

OGC Marine Domain Working Group

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BS-NSMSDIWG Workshop

Virtual | 24 August 2020

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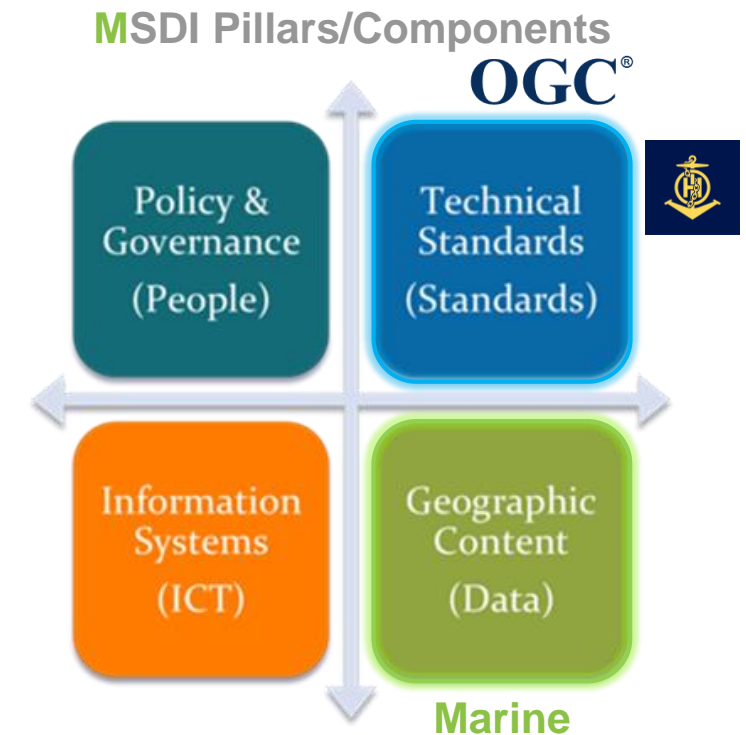
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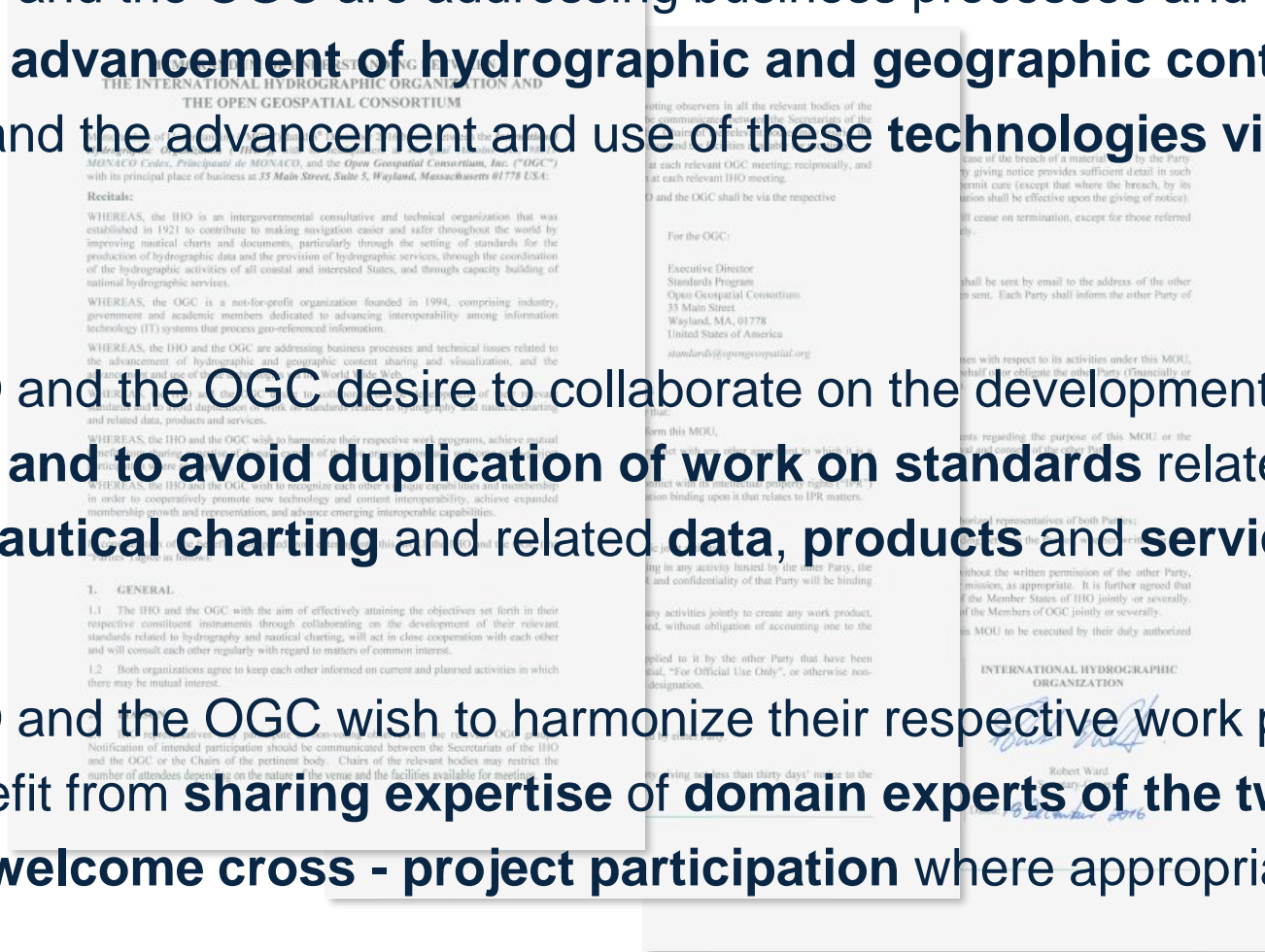
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- Close working relationship between MSDIWG and Marine DWG.
- IHO & OGC standards are considered by both groups.
- Ensures best practices for the interoperability and wider use of marine geospatial data.



- WHEREAS, the IHO and the OGC are addressing business processes and technical issues related to the **advancement of hydrographic and geographic content sharing and visualization, and the advancement and use of these technologies via the World Wide Web.**
- WHEREAS, the IHO and the OGC desire to collaborate on the development of their **relevant standards and to avoid duplication of work on standards** related to **hydrography and nautical charting and related data, products and services.**
- WHEREAS, the IHO and the OGC wish to harmonize their respective work programs, achieve mutual benefit from **sharing expertise of domain experts of the two organizations** and **welcome cross - project participation** where appropriate .



- There is a **gap in the current OGC baseline** regarding **marine geospatial data** with an emphasis on **hydrography** and **ocean mapping**.
- To support smart exchange methods required for **interoperability with organizations** such as the International Hydrographic Organization (IHO) and International Oil and Gas Producers (IOGP) and their data standards.
- Motivated by the **widening use of marine data for purposes other than safe navigation**, described frequently as Marine Spatial Data Infrastructure (MSDI).

- **Geospatial data** has been **successfully standardized for navigational purposes** by hydrographic agencies for years.



- Data now in demand for a much **wider range of applications**.



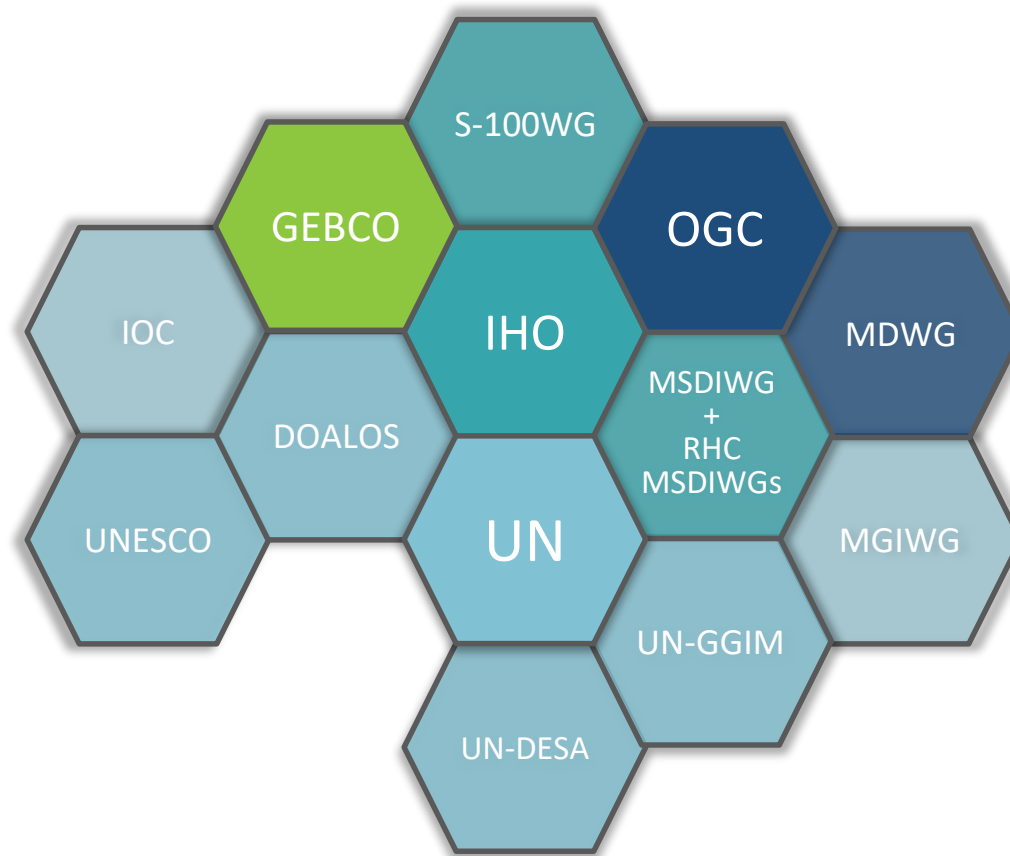
- **Chart data** is a major source of information but **does not lend itself automatically for wider use**.
 - **Bathymetric grids, points clouds, seafloor sediment mosaics and water column data** may require further standardization.
 - **Data volumes and sources are increasing** – driving standardized sensor processing and management techniques.

- The **mission** of the Marine DWG is to broaden the use of marine data through the understanding of the interoperability-related requirements for relevant use cases.
- The **role** of the Marine DWG is to serve as a forum within OGC for marine data issues; to present, refine and focus interoperability-related issues to the Technical Committee; and to serve where appropriate as a liaison to other industry, government, independent, research, and standards organizations active within the marine domain.
 - *Since formally established in June 2016, the Marine DWG meets almost quarterly at OGC's Technical Committee (TC) meetings, and jointly with IHO MSDIWG and UN-GGIM Working Group on Marine Geospatial Information (WG-MGI).*

- 4 Co-chairs: NGA, UKHO, IIC Technologies, Teledyne CARIS
- 119 signed up to Marine DWG email list
 - lists.opengeospatial.org/mailman/listinfo/marine.dwg
- Marine DWG Twiki
 - https://external.opengeospatial.org/twiki_public/MarineDWG/WebHome

- Point Cloud
 - Use of point clouds increasing with LIDAR, also Sonar data often stored as clouds.
 - Joint Marine DWG / Point Cloud Session
- MetOcean
 - Dealing with Met more than Ocean currently however much work done on netCDF for modelling.
- Big Data
 - Data cubes, non-SQL databases, handling the 3V's – Velocity, Volume, Variety.
- DGGS
 - Discrete Global Grid System
 - Joint session with Marine DWG
- SensorThings
 - Smart sensor networks and the IoT.

- Close of OGC Pilot project on Maritime Limits and Boundaries.
 - Outputs to IHO standards in progress and should result in a GML Schema forming part of the point release for the IHO standard.
- Improvements and tighter alignment between IHO and OGC standards – a basis for interoperability between models.
- Input to UN-GGIM and discussions over Integrated Geospatial Information Framework (IGIF) for Water.
- MSDI Pilot is ongoing development
 - Follow-on to IHO-OGC Marine SDI Concept Development Study
 - https://portal.opengeospatial.org/files/?artifact_id=88037
- Engagement with Discrete Global Grid System (DGGS) DWG, and marine applications of DGGS through the GEBCO 2030 Project.



Graphic Reference - J. Pritchard, "UN-GGIM, MGIWG & IOC", Presentation, 104th OGC Technical Committee, Southampton, United Kingdom, 12 September 2017