



FAIR-IMPACT

Expanding FAIR solutions across EOSC

Synchronisation Workshop 2023

Metadata, semantics and
interoperability
November 28th 2023

Esteban Gonzalez, UPM and Anne-Sofie Fink, DeIC



Funded by
the European Union

Let start with an small exercise

<https://www.mentimeter.com/>

Code: 1819 5806

Glossary

Metadata: “Metadata represents data about data. Metadata enriches the data with information that makes it easier to find, use and manage.” (source: ontotex)

Semantic artefacts: “Semantic artefacts is a variety of digital representation of formats, e.g. RDF, Turtle, OWL-RDF, XML, JSON-LD. Artefacts may have a broad range of formalisation: Loose set of terms, taxonomies, thesauri, higher order of logistics including concepts, terms and classes. ” (source: FAIRSFAIR)

Interoperability: “Ability of organisations to interact towards mutually beneficial goals, involving the sharing of information and knowledge between these organisations, through the business processes they support, by means of the exchange of data between their ICT systems.” (source:EIF European interoperability framework)

Recommendations from previous edition

- More cross-disciplinary work is needed to align semantic artefacts with the same terms or concepts.
- Maintenance, sustainability, and governance of semantic artefacts deserve attention and agreement across disciplinary communities.
- The FAIR-at-large community should intensify the work on crosswalks and mapping

CODE: 2489 3480

Objective of this session

The aim of the workshop will be to explore the semantic and technical interoperability adopted by different research communities to explore their compliance with the EOSC IF recommendations...

... and try to *interoperate* all together.

Agenda

1. Introduction to EOSC IF and recommendations.
2. Inspiring talks
 - a. *Mappings and crosswalks* by Yann Le Franc
 - b. *FAIRsharing: mapping the interoperability landscape of standards, databases and policies* by Allyson Lister
3. Interactive session.
4. Discussion session.

Some details for this session.

- The session will be recorded but only for internal use for the rapporteur report writing.
- Shared [spreadsheet](#) and [note taking document](#) for use in the session afterwards).
 - In the spreadsheet please keep information factual, short and include links where possible.
 - In the note taking document you may add more detail and background.
 - Please be careful when editing spreadsheet cells.
 - Please refrain from editing other people's information - even typos.

Some more details for this session.

- You may wish to add more information later, spreadsheet & note taking document will be available until **December 10th**
- Survey responses have been added to the spreadsheet
- 4 questions for this session but you may not have answers for them all.

Questions

1. What does your project/institution/community do to implement semantic artefacts (ontologies, schemas, standard, vocabularies, etc) into your (meta)data?
2. In your project/institution/community do you publish your (meta)data following FAIR principles?
3. Are you reuse data from other project/institution/community?
4. What are the worst data practices adopted in your project/institution/community?

We have received 10 responses. Thank you!

Questions

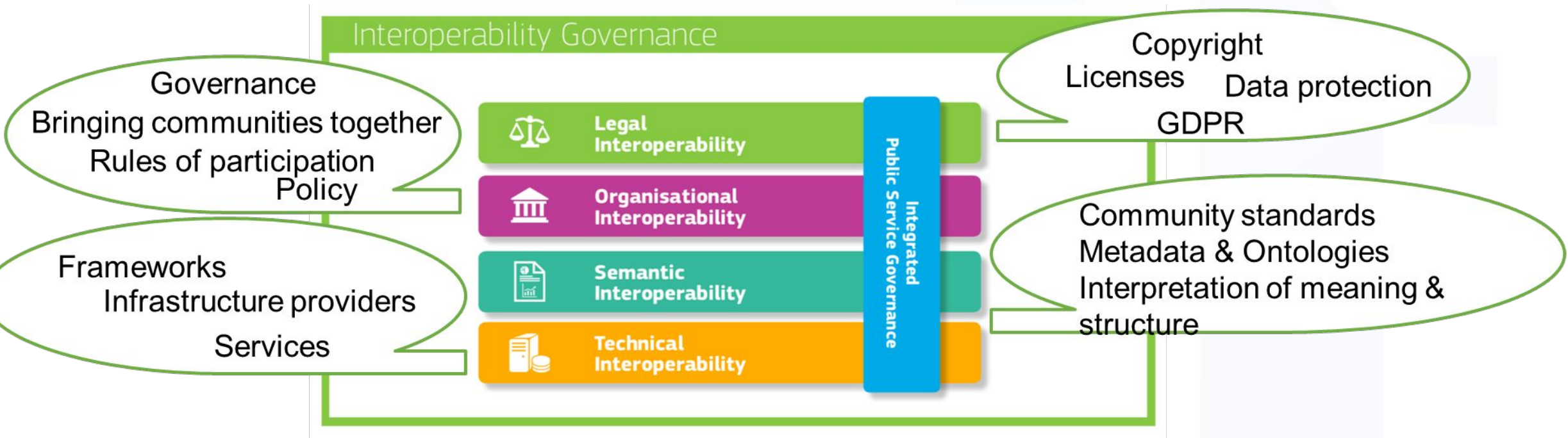
- 70% use any kind of semantic artefact (only 2 ontologies).
- 70% have some FAIR guideline to publish their data
- 40% reuse data from other domains
- Worst data practices
 - metadata using free text
 - no agreement on how to provide metadata inside communities
 - editors don't use PID provided by authors to cite data
 - carelessness in using the concepts of open and private

Do you know more bad data practices?

EOSC IF

(Oscar Corcho et al.)

The EOSC Interoperability Framework is a set of policies and guidelines that enable **interoperability of resources and services**, and will facilitate service composability.



The European Interoperability Framework four levels of interoperability



Problems

Lack of (or overabundance of)

- P1: explicit definitions
- P2: common semantics (general ontologies)
- P3: reference repository
- P4: common metadata scheme across communities
- P5: metadata models



Needs

- N1: principle approaches/tools for ontology and metadata schemes
- N2: harmonisation across disciplines
- N3: harmonisation of data of the same type
- N4: federated access to existing research data repositories



Recommendations

- R1: definitions of concepts, metadata and data schemes
- R2: creating semantic artefacts with open licenses
- R3: associated documentation for semantic artifacts
- R4: repositories of semantic artefacts
- R5: minimum metadata model and cross walks discovery
- R6: extensible options for disciplinary metadata
- R7: apply a broad definition of data (datasets, workflows, lab protocols, software, methods, hardware design, etc.)
- R8: clear protocols and building blocks for catalogues

Take-home messages

- Semantic interoperability is a clear need to achieve more inside and across scientific communities, and to realise the EOSC vision
 - Also applicable to other contexts: data spaces, open data, etc.
- Although well-studied and described, we are still “fighting” with some key problems...
 - Lack of common explicit definitions of terms used inside and across communities
 - Lack of common semantic artefacts across communities
- ... and with the design and implementation of the key enabling components / building blocks
 - Catalogues of semantic artefacts and their metadata
 - Crosswalks across metadata models (mapping repository)
- And finally, a proper governance of all these artefacts inside communities is needed (but that’s for another talk and discussion)

The EOSC Interoperability TF is conducting a landscape overview of semantic interoperability

They are looking for use cases

Visit the Semantic Interoperability Profile wizard!
<https://sip-wizard.ds-wizard.org/>



FAIRsharing.org

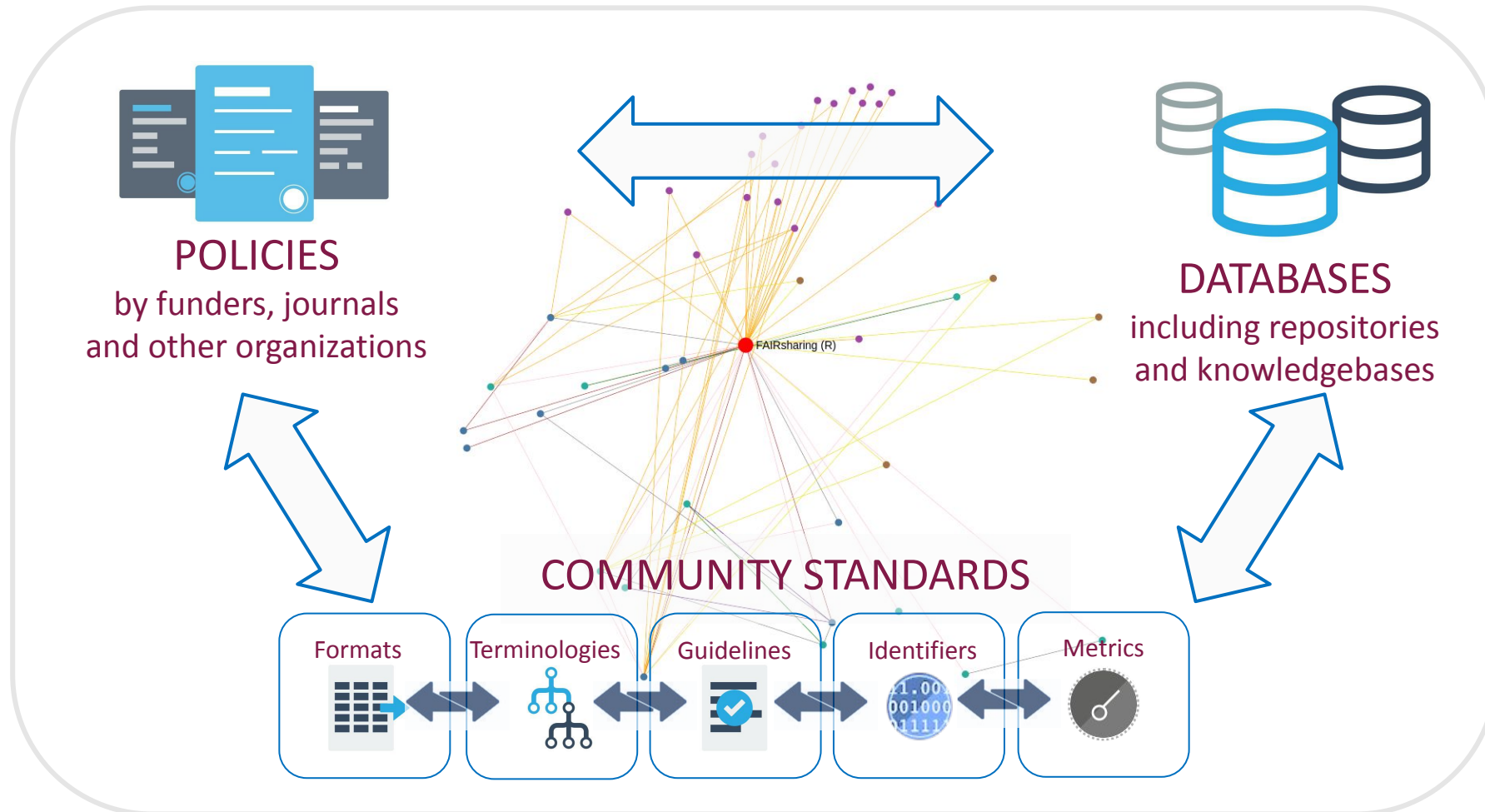
Mapping the interoperability landscape of standards, databases and data policies

Allyson Lister, FAIRsharing Content & Community Lead

Prof. Susanna-Assunta Sansone



An informative and educational resource, and a service



FAIRsharing provides **curated descriptions** and **relationship graphs** of
standards, databases and **policies**

Our mission and how we deliver it

Promote the *value* and *use* of **standards**, **databases** and **policies** in **all disciplines**, by engaging **stakeholders** across all sectors, through all stages of the research life cycle

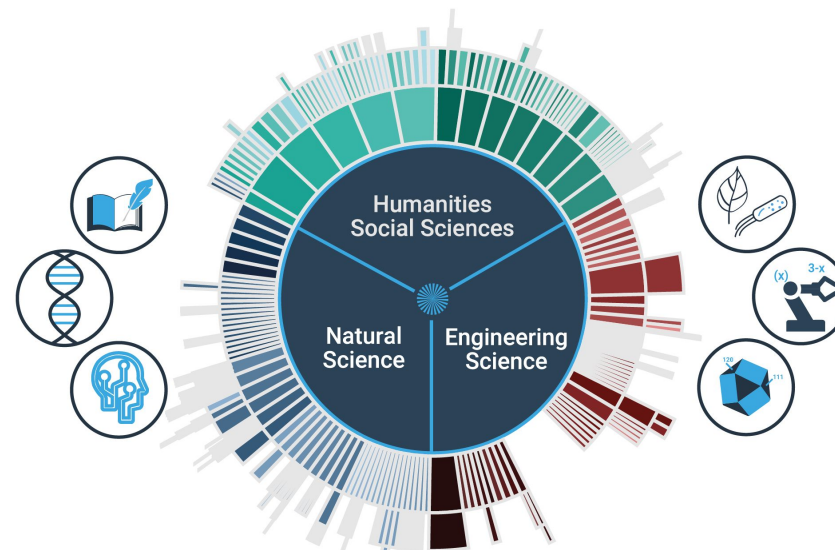
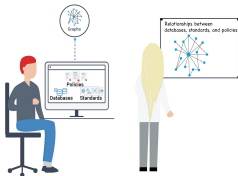
Researchers



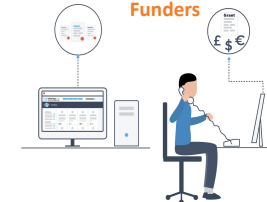
Developers and curators



Librarians and Trainers



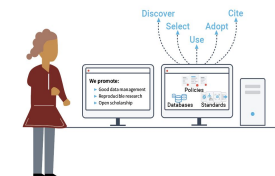
Funders



Journal publishers



Societies and Alliances



Guides **consumers** to *discover*, *select* and *use* these resources with confidence.

Helps **producers** to make their resources more *visible*, more widely *adopted* and *cited*.

Provides **humans** and **tools** with *access* to trustworthy content to *enable* data management tasks.

FAIRsharing in numbers: content, contributions, coverage

1330

Contributors

Our community of record maintainers and curators

4087

Records

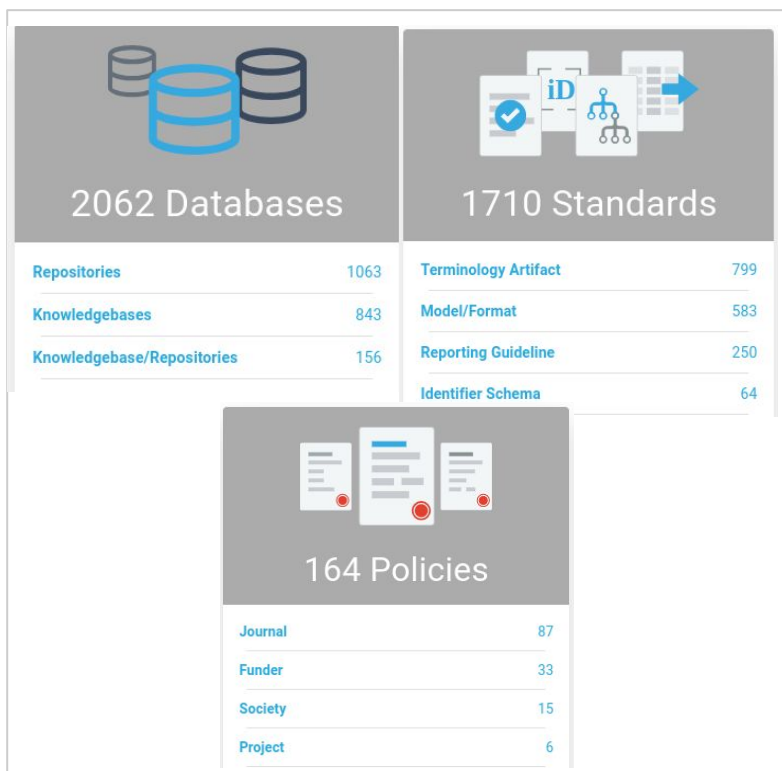
Descriptions of standards, databases and policies

216K

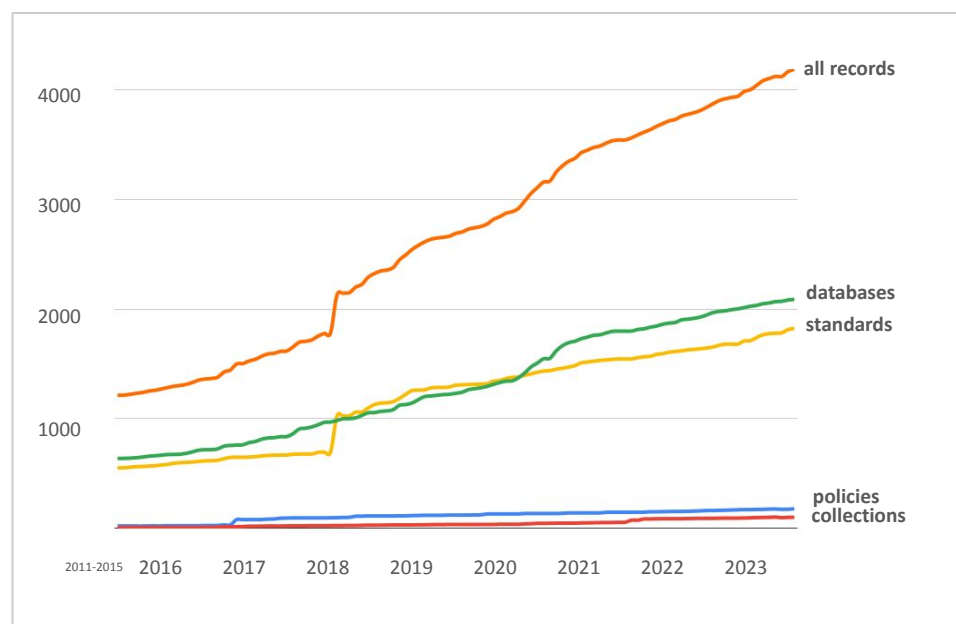
Views

Page visits since 2015

Types and subtypes

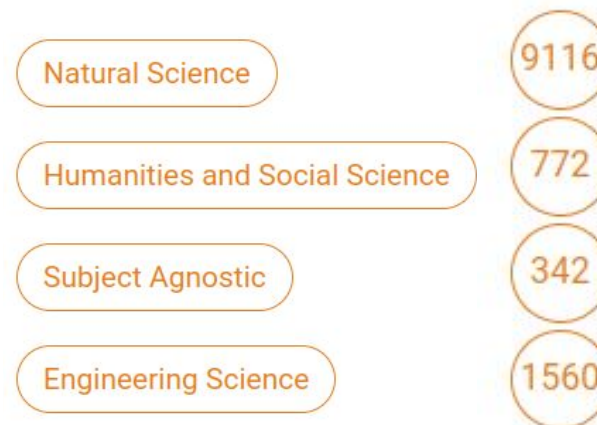


Growth since launch



as of September 2023

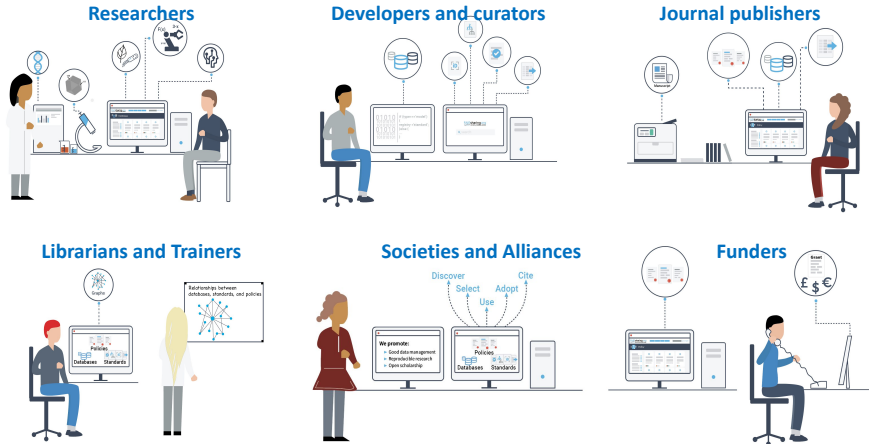
Disciplines



Working with and adopted by all stakeholders, all disciplines

Users, adopters and collaborators include:

Users from all stakeholder groups



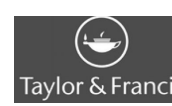
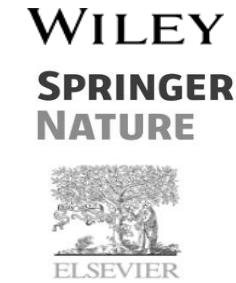
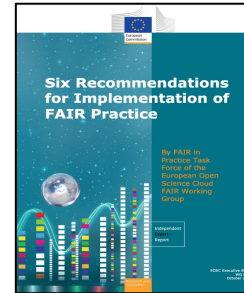
An endorsed output of the FAIRsharing WG (since 2015):



A WG (since 2015) in:



A recommended resource in EOSC reports

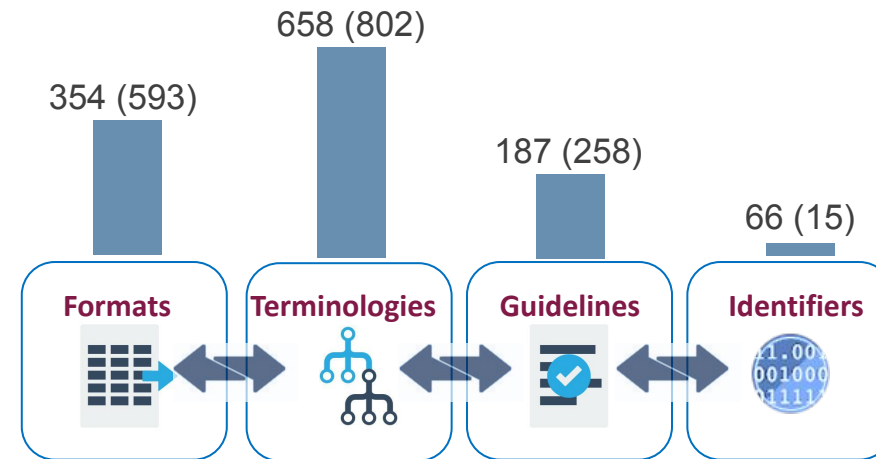


<https://fairsharing.org/communities>

The landscape of (meta)data standards

Example: life and biomedical sciences

Standard organizations, e.g.:



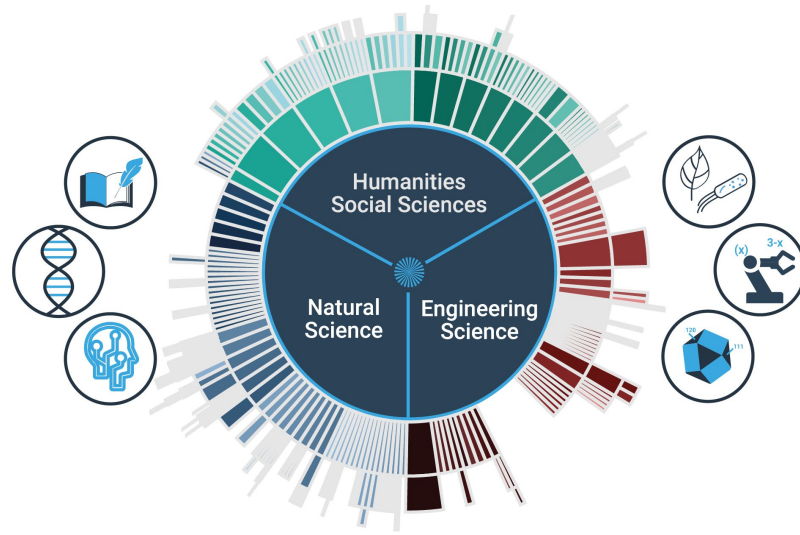
Grass-roots groups, e.g.:



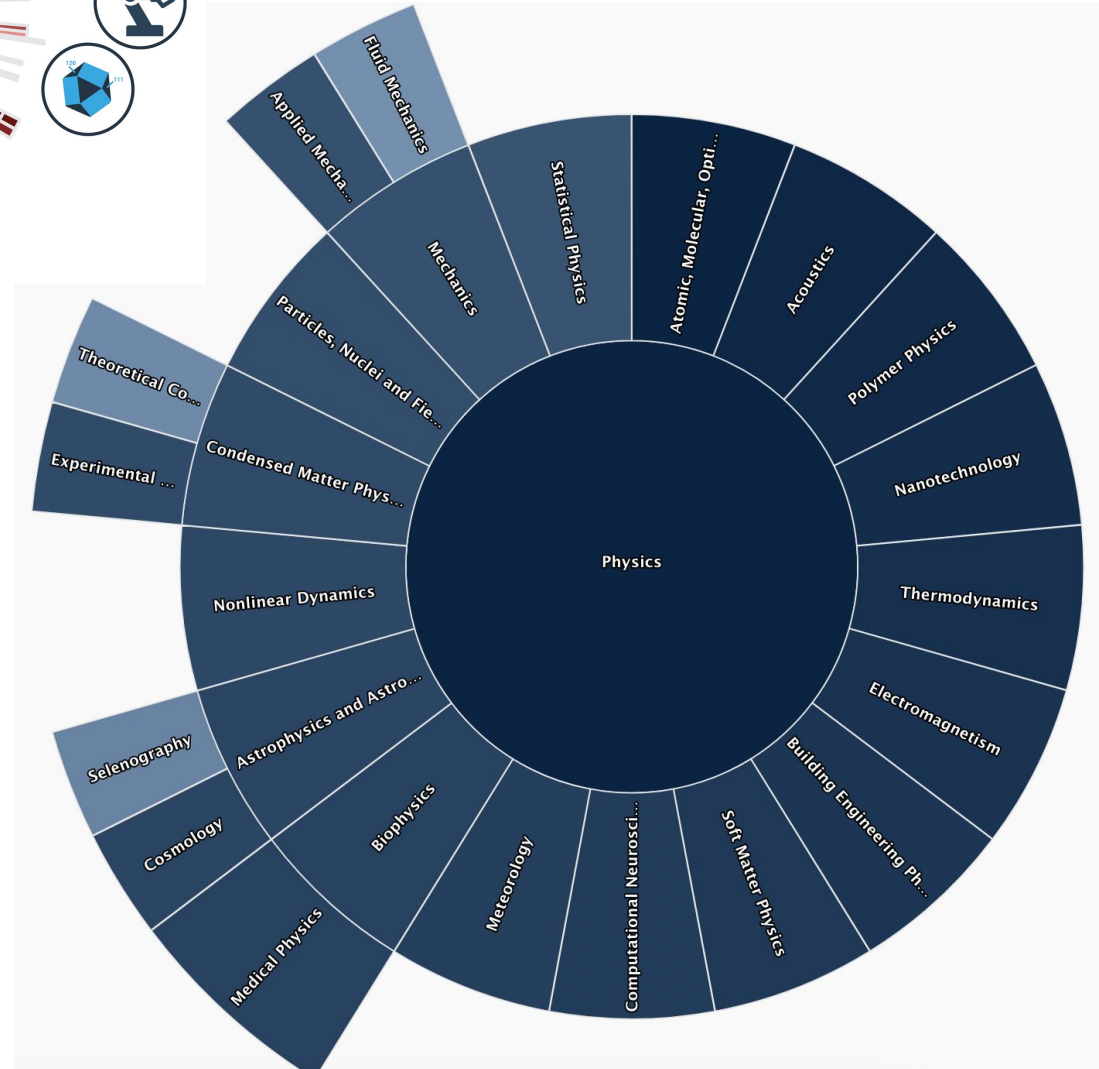
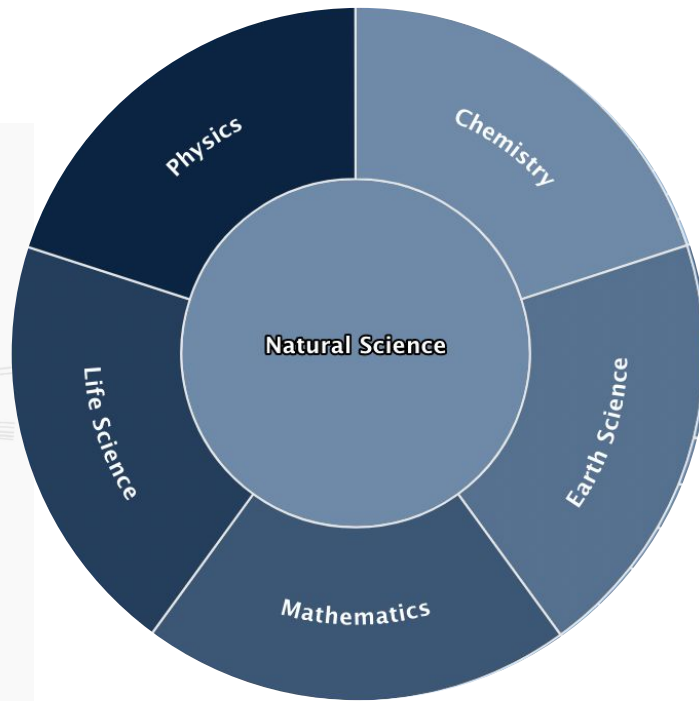
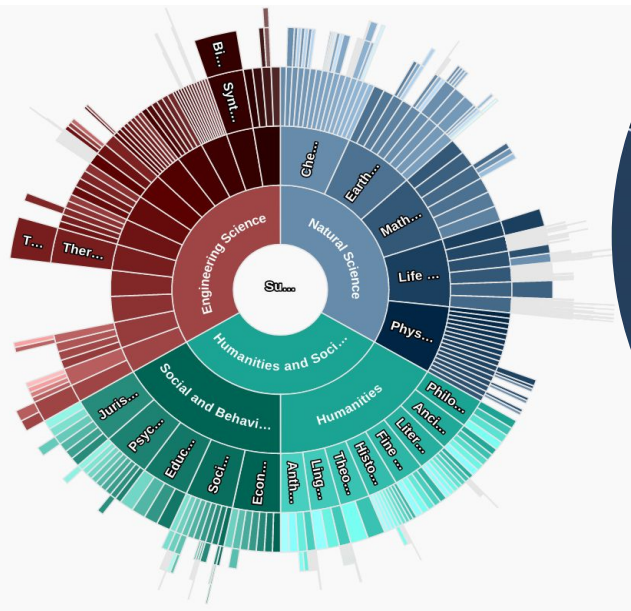
More than 1200 data and metadata standards in the life sciences alone

SRAXml VO AAO MIAME EC number
 SDTM FASTA OBI CHEBI MIRIAM URL DOI
 ISA CML DICOM PATO ENVO MIX MIQAS LSID PURL
 CDASH SBRML MOD TEDDY MIGEN REMARK ORCID Handle IVOA ID
 MITAB OMOP SEDML XAO BTO MIAPE CONSORT RRID InChI ...
 ... DO PRO IDO ... MIASE MISFISHIE ... RRID ...

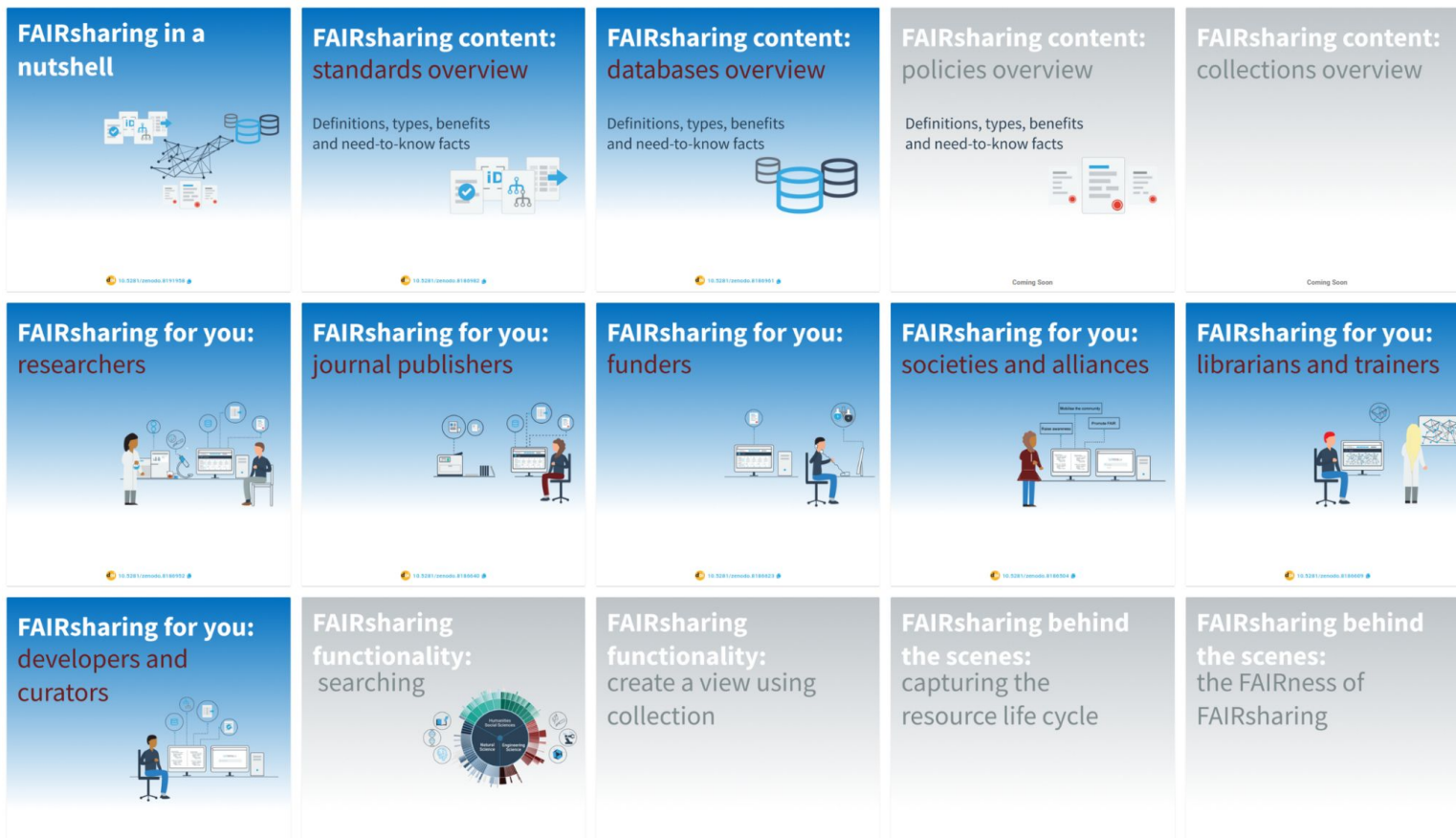
- ▶ Natural Science 8491
- ▶ Humanities and Social Science 692
- ▶ Subject Agnostic 297
- ▶ Engineering Science 1430



Covers all disciplines



Educational Content



Series, focusing on:

- **Content**
- **Users**
- **Functionalities**
- **Behind the scenes**
- **Tips**

Standards in FAIRsharing - an overview



FAIRsharing content: **standards overview**

Core to research data management good practices



FAIRsharing promotes the **value** of standards, the backbone of the **FAIR Principles**

As trusted source of data and metadata* standards for all digital objects, incl. datasets, software, and materials across all disciplines, FAIRsharing:

- guides *users* to discover, select and use standards with confidence
- helps *developers* to make their standards more visible, more widely adopted and cited
- powers *third party tools* by providing trustworthy content to put standards into action

Standards ...

Are a **collectively agreed-upon** set of requirements, specifications, guidelines or characteristics that can be used for the **description, structure, harmonisation, citation, sharing, and/or preservation** of all kinds of data and metadata

Help **machines** with computational accessibility, **interoperability**, and use of data with little/no human intervention; enable humans to understand and **reuse** data at scale

* Where **data** can simply be a piece of information, e.g., observations, a list of measurements, descriptions of certain objects, **metadata** specifies the relevant information about the data, and can be of many types, including descriptive, administrative, and legal

FAIRsharing categorises standards with four types:

1 Reporting guidelines

Outline in narrative form the necessary and sufficient information that should be reported about data, such as in itemised, prescriptive checklists; or the features and behaviours that should be followed, such as in general guiding principles

2 Models and formats

Define the representation of information for use by machines; these range from conceptual models to transmission formats, facilitating data retrieval and exchange between systems

3 Terminology artefacts

Add an interpretive, semantic layer for use by machines and humans; these range from controlled vocabularies (lists of terms, often with definitions) to ontologies (complex hierarchical groupings), providing unambiguous identification of concepts and aiding data querying

4 Identifier schemata

Are formal systems to identify information in a unique, machine-readable way; these persistent identifiers (PIDs), minted by recognised registries, build reliable and long-lasting links between data, people, organisations and infrastructures

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Cite this: [10.5281/zenodo.8186982](https://doi.org/10.5281/zenodo.8186982)
Malin Sandström 0000-0002-8464-2494
Allyson Lister 0000-0002-7702-4495
Susanna-Assunta Sansone 0000-0001-5306-5690

Find more at
fairsharing.org/educational

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FAIRsharing.org Educational

CC BY 4.0 International

Standards in FAIRsharing - an overview



FAIRsharing.org
standards, databases, policies

FAIRsharing provides a snapshot of the **dynamic landscape** of standards

1. Tracks their **evolution**
2. Illustrates **relations** with other standards
3. Displays their **implementation** in databases
4. Monitors their **adoption** in data policies and guidelines

Benefits for all

Be familiar with standards at a level appropriate for your needs, e.g.

- Researchers** should understand the basics, to select the right set when defining a Data Management Plan (DMP)
- Tools and service developers, and data professionals** should have a high familiarity with standards, implement them in data infrastructures, and make them 'invisible' to researchers and other users of these systems
- Trainers, guidance and policy makers** should also have a strong grasp of standards to provide examples and recommend an appropriate set

FAIRsharing visualises **relationships** among resources, e.g.,

- many **standards** are used in **combination** as 'packages', such as when a **terminology** is **related to** a given **format**
- which **standards** are **implemented by** databases and are **recommended by** policies

There is no central authority for standards, but there are two main producer groups:

- Standards Developing Organisations, with formal membership & development processes, create *de jure* standards often available for a fee
- Grass-roots, open communities create freely available *de facto* standards via a more organic process, generally accepted through common use
- As long as a standard is recognized by the research community and discipline you belong to, both types are suitable for enabling FAIR data

Navigating the standards ecosystem is challenging:

- Standards are often fragmented, with unnecessary duplications and gaps
- High numbers of published standards in some research areas reflects the dynamic nature of data types, technologies, and needs of the research communities
- Several mappings are being created to enable crosswalking among standards
- Measuring the uptake is not trivial and achieving a full picture is practically impossible

Do not be discouraged: it is always better to use a standard, even if imperfect, than none!

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Standards in FAIRsharing - an overview



FAIRsharing provides a snapshot of

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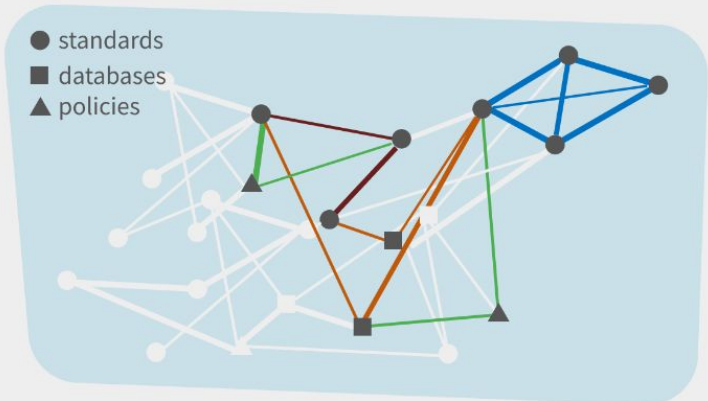
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Standards in FAIRsharing - an overview



FAIRsharing.org
standards, databases, policies

Subject tags indicate the specific scientific significance, or domain, e.g., *Neuroscience, Linguistics*

Subject agnostic is used to describe standards that are suitable for all research areas

Domain tags indicate the specific relevance to technology or protocol, e.g., *magnetic resonance imaging, literature mining*

FAIRsharing displays the intended use of each standard

Ready when a resource is considered suitable for use

In development when a resource is being developed and may be used but may also be in a state of flux

Deprecated when the community no longer mandates its use; this status is curated jointly with an explanation and, where available, a link to the standard that has superseded it, or been merged with it

Uncertain when contact cannot be established with the community or owners of a resource, and therefore its current status cannot be determined; generally used on a temporary basis

FAIRsharing uses indicators to show the life-cycle status of each standard

Examples

Collection of 15 research metadata schemas crosswalked to Schema.org by the RDA Research Metadata Schemas WG
List: fairsharing.org/3641
Graph: fairsharing.org/graph/3641

A guideline for *Astrophysics and Astronomy*, DOI: 10.25504/FAIRsharing.RycpEU
A model/format for *generic* use, DOI: 10.25504/FAIRsharing.hzdqz8
A terminology for *Linguistics*, DOI: 10.25504/FAIRsharing.8DCv6L
A *general purpose* standard, DOI: 10.25504/FAIRsharing.5bbab9

Views of standards by type:
fairsharing.org/standards/identifier_schemas
fairsharing.org/standards/model_and_format
fairsharing.org/standards/reporting_guidelines
fairsharing.org/standards/terminology_artefacts

Search standards using different options:
fairsharing.org/#search

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Find more at
fairsharing.org/educational

<https://fairsharing.org/educational>

Standards in FAIRsharing - an overview



Examples

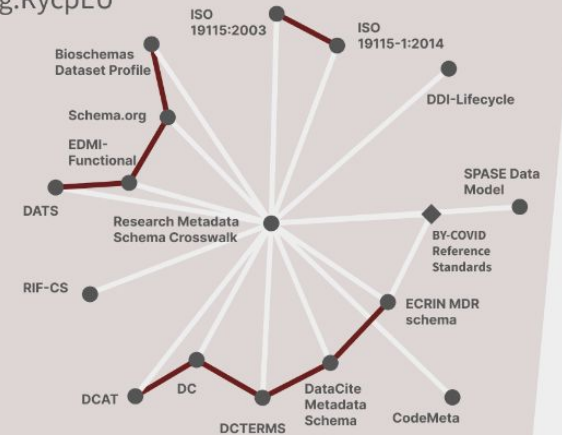
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Search standards using different options:
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FAIRsharing.org Educational


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Collections: tailored views for education and promotion

Collections are branded pages that *group* selected **standards** and/or **repositories**. Initiatives and projects have created them for several purposes, e.g. to list resources:

EXAMPLES

Developed by the community



International Virtual Observatory Alliance (IVOA)
Maintainers [carviset](#)
Subjects [Astrophysics And Astronomy](#)

Collection URL: fairsharing.org/IVOA

Recommended by a community



RDA Covid-19 WG Resources (RDACovid19WG)
Maintainers [FAIRsharingTeam](#)
Subjects [Public Health](#)

Collection URL: fairsharing.org/RDACovid19WG

Developed by a SDO





cdisc
Maintainers [awhite](#)
Subjects [Biomedical Science](#) [Preclinical Studies](#)

Collection URL: fairsharing.org/CDISC

Mapped to each other

Crosswalk of most used metadata schemes and guidelines for metadata interoperability

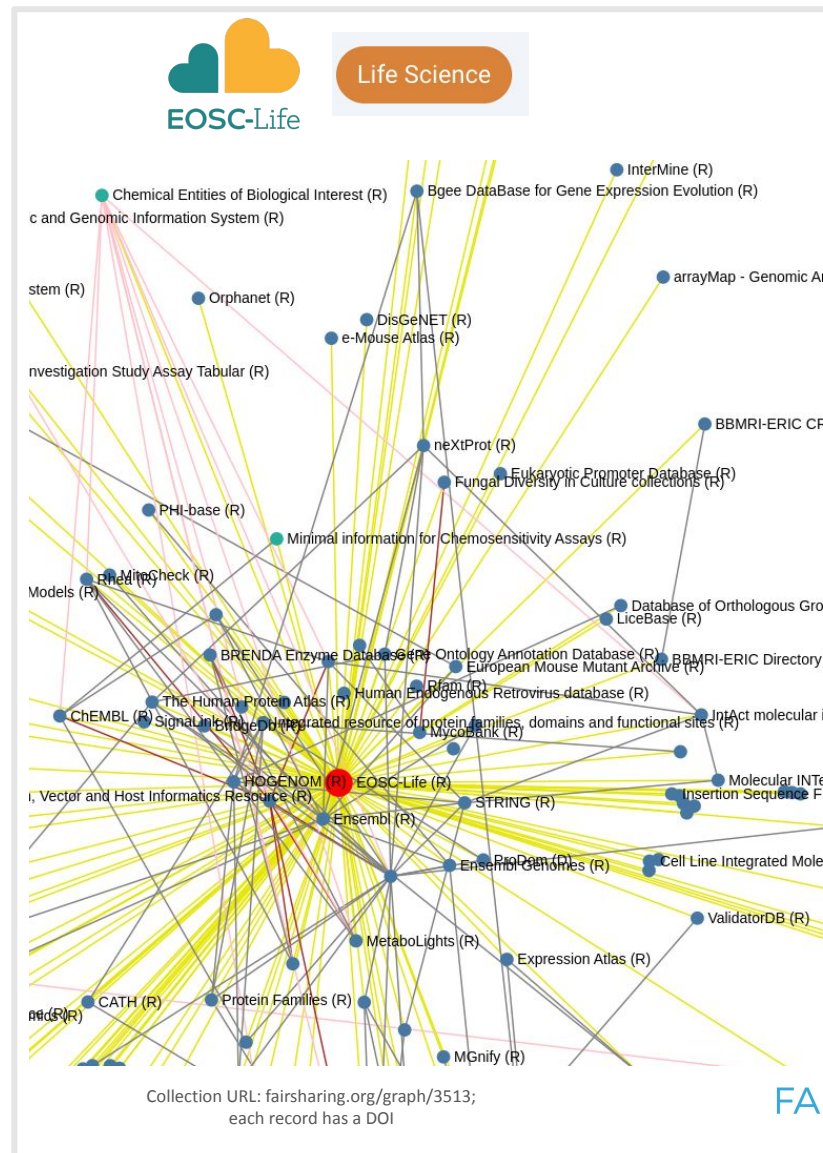
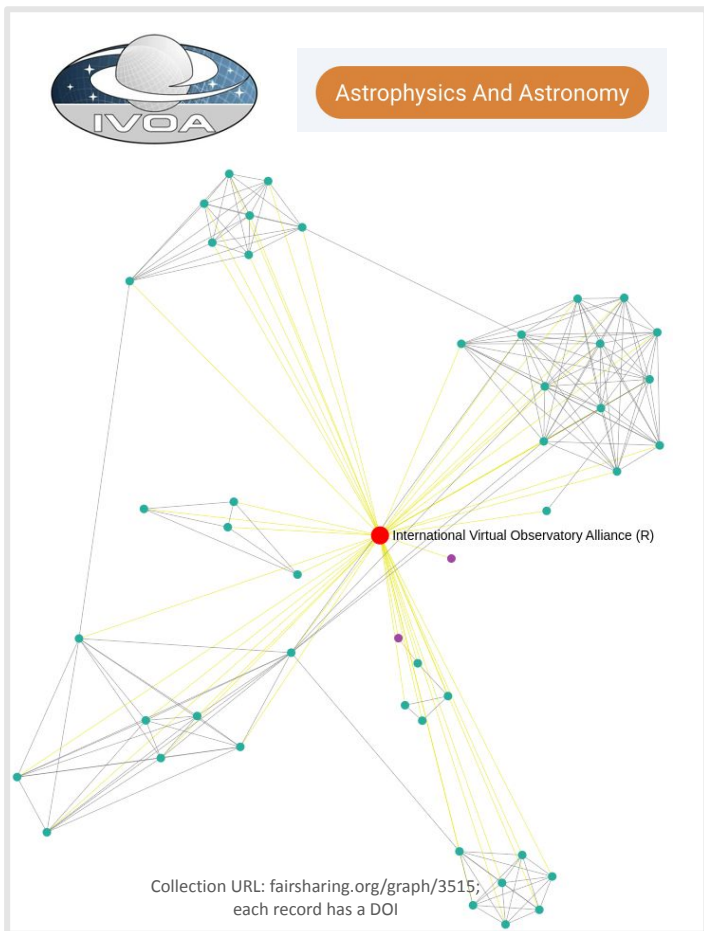


Maintainers [ojstersek@uni-mb.si](#) 
Subjects [Subject Agnostic](#)

Collection URL:
fairsharing.org/CrosswalkOfMostUsedMetadataSchemesAndGuidelines

FAIRsharing makes your resource discoverable to an entire ecosystem of resources

- Deprecates
- Recommends
- Collects
- Profiles
- Accepts
- Outputs
- Shares code with
- Shares data with
- Implements
- Extends
- Related to



The **standards, repositories and policies** each EOSC Cluster uses or endorses

Registry

- COLLECTION
- DATABASE
- STANDARD
- POLICY

Status (shown on mouseover)

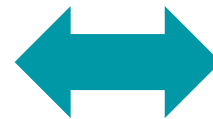
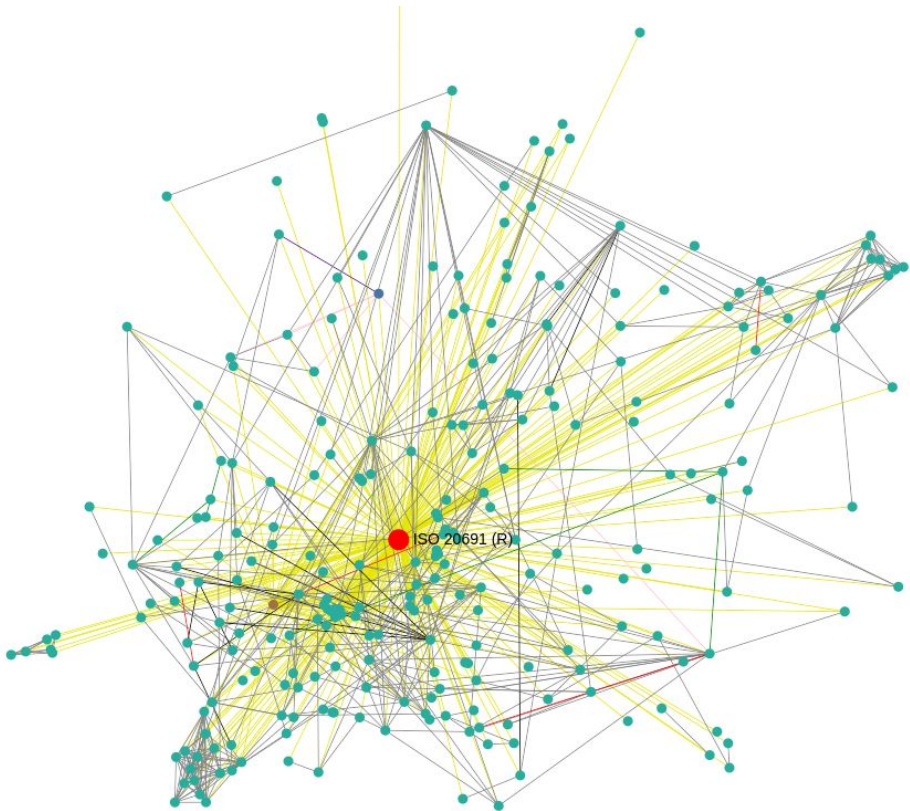
- READY
- IN DEVELOPMENT
- UNCERTAIN
- DEPRECATED

Distance from centre

- ONE HOP
- TWO HOPS
- THREE HOPS

'Live' Knowledge graphs to complement lists

To discover and search the 230 related **standards**, part of the specification developed by the ISO Technical Committee on Biotechnology Processes



ISO

ICS > 07 > 07.080

ISO/DIS 20691

Biotechnology – Requirements for data formatting and description in the life sciences

BUY THIS STANDARD

FORMAT LANGUAGE

PDF English

PAPER English

CHF **58**

GENERAL INFORMATION

Status : Under development You can **comment** on this draft international standard by contacting your **national member**

Edition : 1 Number of pages : 48

Technical Committee : ISO/TC 276 Biotechnology

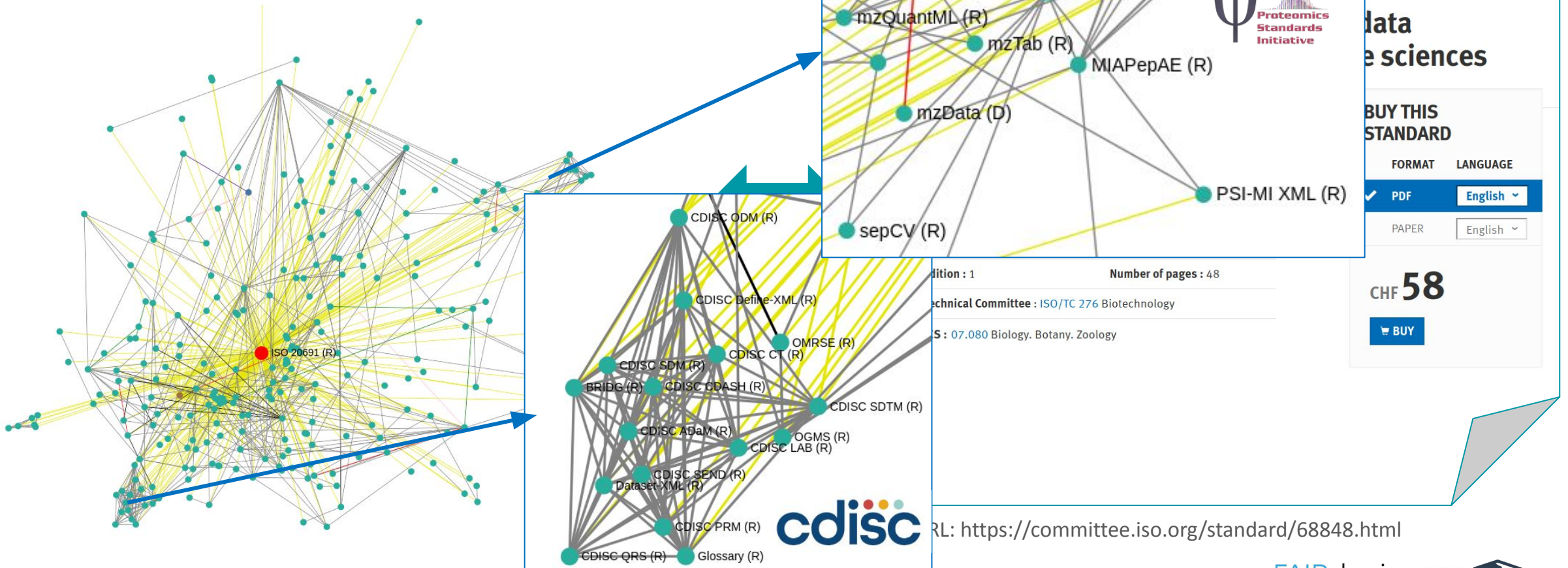
ICS : 07.080 Biology, Botany, Zoology

URL: <https://committee.iso.org/standard/68848.html>

URL: <https://fairsharing.org/ISO20691>

'Live' Knowledge graphs to complement lists


To discover and search the 230 related **standards**, part of the specification developed by the ISO Technical Committee on Biotechnology Processes




URL: <https://fairsharing.org/ISO20691>

Powering 3rd party tools



A growing number of tools and services access FAIRsharing API, and use it for **look-up, selection** and **content retrieval** for **standards** and **repositories** in:

- creation of data management plans
- enrichment of guidance and training material
- assessment of FAIRness 



 **EOSC** | FAIR Metrics and Data Quality Task Force

FAIR Assessment Tools: Towards an “Apples to Apples” Comparisons

 Wilkinson, Mark D;  Sansone, Susanna-Assunta;  Grootveld Marjan;  Nordling, Josefine;  Dennis, Richard;  Hecker, David

Defining PID-compliant Identifier Schemas


Via this EOSC workshop, FAIRsharing will be implementing the current EOSC PID definition (<https://doi.org/10.2777/926037>) and curate all identifier schemas within FAIRsharing to provide a common point of truth for which identifier schemas are PIDs for the purposes of FAIR evaluation and assessment



★★★★★ Rate this publication
A Persistent Identifier (PID) policy for the European Open Science Cloud (EOSC)

This policy was authored by representatives of the EOSC FAIR Working Group and EOSC Architecture Working Group. This Persistent Identifier (PID) policy is written for senior decision makers within potential EOSC service and infrastructure providers and will be of interest to all EOSC stakeholders. It defines a set of

▼ View more












FAIR Metrics and Data Quality Task Force

FAIR Assessment Tools: Towards an "Apples to Apples" Comparisons

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<p>QID</p>  <p>Wikidata Identifier</p> <p>Unique Identifier (UID) used for items in Wikidata.</p> <p>Subject Ag... Not applic...</p> <p>Related Standards: 0 Implementing Databases: 3 Endorsing Policies: 0</p>	<p>IVOA Identifier</p>  <p>IVOA Identifier</p> <p>An IVOA Identifier is a globally unique name for a resource within the Virtual Observatory. This name can be used to retrieve a unique description of the resource from an IVOA-compliant registry or ...</p> <p>Astrophys... Centrally R... Not applic...</p> <p>Related Standards: 7 Implementing Databases: 1 Endorsing Policies: 0</p>	<p>CAS RN</p>  <p>CAS Registry Number</p> <p>Identifier used by the Chemical Abstracts Service Registry. A CAS Registry Number is a numeric identifier that can contain up to 10 digits, divided by hyphens into three parts. The right-most digit is...</p> <p>Cheminform... Chemical E... Not applic...</p> <p>Related Standards: 0 Implementing Databases: 10 Endorsing Policies: 0</p>
<p>RRID</p>  <p>Research Resource Identifier</p> <p>Research Resource Identifiers (#RRID) are ID numbers assigned to help researchers cite key resources (antibodies, model organisms and software projects) in the biomedical literature to improve transparen...</p> <p>Chemistry Citation All +4 more tags</p> <p>Related Standards: 6 Implementing Databases: 15 Endorsing Policies: 11</p>	<p>URL</p>  <p>Uniform Resource Locator</p> <p>URL (Uniform Resource Locator) - the typical "address" of web content. It is a kind of URI (Uniform Resource Identifier) that begins with "http://" and consists of a string of characters used to identify ...</p> <p>Knowledge... Centrally R... Not applic... one more tag</p> <p>Related Standards: 10 Implementing Databases: 0 Endorsing Policies: 1</p>	<p>ORCID iD Identifier Schema</p>  <p>Open Researcher and Contributor ID Identifier Schema</p> <p>The ORCID Identifier Schema is an https URI with a 16-digit number that is compatible with the ISO Standard (ISO 27729), also known as the International Standard Name Identifier (ISNI), e...</p> <p>Knowledge... Centrally R... Not applic...</p> <p>Related Standards: 4 Implementing Databases: 4 Endorsing Policies: 0</p>
<p>RInChi</p> 	<p>ERM Identifier</p> 	<p>EC Number</p> 



- FAIRsharing provides content to support the **Plan** and **Assess** themes
- Within the **Track** theme, FAIRsharing is both a knowledge graph (for standards, databases, data policies and organisations) and provides content to other KGs
- FAIRsharing also provides a service for improving how people search and find information on these resources

What can FAIRsharing do for you?

You require...

FAIRsharing.org helps you via...

Visibility for the resources you produce and endorse	Collections of resources to provide live representations and showcase interoperability of these resources
Visibility for the organisations responsible for them	Organisation-specific FAIRsharing pages that list all relationships
Integration of resources with an ecosystem of tools	API access used by many tools including those for FAIR assessment and data management planning
Ways to discover resources of use to your stakeholders	Search and graph functionality to discover resources for collaboration and use

FAIR-IMPACT recommendations and FAIRsharing

To enhance...

You should...

Recommendation 1: Develop domain and cross-domain interoperability frameworks at the level of vocabularies, ontologies, and metadata schema ([FAIRsFAIR white paper - Rec1](#)).

Discover **relationships** and use FAIRsharing record links in your guidance to members, **utilising stable PIDs** for resources you want to recommend.

Recommendation 2: Define maintenance of a repository of semantic artefacts and a governance framework for such a repository ([EOSC Interoperability Framework](#) - Semantic recommendation p.6)

Register your **repository**, the **terminologies** within it (if not already present), and crosswalks in FAIRsharing to improve **visibility** to **humans** and **machines**

Recommendation 3: Develop interoperability frameworks for FAIR sharing within disciplines and for interdisciplinary research ([Turning FAIR into reality - Rec4](#))

Suggest that members use FAIRsharing to **discover standards** and **databases** for this work

Recommendation 4: Define a clear PID policy and a common security and privacy framework ([EOSC Interoperability Framework](#) - Technical recommendation p.6)

Implement and join EOSC FAIR Metrics and Data Quality TF **common approaches** to **FAIR evaluation**

Representation and **visibility** of your resources in FAIRsharing

Nominate representatives to **join** the **FAIRsharing Community Champions** to aid delivery of all of these

FAIRsharing Community Champion Programme

Community Champions

3772

edits

520

updated records

104

new records

**Since they
began in Autumn
2022*

Our **Maintainers** and **Community Champions** are continue to update across **all disciplines**, according to their needs and interests

Record Maintainers

3281

edits

418

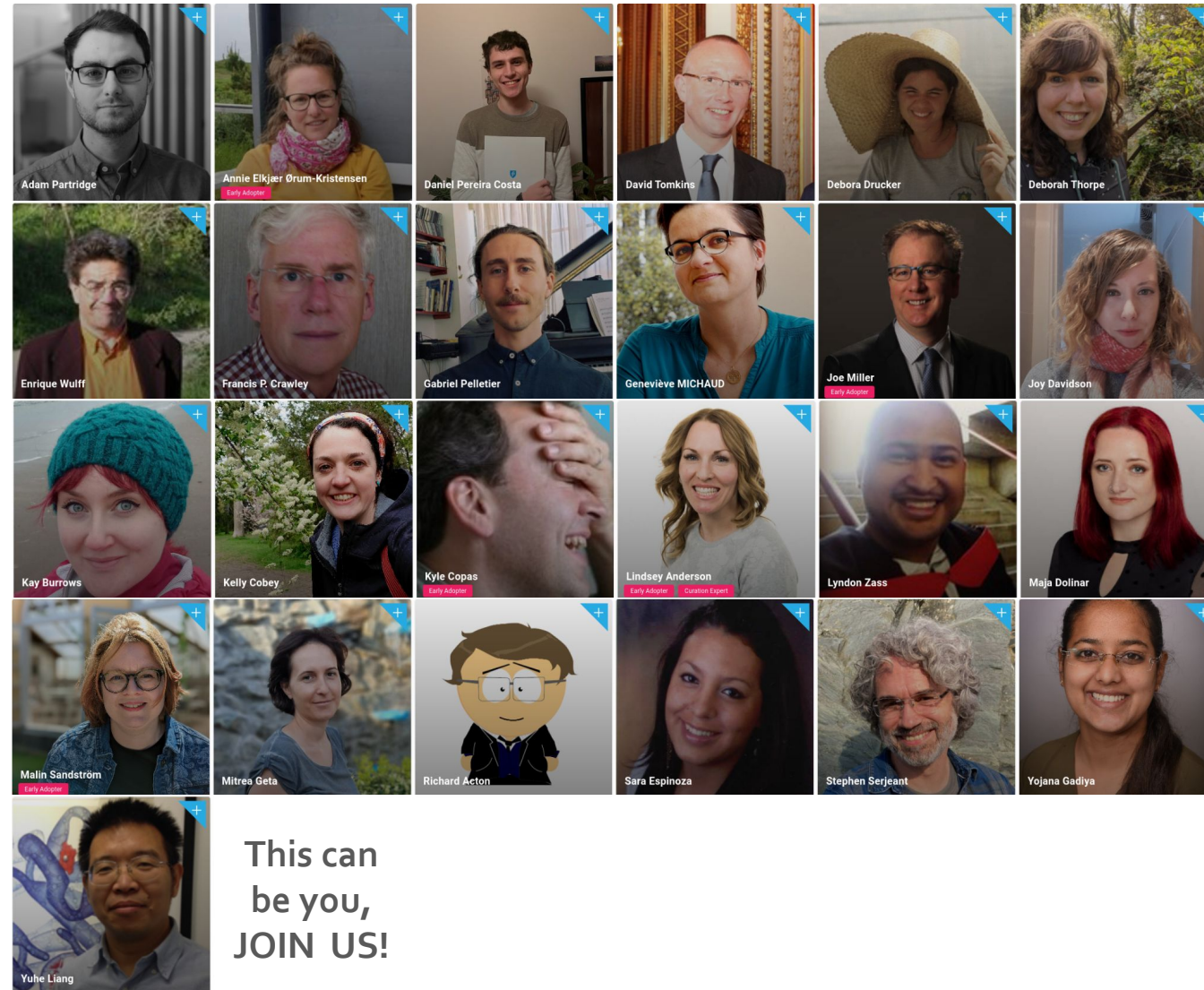
active maintainers

**Since our new
site went live in
October 2021*

FAIRsharing Community Champion Programme

A thriving community of domain and discipline experts who:

1. **act as advocates** to promote the value of standards, databases and policies for digital objects (incl. data, software).
2. **create educational material** describing these resources helping researchers and other stakeholders to find, use and adopt them.
3. **enrich the content** of FAIRsharing, adding and enhancing the description and discoverability of these resources.



This can
be you,
JOIN US!

fairsharing.org/community_champions/our_champions

Professional activities (4) Sort

University of Oxford - FAIRsharing: Oxford, GB

2023-01-01 to 2023-12-31 | FAIRsharing Community Champion (Omics) 2023 (University of Oxford - FAIRsharing) [Show more detail](#)
Service
URI: [FAIRsharing user page for Inanderscience, 2023](#)
URI: [FAIRsharing Community Champions Programme 2023](#)

Source: FAIRsharing.org

The following community curators have contributed to this record:

FAIRsharing.org: Oxford, GB kcopas@gbif.org jmiller@gbif.org

2022-01-01 to 2022-12-31 | FAIRsharing Community Curator (Omics) 2022 (FAIRsharing.org) [Show more detail](#)
Service
URI: [FAIRsharing user page for Inanderscience](#)
URI: [FAIRsharing Community Curation Programme](#)

Source: FAIRsharing.org

Thank you!

Stakeholder Advisors

- **Amye Kenall**, Research Square
- **Adam Leary**, Oxford University Press
- **Catriona MacCallum**, Wiley
- **Dagmar Meyer**, European Research Council, Executive Agency
- **David Carr**, Global Biodata Coalition
- **Dominic Fripp**, JISC
- **Emma Ganley**, Protocols.io
- **Geraldine Clement-Stoneham**, Medical Research Council
- **Graham Smith**, Springer Nature
- **Helena Cousijn**, DataCite
- **Imma Subirats**, FAO of the United Nations
- **Kiera McNiece**, Cambridge University Press
- **Lauren Cadwallader**, PLoS
- **Lorenzo Feri**, Elsevier
- **Luiz Olavo Bonino**, GO-FAIR
- **Mark Leggott**, Digital Research Alliance of Canada
- **Marta Teperek**, Open Science NL
- **Michael Ball**, Medical Research Council
- **Mike Huerta**, NIH National Library of Medicine
- **Nick Everitt, and Matthew Cannon**, Taylor and Francis
- **Peter McQuilton**, (FAIRsharing Founding Member), GSK
- **Rebecca Grant**, F1000
- **Richard Brown**, BBSRC UKRI
- **Robert Hanisch**, National Institute of Standards and Technology
- **Sarah Callaghan**, Research Strategy & Policy Unit, University of Oxford
- **Sarah Stewart**, St. George's, University of London; Oxford Internet Institute
- **Scott Edmunds**, GigaScience, Oxford University Press
- **Simon Hodson**, CODATA
- **Theo Bloom**, British Medical Journal
- **Thomas Lemberger**, EMBO Press
- **Varsha Khodiyar**, Independent Expert
- **Wei-Mun Chan**, eLife

Community Champions

fairsharing.org/community_champions/our_champions



WG

FAIRsharing Registry: Connecting data policies, standards and databases RDA WG

www.rd-alliance.org/group/fairsharing-registry-connecting-data-policies-standards-databases.html

RDA FAIRsharing WG Chairs

- **Graham Smith**, Springer Nature
- **Holly Murray**, Health Data Research UK
- **Peter McQuilton**, GSK
- **Rebecca Grant**, F1000
- **Simon Hodson**, CODATA
- **Allyson Lister**, University of Oxford
- **Susanna-Assunta Sansone**, University of Oxford

Operational Team



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Front End Manager



Delphine Dauga

Curation Manager



Prakhyat Gailani

Web Developer



DEPARTMENT OF
**ENGINEERING
SCIENCE**



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Expanding FAIR solutions across EOSC



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