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Repository Power: How Repositories can support Open Access Mandates

OR2015 | 10th International Conference on Open Repositories

June 8-11, 2015, Indianapolis, Indiana, USA



Context

FUNDERS

Many funders have now stipulated open access to results!

MANDATES

Many have Open Access mandates in place!

REPOSITORIES

But how often are these outputs linked to funding details?



Overview

- 1. Introduction to OpenAIRE**
- 2. Supporting the EC Mandate**
- 3. How OpenAIRE works**
- 4. Applications**
- 5. Results**

What is OpenAIRE?

1

OpenAIRE

OPEN ACCESS INFRASTRUCTURE

for research in Europe

www.openaire.eu

From a pilot in FP7

to a key service in H2020

Science. **Set free.**

11,456,839 publications and 7,314 datasets from 5,862 repositories and OA journals

OpenAIRE

Dec. 2009 - Nov. 2012

OpenAIREplus

Dec. 2011 – Dec. 2014

OpenAIRE2020

Jan. 2015 a Jun. 2018



Who we are

- **In 24x7 operation since Dec 2010**
 - OpenAIRE
 - OpenAIREplus
 - OpenAIRE2020
 - A legal entity in 2016
- **Consortium of 50 partners**

Open Access experts

- Institutional, national and international perspectives on OA policies & e-Infrastructures

Information & Computer Science experts

- Building efficient e-Infra technologies
- State of the art technologies (big data, linked data)

Legal experts

- Legal & policy recommendations

Data communities

- Best practices for data
- Linking to data infrastructures

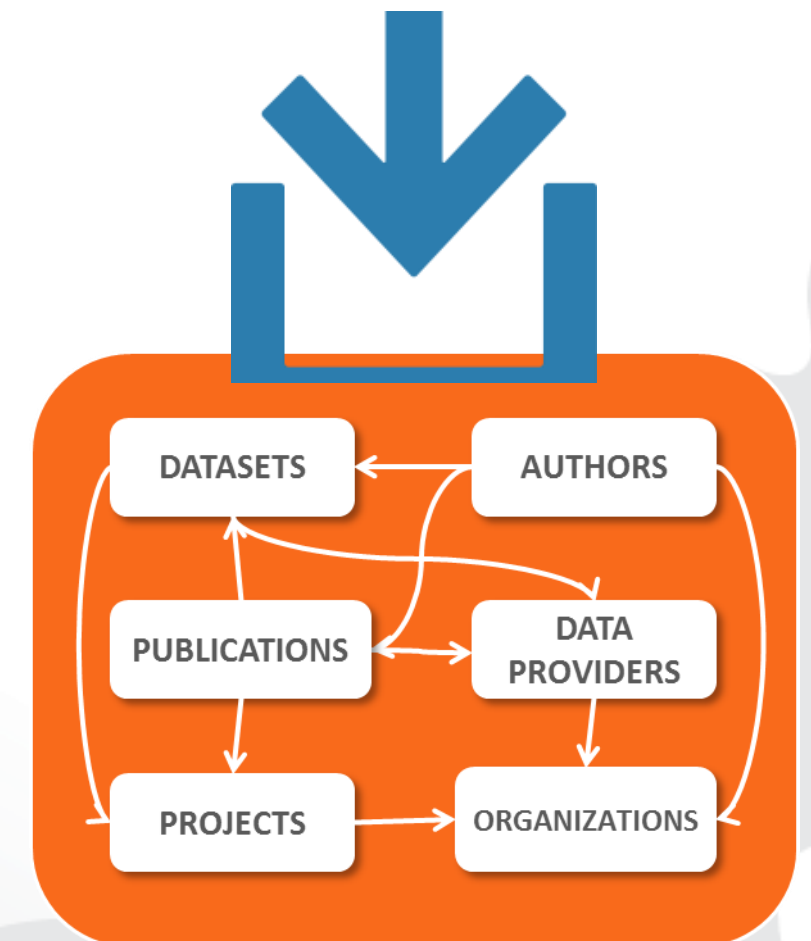


Project & Infrastructure...

Guided by OA funder policies (European Commission)

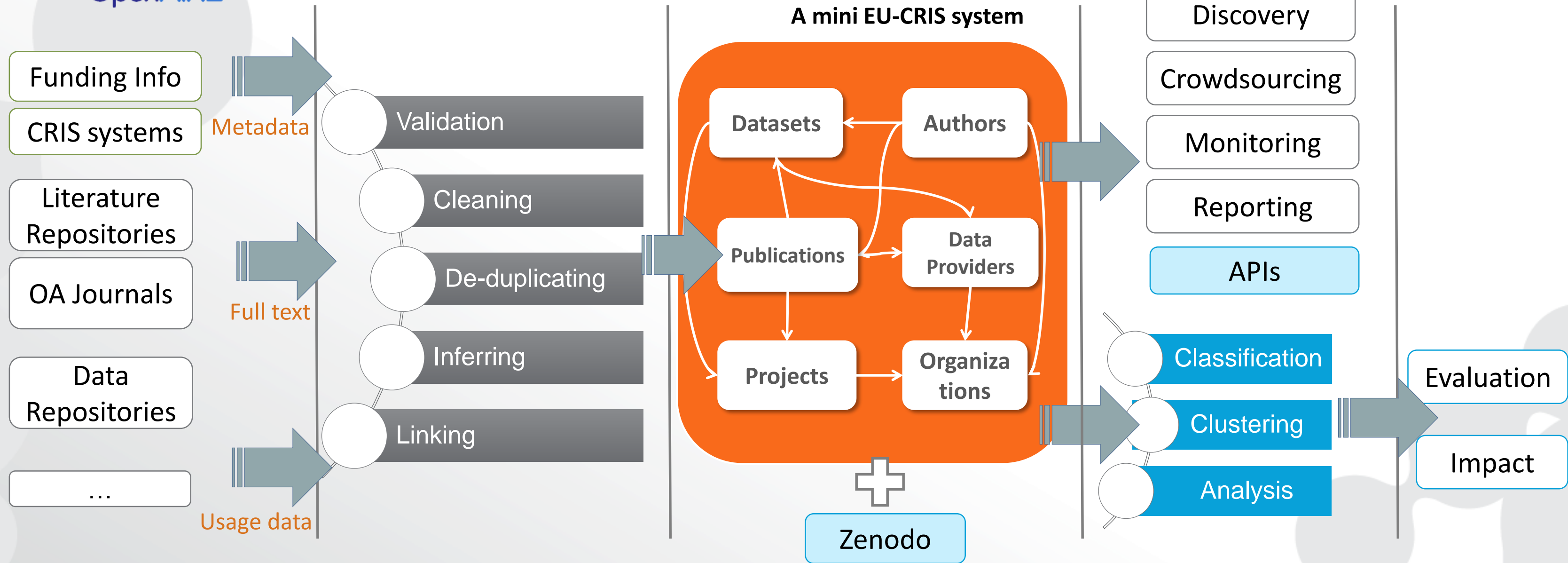
Participatory approach (human & e-infrastructure)

Integrated Scientific Information System



OpenAIRE2020 Networking Organisation





Data Providers

OpenAIRE Platform

Services

Supporting the EC OA Mandate

2

EC OA Mandate Progression

FP7 OA Pilot (2008)

- Grant agreement SC39
- 20% programme areas
- Deposit in Repositories
- Gold payments during project
- ERC's OA Guidelines

Horizon 2020 (2015)

- All grant agreements
- 100% programme areas
- Deposit in Repositories
- Gold payments *after* project
 - Resources to pay article charges; Research into sustainable and competitive models/workflows
- Open Data Pilot



Open Access in Horizon 2020

The grant agreement states:

**“ENSURE OPEN ACCESS...
AS SOON AS POSSIBLE AND AT THE LATEST ON
PUBLICATION, DEPOSIT A MACHINE-READABLE
ELECTRONIC COPY OF THE PUBLISHED VERSION
OR FINAL PEER-REVIEWED MANUSCRIPT
ACCEPTED FOR PUBLICATION IN A REPOSITORY
FOR SCIENTIFIC PUBLICATIONS”**

http://ec.europa.eu/research/participants/data/ref/h2020/mga/gga/h2020-mga-gga-multi_en.pdf

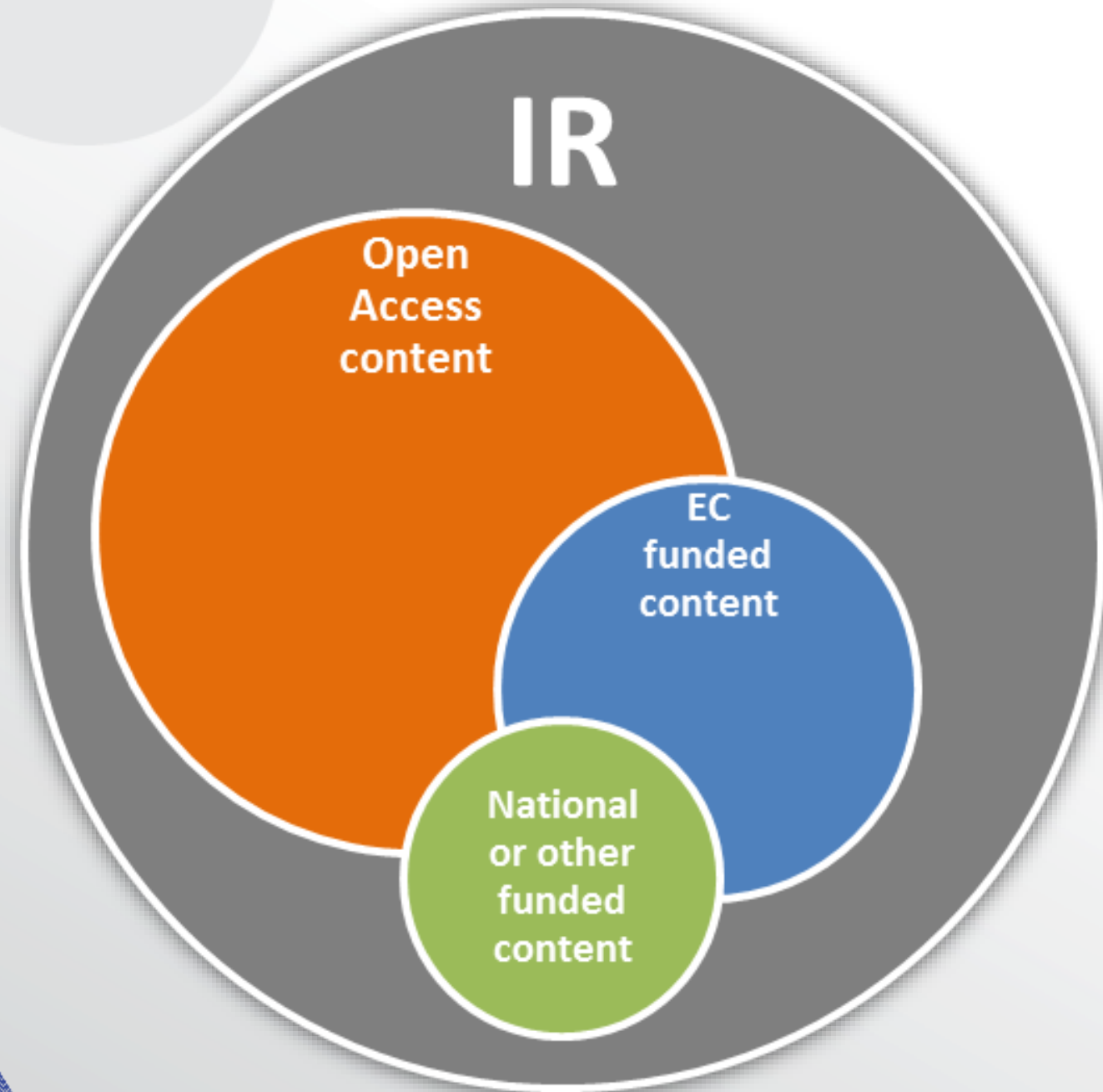


How OpenAIRE works

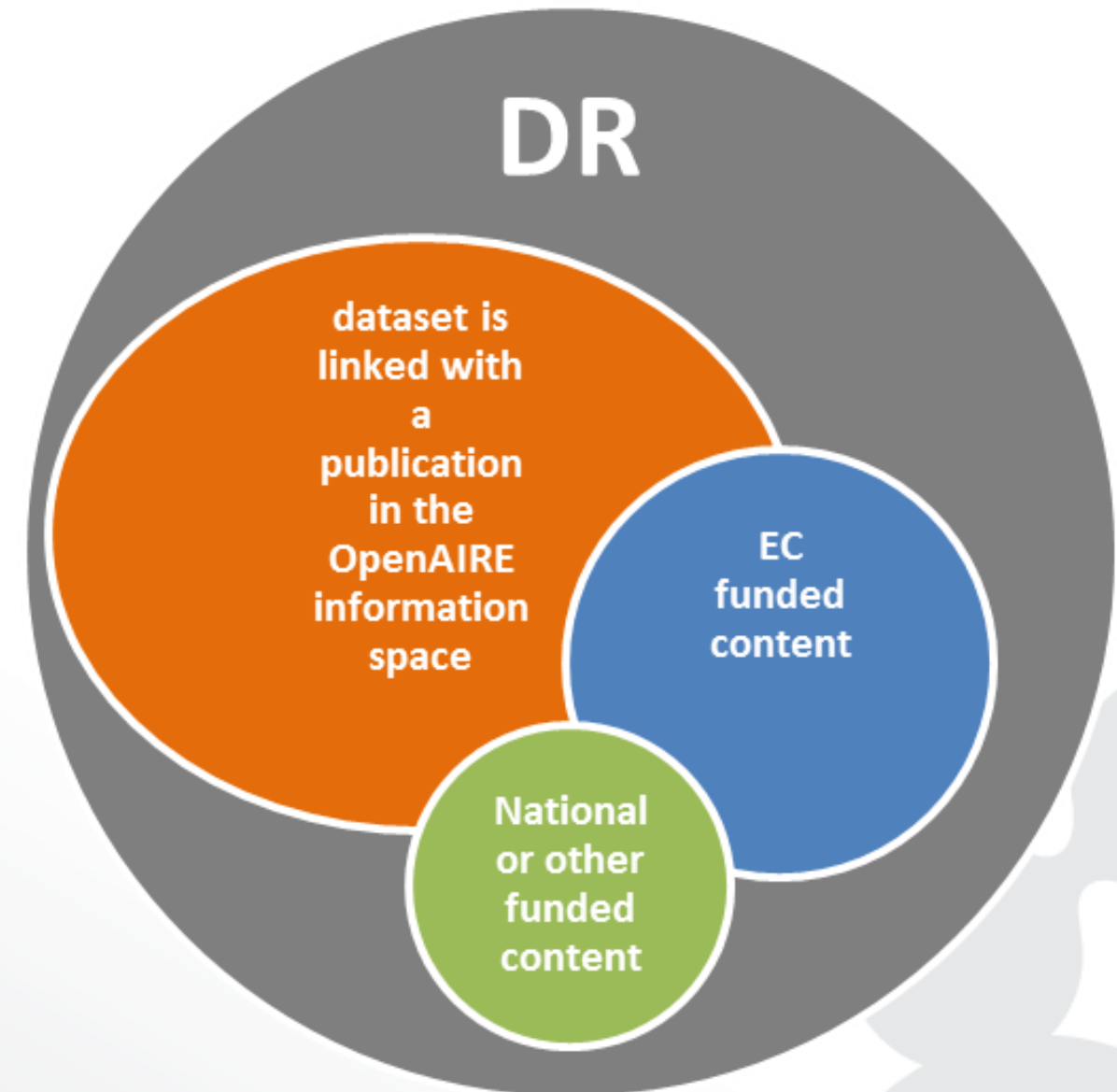


Content acquisition policy: repositories

Publications in OpenAIRE



Data in OpenAIRE



OpenAIRE will expand the current policy to other dataset classes (Open Access datasets) because OpenAIRE would like to have some for quality certification.

Interoperability is Key

- **Reliant on network of repositories**
 - Participation of institutions / repositories
- **Guidelines and standards**
 - OpenAIRE guidelines for Literature, Data, CRIS
 - Uniform vocabularies & global adoption (RDA, WDS, W3C, ...)
- **Identifier schemes**
 - Synergies with ongoing e-Infras

Why Guidelines?

Collect data not in Google

FUNDING INFORMATION

ACCESS RIGHTS AND LICENSE INFO

+

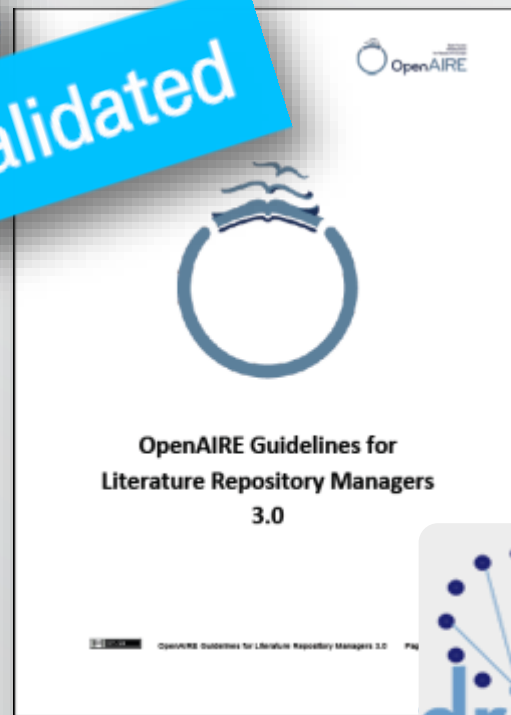
**REFERENCED DATASETS & RELATED PUBLICATIONS,
EMBARGO DATE INFORMATION**



Data providers: 3 Guidelines

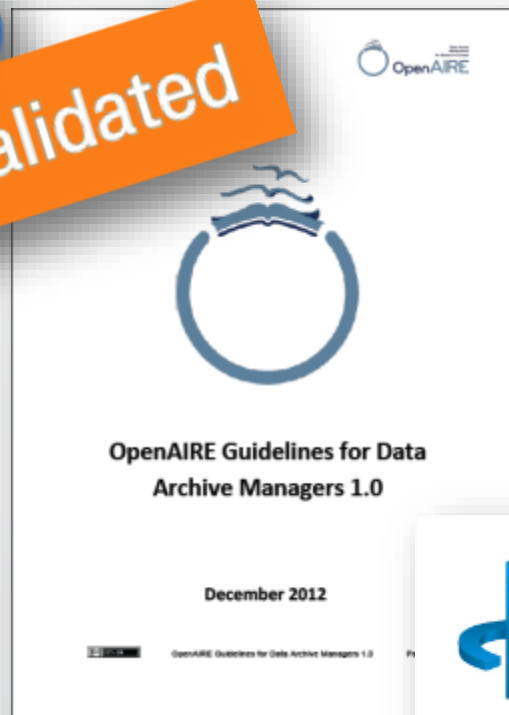
1 Publications Repositories

Dublin Core (DRIVER)



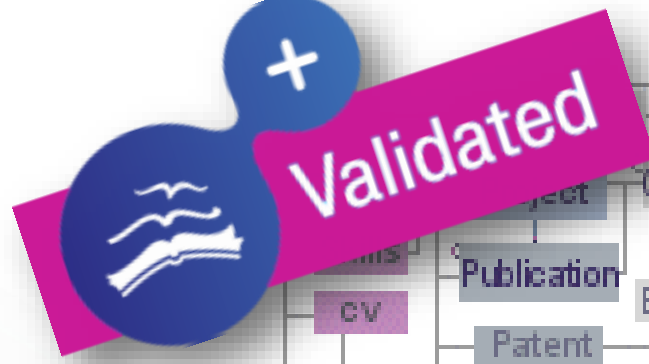
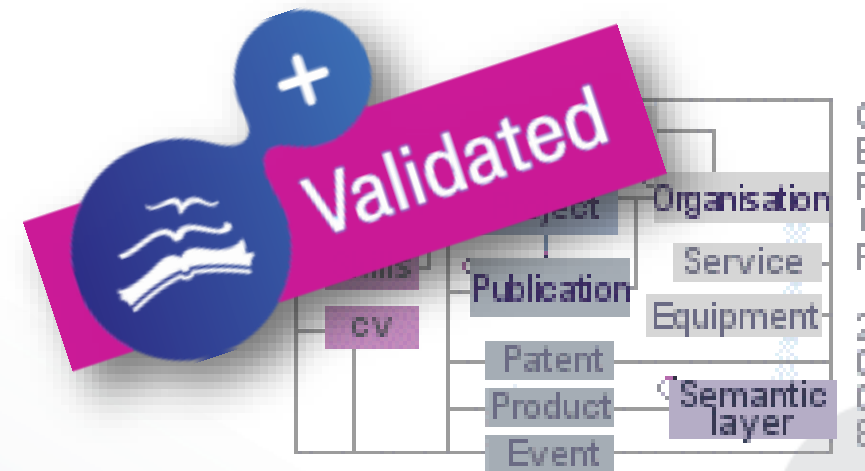
2 Data Repositories

Datacite



3 CRIS systems

CERIF-XML





“Repository managers
reduce workload of authors
to fulfill the EC
Open Access requirements”

The screenshot shows the OpenAIRE website homepage. At the top left is the OpenAIRE logo. To its right is a navigation menu with links for PARTICIPATE (DEPOSIT, JOIN), SEARCH (PUBLICATIONS, DATA, PROJECTS), STATISTICS (OA, PROJECTS, TOPICS), SUPPORT (FAQ, HELPDESK, GUIDES), and OPEN ACCESS IN EUROPE. Below the navigation is a large banner with the text "Science. Set free." and "8,399,456 publications and 611 datasets from 435 repositories and OA journals". Underneath the banner is a search bar with a dropdown menu for "Repositories" and a search icon. Below the search bar are four main service areas: Researchers (Deposit publications & data, Link research to funder/project, Download author's guide for OA), Data Providers (Register & validate content, Get guidelines for interoperability, Enrich repository content), Research Managers (Learn about EC & national policies, Create project reports, Get statistical information), and Funding Agencies (Learn how to embrace OA, Participate in OpenAIRE, Find aggregated statistics). At the bottom, there are sections for "Latest News" (Workshop on Mining Scientific Publications) and "Mark your calendar" (The 3rd LIBER Workshop on Digital Curation, EGI Community Forum 2014). On the right side, there is a blue sidebar for the Digital Repository of Ireland (dri) with the text "The Digital Repository of Ireland is a national, trusted digital repository for social science and humanities data, with the mission of linking, preserving, and providing". A large orange watermark "www.openaire.eu" is overlaid across the bottom of the screenshot.

Applications

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Adding Value

- **Funding information into the workflow**
 - Adding project & funding information to repository
- **Metadata in repositories**
 - Correct metadata at local deposit
- **Further Networking**
 - National funders to expose funding information
 - Working with the EC on smooth data delivery
 - Re-Using the OpenAIRE Services

OpenAIRE API documentation

20 March 2015

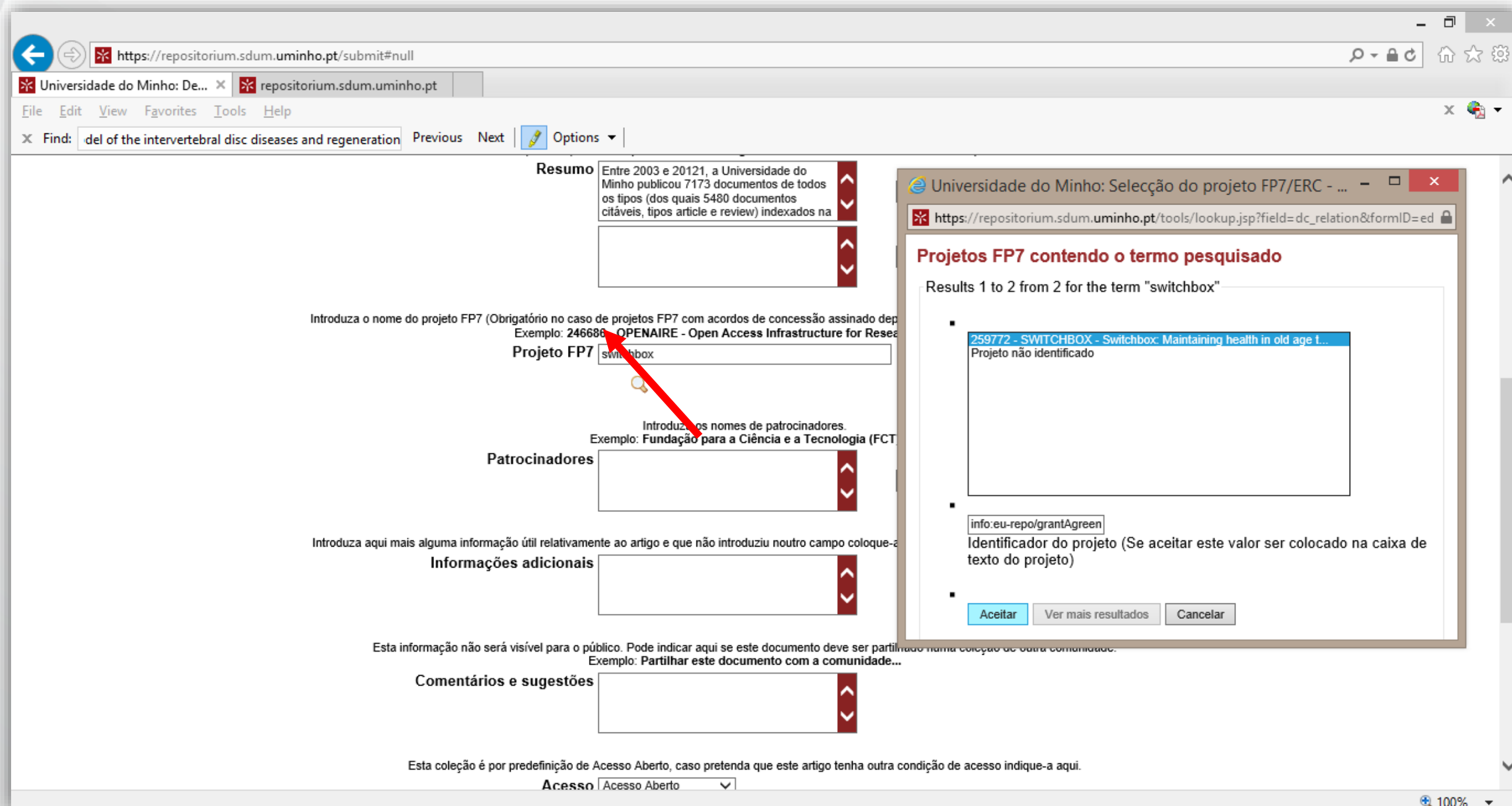
Table of Contents

1. Overview
2. Bulk access via OAI-PMH
3. Bulk access to projects
 - DSpace/ePrints
 - Projects in TSV file
4. Selective access with HTTP API
 - Common API parameters
 - Publications
 - Datasets
 - Projects

<http://api.openaire.eu>

Submission workflow

Searching by the name or the project id number



The screenshot displays the submission workflow interface for OpenAIRE. The main page is titled "Universidade do Minho: De..." and shows a search for "del of the intervertebral disc diseases and regeneration". The interface includes several form fields for submission:

- Resumo:** A text area containing the text: "Entre 2003 e 20121, a Universidade do Minho publicou 7173 documentos de todos os tipos (dos quais 5480 documentos citáveis, tipos article e review) indexados na".
- Projeto FP7:** A text input field containing "switchbox".
- Patrocinadores:** A text input field.
- Informações adicionais:** A text input field.
- Comentários e sugestões:** A text input field.

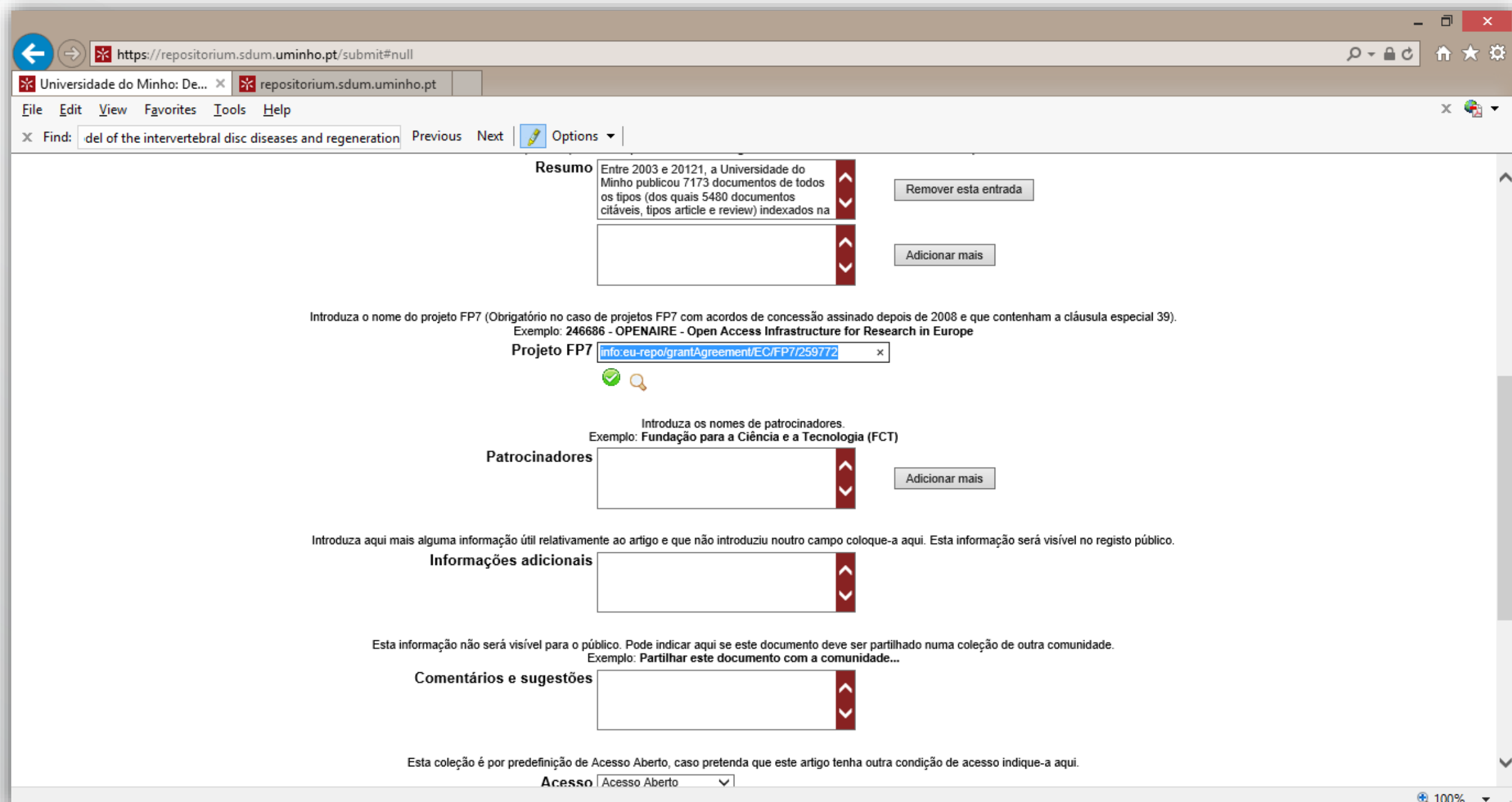
A red arrow points to the "Projeto FP7" field. A modal window titled "Universidade do Minho: Selecção do projeto FP7/ERC - ..." is open, showing search results for "switchbox". The results are:

- Results 1 to 2 from 2 for the term "switchbox"
- 259772 - SWITCHBOX - Switchbox: Maintaining health in old age t...
Projeto não identificado
- info:eu-repo/grantAgreen
Identificador do projeto (Se aceitar este valor ser colocado na caixa de texto do projeto)

Buttons for "Aceitar", "Ver mais resultados", and "Cancelar" are visible at the bottom of the modal window.

Submission workflow

Select the project and accept... the necessary namespace will be filled



The screenshot shows a web browser window with the URL <https://repositorium.sdum.uminho.pt/submit#null>. The browser tabs show "Universidade do Minho: De..." and "repositorium.sdum.uminho.pt". The browser's search bar contains the text "del of the intervertebral disc diseases and regeneration".

The main content area displays a submission form with the following sections:

- Resumo**: A text area containing the text "Entre 2003 e 20121, a Universidade do Minho publicou 7173 documentos de todos os tipos (dos quais 5480 documentos citáveis, tipos article e review) indexados na". To the right of the text area are two buttons: "Remover esta entrada" and "Adicionar mais".
- Projeto FP7**: A text area with the instruction "Introduza o nome do projeto FP7 (Obrigatório no caso de projetos FP7 com acordos de concessão assinado depois de 2008 e que contenham a cláusula especial 39). Exemplo: 246686 - OPENAIRE - Open Access Infrastructure for Research in Europe". The text area contains the URL "info:eu-repo/grantAgreement/EC/FP7/259772". To the right of the text area is a button "Adicionar mais".
- Patrocinadores**: A text area with the instruction "Introduza os nomes de patrocinadores. Exemplo: Fundação para a Ciência e a Tecnologia (FCT)". To the right of the text area is a button "Adicionar mais".
- Informações adicionais**: A text area with the instruction "Introduza aqui mais alguma informação útil relativamente ao artigo e que não introduziu noutro campo coloque-a aqui. Esta informação será visível no registo público."
- Comentários e sugestões**: A text area with the instruction "Esta informação não será visível para o público. Pode indicar aqui se este documento deve ser partilhado numa coleção de outra comunidade. Exemplo: Partilhar este documento com a comunidade..."
- Acesso**: A dropdown menu with the instruction "Esta coleção é por predefinição de Acesso Aberto, caso pretenda que este artigo tenha outra condição de acesso indique-a aqui." and the selected option "Acesso Aberto".

Services: A project view

Project: ELISA

TITLE: European Light Sources Activities - Synchrotrons and Free E

ORGANIZATIONS: INFN, DESY, HZDR, KIT, Helmholtz-Zentrum Be, DESY, Helmholtz-Zentrum Geestech, EMBL, Synchrotron SOLEIL, KIT, FOM, CNRS, Synchrotron S

MORE INFORMATION: [Detailed project information \(CORDIS\)](#)

ELISA

European light sources activities - synchrotrons and free electron lasers

From 2009-03-01 to 2011-08-31 | [ELISA website](#)

Europe has the largest and most advanced system of synchrotrons and free electron lasers (FELs): 17 operating facilities, several under construction, some 300 beamlines, 25,000-30,000 users per year from many disciplines (materials, chemistry, biology, medicine, physics, technology and others); this is also the worlds largest experimental network. The system is an open resource for all scientists ...

Project details

Project reference: 226716	Programme acronym: FP7-INFRASTRUCTURES
Status: Completed	Subprogramme area: INFRA-2008-1.1.1
Total cost: EUR 11 527 104	Contract type: Combination of CP and CSA
EU contribution: EUR 10 000 000	

Results

- Periodic Report Summary - ELISA (European light sources activities - synchrotrons and free electron lasers)

Documents

- Periodic Report - ELISA (European light sources activities - synchrotrons and free electron lasers)

Publications (436)

- Improved scintillation proportionality and energy resolution of LaBr(3):Ce at 80 K
Ivan V. Khodyuk - Mikhail S. Alekhin - Johan T. M. de Haas - Pieter Dorenbos
- Structure of the Dimeric Autoinhibited Conformation of DAPK2, a Pro-Apoptotic Protein Kinase
Ashok K. Patel - Ravi P. Yadav - Viivi Majava - Inari Kursula - Petri Kursula
- Examination of the Coordination Sphere of AIII in Trifluoromethyl-Heteroarylalkenolato Complex Ions by Gas-Phase IRMPD Spectroscopy and Computational Modelling
Lisa Brueckmann - Wieland Tyrra - Sanjay Mathur - Giel Berden - Jos Oomens - Anthony J. H. M. Meijer - Mathias Schaefer

Publications | Data | Statistics

[view all 581](#)

XAFS IN THE TRACKING OF REACTIONS IN AQUEOUS SOLUTION: A CASE OF REDOX REACTION BETWEEN [AuCl4](-) COMPLEX IONS AND ETHANOL

Paclawski, K.; Sikora, M. (2012)
Projects: ELISA (226716)

In this work the potential application of synchrotron radiation in the studies of reaction kinetics in aqueous phase were presented. After short introduction describing principles of technique and potential application of XAFS for the structural studies of reacting species, the experimental results of

Repositories & funding info

Home | Search | OpenAIRE Data Providers

Ghent University Academic Bibliography

NAME	Ghent University Academic Bibliography
TYPE	Publication Repository
ITEMS	200674 (2015/04/13)
SUBJECTS	-
LANGUAGES	English
CONTENTS	Journal articles
POLICIES	-
COMPATIBILITY	OpenAIRE 2.0+ (DRIVER OA, EC funding)
OAI-PMH	https://biblio.ugent.be/oai

Publications | **Data** | Statistics

OpenAIRE search results showing a list of documents. The first result is 'Thermal analysis in eco concrete research' by van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren, van der Schueren. The document is available in PDF format and is part of the 'Thermal analysis in eco concrete research' project.

Funder

- European Commission (519)
- Wellcome Trust (10)
- FCT (5)

Funding Stream

- Cooperation (319)
- Ideas (125)
- People (67)
- Capacities (23)
- Molecules, Genes and ... (7)

[View more](#) →

Scientific Area

- ERC (125)
- ICT (86)
- HEALTH (84)
- KBBE (67)

Repositories & funding info




OpenAIRE

Home | Search | OpenAIRE Data Providers

 [Universidade do Minho: RepositoriUM](#)

NAME	Universidade do Minho: RepositoriUM
TYPE	Publication Repository
ITEMS	29411 (2014/11/24)
SUBJECTS	-
LANGUAGES	por
CONTENTS	Journal articles
POLICIES	-
COMPATIBILITY	OpenAIRE 2.0+ (DRIVER OA, EC funding)
OAI-PMH	http://repositorium.sdum.uminho.pt/oai/driver



OpenAIRE

Funder

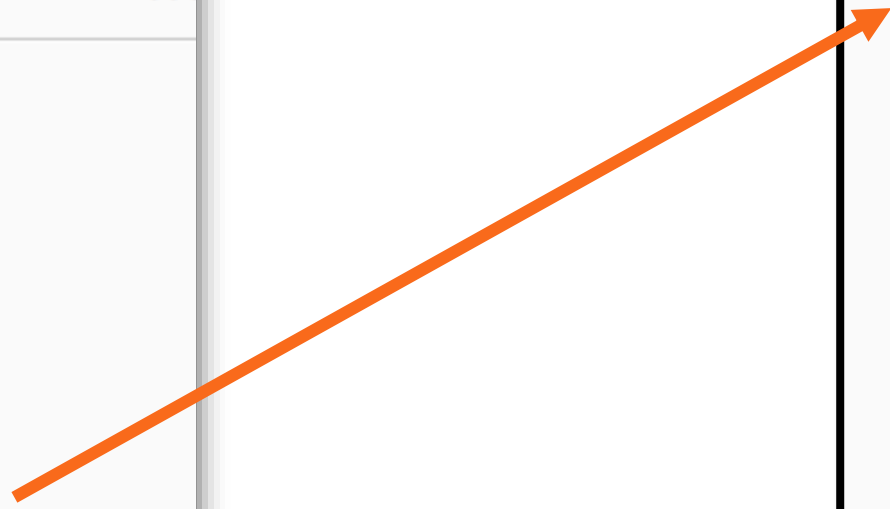
- [FCT \(1147\)](#)
- [European Commission \(427\)](#)
- [Wellcome Trust \(3\)](#)

Funding Stream

- [5876-PPCDTI \(757\)](#)
- [POCI \(295\)](#)
- [Cooperation \(256\)](#)
- [Capacities \(127\)](#)
- [3599-PPCDT \(84\)](#)
- [View more](#)


Scientific Area

- [ICT \(79\)](#)
- [NMP \(78\)](#)
- [HEALTH \(51\)](#)
- [INFRA \(49\)](#)
- [REGPOT \(44\)](#)
- [View more](#)



Repositories & funding info

Home | Search | OpenAIRE Data Providers

 [Digital.CSIC](#)

NAME	Digital.CSIC
TYPE	Publication Repository
ITEMS	107530 (2015/04/13)
SUBJECTS	-
LANGUAGES	Spanish
CONTENTS	Journal articles
POLICIES	-
COMPATIBILITY	OpenAIRE 3.0 (OA, funding)
OAI-PMH	http://digital.csic.es/dspace-oai/request

Publications | **Data** | Statistics



OpenAIRE

[Catalan; Valencian \(756\)](#)
[View more](#)

Funder

[European Commission \(2161\)](#)
[FCT \(62\)](#)
[Wellcome Trust \(38\)](#)

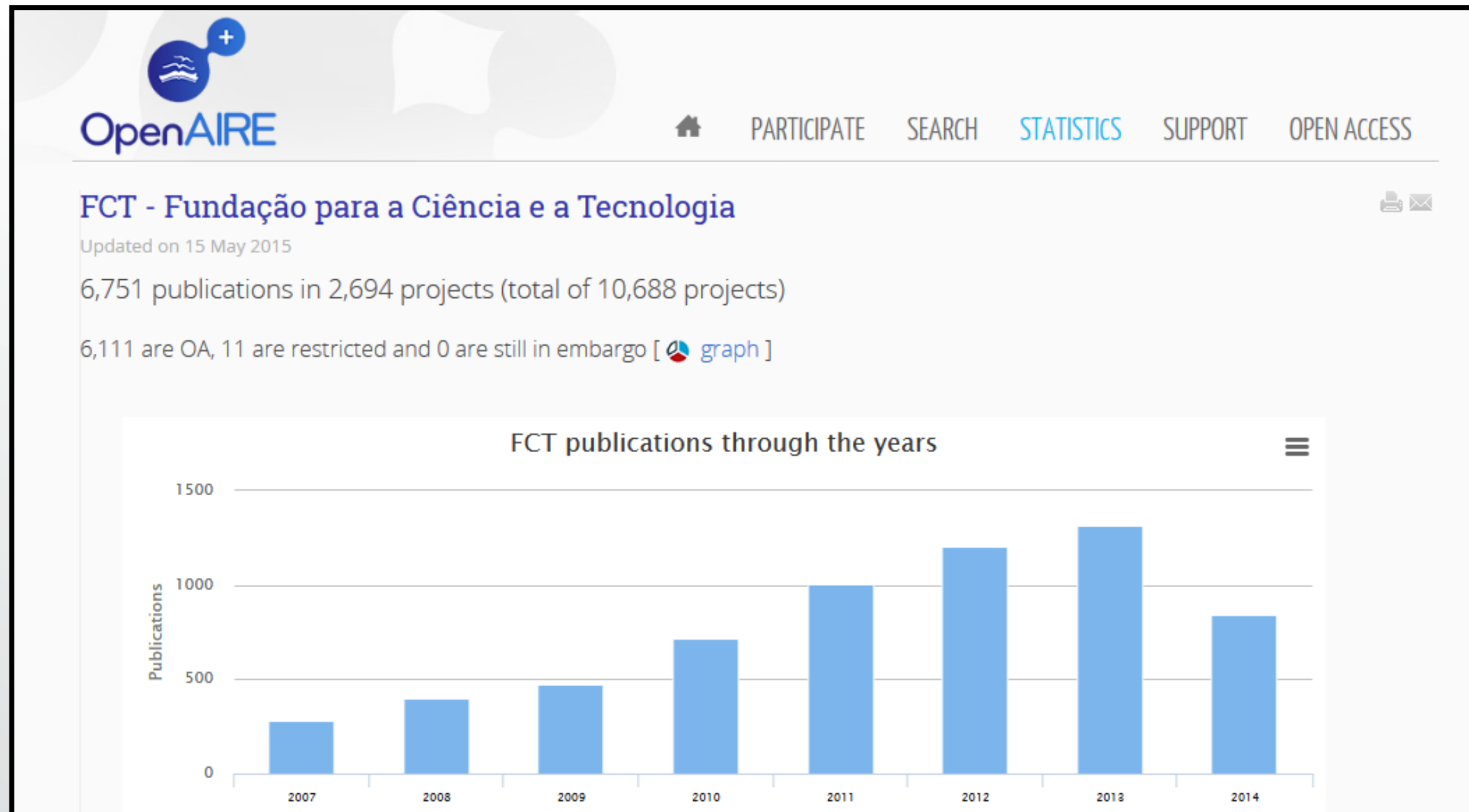
Funding Stream

[Cooperation \(1259\)](#)
[People \(428\)](#)
[Capacities \(347\)](#)
[Ideas \(327\)](#)
[3599-PPCDT \(33\)](#)
[View more](#)

Scientific Area

[PEOPLE \(428\)](#)
[ERC \(327\)](#)
[ICT \(326\)](#)
[ENV \(295\)](#)
[INFRA \(287\)](#)

National Funder – FCT (Pt)



Results

5

Outcomes

- **EC and ERC can monitor scientific output in FP7**
- **For FP7: 100,000 publications. 52% are OA**
- **10,000 of 25,000 projects linked**
- **580 Data sources: IR's, publishers, aggregators**

[Home](#) | [Statistics](#) | [FP7 statistics](#)

FP7 statistics

101,468 publications in 10,804 projects (from a total of 24,681)

57,344 are OA, 2,907 are restricted and 220 are still in embargo [ [graph](#)]

For SC39: 15,237 publications in 1,069 projects (total of 1,907 projects) - 9,140 are OA [ [graph](#)]

[FP7 Timeline](#) 

About Publications

[Top 30 projects in publications](#) 

[Top 30 projects in data](#) 

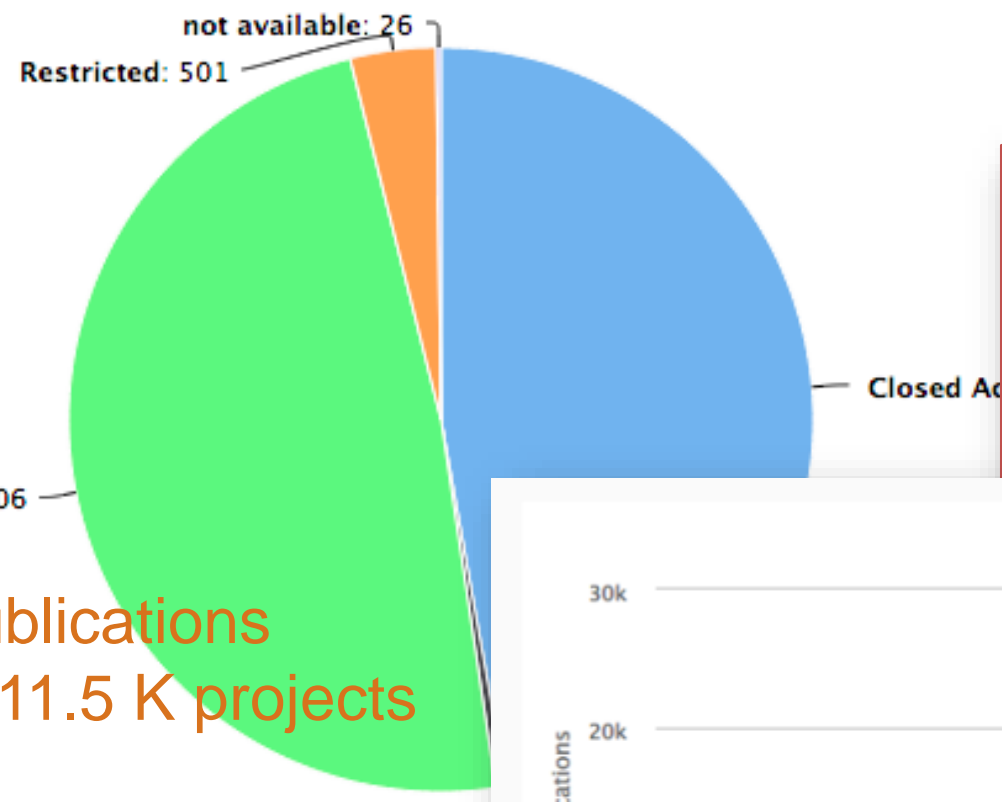
[Publications by programme](#) 

[Publications by scientific area](#) 

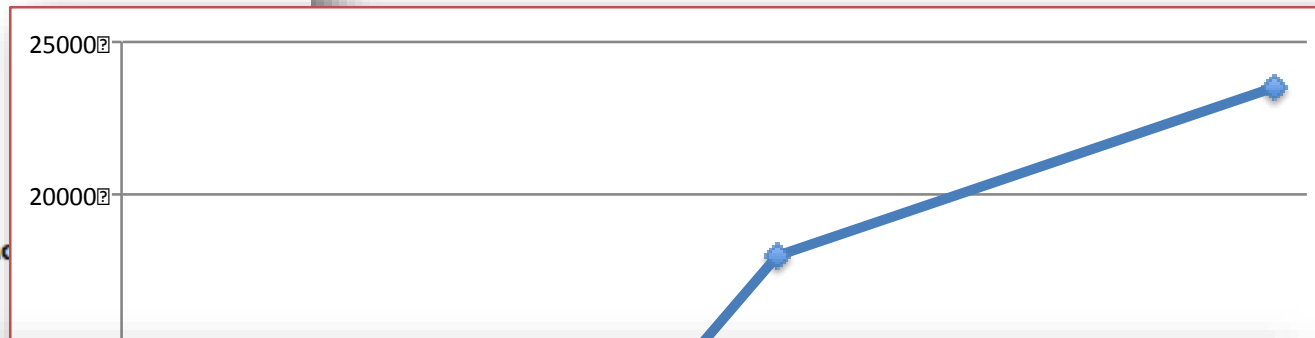
About Projects

OA results for FP7

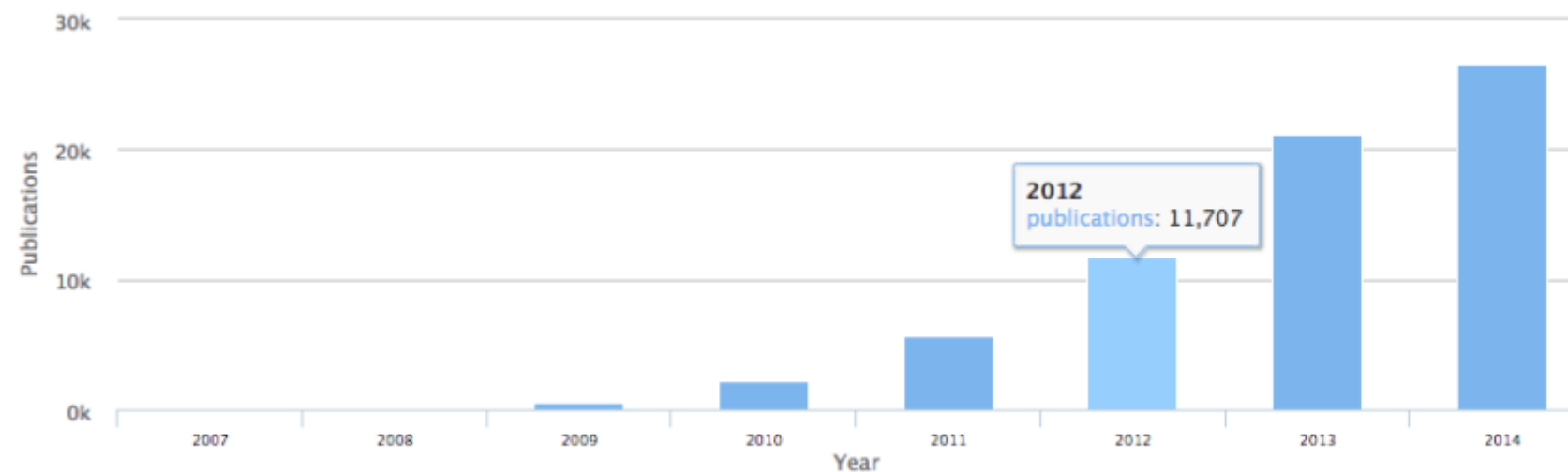
Publications of FP7 projects with SC39 breakdown per access mode



FP7
 116.6K publications
 Linked to 11.5 K projects
 50% OA

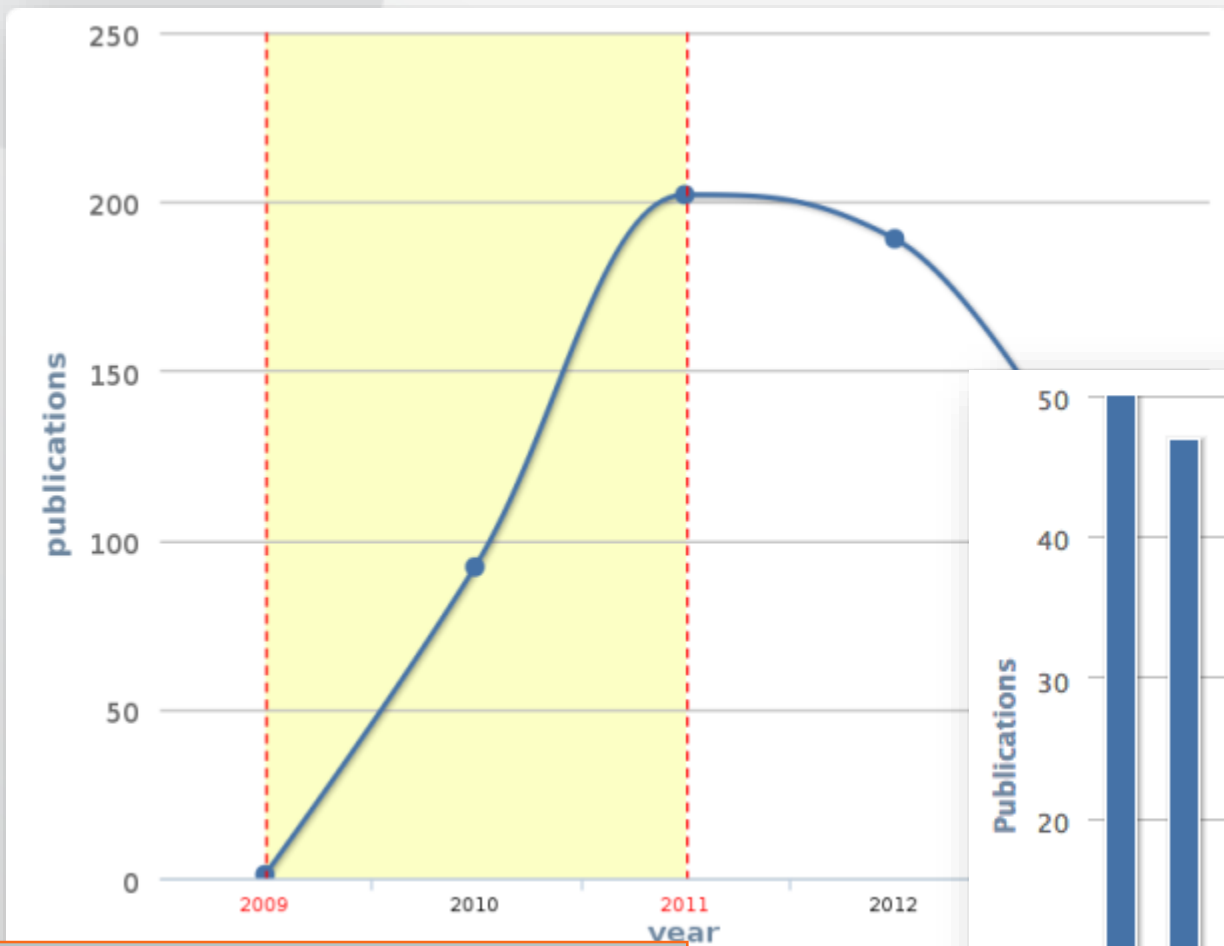


ERC publications through the years



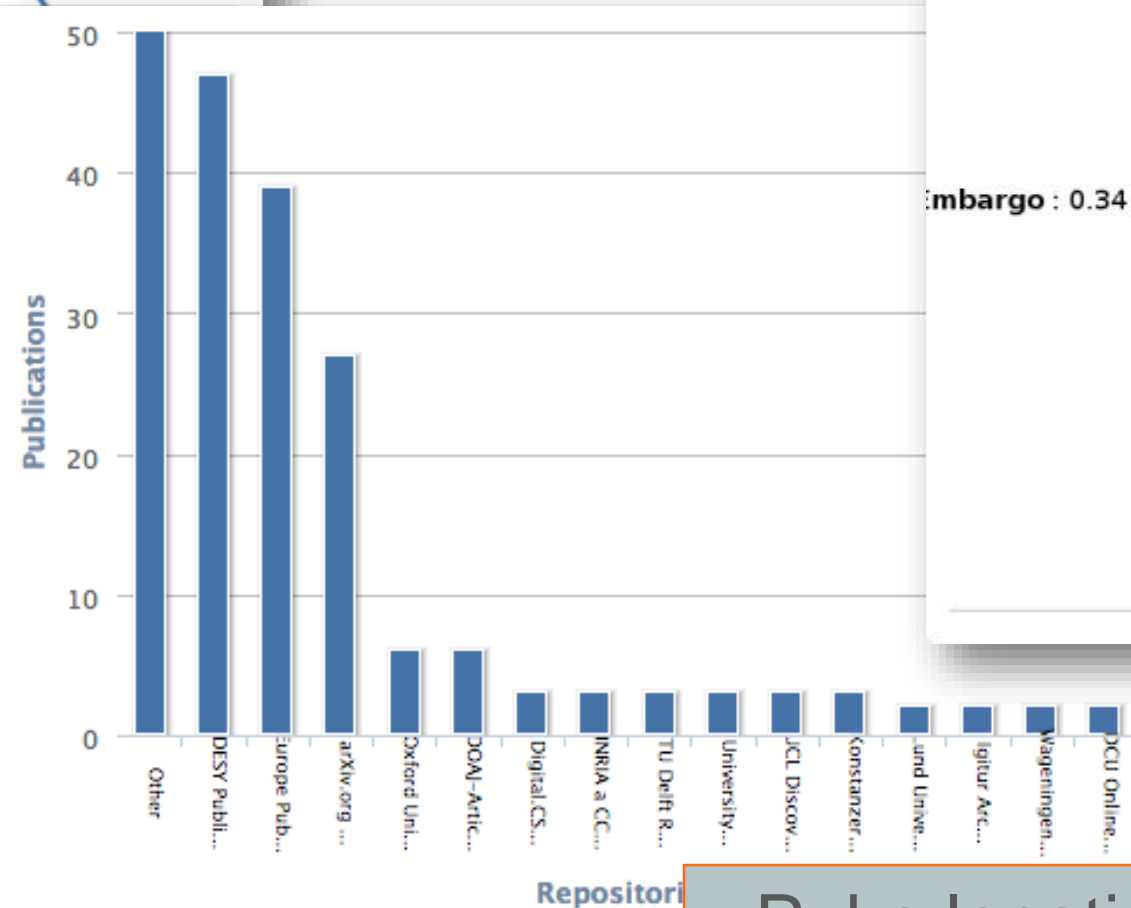
Increase of FP7 publications in institutional repos

Potential: Project statistics

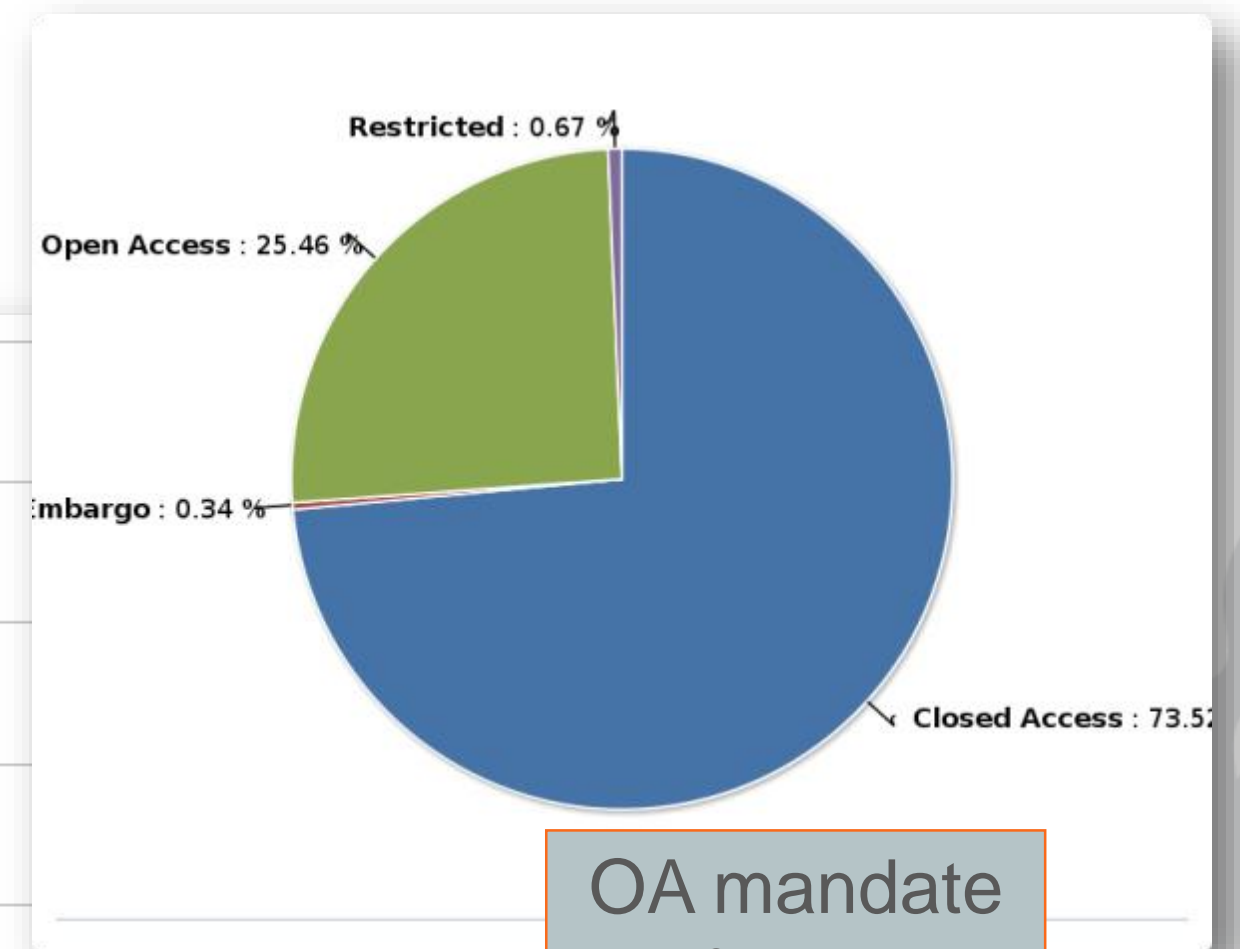


Project productivity over time

Post project-monitoring



Pubs location



OA mandate conformance

Wrap-up

Conclusions

- **Purpose**
 - Open up publications for users
 - Save time of researchers, project managers & admin
- **Vision**
 - a networked, automated API machine that produces a high quality data fabric
- **Lessons**
 - Distributed Data is a strength and a challenge
 - Reliance on consistent metadata from repositories
 - Forster Interoperability / Develop common guidelines
 - Uniform vocabularies and identifiers are key

**SHARE
RESEARCH.
SHAPE A
BETTER
FUTURE.**

Open Access to
research results
benefits everyone.

Join COAR



- Visit the COAR Website:

www.coar-repositories.org

- Contact COAR Executive Director, Kathleen Shearer, for more information:

kathleen.shearer@coar-repositories.org

- Contact the COAR office to register your interest in becoming a member of COAR

office@coar-repositories.org

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- Find us on Facebook: <https://www.facebook.com/COAReV>



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facebook.com/groups/openaire



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