IHO Stakeholders' Forum

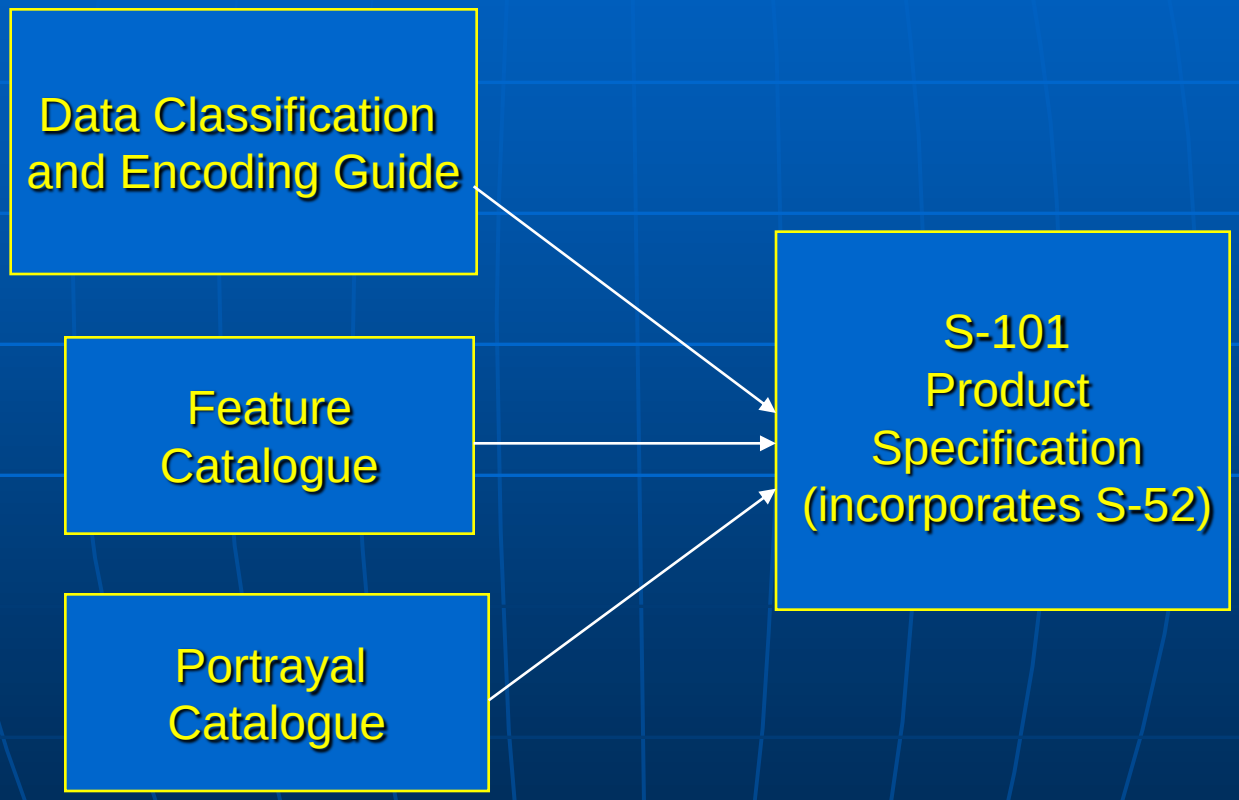
S-101
The next generation ENC

Barrie Greenslade – UKHO
Chair IHO TSMAD WG

S-101 – next generation ENC

- New Features
  - Plug and play ECDIS
  - Data driven loading strategy
  - Intelligent cartographic text
  - More user friendly pick reports and update information
  - Bathymetry quality measures to replace CATZOC
  - Scale dependent and scale independent data sets
  - Implementation rules
  - Retains ISO/IEC 8211
  - S-57 to S-101 converter

S-101 Structure



Plug and Play

- S-101 can be easily changed to model a changing world or make improvements
  - Dynamic Feature Catalogue
  - Dynamic Portrayal Catalogue
- Machine readable formats
- Revised and simpler type approval

Loading Strategy

- Producer defined scales
  - Maximum and Minimum display scales
- Reduced number of Navigation Purposes
  - Port and Approaches
  - Coastal passage
  - Ocean passage/routing

Text Placement

- New feature class carries the positional geometry and other text attributes
- Flip Bearing concept

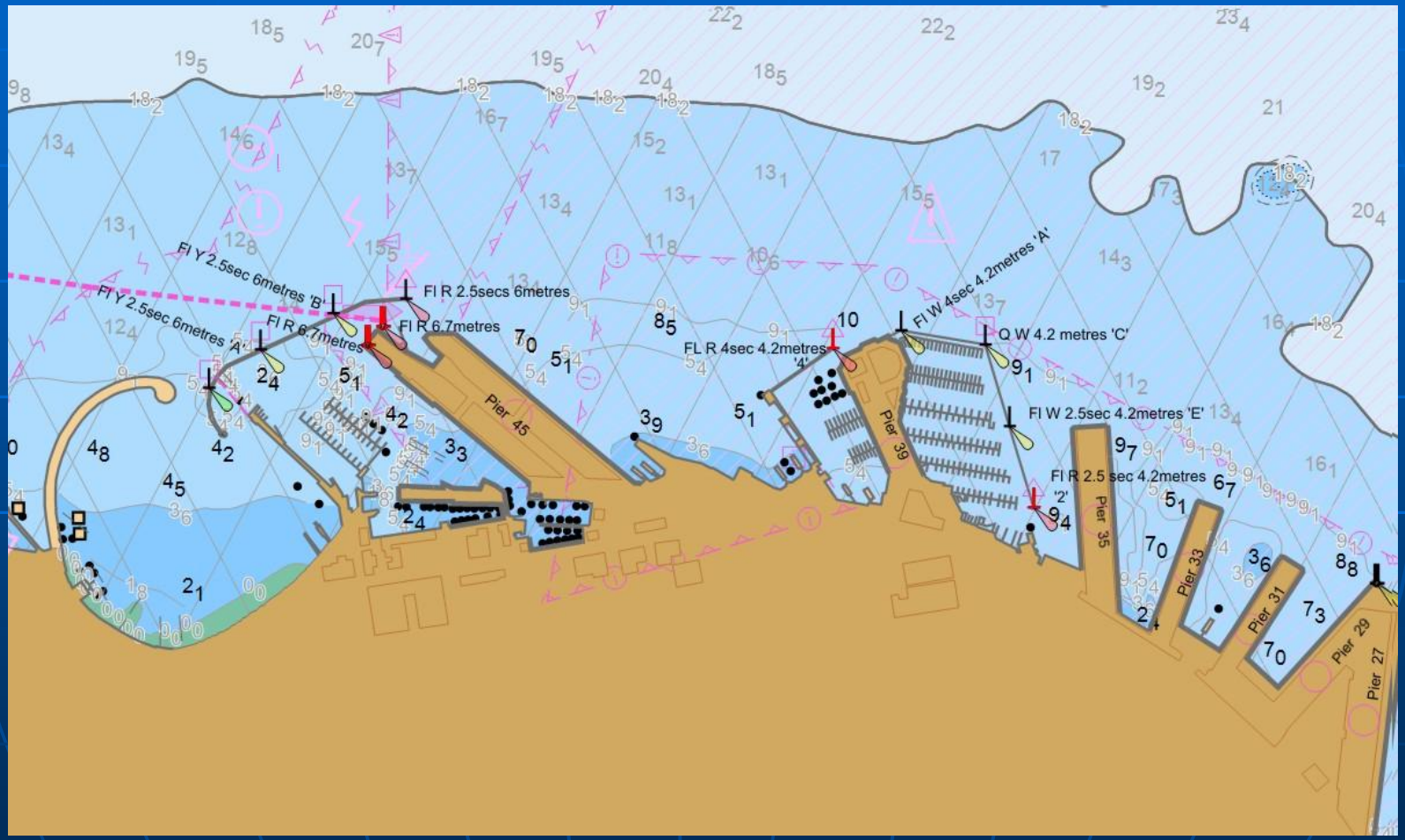
Example 1 – Text placement feature provides a point position and flip bearing is not defined.

Example 2 – Flip bearing of 180 degrees constrains the text to the semi circle shown.

Example 3 – Flip bearing of 45 degrees constrains the text to the semi circle shown.

Text Placement - Now

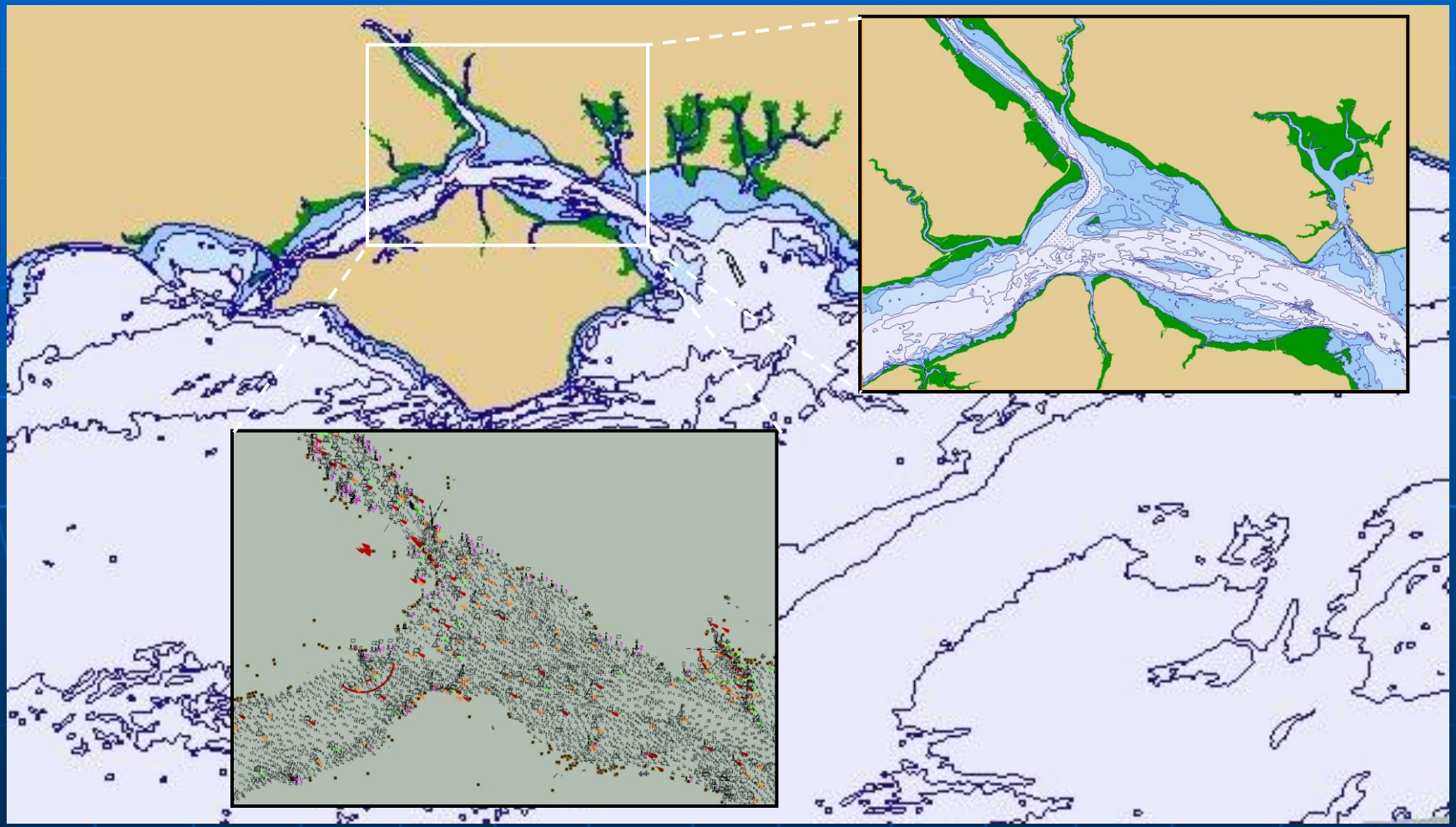
Text Placement - After



Bathymetric Quality Measures

- A more dynamic approach to providing survey information
- CATZOC is a catch all solution
- New methodology will take into account individual vessels' parameters
- Traffic light approach
- Test bed trials at the University of Southern Mississippi

Scale Dependent and Independent Data Sets



New Structures

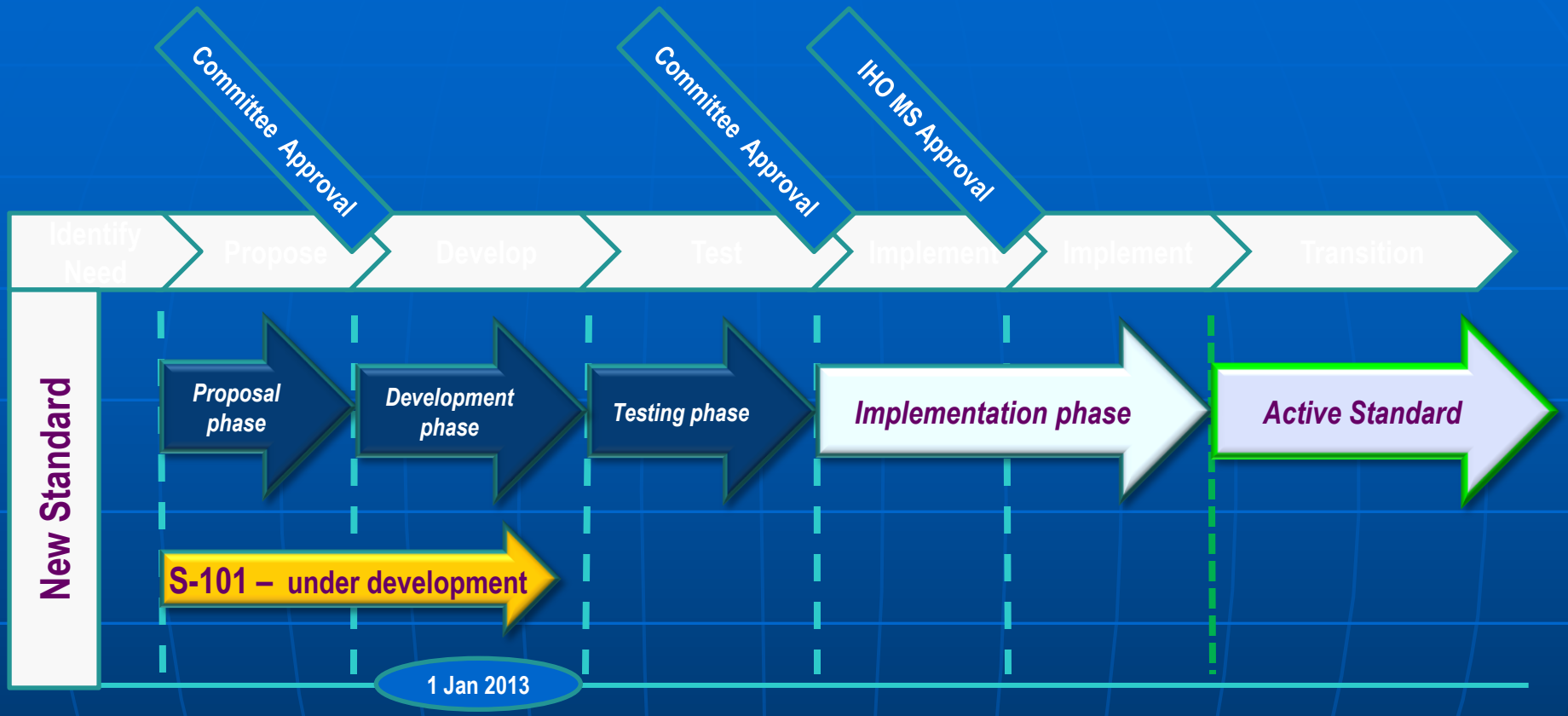
- S-52 functions embedded within data
  - E.g. relationships between features and their geometry
  - New complex attributes which improve the structure of the data and allow machine readability (no more structured text)

Information Types

- Provides meta information about features
- Associated to features not geometry
- Will reduce the need for caution areas
- Proving to be a useful tool for nautical publication data

S-101 Development Timetable

- Complete portrayal
- Conduct impact analysis
  - Production Software (Hydrographic Offices, software companies)
  - OEMs
  - End Users – training establishments
  - Type-approval authorities
- Establish test datasets and test-beds
- Execute test plan


Committee Approval
Committee Approval
IHO MS Approval
Identify Need
Propose
Develop
Test
Implement
Implement
Transition
New Standard
Proposal phase
Development phase
Testing phase
Implementation phase
Active Standard
S-101 – under development
1 Jan 2013

Migration from S-57 to S-100

- S-57 to S-101 Converter developed
- Cooperation with all interested parties
  - (stakeholder workshops, IHO S-100 Discussion Forum, …..)
- S-57 ed3.1 will continue to be used for many years even after S-100 release
- Opportunity to use S-100 based Prod Specs (e.g. gridded bathy) with S-57 ENC Prod Spec via data overlays

Impact on S57 e3.1 ENCs

- S-101 ENC Product Specification will not come into force until full testing procedures are completed
- S-101 ENC will sit alongside the existing S-57 e3.1 ENC Product Specification for some time
- ECDIS equipment which are upgraded to use S-101 ENCs ***will be able to use*** S-57 e3.1 ENCs