <sup>th</sup> Oct 21	UTC +1
Live Course (B)	12 <sup>th</sup> Oct 21 14 <sup>th</sup> Oct 21	UTC +1
Live Course (C )	26 <sup>th</sup> Oct 21 27 <sup>th</sup> Oct 21	UTC +9
Live Course (D)	09 <sup>th</sup> Nov 21 10 <sup>th</sup> Nov 21	UTC +4.5
Live Course (E)	16 <sup>th</sup> Nov 21 17 <sup>th</sup> Nov 21	UTC +8

\*Advertised to all IC-ENC members in the first instance



# S-100 Key Dates for 2021



Description	Date	Time Zone
Live Course (F)	23 <sup>rd</sup> Nov 21 24 <sup>th</sup> Nov 21	UTC +8
Live Course	30 <sup>th</sup> Nov 21 01 <sup>st</sup> Dec 21	UTC +12
Live Course	07 <sup>th</sup> Dec 21 08 <sup>th</sup> Dec 21	UTC +12
Live Course	14 <sup>th</sup> Dec 21 16 <sup>th</sup> Dec 21	UTC

For more information and booking please contact [internationaltraining@ukho.gov.uk](mailto:internationaltraining@ukho.gov.uk)

2022 – 2023 dates to be released depending on demand



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# Thank you

