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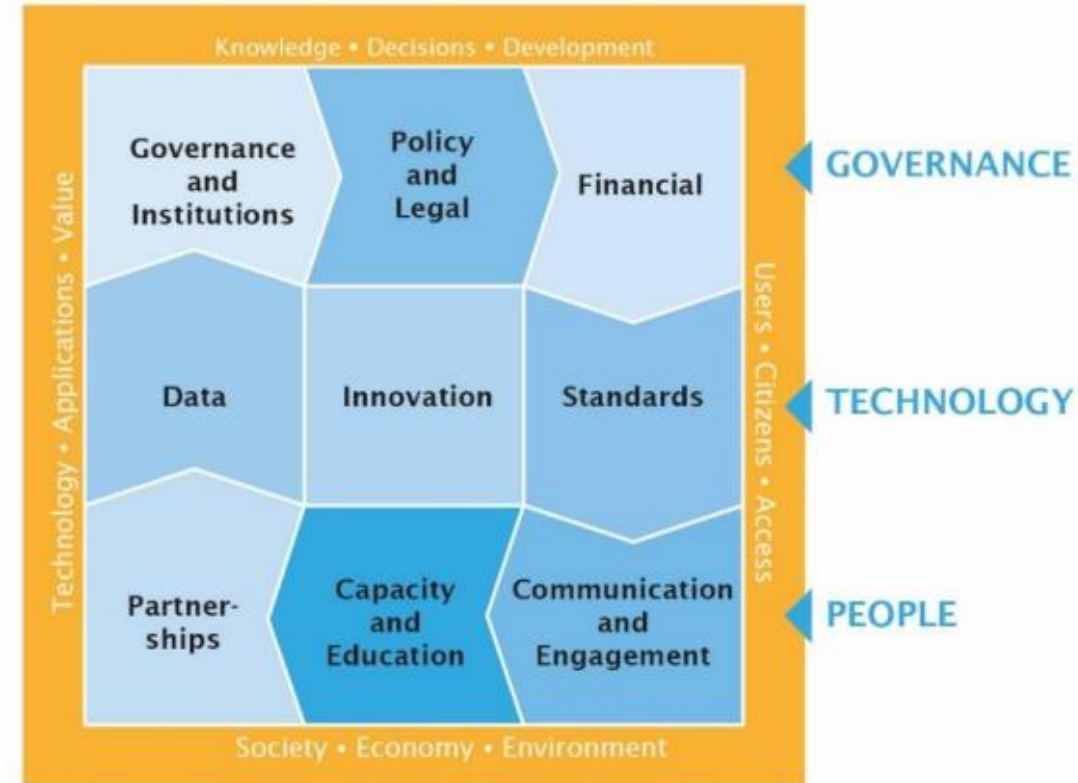
How S-100 could better support MSDI

5th April 2024



Overview – S-100 and MSDI

- › [IHO C-17](#) provides guidance for Spatial Data Infrastructures or Marine Spatial Data Infrastructure (MSDI)
- › One important enabler to effective MSDI are Standards (C-17 4.2.3), this is reflected in Standards being one of the Nine Strategic Pathways under the UN GGIM Integrated Geospatial Information Framework (IGIF)
- › The S-100 standard was developed with an intent to broaden the use of marine geospatial information and align with contemporary geospatial standards





The Challenge

- › The UK considers that S-100 and MSDI should be more closely related. C-17 makes limited reference to S-100 and as S-100 evolves there is a risk that changes to support navigation use cases constrain benefits for MSDI
- › We see S-100 and MSDI as complementary and as we move forward on the implementation of S-100 better communicating this would support uptake of both initiatives
- › We feel there are structural barriers that constrain liaison with the MSDI WG sitting under the IRCC*

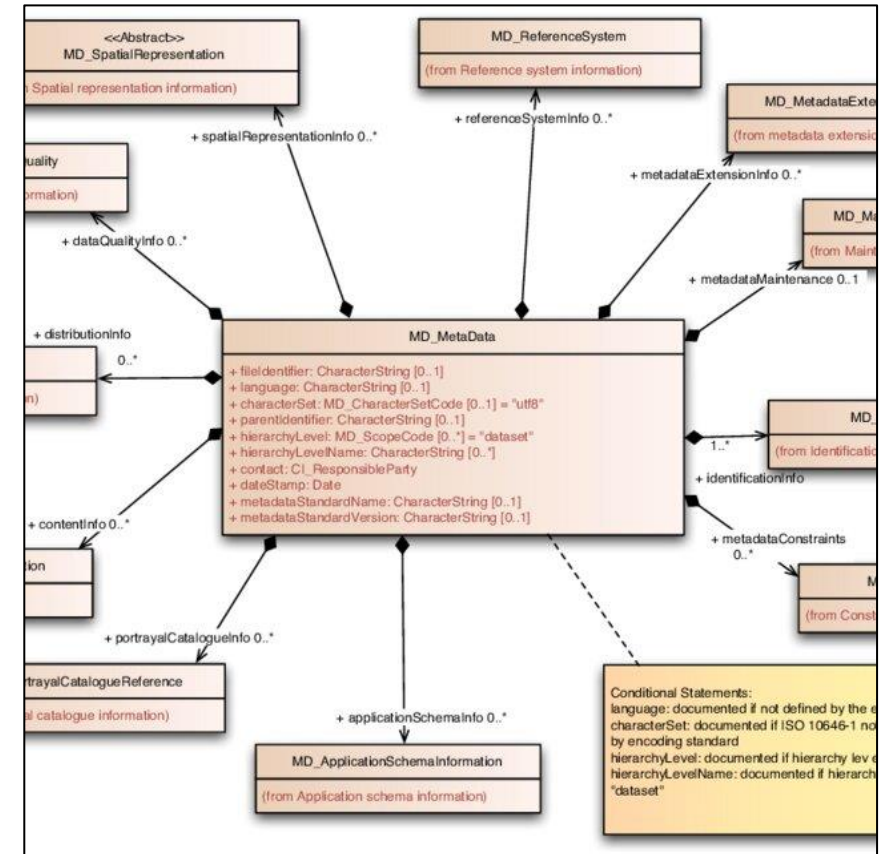
(we do not propose structural changes)





Example 1 Metadata

- › S-100 profiles the ISO 19115 metadata standard in Part 4a
- › The ISO 19115 Metadata standard when implemented through appropriate national and regional profiles is a key enabler to MSDI
- › S-100 5.2.0 has constrained Part 17 metadata so that extensions are prohibited but this does not apply to Part 4a
- › Proposals have been made to the S-101PT to remove the option including Part 4a metadata within an S-100 Exchange Set
- › The UK considers that although S-98 should prohibit the provision of Part 4a metadata for provision to navigation systems it should be permitted for other exchange use cases and Product Specifications should not constrain this





Example 2 Vertical Reference Frames

- › Within MSDI the integration of data from different domains requires knowledge of the relationship between different vertical datums
- › This is especially important in the coastal zone and numerous initiatives have identified this challenge
- › S-100 caters for different vertical datums but does not provide a standard mechanism for relating one vertical datum to another
- › **S-101 Project Team discussed a [proposal](#) to extend S-101 for this but we feel the S-100WG consider this at S-100 level for consistency across Product Specifications (it would remain optional)**





Example 3 Data Quality

- › As the availability of data explodes and the value of data gains greater recognition Data Quality is of increasing importance
- › S-100 provides a structured approach to Data Quality we see scope to apply data quality measures as a key component of MSDI
- › **For instance, as S-158 develops the use of these data quality measures more broadly could be promoted through C-17**
- › **Steps to better communicate Data Quality could also be taken by extending S-100 Part 4a**





Recommendations

1. Discuss the points raised in this paper, it is intended as a stimulus for active discussion
2. Consider the need to provide any direction to the S-100 WG
3. Consider the need for liaison between S-100 WG and the MSDI WG
4. Consider the development of material to describe how S-100 support MSDI with the potential to include in C-17 in future





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ADMIRALTY

Thank you

