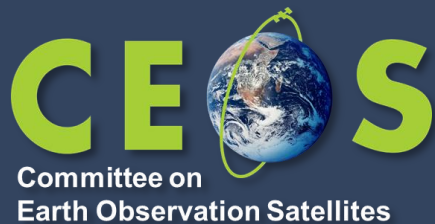


CEOS Interoperability Handbook Version 2.0 Update



**Tom Sohre & Nitant Dube,
WGISS**

**Agenda Item #5.1
WGISS-60**

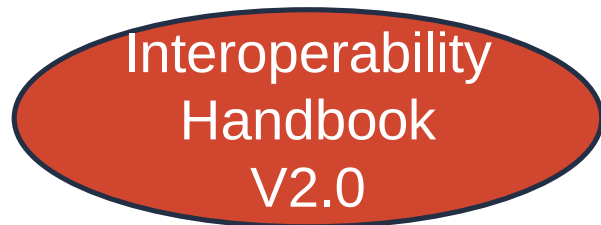
**13-17 October, 2025
Oberpfaffenhofen, Germany**

❖ Objective

DATA-24-03	CEOS Interoperability Handbook 2.0	2025 Q4	WGISS
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- CEOS Interoperability Handbook Version 2.0 should provide guidance to the organizations for development of **Interoperable Data** and **Services** and help them in measuring their **maturity level**

Completed and Plan for Endorsement
during CEOS Plenary 2025



Will be taken up as part of WGISS
Work Plan for 2026



Will be taken up as part of WGISS
Work Plan for 2026 and 2027



Chronology of Events

Event	Date
Initial Idea/ Recommendation	CEOS Plenary 2022
Discussion on Draft Roadmap and Factors	SIT-38 March 2023
Framework endorsement	Plenary 2023
Identification of Factor Leads and Discussions with CEOS Working Groups	WGISS-57 and WGISS-58 2024
Detailed Discussion of Each Factor	WGISS-59 (March 2025)
Release of Draft Handbook for Public comments	April 2025
Presentation to SIT-TW	Sept 2025
Final Review WGISS-60	Oct 2025
Endorsement by Plenary (Planned)	Nov 2025

Contributors for Factors

Interoperability Handbook Factors	Factor Lead	Linkages to CEOS Work
Quality	Cody Anderson (USGS, WGCV)	
Vocabulary	Peter Strobl (EC-JRC, LSI-VC)	CEOS common Dictionary
Architecture	Alex Leith (Auspacious, SEO) Mirko Albani (ESA, WGISS)	
Interface	Damiano Guerrucci (ESA, WGISS)	
Policy	SEO, CEO and WGISS	

Public comments

OGC

CEOS-COAST

NASA

NPL

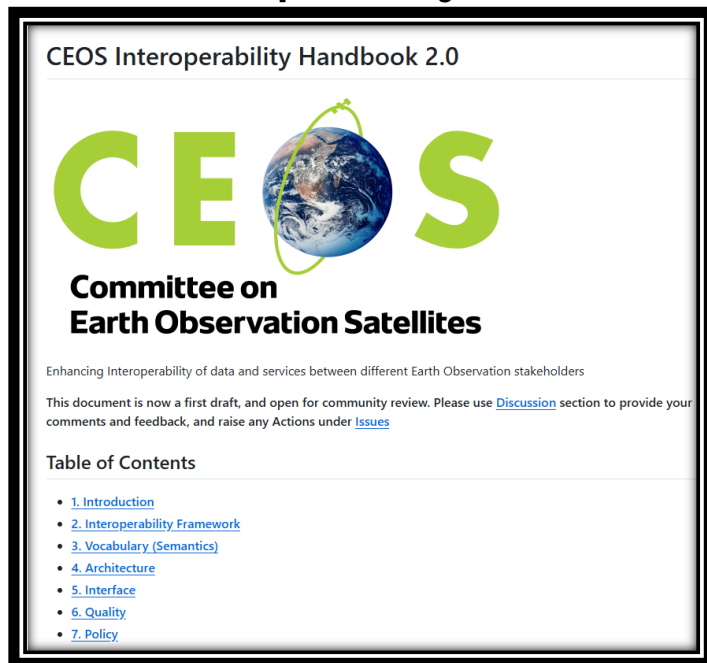
DLR

Contributors on Github

30

- ❖ In-line with CEOS recommendation of using Github for publishing documents and code, Interoperability Handbook is completely developed and maintained on Github
- ❖ Document is Live now and will provide capability for frequent changes and feedback by larger community
- ❖ Allows users to track changes and replicate the active repositories

❖ The Interoperability Handbook 2.0 is now available on github

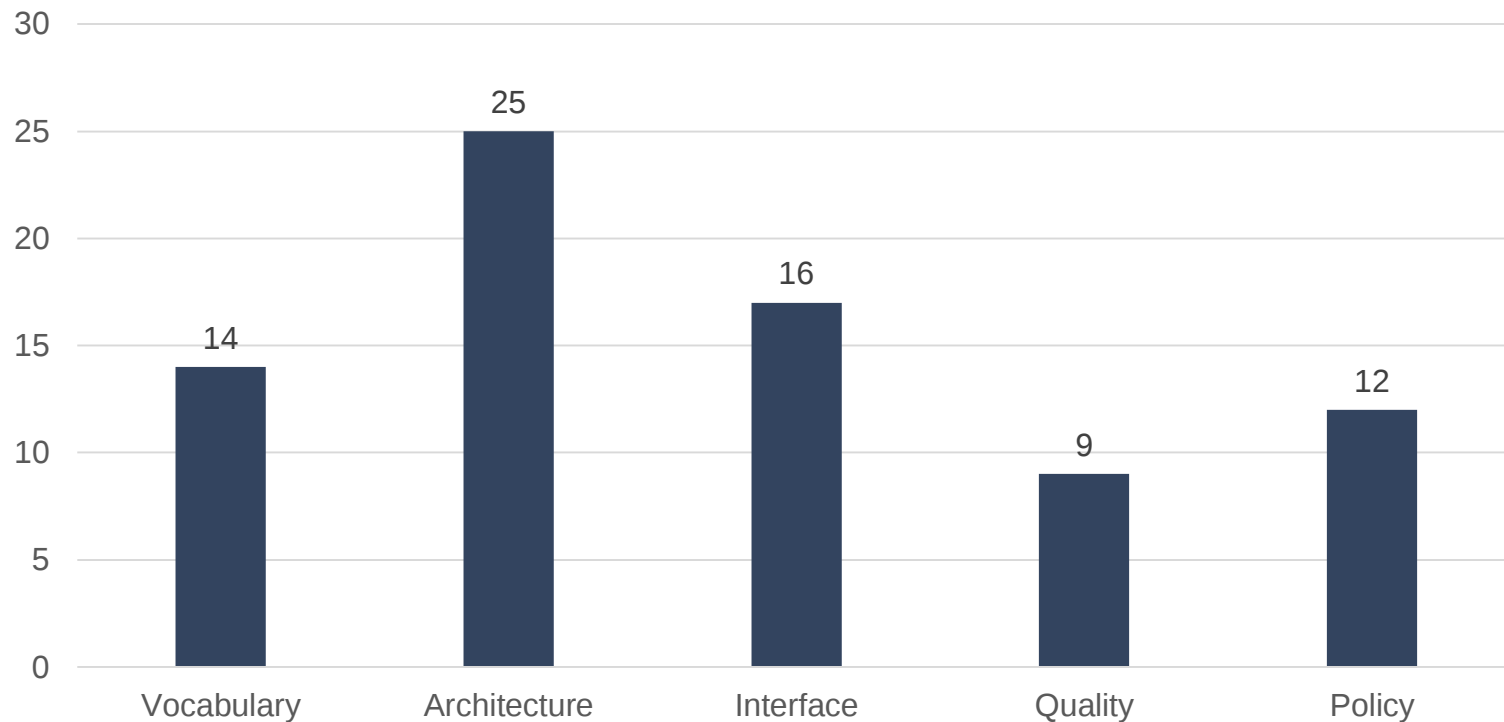


<https://github.com/ceos-org/interoperability-handbook>

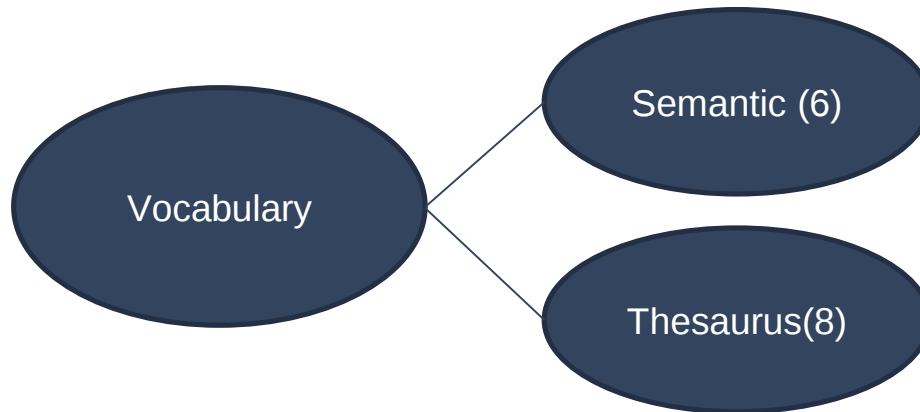
❖ Chapters

- **Chapter-1 : Introduction**
- **Chapter-2: Interoperability Framework**
- **Chapter-3: Vocabulary (Semantics)**
- **Chapter-4: Architecture**
- **Chapter-5: Interface (Accessibility)**
- **Chapter 6: Quality**
- **Chapter 7: Policy**
- **Chapter-8: Conclusion**

Recommendations



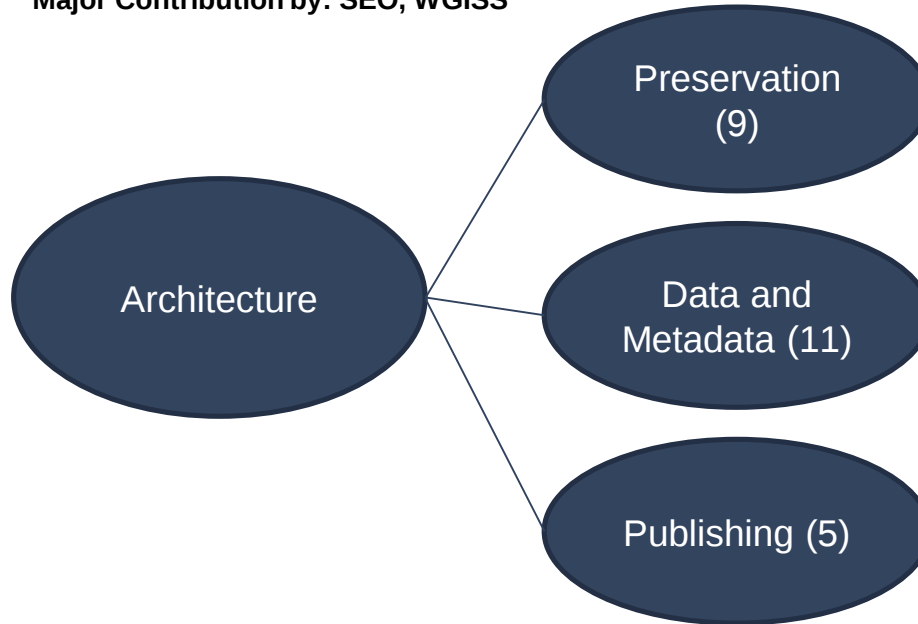
Major Contribution by: LSI-VC



- Promote Development of Community Thesaurus
- CEOS Common dictionary (CEOS/KCEO) being developed on github
- Controlled Vocabularies with lookup of keywords via Linked Data Principles

- Base, Core, Controversial and High Impact terms
- Circular definitions
- Explanations with Notes providing reference to Source document
- Version Control at Individual Term Level
- Contradictory/alternative definitions and explanations

Major Contribution by: SEO, WGISS

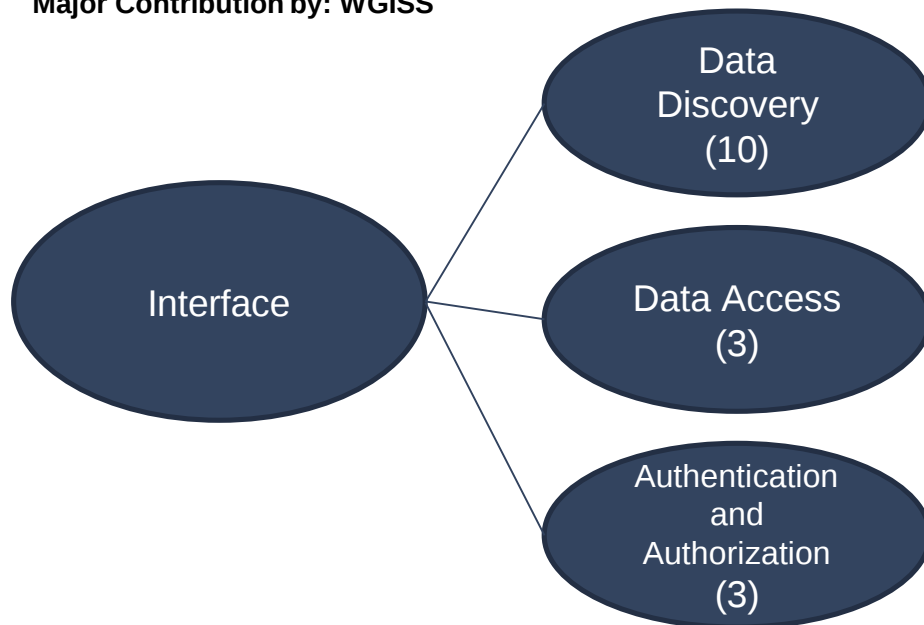


- Open Archival Information System (OAIS) Reference Model
- CEOS Data Appraisal Procedure
- Shared Collection Lifecycle Management Principles for EO data

- CEOS ARD Framework
- CEOS EO collection and Granule discovery Best practices with STAC
- CEOS Persistent Identifiers Best Practice

- Discovery and accessibility of data through metadata
- STAC geoparquet
- ZARR and Cloud Optimized Geotiff
- Cloud Interoperability

Major Contribution by: WGISS

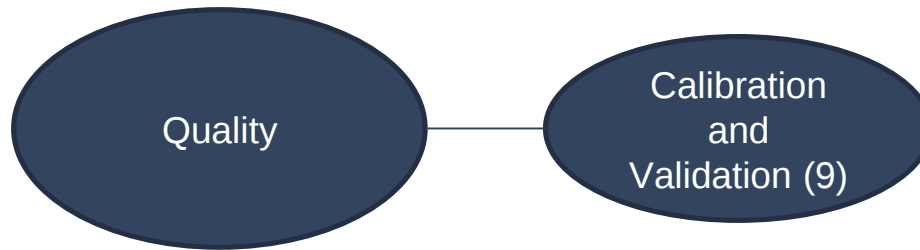


- CEOS STAC Collection and Granule Discovery Best Practices
- CEOS Open Search Best Practices
- CEOS Service Discovery Best Practices

- S3 (Simple Storage Service)
- HTTPS based access
- Cloud Optimized GeoTiff

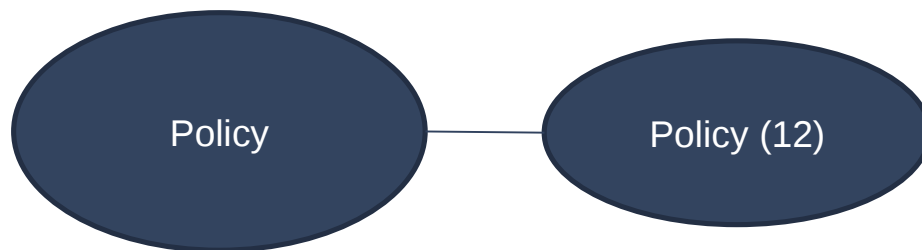
- OpenID Connect
- OpenAPI 3.0

Major Contribution by: WGCV



- Community Calibration through CEOS WGCV, WMO GSICS, JACIE and VH-RODA
- CEOS-FRM
- CEOS Cal/Val sites RadCalNet and SARCalNet
- QA4EO
- ESA/NASA/USGS Mission quality Assessment Framework
- JACIE Best Practices document
- CEOS Cal/Val Portal

Major Contribution by: WGISS, CEO, SEO



- Engagement with CEOS, GEO and CGMS
- Policy Audit
- CEOS MIM Database
- Open Standards and Specifications
- Open Data
- Open Source Software
- Open Science
- Data Licensing
- Data Procurement from 3rd Party
- Data Preservation
- Purge Alert

Thanks

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