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OpenAIRE services: CRIS registration, Lightweight FAIR assessment, and OpenScience Observatory



Interoperability
Guidelines

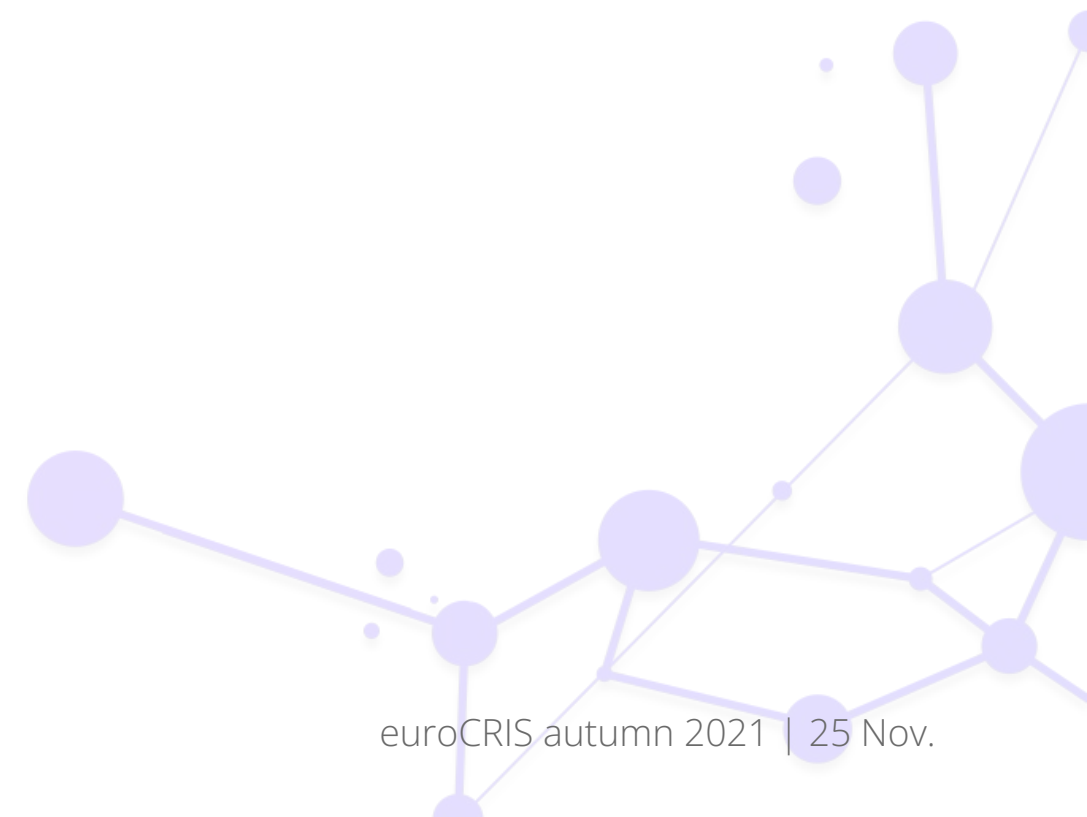


OPENSOURCE
OBSERVATORY

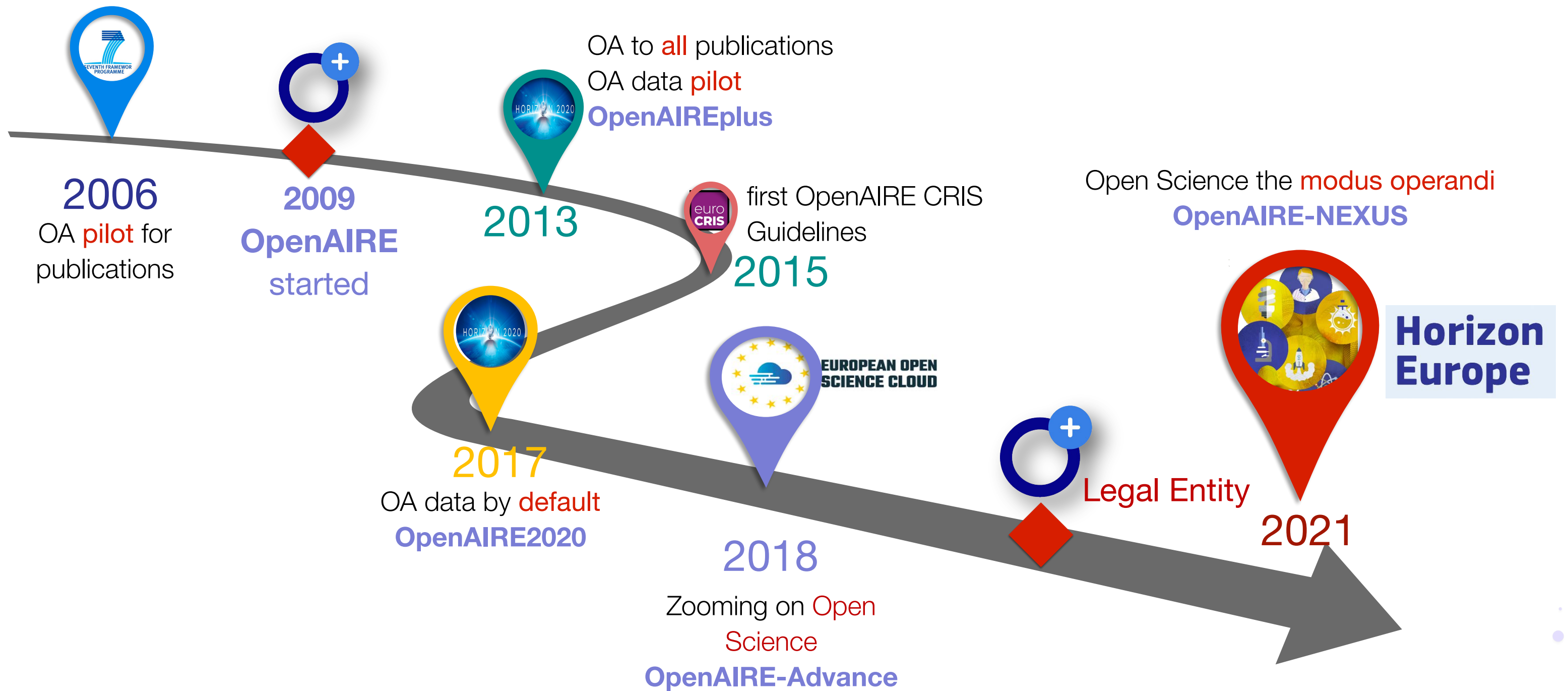
**Autumn 2021 webinar series of euroCRIS
November, 25th 2021**

Topics

- Brief introduction to OpenAIRE
- Updates on CRIS registration
- Lightweight FAIR assessment
- Open Science Observatory



OpenAIRE: Open Access and Science





... and more

>450Mi harvested records
>500Mi bi-lateral links
>13Mi+ full-texts



OpenDOAR



... and more



Academic Graph

... and more European and international funders



schema.org



Collecting metadata, links, and full-texts from more than 12K sources worldwide to materialize a graph where entities of the research life cycle are linked to each other



... and more



... and more



OpenAIRE - ZBMed | 4. November 2021

... and more



**PROVIDE dashboard
a brief update on CRIS registration**

DRIS - Directory of Research Information Systems

Repository Digital Collections Research Outputs People Organizations DRIS Help Q Sign on to:

EuroCRIS / DRIS

Browse

Search the Directory of Research Information System (DRIS)

Name: All AND
Country: All AND
Scope: All

Reset Search

Geo Map

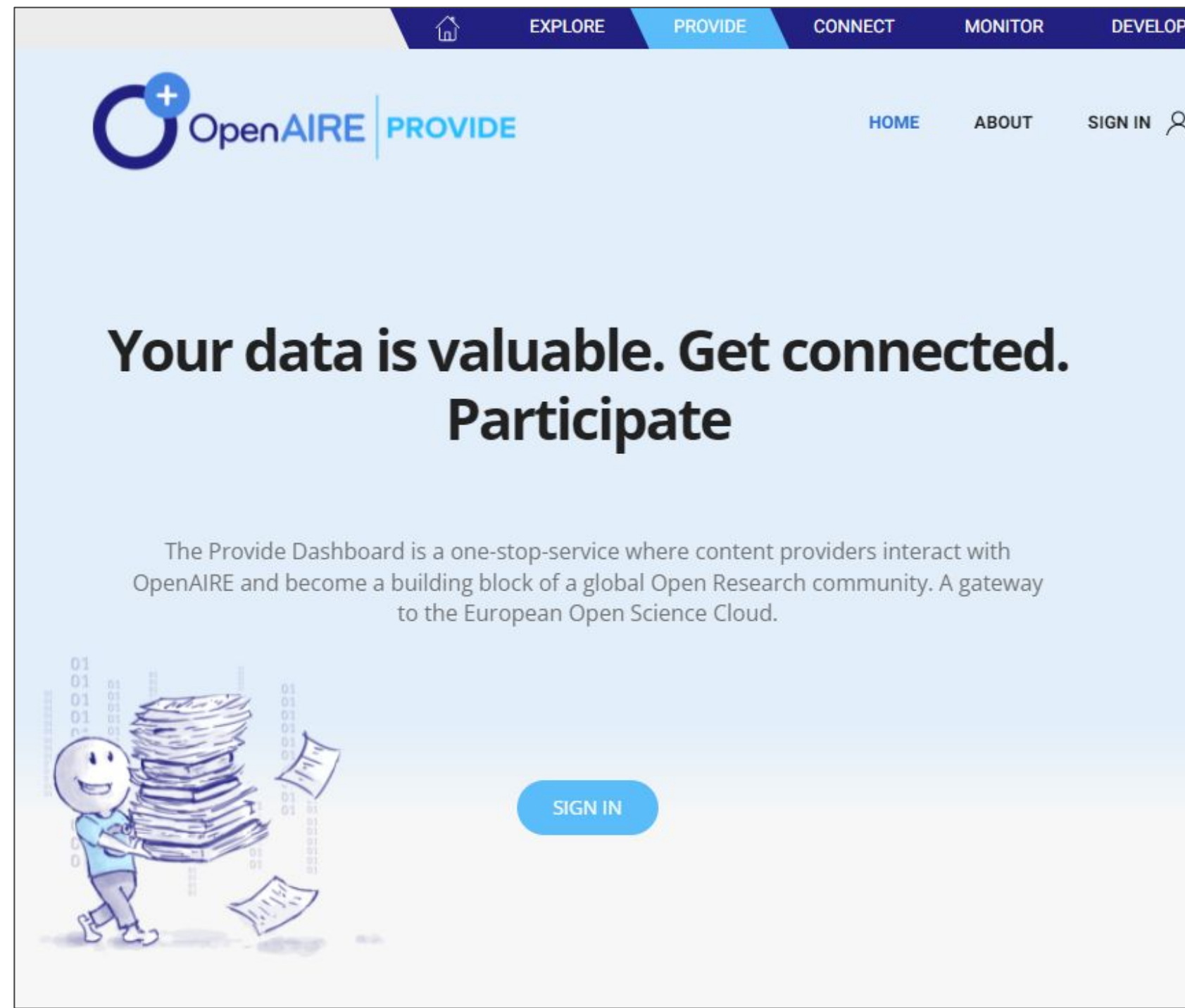
The map displays the following data points:

Country	Count
Finland	5
Norwegen	111
Frankreich	137
Deutschland	188
Ukraine	188
Indien	152
Pakistan	181
USA	25
Mexiko	26
Kanada	26
Brasilien	14
Kolumbien	14
Venezuela	14
Türkei	10
Italien	38
Südkorea	23
Japan	23
Indonesien	23
China	2

DRIS - Directory of Research Information Systems

- **registered systems: 926**
- **collecting CRIS system information from a dedicated API**
 - Name, description, country, platform, scope, ...

OpenAIRE - PROVIDE dashboard



OpenAIRE - PROVIDE dashboard

The screenshot displays the OpenAIRE PROVIDE dashboard interface. On the left, a navigation menu is visible with the following items: Register (highlighted with a red arrow), Validator, Validate, Validation History, and Notifications. Below the menu, there is a section titled 'REPOSITORIES' with several repository logos. The main content area is titled 'Register your datasource' and contains five cards: Literature repository, Data repository, Journal, Aggregator, and CRIS systems. The 'CRIS systems' card is highlighted with a red rounded rectangle.

PROVIDE dashboard: CRIS registration

The screenshot displays the OpenAIRE PROVIDE dashboard interface. On the left, a navigation menu is visible with the following items: Register, Validator, Validate, Validation History, and Notifications. The main content area is titled "Register your datasource" and features a progress bar with four steps: 1. Select Re..., 2. Register ..., 3. Register i..., and 4. Finish. Steps 3 and 4 are highlighted with red boxes. Below the progress bar, there is a section for "Basic information" with a light blue box containing the text: "The following fields are completed by DRIS. If you want to edit them, you can do it by using this [DRIS link](#)". Below this, there are input fields for "Software Platform (*)" (with a dropdown menu showing "[Other] (enter name below)"), "Official Name (*)", and "Description (*)".

OpenAIRE RESEARCH GRAPH

CRIS

- Products
- Patents
- Publication

Repositories

- Data
- Publications
- Software
- ORP

Funders

- Projects
- Funding info

Integration of additional scholarly communication sources

ORCID, Microsoft Academic Graph, Crossref, DOIBoost, ScholExplorer, OpenAIRE UsageCounts

- Metadata, relationships
- Relationships
- Metadata

Aggregation

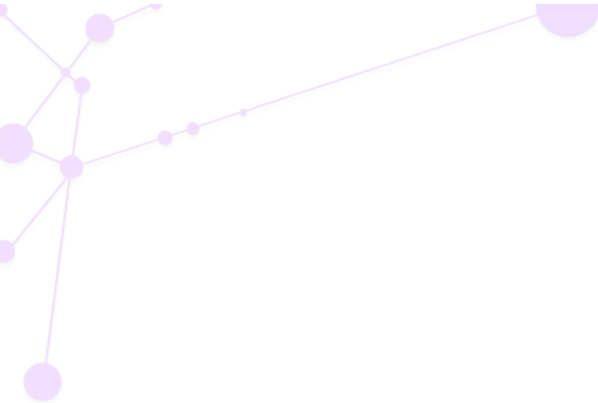
Collection and harmonisation

OpenAIRE ResearchGraph

RAW

OpenOrgs





ID: openorgs_::0000098003
Created at July 16, 2020 11:48:19 by import:grid.ac
Modified at July 16, 2020 11:48:19 by import:grid.ac

Metadata Management [Duplicates](#) new [Conflicts](#) [Note](#) [History](#) ↻

Official name and type

name Bielefeld University **type** Education

Geographical location

city Bielefeld **country** Germany **lat** 52.037778

Other names and identifiers

Acronyms

new acronym...

Aliases

name	language
Bielefeld University	en
Universität Bielefeld	de
new alias...	language...

Identifiers

id	type
Q24382	Wikidata
501100005721	FundRef
1546410	OrgRef
avascrpt:74911.b	GRID



OpenAIRE RESEARCH GRAPH

CRIS

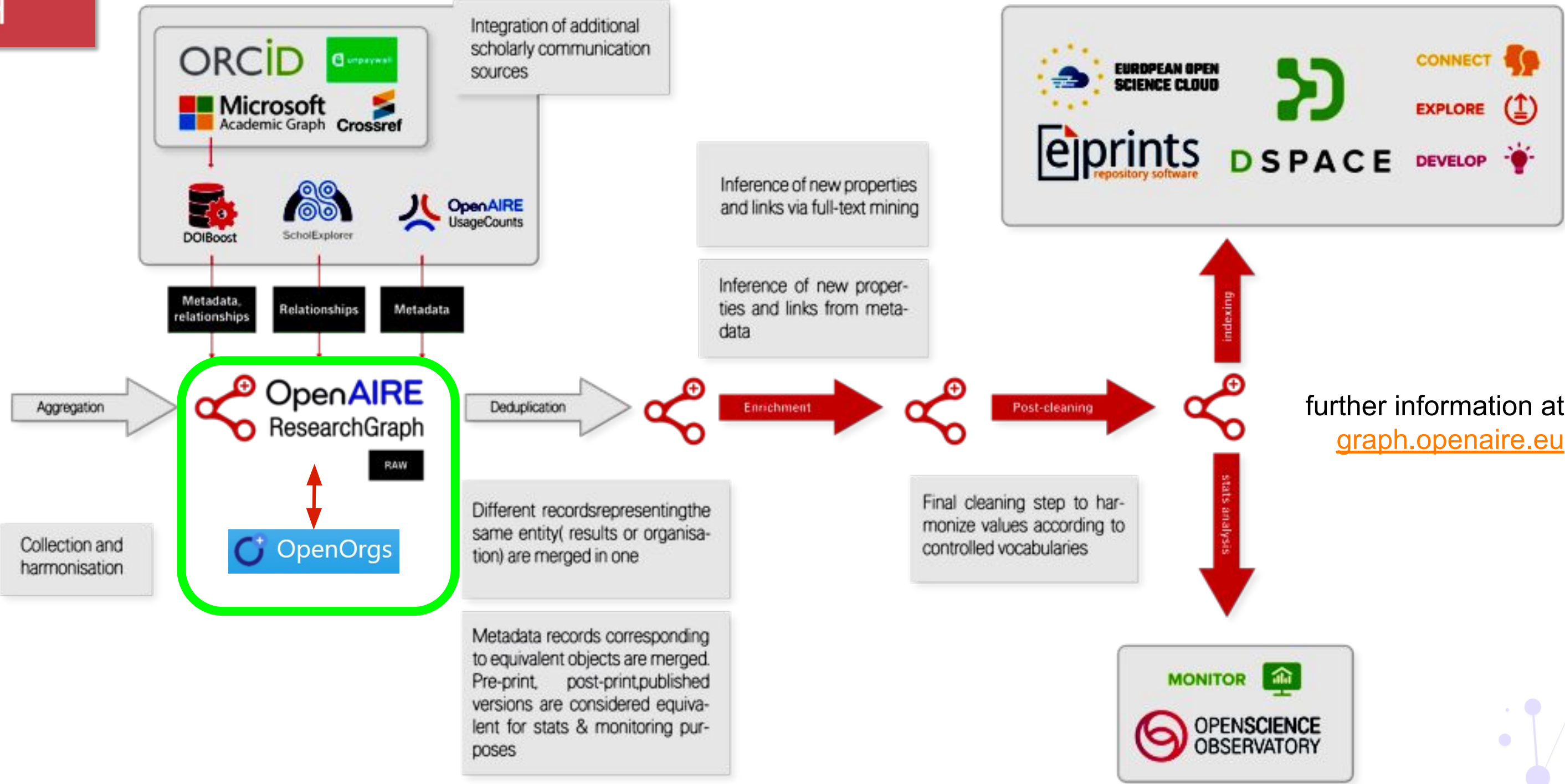
- Products
- Patents
- Publication

Repositories

- Data
- Publications
- Software
- ORP

Funders

- Projects
- Funding info



further information at graph.openaire.eu



**PROVIDE dashboard
lightweight FAIR assessment**

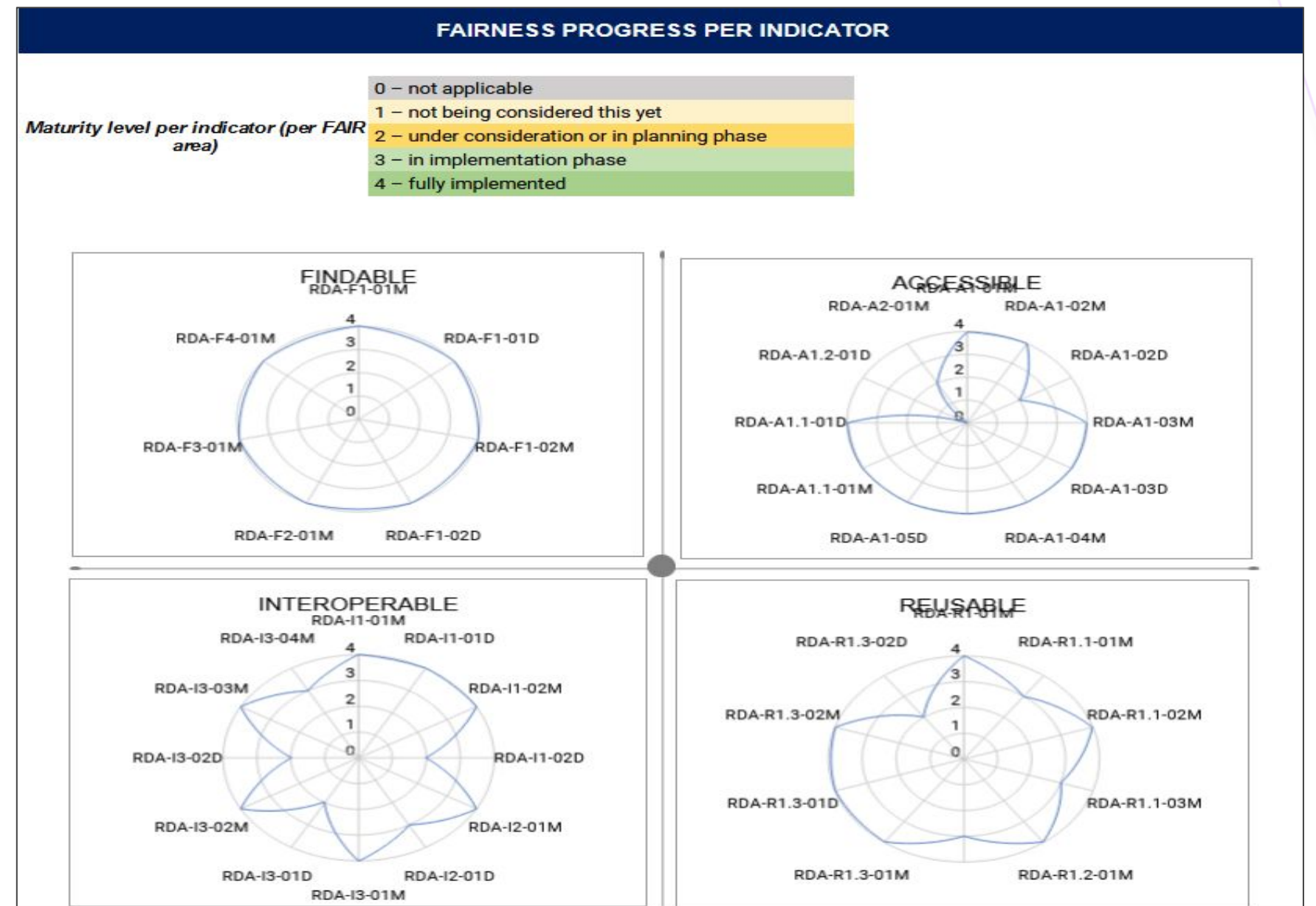
FAIRification

based on Research Data Alliance - FAIR Data Maturity Model: specification and guidelines
[<https://doi.org/10.15497/RDA00050>]

- Findable
- Accessible
- Interoperable
- Reuseable

Evaluation of “OpenAIRE Guidelines for institutional and thematic repository managers 4.0”

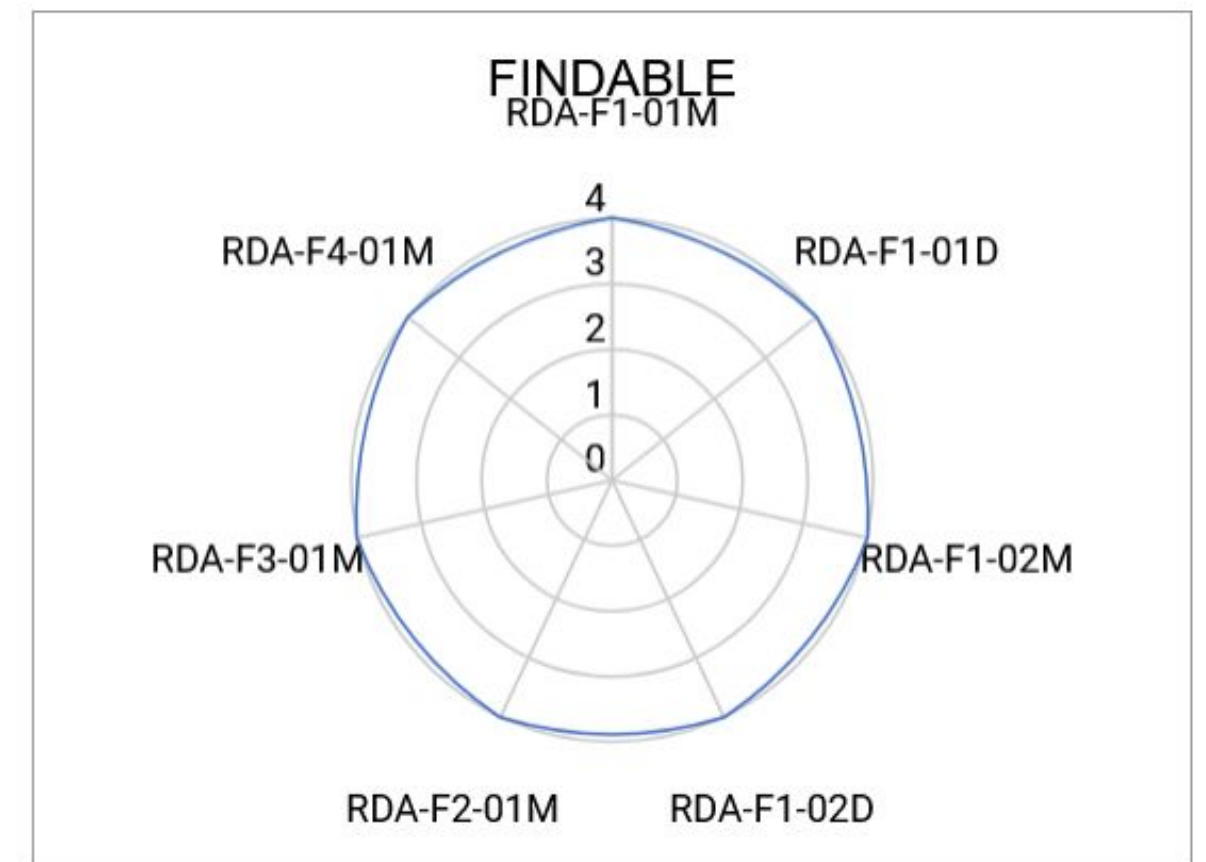
[<https://doi.org/10.5281/zenodo.1299203>]



Evaluation of section

- Findable

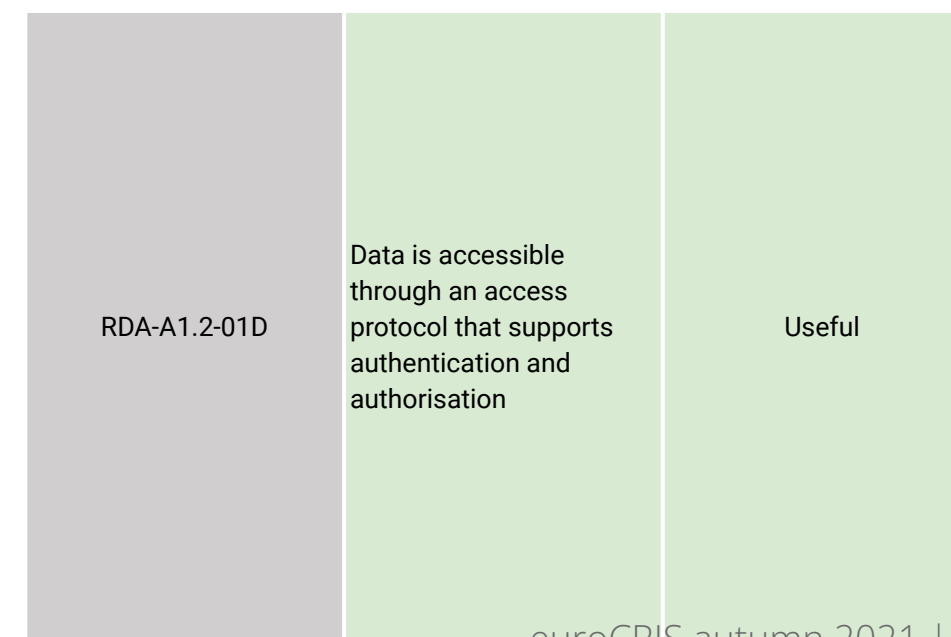
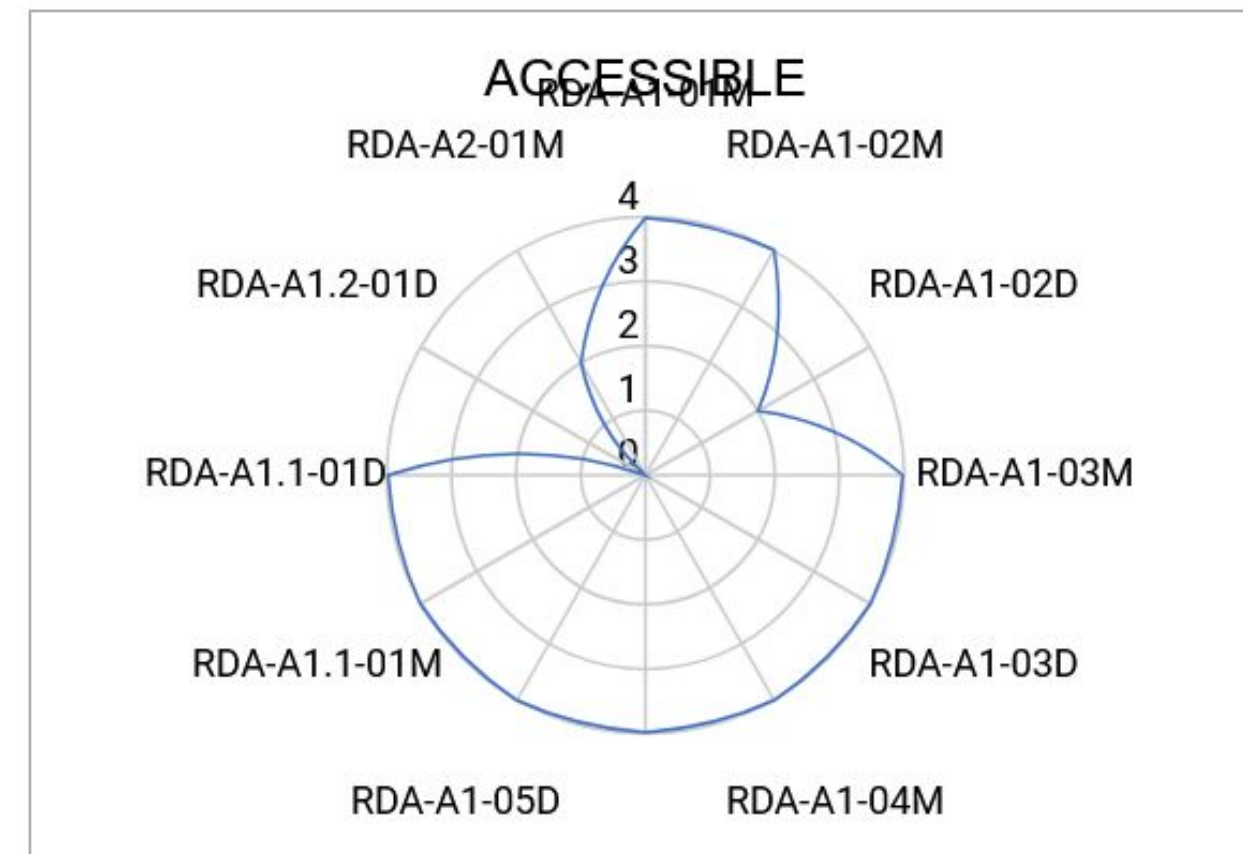
Indicator Id	FAIR Indicator	Priority	met in the guidelines	Primarily Supported in the Guidelines
RDA-F1-01M	Metadata is identified by a persistent identifier	Essential	y	Resource Identifier
RDA-F1-01D	Data is identified by a persistent identifier	Essential	y	Resource Identifier
RDA-F1-02M	Metadata is identified by a globally unique identifier	Essential	y	Resource Identifier
RDA-F1-02D	Data is identified by a globally unique identifier	Essential	y	Resource Identifier
RDA-F2-01M	Rich metadata is provided to allow discovery	Essential	y	implicitly
RDA-F3-01M	Metadata includes the identifier for the data	Essential	y	File Location
RDA-F4-01M	Metadata is offered in such a way that it can be harvested and indexed	Essential	y	implicitly



Evaluation of section

- Accessible

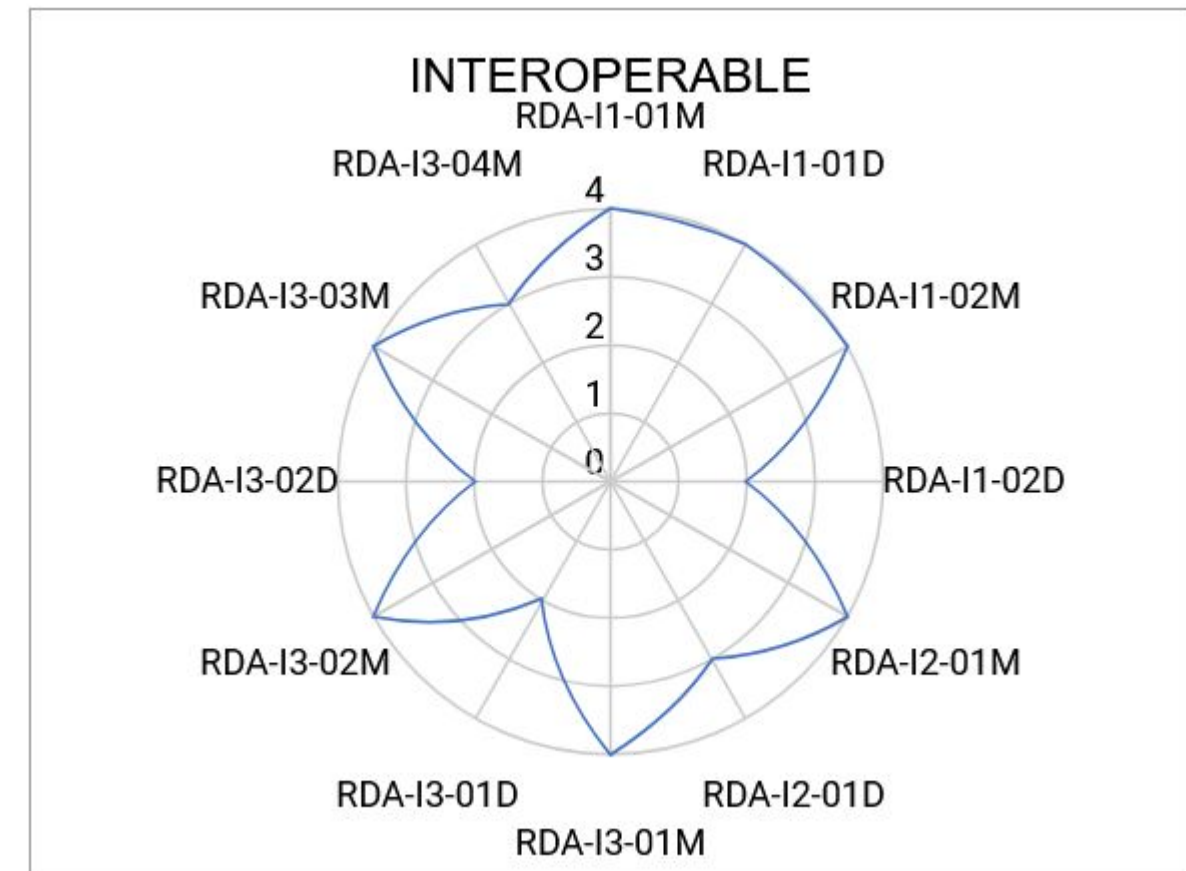
A1	RDA-A1-01M	Metadata contains information to enable the user to get access to the data	Important	y	Access Rights
A1	RDA-A1-02M	Metadata can be accessed manually (i.e. with human intervention)	Essential	y	not controlled by / in the scope of the Guidelines
A1	RDA-A1-02D	Data can be accessed manually (i.e. with human intervention)	Essential	n	not controlled by / in the scope of the Guidelines
A1	RDA-A1-03M	Metadata identifier resolves to a metadata record	Essential	y	implicitly supported by the OAI-PMH protocol but also digital objects minted with a DOI
A1	RDA-A1-03D	Data identifier resolves to a digital object	Essential	y	Resource Identifier
	RDA-A1-04	Metadata is accessed			



Evaluation of section

- Interoperable

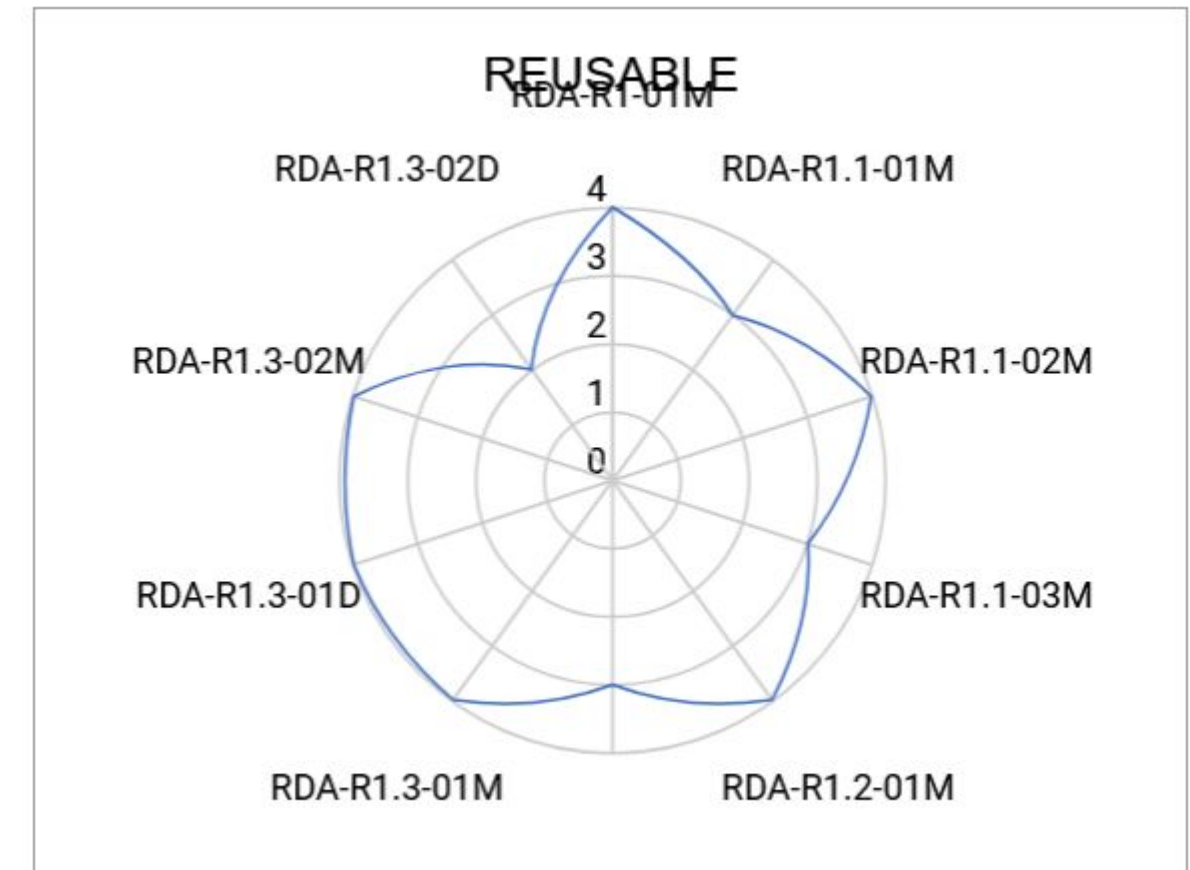
I1	RDA-I1-01M	Metadata uses knowledge representation expressed in standardised format	Important	y	Subject
I1	RDA-I1-01D	Data uses knowledge representation expressed in standardised format	Important	y	Format
I1	RDA-I1-02M	Metadata uses machine-understandable knowledge representation	Important	y	knowledge representation is cross-domain and on the level of XML
I1	RDA-I1-02D	Data uses machine-understandable knowledge representation	Important	n	not explicitly supported
I2	RDA-I2-01M	Metadata uses FAIR-compliant vocabularies	Important	y	supported for some vocabularies in the Guidelines, e.g. COAR vocabularies, CC-licenses vocabularies
I2	RDA-I2-01D	Data uses FAIR-compliant vocabularies	Useful	n	not supported by the guidelines
I3	RDA-I3-01M	Metadata includes references to other metadata	Important	y	related identifier
I3	RDA-I3-01D	Data includes references to	Useful		not in the scope of the



Evaluation of section

- Reusable

R1	RDA-R1-01M	Plurality of accurate and relevant attributes are provided to allow reuse	Essential	y	yes, as long as it concerns bibliographic information
R1.1	RDA-R1.1-01M	Metadata includes information about the licence under which the data can be reused	Essential	y	License Condition
R1.1	RDA-R1.1-02M	Metadata refers to a standard reuse licence	Important	y	License Condition
R1.1	RDA-R1.1-03M	Metadata refers to a machine-understandable reuse licence	Important	y	License Condition
R1.2	RDA-R1.2-01M	Metadata includes provenance information according to community-specific standards	Important	n	not supported
R1.2	RDA-R1.2-02M	Metadata includes provenance information according to a cross-community language	Useful	n	not supported
R1.2	RDA-R1.2-03M	Metadata complies with a	Essential	y	supported (Dublin Core)



Guidelines for inst.& them.Repository managers v4.1-rc1:

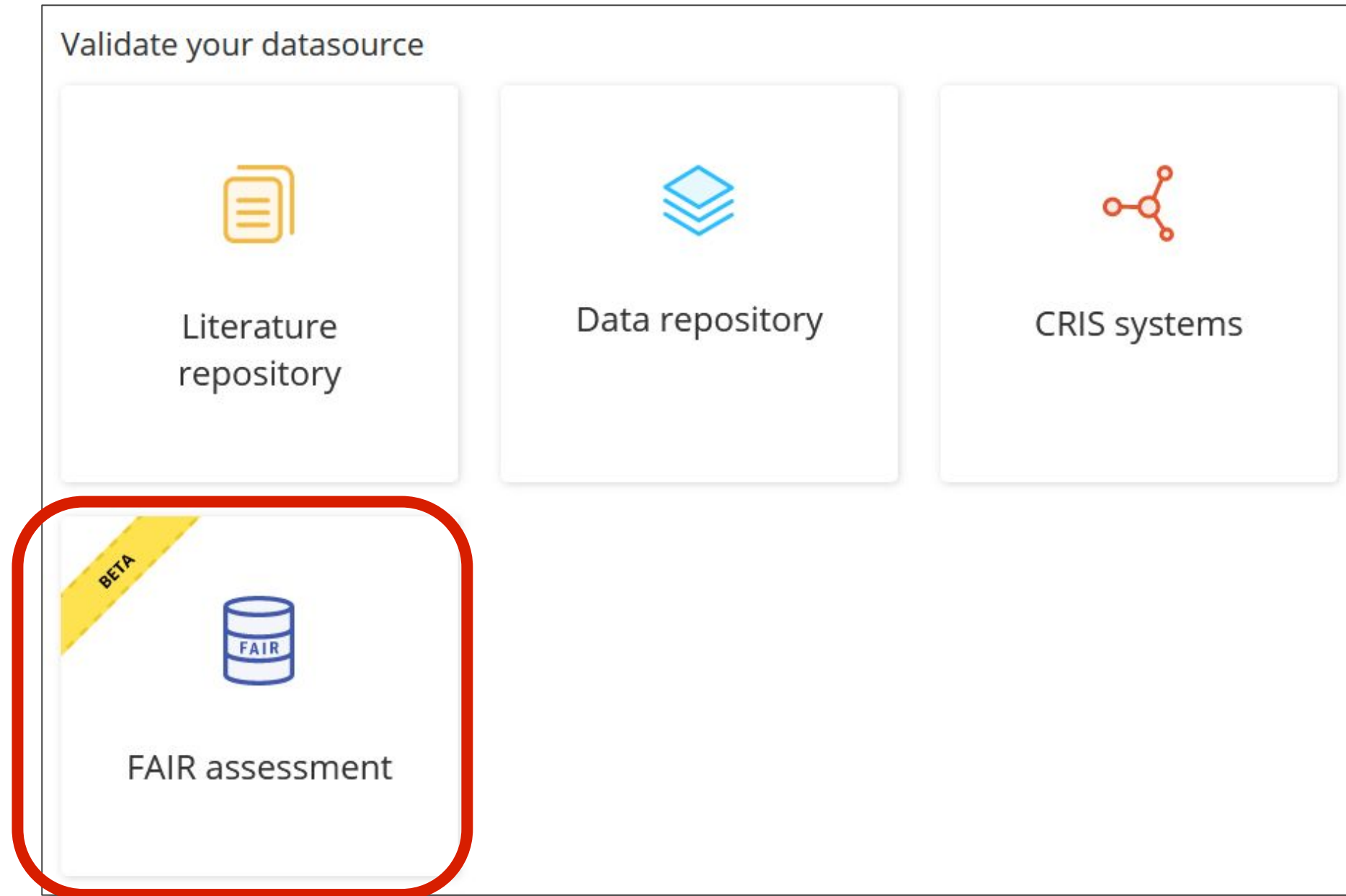
<https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/latest/fair-enable-d.html>

PROVIDE

The screenshot shows the OpenAIRE PROVIDE dashboard homepage. At the top, there is a navigation bar with a home icon and the following menu items: EXPLORE, PROVIDE (highlighted), CONNECT, MONITOR, and DEVELOP. Below this, the OpenAIRE PROVIDE logo is on the left, and navigation links for HOME, ABOUT, and SIGN IN (with a user icon) are on the right. The main heading reads "Your data is valuable. Get connected. Participate". Below the heading is a paragraph: "The Provide Dashboard is a one-stop-service where content providers interact with OpenAIRE and become a building block of a global Open Research community. A gateway to the European Open Science Cloud." To the left of this text is an illustration of a smiling character carrying a large stack of papers, with binary code (0s and 1s) floating around. A blue "SIGN IN" button is positioned to the right of the illustration.

<https://provide.openaire.eu>

PROVIDE



<https://provide.openaire.eu> -> **Validator**

PROVIDE

Run compatibility test

1

Select datasource

2

Select guidelines

3

Select parameters

4

Finish

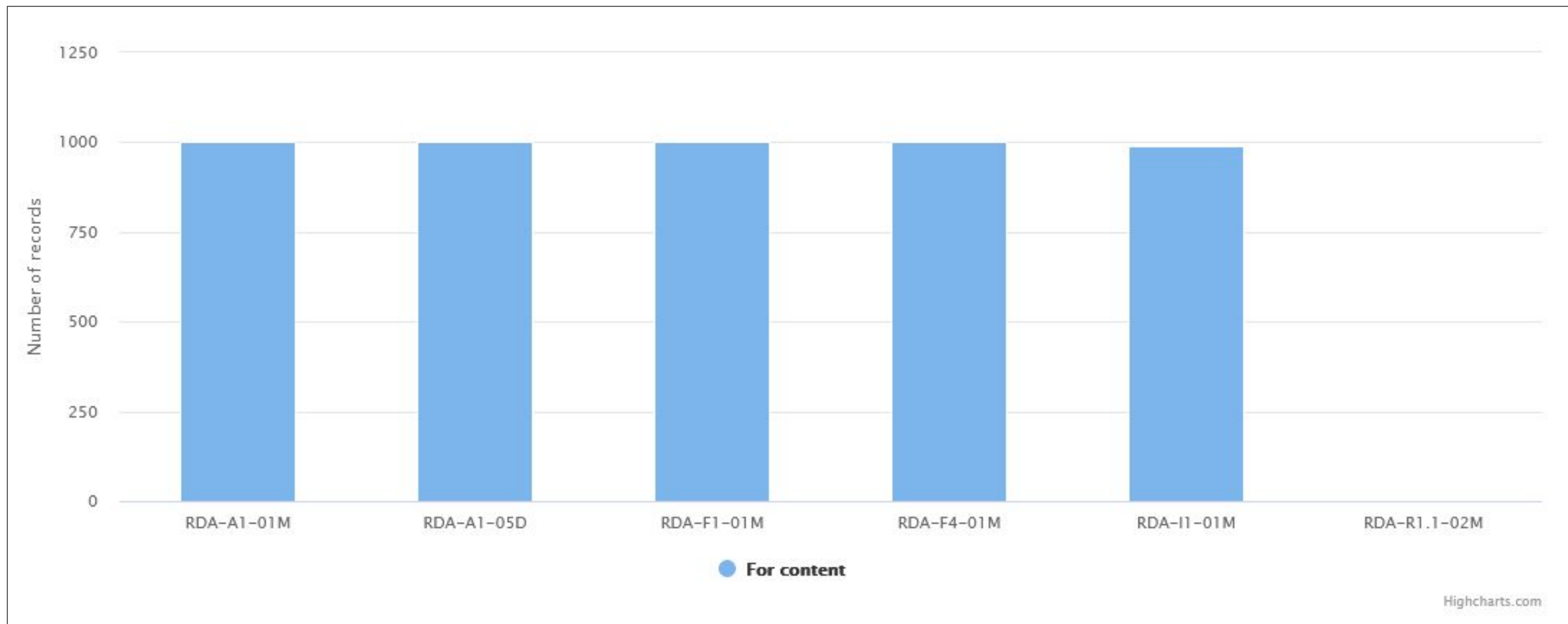
Select base URL from one of your registered repositories

-- none selected --

or enter new

<https://pub.uni-bielefeld.de/oai>

PROVIDE

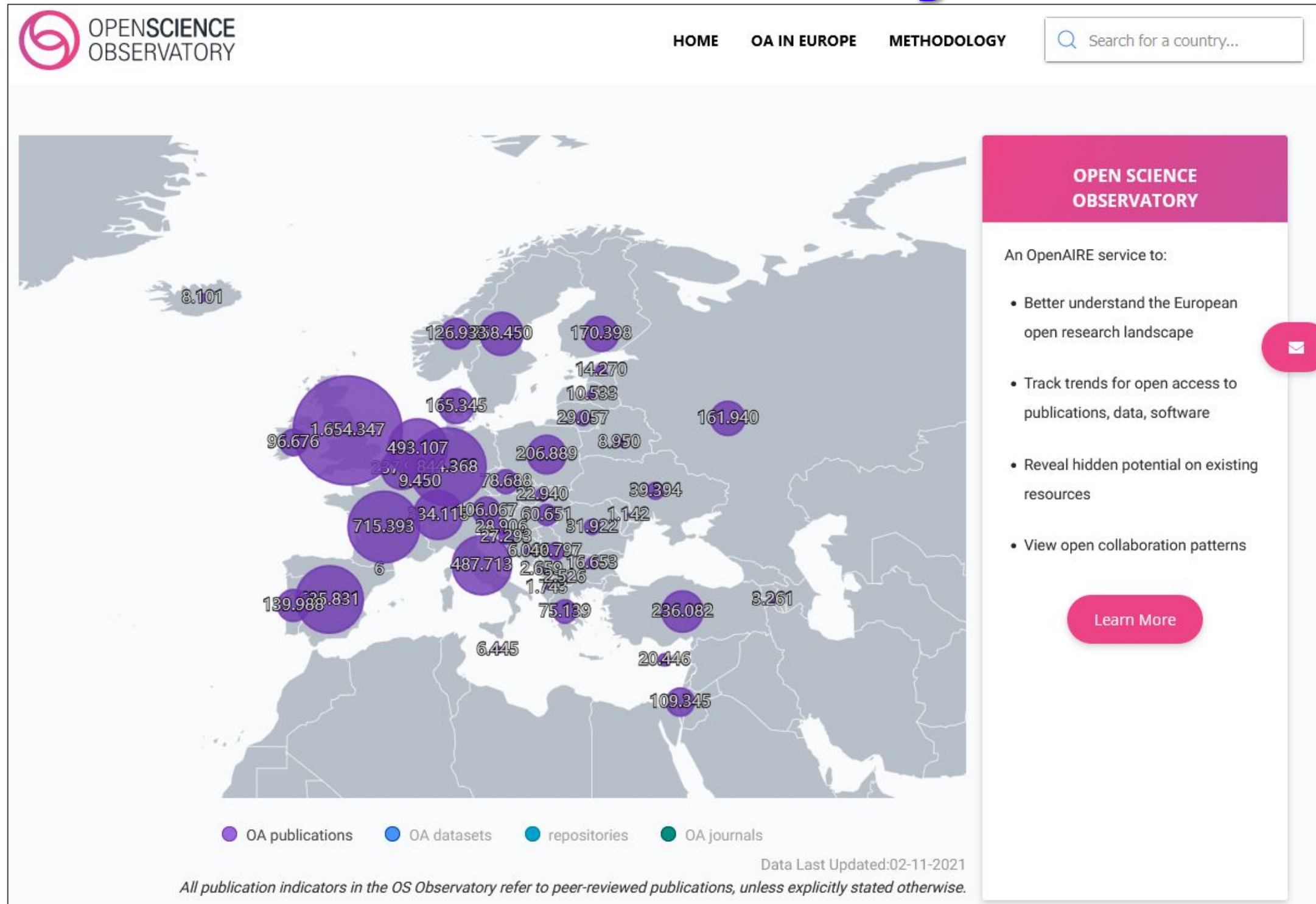




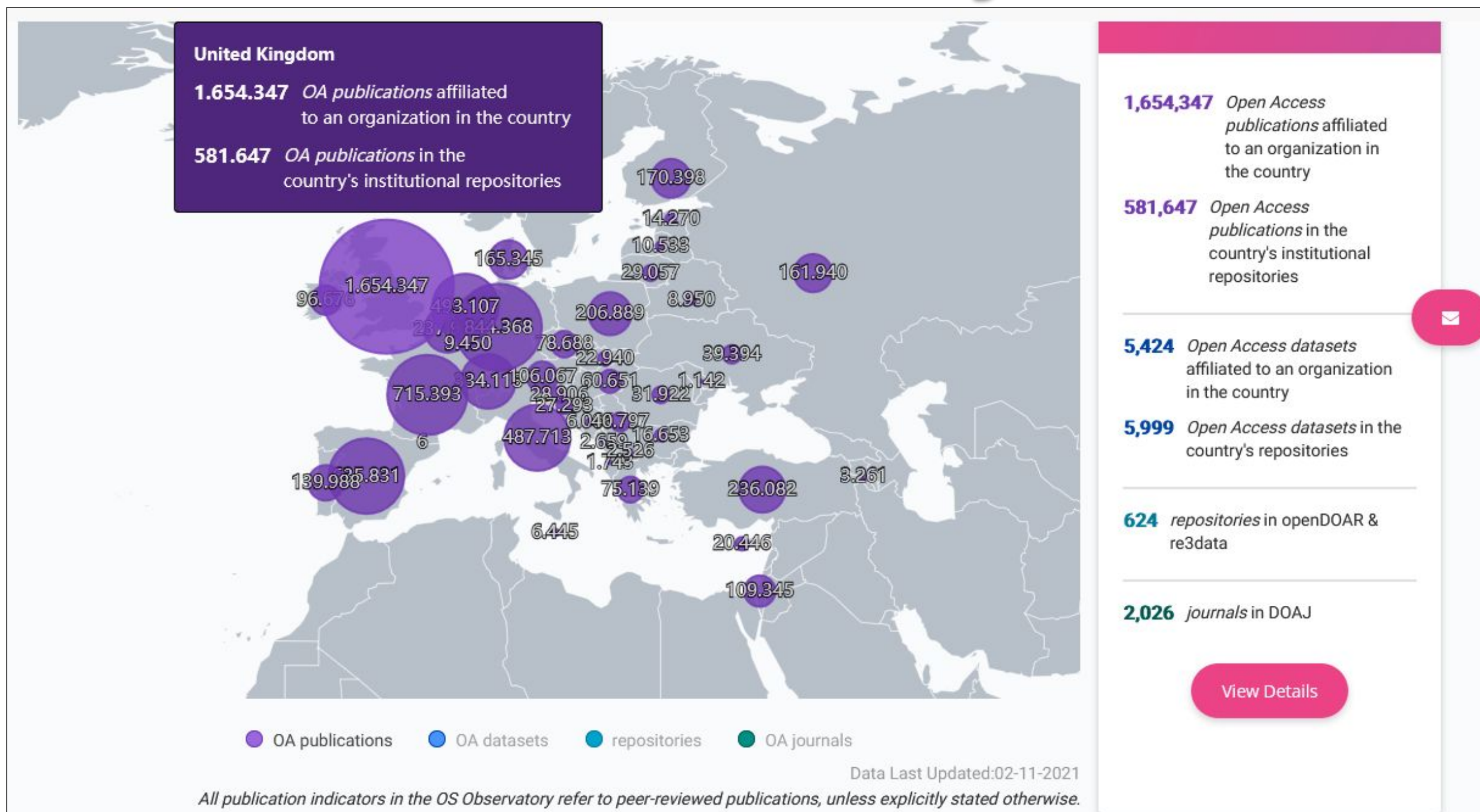
Open Science Observatory

a glance at the numbers

Open Science Observatory



Open Science Observatory



Open Science Observatory

6,288,165
Open Access publications
41.5% share open access

38,756
Open Access datasets
36% share open access

Open Access (OA) in Europe

Show: **affiliated**

Country	repositories
Albania	1
Andorra	1
Armenia	2
Austria	78
Belarus	38

Home > Netherlands



Netherlands

Data Last Updated: 02-11-2021

493,107
Open Access publications affiliated to an organization in the country
50.4% share open access

96
Open Access datasets affiliated to an organization in the country
92.3% share open access

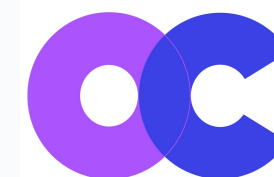
138
repositories in openDOAR & re3data
23.2% validated

737
Open Access journals in DOAJ
96.2% validated

304,797
Open Access publications in the country's institutional repositories
63.5% share open access

106,561
Open Access datasets in the country's repositories
81.3% share open access

OPEN@PC



Research Overview

2.16% of GDP for **2018** R&D expenditure

4 funders

284 funding organizations

6448 projects funded by the European Commission since 2013



Country page in **OpenAIRE**



Open Science Observatory



Terminology and construction

Entities

Inherited and Inferred Attributes

Constructed Attributes

Research Outcomes

There are currently four different types of research outcomes in the OpenAIRE Research Graph:

- publications
- datasets
- software
- other research products

OpenAIRE deduplicates (merges) different records of research outcomes and keeps the metadata of all instances.

publication

Research outcome intended for human reading (published articles, pre-prints, conference papers, presentations, technical reports, etc.)

Only peer-reviewed publications are considered in the OS Observatory, unless explicitly stated otherwise (see tab Constructed Attributes for definition of peer-review).

dataset

Research data

Granularity is not defined by OpenAIRE, it reflects the granularity supported by the sources from which the description of the dataset has been collected.

software

Source code or software package developed and/or used in a research context

Our methodological approach is based on the following principles:

- **Openness and transparency:** Methodological
- **Coverage and accuracy:** As detailed in [graph](#). fullest extent possible, in order to provide mea
- **Clarity and replicability:** We describe our con community to create ongoing updates to our p
- **Readiness and timeliness:** The methodology - natural language processing (NLP)/machine-
- **Trust and robustness:** Our methodology also operationalized, used and reused, in conjuncti



Community feedback

Community feedback

- **OpenAIRE Guidelines for CRIS Manager (v1.1.1)**
 - <https://openaire-guidelines-for-cris-managers.readthedocs.io/en/v1.1.1/>
 - **Feedback:**
 - <https://github.com/openaire/guidelines-cris-managers/issues> (with sign-in)
 - <https://docs.google.com/document/d/1BkkO3ysr5Pmsqt7kZ118ZxBv1wE9Md3TYvp9vtUUV-c/edit#> (without sign-in)
- **sharing novelties during monthly Community Calls**
<https://www.openaire.eu/provide-community-calls>



@openaire_eu
#OpenAIRE-Nexus

euroCRIS

Current Research Information Systems

THANK YOU

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OpenAIRE

