

Bibliometrics



Enter the new era of Research Assessment with the
OpenAIRE Graph.

Transition away from proprietary databases, and include
more than just publications when assessing bibliometrics

Why?

- We are **the community driving Open Science** in Europe for more than 15 years
- We care about **ensuring that openness** is not just for researchers, but also for policy and decision makers
- We **use openness for the community's advantage**
- We ensure that the **OpenAIRE Graph is a community good**, a collaborative effort, Open-source and community-driven aspects

Features

- A 360° View of Research
- Open Access and Transparent
- High Content Quality
- Interlinked Data
- Continuous Updates
- Multi-Dimensional Analysis
- Contextual Insights
- EU and Global Research Focus
- Community and Collaborative Effort
- Cost-Effective
- API Access

Extensive and Diverse Data Sources

OpenAIRE Graph integrates information from a multitude of sources, including publications, research data, software, projects, organisations, and funders globally.

This provides a more holistic view of the research landscape compared to traditional bibliometric tools.

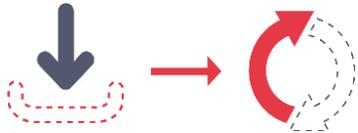


Data sources contributing to the graph
Collecting everything, not just open research



Open & Transparent

Data provenance is fully tracked and documented.



Unrestricted Access

Data is freely available for download and reuse, licensed under CC-BY

The World of **Data Set Free**

Open Access and Transparency

OpenAIRE supports **Open Science principles**, providing free and transparent access to its data.

This openness facilitates **broader research and analysis opportunities**, particularly for institutions or researchers with limited access to paid databases.

Improving Content Quality Collaboratively

We are actively collaborating with the community and domain experts to check and evaluate the effectiveness of our internal processes in **enhancing content quality**.

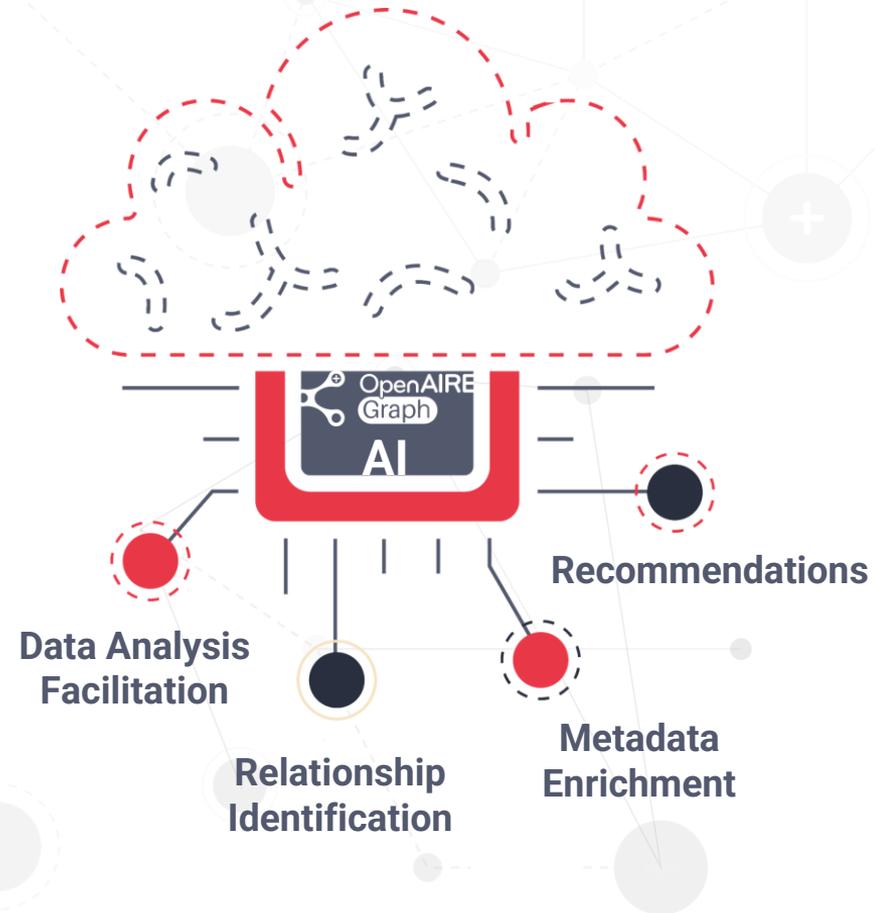
Deduplication: Avoids double-counting of citations across multiple versions of a single article.

Persistent Identifiers: Uses PIDs to effectively track publications, research data, and software.

Interlinking of Data

OpenAIRE doesn't just collect data; it also interlinks it.

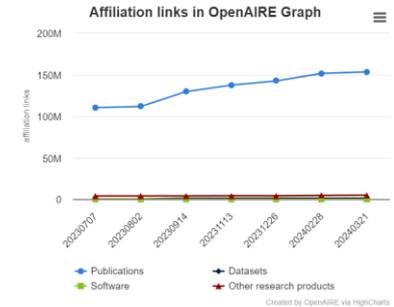
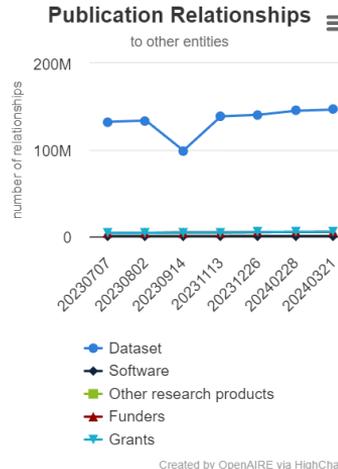
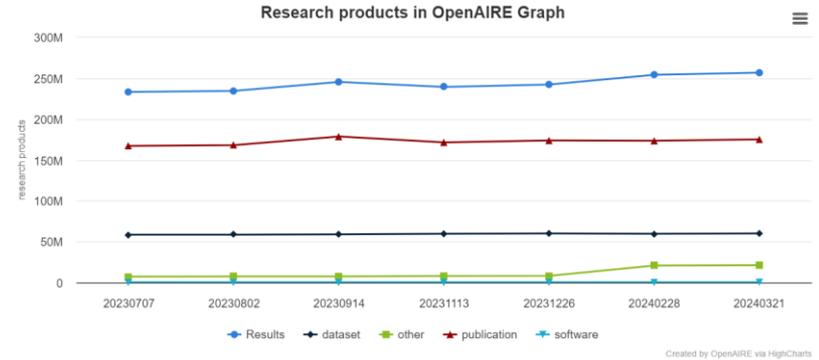
This means publications, data sets, projects, and funding information are connected, offering a **unique opportunity to perform more complex, network-based analyses** that can reveal patterns and trends not visible through simple citation counts or publication records.



Continuous Updates

The Graph is **continuously updated**, reflecting the latest changes and additions to the repository.

This feature is crucial for bibliometrics, where the timeliness of data can significantly impact the **accuracy and relevance of the analysis**.



Support for Multi-Dimensional Analysis

With its rich dataset and interlinked nature, the OpenAIRE Graph allows for multidimensional bibliometric analyses.

Researchers can **explore beyond mere citation impact** to examine aspects such as collaboration networks, interdisciplinary research impacts, and the influence of research funding on scientific outputs.



SUSTAINABLE
DEVELOPMENT GOALS



& Fields of Science (FoS)



Get **Deeper Insights** into Publications

Contextual Insights

Enriches the context of publications by classifying them according to Fields of Science (FoS) and Sustainable Development Goals (SDG)

EU and Global Research Focus

As an infrastructure that is aligned with the European Commission's Open Access mandates, the OpenAIRE Graph provides specific insights into the **impact of European research initiatives**.

Its extensive dataset also includes **global research activities**, making it a versatile tool for comparative studies on an international scale.



Community and Collaborative Aspect

The OpenAIRE Graph encourages collaboration among researchers, librarians, and developers.

This community-driven aspect means that users can contribute to and benefit from improvements in data quality and functionality, **promoting a more dynamic and responsive bibliometric tool.**

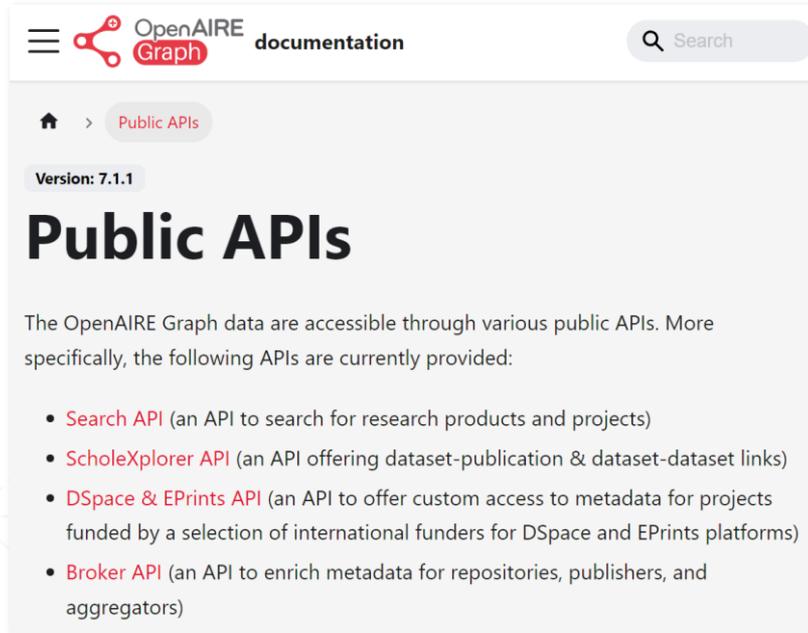
Advance the OpenAIRE Guidelines to collaboratively improve standards for Open Access repositories, helping to support interoperability and increasing the **visibility of research outputs.**

Cost-Effective

A cost-effective alternative to other bibliometric tools and databases that require expensive subscriptions.

This is particularly beneficial for organisations and researchers with limited funding but who need **access to detailed bibliometric data**.

If you would like to co-invest in the OpenAIRE Graph, you can contact us at amke@openaire.eu



The screenshot shows the OpenAIRE Graph documentation page for Public APIs. The page title is "Public APIs" and the version is 7.1.1. The content describes the availability of various public APIs for accessing OpenAIRE Graph data.

OpenAIRE Graph documentation

Public APIs

Version: 7.1.1

Public APIs

The OpenAIRE Graph data are accessible through various public APIs. More specifically, the following APIs are currently provided:

- **Search API** (an API to search for research products and projects)
- **ScholarExplorer API** (an API offering dataset-publication & dataset-dataset links)
- **DSpace & EPrints API** (an API to offer custom access to metadata for projects funded by a selection of international funders for DSpace and EPrints platforms)
- **Broker API** (an API to enrich metadata for repositories, publishers, and aggregators)

Access the OpenAIRE Graph dataset through public APIs for your bibliometric analysis.

<https://graph.openaire.eu/docs/apis/home>

Volume of Data: A collection of the global core of research outputs, representing the global knowledge of science.

Source Diversity: A wide range of data sources, ensuring a multifaceted view of modern research.

Global Collaboration: A platform encapsulating international research efforts and expertise, bridging geographical gaps.

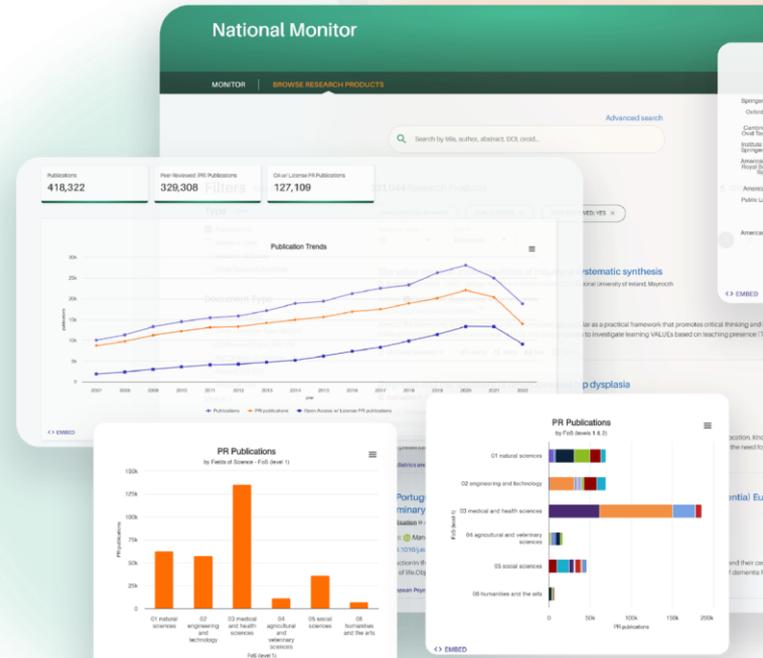


Visualise the Graph's data on the impact of your organisation in the research ecosystem via **OpenAIRE MONITOR**.

The **Irish National Open Access Monitor** example.

Supporting the nation's shift towards Irish scholarly research communication output transparency and accessibility, aimed at being 100% Open Access.

... No technical background or powerful computing infrastructure needed!





Use OpenAIRE Graph for **Bibliometrics**

Do you have **technical expertise?**

Access the OpenAIRE Graph dataset through **OpenAIRE API** for your bibliometric analysis.

Download the **Graph dataset** on **Zenodo** to explore and process bibliometric data

Note: While the dataset is open and free to all, it requires a significant amount of processing power to handle the entirety of its data. If you don't possess such capacities, you can access parts of the Graph via the **Beginner Kits**.

The screenshot shows the Zenodo page for the 'OpenAIRE Graph Beginner's Kit Dataset'. The page header includes the Zenodo logo and navigation links. The main content area features a title, a list of authors, and a 'Versions' section. The 'Versions' section shows two versions: Version 2.0.0 (published Aug 6, 2023) and Version 1.0.0 (published Dec 30, 2022). The page also includes a 'Downloads' section with 669 views and 272 downloads, and an 'External resources' section with a link to the OpenAIRE project.

zenodo OpenAIRE Graph Beginner's Kit Dataset

Published August 6, 2023 | Version 2.0.0

669 VIEWS 272 DOWNLOADS

OpenAIRE Graph Beginner's Kit Dataset

Baglioni, Miriam; Azzoni, Claudio; Barzi, Alessia; Biondi, Giambattista; La Bruzzo, Sandro; Menghi, Paolo; Dimitropoulos, Hany; Marmiroli, Andrea; Foudakis, Ioannis; Horst, Maria; De Siani, Michela; Arino, Mohamed; Vergada, Thomas; Chatzigeorgidis, Sotirios; Panatier, Olivier; Lumbroso, Roberto; Coriak, Andrei; Schwegler, Julian; Iannidis, Alexandros; Iliopoulou, Katerina; Kokkogiannaki, Argiro

The OpenAIRE Graph is an Open Access dataset containing metadata about research products (literature, datasets, software, etc.) linked to other entities of the research ecosystem: the organizations, project grants, and data sources.

The large size of the OpenAIRE Graph is a major requirement for beginners to familiarise with the underlying data model and explore its contents. Working with the Graph in its full size typically requires access to a huge distributed computing infrastructure which cannot be easily accessible to everyone.

The OpenAIRE Beginner's Kit aims to address this issue. It consists of two components:

- A subset of the OpenAIRE Graph composed of the research products published between 2020-12-28 and 2023-07-31, all the entities connected to them and the respective relationships. This subset is composed of the following parts:
 - `publications.tar`: metadata records about research literature (includes types of publications listed here)
 - `datasets.tar`: metadata records about research data (includes the subtypes listed here)
 - `software.tar`: metadata records about research software (includes the subtypes listed here)
 - `other-research-products.tar`: metadata records about research products that cannot be classified as research literature, data or software (includes types of products listed here)
 - `organisations.tar`: metadata records about organizations involved in the research life-cycle, such as universities, research organizations, funders, journals, aggregators, funder organisations.
 - `databases.tar`: metadata records about data sources whose content is available in the OpenAIRE Graph. They include institutional and thematic repositories.
 - `projects.tar`: metadata records about project grants.
 - `relations.tar`: metadata records about relations between entities in the graph.
 - `communities_infrastructures.tar`: metadata records about research communities and research infrastructures
- Each file is a tar archive containing gz files, each with one json per line. Each json is compliant to the schema available at <http://dx.doi.org/10.5201/zenodo.8238674>.
- The code to analyse the data. It is available on GitHub. Just download the archive, unzip/unrar it and follow the instruction on the README file (no need to clone the GitHub repository).



OpenAIRE
Graph

Stay in touch

Helpdesk

Your go-to for personalised technical support and service assistance



graph.openaire.eu/helpdesk



helpdesk@openaire.eu

User Forum

A space for Graph users to discuss functionalities, share insights, ask questions, and learn together



openaire.flarum.cloud