



Open Access to publications requirement in Horizon 2020

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Open Access is the

DEFAULT

for research results in H2020



WHY OPEN ACCESS TO SCIENTIFIC PEER-REVIEWED PUBLICATIONS?



GOOD FOR SCIENCE

allows scientists to build on previous research results and avoids unnecessary duplication of effort
improved quality and greater efficiency



GOOD FOR THE ECONOMY

speeds up innovation
faster progress to market



GOOD FOR SOCIETY

makes research available to individual citizens and to non-profit organisations
greater transparency



HORIZON 2020 OPEN ACCESS TO SCIENTIFIC PUBLICATIONS



Each Horizon 2020 beneficiary must ensure open access to peer-reviewed scientific publications relating to results.
See Article 212 of the Horizon 2020 Grant Agreement.

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HOW TO ACHIEVE OPEN ACCESS IN HORIZON 2020



deposit the final peer-reviewed manuscript in a repository of your choice
Researchers must ensure open access to the publication within at most 6 months (12 months for publications in the social sciences and humanities).



publish in open access journals or hybrid journals
Article processing charges are eligible for reimbursement during the duration of your project. Hybrid journals sell subscriptions (ie closed access) AND offer the option of making some individual articles open access.



BOTH OPTIONS ARE POSSIBLE
If the gold route is chosen, the article must also be deposited in a repository to comply with Article 212.

MISCONCEPTIONS ABOUT OPEN ACCESS



OPEN ACCESS IS NOT A REQUIREMENT TO PUBLISH
In Horizon 2020 researchers are free to publish or not.



OPEN ACCESS DOES NOT AFFECT THE DECISION TO EXPLOIT RESEARCH RESULTS COMMERCIALY,
eg through patenting.



The decision whether to publish through open access comes after the main general decision on whether to publish directly or to first seek protection.



It is important to stress that open access publications undergo the same kind of peer-review process as subscription publications.

Get support

Participant Portal section on Open Access
Open Science
OpenMRC

#openaccess
@Horizon2020
#OpenAccessEC



Multi-beneficiary General Model Grant Agreement (Version 5.0, 18 October 2017)

29.2 Open access to scientific publications

29.3 Open access to research data



Grant Agreement: § 29.2 Open access to scientific publications

Each beneficiary must ensure open access (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

(a) 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;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

(b) ensure open access to the deposited publication — via the repository — at the latest:

(i) on publication, if an electronic version is available for free via the publisher, or

(ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.

(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms ["European Union (EU)" and "Horizon 2020"] ["Euratom" and Euratom research and training programme 2014-2018];
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

H2020 Programme AGA – Annotated Model Grant Agreement

(Version 4.1, 26 October 2017)

29.2 Open access to scientific publications

29.3 Open access to research data

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf



Grant Agreement: § 29.2 Open access to scientific publications

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- the name of the action, acronym and grant number;

- the publication date, and length of embargo period if applicable, and

- **a persistent identifier (e.g. a stable digital object identifier which identifies the publication and links to an authoritative version).**



JSON Raw Data Headers

Save Copy

Filter JSON

```
country:
  resource: "http://sws.geonames.org/6695072/"
inScheme:
  resource: "http://data.crossref.org/fundingdata/vocabulary"
  created: "2016-10-14T15:27:39.000000"
replaces:
  resource: "http://dx.doi.org/10.13039/501100007601"
prefLabel:
  Label:
    literalForm:
      lang: "en"
      content: "Horizon 2020 Framework Programme"
    about: "http://data.crossref.org/fundingdata/vocabulary/Label-8487499"
narrower:
  0:
    resource: "http://dx.doi.org/10.13039/100010684"
  1:
    resource: "http://dx.doi.org/10.13039/100010688"
  2:
    resource: "http://dx.doi.org/10.13039/100010687"
  3:
    resource: "http://dx.doi.org/10.13039/100010662"
  4:
    resource: "http://dx.doi.org/10.13039/100010686"
  5:
    resource: "http://dx.doi.org/10.13039/100010676"
  6:
    resource: "http://dx.doi.org/10.13039/100010685"
  7:
    resource: "http://dx.doi.org/10.13039/100010667"
modified: "2017-08-01T20:26:08.000000"
altLabel:
  0:
    Label:
      literalForm:
        lang: "en"
        content: "EU Framework Programme for Research and Innovation H2020"
      about: "http://data.crossref.org/fundingdata/vocabulary/Label-10945357"
  1:
    Label:
      literalForm:
        lang: "en"
        content: "Horizon 2020"
      about: "http://data.crossref.org/fundingdata/vocabulary/Label-10945358"
  2:
    Label:
      literalForm:
        lang: "en"
        content: "H2020"
      usageFlag:
      resource: "http://data.crossref.org/fundingdata/vocabulary/abbrevName"
```

OA in H2020: summary of requirements

1



Open Access requirements and who is covered by them?

All beneficiaries of H2020 funding must provide open access (free of charge, online access for any user) to all peer-reviewed publications by depositing them into a repository



http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

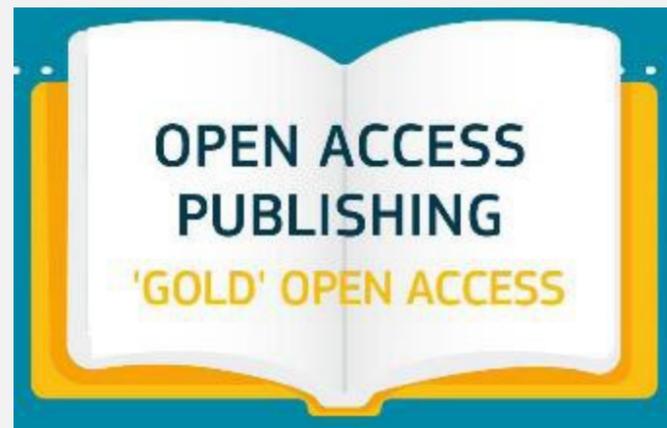
www.openaire.eu/h2020openaccess

In other words...

Authors are free to choose between the two main and non-exclusive routes toward Open Access



Self-archiving (,green' open access): the published article or the final peer reviewed manuscript is uploaded in an online repository – access is often delayed (,embargo period')



Open access publishing (,gold' open access): the article is immediately in open access mode, through the publisher. The associated costs are covered by the author/institution/funder

The **article must always be deposited in a repository,** even if the gold route has been chosen.



Where to deposit?



Institutional repository

OR

Disciplinary repository (arXiv, Europe PubMed Central, etc.)

OR

Zenodo (www.zenodo.org) if none of the above is available. EC-cofunded, multidisciplinary repository, for publications and data.

Remarks:

Finding a repository via registries: ROAR <http://roar.eprints.org>, OpenDOAR <http://www.opendoar.org> or via **OpenAIRE** www.openaire.eu

A list of publications on the project website is not sufficient.

How to bring all publications together? OpenAIRE-compatibility to enable the harvesting of metadata (more details later)

where

what

when

What to deposit?



A machine-readable copy of the **published version** (usually a PDF document)

OR

The **final peer-reviewed manuscript**, accepted for publication, including all modifications from the peer-review process

“Other types of scientific publications, such as non-peer-reviewed articles as well as monographs, books, conference proceedings and ‘grey literature’ (i.e. informally published material not having gone through a standard publishing process, e.g. reports), are not covered by the open access obligation. Best practice: However, to ensure fuller and wider access, beneficiaries are encouraged to provide open access also to these other types of scientific publications (where possible).” (http://ec.europa.eu/research/participants/data/ref/h2020/grants_funding/amga/h2020-amga_en.pdf)

where

what

when

When to deposit?



Each beneficiary must deposit as soon as possible (in some cases, the final version can be deposited before publication, e.g. once accepted by the journal) **and at the latest on publication.**

where

what

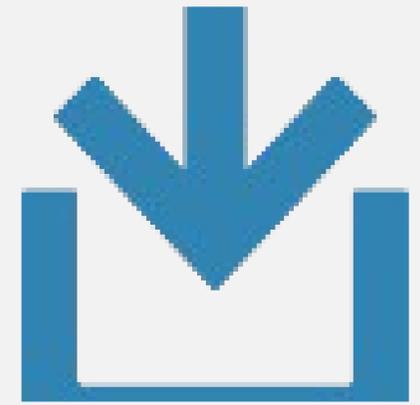
when

When should open access be provided?

Open access must be ensured immediately or after an embargo period:

- GREEN – 6-12 months depending on the research area and the choice of journal
- GOLD – immediately

Some journals demand longer embargo periods (check SHERPA/RoMEO database <http://sherpa.ac.uk/romeo/index.php>).



where

what

when

*... opening access to research*[Home](#) • [Search](#) • [Journals](#) • [Publishers](#) • [FAQ](#) • [Suggest](#) • [About](#)

Publisher copyright policies & self-archiving

[English](#) | [Español](#) | [Magyar](#) | [Nederlands](#) | [Português](#)

Search

 Journal titles or ISSNs **Publisher names** **Exact title** **starts with** **contains** **ISSN**[Advanced Search](#)

Use this site to find a summary of permissions that are normally given as part of each publisher's copyright transfer agreement.

Special RoMEO Pages

- [RoMEO Statistics](#)
- [Application Programmers' Interface \(API\)](#)
- [Publisher Categories in RoMEO](#)
- [Definitions and Terms](#)

Additions and Updates

[RSS1 Feed](#)

- [Royal College of Physicians of Edinburgh](#) - Royal College of Physicians of Edinburgh - 16-Nov-2017
- [Bio-Protocol](#) - Bio-Protocol - 09-Nov-2017
- [Open Journals](#) - Open Journals - 31-Oct-2017

Other SHERPA Services

- [SHERPA/FACT](#) - Funders & Authors Compliance Tool
- [SHERPA/JULIET](#) - Research funders' open access policies



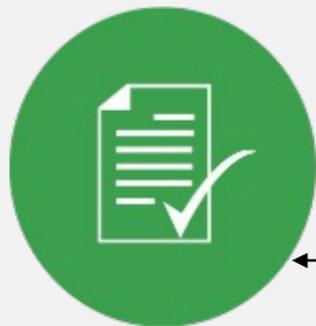
Practical implementation

2





**RESEARCHER
DECIDES WHERE TO
PUBLISH**



**Check publishers
policies on
www.sherpa.ac.uk/romeo**



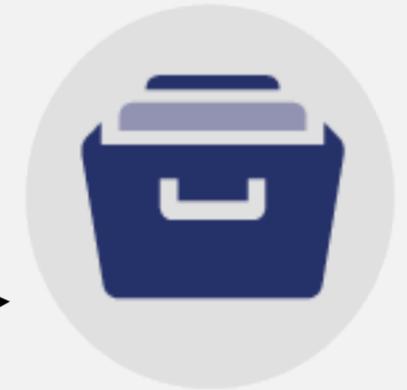
Open Access Journals
doaj.org



Subscription-based journal



**Check for Article
Processing Charges**



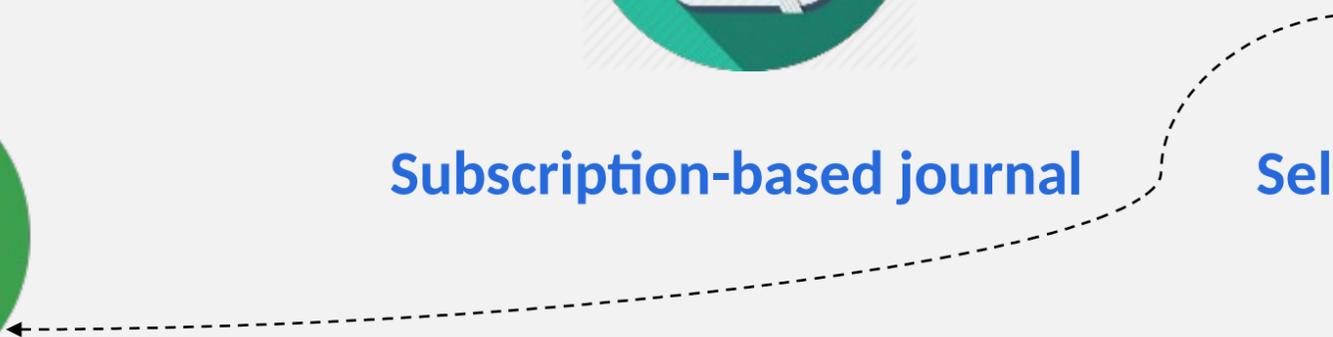
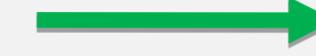
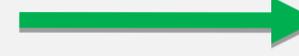
Self-archive in a repository
Find at: openaire.eu



**IMMEDIATE
OPEN ACCESS**



**IMMEDIATE OR DELAYED
OPEN ACCESS**



Are Article Processing Charges (APCs) supported?

Yes

For open access publishing, researchers can publish in open access journals, or in journals that sell subscriptions and also offer the possibility of making individual articles openly accessible (hybrid journals).

Where the case, the Article Processing Charges (APCs) incurred by beneficiaries are eligible for reimbursement during the duration of the action (see Article 6.2.D.3).



D.3 Costs of other goods and services (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible, if they are:

- (a) purchased specifically for the action and in accordance with Article 10.1.1 or
- (b) contributed in kind against payment and in accordance with Article 11.1.

Such goods and services include, for instance, consumables and supplies, dissemination (including open access), protection of results, certificates on the financial statements (if they are required by the Agreement), certificates on the methodology, translations and publications.

[OPTION to be used for trans-national access to research infrastructure: Costs of other goods and services for providing trans-national access to research infrastructure are eligible only if also the conditions set out in Article 16.1.1 are met.]

[OPTION to be used for virtual access to research infrastructure: Costs of other goods and services for providing virtual access to research infrastructure are eligible only if also the conditions set out in Article 16.2 are met.]



1. Costs of other goods and services (D.3): Types of costs — Form — Eligibility conditions — Calculation

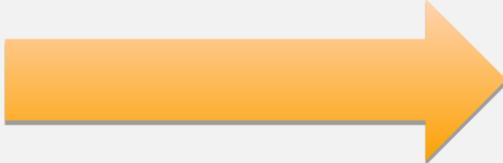
The budget category applies to all RIA, IA and CSA grants under the General MGA.

The additional options for access to research infrastructure (together with the corresponding [Article 16](#) and other provisions) will be inserted into the GA if the action also involves access to research infrastructure.

1.1 What? This budget category **covers** the costs for goods and services that were purchased for the action (or contributed in-kind against payment), including:

- costs for consumables and supplies (*e.g. raw materials etc.*)
- dissemination costs (including regarding open access to peer-reviewed scientific publications, *e.g. article processing or equivalent charges*, costs related to open access to research data and related costs, *such as data maintenance or storage and conference fees for presenting project-related research*)

Publication costs



Dissemination costs, e.g. for publishing in open access journals/books, are eligible costs if incurred during the project period.

What budget to consider in proposals?

APC = Article Processing Charges

Budget for Publications = Average APC x number of publications



Method 1: Average APC based on list of journals used by the consortium (look up prices at publisher website and/or consult librarian)

Method 2: Average APC based on general market figures (see next slide)

Average APC?

Björk/Solomon estimated (2014) the average price of Article Processing Charges (APC) for established **open access journals** at ca. **1,020 EUR** and for **hybrid journals** (subscription journal with OA option for individual articles) at ca. **1,980 EUR**



Average APC?



<https://github.com/OpenAPC/openapc-de>

<https://treemaps.intact-project.org>

At the moment OpenAPC provides cost data on 44,407 open access journal articles contributed by 117 institutions for **fully open access journals** the average payment was **1,479 €**

for **hybrid journals** (subscription journal with OA option for individual articles) the average fee is **2,493 €**



Both types of OA publication costs can be reimbursed in H2020 projects.

Currently, there is no price-cap for APCs.

What are projects expected to do?

Projects have to start planning early on

DURING PROPOSAL WRITING PHASE

- **Outline of dissemination and exploitation strategy, including OA >> impact section of the proposal (how will results be shared, data be managed and shared?)**
- **Include resources for publication costs (what journals, how many publications, what does it cost on average?)**
- **Combine GREEN/GOLD strategies to achieve maximum of OA**

DURING THE PROJECT

- **Additional provisions in the Consortium Agreement - where to deposit, who is responsible.**
- **Implementation of the dissemination strategy, report at reviews and update**
- **What issues occur and how can they be solved? (publisher embargos, repositories for specific material, etc.)**

AFTER THE PROJECT END

- **Are there publications foreseen after the ending of the project (ie which will not be covered by the budget) - for post-FP7 project publications there is a pilot.**
- **Who takes care of deposit in repositories after the project end?**

FP7 Post-Grant Open Access Pilot: results of the first two years

Gwen Franck | 2017-10-09 | FP7 post-grant OA publishing funds, policies & funders, scholarly communication | 1 Reply

<https://blogs.openaire.eu/?p=2312>



The FP7 Post-Grant Open Access Pilot has recently made an analysis of the results of the first 'period' of the Pilot – from May 2015 until April 30th 2017 – in other words, this is the overview of all activity for the Pilot within the 2-year timeframe it was originally intended for.

The dataset it is based on is extracted from the statistics module on the Pilot website – edited, corrected and augmented manually with data obtained externally such as the data from the pre-payment agreements with selected publishers – in order to give a complete overview. [This dataset is available on Zenodo \(doi:10.5281/zenodo.998041\)](#). 4 months into the extension, some of the numbers will already be outdated, but we believe that the trends and conclusions discussed here are still valid, and that they can be used for prediction and projection until the end of the Pilot extension (in February 2018).

On April 30, 2017 a total amount of ca. € 1 497 000 has been spent on a total of 857 publications. The average author fee paid is € 1747 – with an average of € 1 477 for articles and € 5 364 for monographs. Both averages are well below the imposed funding caps of € 2 000 for articles and € 6 000 for monographs.



Some issues to consider



1. Publishing *all* articles in APC based gold OA is not probably the right solution, as this can lead to a substantial amount of the overall project budget. Therefore, a **mixed strategy of GREEN/GOLD open access is highly recommended.**
2. The growing open access market comes with some challenges
 - Lots of new journals/publishers, some of questionable quality (‘predatory journals’)

Some caution is needed when publishing, this holds for all journals.

Consult ‘white lists’ such as DOAJ: <https://doaj.org>

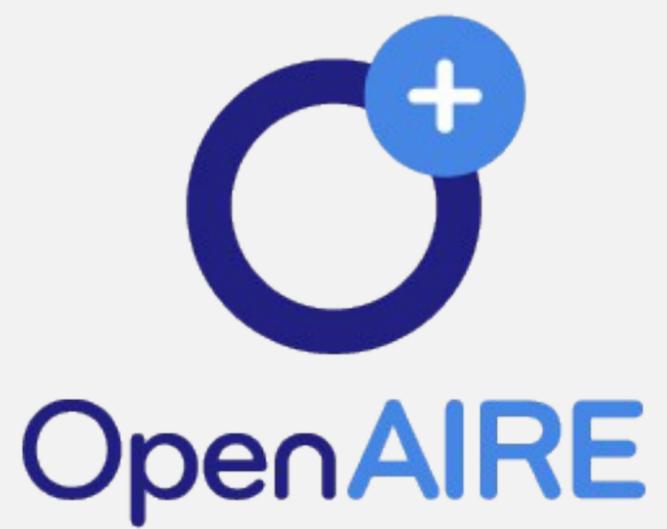


What are the consequences for non-compliance with OA requirements?

If a beneficiary breaches any of its obligations, the grant may be reduced (Article 43) and it may also lead to any of the other measures described in

Chapter 6 of the General Model Grant Agreement





www.openaire.eu

<https://www.openaire.eu>

Search in 22,683,218 publications 606,489 datasets from 2,729 repositories and OA journals



OpenAIRE webinar series for repository managers 2017/2018

To empower our repository network, OpenAIRE is organizing a series of 10 webinars over the next 8 months. The main idea is to approach different OpenAIRE services and tools for content providers and

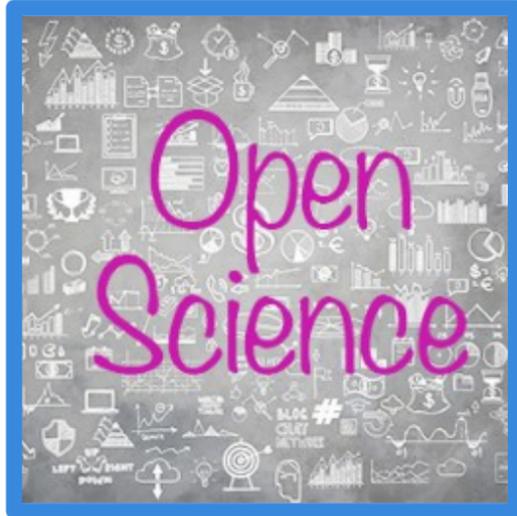
RESEARCHERS

Why Open Access. How to comply. What services to use.

DATA PROVIDERS

How to make your content more visible. What to do to increase quality. How to join.

Services for all



**RESEARCHERS &
RESEARCH
COMMUNITIES**



DATA PROVIDERS



**FUNDERS &
RESEARCH
ADMINISTRATORS**



**3rd party SERVICE
PROVIDERS**

Services at all levels of e-Infrastructure. Services that cover all research life-cycle.

Dashboards for data providers, funders and researcher communities.

RESEARCH ADMINS

How to monitor research results. What services to use for your needs.

RESEARCHERS

Why Open Access. How to comply. What services to use.



OpenAIRE

FUNDERS

Why align policies and practices. How to monitor and analyze results.

DATA PROVIDERS

How to make your content more visible. What to do to increase quality. How to join.

www.openaire.eu

Share, deposit and publish in OA

Why Open Science. How to comply. What services to use.

Discover, Access and Reuse

For all OpenAIRE stakeholders...

Gather outputs. View progress and report. Monitor.

Services for researchers, project coordinators and research managers

Link your research results

Services for researchers, project coordinators and research managers

Interoperability guidelines & validator.

Common standards/best practices for data providers (Guidelines for literature, data repositories, aggregators, OA journals, CRIS systems).
Validator: web service or standalone

Data providers, repositon managers, data archives and CRIS managars

Services for Funders

Align Open Science policies. Sync infrastructures. Monitor and report.

OpenAIRE helps you measure research funding impact and supports monitoring of Open Access

one stop shop for OpenAIRE data providers

for friends... "the repository managers dashboard" 😊

Dashboard for contente providers

Share, deposit and publish in OA

*Why Open Science. How to comply.
What services to use.*

Find where to deposit



DEPOSIT PUBLICATIONS

Are you a grant recipient from the following: H2020; FP7 with SC39; or ERC? Then you are required to publish in [open access](#). One way to do this is to deposit your publications into an [open access repository](#).

Click the following to find more information: [FP7 guidelines](#), [H2020 guidelines](#), [ERC guidelines](#) OR [ask a question](#) to OpenAIRE's national representative.

LOCATE DATA PROVIDER VIA YOUR INSTITUTION

gent SELECT

- UNIVERSITEIT GENT (UGent)
- Georgia Regents University
- Universidad de Belgrano.Argentina
- Pontificia Universidad Católica Argentina
- AgentLink.org
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Country [select [all](#)/[none](#)]

all countries selected

- AFGHANISTAN
- Albania
- Algeria

Participate

[Deposit Publications & Data](#)

[Link Research Results](#)

[Validate / Register Repository](#)

[Content policy](#)

DEPOSIT PUBLICATIONS

DATA PROVIDERS FOR INSTITUTION: **UNIVERSITEIT GENT**

Please use the information/contacts shown below to deposit your publications.

Ghent University Academic Bibliography

Organizations: [UNIVERSITEIT GENT](#)

Type: Institutional Repository

Languages: English, French, Dutch

Contents: Journal articles, Conference and workshop papers, Theses and dissertations, Unpublished reports and working sections, Multimedia and audio, visual materials

Website URL: <https://biblio.ugent.be/>

OAI-PMH URL: <https://biblio.ugent.be/oai>





Acknowledge

PROJECT FUNDING IN THE PUBLICATION
OR DATASET METADATA RECORD

Acknowledge project funding: e.g. ZENODO

New upload

Instructions: (i) Upload minimum one file or fill in required fields (marked with a red asterisk). (ii) Press "Save" to save your upload for editing later. (iii) When ready, press "Publish" to finalize and make your upload public.

Files

Drag and drop files here

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(minimum 1 file required, max 50 GB per dataset - [contact us](#) for larger datasets)

Upload type

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Basic Information

Digital Object Identifier
Optional. If your publisher already assign a DOI to your work, please use it to easily and unambiguously cite your upload.

Preassign DOI

Publication Date
Required. Format: YYYY-MM-DD. In case your

Title
Required.

Authors

Funding

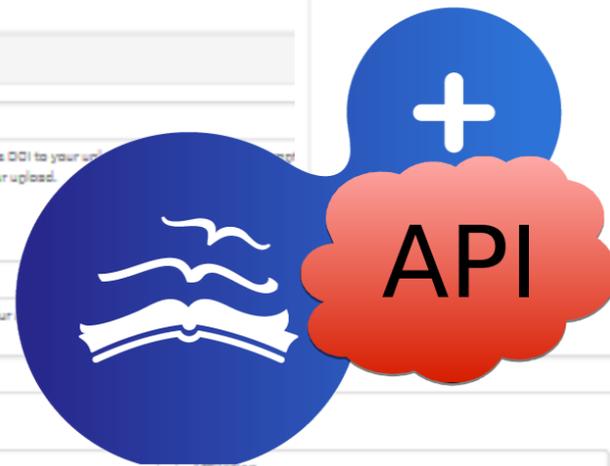
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Zenodo is integrated into reporting lines for research funded by the European Commission via OpenAIRE (<http://www.openaire.eu>). Specify grants which have funded your research, and we will let your funding agency know!

Grants

Optional. Note, a human Zenodo curator will validate your upload before reporting it to OpenAIRE, and you may thus experience a delay before your upload is available in OpenAIRE.

[+ Add another grant](#)



OpenAIRE Funders Projects List

REPOSITORIES DEPOSIT WORKFLOW:

Searching by the name, acronym or the project id number... Select the project and accept

Resumo

Caso este documento tenha resultado de **projetos financiados pela Comissão Europeia (FP7, H2020, ERC), Fundação para a Ciência e Tecnologia (FCT) ou Wellcome Trust (WT)**, identifique esse(s) projeto(s) neste campo. Esta identificação é regra geral um requisito do(s) financiador(es). Para identificar o(s) projeto(s) insira um dos seus elementos de identificação (número, nome, acrónimo ou referência) e seleccione-o na lista que lhe será apresentada.

Projeto financiado

Introduza aqui as designações de

Patrocinadores

Introduza aqui mais informação útil

Informações adicionais

Switch|

- 641553 - HITECA - technology development and fabrication of Hig...
- 237039 - PHOTORCA - Photoregulated organocatalysis - From caged...
- 233157 - MECHANOCHEM SWITCHES - Switching the structure-functio...
- 285952 - SOLARGAIN - Low-cost switchable reflective polymeric s...
- 219291 - LIGHTSWITCHES - Multifunctional DNA light-switches: se...
- 219828 - LIGHT INDUCED SWITCH - Nanoporous Materials and Supram...
- 200431 - INNOSHAD - Innovative Switchable Shading Appliances b...
- 324495 - SWITCH-HD - Switching the disease off: Effects of spat...
- 328078 - NANOSCOPE - Mastering novel switchable molecular mater...
- 328893 - SINGLE-MOLEC-SWITCH - Developing single-molecule switc...

+ Adicionar mais

+ Adicionar mais

+ Adicionar mais

registo público.

registo público.



Discover, Access and Reuse



For all OpenAIRE stakeholders...



All Search keywords SEARCH

- Publications Research Data Projects People Organizations Data Providers

Table with 4 columns: FUNDER, ACCESS MODE, PUBLICATION YEAR, DOCUMENT TYPE. Includes sub-headers like DOCUMENT LANGUAGE, DATA PROVIDER, and COMMUNITIES.

Search dropdown menu with options: Publications, data, projects, ...; all; publications; research data; projects; people; organizations; data providers; Data Providers; General information.

Purification and characterization of an extracellular β -xylosidase from *Pseudozyma hubeiensis* NCIM 3574 (PhXyl), an unexplored yeast

Mhetras, Nutan; Liddell, Susan; Gokhale, Digambar (2016)

Publisher: Springer Berlin Heidelberg

Journal: AMB Express

Languages: English

Types: Article

Subjects: Unexplored yeast, *Pseudozyma hubeiensis*, β -Xylosidase, Original Article, Metal and ethanol tolerant enzyme

Identifiers: [pmc:PMC5023640](https://pubmed.ncbi.nlm.nih.gov/26403640/), [doi:10.1186/s13568-016-0243-7](https://doi.org/10.1186/s13568-016-0243-7)

This paper reports on the production of β -xylosidase from an unexplored yeast, *Pseudozyma hubeiensis*. The expression of this enzyme could be induced by beech wood xylan when the yeast was grown at 27 °C. The enzyme was purified to homogeneity as a glycoprotein with 23 % glycosylation. The purification protocol involved ammonium sulphate precipitation, QAE-Sephadex A50 ion exchange chromatography and sephacryl-200 column chromatography which resulted in 8.3-fold purification with 53.12 % final recovery. The purified enzyme showed prominent single band on SDS-PAGE. It is a monomeric protein of 110 kDa molecular weight confirmed by SDS-PAGE followed by MALDI-TOF mass spectrometry (112.3 kDa). The enzyme was optimally active at 60 °C and pH 4.5 and stable at pH range (4–9) and at 50 °C for 4 h. Chemical modification studies revealed that active site of the purified enzyme comprised of carboxyl, tyrosine and tryptophan residues. The carboxyl residue is involved in catalysis and tryptophan residue is solely involved in substrate binding. The best match from the search of the NCBI nr database was with gi|808364558 glycoside hydrolase of *Pseudozyma hubeiensis* SY62 with 26 % sequence coverage confirming that it is a glycoside hydrolase/beta-glucosidase. From the search of customized SWISSPROT database, it was revealed that SWISSPROT does not contain any entries that are similar to the purified enzyme. Electronic supplementary material The online version of this article (doi:10.1186/s13568-016-0243-7) contains supplementary material, which is available to authorized users.

[LINK TO PROJECT](#)

[LINK TO RESEARCH DATA](#)

References (39)

Related Research Data (1)

Similar Publications (2)

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- Adsul, MG, Bastawde, KB, Gokhale, DV. Biochemical characterization of two xylanases from *Pseudozyma hubeiensis* producing only xylooligosaccharides. *Bioresour Technol.* 2009; 100: 6488-6495
- Andrade, SV, Polizeli, MLTM, Terenzi, HF, Jorge, JA. Effect of carbon source on the biochemical properties of β -xylosidases produced by *Aspergillus versicolor*. *Process Biochem.* 2004; 39: 1931-1938
- Bao, L, Huang, Q, Chang, L, Sun, Q, Zhou, J, Lu, H. Cloning and characterization of two beta-glucosidase/xylosidase enzymes from yak rumen metagenome. *Appl Biochem Biotechnol.* 2012; 166: 72-86
- Basaran, P, Ozcan, M. Characterization of beta-xylosidase enzyme from a *Pichia stipitis* mutant. *Bioresour*

Purification and characterization of an extracellular β -xylosidase from *Pseudozyma hubeiensis* NCIM 3574 (PhXyl), an unexplored yeast

Mhetras, Nutan; Liddell, Susan; Gokhale, Digambar (2016)

Publisher: Springer Berlin Heidelberg

Journal: AMB Express

Languages: English

Types: Article

Subjects: Unexplored yeast, *Pseudozyma hubeiensis*, β -Xylosidase, Original Article, Metal and ethanol tolerant enzyme

Identifiers: [pmc:PMC5023640](https://pubmed.ncbi.nlm.nih.gov/26403640/), [doi:10.1186/s13568-016-0243-7](https://doi.org/10.1186/s13568-016-0243-7)

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References (39)

Related Research Data (1)

Similar Publications (2)

INFERRED RESEARCH DATA

The results below are discovered through our pilot algorithms. [Let us know how we are doing!](#)

Title	Trust
Purification and characterization of an extracellular β-xylosidase from <i>Pseudozyma hubeiensis</i> NCIM 3574 (PhXyl), an unexplored yeast (2016)	65%

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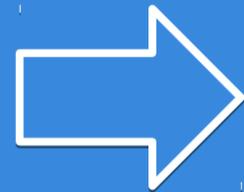
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Services for researchers, project coordinators and research managers

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Community: Category:

2. Select Contexts(s) [BROWSE](#)

Please select concept...



EUROFUSION

Title	Implementation of activities described in the Roadmap to Fusion during Horizon 2020 through a Joint programme of the members of the EUROfusion consortium
Funding	EC H2020 COFUND-EJP
Call	EURATOM-Adhoc-2014-20
Contract (GA) number	633053
Start Date	2014/01/01
End Date	2020/12/31
Open Access mandate	yes
Data Pilot	no
Organizations	VTT, NATIONAL CENTER FOR SCIENTIFIC RESEARCH, EPFL, LU CFI, RBI, JSI, LEI, DTU, UKAEA, NWO-I/Nikhef, COMENIUS, ÖAW, IPPLM, Jülich, NSC KIPT, MPG, IPP.CR, Wigner RCP, VR, KIT, RMA, IST, UTARTU, INRNE-BAS, CEA, CIEMAT, ENEA, UCY, IFA-MG, DCU
More information	Detailed project information (CORDIS)

Publications (906) | Research Data (3) | Statistics

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Parameter study of ICRH wave propagation in IShTAR

Crombé, Kristel; Van Eester, D (2016)
Projects: [EC | EUROfusion \(633053\)](#)

A crude first assessment of how waves behave is commonly made relying on decoupled dispersion equation roots. In the low density, low temperature region behind the last closed flux surface in a tokamak where the density decays exponentially and where the lower hybrid resonance is crossed but where the thermal velocity is small enough to justify dropping kinetic (hot plasma) effects the study of the wave behaviour requires the roots of the full cold plasma





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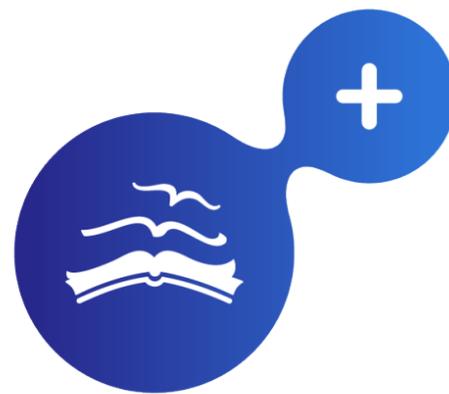
Parameter study of ICRH wave propagation in IShTAR

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PROJECT PUBLICATIONS AND DATASETS



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Grant Management | Project Continuous Report

643410 (OpenAIRE2020) RIA

Call: H2020-EINFRA-2014-2015
Topic: EINFRA-2-2014 Unit: CNECT/C/01

Publishable Summary Deliverables Milestones Critical Risks Publications Patents (IPR) Gender

Publications 1

This project does not currently have any scientific publication

Suggested publications from OpenAIRE (9 publications) 1

No.	Type	Title	Authors	Title of the Journal/Proc./Book	Date of Acceptance	DOI
1	Other	Establishing of a Slovenian open access infrastructure	Hrovat, Goran; Kotar, Mojca; Ferme,		24/12/2015	10.1108/PROG-02-2014-000
2	Article	Semantic Publishing Challenge - Assessing the Quality of Scier	Dimou, Anastasia; Vahdati, Sahar; Di		25/08/2015	
3	Article	Mapping Large Scale Research Metadata to Linked Data: A Pe	Vahdati, Sahar; Huang, Jyun-Yao; Ka		12/06/2015	
4	Article	Structured Affiliations Extraction from Scientific Literature	Bolikowski, Łukasz; Tarnawski,		01/01/2015	
5	Article	CERMINE: automatic extraction of structured metadata from	Dendek, Piotr Jan; Szostek, Pawe&#		01/01/2015	

Project publications (12 publications) 1

No.	Type	Title	Authors	Title of the Journal/Proc./Book	Number, date or freq. of the Journal/Proc./Book	DOI
1	Article in Joi	OpenAIRE: Supporting a European open access mandate	Najla Rettberg and Birgit Schmidt	College & Research Libraries News	Vol.76 No.6	
2	Publication i	Aligning Repository Networks and the Confederation of Open	Kathleen Shearer	INFLIBNET's Convention Proceedings		
3	Article in Joi	Reaching Out to Global Interoperability through Aligning Repr	Kathleen Shearer, Katharina Mueller,	New Avenues for Electronic Publishing in the Age		10.3233/978-1-61499-562-3-
4	Article in Joi	The OpenAIRE2020 FP7 Post-Grant Open Access Pilot: Implem	Pablo de Castro	Information Services & Use		
5	Article in Joi	CERMINE: automatic extraction of structured metadata from	Dominika Tkaczyk, Paweł Szostek, M	International Journal on Document Analysis and F	18/4	10.1007/s10032-015-0249-8
6	Article in Joi	Structured Affiliations Extraction from Scientific Literature	Dominika Tkaczyk, Bartosz Tarnawsl	D-Lib Magazine	21/11/12	10.1045/november2015-tkacz
7	Publication i	On bridging data centers and publishers: the data-literature	Burton Adrian	MTSR 2015 - 9th Metadata and Semantics Resear		
8		Mapping Large Scale Research Metadata to Linked Data: A Pe	SaharVahdati	Communications in Computer and Information Sc	544	
9	Publication i	OpenCourseWare observatory - does the quality of OpenCou	Sahar Vahdati, Christoph Lange, Sör	Proceedings of the Fifth International Conferenc		10.1145/2723576.2723605
10	Article in Joi	Semantic Publishing Challenge - Assessing the Quality of Scier	Christoph Lange	Communications in Computer and Information Sc		

RESEARCH & INNOVATION
Participant Portal - Grant Management Services

MY PROJECT

HORIZON 2020

Call: H2020-EINFRA-2014-1
Type of Action: RIA
Acronym: OpenAIRE2020
Current Phase: Grant Management
Number: 643410
Duration: 42 months
Start Date: 01 Jan 2015
Estimated Project Cost: €13,132,500.00
Requested EU Contribution: €13,000,000.00
Contact: Pilar OCON GARCES

Latest Legal Data
Process List
Document Library
Communication Center

H2020 ONLINE MANUAL

HOW TO

Continuous or Final Reporting



EC projects and funding streams pages and stats

OpenAIRE PARTICIPATE SEARCH

H2020 Monitoring

19,181 publications in 2,951 projects (from a total of 14,260)
8,408 are OA, 99 are restricted and 117 are still in embargo [Graph]

Publications in H2020 Projects through the years

Yearly Cumulative

from OpenAIRE via HighCharts (date: 7/9/2017)
select an area to zoom in

ABOUT PUBLICATIONS

- TOP 30 PROJECTS IN PUBLICATIONS
- H2020 PUBLICATIONS BY TYPE

ABOUT DATA PROVIDERS

- TOP 20 DATA PROVIDERS FOR H2020 PUBLICATIONS
- H2020 PUBLICATIONS BY DATA PROVIDER TYPE

ERC statistics

78,227 publications in 3,921 projects (total of 4,561 projects)
53,949 are OA, 382 are restricted and 89 are still in embargo [Graph]

ERC publications through the years

Yearly Cumulative

from OpenAIRE via HighCharts (date: 7/9/2017)
select an area to zoom in

ABOUT PUBLICATIONS

TOP 30 PROJECTS IN PUBLICATIONS

Column Graph Pie Chart Table

ERC Publications by project (top 30)

project

from OpenAIRE via HighCharts (date: 7/9/2017)

FP7 statistics

220,828 publications in 15,712 projects (from a total of 25,870)
141,829 are OA, 3,476 are restricted and 344 are still in embargo [Graph]

For SC39:

31,889 publications in 1,498 projects (total of 1,907)
22,840 are OA [Graph]

FP7 TIMELINE

To get more detailed views please make your selections from either Programme or Scientific Area:

Programme

- SP1-Cooperation
- SP2-Ideas
- SP3-People
- SP4-Capacities
- SP5-Euratom

Scientific Area

- COH
- ENERGY
- ENV
- ERC
- Fission
- Fusion
- GA

FP7 publications through the years

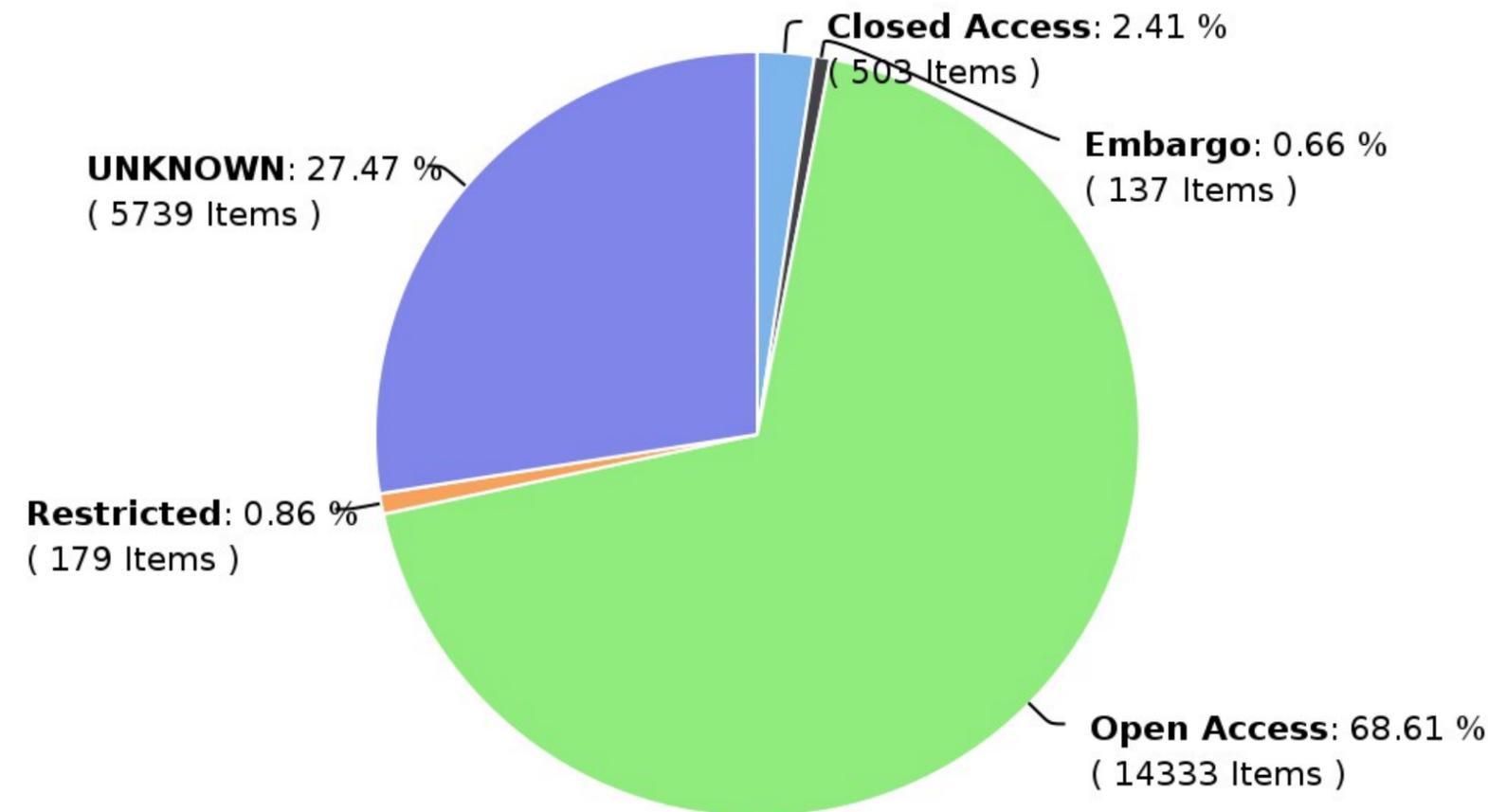
Publications

OA Overview

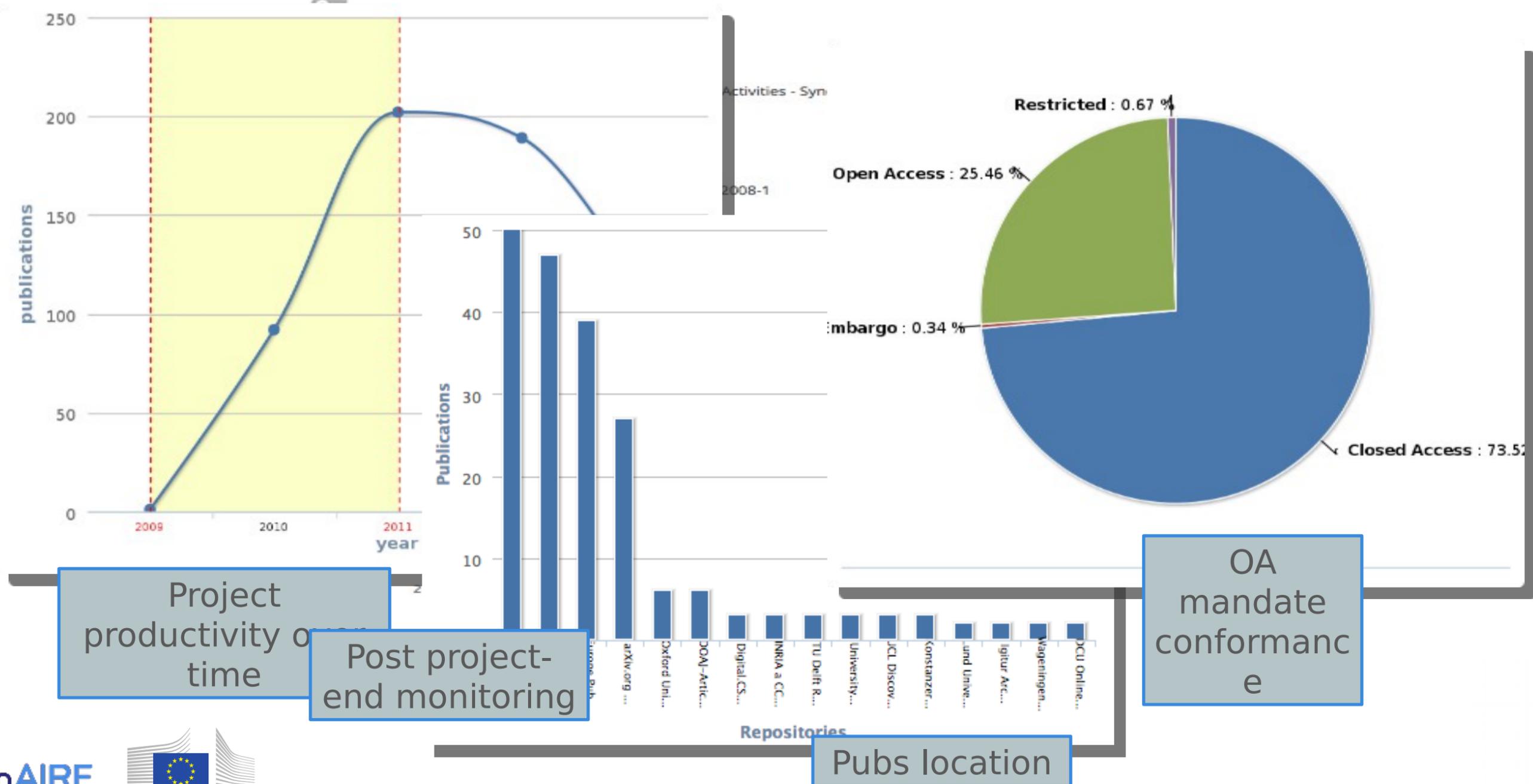
H2020 publications breakdown by access mode

20,892 publications in 3,470 projects
(from a total of 15,408)

14,333 are OA, 179 are restricted and
137 are still in embargo



Project overview





HELPDESK

Ask a question

FAQs



RESOURCES

OA H2020 guide

Copyright Issues

H2020 factsheets



TRAINING

Webinars

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Open Access mandate and Open Research Data in Horizon 2020 How Can OpenAIRE help?

H2020 Open Access Mandate



Horizon 2020
All beneficiaries must deposit

What to deposit?
A machine-readable electronic version
▶ the published version
OR
▶ the final peer-reviewed version for publication.

Are you part of a H2020 project? OpenAIRE helps you to provide Open Access to your project publications and data.

Open Research Data Pilot in Horizon 2020 How can OpenAIRE help?

What is the Open Research Data Pilot?
Open data is data that is free to use, reuse and redistribute. The Open Research Data Pilot enables open access to and reuse of research data from Horizon 2020 projects. Participating projects are required to:

- Develop...

Open Access and Open Data in Horizon 2020 How can OpenAIRE help?

Factsheet for Research Administrators and Project Coordinators

The Horizon 2020 Open Access Mandate

In Horizon 2020, the European Commission (EC) requires that all peer-reviewed publications resulting from project funding are open access (OA), i.e., freely available online with no restrictions on use.

4 Simple Steps to Open Access

- Step 1.** Submit a paper to a journal of your choice (there is no restriction). Publishing costs (article processing fees) are eligible costs and can be reimbursed within the project period.
- Step 2.** Deposit the final peer-reviewed manuscript or publisher's PDF in an institutional or subject repository (for Zenodo.org if no other option is available) as soon as possible and at the latest upon publication. It is not enough to list publications on a project website – they'll go unnoticed!
- Step 3.** Acknowledge project funding in the article's metadata by including the terms ["European Union (EU)" and "Horizon 2020"] or ["Euratom" and Euratom research and training programme 2014-2018"]; the name of the action, acronym and grant number; the publication date and length of embargo period if applicable, and a persistent identifier (e.g. DOI, handle).
- Step 4.** Ensure open access to the deposited publication. An embargo of 6 months (or 12 months for the social sciences and humanities) is acceptable.

Personal data and the Open Research Data Pilot How can OpenAIRE help?

Are you a Research Coordinator or PI participating in Open Research Data Pilot in Horizon 2020?

The EC Open Research Data Pilot
Open data is data that is free to use, reuse, and redistribute. The EC Open Research Data Pilot enables open access to and reuse of research data from Horizon 2020 projects. Participating projects are required to:

- Develop...



What is personal data?

"Personal data" means any information relating to a natural person who is either identified or who could be identified by that data (e.g., by reference to an identifier such as a name, an identification number, location data, online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that person).

Working with Personal Data and Data Protection?

Individuals in a dataset, i.e., associating a record to a natural person by using other sources of information. Moreover, anonymisation provides further privacy guarantees that a person is associated with a certain property, e.g., a certain health condition, with a high probability or even to infer the participation of a person in a published dataset. When possible, anonymisation is the best practice to protect the identity of individuals in a dataset.

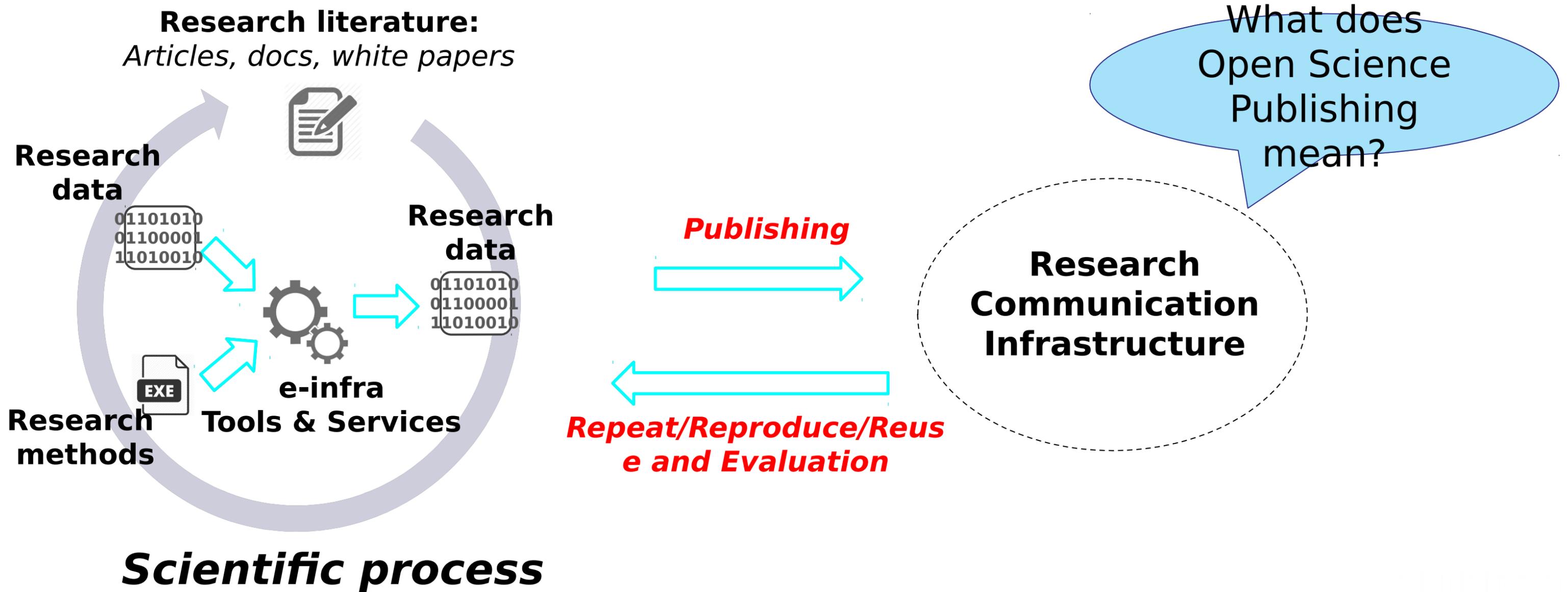


Open Science as a Service

for research communities

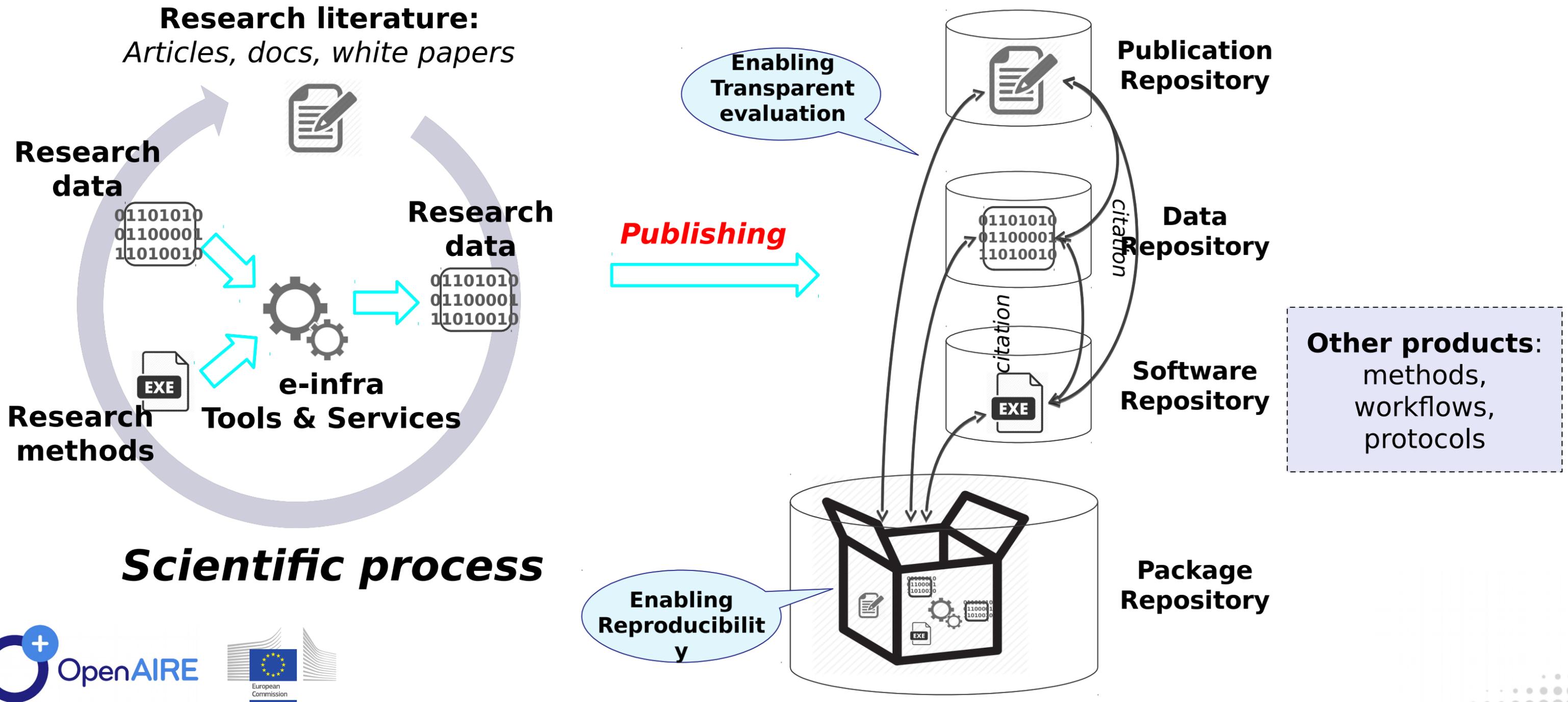
Open Science publishing

Supporting reproducibility and transparent evaluation



Open Science publishing

Supporting reproducibility and transparent evaluation



Open Science publishing: enabling factors

**Enabling transparent
evaluation**

Enabling reproducibility

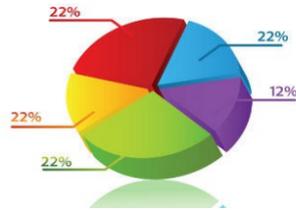


Open Science Publishing: barriers



Open Science as-a-Service (OSaaS)

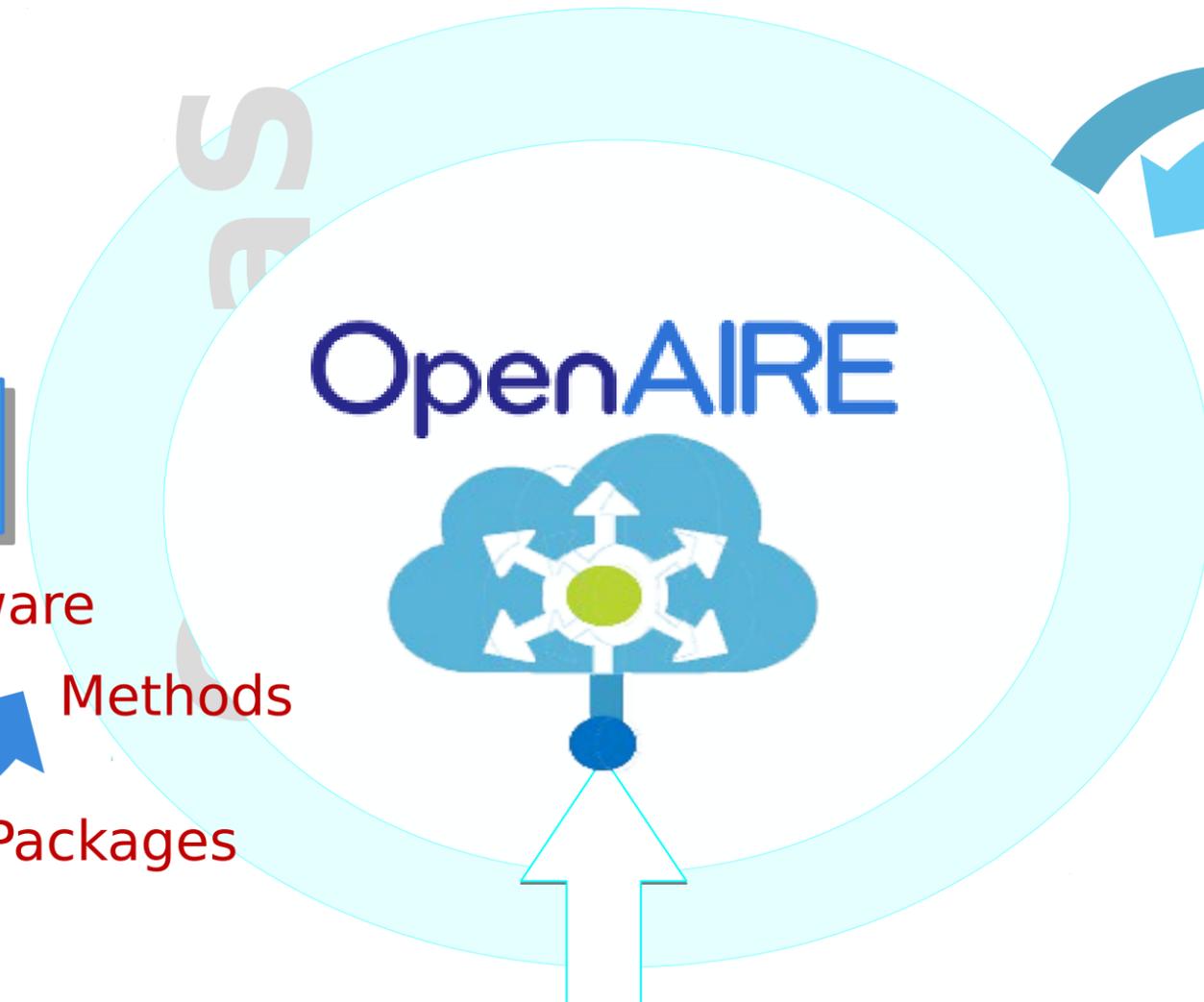
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Dashboard**

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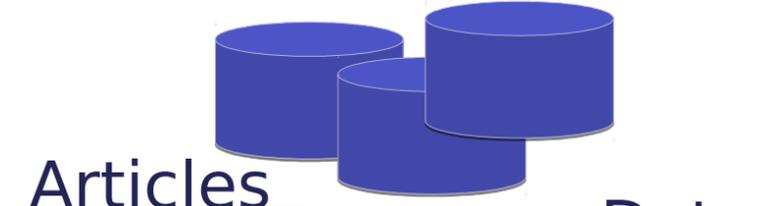


OpenAIRE



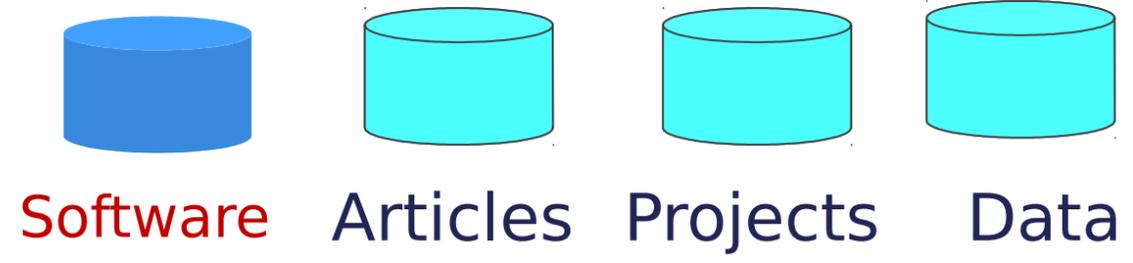
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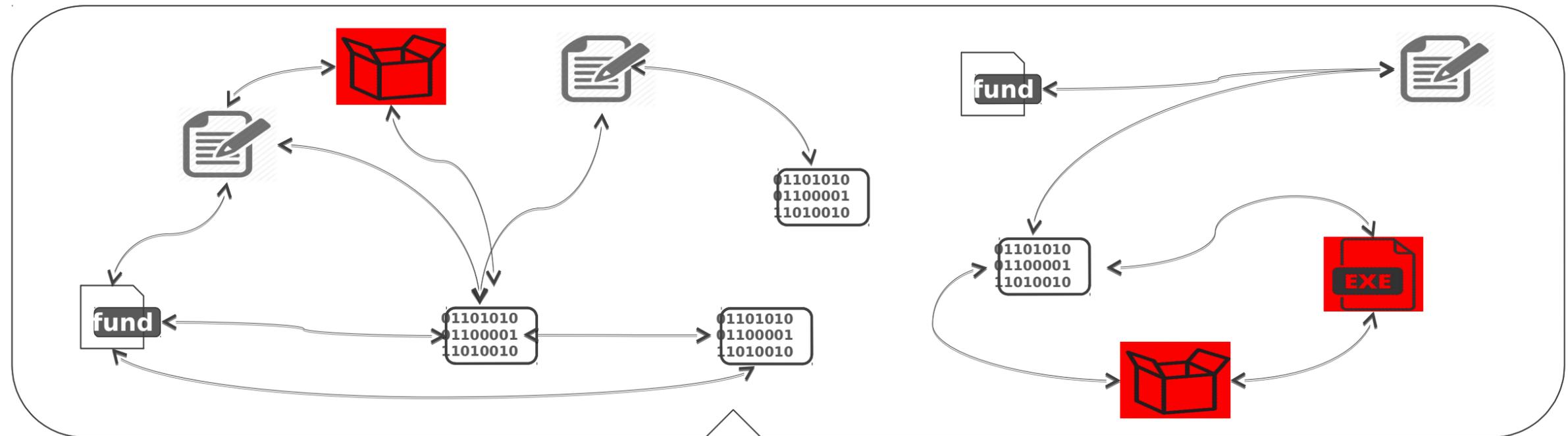
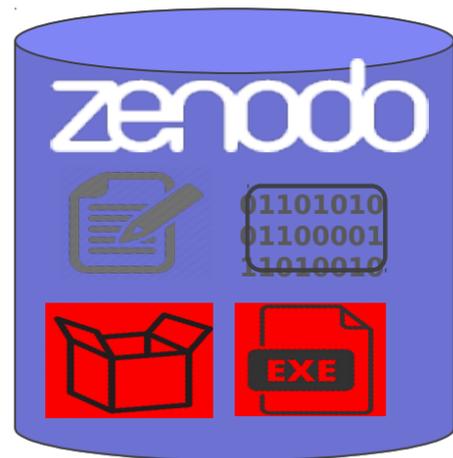
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Research Community

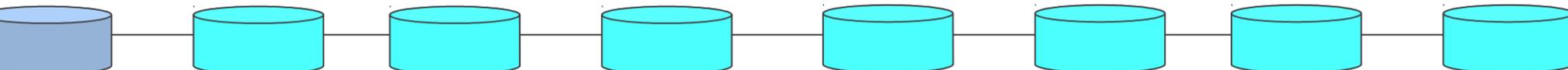
OpenAIRE OSaaS: methods and packages

- **Metadata description for methods and packages:** citation and reproducibility (e.g. Research Objects, Rmap)
- **Interoperability guidelines for exchanging packages of interlinked artefacts:** enabling exchange of information across research communication infrastructure



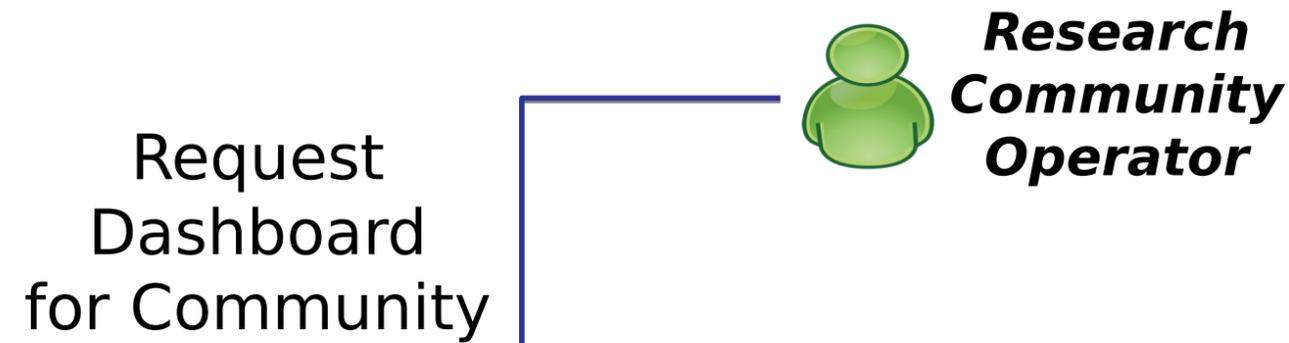
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Harvest

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Harmonize

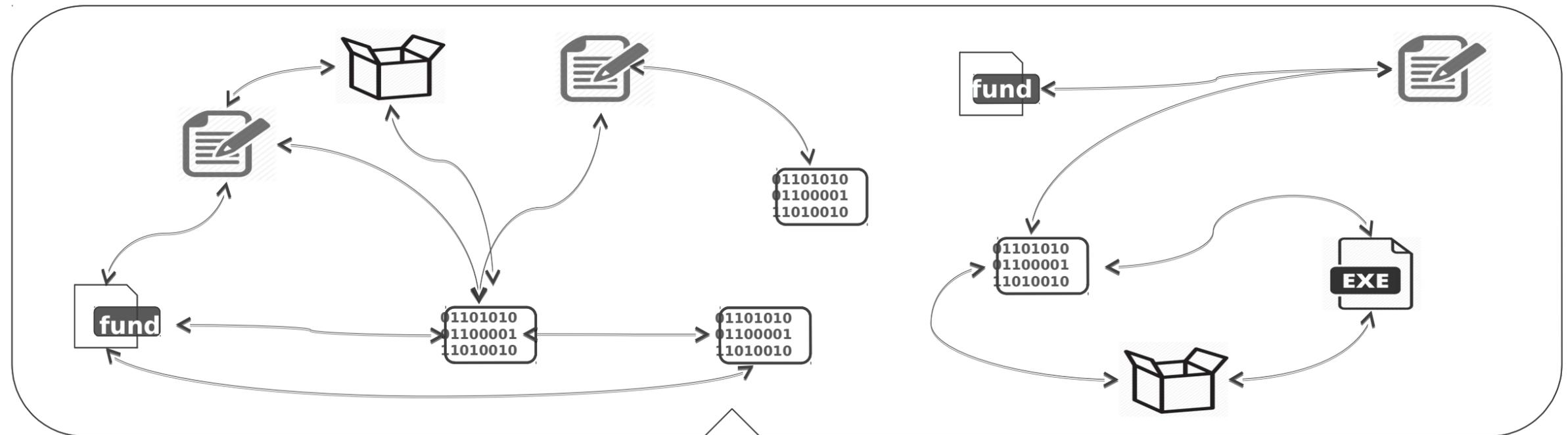
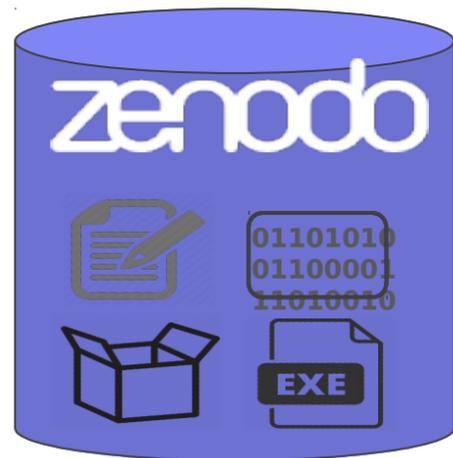


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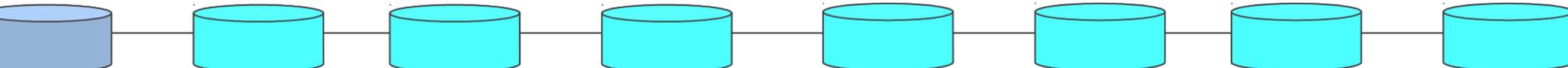


Research Community Service



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Harvest

Inference
Harmonize



Repositories of publications, datasets, projects, methods, packages

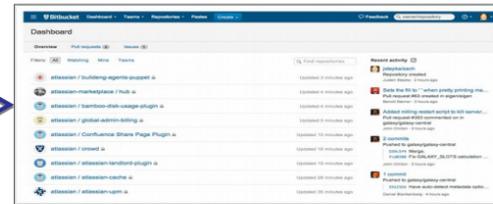
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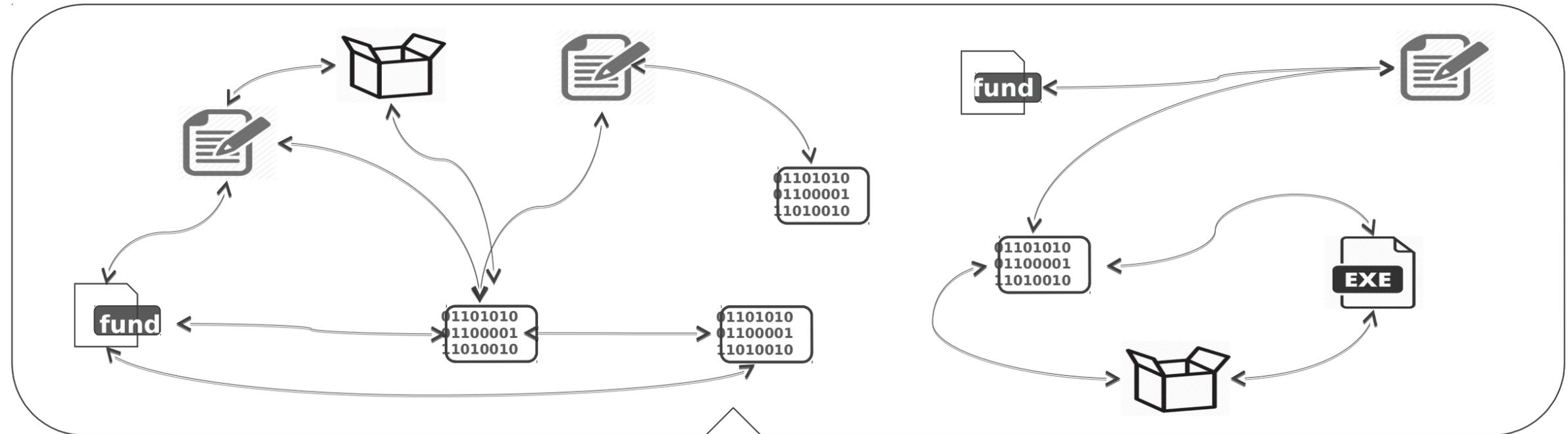
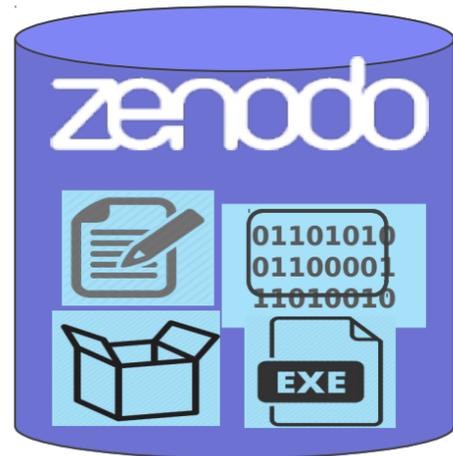
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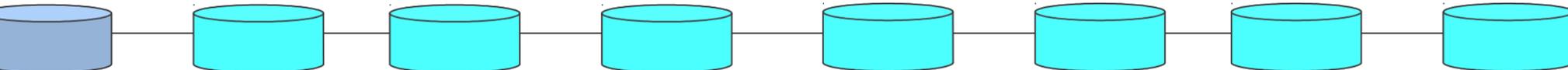


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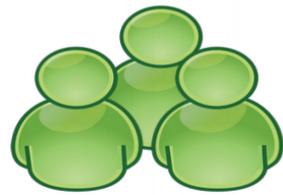
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Repositories of publications, datasets, projects, methods, packages

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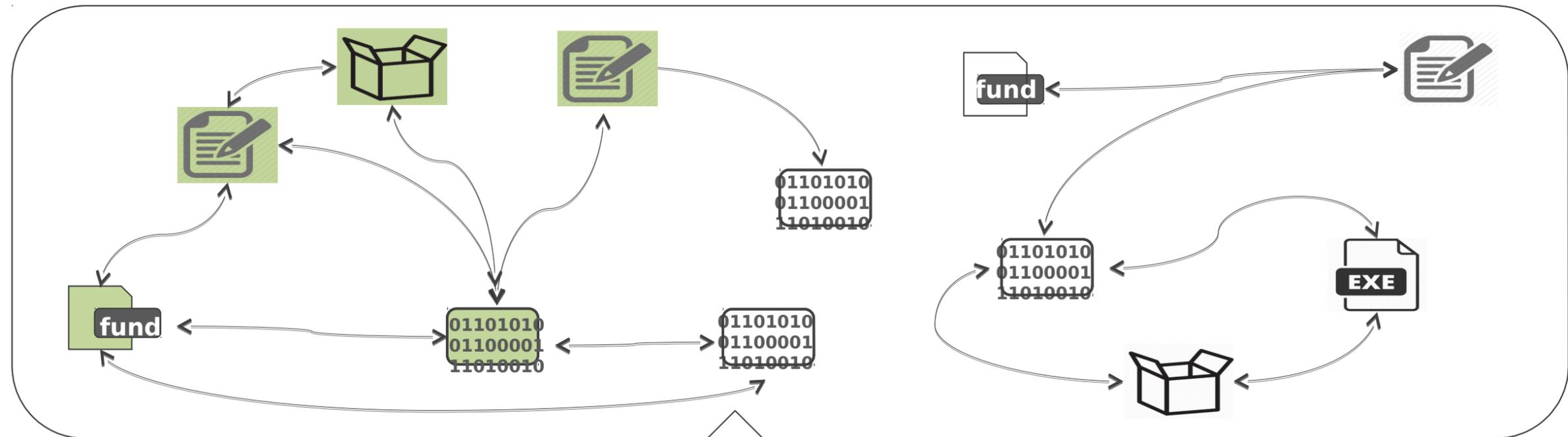
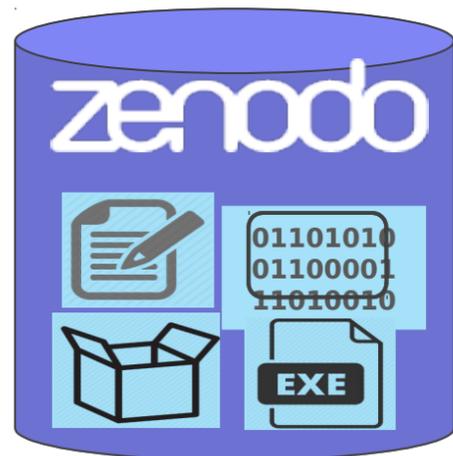
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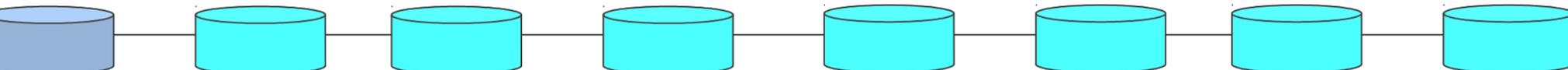


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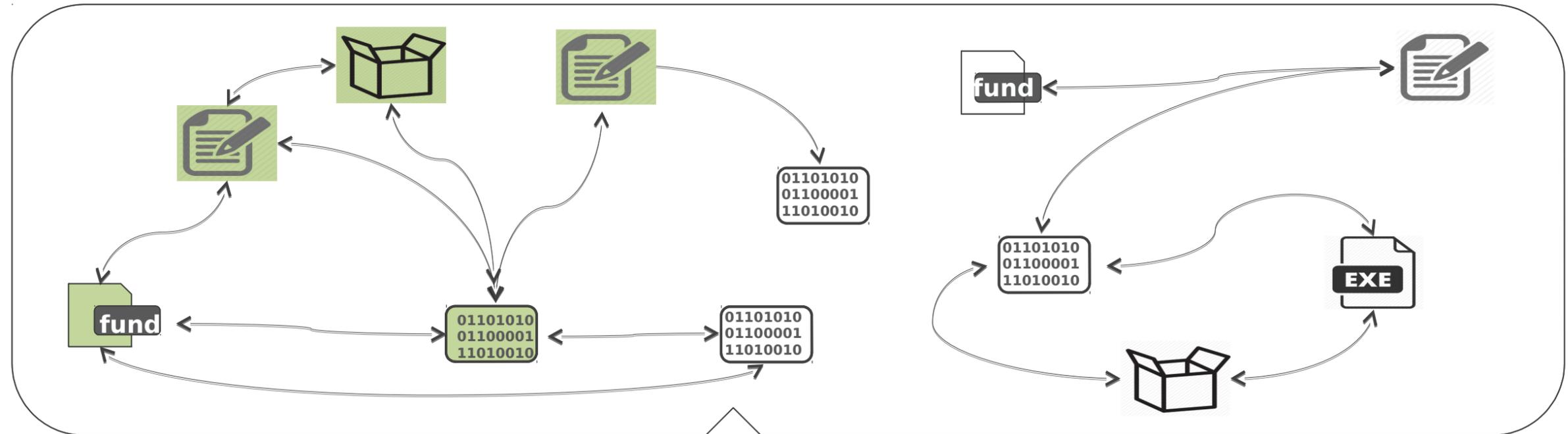
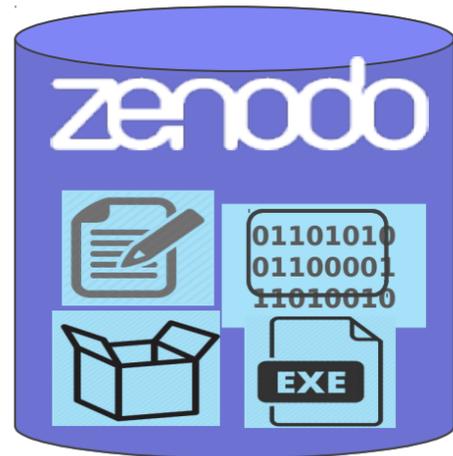


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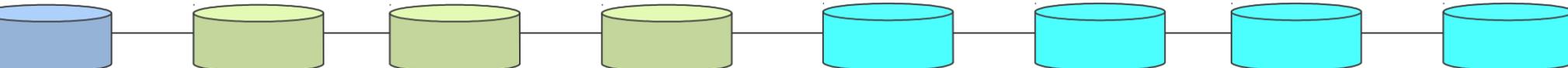
- Manage users
- Configure stats
- Configure inference

Research Community Service



Deduplicate
Harvest

Inference
Harmonize



Repositories of publications, datasets, projects, methods, packages

Research Communities and Open Science benefits



OpenAIRE-Connect Pilots

Research Community Dashboard Services

1. **Earth and Environmental Sciences (PANGAEA and ATLAS community)**
2. **Cultural Heritage and Digital Humanities (PARTHENOS research infrastructure)**
3. **Neuroinformatics (France Life Imaging national infrastructure - CNRS)**
4. **Fisheries and aquaculture management (BlueBridge & MARBEC infrastructures)**
5. **Environment & Economy (national/EU node of the United Nations Sustainable Development Solutions Network)**

Thank you!

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