

FAIRsharing.org

An ecosystem of research standards and databases
for effective RDM

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datareadiness.eng.ox.ac.uk



contact@fairsharing.org



[@FAIRsharing_org](https://twitter.com/FAIRsharing_org)



[10.25504/FAIRsharing.2abjs5](https://doi.org/10.25504/FAIRsharing.2abjs5)



National Institutes
of Health



Medical
Research
Council



NATURAL
ENVIRONMENT
RESEARCH COUNCIL



Innovative Medicines Initiative



UNITED
KINGDOM



wellcome

FAIRsharing in a nutshell:

scope and mission

Users, adopters, communities and working groups

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



A WG (since 2015) in:



A recommended resource in EOSC reports



Used by all stakeholder groups

Researchers in academia,
industry and government

Developers & curators of
resources and tools

Research data facilitators,
librarians, trainers

Society, unions
and community alliances

Journal publishers and
organisations with data policies

Funders and data
policy makers

Including:



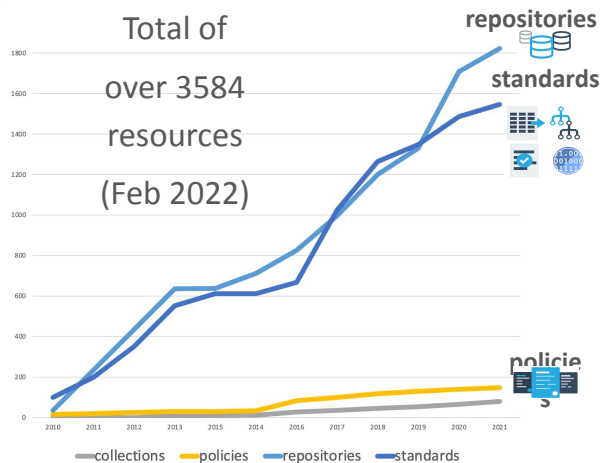
<https://fairsharing.org/communities>

FAIRsharing.org Educational

CC BY-SA 4.0 International

Promoting use and value of databases, standards, policies

FAIRsharing.org



1578 Standards

Terminology Artifact	830
Model/Format	504
Reporting Guideline	225
Identifier Schema	19

[VIEW ALL](#)

1846 Databases

Repositories	952
Knowledgebases	788
Knowledgebase/Repositories	106

[VIEW ALL](#)

160 Policies

Journal	94
Funder	23
Project	16
Society	13

[VIEW ALL](#)

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

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

Research Data Management (VIII/VIII)

Metadata in RDM: General characteristics

- **Domain specific** (Engineering, Culture, Chemistry, ...) and **community specific**
- **Evolving continuously and dynamically over time**
- Must be **accepted, developed** and **maintained** by a **designated community (avoid isolated solution!)**. Includes a.o.
 - a) promotion (make community aware of its existence)
 - b) aligned with further metadata initiatives (moving away from silos)
 - c) applicable in RDM (in RDM practise)

NFDI supports terminology development and use through **introduction of community specific Terminology Services for Ontologies**

Ontologies in FAIRsharing

Database | [Open Access](#) | Published: 02 June 2014

The Software Ontology (SWO): a resource for reproducibility in biomedical data analysis, curation and digital preservation

[James Malone](#), [Andy Brown](#), [Allyson L Lister](#), [Jon Ison](#), [Duncan Hull](#), [Helen Parkinson](#) & [Robert Stevens](#)



Journal of Biomedical Semantics 5, Article number: 25 (2014) | [Cite this article](#)

6508 Accesses | 38 Citations | 22 Altmetric | [Metrics](#)

<https://doi.org/10.1186/2041-1480-5-25>

terms4FAIRskills

Building a terminology for the skills necessary to make data FAIR and to keep it FAIR.

The terms4FAIRskills project has created a formalised terminology that describes the competencies, skills and knowledge associated with making and keeping data FAIR. This terminology can be used in a variety of use cases, including:

- To assist with the creation and assessment of stewardship curricula;
- To facilitate the annotation, discovery and evaluation of FAIR-enabling materials (e.g. training and resources);
- To enable the formalisation of job descriptions and CVs with recognised, structured competencies.

<https://terms4fairskills.github.io/>

> PLoS One. 2016 Apr 29;11(4):e0154556. doi: 10.1371/journal.pone.0154556. eCollection 2016.

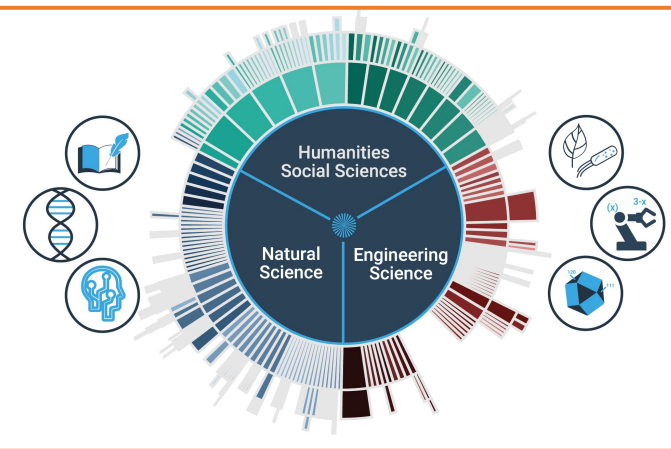
The Ontology for Biomedical Investigations

[Anita Bandrowski](#)¹, [Ryan Brinkman](#)², [Mathias Brochhausen](#)³, [Matthew H Brush](#)⁴, [Bill Bug](#)⁵, [Marcus C Chibucos](#)⁶, [Kevin Clancy](#)⁷, [Mélanie Courtot](#)⁸, [Dirk Derom](#)⁹, [Michel Dumontier](#)¹⁰, [Liju Fan](#)¹¹, [Jennifer Fostel](#)¹², [Gilberto Fragoso](#)¹³, [Frank Gibson](#)¹⁴, [Alejandra Gonzalez-Beltran](#)¹⁵, [Melissa A Haendel](#)⁴, [Yongqun He](#)¹⁶, [Mervi Heiskanen](#)¹⁷, [Tina Hernandez-Boussard](#)¹⁰, [Mark Jensen](#)¹⁸, [Yu Lin](#)¹⁶, [Allyson L Lister](#)¹⁵, [Phillip Lord](#)¹⁹, [James Malone](#)²⁰, [Elisabetta Manduchi](#)²¹, [Monnie McGee](#)²², [Norman Morrison](#)²³, [James A Overton](#)²⁴, [Helen Parkinson](#)²⁰, [Bjoern Peters](#)²⁴, [Philippe Rocca-Serra](#)¹⁵, [Alan Ruttenberg](#)¹⁸, [Susanna-Assunta Sansone](#)¹⁵, [Richard H Scheuermann](#)²⁵, [Daniel Schober](#)²⁶, [Barry Smith](#)¹⁸, [Larisa N Soldatova](#)²⁷, [Christian J Stoeckert Jr](#)²¹, [Chris F Taylor](#)²⁰, [Carlo Torniai](#)⁴, [Jessica A Turner](#)²⁸, [Randi Vita](#)²⁴, [Patricia L Whetzel](#)¹, [Jie Zheng](#)²¹

Affiliations + expand

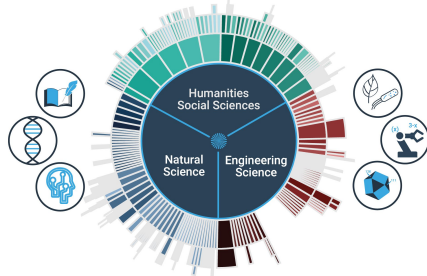
PMID: 27128319 | PMCID: PMC4851331 | DOI: 10.1371/journal.pone.0154556

<https://doi.org/10.1371/journal.pone.0154556>



<https://github.com/FAIRsharing/domain-ontology>

<https://github.com/FAIRsharing/subject-ontology>



Search by subject

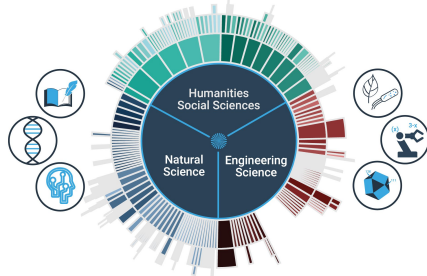
Powered by our Subject Ontology of 436 terms

<https://fairsharing.org/browse/subject>

<https://github.com/FAIRsharing/subject-ontology>

<https://www.ebi.ac.uk/ols/ontologies/srao>

▶ Natural Science	7652
▶ Humanities and Social Science	558
Subject Agnostic	237
▶ Engineering Science	1173



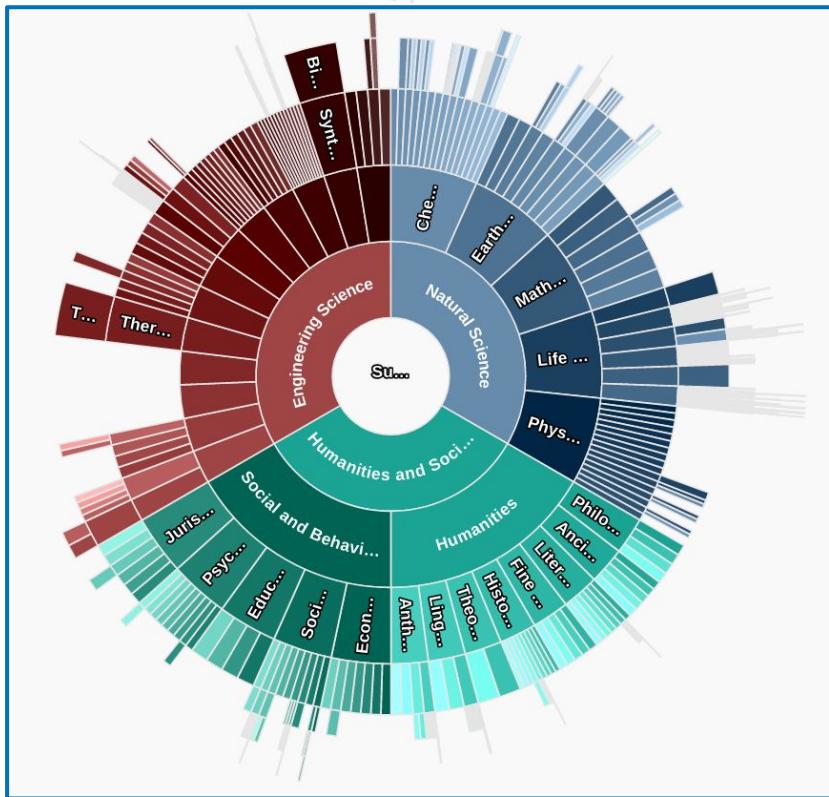
Search by subject

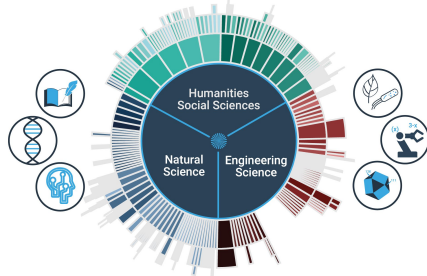
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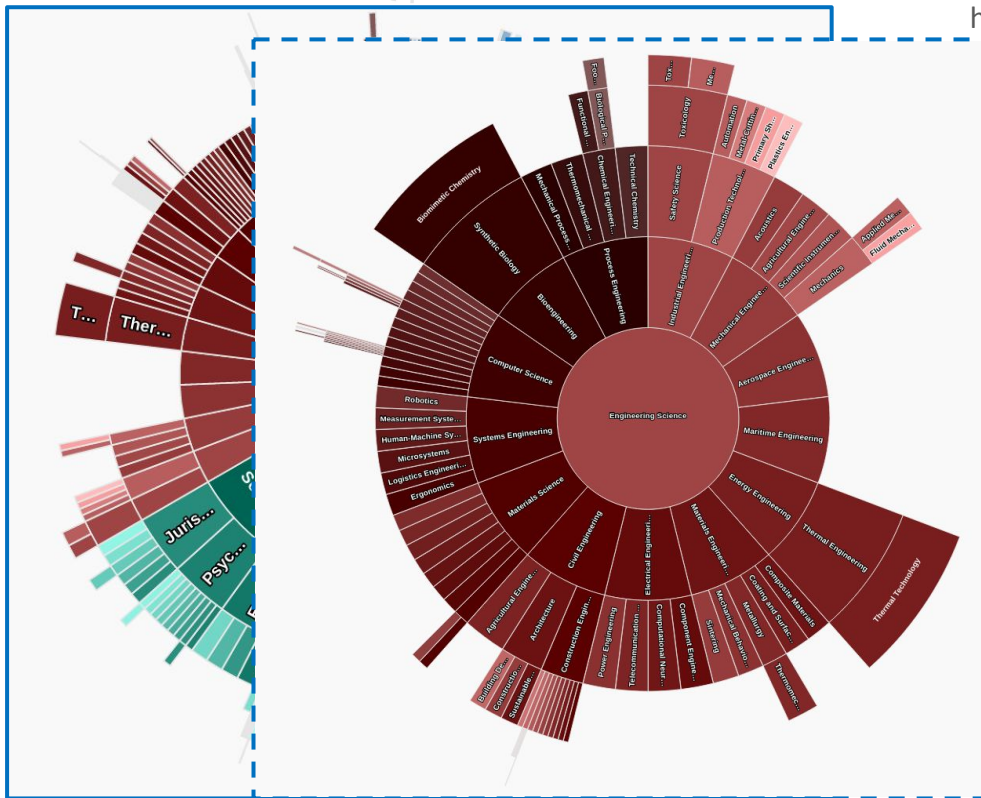
Search by subject

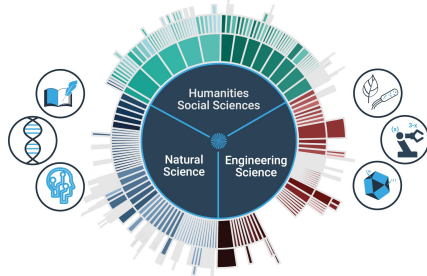
Powered by our Subject Ontology of 436 terms

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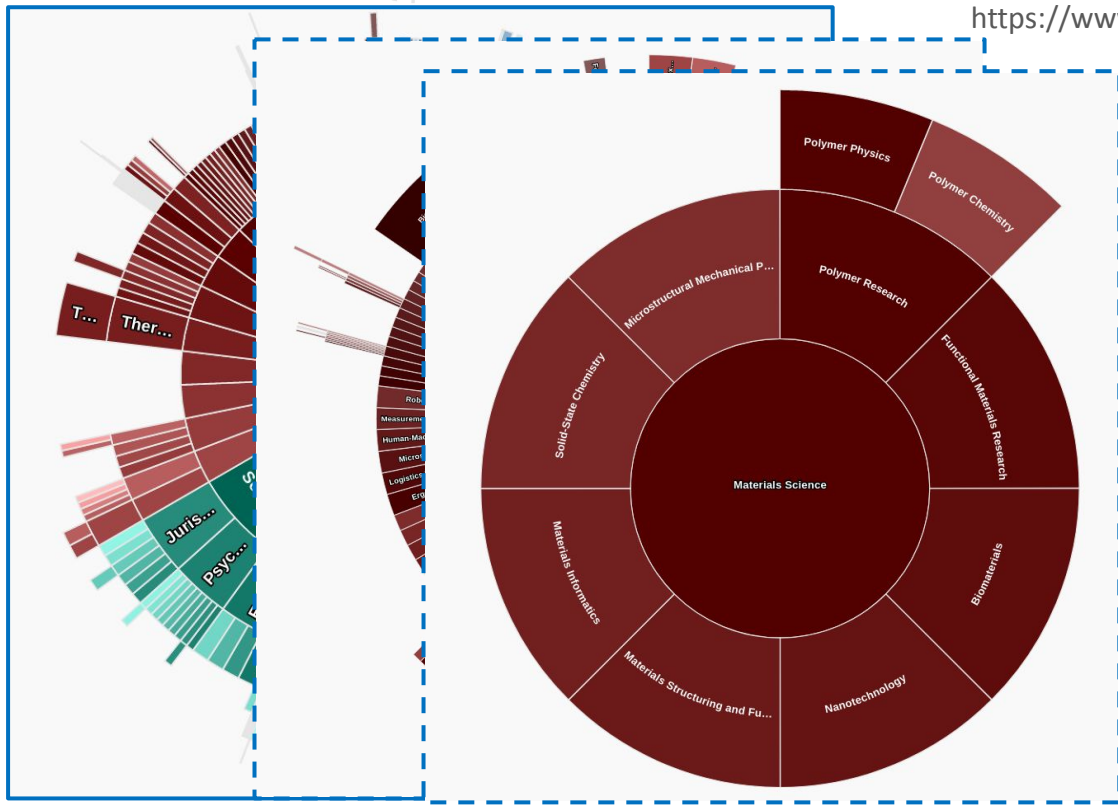
Search by subject

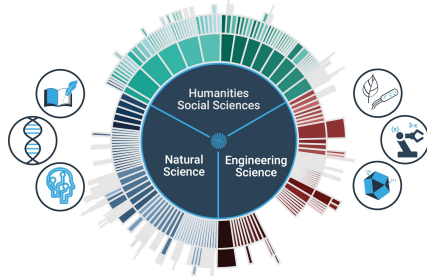
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<https://fairsharing.org/browse/subject>

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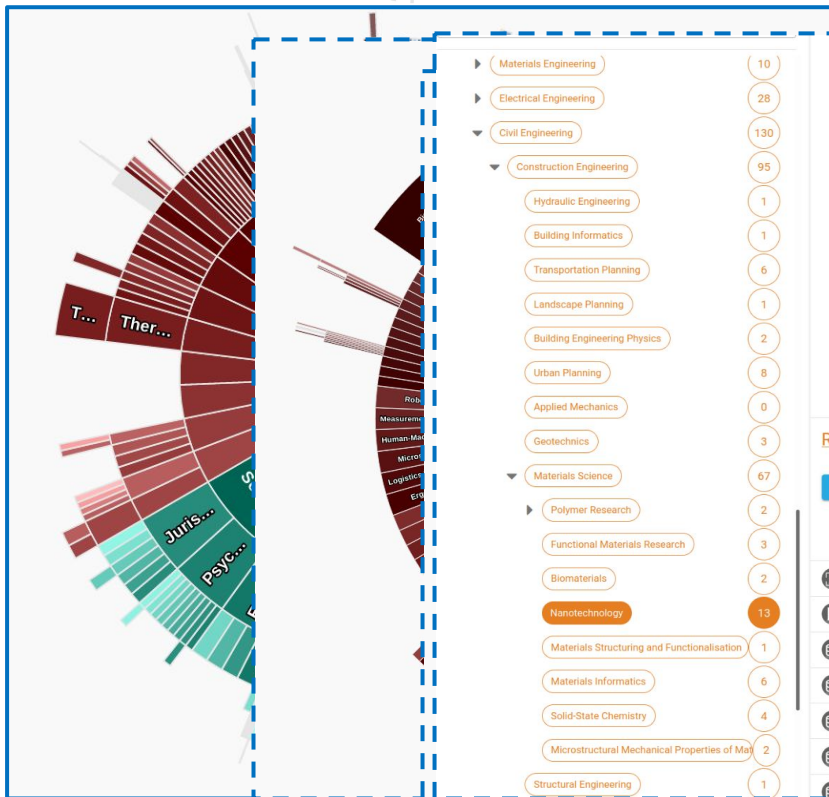
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<https://github.com/FAIRsharing/subject-ontology>

<https://www.ebi.ac.uk/ols/ontologies/srao>



13

Nanotechnology

A multidisciplinary field that strives to comprehend the interactions of cellular components, molecular components and engineered materials at the nanoscale (i.e., less than 100 nanometers). This discipline focuses on the understanding and control of matter at the nanoscale, wherein unique phenomena enable novel applications.

Descendants count: 0

Ancestors:

- Natural Science
- Chemistry
- Physical Chemistry
- Surface Science
- Physics
- Engineering Science
- Civil Engineering
- Construction Engineering
- Materials Science
- Computer Science

Records with this subject:

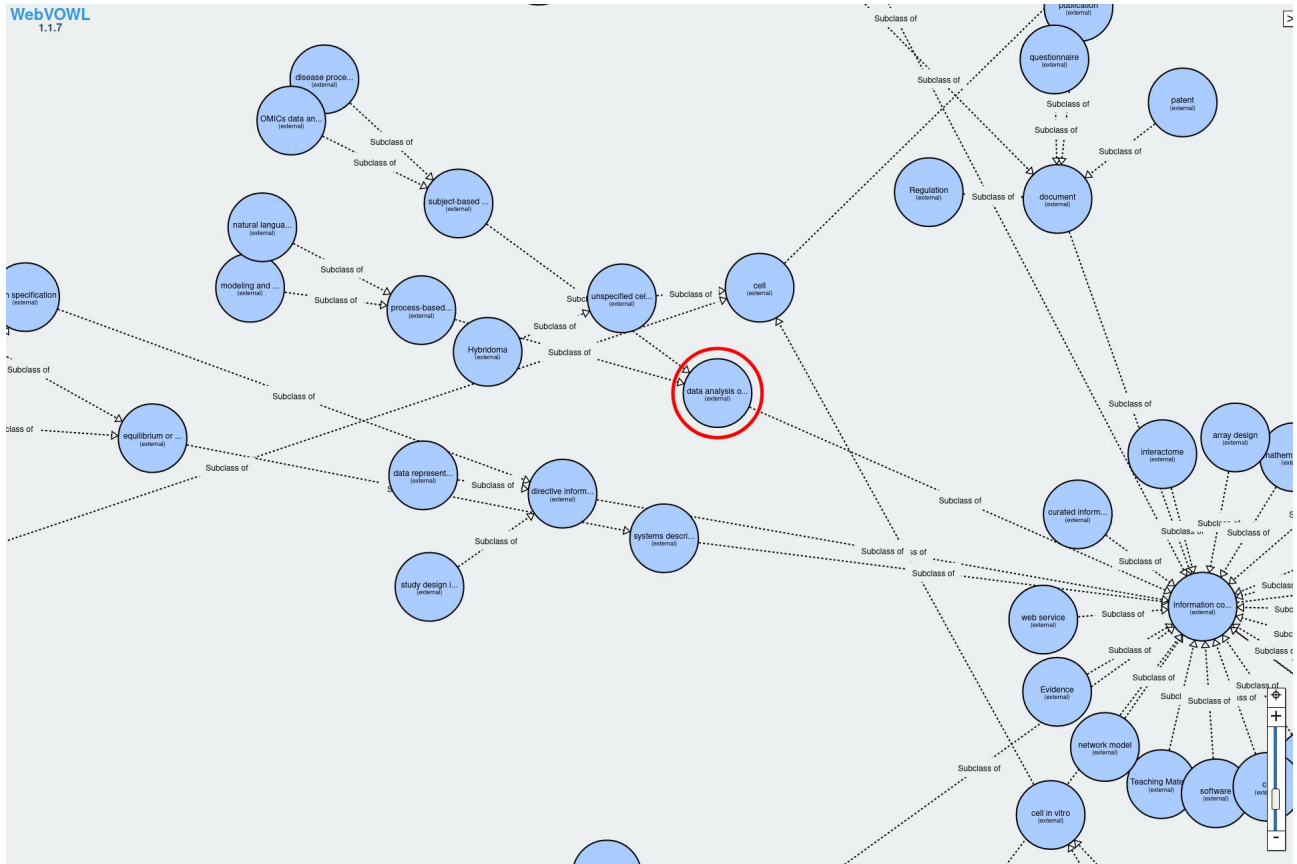
ACCESS ALL SEARCH OPTIONS

Row per page: 50 Showing 1 to 50

Record name	Record registry and type	Record status
European Registry of Materials Identifier	Standard (identifier schema)	ready
ISA-TAB-Nano	Standard (model and format)	ready
caNanoLab	Database (repository)	ready
NanoMaterial Registry	Database (repository)	deprecated
4TU.ResearchData	Database (repository)	ready
European Union Observatory for Nanomaterials	Database (knowledgebase)	ready
NASA Ames PAH-IR Spectroscopic Database	Database	ready

Domains

- Hierarchy of 968 domains / content descriptors that imports a subset of terms, annotation and persistent identifiers from >50 publicly-available vocabularies.
- Used in annotating and indexing FAIRsharing records
- Primarily automatically generated in a bottom-up way based on user requirements



<https://service.tib.eu/webvowl>

→ ↻ https://fairsharing.org/FAIRsharing.zcveaz

4TU.ResearchData (4TU.ResearchData)

dbi 10.25504/FAIRsharing.zcveaz

Type Repository

Registry Database

Description 4TU.ResearchData is an international data repository for science, engineering and design, open to anyone in the world to upload and download data. Its services include curation, sharing, long-term access and preservation of research datasets. These services are available to anyone around the world. In addition, 4TU.ResearchData also offers training and resources to researchers to support them in making research data findable, accessible, interoperable and reproducible (FAIR).

Homepage <https://data.4tu.nl/portal>

Year of Creation 2008

Maintainers [4TU.ResearchData](#), [martateperek](#)

Countries developing this resource [Netherlands](#)

Subjects Hydraulic Engineering, Logistics Engineering, Environmental Science, Engineering Science, Construction Engineering, Mechanical Engineering, Food Process Engineering, Geography, Mechanical Engineering, Informatics, Aerospace Technology, Maritime Engineering, Energy Engineering, Materials Engineering, Building Engineering, Chemistry, Agricultural Engineering, Electrical Engineering, Business Administration, Manufacturing Engineering, Earth Science, Mathematics, Atmospheric Science, Agriculture, Biological Process Engineering, Life Science, Computer Science, Chemical Engineering, Physics, Chemical Engineering, Biology, Power Engineering, Water Research, Hydrology, Building Design

Domains Data Storage

Taxonomic Range All

A window with additional details appears when hovering over a tag

Type: subjects
Name: Logistics Engineering
URL: http://aims.fao.org/aos/agrovoc/c_331401
Definition: Logistics Engineering is a field of engineering dedicated to the scientific organization of the purchase, transport, storage, distribution, and warehousing of materials and finished goods.
Synonyms: Logistics.

Subjects and domains in a FAIRsharing record

4TU ResearchData (1278) martateperék (3719) Add a maintainer

Edit Contact information:
Marta Teperek (researchdata@4tu.nl), 0000-0001-8520-5598 Add a new contact point

This window appears when hovering over a tag. It includes a brief definition of the tag and any synonyms and links to other ontologies.

TAXO

SUBJECTS

Hydraulic... Logistics E... Environme... Engineerin... Constructi... Mechanica... Industrial ...
Informatics Aerospace... Componen... Nanotechn...
Building En... Health Sci... Architecture... Chemistry
Civil Engin... Metal-cutti... Earth Scie... Mathemat...
Biological... Life Science... Computer... Chemical ...
Process E... Biology... Power Eng... Water Res...

DOMAINS Data Stora...

USER DEFINED TAGS Researcher data Add new term(s)

SAVE AND CONTINUE SAVE AND EXIT

Editing subjects and domains in a record

4TU ResearchData (1278) martateperek (3719) Add a maintainer

Edit Contact information:
Marta Teperek (researchdata@4tu.nl): 0000-0001-8520-5998 Add a new contact point

TAXO

SUBJECTS

Hydraulic... Logistics E... Environme... Engineerin... Constructi... Mechanica... Industrial ...
Informatics... Aeros... Componen... Nanotechn...
Building En... Health Sci... Architecture... Chemistry
Civil Engin... Metal-cati... Earth Scie... Mathemat...
Biological... Life Science... Computer... Chemical ...
Process E... Biolog... Power Eng... Water Res...

DOMAINS
Data Stora...

USER DEFINED TAGS
Researcher data Add new term(s)

SAVE AND CONTINUE SAVE AND EXIT

This window appears when hovering over a tag. It includes a brief definition of the tag and any synonyms and links to other ontologies.

This tag is already present and can be reviewed or deleted

Editing subjects and domains in a record

4TU ResearchData (1278) martateperek (3719) Add a maintainer

Edit Contact information:
Marta Teperek (researchdata@4tu.nl), 0000-0001-8520-5998 Add a new contact point

This window appears when hovering over a tag. It includes a brief definition of the tag and any synonyms and links to other ontologies.

TAXO

Hydraulic... Logistics E... Environme... Engineerin... Construct... Mechanica... Industrial ...

SUBJECTS

DOMAINS

Data Stora...

USER DEFINED TAGS

Researcher data

SAVE AND CONTINUE SAVE AND EXIT

Add new term(s)

This tag is already present and can be reviewed or deleted

As the user types in the input field, terms matching the text are pulled from the server and populate the table (shown right)

Search names and synonyms
engineering

Type of keyword	Name	Definition	Alternative names
<input checked="" type="checkbox"/>	SUBJECT	Construction Engineering	Construction Engineering - a professional discipline that deals with the designing, planning, construction, and management of infrastructures such as roads, tunnels, bridges, airports, railroads, facilities, buildings, dams, utilities and other projects. Construction Engineering is considered a professional sub-practice area of civil engineering or architectural engineering.
<input type="checkbox"/>	DOMAIN	Next Generation Dna Sequencing	NGS, Genome sequencing, Nucleotide sequencing, high-throughput, Next gen sequencing, High throughput DNA sequencing, Next gen, Second generation sequencing, Next generation sequencing of target genes, High throughput nucleotide sequencing, Sequencing, high-throughput nucleotide
<input checked="" type="checkbox"/>	SUBJECT	Building Engineering Physics	Building Engineering Physics investigates the areas of natural science that relate to the energy performance of buildings and their indoor and outdoor environments. The understanding and application of Building Engineering Physics allows us to design and construct high performance buildings which are comfortable and functional, yet use natural resources efficiently and minimise the environmental impacts of their construction and operation. It is related to Architecture, Structural Engineering and Building Services Engineering.
<input checked="" type="checkbox"/>	SUBJECT	Industrial Engineering	Industrial engineering is a branch of engineering which deals with the optimization of complex processes, systems, or organizations, to create engineering processes and systems that improve quality and productivity.
<input checked="" type="checkbox"/>	SUBJECT	Energy Engineering	Energy Engineering covers the broad field of engineering dealing with energy efficiency, energy services, facility management, plant engineering, environmental compliance and alternative energy technologies, focussing on design, operation, control and optimization of energy use.
<input checked="" type="checkbox"/>	SUBJECT	Biological Process Engineering	Biological Process Engineering is a specialization of Chemical Engineering and Process Engineering that deals with the design and development of equipment and processes for the manufacturing of products such as agriculture, food, feed, pharmaceuticals, nutraceuticals,

Bioprocess Engineering

Editing subjects and domains in a record

4TU ResearchData (1278) martatepererek (3719) Add a maintainer

Edit Contact information:
Marta Tepererek (researchdata@4tu.nl), 0000-0001-8520-5998 Add a new contact point

This window appears when hovering over a tag. It includes a brief definition of the tag and any synonyms and links to other ontologies.

TAXO

Hydraulic... Logistics E... Environme... Engineerin... Construct... Mechanica... Industrial ...

SUBJECTS

DOMAINS

Data Stora...

USER DEFINED TAGS

Researcher data

SAVE AND CONTINUE SAVE AND EXIT

This tag is already present and can be reviewed or deleted

Add new term(s)

As the user types in the input field, terms matching the text are pulled from the server and populate the table (shown right)

Search names and synonyms
engineering

Type of keyword	Name	Definition	Alternative names
<input checked="" type="checkbox"/>	SUBJECT	Construction Engineering	Construction Engineering - a professional discipline that deals with the designing, planning, construction, and management of infrastructures such as roads, tunnels, bridges, airports, railroads, facilities, buildings, dams, utilities and other projects. Construction Engineering is considered a professional sub-practice area of civil engineering or architectural engineering.
<input type="checkbox"/>	DOMAIN	Next Generation Dna Sequencing	NGS, Genome sequencing, Nucleotide sequencing, high-throughput, Next gen sequencing, High throughput DNA sequencing, Next gen, Second generation sequencing, Next generation sequencing of target genes, High throughput nucleotide sequencing, Sequencing, high-throughput nucleotide
<input checked="" type="checkbox"/>	SUBJECT	Building Engineering Physics	Building Engineering Physics investigates the areas of natural science that relate to the energy performance of buildings and their indoor and outdoor environments. The understanding and application of Building Engineering Physics allows us to design and construct high performance buildings which are comfortable and functional, yet use natural resources efficiently and minimise the environmental impacts of their construction and operation. It is related to Architecture, Structural Engineering and Building Services Engineering.
<input checked="" type="checkbox"/>	SUBJECT	Industrial Engineering	Industrial engineering is a branch of engineering which deals with the optimization of complex processes, systems, or organizations, to create engineering processes and systems that improve quality and productivity.
<input checked="" type="checkbox"/>	SUBJECT	Energy Engineering	Energy Engineering covers the broad field of engineering dealing with energy efficiency, energy services, facility management, plant engineering, environmental compliance and alternative energy technologies, focussing on design, operation, control and optimization of energy use.
<input checked="" type="checkbox"/>	SUBJECT	Biological Process Engineering	Biological Process Engineering is a specialization of Chemical Engineering and Process Engineering that deals with the design and development of equipment and processes for the manufacturing of products such as agriculture, food, feed, pharmaceuticals, nutraceuticals,

When a tag is selected it is inserted in the appropriate box among the three above

Editing subjects and domains in a record

4TU ResearchData (1278) martateperек (3719) Add a maintainer

Edit Contact information:
Marta Teperек (researchdata@4tu.nl), 0000-0001-8520-5998 Add a new contact point

This window appears when hovering over a tag. It includes a brief definition of the tag and any synonyms and links to other ontologies.

Name: logistics engineering
URL: http://aims.fao.org/aos/agrovoc/c_331401
Definition: Logistics Engineering is a field of engineering dedicated to the scientific organization of the purchase, transport, storage, distribution, and warehousing of materials and finished goods.
Synonyms: Logistics.

TAXO
Hydraulic... Logistics E... Environme... Engineerin... Construct... Mechanica... Industrial...
Informatics... Aerosp... Componen... Nanotechn...
Building En... Health Sci... Architecture... Chemistry...
Civil Engin... Metal-c... Earth Sci... Mathemat...
Biological... Life Science... Computer... Chemical...
Process E... Biolog... Power Eng... Water Res...

SUBJECTS

DOMAINS
Data Stora...

USER DEFINED TAGS
Researcher data

SAVE AND CONTINUE SAVE AND EXIT

Add new term(s)

Editing subjects and domains in a record

Search names and synonyms
engineering

Type of keyword	Name	Definition	Alternative names
<input checked="" type="checkbox"/> SUBJECT	Construction Engineering	Construction Engineering - a professional discipline that deals with the designing, planning, construction, and management of infrastructures such as roads, tunnels, bridges, airports, railroads, facilities, buildings, dams, utilities and other projects. Construction Engineering is considered a professional sub-practice area of civil engineering or architectural engineering.	
<input type="checkbox"/> DOMAIN	Next Generation Dna Sequencing	A DNA sequencing technique that became commercially available in 2004 and is used by specific commercial platforms that embody a complex interplay of enzymology, chemistry, high-resolution optics, hardware, and software engineering. These instruments allow highly streamlined sample preparation steps prior to DNA sequencing, which provides a significant time savings and a minimal requirement for associated equipment in comparison to the highly automated, multistep pipelines necessary for clone-based high-throughput sequencing. Each technology amplifies single strands of a fragment library and perform sequencing reactions on	NGS, Genome sequencing, Nucleotide sequencing, high-throughput, Next gen sequencing, High throughput DNA sequencing, Next gen, Second generation sequencing, Next generation sequencing of target genes, High throughput nucleotide sequencing, Sequencing, high-throughput nucleotide
<input checked="" type="checkbox"/> SUBJECT	Building Engineering Physics	Building Engineering Physics investigates the areas of natural science that relate to the energy performance of buildings and their indoor and outdoor environments. The understanding and	
<input checked="" type="checkbox"/> SUBJECT	Industrial Engineering		
<input checked="" type="checkbox"/> SUBJECT	Energy Engineering		
<input checked="" type="checkbox"/> SUBJECT	Biological Process Engineering		

When a tag is selected it is inserted in the appropriate box above

Create new user defined tags

New tag label

Add term to creation list

No new tags to create

SUBMIT NEW TAGS CANCEL

As the user types in the input field, terms matching the text are pulled from the server and populate the table (shown right)

This tag is already present and can be reviewed or deleted

A new user-defined tag will be created as necessary

terms4FAIRskills

Info: <https://terms4fairskills.github.io/>

Contact: terms4fairskills@codata.org

Dr Laura Molloy, CODATA

laura@codata.org

Dr Allyson Lister, FAIRsharing

allyson.lister@oerc.ox.ac.uk / contact@fairsharing.org

The screenshot displays the 'learning medium' class in the terms4FAIRskills ontology. The left pane shows a class hierarchy starting from 'owl:Thing', with 'learning medium' highlighted. The right pane shows the class's annotations, including its label 'learning medium', a definition, and various properties like 'Created by' (Peter McQuilton) and 'Creation date'. The 'Description' field is also visible.

terms4FAIRskills: scope and uses

Training resources for Data Stewards are fragmented. T4FS is a terminology for the *competencies, skills and knowledge* necessary to make data FAIR and to keep it FAIR.

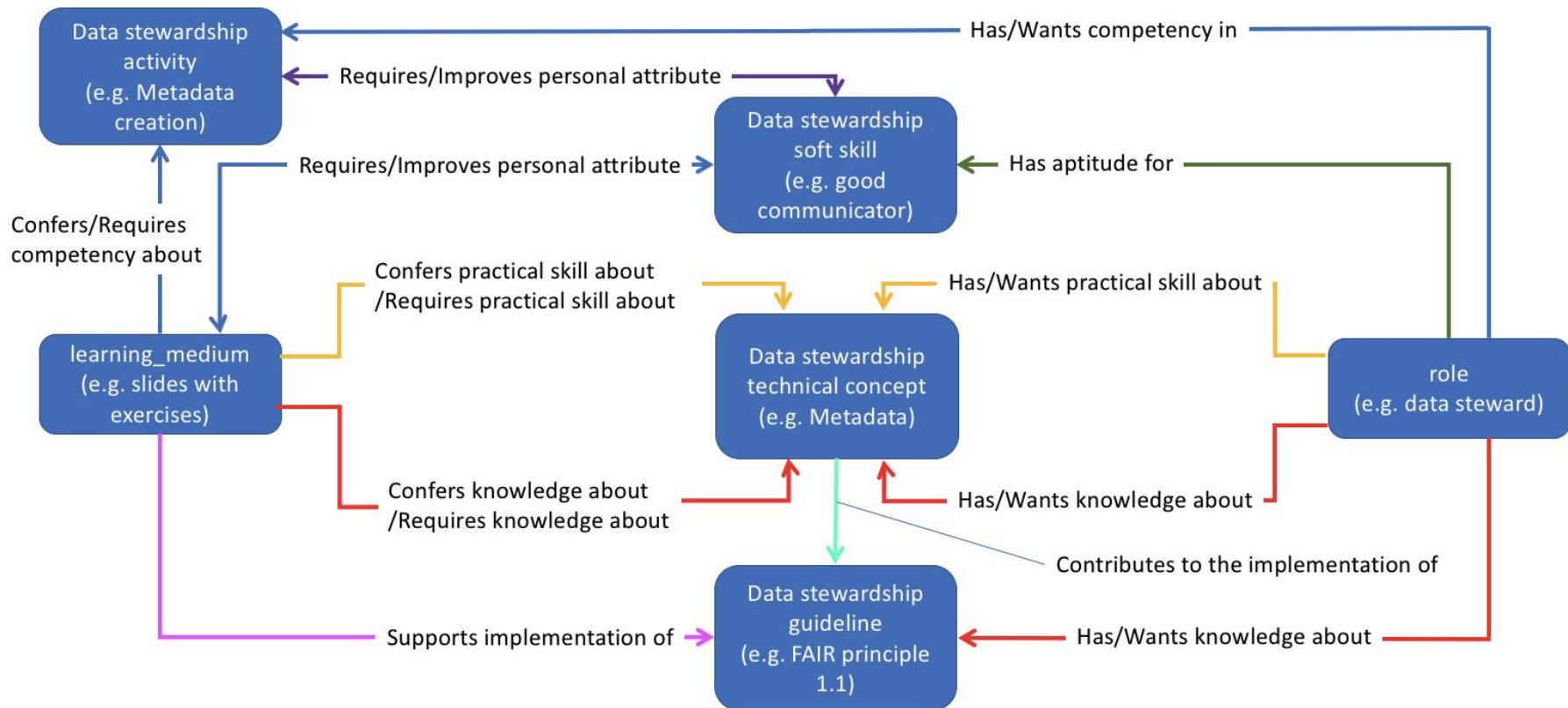
Discovery: facilitate the annotation, search and evaluation of FAIR-enabling materials (e.g. training) and resources

Design: assist the creation and assessment of data stewardship curricula

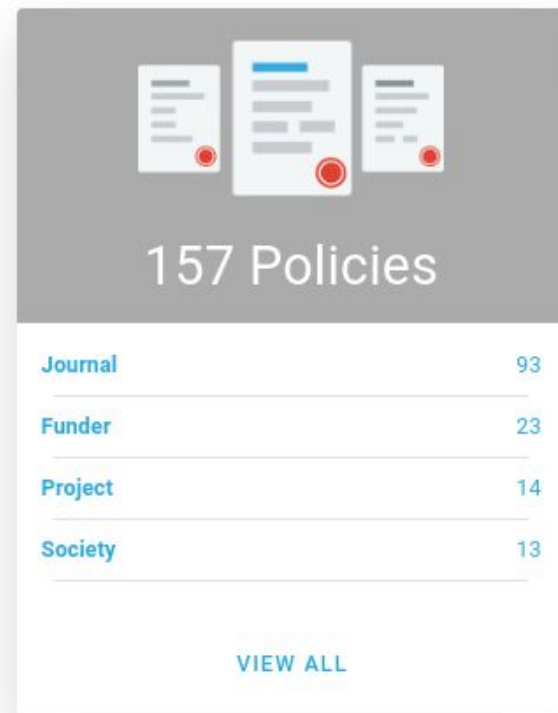
Training: help trainers who teach FAIR data skills, researchers and others who wish to identify skill gaps in their own skills base / teams

Formalisation: enable the definition of job descriptions and CVs with recognised, structured competencies

terms4FAIRskills: model



A repository record: at-a-glance view



How to get an account and create/update a record with us:

<https://fairsharing.gitbook.io/fairsharing/>

ACTIONS ▾

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:

Dash



Dryad (Dryad)

10.25504/FAIRsharing.wkggtx

Type Repository

Registry Database

Description Dryad is an open-source, community-led data curation, publishing, and preservation platform for CC0 publicly available research data. Dryad has a long-term data preservation strategy, and is a Core Trust Seal Certified Merritt repository with storage in US and EU at the San Diego Supercomputing Center, DANS, and Zenodo. While data is undergoing peer review, it is embargoed if the related journal requires / allows this. Dryad is an independent non-profit that works directly with researchers to publish datasets utilising best practices for discovery and reuse; publishers to support the integration of data availability statements and data citations into their workflows; and institutions to enable scalable campus support for research data management best practices at low cost. Costs are covered by institutional, publisher, and funder members, otherwise a one-time fee of \$120 for authors to cover cost of curation and preservation. Dryad also receives direct funder support through grants.

Homepage <http://datadryad.org/>

Year of Creation 2008

Maintainers [datadryad](#)Countries developing this resource [United States](#)Subjects [Subject Agnostic](#)Domains [Curated Information](#) [Literature Curation](#)Taxonomic Range [All](#)User Defined Tags [General Purpose](#)

VIEW RELATION GRAPH

<https://doi.org/10.25504/FAIRsharing.wkggtx>

Record page and general information

> 40 descriptors including:

- Subject(s) coverage
- Maintainer(s)
- Funder(s)
- Organization(s)
- Access
- Licence(s)
- Publication(s)
- Related resources

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:



Dryad (Dryad)

10.25504/FAIRsharing.wkggtx

Type Repository

Registry Database

Description Dryad is an open-source, community-led data curation, publishing, and preservation platform for CC0 preservation strategy, and is a Core Trust Seal Certified Merritt repository with storage in US and EU. While data is undergoing peer review, it is embargoed if the related journal requires / allows this. researchers to publish datasets utilising best practices for discovery and reuse; publishers to support them into their workflows; and institutions to enable scalable campus support for research data management publisher, and funder members, otherwise a one-time fee of \$120 for authors to cover cost of curation through grants.

Homepage <http://datadryad.org/>

Year of Creation 2008

Maintainers [datadryad](#)

Countries developing this resource [United States](#)

Subjects [Subject Agnostic](#)

Domains [Curated Information](#) [Literature Curation](#)

Taxonomic Range [All](#)

User Defined Tags [General Purpose](#)

[VIEW RELATION GRAPH](#)

ACTIONS

Edit record

Request ownership

Watch record

View Relation Graph

View record history

Have a suggestion/question ?

Maintainer Actions

New login options via our trusted status with



and also via



GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:



Dryad (Dryad)

10.25504/FAIRsharing.wkggtx

Type Repository

Registry Database

Description Dryad is an open-source, community-led data curation, publishing, and preservation platform for CC0 preservation strategy, and is a Core Trust Seal Certified Merritt repository with storage in US and EU. While data is undergoing peer review, it is embargoed if the related journal requires / allows this. researchers to publish datasets utilising best practices for discovery and reuse; publishers to support them into their workflows; and institutions to enable scalable campus support for research data management publisher, and funder members, otherwise a one-time fee of \$120 for authors to cover cost of curation through grants.

Homepage <http://datadryad.org/>

Year of Creation 2008

Maintainers [datadryad](#)

Countries developing this resource [United States](#)

Subjects [Subject Agnostic](#)

Domains [Curated Information](#) [Literature Curation](#)

Taxonomic Range [All](#)

User Defined Tags [General Purpose](#)

VIEW RELATION GRAPH

ACTIONS ▾

Edit record

Request ownership

Watch record

View Relation Graph

View record history

Have a suggestion/question ?

General Actions

ACTIONS ▾

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:

[Dash](#)



Dryad (Dryad)

[10.25504/FAIRsharing.wkggtx](https://doi.org/10.25504/FAIRsharing.wkggtx)

Type Repository

Registry Database

Description Dryad is an open-source, community-led data curation, publishing, and preservation platform for CC0 publicly available research data. Dryad has a long-term data preservation strategy, and is a Core Trust Seal Certified Merritt repository with storage in US and EU at the San Diego Supercomputing Center, DANS, and Zenodo. While data is undergoing peer review, it is embargoed if the related journal requires / allows this. Dryad is an independent non-profit that works directly with researchers to publish datasets utilising best practices for discovery and reuse; publishers to support the integration of data availability statements and data citations into their workflows; and institutions to enable scalable campus support for research data management best practices at low cost. Costs are covered by institutional, publisher, and funder members, otherwise a one-time fee of \$120 for authors to cover cost of curation and preservation. Dryad also receives direct funder support through grants.

Homepage <http://datadryad.org/>

Year of Creation 2008

Maintainers [datadryad](#)

Countries developing this resource [United States](#)

Subjects [Subject Agnostic](#)

Domains [Curated Information](#) [Literature Curation](#)

Taxonomic Range [All](#)

User Defined Tags [General Purpose](#)

VIEW RELATION GRAPH

Basic Metadata

ACTIONS ▾

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:



Dryad (Dryad)

10.25504/FAIRsharing.wkggtx

Type Repository

Registry Database

Description Dryad is an open-source, community-led data curation, publishing, and preservation platform for CC0 publicly available research data. Dryad has a long-term data preservation strategy, and is a Core Trust Seal Certified Merritt repository with storage in US and EU at the San Diego Supercomputing Center, DANS, and Zenodo. While data is undergoing peer review, it is embargoed if the related journal requires / allows this. Dryad is an independent non-profit that works directly with: researchers to publish datasets utilising best practices for discovery and reuse; publishers to support the integration of data availability statements and data citations into their workflows; and institutions to enable scalable campus support for research data management best practices at low cost. Costs are covered by institutional, publisher, and funder members, otherwise a one-time fee of \$120 for authors to cover cost of curation and preservation. Dryad also receives direct funder support through grants.

Homepage <http://datadryad.org/>

Year of Creation 2008

Maintainers [datadryad](#)

Countries developing this resource [United States](#)

Subjects Subject Agnostic

Domains Curated Information Literature Curation

Taxonomic Range All

User Defined Tags General Purpose

VIEW RELATION GRAPH

Controlled Vocabularies

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources: [Dash](#)



How to cite this record

FAIRsharing.org: Dryad; Dryad, DOI: [10.25504/FAIRsharing.wkgttx](https://doi.org/10.25504/FAIRsharing.wkgttx), Last Edited: Friday, July 9th 2021, 11:40, Last Editor: allysonlister, Last Accessed: Monday, July 12th 2021, 13:04



[VIEW RELATION GRAPH](#)

Record created at Tuesday, November 4th 2014, 15:23 | **Record updated at** Friday, July 9th 2021, 11:40

COLLECTIONS & RECOMMENDATIONS

Search through recommended by

COLLECTED BY (5)

RECOMMENDED BY (41)



The Royal Society - Data sharing and mining

The Royal Society - Data sharing and mining **recommends** Dryad



Nature Publishing Group - Nature Materials - Availability of Data and materials

Nature Publishing Group - Nature Materials - Availability of Data and materials **recommends** Dryad



Springer Nature - Research Data Policies

Springer Nature - Research Data Policies **recommends** Dryad

RELATED CONTENT

Search through related standards

RELATED STANDARDS (9)

RELATED DATABASES (8)

OTHER RELATED RECORDS (0)



Common Metadata Elements for Cataloging Biomedical Datasets

Dryad **implements** Common Metadata Elements for Cataloging Biomedical Datasets



DataCite Metadata Schema

Dryad **implements** DataCite Metadata Schema



Schema.org

Dryad **implements** Schema.org

Relations



Licences

[Creative Commons CC0 1.0 Universal \(CC0 1.0\) Public Domain Dedication](#)

[DataDryad Terms of Service](#)

ADDITIONAL INFORMATION

Access Points

Name	Dryad API
Type	REST
URL	https://datadryad.org/api/v2/
Example URL	https://datadryad.org/api/v2/datasets
Documentation URL	https://datadryad.org/api/v2/docs/
<hr/>	
Name	Protocol modules are available for OAI-PMH
Type	OAI-PMH
URL	https://datadryad.org/stash/our_platform
Documentation URL	https://datadryad.org/stash/our_platform

DATA CONDITIONS



Data curation

[Data curation](#)

[Submit](#)

Size Limit: 300GB/dataset

No support for individual-level human data

Per-researcher storage: unlimited



Data access

[Search](#)

[Browse](#)

Data Conditions and Access



Licences

[Creative Commons CC0 1.0 Universal \(CC0 1.0\) Public Domain Dedication](#)

[DataDryad Terms of Service](#)

ADDITIONAL INFORMATION

Access Points

Name	Dryad API
Type	REST
URL	https://datadryad.org/api/v2/
Example URL	https://datadryad.org/api/v2/datasets
Documentation URL	https://datadryad.org/api/v2/docs/

Name	Protocol modules are available for OAI-PMH
Type	OAI-PMH
URL	https://datadryad.org/stash/our_platform
Documentation URL	https://datadryad.org/stash/our_platform

DATA CONDITIONS



Data curation

[Data curation](#)

[Submit](#)

Size Limit: 300GB/dataset

No support for individual-level human data

Per-researcher storage: unlimited



Data access

[Search](#)

[Browse](#)

Data Conditions and Access



How to cite this record

FAIRsharing.org: Dryad; Dryad, DOI: [10.25504/FAIRsharing.wkgtx](https://doi.org/10.25504/FAIRsharing.wkgtx), Last Edited: Friday, July 9th 2021, 11:40, Last Editor: allysonlister, Last Accessed: Monday, July 12th 2021, 13:04

Maintainers

[datadryad](#)

Record created at Tuesday, November 4th 2014, 15:23 | **Record updated at** Friday, July 9th 2021, 11:40



ORCID

Connecting research and researchers

Attribution

ORGANISATIONS



Organisations maintaining this resource

[Dryad, Durham, NC, USA](#) Lead
(Government body)



Organisations funding this resource

[National Science Foundation \(NSF\), USA](#)
(Government body)

Grants: [0830944](#), [1147166](#)



Citation and history



How to cite this record

FAIRsharing.org: Dryad; Dryad, DOI: [10.25504/FAIRsharing.wkgttx](https://doi.org/10.25504/FAIRsharing.wkgttx), Last Edited: Friday, July 9th 2021, 11:40, Last Editor: allysonlister, Last Accessed: Monday, July 12th 2021, 13:04



Publication for citation

Making Data Accessible: The Dryad Experience. Miller GW (2016) [10.1093/toxsci/kfv238](https://doi.org/10.1093/toxsci/kfv238)

Record created at Tuesday, November 4th 2014, 15:23 | Record updated at Friday, July 9th 2021, 11:40

PUBLICATIONS

Making Data Accessible: The Dryad Experience.

Miller GW
Toxicol Sci, 2016

[VIEW ON PUBMED](#)

[VIEW PUBLICATION](#)

[PUBLICATION LINK](#)

GMS publishes your research findings - and makes the related research data available through Dryad.

Arning U
GMS Z Med Ausbild, 2015

[VIEW ON PUBMED](#)

[VIEW PUBLICATION](#)

[PUBLICATION LINK](#)

SUPPORT



Blog/News

[Dryad News and Views](#)



Contact form

[Dryad Contact Form](#)



Frequently Asked Questions (FAQs)

[Dryad FAQ](#)



Github

[Dryad Web Service Documentation](#)



Help documentation

[Dryad Wiki Pages](#)

[Submission Documentation](#)



Twitter

[@datadryad](#)



Wikipedia

[Wikipedia Entry](#)



Contacts

Name: [Dryad Helpdesk](#)

Support

Evolution is monitored and reasons provided

The screenshot displays a web interface for a data registry. On the left, there are several filter sections: 'Registry', 'Record Type', 'Subjects', 'Domains', 'Species', 'Licence(s)', and 'Organisation(s)'. Each section has a search input and an 'APPLY' button. At the top, there are buttons for 'MATCH ALL TERMS' and 'MATCH ANY TERM', and a status filter grid with options like 'MAINTAINED', 'NOT MAINTAINED', 'RECOMMENDED', 'NOT RECOMMENDED', 'APPROVED', 'NOT APPROVED', 'READY', 'DEPRECATED', 'UNCERTAIN', and 'IN DEV.'. The main content area shows a list of 23 items, with the first four visible:

- Brain Imaging Network Data Repository**: We are a leading national institution in brain MR imaging and molecular imaging (given cyclotron and radiopharmacy facilities). These pillars create t...
Tags: **Bioimaging**, **Homo sapi...**, +3 more tags
Stats: Standards Implemented: 1, Related Databases: 0, Endorsing Policies: 0
- Cell Image Library**: This library is a public and easily accessible resource database of images, videos, and animations of cells, capturing a wide diversity of organisms, cell type...
Tags: **Cell Biology**, **Cell**, **All**, +8 more tags
Stats: Standards Implemented: 1, Related Databases: 3, Endorsing Policies: 2
- IDR Image Data Resource**: IDR is a prototype platform for publishing, mining and integrating bioimaging data at scale, following the Euro-Bioimaging/ELIXIR imaging strategy using t...
Tags: **Biomedical...**, **Bioimaging**, **Apis melif...**, +16 more tags
Stats: Standards Implemented: 7, Related Databases: 8, Endorsing Policies: 6
- Educational and Research Picture Archiving and Communication System**: The core of the system is tailored PACS (Picture Archiving and Communication System). It forms the basis for educational and research applications su...
Tags: **Biomedical...**, **Medical Im...**, **Homo sapi...**, one more tag
Stats: Standards Implemented: 0, Related Databases: 0, Endorsing Policies: 0

Evolution is monitored and reasons provided


The screenshot shows a database search interface with the following components:


- Filters:** MATCH ALL TERMS, MATCH ANY TERM, MAINTAINED, NOT MAINTAINED, RECOMMENDED, NOT RECOMMENDED, APPROVED, NOT APPROVED, READY, DEPRECATED, UNCERTAIN, IN DEV.
- Search and Navigation:** Search boxes for Registry, Record Type, Subjects, and Domains, each with an APPLY button. A pagination bar shows "Displaying 1 to 23 of 23."
- Record Grid:** A grid of record cards. The first card, "Brain Imaging Network Data Repository", is highlighted with an orange dashed box. It features a database icon with a 'D' (Deprecated) status, a description, tags like "Bioimaging" and "Homo sapi...", and a list of standards implemented (1), related databases (0), and endorsing policies (0).
- Record Detail View:** An orange arrow points from the highlighted record to a detailed view. It has a "GENERAL INFORMATION" tab and a red text block stating: "This record was deprecated on 2021-9-17 for the following reason(s): This resource is no longer available at the stated homepage, and an updated homepage cannot be found. Please get in touch with us if you have updates for this record." Below this, it shows the record title "Brain Imaging Network Data Repository", a DOI "10.25504/FAIRsharing.qwd1nx", and the type "Repository".

i This record is awaiting review by FAIRsharing curators

ACTIONS ▾

GENERAL INFORMATION





 **Data and Service Center for the Humanities (DaSCH)**

 Awaiting DOI

Type	Repository
Registry	Database

In-house curation and the 'life cycle status' tags

Life cycle tags:

-  Ready for use, implementation, or recommendation
-  In development
-  Status uncertain
-  Deprecated as subsumed or superseded

- Every edit is checked by the in-house curation team
- Maintainers are notified via email when their record is updated

How do *consumers* and *producers*
of standards, repositories and policies
use FAIRsharing and **benefit** from it?

A closer look at our community

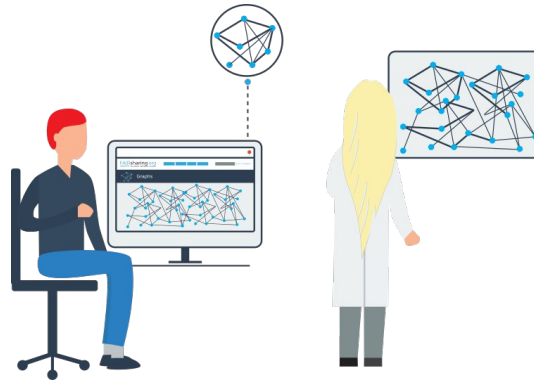
Researchers in academia, industry, government

Use FAIRsharing to **identify** and cite the resources that exist for your discipline when creating a **data management plan**, releasing data or submitting a manuscript to a journal.



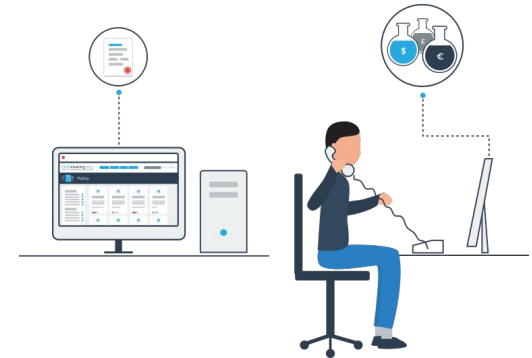
Research data facilitators, librarians, trainers

Use FAIRsharing to provide a **foundation** for lectures, training and teaching material; to plug into data management planning tools and other FAIR-supporting resources.



Funders and data policy makers

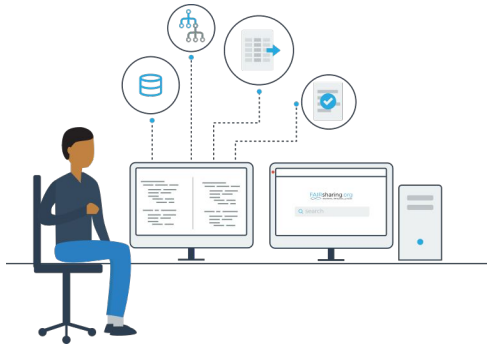
Recommend FAIRsharing to your awardees or community to inform development of their data management plan; **select** the appropriate resources to recommend in your data policy.



A closer look at our community

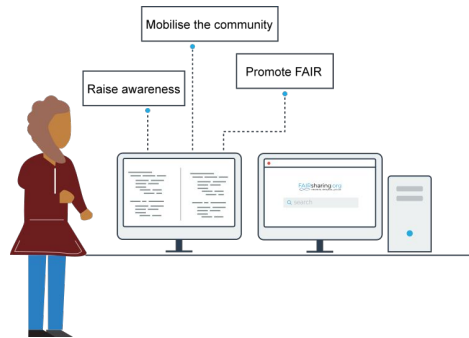
Developers and curators of resources

Make your standard, database or repository discoverable by **adding** or **claiming** it in FAIRsharing; **increase exposure** outside your community and promote adoption.



Learned societies, unions and associations

Collaborate with FAIRsharing to **raise awareness** of your resource; mobilize your community to take action to promote registration, use and citation of key resources.



Journal publishers and data policy developers

Create **personalised inter-related lists** of citable resources relevant to your authors, users or their community; **maintain and revise** your recommendation over time.





Wellcome Trust Policy on Data Management and Sharing

[10.25504/FAIRsharing.pj0zsn](https://doi.org/10.25504/FAIRsharing.pj0zsn)

Type

Funder

Registry

Policy

Description

All Wellcome Trust funded researchers should maximise access to their research data with as few restrictions as possible. It requires applicants whose proposed research will generate data that hold significant value as a resource for the wider research community to submit a data management and sharing plan as part of the application process.

Homepage

<http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX035043.htm>

Year of Creation

2010

Maintainers

[daverocarr](#)

Countries developing this resource

[United Kingdom](#)

Subjects

[Life Science](#)

[Biomedical Science](#)

Domains

None

Taxonomic Range

[All](#)

User Defined Tags

[Researcher Data](#)

[VIEW RELATION GRAPH](#)



How to cite this record

FAIRsharing.org: Wellcome Trust Policy on Data Management and Sharing, DOI: [10.25504/FAIRsharing.pj0zsn](https://doi.org/10.25504/FAIRsharing.pj0zsn), Last Accessed: Tuesday, February 15th 2022, 15:06

Record created at Tuesday, November 4th 2014, 15:23 | **Record updated at** Wednesday, November 24th 2021, 13:15

<https://doi.org/10.25504/FAIRsharing.pj0zsn>

Funder policy: an example

GENERAL INFORMATION



Type Funder

Registry Policy

Description All Wellcome Trust funded researchers should submit a plan for how their proposed research will generate data and how this data will be managed and shared as part of their research project.

Homepage <http://www.wellcome.ac.uk/About-us/Policy>

Year of Creation 2010

Maintainers [daverocarr](#)

Countries developing this resource [United Kingdom](#)

Subjects [Life Science](#) [Biomedical Science](#)

Domains None

Taxonomic Range [All](#)

User Defined Tags [Researcher Data](#)

[VIEW RELATION GRAPH](#)

How to cite this record

FAIRsharing.org: Wellcome Trust Policy on Data Management and Sharing, DOI: [10.25504/FAIRsharing.pj0zsn](https://doi.org/10.25504/FAIRsharing.pj0zsn), Last Accessed: Tuesday, February 15th 2022, 15:23

Record created at Tuesday, November 4th 2014, 15:23 | Record updated at

<https://doi.org/10.25504/FAIRsharing.pj0zsn>

Wellcome Trust Policy on Data Management and Sharing

[doi](#) [10.25504/FAIRsharing.pj0zsn](https://doi.org/10.25504/FAIRsharing.pj0zsn)

COLLECTIONS & RECOMMENDATIONS

Search through in collections

IN POLICIES (0) **IN COLLECTIONS (1)**

National Child Development Study (UK)
National Child Development Study (UK) collects Wellcome Trust Policy on Data Management and Sharing

RELATED CONTENT

Search through other related records

RELATED DATABASES (0) **OTHER RELATED RECORDS (2)**

OECD Principles and Guidelines for Access to Research Data from Public Funding
OECD Principles and Guidelines for Access to Research Data from Public Funding related to Wellcome Trust Policy on Data Management and Sharing

Wellcome Trust: Sharing research data to improve public health: joint statement of purpose
Wellcome Trust Policy on Data Management and Sharing related to Wellcome Trust: Sharing research data to improve public health: joint statement of purpose

SUPPORT

Help documentation

<http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Data-sharing/Data-management-and-sharing/index.htm>

Twitter

<https://twitter.com/wellcometrust>

Contacts

Name: [Anne Taylor](#)

ORGANISATIONS

Organisations funding this resource

[The Wellcome Trust, UK](#)
(Charitable foundation)

Funder policy: an example

GENERAL INFORMATION



Wellcome Trust Policy on Data Management and Sharing

10.25504/FAIRsharing.pj0zsn

Type

Funder

Funder policy: the value of our graphs

NationalChildDevelopmentStudyU...

Wellcome Trust Policy on Data ...

OECD Principles and Guidelines...

Wellcome Trust Sharing resear...

Maturity status

ready

Record type

Policy

Collection

Relationships

Related To

Collected by

<https://doi.org/10.25504/FAIRsharing.pj0zsn>



Wellcome Trust Policy on Data Management and Sharing

doi 10.25504/FAIRsharing.pj0zsn

Type

Funder

Funder policy: the value of our graphs

NationalChildDevelopmentStudyU...

Wellcome Trust Policy on Data ...

OECD Principles and Guidelines...

Wellcome Trust: Sharing resear...



OECD Principles and Guidelines for Access to Research Data from Public Funding

OECD Principles and Guidelines for Access to Research Data from Public Funding **related to** Wellcome Trust Policy on Da...

Wellcome Trust: Sharing research data to improve public health: joint statement of purpose

Wellcome Trust Policy on Data Management and Sharing **related to** Wellcome Trust: Sharing research data to improve public healt...

Maturity status

ready

Record type



Policy



Collection

Relationships

Related To

Collected by

GENERAL INFORMATION



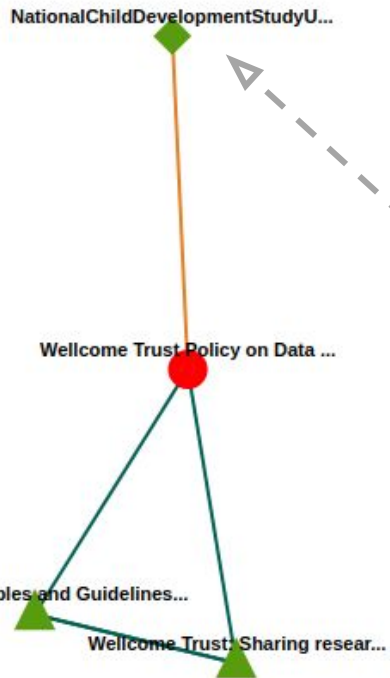
Wellcome Trust Policy on Data Management and Sharing

[doi 10.25504/FAIRsharing.pj0zsn](https://doi.org/10.25504/FAIRsharing.pj0zsn)

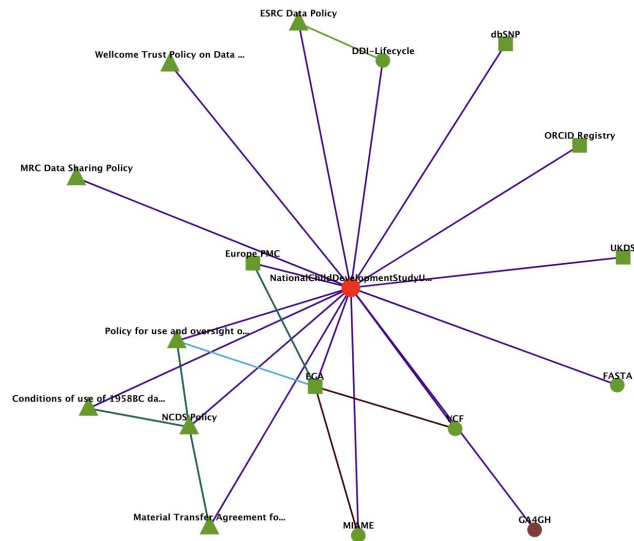
Type

Funder

Funder policy: the value of our graphs



FAIRsharing Network Graph
NationalChildDevelopmentStudyUK
(Collection/Collection)



Maturity status

- ready
- deprecated

Record type

- Database
- Standard
- Policy
- Collection

Relationships

- Collects
- Related To
- Recommends
- Implements
- Recommended by

A collection representing the **standards** and **databases** used by this UK study, which complies with the Wellcome **policy**


<https://doi.org/10.25504/FAIRsharing.pj0zsn>

Tailored views for education and promotion

Collections are 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](#)

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

Recommended by a community



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

URL: <https://fairsharing.org/RDACovid19WG>


Developed by a SDO




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

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

Mapped to each other

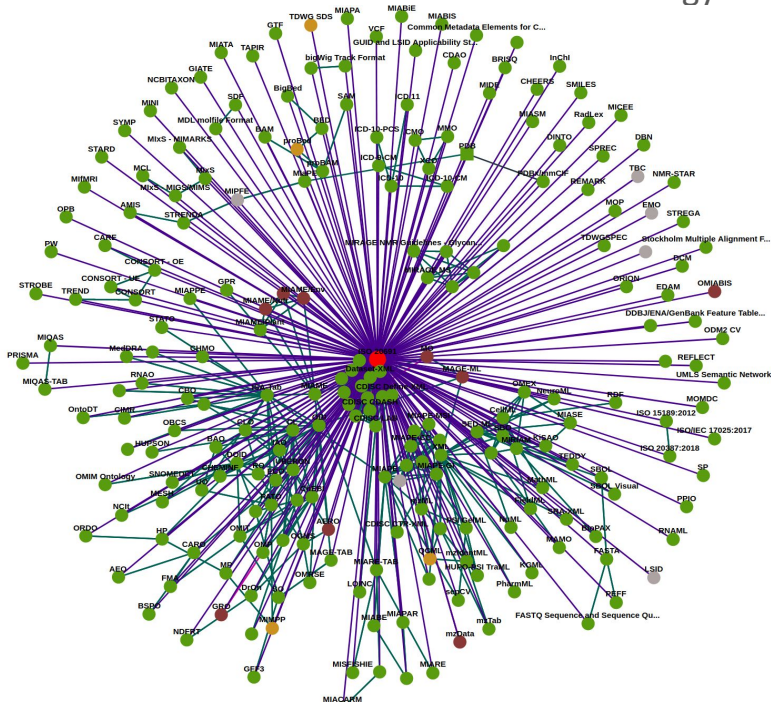


Crosswalk of most used metadata schemes and guidelines for metadata interoperability
Maintainers [ojstersek@uni-mb.si](#) 
Subjects [Subject Agnostic](#)

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


Researchers: 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>





ICS > 07 > 07.080

ISO/DIS 20691


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

BUY THIS STANDARD

FORMAT	LANGUAGE
<input checked="" type="checkbox"/> PDF	English
<input type="checkbox"/> PAPER	English

CHf **58**

GENERAL INFORMATION

Status :  Under development

Edition : 1

Technical Committee : ISO/TC 276 Biotechnology

ICS : 07.080 Biology, Botany, Zoology

You can **comment** on this draft international standard by contacting your **national member**

Number of pages : 48

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

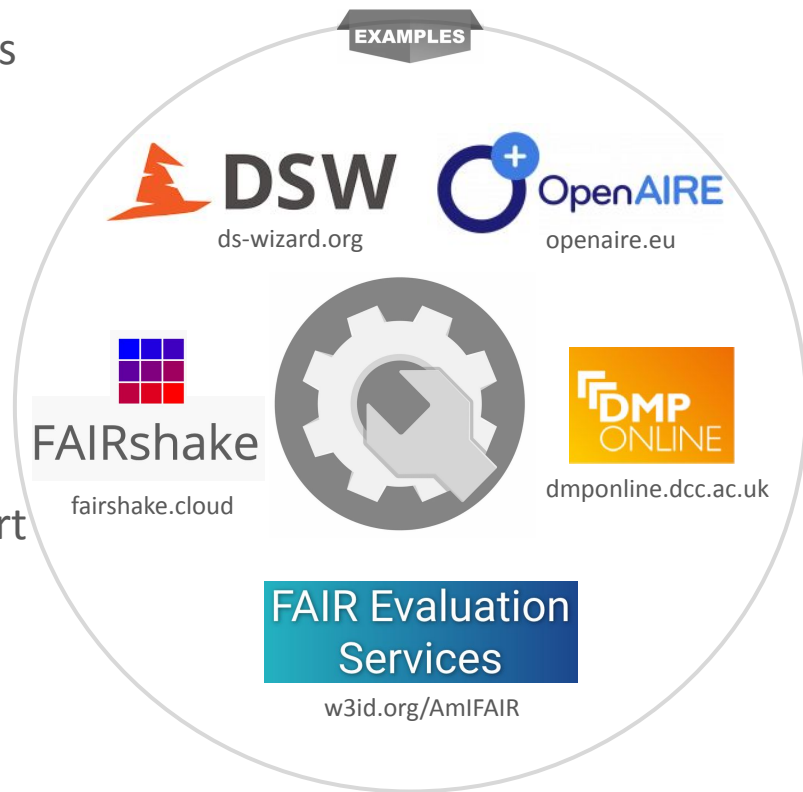
Services: curated content to power 3rd party tools

A growing number of **FAIR-enabling Services** access FAIRsharing API, and use it as **look-up** and **select** service for **standards** and **repositories** for:

- data management plans and guidelines
- FAIR assessment

A new, in-development **Data Discovery Service**, part of ELIXIR-driven EOSC-Life and BY-COVID projects:

- register repositories' access methodologies, e.g. schema.org, bioschemas, OAI-PMH
- enable (meta)data harvesting



How FAIRsharing helps in FAIR Evaluation and RDM / DMP applications

Ways in which FAIRsharing assists others with FAIRness

1. For FAIR evaluation, DMP and other tools/services

it provides a look-up service (via the API) for standards and repositories

2. For developers and users of FAIRness tests and indicators

it provides a searchable registry to describe and discover them

3. For community, organizations and projects

it enables creation of profiles to declare and visual the standards and repositories they use

4. *(future?)* For standards, repositories and policies' owners/maintainer

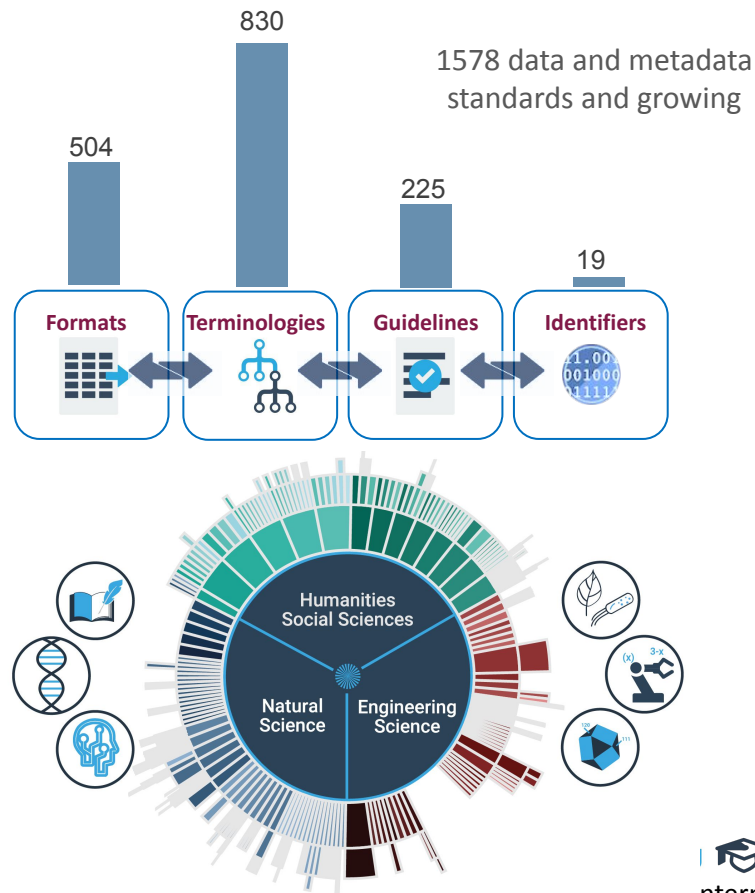
it could enable them to display a FAIRness level on their record page; along with the name of the tool used to measure it, a time stamp, and improvement tracking

As a look-up service for standards

1. For FAIR evaluation, DMP and other tools/services it provides a look-up service (via the API) for **standards**: name, types and other metadata

To help with questions like:

- *what are the types of PID schemas?*
- *Is SpectralDM the right community standard data model to describe the structure of spectrophotometric datasets?*



As a look-up service for standards

1. For FAIR evaluation, DMP and other tools/services it provides a look-up service (via the API) for standards: name, types and other metadata

To help with questions like:

- *what are the types of PID schemas?*
- *Is SpectralDM the right community standard data model to describe the structure of spectrophotometric datasets?*

→ Be aware: checking 'compliance' against standards is not easy, or even possible for many, due to their narrative form (checklists) and/or absence of canonical validators; these challenges are the focus of our pre-print doi.org/10.5281/zenodo.5596465

GENERAL INFORMATION

Data Documentation Initiative Codebook (DDI-Codebook)

DOI: [10.25504/FAIRsharing.EZCpPd](https://doi.org/10.25504/FAIRsharing.EZCpPd)

Type: Model and format

Registry: Standard

Description: Data Documentation Initiative (DDI-Codebook, DDI-C) is a more light-weight version of DDI-Lifecycle, intended primarily to document simple survey data. Originally DTD-based, DDI-C is now available as an XML Schema. The freely available international DDI standards describe data that result from observational methods in the social, behavioral, economic, and health sciences. DDI is used to document data in over 80 countries of the world.

Homepage: <https://ddialliance.org/Specification/DDI-Codebook/2.5/>

Year of Creation: 2000

Maintainers: [jjyle](#) (ID)

Countries developing this resource: Worldwide

Subjects: Economics, Social Science, Health Science, Social And Behavioural Science, Biomedical Science

Domains: Study Design

Taxonomic Range: Not applicable

User Defined Tags: None

[VIEW RELATION GRAPH](#)

How to cite this record

FAIRsharing.org: DDI-Codebook: Data Documentation Initiative Codebook, DOI: [10.25504/FAIRsharing.EZCpPd](https://doi.org/10.25504/FAIRsharing.EZCpPd), Last Accessed: Thursday, February 10th 2022, 11:49

Record created at Saturday, July 18th 2020, 13:34 | Record updated at Wednesday, November 24th 2021, 13:13

As a look-up service for standards

1. For FAIR evaluation, DMP and other tools/services it provides a look-up service (via the API) for **standards**: name, types and other metadata


To help with questions like:

- *what are the types of PID schemas?*
- *Is SpectralDM the right community standard data model to describe the structure of spectrophotometric datasets?*

→ Be aware: checking 'compliance' against standards is not easy, or even possible for many, due to their narrative form (checklists) and/or absence of canonical validators; these challenges are the focus of our pre-print doi.org/10.5281/zenodo.5596465

GENERAL INFORMATION

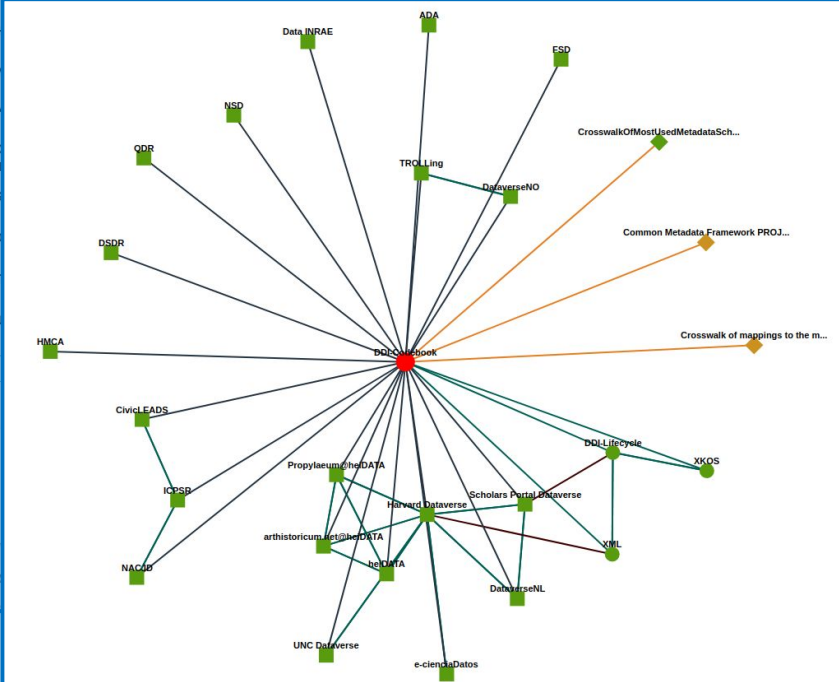
Data Documentation Initiative Codebook (DDI-Codebook)

 [10.25504/FAIRsharing.EZCpPd](https://doi.org/10.25504/FAIRsharing.EZCpPd)

Type: Model and format

Registry: Standard

Description: Data Documentation Initiative (DDI-Codebook, DDI-C) is a more light-weight version of DDI-Lifecycle, intended primarily to document simple survey data. Originally DTD-based, DDI-C is now available as an XML Schema. The freely available international DDI standards describe data that result from observational methods in the social, behavioral, economic, and health sciences. DDI is used to document data in over 80 countries of the world.



The diagram illustrates a network of standards and datasets centered on the DDI-Codebook. The central node is 'DDI-Codebook'. It is connected to numerous other nodes, including: Data INRAE, ADA, ESD, CrosswalkOfMostUsedMetadataSch..., Common Metadata Framework PROJ..., Crosswalk of mappings to the m..., DDI-Lifecycle, XKOS, XML, DataverseNL, Harvard Dataverse, Scholars Portal Dataverse, Propylaeum, the DATA, arhistoricum, net@the DATA, hC DATA, UNC Dataverse, e-clenda Datos, NACDR, ICPSR, Civil LEADS, HMCA, DSDR, ODR, NSD, TRO L Ling, DataverseNO, and HMCA. The connections are represented by lines radiating from the central node to the peripheral nodes.

As a look-up service for repositories

1. For FAIR evaluation, DMP and other tools/services it provides a look-up service (via the API) for **repositories**: name, types and other metadata

To help collecting information (at data resource level), such as the presence and type of:

- *licence or terms of use*
- *datasets accessibility/openness*
- *accessibility mechanism*
- *policies (e.g. curation, preservation)*
- *PIDs schema*
- *data and metadata standards*
- *and many others...*

The screenshot shows the profile page for Zenodo (Zenodo) on FAIRsharing.org. The page is titled "GENERAL INFORMATION" and includes the following details:

- Name:** Zenodo (Zenodo)
- DOI:** 10.25504/FAIRsharing.wy4egf
- Type:** Repository
- Registry:** Database
- Description:** Zenodo is a generalist research data repository built and developed by OpenAIRE and CERN. It was developed to aid Open Science and is built on open source code. Zenodo helps researchers receive credit by making the research results citable and through OpenAIRE integrates them into existing reporting lines to funding agencies like the European Commission. Citation information is also passed to DataCite and onto the scholarly aggregators. Content is available publicly under any one of 400 open licences (from opendefinition.org and spdx.org). Restricted and Closed content is also supported. Free for researchers below 50 GB/dataset. Content is both online on disk and offline on tape as part of a long-term preservation policy. Zenodo supports managed access (with an access request workflow) as well as embargoing generally and during peer review. The base infrastructure of Zenodo is provided by CERN, a non-profit IGO. Projects are funded through grants.
- Homepage:** <https://www.zenodo.org>
- Year of Creation:** 2013
- Maintainers:** zenodo
- Countries developing this resource:** Worldwide
- Subjects:** Data Management, Subject Agnostic
- Domains:** Data Storage
- Taxonomic Range:** All
- User Defined Tags:** Open Science

There is a "VIEW RELATION GRAPH" button and a "How to cite this record" section with the following information:

FAIRsharing.org: Zenodo; Zenodo, DOI:
10.25504/FAIRsharing.wy4egf, Last Accessed: Thursday,
February 10th 2022, 11:53

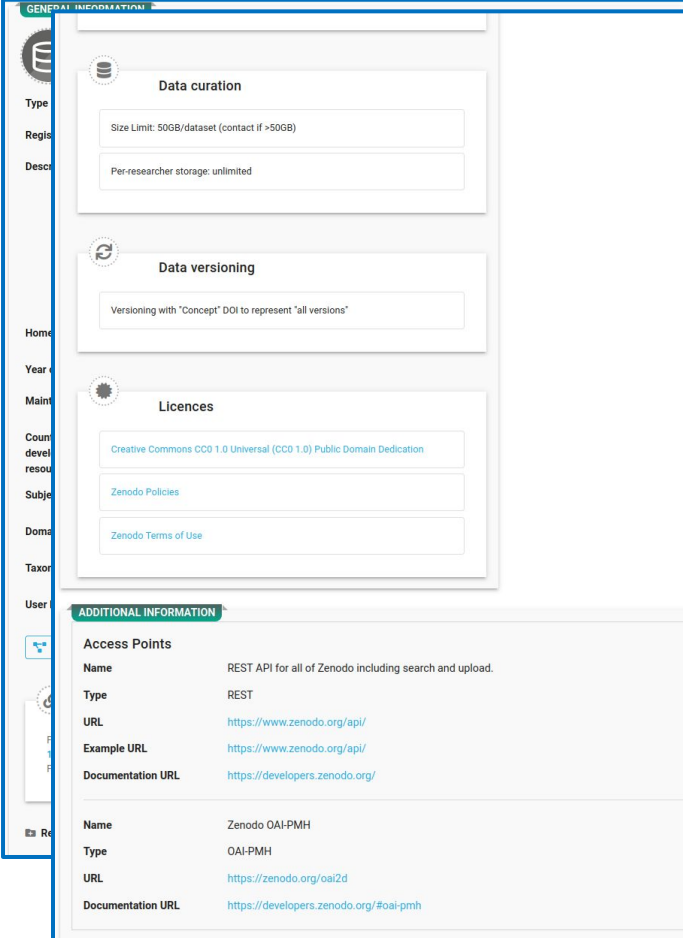
Record created at: Tuesday, November 15th 2016, 7:56 | Record updated at: Monday, December 6th 2021, 10:49

As a look-up service for repositories

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- *and many others...*



The screenshot displays the 'GENERAL INFORMATION' section of a repository page. It includes a sidebar with navigation options like 'Type', 'Registration', 'Description', 'Home', 'Year', 'Maintenance', 'Count', 'Development resources', 'Subject', 'Domains', 'Taxonomy', and 'Users'. The main content area is divided into three sections: 'Data duration' (with a size limit of 50GB/dataset), 'Data versioning' (using 'Concept' DOI), and 'Licences' (listing Creative Commons CC0 1.0, Zenodo Policies, and Zenodo Terms of Use). Below this is the 'ADDITIONAL INFORMATION' section, which lists 'Access Points' and 'Zenodo OAI-PMH' with their respective names, types, URLs, and documentation links.

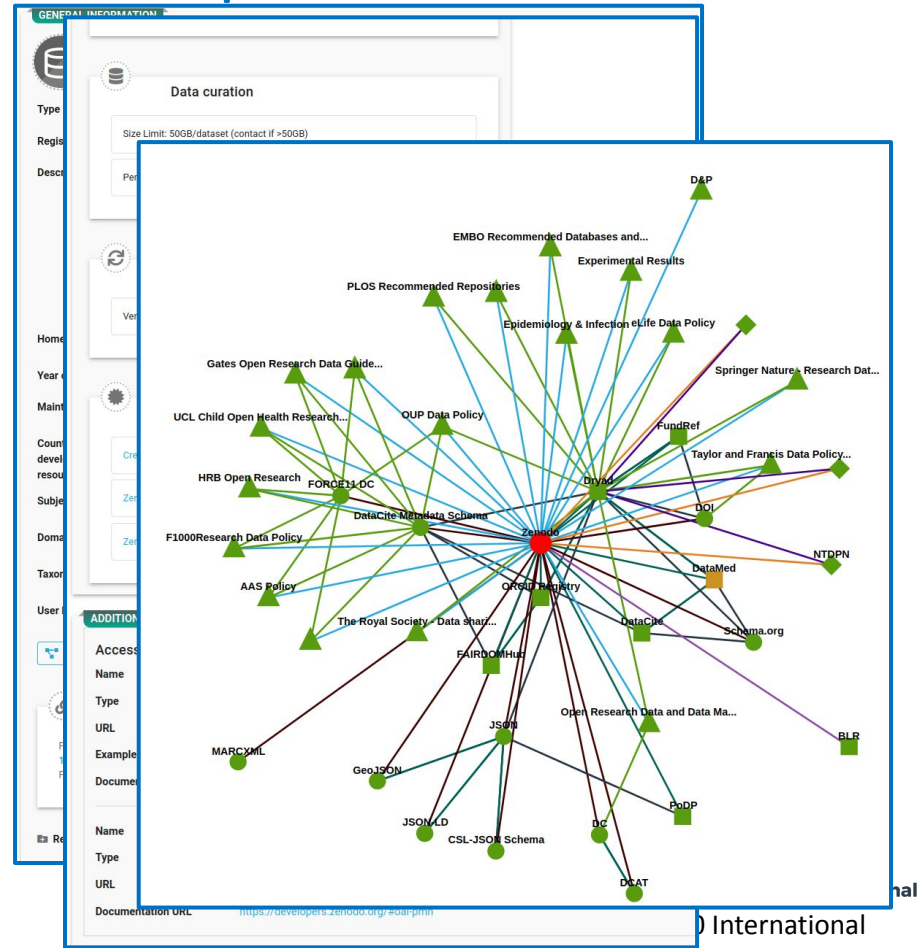
ADDITIONAL INFORMATION	
Access Points	
Name	REST API for all of Zenodo including search and upload.
Type	REST
URL	https://www.zenodo.org/api/
Example URL	https://www.zenodo.org/api/
Documentation URL	https://developers.zenodo.org/
Zenodo OAI-PMH	
Name	Zenodo OAI-PMH
Type	OAI-PMH
URL	https://zenodo.org/oai2d
Documentation URL	https://developers.zenodo.org/#oai-pmh

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As a registry for FAIRness tests and indicators

2. For developers and users of FAIRness tests and indicators it provides a searchable registry to describe and discover them

To complement their storage in e.g. GitHub, and help to make them to be:

- *discoverable*
- *citable (via record's DOI)*
- *unique*
 - *ensuring community 'sees' what exists and adds/extends as needed*
- *usable in community profiles*

➔ This functionality is in a *testing phase*

The image displays a grid of nine FAIR Maturity Indicator cards. Each card features a circular icon with a checkmark and the letter 'R'. The cards are arranged in a 3x3 grid. Each card includes a title, a brief description, a set of tags (Data Maint, Digital Cur, Not applic, +2 more tags), and a list of related standards (Related Standards, Implementing Databases, Endorsing Policies) with associated counts.

Indicator ID	Description	Tags	Related Standards
FAIR Maturity Indicator Gen2-MI-I2B	The FAIR Maturity Indicator Gen2-MI-I2B measures if the (meta)data uses vocabularies that are, themselves, FAIR. In this strict Maturity Indicator, we test if the vocabulary terms resol...	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 2, Implementing Databases: 1, Endorsing Policies: 1
FAIR Maturity Indicator Gen2-MI-R1.1	The FAIR Maturity Indicator Gen2-MI-R1.1 Maturity Indicator measures the presence of a pointer in the metadata to the data license. Data that does not have a license cannot (legitimate)...	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 1, Implementing Databases: 0, Endorsing Policies: 0
FAIR Maturity Indicator Gen2-MI-I1A	The FAIR Maturity Indicator Gen2-MI-I1A measures the use of a formal, accessible, shared, and broadly applicable language for knowledge representation. The unambiguous communication ...	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 2, Implementing Databases: 1, Endorsing Policies: 1
FAIR Maturity Indicator Gen2-MI-I2A	The FAIR Maturity Indicator Gen2-MI-I2A measures if the (meta)data uses vocabularies that are, themselves, FAIR. For interoperability, it must be possible to identify data that can ...	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 2, Implementing Databases: 1, Endorsing Policies: 1
FAIR Maturity Indicator Gen2-MI-I1B	The FAIR Maturity Indicator Gen2-MI-I1B measures the use of a formal, accessible, shared, and broadly applicable language for knowledge representation. The unambiguous communication ...	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 2, Implementing Databases: 1, Endorsing Policies: 1
FAIR Maturity Indicator Gen2-MI-A1.2	The FAIR Maturity Indicator Gen2-MI-A1.2 measures if the resolution protocol supports authentication and authorization for access to restricted content.	Data Maint, Digital Cur, Not applic, +2 more tags	Related Standards: 1, Implementing Databases: 1, Endorsing Policies: 1
FAIR Maturity Indicator Gen2-MI-F4	The FAIR Maturity Indicator Gen2-MI-F4 measures the degree to		
FAIR Maturity Indicator Gen2-MI-F3	The FAIR Maturity Indicator Gen2-MI-F3 measures whether the		
FAIR Maturity Indicator Gen2-MI-F2B	The FAIR Maturity Indicator Gen2-MI-F2B measures whether the		

As a place to compare profiles, fostering FAIRness

3. For community, organizations and projects

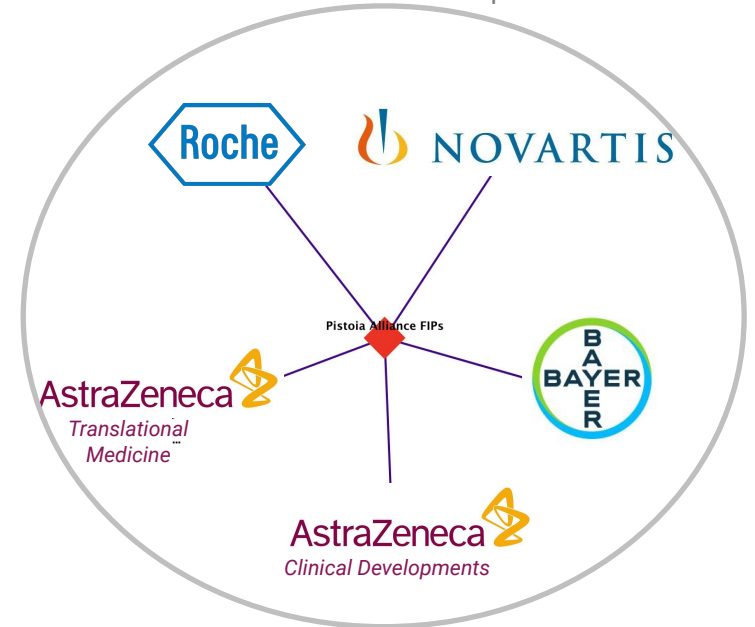
it enables the creation of profiles to declare and visualise **standards** and **repositories** they use

This is done through collections, connecting the standards used to the FAIR indicators fulfilled

→ This is an *explorative work*, which may be improved as the tests and indicators mature and are globally agreed!



A collaboration with the FAIR Implementation WG



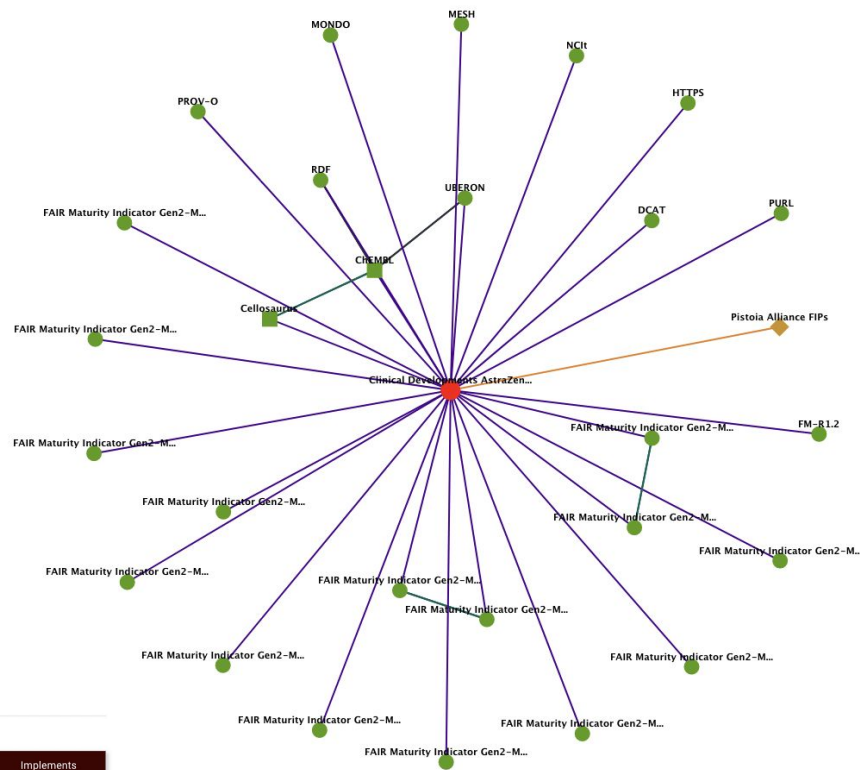
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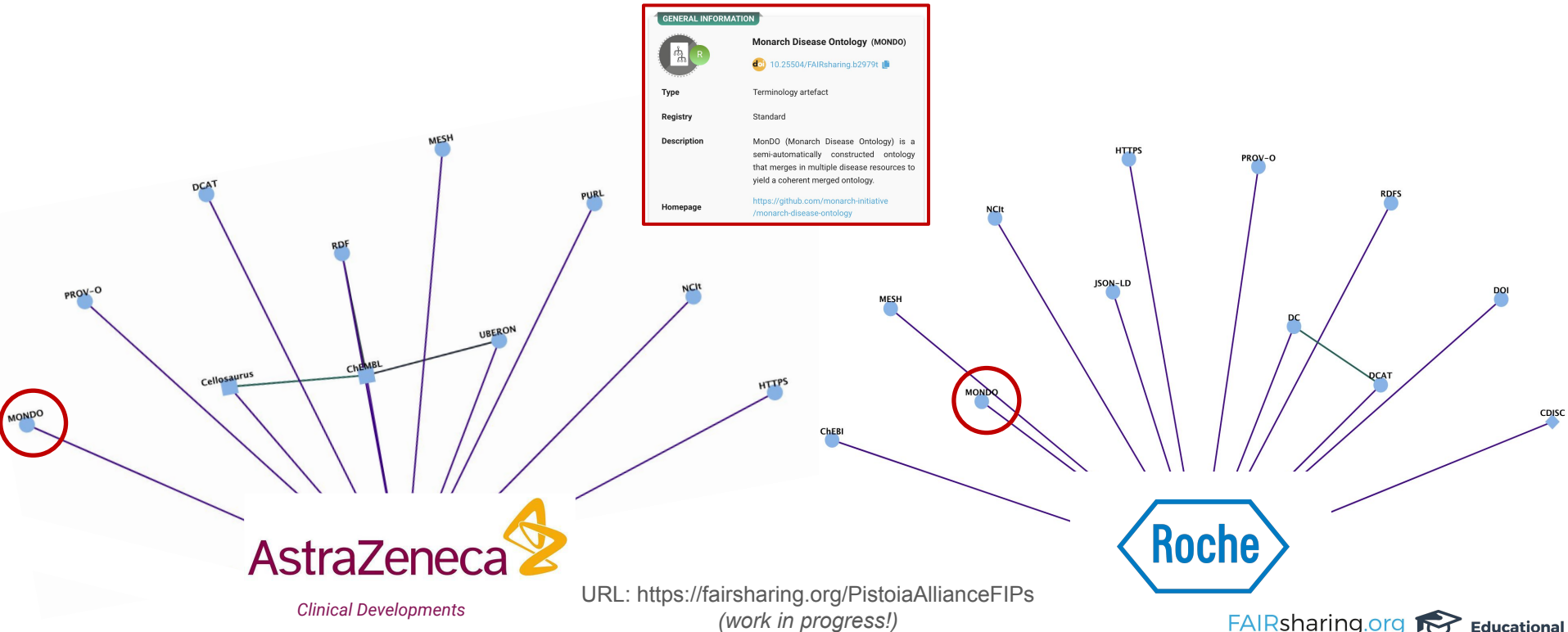
➔ This is an *explorative work*, which may be improved as the tests and indicators mature and are globally agreed!



Clinical Developments

Disclaimer: These profiles speak for a limited community and do not represent any company standards

Comparing the use of standards and promoting convergence



AstraZeneca

Clinical Developments

URL: <https://fairsharing.org/PistoiaAllianceFIPs>
(work in progress!)

Roche

[FAIRsharing.org](https://fairsharing.org)  Educational

Disclaimer: These profiles speak for a limited community and do not represent any company standards

CC BY-SA 4.0 International

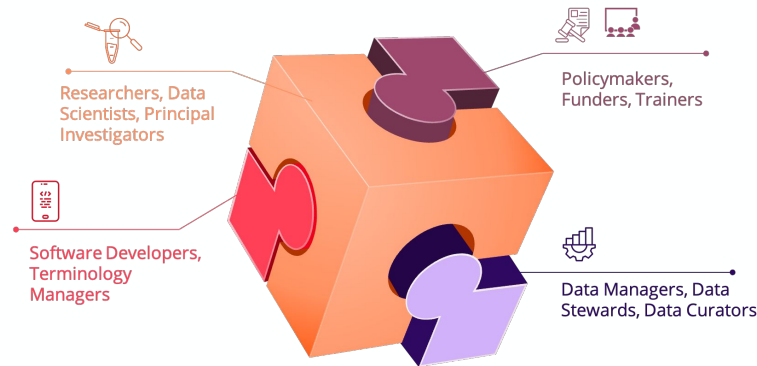
The FAIR Cookbook

What is it?

An online, 'live'
resource for the **life sciences**

A collection of **recipes** that cover the operation steps of FAIR data management

Who is it for?



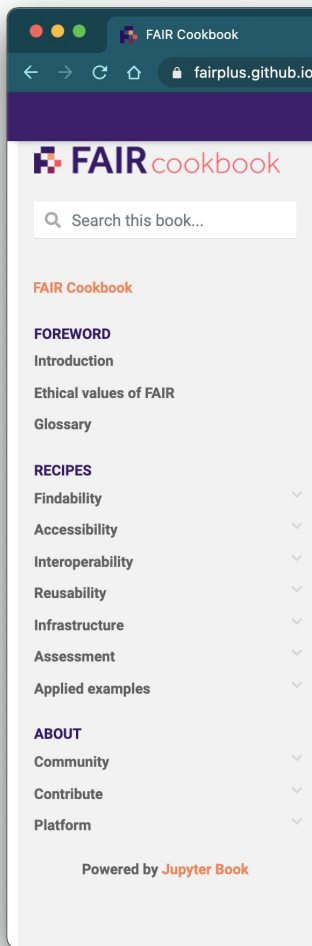
Who developed it?

Researchers and **data managers**
professionals in the life sciences, from academia and industry

Including ELIXIR members

Learning objectives

- 1 Learn how to improve the FAIRness with **exemplar datasets**
- 2 Understand the levels and **indicators** of FAIRness
- 3 Discover **open source** technologies, tools and services
- 4 Find out the required **skills**
- 5 Acknowledge the **challenges**



Online resource:

<https://faircookbook.elixir-europe.org>

Email: fairplus-cookbook@elixir-europe.org

Creators and contributors to date

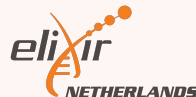
+50 life sciences professionals, researchers and data managers



FARplus partners
Industry + Academia



ELIXIR Nodes
represented



Online resource:

<https://faircookbook.elixir-europe.org>

Email: fairplus-cookbook@elixir-europe.org

Engagement and Attribution

Help us to help you promote your repository: become a maintainer!

- You are the expert, producer, owner or maintainer
 - Use your ORCID to be recognised and credited

Help us to help you promote your repository: become a maintainer!

- You are the expert, producer, owner or maintainer
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- You know more about the key features and descriptors
 - Identify the community standards you use, key to FAIRness
 - Describe the relationships, if any, with other repositories

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 - Use your ORCID to be recognised and credited
- You know more about the key features and descriptors
 - Identify the community standards you use, key to FAIRness
 - Describe the relationships, if any, with other repositories
- Your descriptive record in FAIRsharing informs user decisions
 - Add rich metadata to help with visibility and user selection
 - Indicate if you have any global certifications, or community badges of adoption and recommendation

Broaden Coverage within your Research Domain: Community Curators early adopters programme

- Do you have a **broad** and **deep understanding** of the standards and databases most relevant in your field?

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- **Influence** new FAIRsharing functionalities

FAIRness of FAIRsharing: machine-accessible content

Findability



Sitemap.xml, JSON

Schema.org

Markup with Schema.org for search indexes



DOI unique persistent identifiers for each record



ORCID for author credit and authentication

Interoperability



JSON markup



Standardized semantics



Cross-links to or import from records in other registries



ROR for organizations (*ongoing*)



FundRef for funders (*ongoing*)

Accessibility



read/write REST API
read OAI-PMH

Reusability



CC BY 4.0 license



JSON export

Operational Team

- **Allyson Lister**, Content and Community Lead
- **Milo Thurston**, Technical Lead
- **Ramon Granell**, Data Enrichment & Quality Manager
- **Delphine Dauga**, Data Curator Manager
- **Hossein Mirian**, Web Developer
- **Dominique Batista**, Research Software Engineer
- **Massimiliano Izzo**, Research Software Engineer
- **Philippe Rocca-Serra**, Co-Founder
- **Susanna-Assunta Sansone**, PI and Founder

Executive Advisors

- **Varsha Khodiyar**, Springer Nature
- **David Carr**, The Wellcome Trust, Wellcome Open Research
- **Chris Graf**, Wiley
- **Marta Teperek**, Data Stewardship Coordinator, TUDelft
- **Robert Hanisch**, Director, NIST Office of Data & Informatics
- **Peter McQuilton**, GSK

Stakeholder Advisors

- **Emma Ganley**, Director of Strategic Initiatives, Protocols.io
- **Michael Ball**, Biotechnology and Biological Sciences Research Council (BBSRC)
- **Theo Bloom**, British Medical Journal (BMJ)
- **Nick Everitt and Matthew Cannon**, Taylor and Francis
- **Wei-Mun Chan**, eLife
- **Geraldine Clement-Stoneham**, Head of Knowledge Management and Scholarly Communication, Medical Research Council (MRC)
- **Helena Cousijn**, DataCite
- **Scott Edmunds**, GigaScience, Oxford University Press
- **Dominic Fripp**, JISC, UK
- **Simon Hodson**, CODATA
- **Iain Hrynaszkiewicz**, PLoS
- **Mike Huerta**, Coordinator of Data & Open Science Initiative, Associate Director for Programme Development at the NIH National Library of Medicine
- **Amye Kenall**, VP of Publishing and Product, Research Square
- **Adam Leary**, Oxford University Press
- **Thomas Lemberger**, EMBO Press
- **Luiz Olavo Bonino**, GO-FAIR
- **Kiera McNiece**, Cambridge University Press
- **Dagmar Meyer**, European Research Council (ERC), Executive Agency
- **Marina Soares E Silva, Ilaria Carnevale and Sarah Callaghan**, Elsevier
- **Imma Subirats**, Information Management Officer, FAO of the United Nations
- **Molly Cranston and Guillaume Wright**, F1000Research
- **Kathryn Sharples**, Wiley
- **Catriona MacCallum**, Hindawi

FAIRsharing.org

Vielen Dank!
Thank you!



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**ENGINEERING
SCIENCE**



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OXFORD

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[@FAIRsharing_org](https://twitter.com/FAIRsharing_org)



[10.25504/FAIRsharing.2abjs5](https://doi.org/10.25504/FAIRsharing.2abjs5)



National Institutes
of Health



Medical
Research
Council



European
Commission



Innovative Medicines Initiative



ELIXIR



NATURAL
ENVIRONMENT
RESEARCH COUNCIL



wellcome