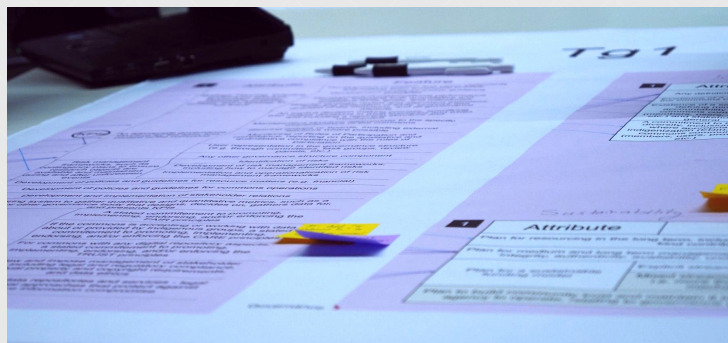


Adopting and Implementing the Model for your organisation

GLOBAL OPEN RESEARCH COMMONS (GORC) INTERNATIONAL MODEL RDA WORKING GROUP (WG)

The Global Open Research Commons (GORC) International Model WG⁴ 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.



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

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 attributes⁷ 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 Objects⁸.

4. <https://www.rd-alliance.org/groups/gorc-international-model-wg>

5. <https://www.rd-alliance.org/groups/global-open-research-commons-ig>

6. <https://doi.org/10.15497/rda00099>

7. Please see the Glossary for all definitions: <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>

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 chose 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 Definitions⁹, 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 globe¹⁰, 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-focussed, national, pan-national or international will affect the implementation decisions.



The GORC WG in action during RDA Plenary 20 in Gothenburg, Sweden, in March 2023.

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 IG¹² and browse their Output describing a typology of the essential elements in a Commons.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.

12. <https://www.rd-alliance.org/groups/global-open-research-commons-ig>

13. <https://www.rd-alliance.org/group/global-open-research-commons-ig/outcomes/gorc-ig-typology-and-definitions>

Attribute	Feature
High quality is that the data is for the research.	Community supported and well documented metadata standards(s) in addition to generic standards.
A mechanism to capture provenance for research artifacts, in addition to basic metadata, such that metadata includes provenance information according to a cross-community language.	A mechanism to capture provenance for research artifacts, in addition to basic metadata, such that metadata includes provenance information according to a cross-community language.
Metadata is offered in such a way that it can be harvested and indexed.	Metadata is offered in such a way that it can be harvested and indexed.
Metadata can be accessed both by humans and by machines.	Metadata can be accessed both by humans and by machines.
Metadata includes information about the license under which the research object can be reused. Where possible, metadata refers to a standard, machine-actionable reuse license.	Metadata includes information about the license under which the research object can be reused. Where possible, metadata refers to a standard, machine-actionable reuse license.
A metadata description contains the PID of the corresponding object.	A metadata description contains the PID of the corresponding object.
Metadata terms that are in a resolvable namespace (so-called Grounded Metadata), where resolution leads to a definition of the meaning of the term.	Metadata terms that are in a resolvable namespace (so-called Grounded Metadata), where resolution leads to a definition of the meaning of the term.
Metadata may be retrieved by an open and free protocol.	Metadata may be retrieved by an open and free protocol.
Metadata contain qualified outward references to third party resources.	Metadata contain qualified outward references to third party resources.
Metadata contain a descriptive title beyond the title of the research object filename.	Metadata contain a descriptive title beyond the title of the research object filename.
Metadata contain a list of contributors, including those involved with curation, methodology, resources, and software (if the research object is data that has been simulated or processed).	Metadata contain a list of contributors, including those involved with curation, methodology, resources, and software (if the research object is data that has been simulated or processed).
Metadata contain a rich description, including the number of files, important variables, and other available documentation.	Metadata contain a rich description, including the number of files, important variables, and other available documentation.
Metadata specifies the research object subtype.	Metadata specifies the research object subtype.
Metadata contain affiliated organizations of the authors or organizations participating in the project.	Metadata contain affiliated organizations of the authors or organizations participating in the project.
Metadata contain the countries of the organization or project.	Metadata contain the countries of the organization or project.
Metadata contain information about the funder.	Metadata contain information about the funder.
Metadata contain information about the context.	Metadata contain information about the context.
Metadata contain the publisher of the research object, who is the entity that makes the research object public.	Metadata contain the publisher of the research object, who is the entity that makes the research object public.
Metadata contain information about the location of this instance of the research object.	Metadata contain information about the location of this instance of the research object.
Metadata contain links to related research products.	Metadata contain links to related research products.
Metadata contains links or provides information for dynamic linking to related research products.	Metadata contains links or provides information for dynamic linking to related research products.
Metadata contain method of data production.	Metadata contain method of data production.
Metadata contain information to enable the user to get access to the data.	Metadata contain information to enable the user to get access to the data.
Metadata is accessed through standardized protocol.	Metadata is accessed through standardized protocol.
Metadata uses machine-understandable community knowledge representations and standards.	Metadata uses machine-understandable community knowledge representations and standards.
Metadata includes references to other metadata, preferably qualified references.	Metadata includes references to other metadata, preferably qualified references.
Metadata uses controlled vocabularies.	Metadata uses controlled vocabularies.
Identify what resources and research objects to be marked up with structured metadata.	Identify what resources and research objects to be marked up with structured metadata.
A crosswalk that maps repository schema to markup vocabulary.	A crosswalk that maps repository schema to markup vocabulary.

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

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