“OpenAIRE CONTENT PROVIDERS COMMUNITY CALLS”

Are you a content provider? Got questions? Come and learn more! OpenAIRE is running a series of regular online community calls targeting all OpenAIRE content providers managers.

Every month, on the first Wednesday 14h30 CET

Upcoming releases
Questions and comments
Recent developments
Provide – recent news

Provide Public Roadmap
https://trello.com/b/JHbHKLZ4/openaire-provide-roadmap

Provide Dashboard User interface improvements
https://provide.openaire.eu

Guidelines V4 rules already integrated in the validator tool
https://provide.openaire.eu

...
OpenAIRE Guidelines V4:
specifications and implementation roadmap and use cases

1st) Specifications and novelties from the guidelines Version 4
2nd) Use cases or early adopters (RCAAP, Spanish use cases, LAReferencia)
Guidelines and Recommendations

Bielefeld University

OpenAIRE community call | 6 NOV 2019
brief agenda

- OpenAIRE Aggregation Overview
  Objectives, Content, and Guidelines

- Literature Guidelines v4 Overview
  Introduction to the Application Profile
OpenAIRE Aggregation Overview
Integration Scenarios

- Directly harvested (from repositories, journals) and indirectly harvested (via aggregators, publishers)
- Individually claimed
- Individually referenced (if resolvable via PIDs)
Aggregated Artefact and Data Source Types

Publications
- Article
- Preprint
- Report
- Patent
- ...

Datasets
- Dataset
- Collection
- Clinical Trial
- ...

Software
- Research Software
- ...

Other Research Products
- Service
- Workflow
- Interactive Resource
- ...

Institutional/publication repositories
Journals/publishers
Data repositories
Software repositories
Other Products repositories
CRIS
OpenAIRE’s Guidelines for Open Science Content Providers

For Institutional, Thematic Repositories and Publishing Platforms

- Data Archives
- CRIS Platforms
- Software Repositories
- Other Research Products

https://guidelines.openaire.eu
Guidelines

● A tool for repository managers to define and implement local data management policies.

● They meet the requirements of OpenAIRE - Open Access Infrastructure for Research in Europe - and the Open Access strategy of the European Commission.

● They guide repository managers to expose to the OpenAIRE infrastructure open access and non-open access publications together with funding information.

● They help authors:
  ○ to meet the EC Open Access requirements or other funders requirements, cooperating with OpenAIRE
  ○ to include their work into the OpenAIRE infrastructure for discoverability and utilization of OpenAIRE’s portal services
What’s new / 1

- Based on Dublin Core & DataCite metadata schemes
- Requires OAI metadata format prefix ‘oai_openaire’
- Requires no specific OAI set
  - Access level declaration per record more important
- Compatible with new OpenAIRE Content Acquisition Policy
  - Open access and non open access
  - Funded and non funded
What’s new / 2

- Uses controlled vocabularies defined by COAR (access rights, resource types, version types)
  https://www.coar-repositories.org/activities/repository-interoperability/coar-vocabularies/

- Enhances ‘explicitness’ by dedicated properties for specific information
What’s new / 3

- Supports various identifier types
  - scholarly works: DOI, Handle, ARK, ...
  - authors: ORCID, ISNI, ...
  - organisations: ISNI, OpenDOAR, re3data, funder DOIs
What’s new / 4

- Creates hierarchical level via container

[Diagram showing relationships between journal, article, book, chapter, series, conference, and poster]
OpenAIRE Guidelines for Literature Repositories v4.0

Application Profile

http://dx.doi.org/10.5281/zenodo.1299203
(Released Nov-2018)
## Metadata Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Metadata Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>discovery and citability</td>
<td>descriptive metadata</td>
</tr>
<tr>
<td>accessibility and reuse</td>
<td>access rights, licenses, file locations, dates (embargo end)</td>
</tr>
<tr>
<td>contextualization</td>
<td>research project, linked research artefacts</td>
</tr>
<tr>
<td>interoperability</td>
<td>entity identifiers, controlled vocabularies</td>
</tr>
<tr>
<td>reporting</td>
<td>funding references</td>
</tr>
</tbody>
</table>
### Discovery and Citability I

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement level</th>
<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creator</td>
<td>Mandatory</td>
<td>datacite:contributor</td>
</tr>
<tr>
<td>Publication Date</td>
<td>Mandatory</td>
<td>datacite:date</td>
</tr>
<tr>
<td>Title</td>
<td>Mandatory</td>
<td>datacite:title</td>
</tr>
<tr>
<td>Resource Identifier</td>
<td>Mandatory</td>
<td>datacite:identifier</td>
</tr>
<tr>
<td>Resource Type</td>
<td>Mandatory / Controlled</td>
<td>oaire:resourceType</td>
</tr>
<tr>
<td>Contributor</td>
<td>Mandatory if applicable</td>
<td>datacite:contributor</td>
</tr>
<tr>
<td>Language</td>
<td>Mandatory if applicable / Controlled</td>
<td>dc:language</td>
</tr>
<tr>
<td>Description</td>
<td>Mandatory if applicable</td>
<td>dc:description</td>
</tr>
<tr>
<td>Subject</td>
<td>Mandatory if applicable</td>
<td>datacite:subject</td>
</tr>
<tr>
<td>Publisher</td>
<td>Mandatory if applicable</td>
<td>dc:publisher</td>
</tr>
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</table>
# Discovery and Citability II

<table>
<thead>
<tr>
<th>Property</th>
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<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Recommended</td>
<td>dc:source</td>
</tr>
<tr>
<td>Coverage</td>
<td>Recommended</td>
<td>dc:coverage</td>
</tr>
<tr>
<td>Audience</td>
<td>Optional</td>
<td>dcterms:audience</td>
</tr>
<tr>
<td>GeoLocation</td>
<td>Optional</td>
<td>datacite:geoLocation</td>
</tr>
<tr>
<td>Resource Version</td>
<td>Recommended</td>
<td>oaire:version</td>
</tr>
<tr>
<td>Citation Title</td>
<td>Recommended</td>
<td>oaire:citationTitle</td>
</tr>
<tr>
<td>Citation Volume</td>
<td>Recommended</td>
<td>oaire:citationVolume</td>
</tr>
<tr>
<td>Citation Issue</td>
<td>Recommended</td>
<td>oaire:citationIssue</td>
</tr>
<tr>
<td>Citation Start Page</td>
<td>Recommended</td>
<td>oaire:citationStartPage</td>
</tr>
<tr>
<td>Citation End Page</td>
<td>Recommended</td>
<td>oaire:citationEndPage</td>
</tr>
<tr>
<td>Citation Edition</td>
<td>Recommended</td>
<td>oaire:citationEdition</td>
</tr>
</tbody>
</table>

```xml
<oaire:citationTitle>some Journal Title</oaire:citationTitle>
<oaire:citationVolume>10</oaire:citationVolume>
```
## Accessibility and Reuse

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement level</th>
<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Rights</td>
<td>Mandatory / Controlled</td>
<td>datacite:rights</td>
</tr>
<tr>
<td>License Condition</td>
<td>Recommended</td>
<td>oaire:licenseCondition</td>
</tr>
</tbody>
</table>

```xml
<oaire:licenseCondition startDate="2019-02-01" uri="http://creativecommons.org/licenses/by-nc/4.0/">Creative Commons Attribution-NonCommercial</oaire:licenseCondition>
```
Reporting (to Funders)

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement level</th>
<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Reference</td>
<td>Mandatory if applicable</td>
<td>oaire:fundingReference</td>
</tr>
<tr>
<td>Embargo Period Date</td>
<td>Mandatory if applicable</td>
<td>datacite:date</td>
</tr>
</tbody>
</table>

```xml
<oaire:fundingReferences>
  <oaire:fundingReference>
    <oaire:funderName>European Commission</oaire:funderName>
    <oaire:funderIdentifier funderIdentifierType="Crossref Funder ID">http://doi.org/10.13039/100010661</oaire:funderIdentifier>
    <oaire:fundingStream>Horizon 2020 Framework Programme</oaire:fundingStream>
    <oaire:awardTitle>Open Access Infrastructure for Research in Europe 2020</oaire:awardTitle>
  </oaire:fundingReference>
</oaire:fundingReferences>
```
## Interoperability

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement level</th>
<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>Recommended</td>
<td>dc:format</td>
</tr>
<tr>
<td>Alternate Identifier</td>
<td>Recommended</td>
<td>datacite:alternateIdentifier</td>
</tr>
<tr>
<td>Related Identifier</td>
<td>Recommended</td>
<td>datacite:relatedIdentifier</td>
</tr>
</tbody>
</table>

```xml
<datacite:alternateIdentifiers>
  <datacite:alternateIdentifier alternateIdentifierType="URL">http://someUrl</datacite:alternateIdentifier>
</datacite:alternateIdentifiers>
```
## Mining and Download

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement level</th>
<th>Metadata Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Location</td>
<td>Mandatory if applicable</td>
<td>oaire:file</td>
</tr>
<tr>
<td>Size</td>
<td>Optional</td>
<td>datacite:size</td>
</tr>
<tr>
<td>Related Identifier</td>
<td>Recommended</td>
<td>datacite:relatedIdentifier</td>
</tr>
</tbody>
</table>

```xml
<oaire:file accessRightsURI="http://purl.org/coar/access_right/c_abf2" mimeType="application/pdf" objectType="fulltext">http://link-to-the-fulltext.org
</oaire:file>
```
## Implementation in the OpenAIRE Infrastructure

<table>
<thead>
<tr>
<th>Service</th>
<th>What</th>
<th>When</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validator</td>
<td>Ruleset for Guidelines v4</td>
<td>released</td>
<td>also required for Guidelines implementers</td>
</tr>
<tr>
<td>DataSource Registration &amp; Update</td>
<td>Compatibility Level MetadataFormat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregation</td>
<td>Transformation Rules</td>
<td>In preparation</td>
<td></td>
</tr>
<tr>
<td>Provide</td>
<td>visible in dashboards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Guidelines References

- Guidelines (OpenAIRE) [https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/](https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/)

- Schema and examples (GitHub) [https://github.com/openaire/guidelines-literature-repositories](https://github.com/openaire/guidelines-literature-repositories)

- Guidelines <-> Repository platform support [https://docs.google.com/spreadsheets/d/1_TQzbMf1jz-YEgatt76lMe-MBbt28g-1_N7j_GZyoPc/edit](https://docs.google.com/spreadsheets/d/1_TQzbMf1jz-YEgatt76lMe-MBbt28g-1_N7j_GZyoPc/edit)
Guidelines References

- **Contribute / Feedback channels (various)**
  - edit GoogleDoc: [https://docs.google.com/document/d/1aFWrkBO_f_GTWWTAfco4uoUphEbtOOdJVD_2ohYw7Ek/edit](https://docs.google.com/document/d/1aFWrkBO_f_GTWWTAfco4uoUphEbtOOdJVD_2ohYw7Ek/edit)
  - visit GitHub: [https://github.com/openaire/guidelines-literture-repositories/issues](https://github.com/openaire/guidelines-literture-repositories/issues)
  - annotate guidelines: [https://web.hypothes.is](https://web.hypothes.is)
  - send emails: [guidelines@openaire.eu](mailto:guidelines@openaire.eu)
  - contact NOADs: [https://www.openaire.eu/contact-noads](https://www.openaire.eu/contact-noads)
New Openaire 4 Guidelines in RCAAP

http://www.openaire.eu
RCAAP Project Implementation
RCAAP Project

- National Initiative in Portugal
- Network for scientific resources (repositories, journals, portals, research data repositories)
- Integrates La Referencia Contents
- Has a content policy based on OpenAIRE guidelines
- Provides Dspace hosting service where some developments have been done!
The Context

• Now
  • 28 Repositories in Dspace 5
    • Adapt with existing information

• Future
  • Update to Dspace 7
    • Make guidelines by default on new DSpace
The Implementations

- New input-forms
  - Authors as entity (from ORCID & National Curriculum)
  - New fields /options

- New OAI-PMH metadata profile (oai_openaire)
  - Mapping of project prefix to entity
  - Fields mapping for new metadata schema
<table>
<thead>
<tr>
<th>Autor</th>
<th>primeiro nome, último nome, ex. Silva</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montemanni</td>
<td>R</td>
</tr>
<tr>
<td>Gambardella</td>
<td>LM</td>
</tr>
<tr>
<td>Carvalho</td>
<td>José</td>
</tr>
<tr>
<td></td>
<td>Primeiro nome, ex. Manuel</td>
</tr>
</tbody>
</table>

**Pesquisa na autoridade de nomes**

- **Procurar por identificador**
  - CIENCIA ID/ORCID

**Lista de resultados**

<table>
<thead>
<tr>
<th>Autor</th>
<th>Variáveis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carvalho, José</td>
<td></td>
</tr>
<tr>
<td>Barão, Fernando</td>
<td></td>
</tr>
<tr>
<td>Abreu, José António Carvalho Dias de Carvalho, José Carlos Silva</td>
<td></td>
</tr>
<tr>
<td>Fernandes, José</td>
<td></td>
</tr>
<tr>
<td>Carvalho, José</td>
<td></td>
</tr>
<tr>
<td>Rodrigues, José</td>
<td></td>
</tr>
<tr>
<td>Maneira, José</td>
<td></td>
</tr>
<tr>
<td>Carvalho, José Carlos Bento de Oia, António</td>
<td></td>
</tr>
<tr>
<td>Carvalho, José Tiago</td>
<td></td>
</tr>
<tr>
<td>Carvalho, José Eduardo</td>
<td></td>
</tr>
<tr>
<td>Carvalho, José Inácio</td>
<td></td>
</tr>
</tbody>
</table>

**Informação sobre o autor**

- **Nome**: Carvalho, José
- **Variantes**: N/A
- **Affilação**: N/A
- **Identificadores**
  - 6013-9659-6880
  - CIENCIA
  - 0000-0003-1729-3404

**Documentos do autor no Repositório**

**Aceitar**

**Cancelar**
Funding

Caso a publicação tenha resultado de projeto(s) financiado(s) pela Comissão Europeia (FP7, H2020, ERC), Fundação para a Ciência e Tecnologia ou Wellcome Trust, identifique esse(s) projeto(s) aqui. Essa identificação é geralmente um requisito dos financiadores. Para identificar o(s) projeto(s) insira um dos seus elementos identificativos (número, nome, acrônimo ou referência) e selecione da lista que lhe é apresentada. Dúvidas ou mais informações aceda aqui.

Projeto Financiado

info.eu-repo/grantAgreement/EC/FP7/612425/EU
OAI-PMH

• Metadata Prefix oai_openaire already available
  https://sapientia.ualg.pt/oai/request?verb=ListMetadataFormats

• Example:

Specific item:
User Interface VS OAI-PMH

<datacite:creator>
  <datacite:creatorName>Filipa Naughton</datacite:creatorName>
  <datacite:givenName>Filipa</datacite:givenName>
  <datacite:familyName>Naughton</datacite:familyName>
</datacite:creator>


<fundingReferences>
  <fundingReference>
    <funderName>European Commission</funderName>
    <funderIdentifier funderIdentifierType="Crossref Funder ID">http://doi.org/10.13039/501100008530</funderIdentifier>
    <fundingStream>FP7</fundingStream>
    <awardNumber>339108</awardNumber>
  </fundingReference>
</fundingReferences>
Other Fields

- Size
- Version
- File URL
- License
- Rights
- Types
- …

All based on normal fields on the submission forms!
## Versions Mapping

<table>
<thead>
<tr>
<th>DRIVER versions</th>
<th>NISO-RP-8-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>info:eu-repo/semantics/draft</td>
<td>AO</td>
</tr>
<tr>
<td>info:eu-repo/semantics/submittedVersion</td>
<td>SMUR</td>
</tr>
<tr>
<td>info:eu-repo/semantics/acceptedVersion</td>
<td>AM</td>
</tr>
<tr>
<td></td>
<td>P</td>
</tr>
<tr>
<td>info:eu-repo/semantics/publishedVersion</td>
<td>VoR</td>
</tr>
<tr>
<td>info:eu-repo/semantics/updatedVersion</td>
<td>CVoR</td>
</tr>
<tr>
<td></td>
<td>EVoR</td>
</tr>
<tr>
<td></td>
<td>NA</td>
</tr>
</tbody>
</table>
The Search Portal Level

All repositories are mapped to OpenAIRE 4 guidelines with:

- Document types mapping
- Versions
- Rights Access

All information is then provided for:

- The user interface
- The API
• Show the information from entities

• Examples:
  - Identifiers of authors (to be included)
  - Licences
  - Related Information
• Rules
• Transformations
• Validations
• Improvements
Search Portal

- Repository Profile with information:
  https://www.rcaap.pt/repositoryInfo.jsp?locale=pt&id=sapientia

Software La Referencia
  - Transformations and validations
Dspace 7 & OpenAIRE 4

• Group to implement OpenAIRE guidelines on Dspace 7 without any plugin or additional developments.

• Implementation of Entities in Dspace 7 and the compliance with OpenAIRE Guidelines 4 (litterature repositories)

• [https://wiki.duraspace.org/display/DSPACE/DSpace+7+Entities+Working+Group](https://wiki.duraspace.org/display/DSPACE/DSpace+7+Entities+Working+Group)
Why new Guidelines?
Thanks

jcarvalho@sdum.uminho.pt
OPENAIRE V4 GUIDELINES
USE CASES OR EARLY ADOPTERS

Lautaro Matas - LA Referencia
Paola A. Azrilevich - LA Referencia

OpenAIRE provide Community call
November 6, 2019
DISSEMINATION ACTIONS

Guidelines v3.0 version dissemination actions

Flyer/Infographic with main aspects
PPTs provided to national nodes (S,M,L)
Webinar for national nodes and LA Referencia technical council representatives
Webinars for repositories (Costa Rica, Perú, Ecuador x2, Uruguay) - more than 200 participants

Guidelines v4.0 version dissemination actions

Active participation in the expert’s group and reviewers
Review and translation to Spanish translation of v4 document (to be published soon)
F.A.Q. review and update
Webinar for national nodes (main changes, elements, COAR vocabularies, controlled terms, namespaces, etc.)
Workshop (presential) for Costa Rica with practical applications and examples.

Resources: http://www.lareferencia.info/es/recursos/directrices-metadatos
LA REFERENCIA SOFTWARE PLATFORM ACTIONS

LA Referencia LRHarvester 4.0 is under development and includes an internal Entity-Relation model.

The main objective is to build, enrich and store an entity-relation model based on the different metadata sources (literature repositories, aggregators, OpenAIRE Graph, API’s, CV’s, founders metadata)

And then use the entity-relation model to curate and enrich metadata. Also interoperate with original sources (and actors) to provide feedback.

LRHarvester v4 architecture and services is being developed in collaborations with RCAPP/Univ. Minho (Portugal), IBICT (Brasil) and CONCYTEC (Perú)

LA Referencia LRHarvester V4 platform could (potentially) be used to provide OpenAIRE 3.0 to 4.0 migration service for repositories – The proof of concept will be developed and shared during 2020
NEXT ..

Guidelines v4 Spanish translation dissemination – December 2019
New version of the document “Metadata and harvest policies of LA Reference” (regional application profile, if necessary) – Q2 2020
F.A.Q dissemination and update
Webinars for repositories (for each national node) – Q1 2020

During 2020
LRHarvester 4.0 deploy in 10 LA Referencia countries and central node
Legacy metadata update service for repositories (proof of concept)
MUCHAS GRACIAS / THANK YOU
Adapting repositories to OpenAIRE Guidelines 4.0: University of Huelva repository, a case study

FACTS ABOUT OPENAIRE
- Indexes 2.5 million publications (25 million on open access) and 1 million examples of research data (675,000 datasets)
- Aggregates 15K content providers (journals, repositories, aggregators, etc.)
- OpenAIRE Guidelines apply to OA repositories and through implementation of the guidelines, repositories comply with European Commission Open Access requirements. These guidelines, in their version 3.0, are used by a whole set of harvesters, aggregation infrastructures (national, regional and thematic areas) and discovery tools across Europe and Latin America.
- The approval in late November 2016 of the OpenAIRE Guidelines for Literature Repository Managers 4.0 marked a step further in this evolution of repositories. The incorporation (and expansion) of ORCID identifiers, together with a new set of typology, rights and versioning methods are the main changes of these guidelines.

REASONS FOR SWITCHING FROM OPENAIRE GUIDELINES 3.0 TO 4.0
- Authors need to link to their research output, easing name disambiguation
- Avoids overloading of orcid metadata
- Makes maintenance and mappings of controlled vocabularies easier with the help of identifiers
- Makes identification of resources easier
- Funds need to link funding information with research output
- To align with other advocacy communication infrastructures

OPENAIRE GUIDELINES 4.0 OBJECTIVES
- To build an application profile (now OA-metadatARef3) based on established and widely used metadata schemes (Dublin Core and DataCite1) in repositories
- To allow for additional properties when needed. To obtain more granularity and flexibility regarding metadata coverage and submissions
- To support identifier schemes for authors, organizations, funders, scholarly resources
- To update controlled vocabularies (COAR Controlled Vocabularies) for resource types, subject headings & classifications, access rights, license information

CHALLENGES FOR REPOSITORIES
The need to maintain the compatibility of OA-DRM in a variety of institutional schemes (OA-DC, OpenAIRE-3, DataCite etc.). The appearance of OpenAIRE Guidelines 4.0 does not imply that compatibility with OpenAIRE Guidelines 3.0 may be abandoned because the various hosting infrastructures could be retained slowly to the new standards. To include identifiers in the repository: ORCID IDs, Funder IDs, ISNI, etc. for subsequent exposure in the OA-DRM interface.

To restrict over-metadating: multiple vocabularies for the correct exposure of descriptive, typology, rights and versioning metadata. The need to use the new COAR vocabularies and keep using OA-DRM vocabularies for compatibility with current harvesting engines.

Associating ORCID IDs with the author’s metadata fields
In the implementation made some other alternatives exist, the DCSpace authority framework is used, together with the queries made through the ORCID API and the recovery of names and identifiers etc. (functionality present since 2014 in DCSpace v3).

Relevant aspects are the normalization of the author name, the assignment of an internal authority for author ID different from the ORCID ID and the creation of a new entry in the SOLR authority core.

Example in the SOLR authority core

```
<id>19905947137000004714</id>
<branch>51814146</branch>
<identifiers>author</identifiers>
<field name="name">Alvaro Atienza, David Castillo</field>
<field name="affiliation">University of Huelva</field>
<field name="degree">PhD</field>
<field name="ORCID">0000-0002-0253-2382</field>
<field name="homepage">http://www.uah.es/</field>
<field name="twitter">@alvaro_atienza</field>
```

Collect Funder information
Information about financial support (funding) must be included in the resource metadata. The fundingFunder element and subproperties repulse the info for self-identification (fundingFunder) system. The main elements extend the funding information and define it more precisely, so plan for additional metadata fields.

In order to collect European project information, perform the integration with OpenAIRE services (http://apiprotocol.org) to obtain an authoritative list of projects. The retrieved values include the project name and project ID.

For national or regional projects, plan for integration with services from many other R&D agencies and Funding Agencies to obtain the relevant list of project information.

Plan for new descriptions and vocabularies
Resource types, access rights and resource versions are defined with the respective COAR controlled vocabularies.

If a new repository is being built, prepare metadating directly in order to incorporate corresponding COAR vocabularies. Equally, if at the time there is no collection of specific object attributes (such as those needed to complete a citation or those that correspond to the version), the capture of these values should be considered.

If your repository is OpenAIRE 3 compatible and it requires a complete transformation to OpenAIRE 4, perhaps the best option would be to embark on a mass metadata conversion project, swapping in or ignoring the obsolete DRYVIR values for the new COAR vocabularies.

If your repository is OpenAIRE 3 compatible and needs to maintain this compatibility for a time, the preferable option, chosen for the University of Huelva repository, is to delegate as far as possible the transformation of metadata in the OA crosswalk. The rules of the crosswalk will transform the vocabularies used (mainly, DRYVIR vocabularies) in the corresponding COAR terms. Clearly, this transformation faces the disadvantage that there is no bidirectional correspondence, another syntactical non semantic, between both sets of vocabularies. This semantic loss should be regarded as a lesser evil as it does not subject all its digital resources to re-metadating.
Adapting repositories to OpenAIRE Guidelines 4.0: University of Huelva repository, a case study

New OAI-PMH schema for OpenAIRE v4

Exposing ORCID IDs

The application profile oaire uses the dataset schema to expose the author metadata, complementing it with the ORCID iD value, thus creating the "datacite:creator" element.

Note that other contributors will be mapped to "dataset:contributor" elements, following the recommendations for the application profile.

In the implementation performed for the University of Huelva repository, whose values come from the SOLR Authority-roles, additional author properties exist, they are exposed in the "dataset:creator" element, such as institutional affiliation information.

- dataset:creator
  - name: "Marin, Jochele"
  - affiliation: "University of Huelva"

Exposing Funding Information

In the oaire metadata schema, the project information is exposed through a fundingReference element. This transforms the value or values stored in the resource into the corresponding oaire elements. This may require redefinition of the tags in the OAI records, coming from a diversity of APIs, in the fundingReference subelements.

- oaire:fundingReference
  - oaire:funderIdentifier: "Ministerio de Economía y Competitividad"

Exposing COAR Controlled Vocabularies elements

If the metadata values of the resource already contain the appropriate values of COAR vocabularies, simply expose them on the OAI interface.

Otherwise, the best option we recommend is to adapt the OAI framework through XSLT transformations, e.g., the following section is used to transform the "article" term into "journal" within COAR terms.

- oaire:article
  - oaire:identifiers
    - oaire:publicationIdentifiers
      - oaire:issn: "0005-0012"
Adapting repositories to OpenAIRE Guidelines 4.0: University of Huelva repository, a case study

Example OpenAIRE 4

Thank you!

www.openaire.eu/provide-community-calls