



GOSC WGs and CSs: Orientation Meeting

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Global Open Science Cloud Initiative

- A number of Open Science/Research Clouds/Platforms/Commons emerging globally.
- Domain research infrastructures.
- Open Science eInfrastructures.
- OSCs: infrastructures aligning vertically (full-stack) and across all domains.
- The Global Open Science Cloud (GOSC) initiative will encourage **cooperation, alignment, and ultimately interoperability**, between existing and emerging Open Science Clouds (OSCs).
- GOSC aims to do this through a combination of thematic **Working Groups** (building on existing experiences and addressing key areas of shared interest), and a set of detailed **Case Studies** that will demonstrate how international collaborative research communities and projects can be supported by Open Science Clouds.



ISC, UNESCO and CODATA



International
Science Council

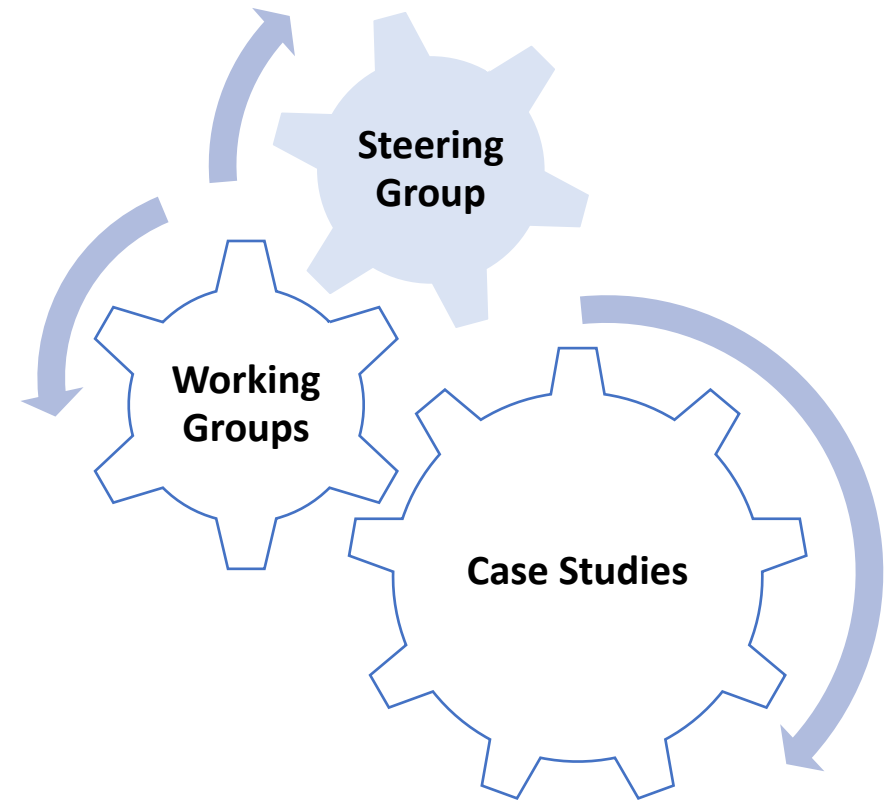
- **International Science Council Action Plan, 4.4:** encourages the creation of national or regional Open Science platforms in the Global South, in order 'to position scientists and science systems in the Global South at the cutting edge of data-intensive open science': <https://council.science/actionplan/open-science/>
- Includes ISC and CODATA engagement with the AOSP, MOSP; support for GOSC; and ISC and CODATA support for the UNESCO Recommendation.
- **UNESCO Recommendation on Open Science:** will be approved in November 2021.
- Recommends: 'North-South, North-South-South and South-South collaborations to optimize infrastructure use and joint strategies for shared, multinational, regional and national open science platforms, including through the promotion of research collaborations, sharing of open science infrastructures, technical assistance, transfer and coproduction of technology related to open science and exchange of good practices under mutually agreed terms' (iii.g)
- <https://en.unesco.org/science-sustainable-future/open-science/recommendation>
- **CNIC** aiming to set up an International Programme Office as part of the CODATA Decadal Programme (ISC Action Plan, 3.1): <https://bit.ly/CODATA-Decadal-Programme>

Global Collaboration

- **EOSC, AOSP, LA Referencia/Red Clara, CSTCloud, MOSP, ARDC, NDRIO, EGI, Géant, NICIS** etc, etc, represented in WGs and Case Studies and on the Steering Group.
- **CNIC** providing secretariat support, project resource and (subject to agreement) an International Programme Office to support and extend the initiative.
- **EGI** co-leading the Infrastructure WG and providing secretariat support.
- **CODATA** providing coordination and secretariat support.
- Invite other partners in various possible roles:
 - Project participation / contribution in kind.
 - New Case Studies
- Collaborate with the **RDA GORC Models WG** currently producing a conceptual framework for Open Research Commons and a bibliography.

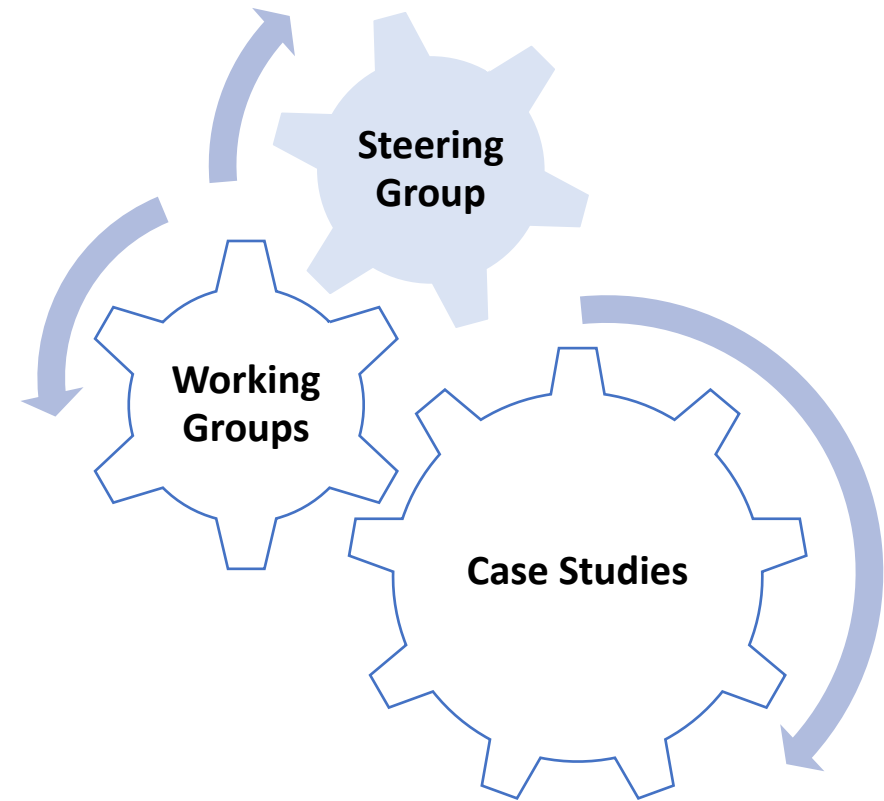
Global Open Science Cloud (GOSC) Working Groups

- **Thematic Working Groups and Domain Case Studies**
- Mechanisms for encouraging communication, sharing of information, cooperation and ultimately alignment and interoperability (where needed).
- Regular interactions between the WGs and Case Studies (propose quarterly AHMs).
- Four initial WGs, exploring key topics of shared concern:
 1. Strategy, governance and sustainability.
 2. Policy and legal.
 3. Technical infrastructure.
 4. Data interoperability.



Global Open Science Cloud (GOSC) Case Studies

- **Five** initial Case Studies, exploring key topics of shared concern:
 1. Incoherent scatter radar data fusion and computation
 2. Biodiversity and ecology information platform
 3. SDG-13 climate change and natural disasters
 4. Sensitive data federation analysis model in population health
 5. Open reproducible raw diffraction data for access in pandemics (new)



Possible GOSC Working Group Activities

- **Understanding the landscape:** information sharing, what are the various OSC initiatives doing in this space?
- **Identifying the challenges:** what are the major issues and challenges from the perspectives of the various OSCs? Identify shared and different perspectives.
 - Output: Landscape report and presentation of challenges to be addressed?
- **Ideate possible solutions:** Discuss and brainstorm possible solutions and outputs.
- **Test and refine solutions:** Workshops, feedback on draft documents, recommendations.
 - Output: Recommendations to encourage cooperation and alignment?

Suggested GOSC Working Group Timeline

1. **From 28 June 2021: WGs and Case Studies formed**, co-chairs identified
2. **From 2 Sept 2021, Co-Chairs Meeting:** prepare WG and Case Study work plans.
3. **19-21 Oct 2021: EGI Conference (fully virtual)**, WGs and Case Studies (where on appropriate topics) communicate activities to global e-Infrastructure community.
4. **27 Oct 2021: GOSC Workshops as part of fully virtual SciDataCon 2021.** WGs and Case Studies discuss their workplans: mission, objectives, planned outputs...
5. **June 2022: GOSC Workshops as part of International Data Week 2022**, Seoul, Republic of Korea. WGs and CSs report on progress and outputs.
6. **Sep 2022: International Symposium on Open Science Cloud, Beijing, China (TBC).** WGs and CSs report on progress and outputs.
7. **Oct 2022: GOSC Workshops as part of 2nd FAIR Convergence Symposium**, Leiden, Netherlands. WGs and CSs report on progress and outputs.
8. **Oct 2023: WG report on final outputs as part of International Data Week, Salzburg, Austria.** WGs and CSs renewed, redirected or retired.

Key GOSC Information

- GOSC Overview: <https://bit.ly/GOSC-Overview>
- GOSC Introduction and Launch Event: <https://bit.ly/GOSC-Intro-Launch>
 - Includes presentations, recording, links to useful documents.
- Join GOSC WGs, Case Studies: <https://bit.ly/3jwZHNg>
- Propose New Case Studies: <https://bit.ly/GOSC-Propose-New-Case-Study>
- **GOSC Co-Chairs Briefing Document - 2 September 2021:** <https://bit.ly/GOSC-Co-Chairs-Briefing>

Thank you for your attention

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Strategy, Governance and Sustainability

- OSCs have shared challenges of governance, funding, sustainability, rules of participation, inclusivity, making their value proposition, and engagement with researchers and existing research infrastructures and other e-infrastructures.
- Exchange of information and experience.
- Identify topics to explore in more detail.
- Possible initial questions:
 - What are the governance and accountability structures?
 - What are the mechanisms for funding core OSC infrastructures?
 - How does the OSC present its value proposition in order to sustain operations?
 - What are the rules of engagement for public and private institutions?
- Initial contacts: Yu CHEN, CNIC, cy@cnic.cn; Hana Pergl, CODATA, hana@codata.org

Policy and Legal

- Building on many international policy and legal statements.
- Interest among OSCs to share experiences in policy development, legal issues.
- Potentially also to seek alignment of their policies, and even legal frameworks.
- Exchange of information and experience.
- Identify topics to explore in more detail.
- Possible initial questions:
 - What are the key policy instruments adopted by the OSCs?
 - To what extent do these align and do they map well to major international statements of principle or policy?
 - Are there any areas of policy misalignment that could hamper cooperation among OSCs and projects supported by OSCs?
 - What are the most significant issues of legal interoperability to be addressed?
- Initial contacts: Mark Leggott, CODATA Data Policy Committee, RDA Council, NDRIO mark.leggott@rdc-drc.ca; Lili ZHANG, CNIC, zhll@cnic.cn; Paul Uhler, Consultant, pfuhler@gmail.com

Technical Infrastructure

- Open Science Clouds necessarily build on existing global e-infrastructures, including provision of high-speed academic networks, high performance computing, cloud computing, and so on.
- Build on existing collaborations between these e-infrastructures.
- Identify topics to explore in more detail.
- Possible initial topics:
 - Network connectivity and protocols
 - Secure Authentication and Authorization Infrastructure (AAI)
 - Mechanisms for federation of computing and other services
 - Many others!
- Initial co-chairs: LI Jianhui, CNIC, lijh@cnic.cn; Mark Dietrich, EGI, mark.dietrich@egi.eu
- Initial contact: Yin CHEN, EGI, yin.chen@egi.eu

Data Interoperability

- Among the objectives of OSC initiatives is to provide infrastructure to support interoperability within and across domains.
- Building on existing RIs and supporting new cross-domain research areas.
- Exchange of information and experience.
- Identify topics to explore in more detail.
- Possible initial topics:
 - The emerging FAIR Digital Object Framework
 - The use of structural and provenance metadata to facilitate machine-actionability across data
 - The alignment and development of good FAIR practice for semantic artefacts (including scientific vocabularies)
 - The need for systematic approaches that ensure reusability of cross-walks etc.
- Initial contacts: Simon Hodson, CODATA, simon@codata.org; Lianglin HU, CNIC, hull@cnic.cn