



The Global Ocean Observing System

The OG1.0 Era: A global community format for OceanGliders

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OceanGliders



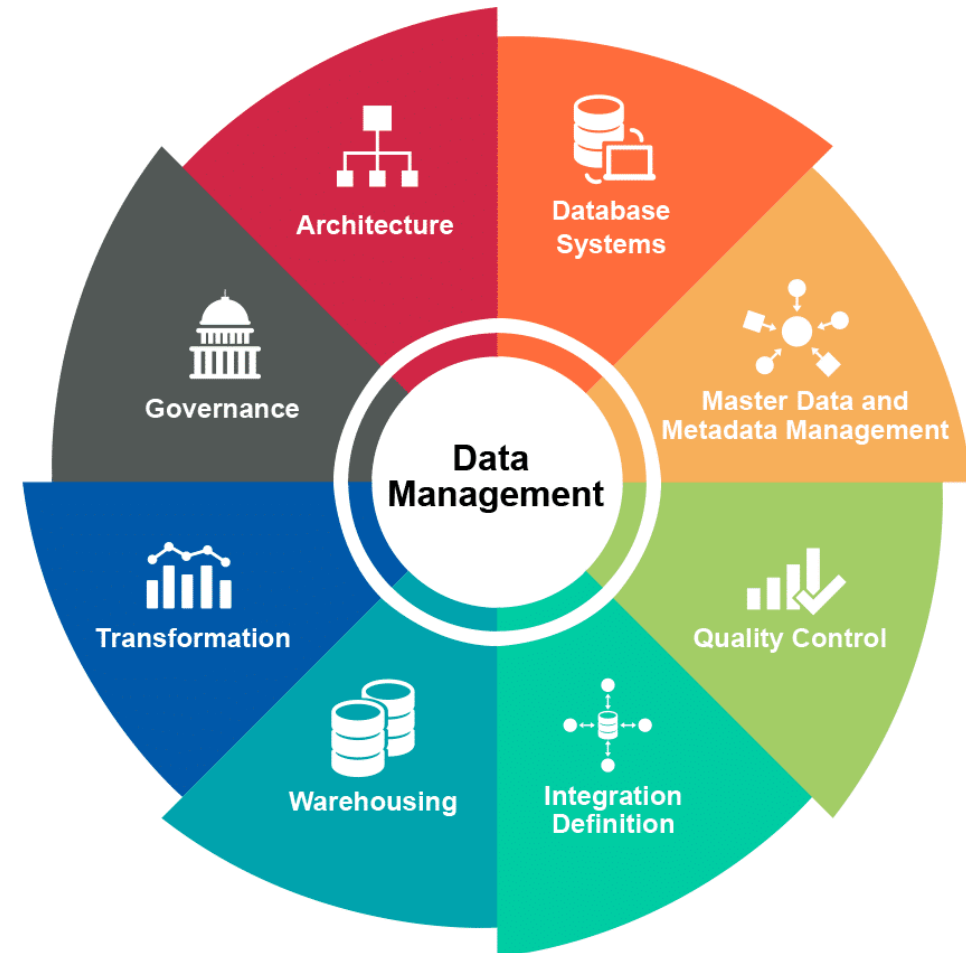
History

The OceanGliders Data Management Task Team were tasked with creating a global standard for glider data (2020)

<https://www.oceangliders.org/taskteams/data-management/>

Benefits

- Coordination and governance
- Visibility
- Harmonization



Methods

- An evolution of the EGO, IMOS and IOOS formats

 - evaluating existing formats to evolve into one format

- Moving to GitHub for transparency and openness in decisions made

- FAIR principles

 - compatible with ERDDAP

 - NetCDF self-describing file

 - Controlled vocabularies

- An initial set of mandatory variables allow easier adoption

 - mandatory, highly desirable, suggested variables

Results

Manual

https://oceangliderscommunity.github.io/OG-format-user-manual/OG_Format.html

Vocabulary manual

<https://oceangliderscommunity.github.io/OG-format-user-manual/vocabularyCollection/tableOfControlledVocab.html>

Example files (Seaglider, Slocum, Seaexplorer, Spray)

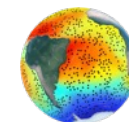
https://github.com/OceanGlidersCommunity/OG-format-user-manual/tree/main/og_format_examples_files

Format checker (web-based application developed in rust by [Guilherme Castelão](#))

Ocean best practices DOI (soon to be submitted <https://www.oceanbestpractices.org/>)



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OG1.0 file format highlights

Trajectory Discrete Geometry, using NetCDF system and following CF 1.10 (Climate and Forecast) specifications

The required granularity of the data set is the glider mission, starting from deployment at sea to recovery

Format follows the ACDD 1.3 convention where possible

Geospatial variables are mandatory

Recommendation to follow community best practices

Global attributes are used for discovery metadata

OG1.0 file format highlights cont.

Prominent use of controlled vocabularies

Human friendly text alongside machine readable URLs

Made sure OG1.0 is ERDDAP 'friendly' – once hosted in ERDDAP, users can access the data in other ways such as csv/json/kml

Trajectory ID - stacking of repeated deployments within the same ERDDAP dataset

Generic tools are being built such as OG1-2-XML generation

Release stages

Current version OG1.0 (IUGC, June 2024)

Future releases will follow best practice for software releases <https://semver.org/>

- minor release OG1.1

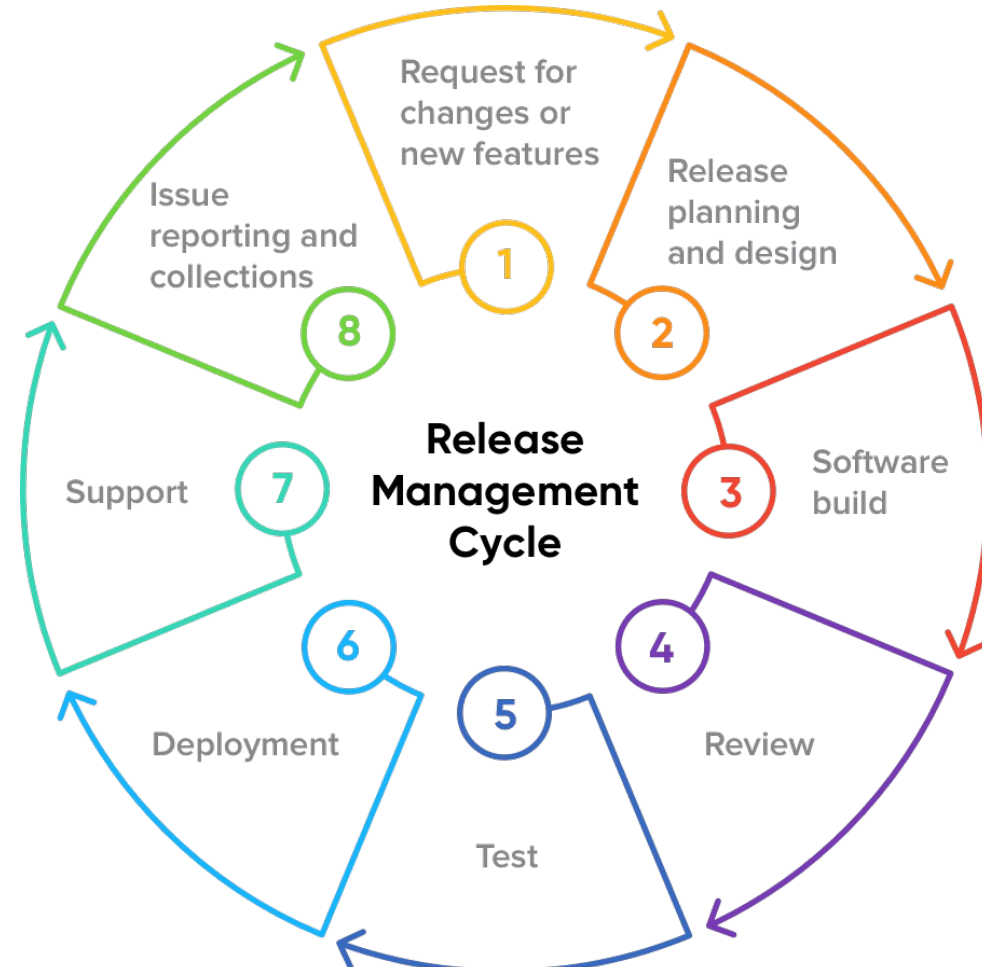
- major release OG2.0

- Suggestions for updates to the format standard will be reviewed by the OGDMTT

- Suggestions for new fields will be reviewed and if accepted will initially be added as 'suggested'

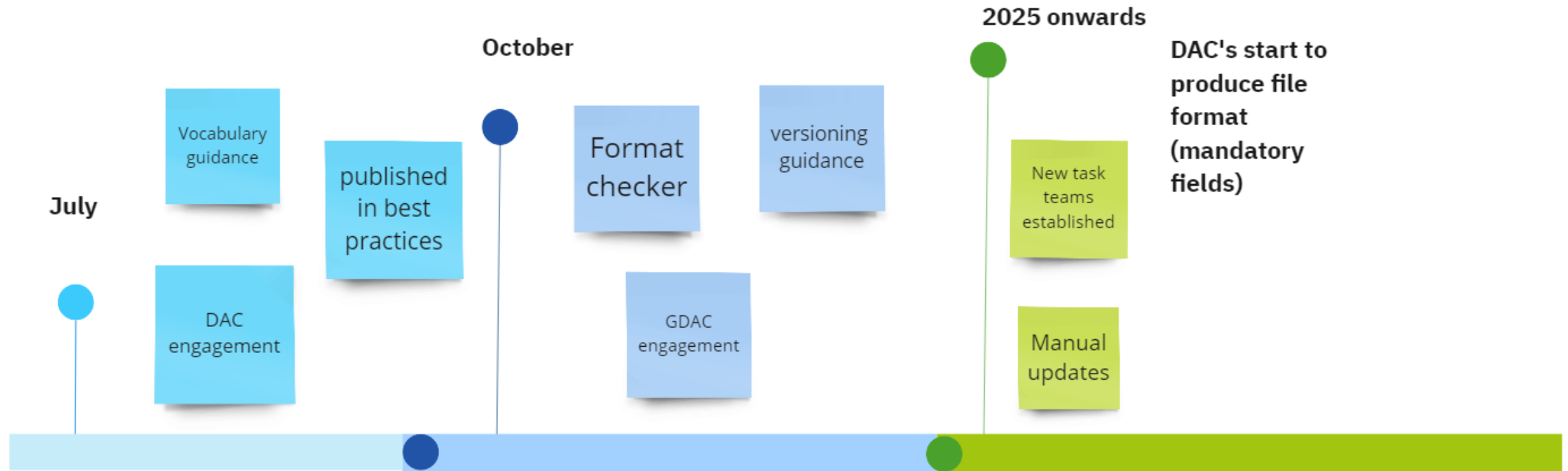
- 'suggested' could go to 'highly desirable'

- Eventually some 'highly desirable' fields will change to 'mandatory'. Triggering a major release, requiring an update of format checker and testing of delivery flows (GDAC)

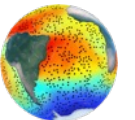




OG1.0 Adoption Roadmap



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Thank you

Victor Turpin
Daniel Hayes
Justin Buck
Callum Rollo
Guilherme Castelão
Jennifer Sevadjian
Pierre Testor



OceanGliders Data Management Task Team - feedback

