



Global Open Research Commons

and their contribution to knowledge
valorisation

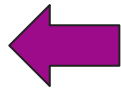
e-IRG Workshop under Belgian EU Presidency

*Javier Lopez Albacete, European Commission
on behalf of the RDA Global Open Research Commons Interest and Working Groups
5 June, 2024*

Research Data Alliance GORC Interest and Working Groups.

“Digital resources for the common good”.

Goal: To develop a roadmap for global commons integration



GORC IG (2018-on)



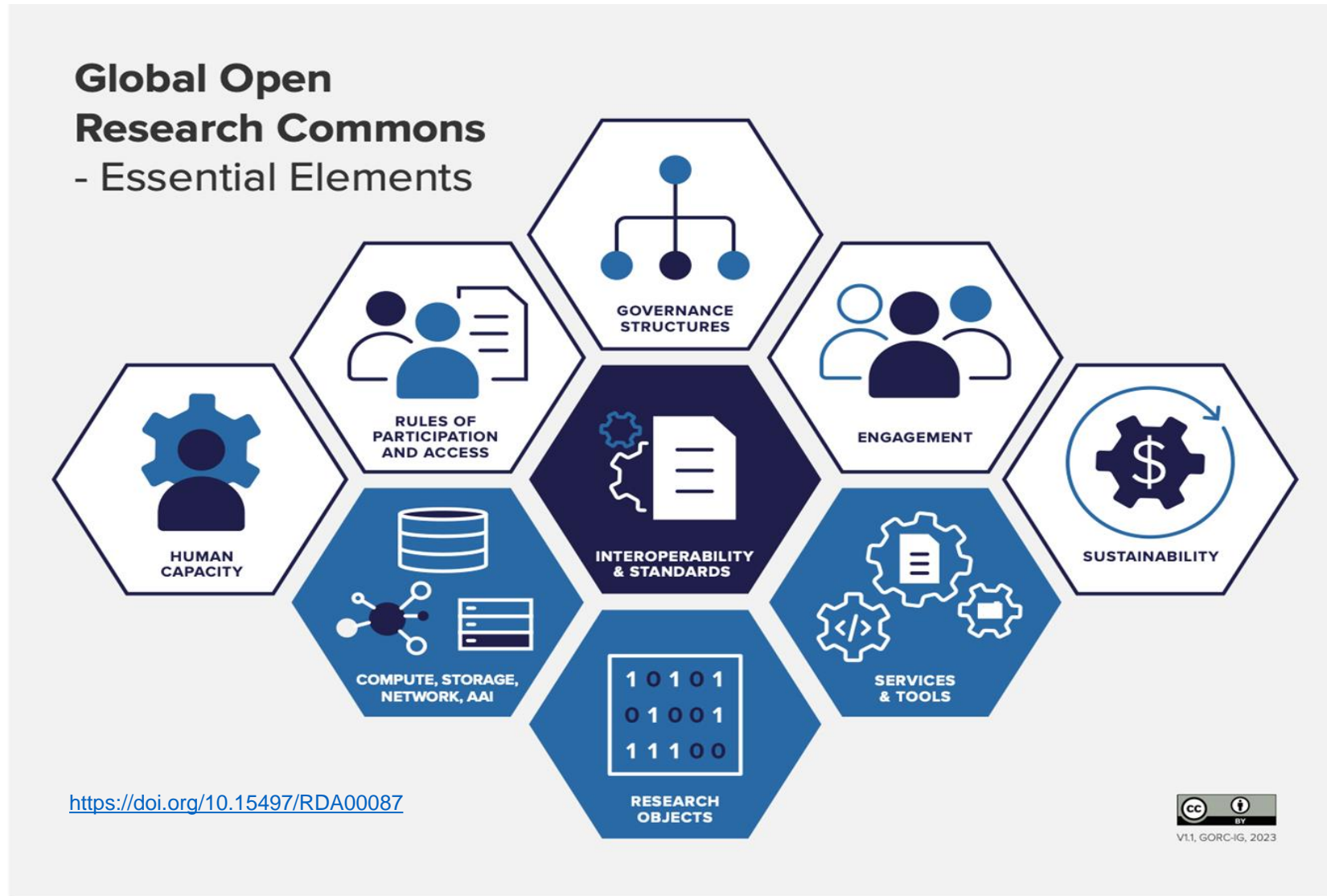
**GORC International Model
WG (2021-on)**

Co-Chairs: CJ Woodford (DRAC Canada), Andrew Treolar (ARDC Australia), Lautaro Matas (La Referencia, LAC), Mikiko Tanifuji (NII Japan) and JLA. Previously: Devika Madali (ISI India), Mark Leggott (RDC Canada), Karen Payne (ISC/WDS Canada), Sarah Jones (GEANT, Netherlands)...

“The Global Open Research Commons (GORC) is an ambitious vision of a global set of interoperable resources necessary to enable researchers to address societal grand challenges including climate change, pandemics, and poverty. The realized vision of GORC will provide frictionless access to all research artifacts including, but not limited to: data, publications, software and compute resources; and metadata, vocabulary, and identification services to everyone everywhere, at all times”. [cf WG case statement].

GORC Typology of essential elements

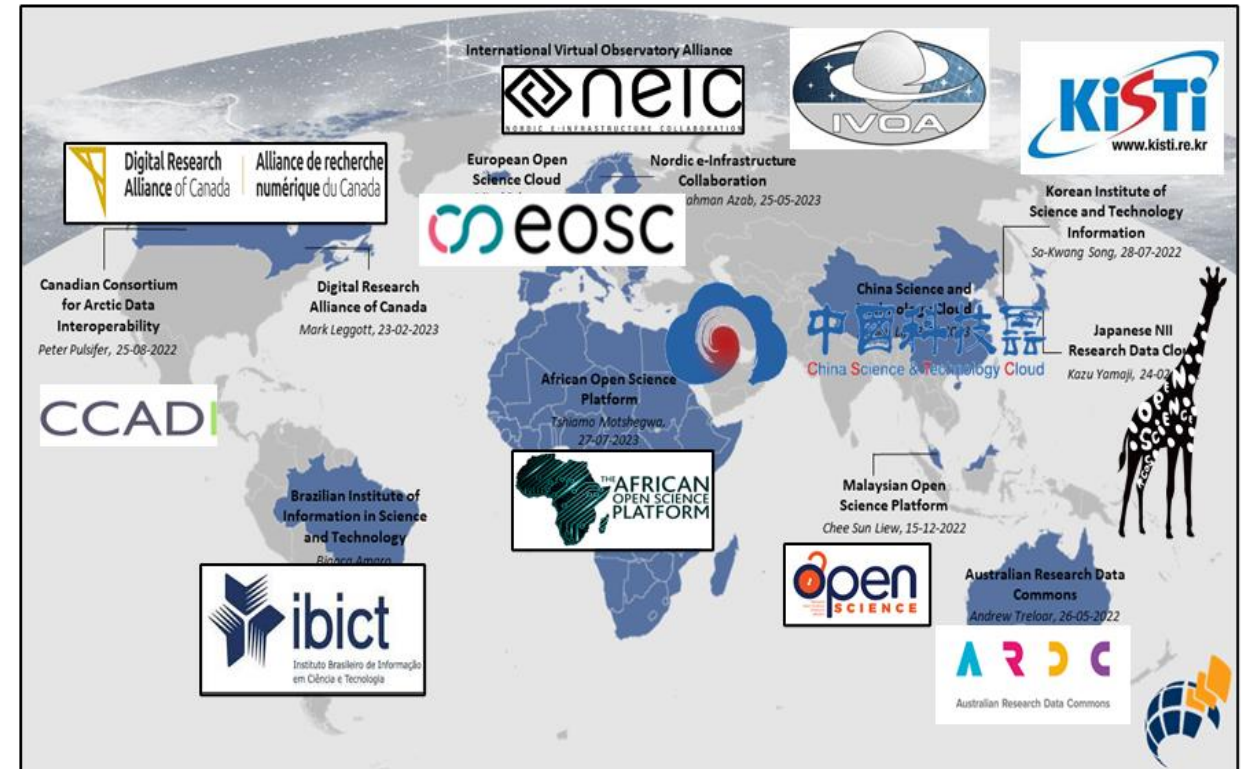
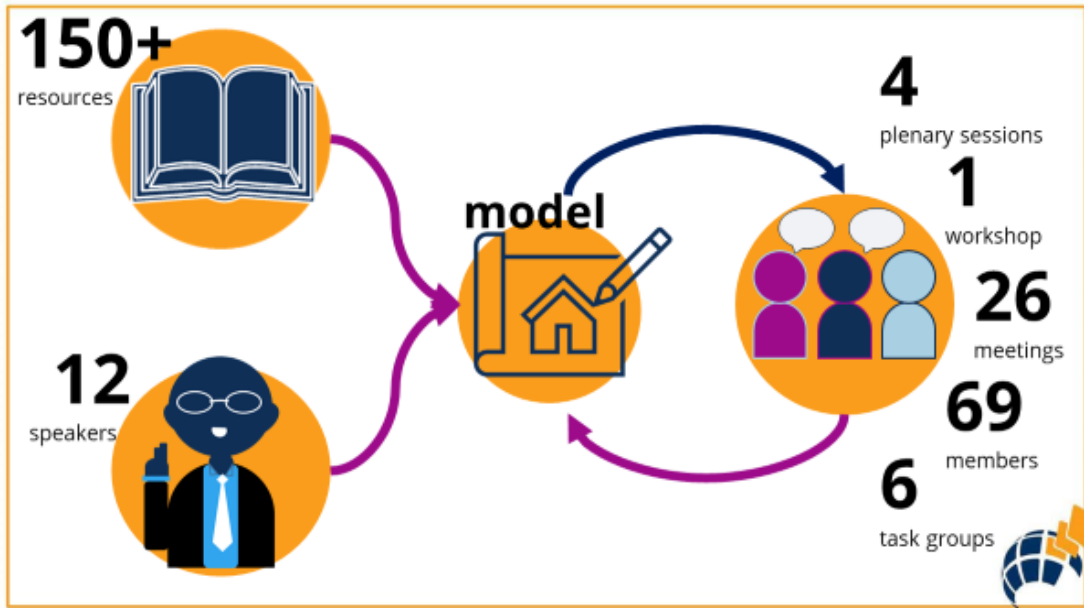
Commons: “A global trusted ecosystem that provides seamless access to high quality interoperable research outputs and services”



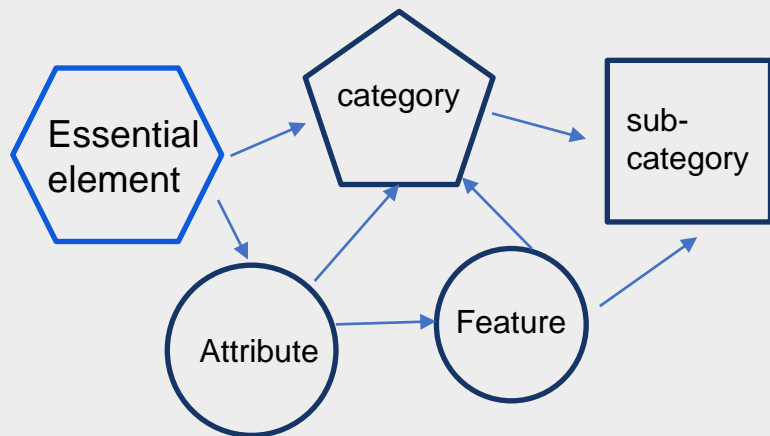
A deeper dive: The GORC International Model

Goal: to provide a framework and common language to stakeholders around the world who are committed to developing interoperable research services for the public good.

The **GORC IM provides** a list of observable international attributes of features, services structures and functionality that can help define a Commons and that will feed into a roadmap of Commons interoperability.



GORC IM
Structure:



+

Consideration levels
Core
Desirable
Optional

+

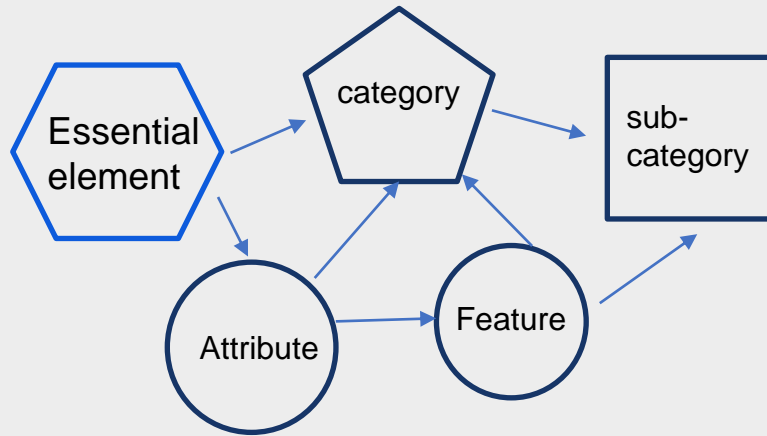
Extended description
Primary sources
KPIs and metrics

Total: 292 entries 104 KPI's

GORC IM v1: <https://doi.org/10.15497/RDA00099>

GORC IM report v1: <https://doi.org/10.15497/RDA00097>

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E.g.:

Governance

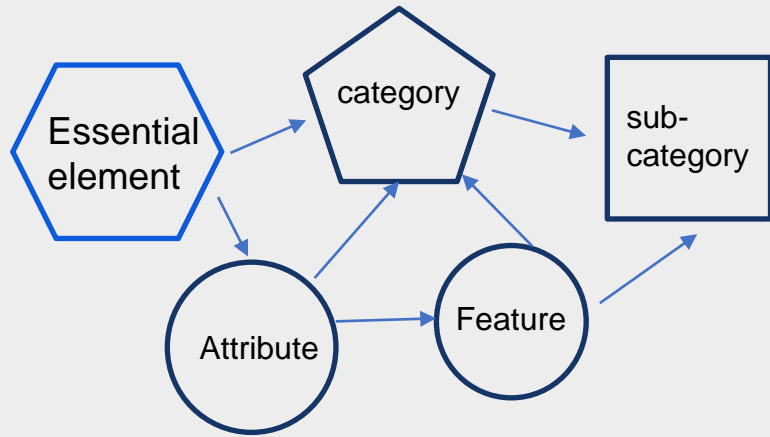
1. Intent and definition →
2. Strategic Planning
3. Organizational structures and design.
4. Internal Policy Development, implementation, and review
5. Governance rules, principles, and enforcement of quality for Research Objects and Services & Tools

Identification and definition of the commons* community* and stakeholders, how their needs intersect with the commons*, and how the commons* engages with the community* to fulfill their needs*

Different value propositions for different stakeholder groups (e.g. **researchers, citizen scientists, industry and enterprises, universities, standard development organizations, policy making organizations, specialized Service* Providers*, research funding agencies, research infrastructure and e-Infrastructure**)

Core

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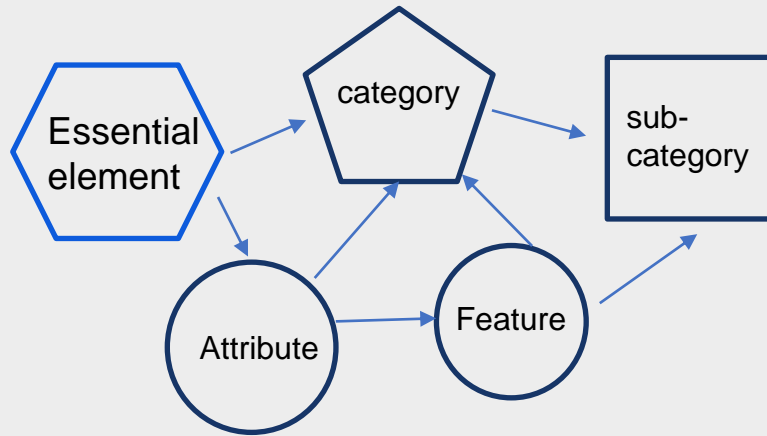
E.g.:

ICT Infrastructure

1. Network Infrastructure
2. Computing infrastructure
3. Storage infrastructure
4. Foundational Operating System
5. AAI

Internal network infrastructure	i.e. passing messages between connected computing and storage, Interoperability* between the endpoints for commons* computing and storage	Core
External network infrastructure	i.e. Appropriate for the context of the commons*, considering national, regional, pan-national, and discipline/domain research community* needs and incorporating interconnect and intraconnect network infrastructure.	Desirable
Knowledge and management of Storage Infrastructure		Core
Federated Storage Infrastructure	i.e. distributed storage infrastructure that are interconnected and appear to be one storage infrastructure to the user.	Optional

GORC IM Structure:



+

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Services & Tools

1. Research object repositories
2. Discovery services
3. Services and tools for direct research tasks
4. Services and tools that enable workflows and middleware
5. Persistent identifier services
6. Vocabulary and semantic object services
7. Data management services and tools
7. Commons catalogue of all services and tools
8. Security and identification services
9. Helpdesk service

E.g.:

Analysis, processing, and visualization Services* and Tools*

i.e. Processes for Research Objects* with the goal of discovering useful information, informing conclusions, and supporting decision-making.

artificial intelligence and machine learning Services* and Tool*Is, forecasting, visualization, data extrapolation, image analysis, iterative model fitting. data analysis (e.g. transformation, calibration, normalization, plausibility checks), data cleaning, etc., Different forms and formats of Analysis (i.e. manual, exploratory, descriptive, diagnostic, evaluative, predictive, prescriptive, correlational, statistical, automated or autonomous) e.g. workflows (i.e. **Services* enabling the building and implementation of workflows**), A collaborative platform* with AAI for groups")

Core

GORC IM

Adoption cases (cf RDA Plenary 22, May 2024)

- **SURF**: Avoiding fragmentation. Internal reflections and strategic awareness rising. Improving readiness for EOSC (M. Hoogerwerf).
- **ELIXIR Sweden**: Strategic planning, alignment with international efforts... (W. Nyberg Åkerström)
- **REASON**: A proposed national research Commons for Norway (P. Conzett & Rory Macneil)

GORC IM

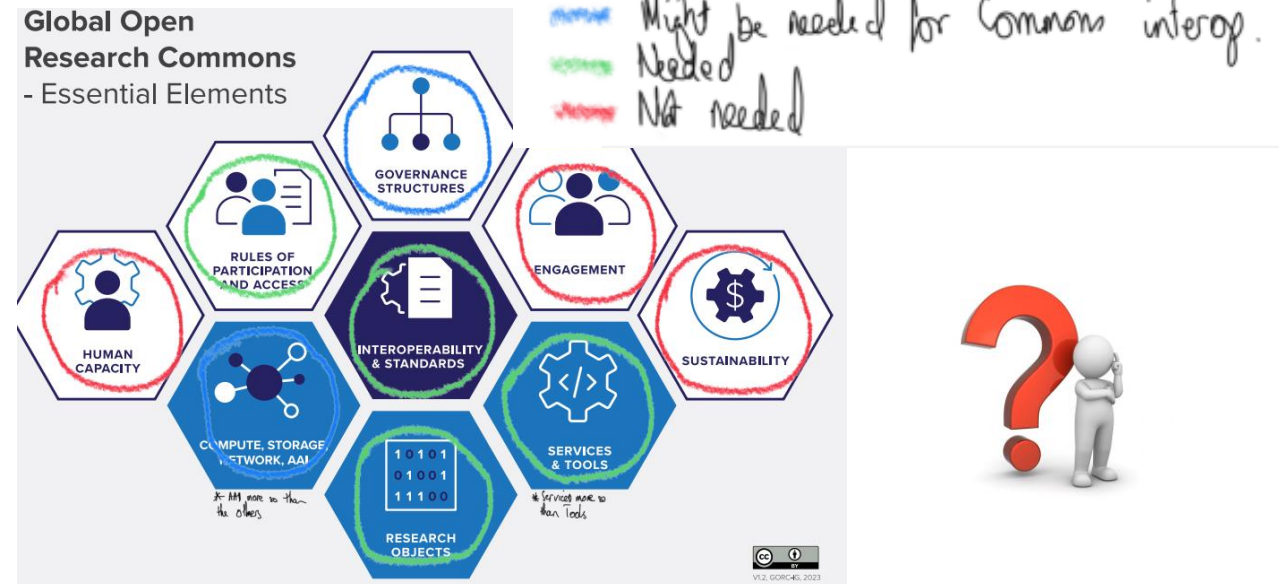
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GORC WG. Next steps (?):

- Adoption of the model
- Profiles of the model by discipline (e.g. for health commons), by maturity
- Mapping the model to other RDA and community outputs
- Expand model to include research hardware, physical research infrastructure
- Expand model to include an implementation recommendation and examples for each item
- Expand model to include a maturity level and examples for each item
- Others?

GORC IG. Next steps (?):



Thank you

- *RDA GORC International Model Working Group (WG)*.
<https://www.rd-alliance.org/groups/gorc-international-model-wg>
- *The Global Open Research Commons International Model, Version 1 (Version 1)*. Research Data Alliance. <https://doi.org/10.15497/RDA00099>
- *The Global Open Research Commons International Model Report, Version 1 (Version 1)*. Research Data Alliance. <https://doi.org/10.15497/RDA00097>
- *Adoption tool (Interactive Google Sheets) for the Global Open Research Commons International Model*.
https://docs.google.com/spreadsheets/d/1OyfiV414O4zITFQVLI9uc0Pg9d_9yjpZU4Pk7vYRkQc/edit
- *RDA GORC Interest Group (IG)*.
<https://www.rd-alliance.org/groups/global-open-research-commons-ig>
- *GORC IG Typology and Definitions Diagram (Version 1.0)*. Research Data Alliance.
<https://doi.org/10.15497/RDA/00095>
- *GORC IG: Typology and Definitions (Version 1.01)*. Research Data Alliance.
<https://doi.org/10.15497/RDA00087>