



OpenCitations

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REDESIGNING AN OPEN INFRASTRUCTURE ACCORDING TO THE FAIR PRINCIPLES

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FAIR use of open citation data

Open citation data that is compliant with FAIR data principles benefits the scholarly community as a whole.

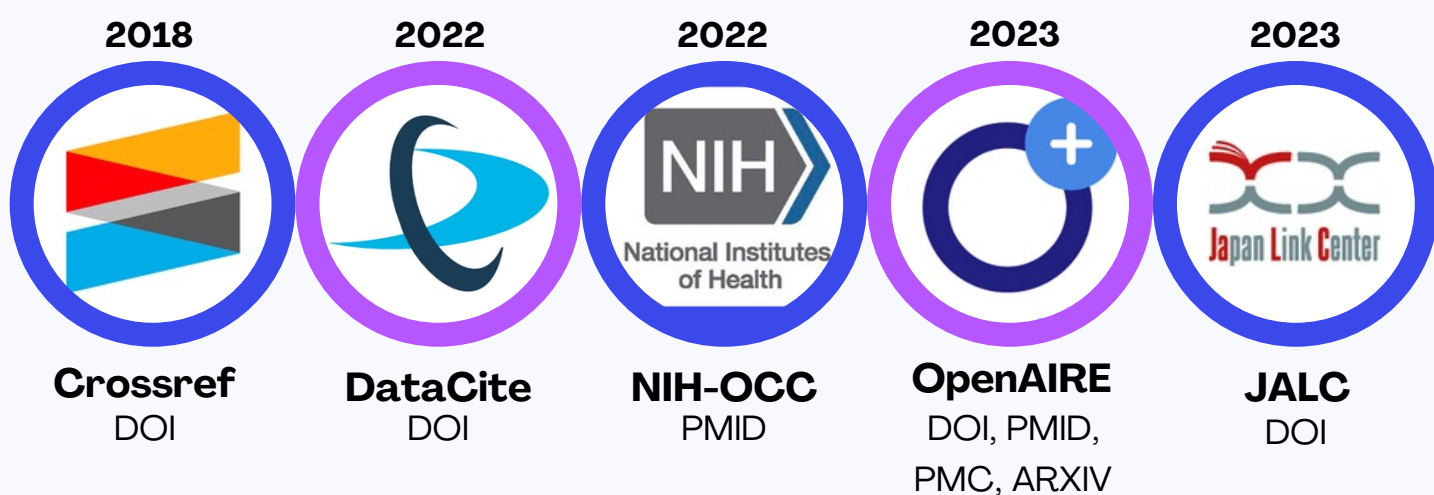
It is essential for citation indexes (either proprietary services or open science infrastructures) to embrace the FAIR principles to maximise their interoperability and reuse.

Since 2010, the open science infrastructure organisation OpenCitations has provided access to global scholarly bibliographic and citation data as a disruptive alternative to traditional proprietary citation indexes.

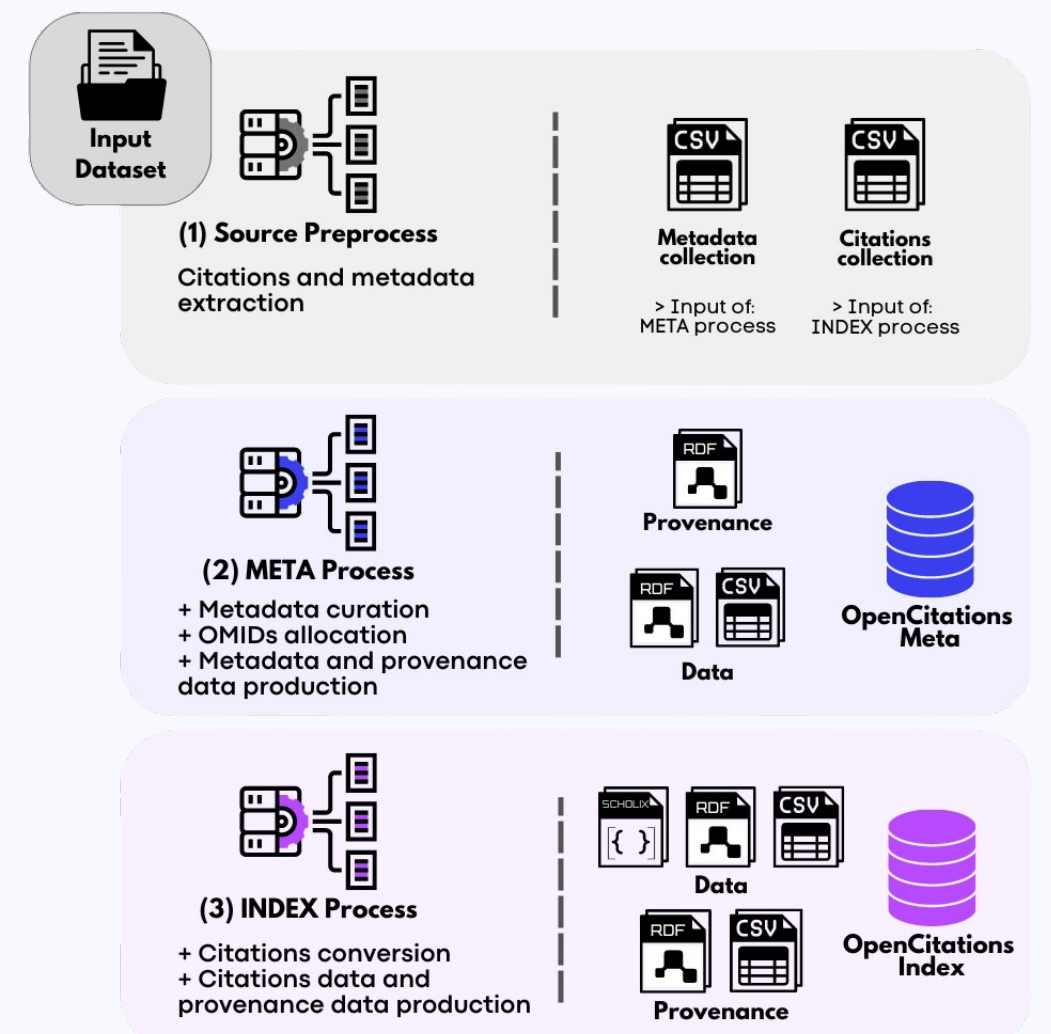
Collections and Data Sources

Each of the sources provides open citation data that has been merged and enriched in the unified collection **OpenCitations Index**.

The **OpenCitations Meta** collection, instead, stores and delivers basic bibliographic metadata (title, authors, identifiers, venues, etc.) for all publications involved in the citations included in the OpenCitations Index.



A new workflow for multiple sources



A FAIR Open Science Infrastructure

Findable: OpenCitations (and its metadata) has been included in several catalogues, including the EOSC and the IOI InfraFinder. All software created is available on GitHub and archived in Software Heritage, while the data are available in Figshare, Internet Archive, and Zenodo. All these entities are assigned with persistent identifiers—w3id.org (infrastructure, APIs), DOI (data, data model, software), SHWID (software), OCI, and OMID (data entities).

Accessible: Everything at OpenCitations, from services to data, can be retrieved using their persistent identifiers via HTTP. The bibliographic and citation data are available in machine-readable forms following Linked Data principles. All data can be accessed independently from the original publications from which they have been obtained.

Interoperable: All data are modelled in RDF according to a set of ontologies that follow the FAIR principles. REST APIs are available to enable interoperability at the service level.

Reusable: All data are available in CC0 and software is licensed using open source licenses to maximise reuse. Provenance information is associated with all the data entities via PROV-O, and data changes are also tracked (to enable transparency).