Global Open Research Commons
International Model RDA Working Group

Adopting and Implementing the Model for your organisation
THE GLOBAL OPEN RESEARCH COMMONS (GORC)

The Global Open Research Commons (GORC) is an ambitious vision for a global set of interoperable resources necessary to enable researchers to address societal grand challenges including climate change, pandemics, and poverty. Once realised, the vision of GORC will provide frictionless access to all research artefacts including, but not limited to: data, publications, software and compute resources as well as associated metadata, vocabulary, and identification services.

The GORC is being built by working across a set of national, pan-national and domain-specific organisations such as the European Open Science Cloud, the African Open Science Platform, and the International Virtual Observatory Alliance.

ABOUT RDA

The Research Data Alliance (RDA) is a community-driven initiative, with a goal to build the social and technical infrastructure to enable open sharing and re-use of data. RDA has a grass-roots, inclusive approach, covering all data lifecycle stages, and engaging data producers, users and stewards, addressing data exchange, processing, and storage. It is a neutral social platform where international research data experts meet to exchange views and to agree on topics, such as social hurdles on data sharing, education and training challenges, data management plans and certification of data repositories. RDA also tackles disciplinary and interdisciplinary interoperability, as well as the technological aspects of these.

RDA addresses the need for open and interoperable sharing of research data and builds the social, technical and cross-disciplinary links to enable such sharing on a global scale. RDA Members come together through general Interest Groups (IGs) and more focused Working Groups (WGs), formed by experts from all around the world – from academia, private sector and government.

RDA currently has 48 WGs, 65 IGs and 1 Community of Practice (CoP), with over 13,000 members from 151 countries. Several impactful recommendations have been produced by the RDA Community, including the ‘Results of an Analysis of Existing FAIR Assessment Tools (FAIR Data Maturity Model WG)’¹, the ‘Scalable dynamic-data Citation Methodology (Data Citation WG)’² and the ‘COVID-19 Recommendations and Guidelines for Data Sharing (COVID-19 WG)’³.

¹ https://doi.org/10.15497/rda00035
² https://doi.org/10.15497/rda00016
³ https://doi.org/10.15497/rda00052
GLOBAL OPEN RESEARCH COMMONS (GORC) INTERNATIONAL MODEL RDA WORKING GROUP (WG)

The Global Open Research Commons (GORC) International Model WG\(^4\) works under the umbrella of the GORC Interest Group (IG)\(^5\), which aims to support coordination amongst organisations, including through the development of a roadmap for global alignment to help set priorities for commons development and integration. In support of this roadmap, the GORC International Model WG developed a set of attributes for GORC organisations to measure their user engagement and development internally within the organisation, gauge their maturity and compare features across commons.

In the first case, the WG collected information about how existing commons are measuring success, adoption or use of their services within their organisation, such as data downloads, contributed software, and other KPI and access statistics. The WG also developed, validated, collected and curated a set of elements of such Commons along with the attributes that will allow commons developers to compare and develop plans for improvement and interoperability. The primary output of the WG is an organisational structure and a framework that can provide guidance on commons elements, attributes, KPIs and implementations currently in use or expected in research commons (hereafter referred to as the ‘Model’\(^6\)).

The Group’s Outputs provide guidance on the considerations that should be made when undertaking the implementation of a commons at any stage. However, the decisions on what should ultimately be included in the implementation will vary depending on the environment. This flexibility also extends to the items that should be considered in the first place, as the WG outputs are not mandates on what should be implemented, or in what way.

The categories and attributes\(^7\) in the Model are grouped by essential elements, as defined by the GORC Typology: Governance & Leadership, Rules of Participation & Access, Engagement, Human Capacity, Sustainability, Interoperability, Standards & Conventions, Services & Tools, and Research Objects\(^8\).

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4. [https://www.rd-alliance.org/groups/gorc-international-model-wg](https://www.rd-alliance.org/groups/gorc-international-model-wg)
5. [https://www.rd-alliance.org/groups/global-open-research-commons-ig](https://www.rd-alliance.org/groups/global-open-research-commons-ig)
6. [https://doi.org/10.15497/RDA00099](https://doi.org/10.15497/RDA00099)
7. Please see the Glossary for all definitions: [https://doi.org/10.15497/RDA00099](https://doi.org/10.15497/RDA00099)
8. For the detailed list of categories (sub-elements or classes of the essential elements of a commons), attributes (the characteristics of essential elements, categories, and subcategories) as well as features that belong to attributes please see [https://doi.org/10.15497/RDA00099](https://doi.org/10.15497/RDA00099)
According to the WG co-chairs who led the development of the Outputs, when considering the implementation and adoption of the Model and its different elements, the inclusion of elements should be approached similarly to how one would approach a balanced diet: by including several items from each food group - not all foods are essential, available, or healthful for everyone, but something in each food group and a variety is needed. All food groups (and elements) are essential, and should one decide to exclude any of them, this should be done with careful consideration and following consultation with the relevant professionals.

How each element should be realised in the make-up of a commons is a matter of the specific needs of stakeholders in many cases, depending on their specific mission and availability of resources, among other factors. For example, ‘Governance’ is crucial, but not all of the categories and subcategories within Governance may be relevant or feasible for all commons; the Model is intended as guidance that can be adapted for specific needs.

The GORC model describes the essential ingredients, but what quantities you choose and how you prepare them is up to you.
A GLOBAL SET OF CONSIDERATIONS

The WG’s outputs are based on the analysis of an extensive number of sources. The foundation of the model is based on the GORC IG Typology and Definitions\(^9\), which defines essential elements of commons. The model further refines these essential elements by defining categories and subcategories of the essential elements as well as attributes and features of these entities. The items in the model were found in examples provided in the GORC IG Typology and Definitions, observed through 12 speaker series presentations from commons around the globe\(^10\), an analysis of other relevant RDA IGs and WGs, and an analysis of relevant community groups, publications, and reports external to RDA. The sources and analysis were international in scope, surveying commons representatives from around the world and conducting an analysis of initiatives including the European Open Science Cloud (EOSC), the International Virtual Observatory Alliance (IVOA), NII Research Center for Open Science and Data Platform (NII RCOS), Australian Research Data Commons (ARDC), Korea Research Data Commons / Korea Institute of Science and Technology Information (KISTI), the Malaysian Open Science Platform (MOSP), Instituto Brasileiro de Informação em Ciência e Tecnologia (IBICT), the Nordic e-Infrastructure Collaboration (NeIC), the China Science and Technology Cloud (CSTCloud), and the African Open Science Platform (AOSP). The WG also consulted their membership of over 60 individuals globally, as well as the wider RDA Community during Plenary Meetings, dedicated workshops, and online asynchronous reviews.

ADOPTION CONSIDERATIONS

The Model is intended as a guideline with suggestions for commons on how to be better prepared to join the GORC, or to become a GORC. It is not a prescriptive list and not all considerations will be universally applicable. All items in the Model should be given careful consideration by those undertaking its implementation, deciding which are applicable and feasible for them; all decisions should be intentional based on the individual circumstances.

Depending on the level of maturity of a commons, some of the items in the Model may be more appropriate. The type of commons in question is also crucial in deciding which considerations to adopt. Whether the initiative is discipline-focused, national, pan-national or international will affect the implementation decisions.

\(^9\) https://doi.org/10.15497/RDA00087
\(^10\) https://www.rd-alliance.org/group/gorc-international-model-wg/wiki/gorc-wg-speaker-series
\(^11\) A full list of organisations and more details on the methodology are available in the report: https://doi.org/10.15497/RDA00097
IMPLEMENTATION LEVELS

The decision making on the implementation of the Model and the adoption of specific aspects of essential elements can happen at two different levels: a) governance and management, and b) internal personnel carrying out the actions resulting from the decisions made by governance and management. For example, if at the first level the governance bodies define ‘Security’ as an essential aspect, they would work with management to create a risk management framework. Management would consequently work with technicians to implement the appropriate categories and subcategories of essential elements that contain security considerations, namely ICT Infrastructure and Services and Tools. Service personnel would in turn determine the specific implementation and workflow for each as well as perform maintenance and monitoring that then provides feedback to management and governance on allocation of spending, training, and other resources.

ALIGNMENT AND INTEROPERABILITY

One important incentive for the adoption of the GORC International Model Outputs, as mentioned previously, is its truly global nature. As such, adopting and using the model enables a commons to facilitate alignment and interoperability with other global initiatives. As current endeavours focus on developing and deploying services, more effort can be dedicated to ensuring there is a strategy in place for global collaboration; this Model facilitates exactly that.

JOIN THE GLOBAL OPEN RESEARCH COMMONS INTEREST GROUP

The GORC WG invites you to join the Global Open Research Commons IG\(^\text{12}\) and browse their Output describing a typology of the essential elements in a Commons\(^\text{13}\). The WG urges the reader to consider the critical nature of the elements and their categories and sub-categories in the Model, in particular when making decisions with regards to funding allocation and policy-making.

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12. https://www.rd-alliance.org/groups/global-open-research-commons-ig
Global Open Research Commons (GORC) International Model RDA Working Group (WG): Considerations for Developing Policy with Global Impact

Collaborative workshop on the GORC WG Model during RDA Plenary 20 in Gothenburg, Sweden, in March 2023.

THE GLOBAL OPEN RESEARCH COMMONS INTERNATIONAL MODEL, VERSION 1

THE GLOBAL OPEN RESEARCH COMMONS INTERNATIONAL MODEL REPORT, VERSION 1