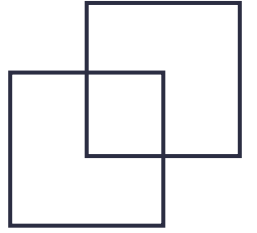


S-100 Implementation Update

Oman National Hydrographic Office
RSAHC 10
Jeddah 2024



Points



- **The importance of Precision Marine Navigation**
- **IHO Roadmap for the S-100 Implementation**
- **ONHO S-100**
- **S-100 Framework in ONHO**
- **ONHO S-100 Development Timeline**
- **Implementation Challenges**

The importance of Precision Marine Navigation

...the ability of a vessel to safely and efficiently navigate within the Omani waters.

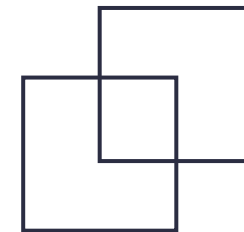
- ✓ Making the marine navigation data more accessible can enhance the decision-making process
- ✓ improved marine safety
- ✓ Reduced collisions and groundings
- ✓ Avoiding hazardous weather conditions

The General goal

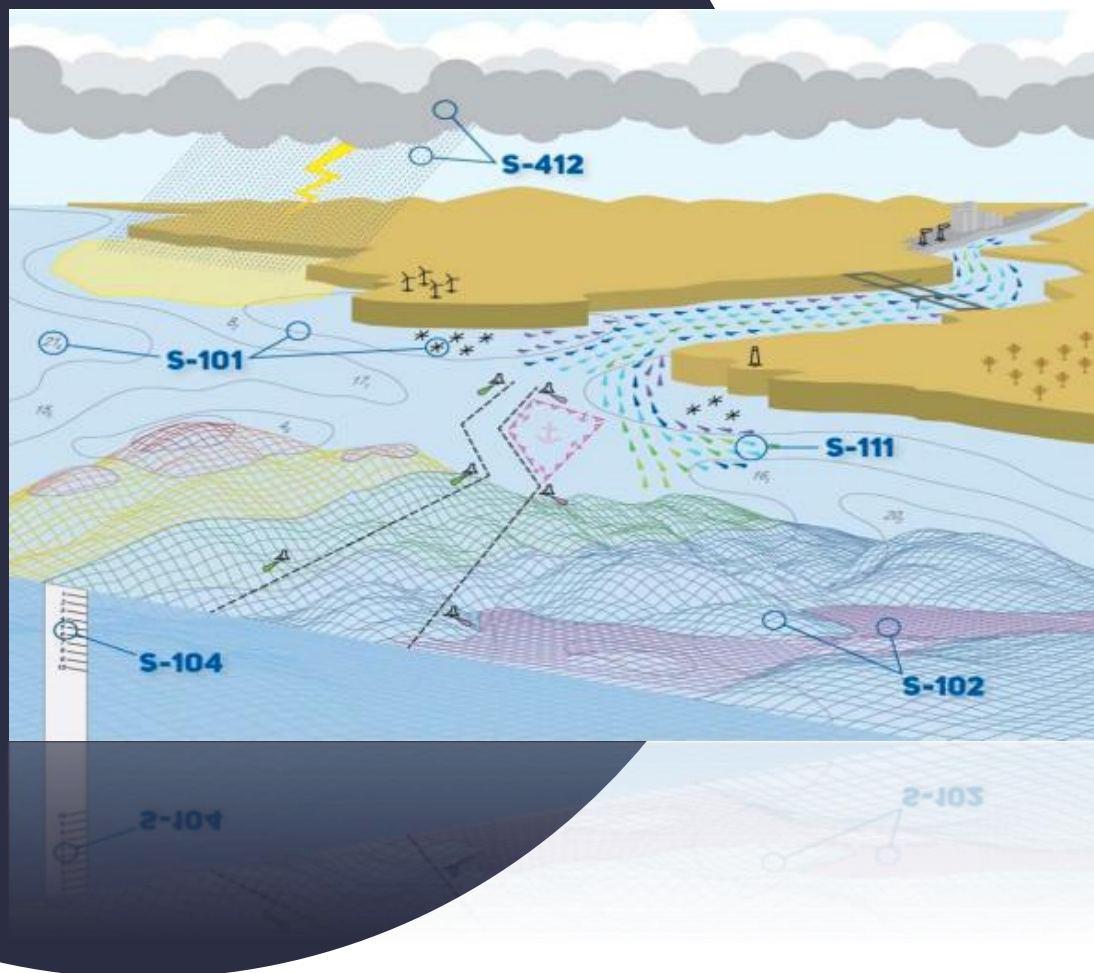
All partners have knowledge and understanding of S100 standards, related IMO resolutions and IHO plans and objectives for S-100 implementation.



IHO Roadmap for the S-100 Implementation

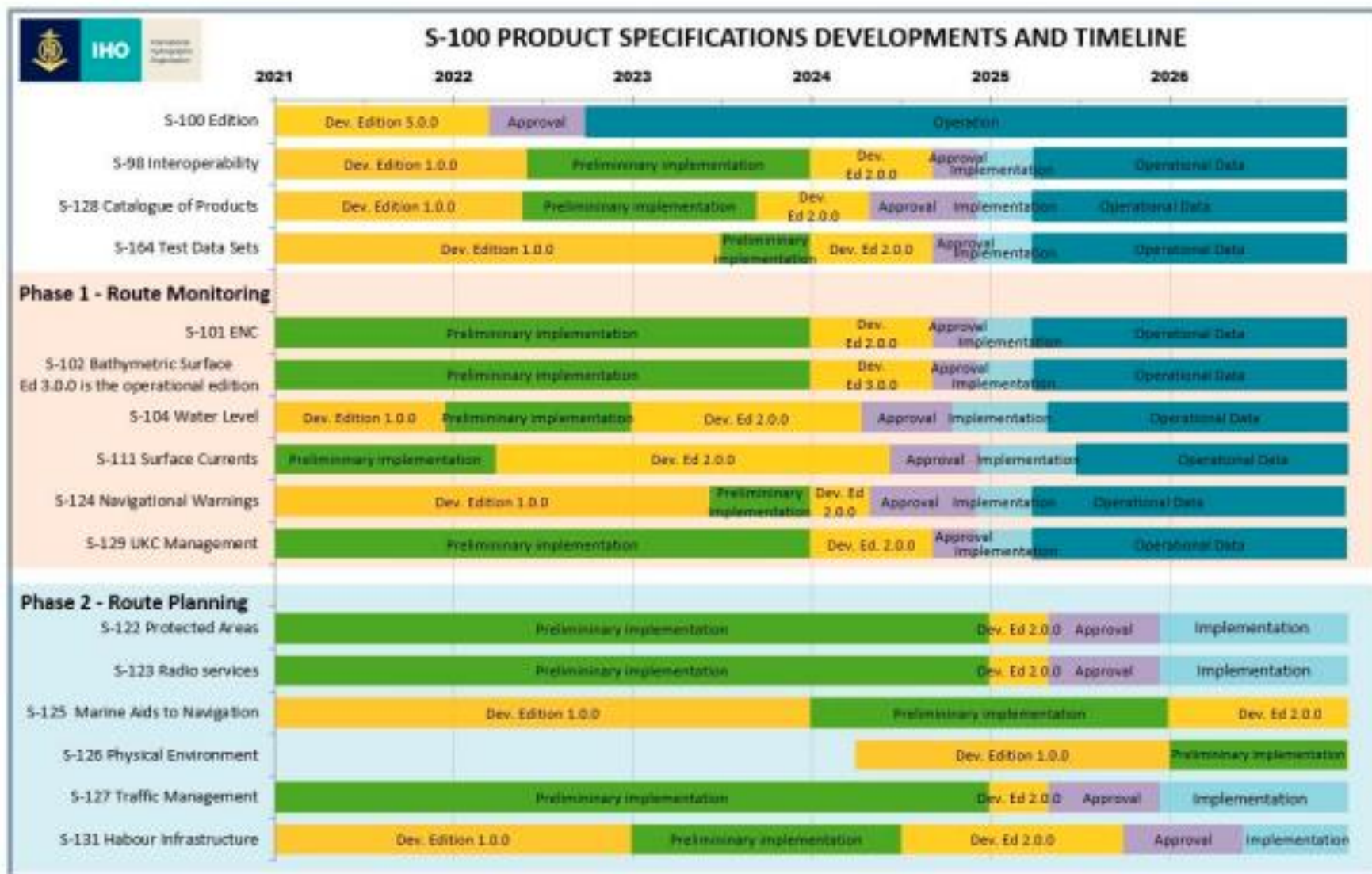


S-100 Data Products



S-101: Electronic Navigational Charts	S-102: Bathymetric Surface
S-104: Water Level Information for Surface Navigation	S-104: Water Level Information
S-111: Surface Currents	S-122: Marine Protected Areas
S-124: Navigational Warnings	S-128: Catalogues of Nautical Products
S-129: Under Keel Clearance Management	S-123: Radio Services
S-131: Marine Harbour Infrastructure	S-201: Aids to Navigation Information
S-412: Weather Overlay	S-413: Weather and Waves Conditions
S-414: Weather and Waves Observations	S-421: Route Exchange Format

IHO Roadmap for the S-100 Implementation



ONHO S-100

ONHO S-100 team

- **Participated and Organized ONHO S-100 plan** according to the S-100 Timeline for the prioritized IHO Product Specifications.
- **Support OMAN government-wide approach** to data collection, Data management, products and services quality, ensuring the alignment of data to outcome monitoring and reporting activities;
- **Understanding the need to reschemeing Oman ENC**s from common scheme ENC S-57 to Gridded ENC format.

ONHO S-100



ONHO S-100 Coordination

01

The Coordination under The National hydrographic committee

Number of authorities is about 12 authorities.
Regular 2 meetings per year.

02

Physical meetings

S-100 team start raising S-100 knowledge for **the four authorities** that holding phase 1 data

03

Maritime Events

Participation of the Oman National Hydrographic Office in marine events and indicating the need to shift to the global model of marine data

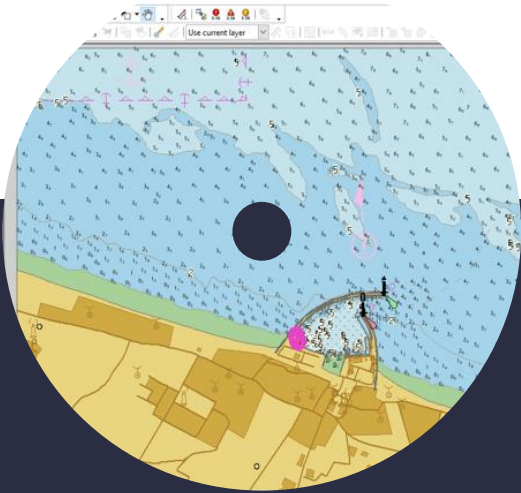
ONHO S-100

National coordination Omani authorities/ partners holding maritime data (S-100)



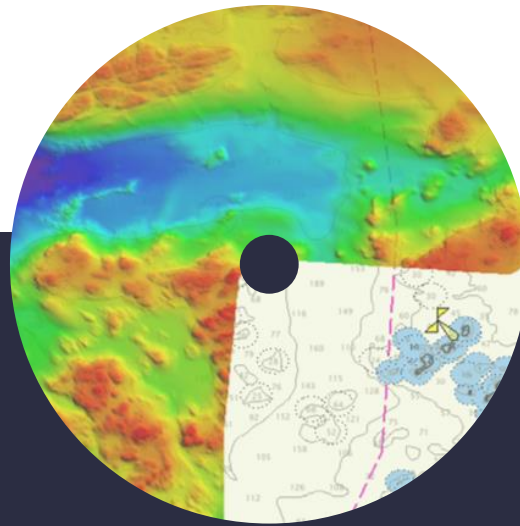
S-100 Framework in ONHO

The first priority S-100 products in ONHO



ENC S-101

Base layer of other layers



Bathymetry S-102

to generate safety contours



Water Level S-104

to provide Water Level Adjustment in navigational systems



Navigational Warnings S-124

to represent the navigation warnings

S-101 Electronic Navigational Chart (ENC)

ONHO Current activities:

- ✓ Capacity building of staff
- ✓ Cell testing (5 S-101 cells) with cooperation with IC-ENC
- ✓ planning the parallel ENC production (S-57 and S-101)& paper charts

Planned activities:

- Data migration S-57
- S-101 (Production, QC and maintenance, of the S-101 ENCs)
- ENC Gridding
- Study the status of supporting parallel production of S-57 , S-101 and paper charts.

S-102 Bathymetry Data

ONHO Current activities:

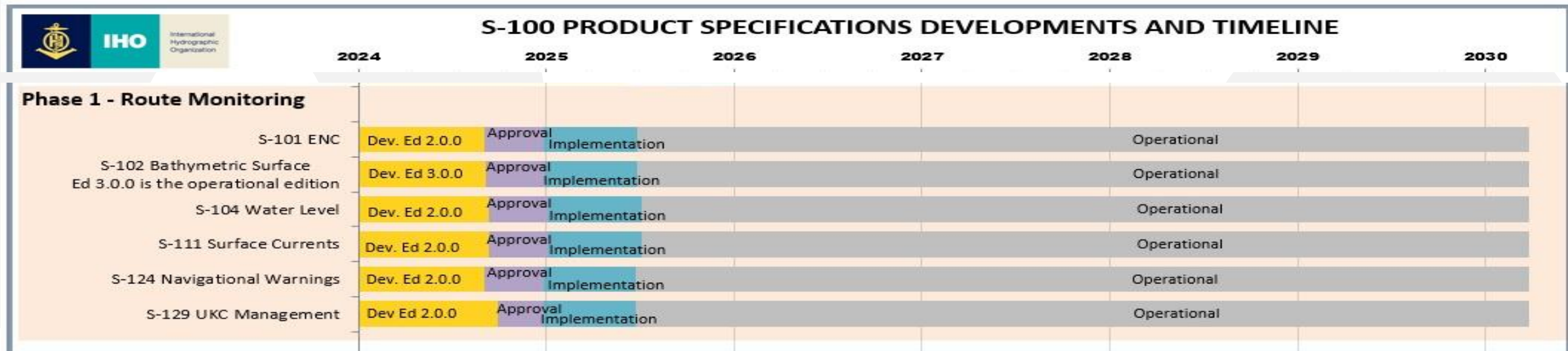
- Standard production and dissemination already established (Ed. 2.1.0)
- Selected ports and /or marine area cells will be tested.

Planned activities:

S-102

- Production, QC and maintenance, of the S-102 products

ONHO S-100 Development Timeline



ONHO S-100 Products TimeLine

PHASE 1 – Route Monitoring	2024	2025	2026	2027	2028	2029	2030
S-101 ENC		Training & Trials	Production	Duel Fuel Production of S-57 and S-101			
S-102 Bathymetry		Training & Trials	Production				
S-104 Water level		Training & Trials		Production			
S-111 Surface currents		Training & Trials		Production			
S-124 NAV warning		Training & Trials			Production		
S-129 UKC management		Training & Trials			Production		

Updated: 11 Nov. 2024



Implementation Challenges

- Implement the new standards in a relatively short time.
- supporting current production of both S-57 and paper charts.
- production systems, resources and capabilities.



Cooperation and coordination between different partners

The complexity of the implementation task and the extensive need to coordinate with other agencies adds new challenges to the work.

- New type of **products**, New **Standards**, New **software**, New **training requirements**, and New expected **Challenges**

Strategies for implementation

- Participation and attending in relevant workshops
IHO, IC-ENC , IMO and IALA
- Interaction with other relevant Oman authorities.
Oman National Hydrographic Office, Ministries,
Ports...
- Coordinate implementation with UKHO.
- S-100 implementation will affects the organization
structured manner and production plans in
general.



**THANK
YOU**



Any Questions or comments?