



Semana OpenAIRE Portugal – Ciência Aberta na prática

*Serviços e diretrizes OpenAIRE para repositórios: EOSC e o futuro*

# The OpenAIRE Research Graph

[graph.openaire.eu](https://graph.openaire.eu)

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*OpenAIRE CTO*







## Tracking Open Science

Reproducibility and transparency require tracking of all outcomes of science and related "context"



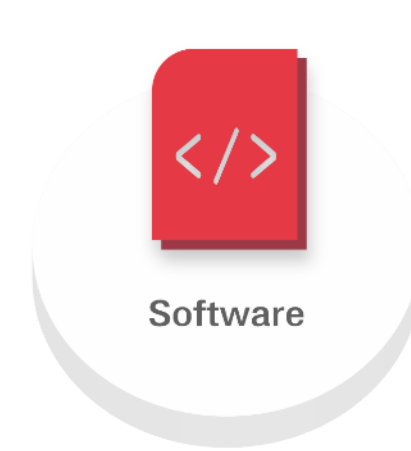
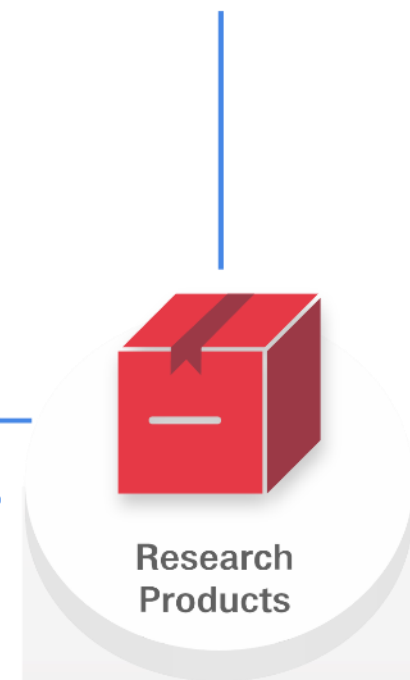
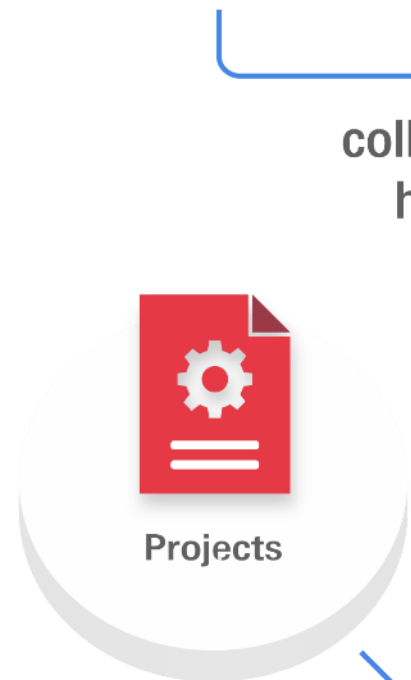
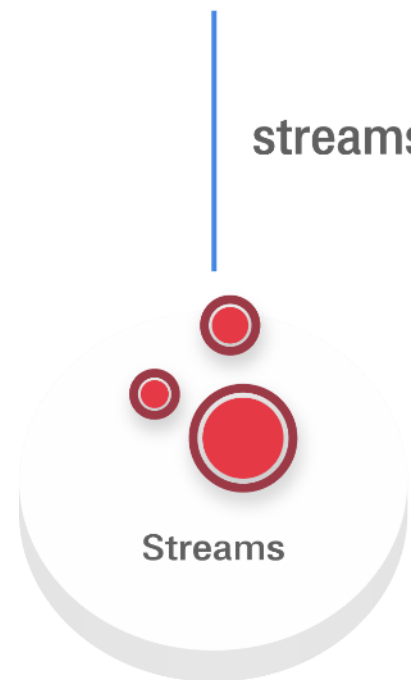
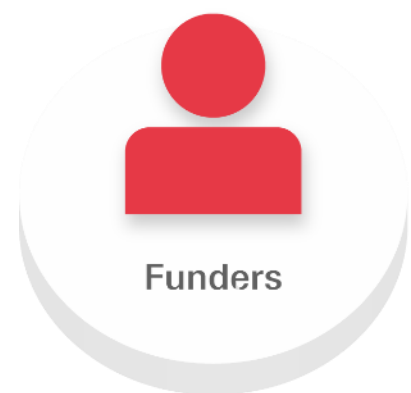
## Monitoring Open Science

Monitoring quality, impact, and "open scienceness" of science should be a transparent, reproducible process for all, inclusive of research "context"



## Discovery Open Science

Discovery of reproducible science outcomes must find new ways, driven by "scientific intentions" that go beyond the "find articles related to a research topic".



streams

collectedFrom  
hostedBy

subtype

projects

funds

substreams

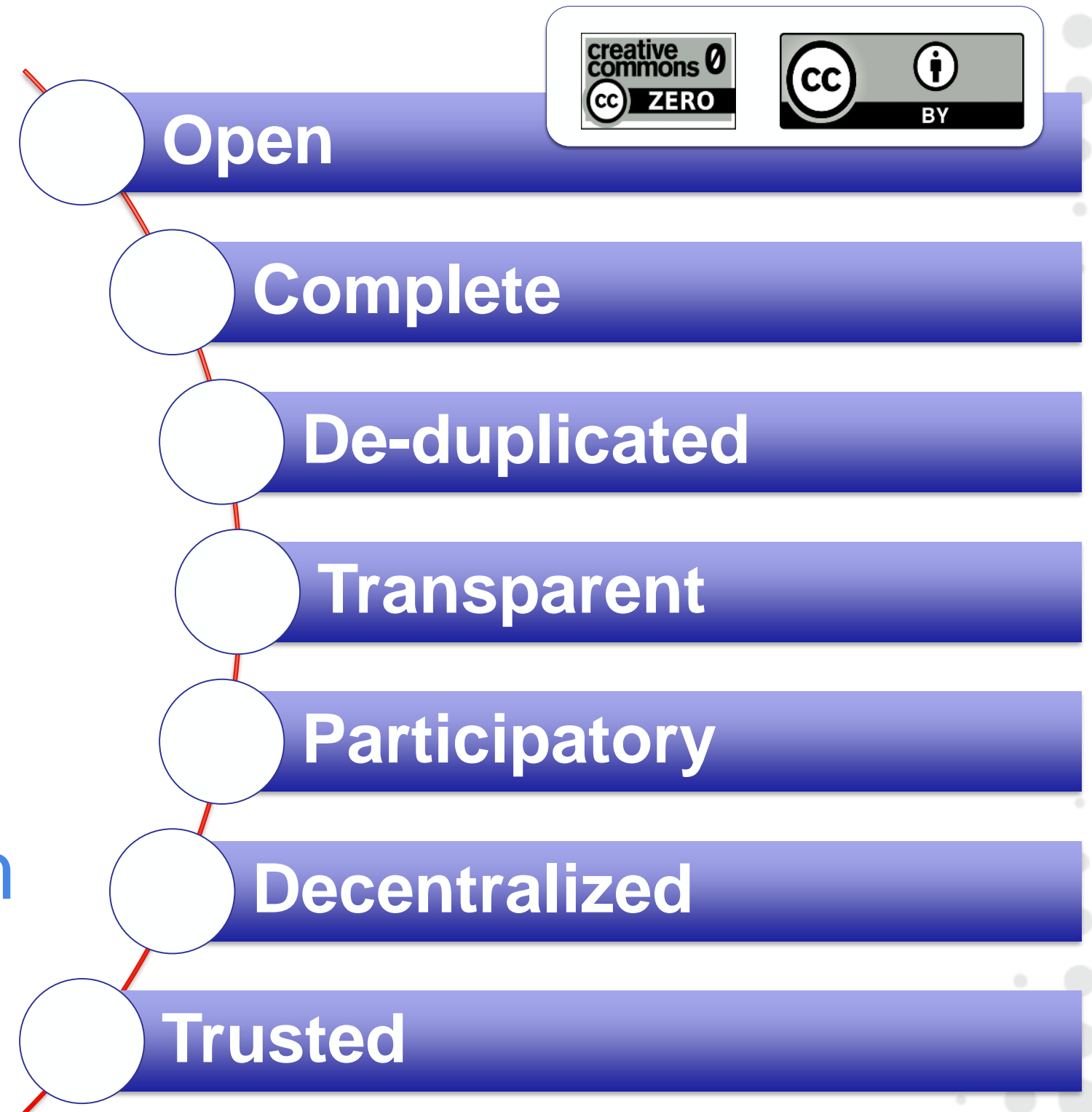
beneficiaries

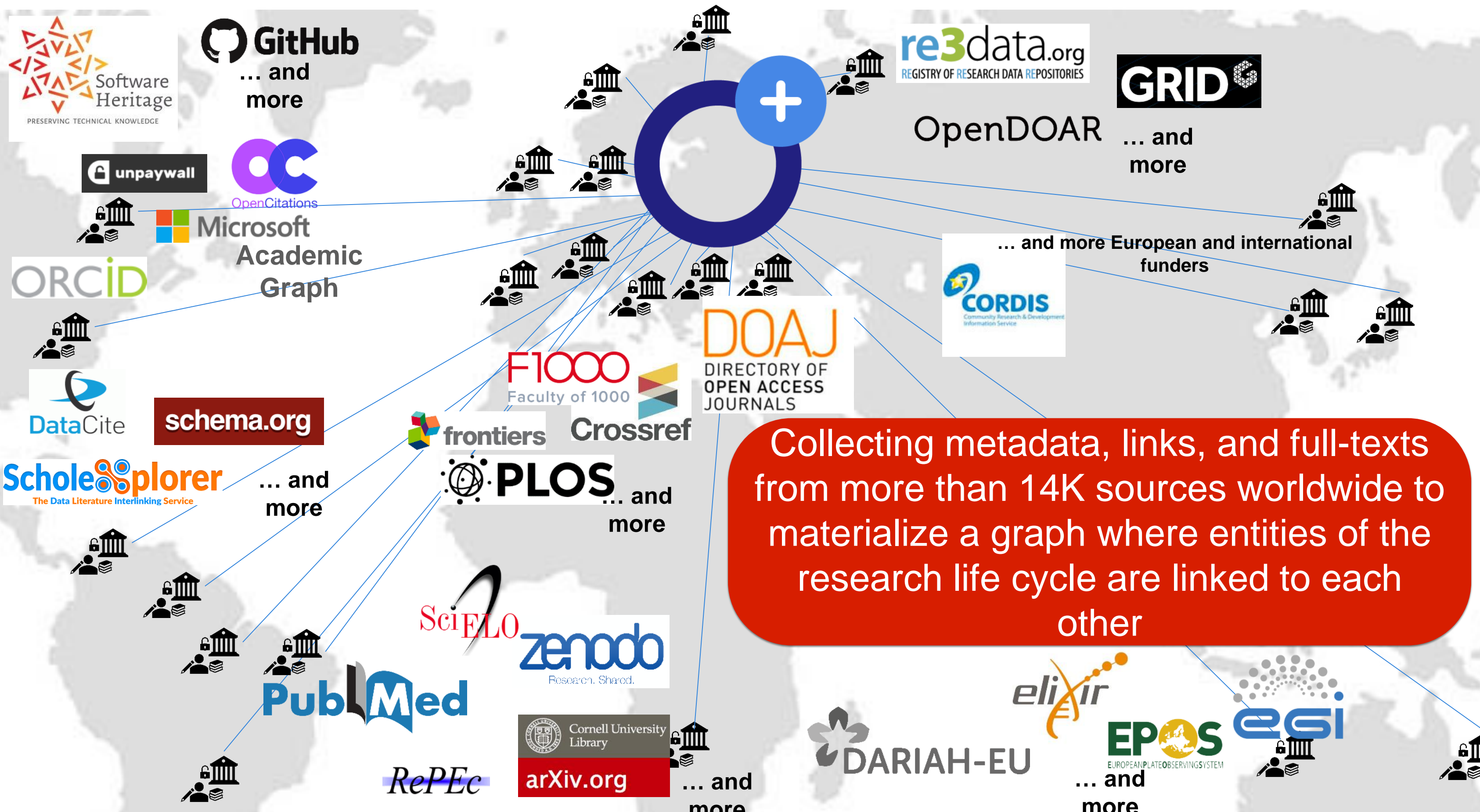
related  
organizations





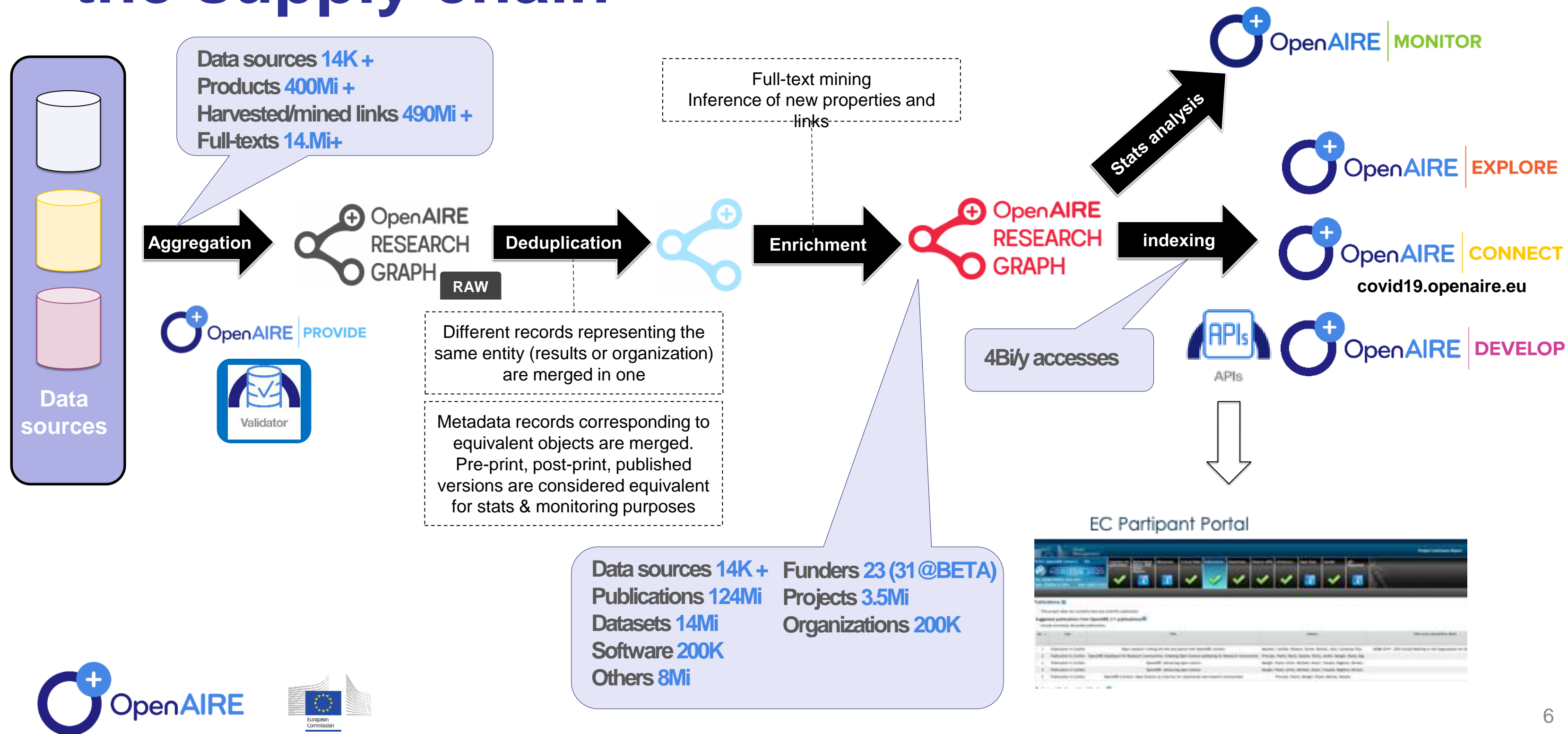
Providing an **open metadata** research graph of interlinked **scientific products**, with **Open Access** information, linked to **funding information** and **research communities**







# OpenAIRE Research Graph the supply chain



# PIDs in OpenAIRE

## Authors

ORCID



## Organizations

GRID

ROR

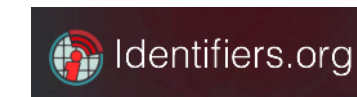


and other funders

## Products



arXiv.org



## Funders/Projects



FCT Fundação para a Ciência e a Tecnologia



and other funders

## Data sources

re3data.org  
REGISTRY OF RESEARCH DATA REPOSITORIES

DOAJ  
DIRECTORY OF OPEN ACCESS JOURNALS

OpenDOAR

+ journal lists from publishers



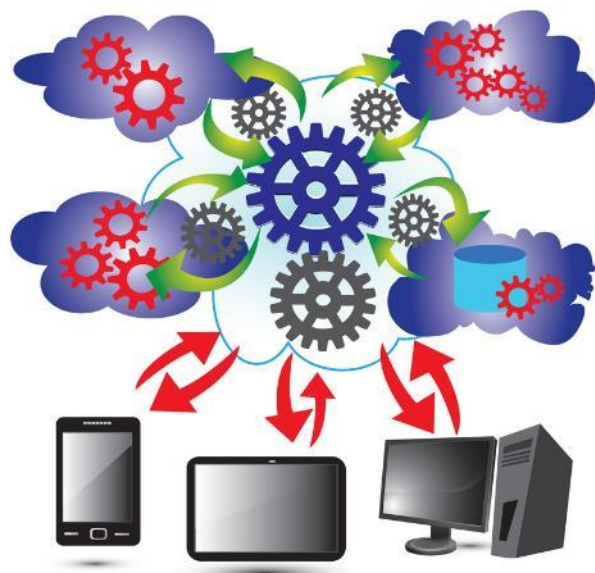
## Services (forthcoming...)



...Clusters and RIs  
service catalogues



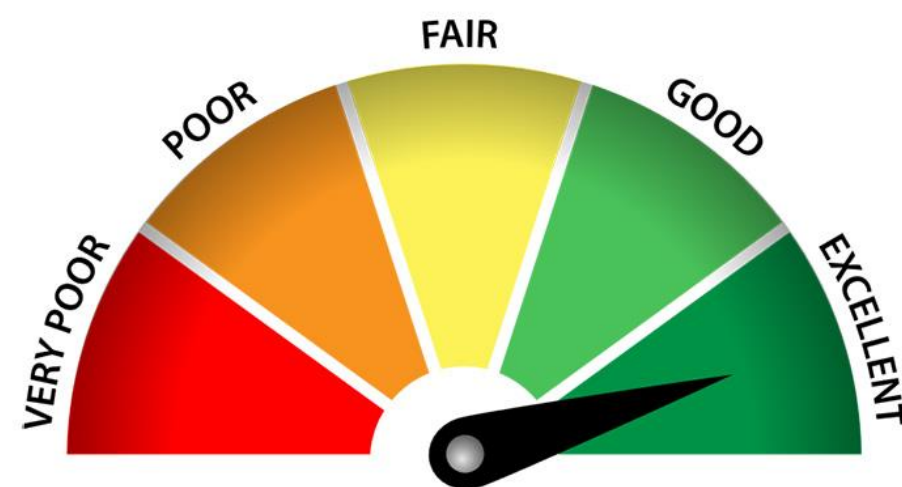
# Tracking Open Science: Challenges



## Heterogeneity

Standards, crosswalks,  
community and cross-  
community view

[guidelines.openaire.eu](https://guidelines.openaire.eu)



## Quality and accuracy

Trust and stability of the  
data: researchers and  
operators in the loop

PROVIDE (validation,  
brokering), user  
feedback, PIDs



## Completeness

Practices, sharing of  
technology and data  
(Knowledge Graphs)

Open Science publishing  
workflows, RDA OSG  
interoperability





Supporting third-  
parties at building  
added-value  
services

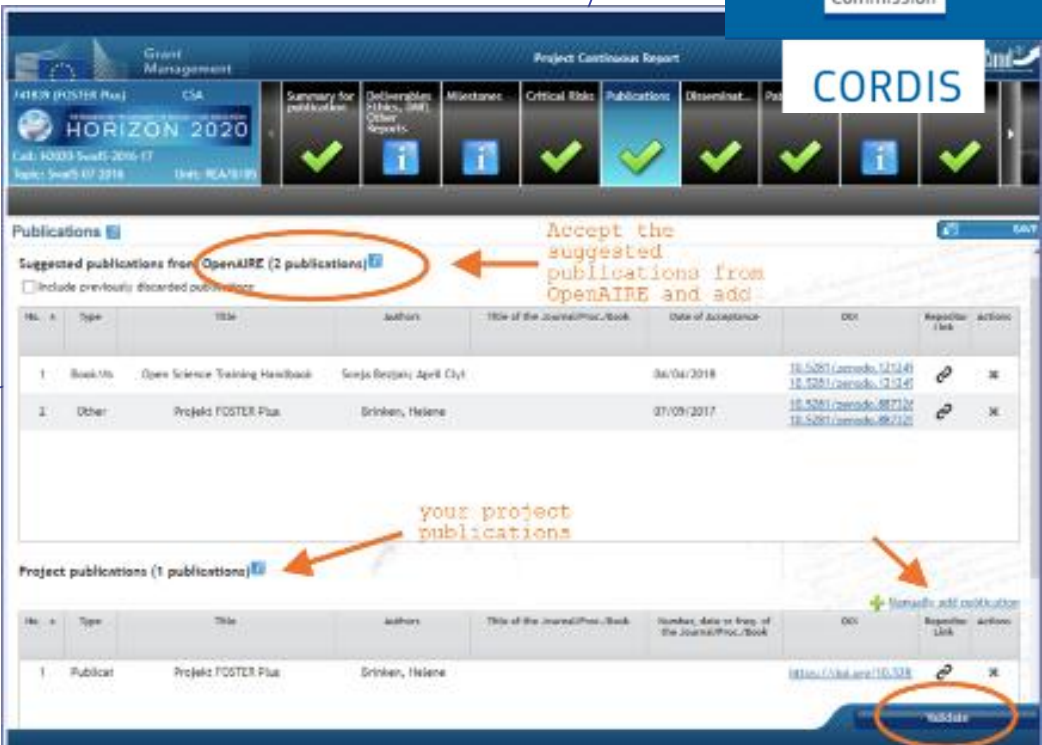
# APIs integration with third-party services



The Graph as EOSC Resource Catalogue

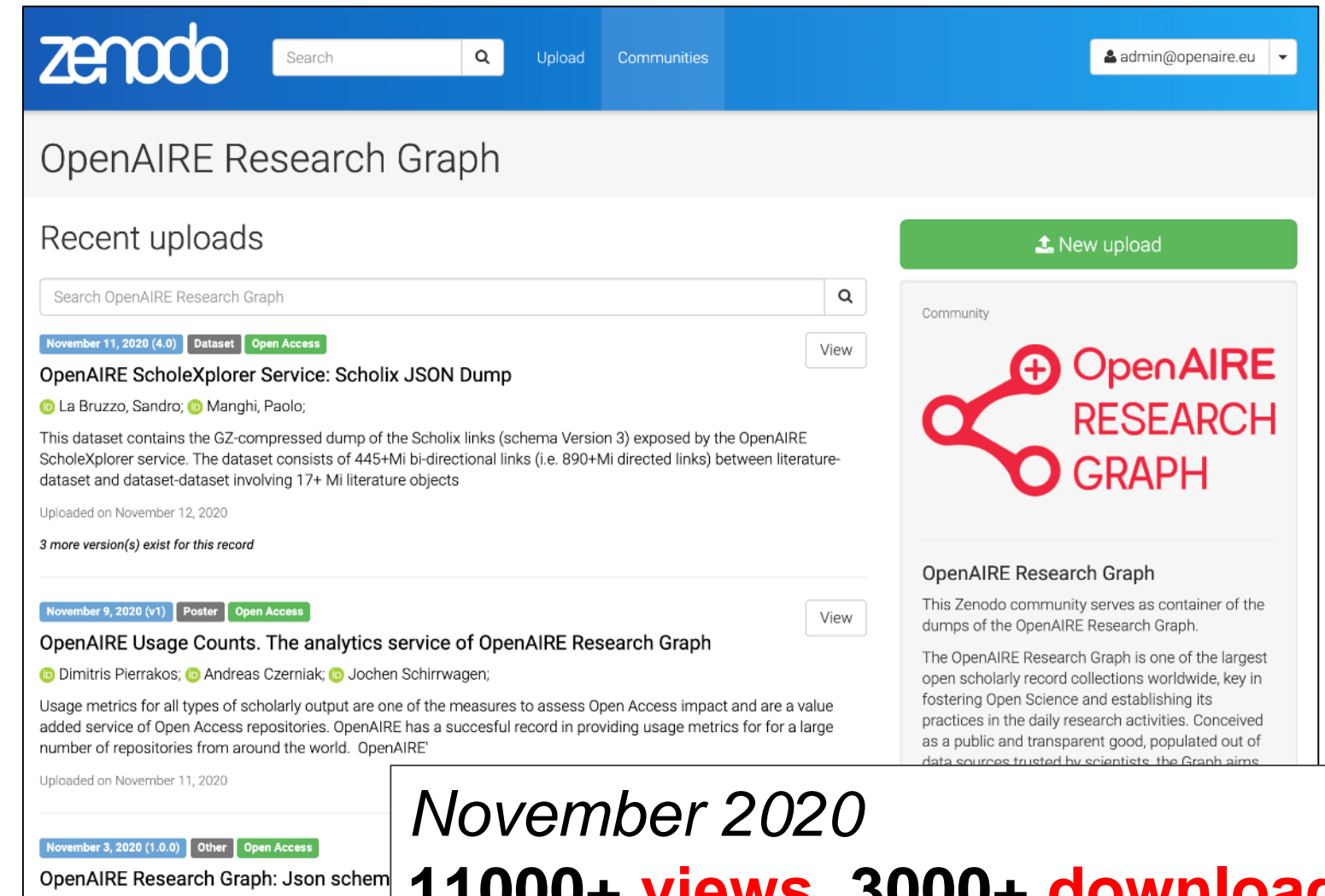


CORDIS



# OpenAIRE Research Graph: Dumps

- OpenAIRE Research Graph
- OpenAIRE COVID-19
- OpenAIRE communities
- DOIBoost
- Scholexplorer 
- **December 2020:**
  - OpenAIRE RDF PID Graph



zenodo

Search [ ] [Q] Upload Communities admin@openaire.eu

## OpenAIRE Research Graph

Recent uploads

Search OpenAIRE Research Graph [Q]

November 11, 2020 (4.0) Dataset Open Access View

**OpenAIRE ScholeXplorer Service: Scholix JSON Dump**

La Bruzzo, Sandro; Manghi, Paolo;

This dataset contains the GZ-compressed dump of the Scholix links (schema Version 3) exposed by the OpenAIRE ScholeXplorer service. The dataset consists of 445+Mi bi-directional links (i.e. 890+Mi directed links) between literature-dataset and dataset-dataset involving 17+ Mi literature objects

Uploaded on November 12, 2020

3 more version(s) exist for this record

November 9, 2020 (v1) Poster Open Access View

**OpenAIRE Usage Counts. The analytics service of OpenAIRE Research Graph**

Dimitris Pierrakos; Andreas Czerniak; Jochen Schirrwagen;


Usage metrics for all types of scholarly output are one of the measures to assess Open Access impact and are a value added service of Open Access repositories. OpenAIRE has a successful record in providing usage metrics for for a large number of repositories from around the world. OpenAIRE

Uploaded on November 11, 2020

November 3, 2020 (1.0.0) Other Open Access

OpenAIRE Research Graph: Json schem

Community

 OpenAIRE RESEARCH GRAPH

OpenAIRE Research Graph

This Zenodo community serves as container of the dumps of the OpenAIRE Research Graph.

The OpenAIRE Research Graph is one of the largest open scholarly record collections worldwide, key in fostering Open Science and establishing its practices in the daily research activities. Conceived as a public and transparent good, populated out of data sources trusted by scientists, the Graph aims

**November 2020**  
**11000+ views 3000+ downloads**

<https://zenodo.org/communities/openaire-research-graph>





Call for collaboration

## ***Improving quality and completeness the Graph***

Data and infrastructure sharing  
OpenAIRE support to access to Graph data (metadata and full-text) and access to full-text mining infrastructure

Embedding improvements as part of the data provision workflow of the Graph

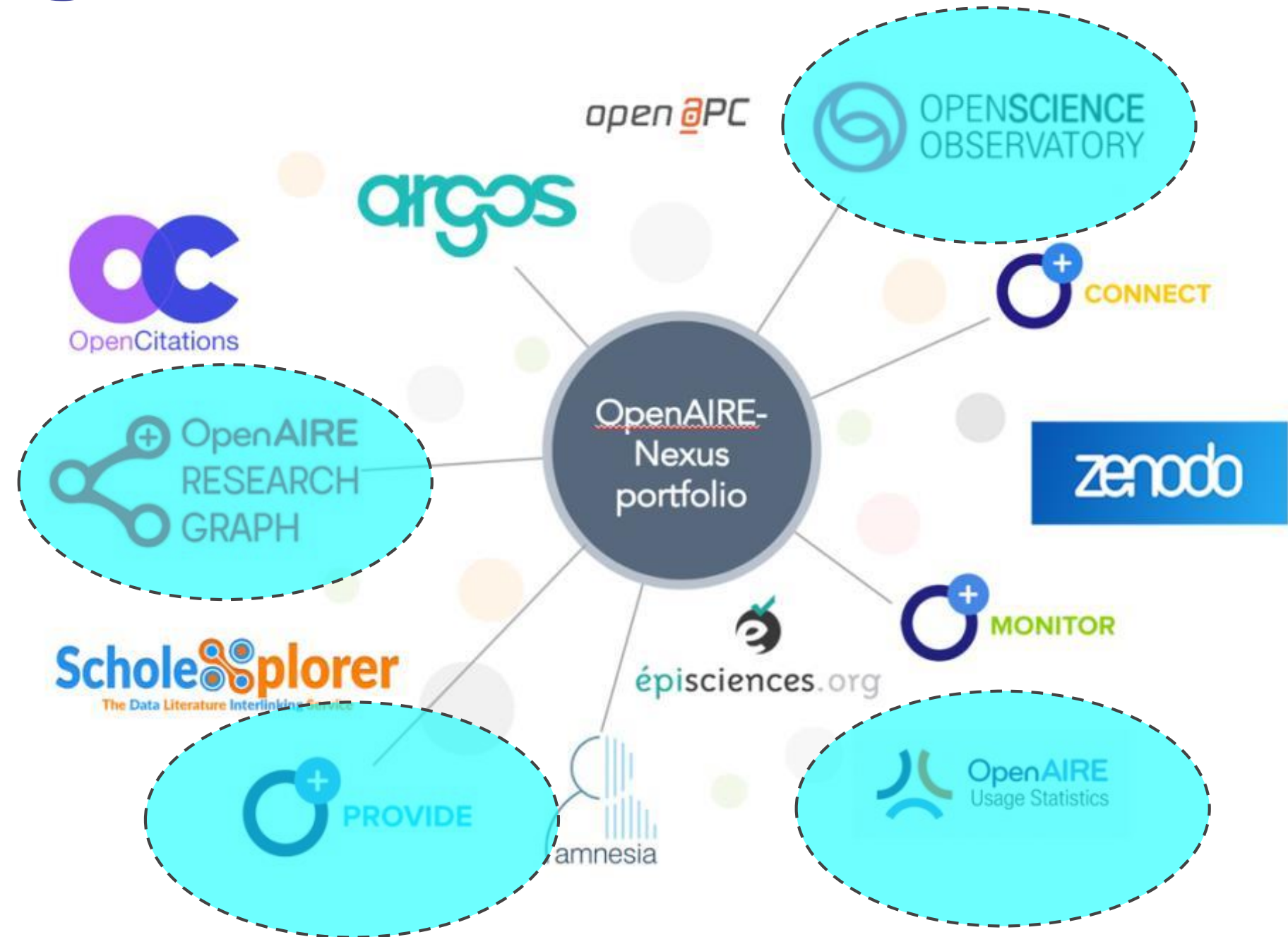
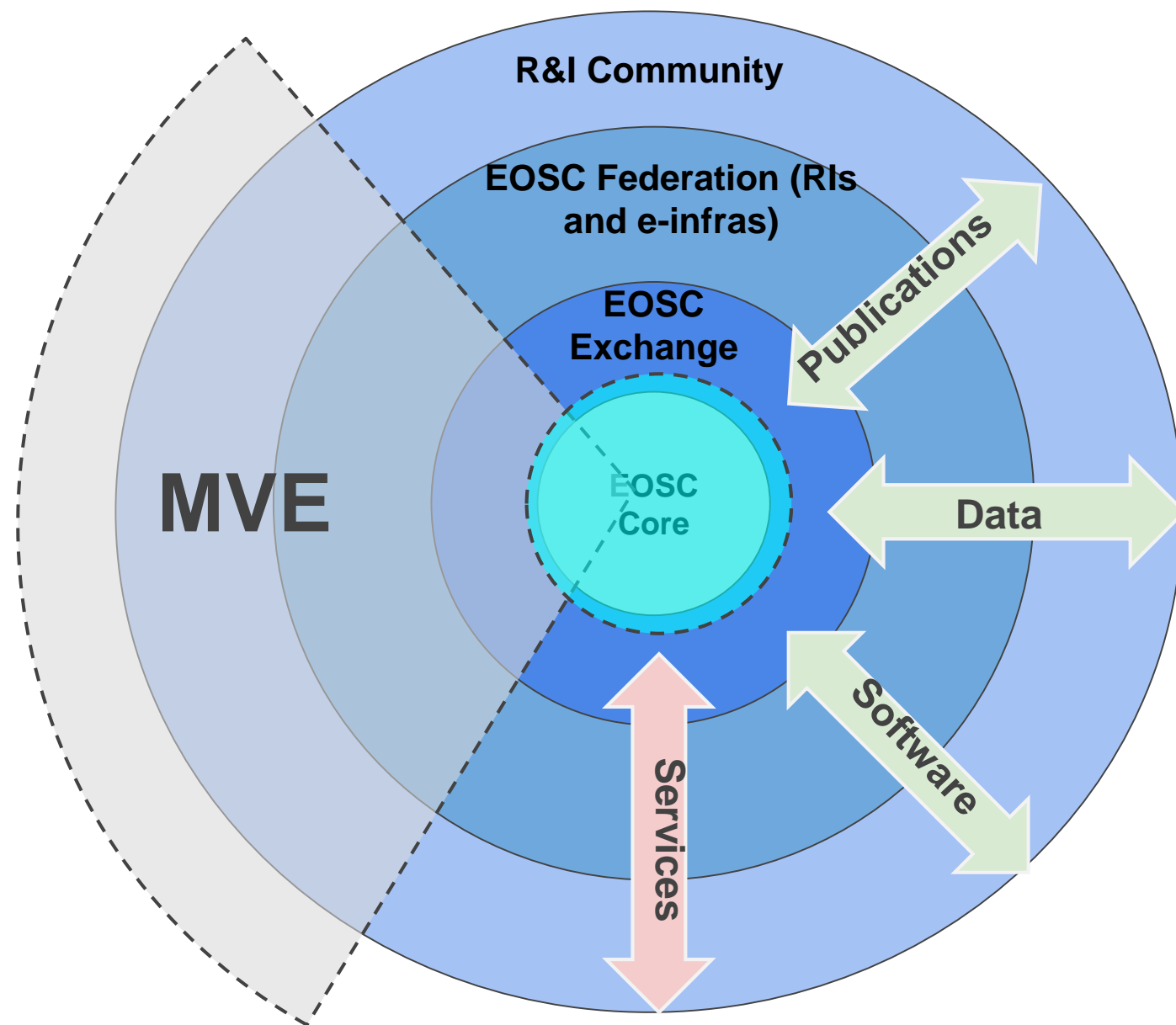
Devising new Open Science services for the community

## ***Improving service provision***

# OpenAIRE services in the EOSC



# Scholarly communication services for the EOSC-Exchange



# Thank you!

**Paolo Manghi (CNR-ISTI)**

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