# Identifiers and metadata enable connections

Crossref

# Crossref overview - global infrastructure

- 8,000 publisher members
- Metadata store of over 89 million scholarly content items
- Persistent citation linking using DOIs
- Funder identifiers
- Report and display corrections & retractions
- Check manuscripts for similarities
- Data about content activity e.g. social, dataset links
- Open Metadata API & Search

Metadata deposited by publishers would be hard to find if there wasn’t a standard way to deposit and retrieve it. **Content Registration** provides that standard, allowing researchers and the rest of the world to know it exists, persistently.

# Content registration

- Journals
- Books
- Conference proceedings
- Standards
- Technical reports
- Working Papers
- Theses and dissertations
- Components (figures, tables)
- Datasets (supplementary data)
- Databases
- Preprints

# metadata

everything, including…

author names, ORCIDs, affiliations, article titles, ISSN, ISBN, pages, issue #, volume #s, dates, identifiers

# more metadata

## such as …

reference lists, funding data, ORCIDs, license data, clinical trial numbers, errata, retractions, updates and more through our Crossmark service, JATS-formatted abstracts, relationships between items…

Registering content help uniquely identify and therefore link it together

# DOI syntax

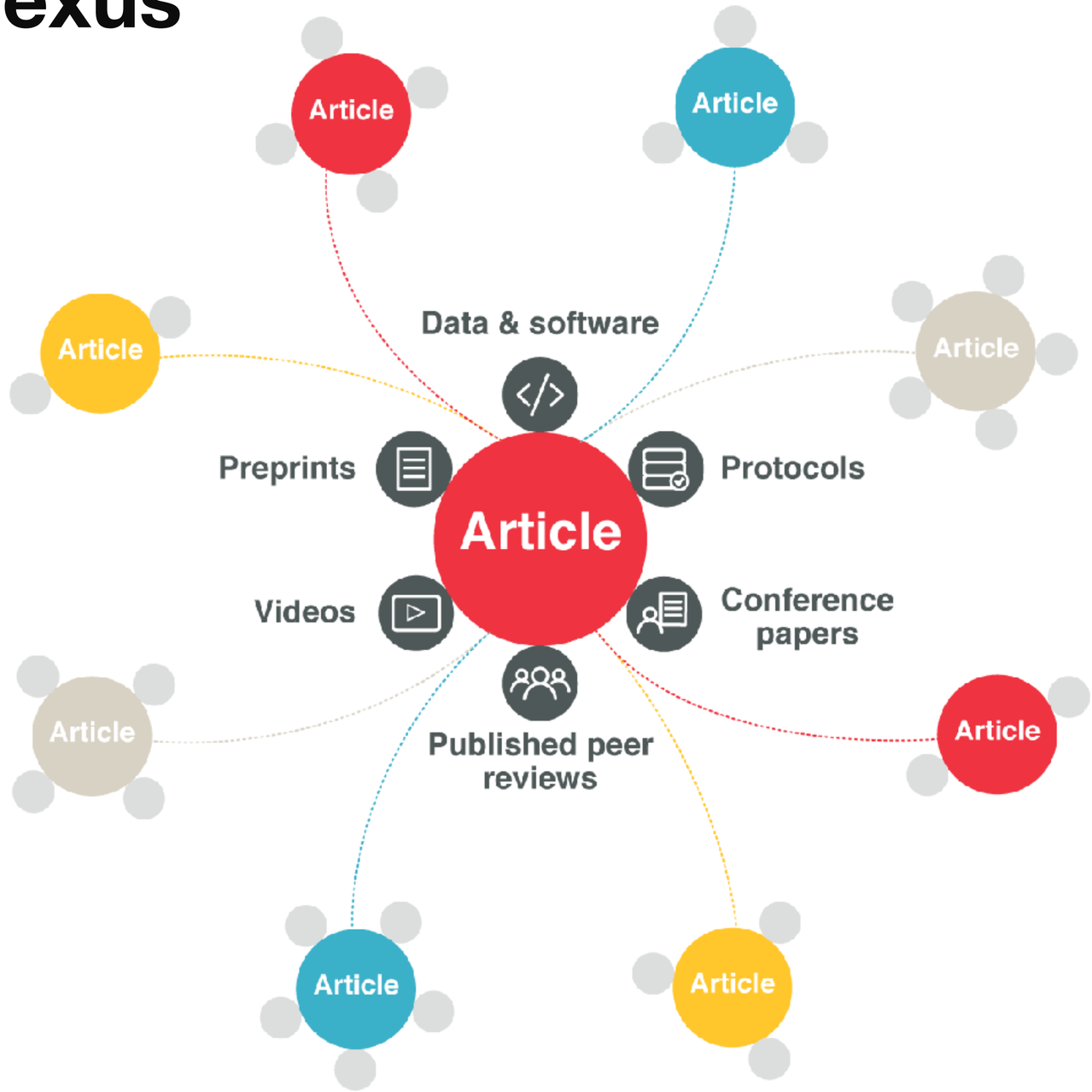
# DOI syntax

https://doi.org/10.1006/jmbi.1995.0238

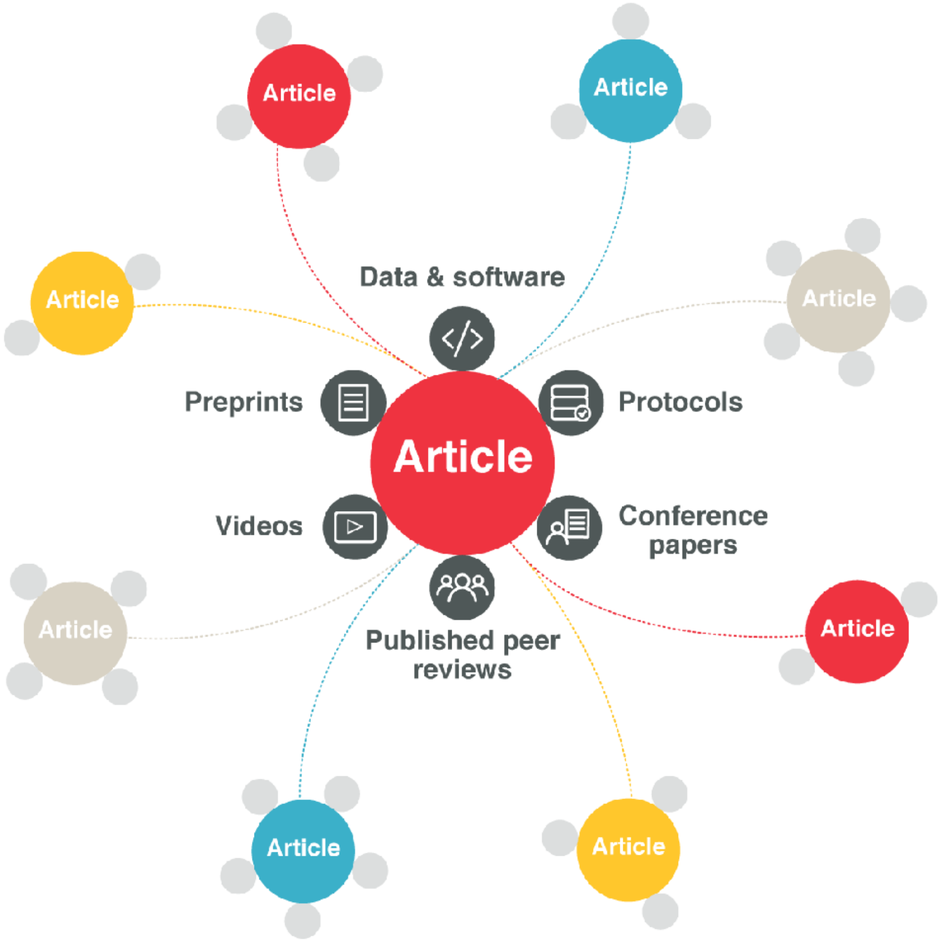
- The DOI directory: makes the DOI actionable on the web
- Prefix: assigned by Crossref
- Suffix: assigned by the publisher

Total DOI = Routes through the DOI resolver to point to the registered URL

# The Article Nexus



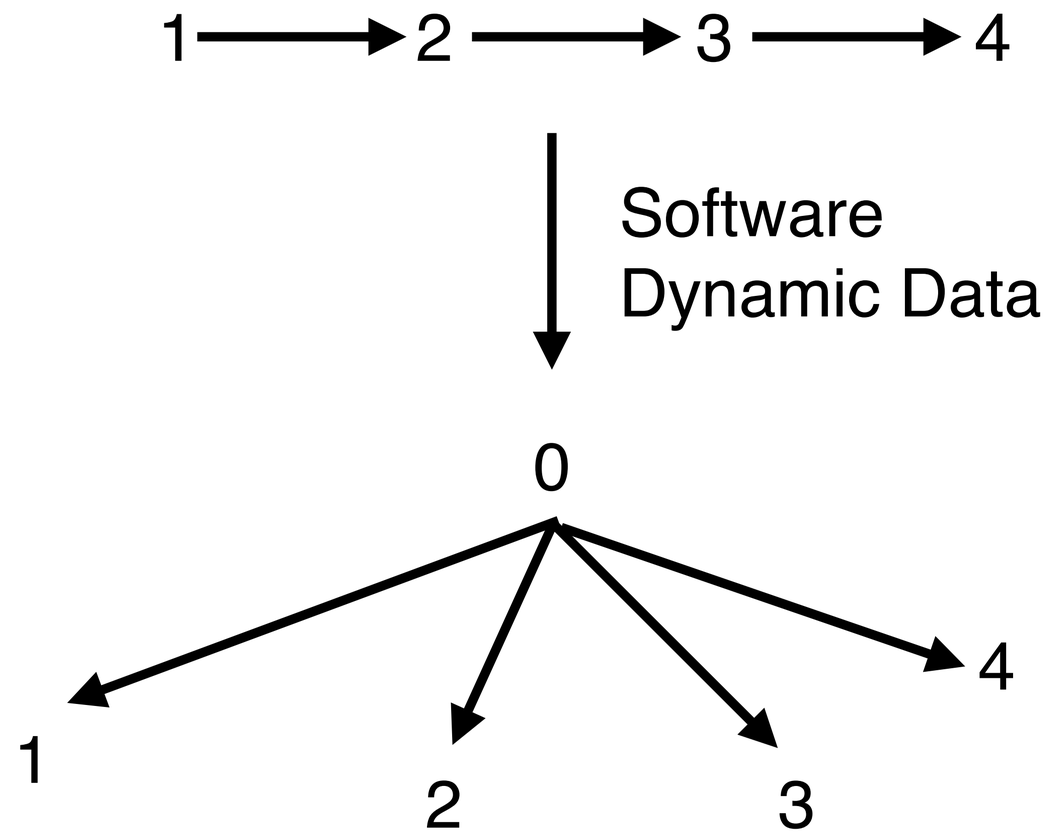
With all the relationships declared across all 80+ million Crossref metadata records, Crossref creates a global metadata graph across subject areas and disciplines that can be used by all.

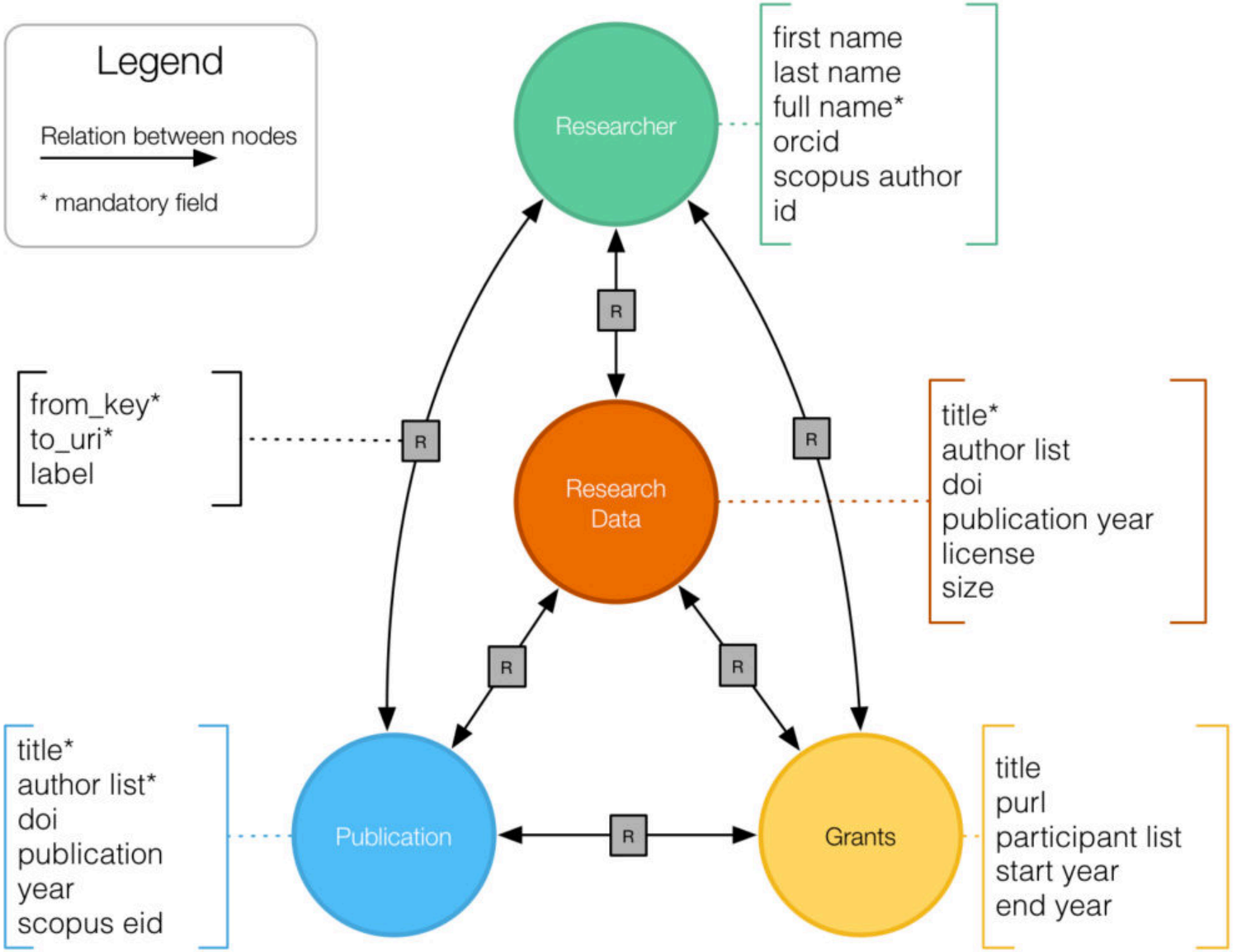



https://www.crossref.org/blog/the-article-nexus-linking-publications-to-associated-research-outputs/

# Data Versioning

Version 4.1 of DataCite schema (end of 2017) will support **hasVersion/isVersionOf** relation types:

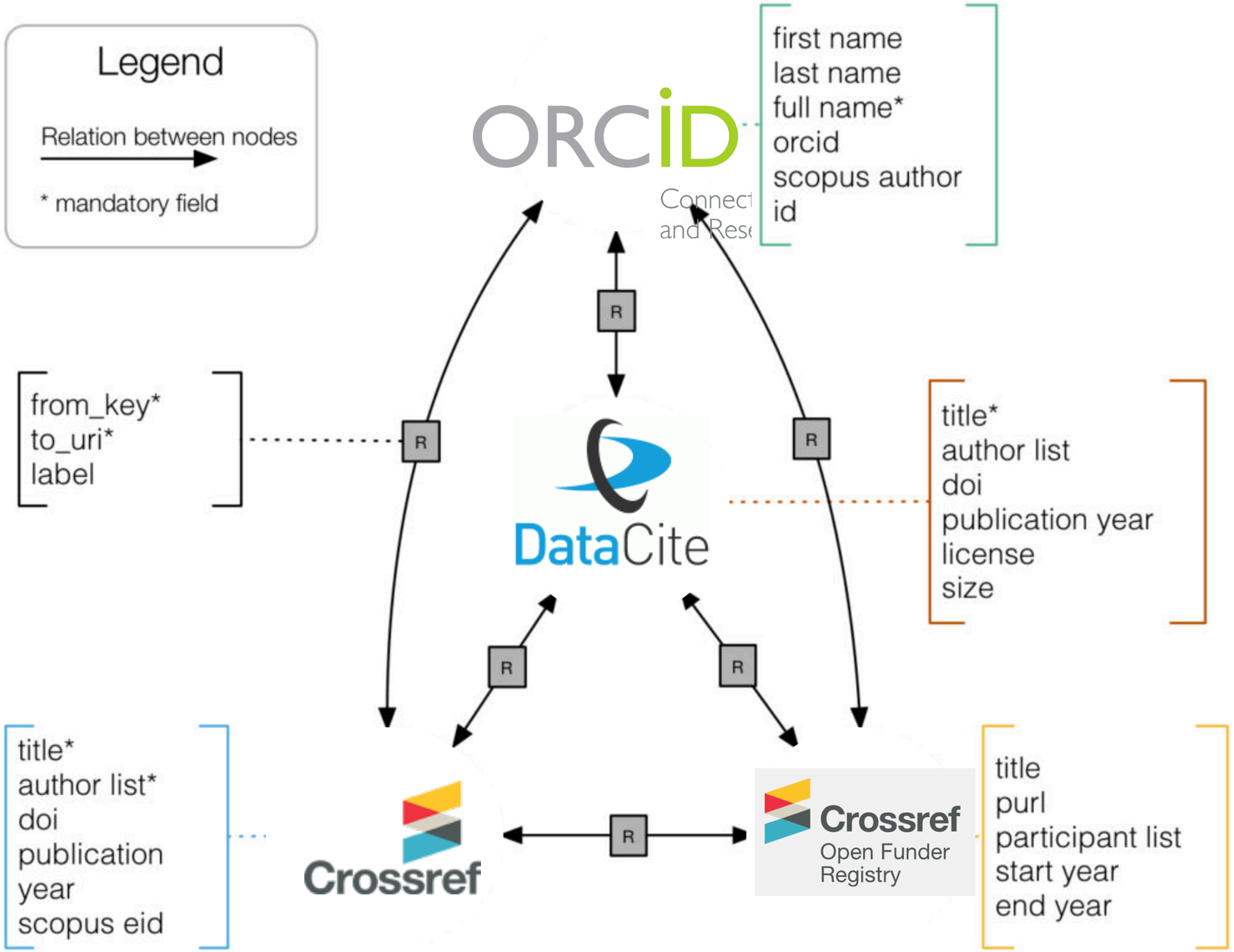





# Research Graph Meta Model

Version 2.0 (Aug 2016)

http://researchgraph.org/schema/



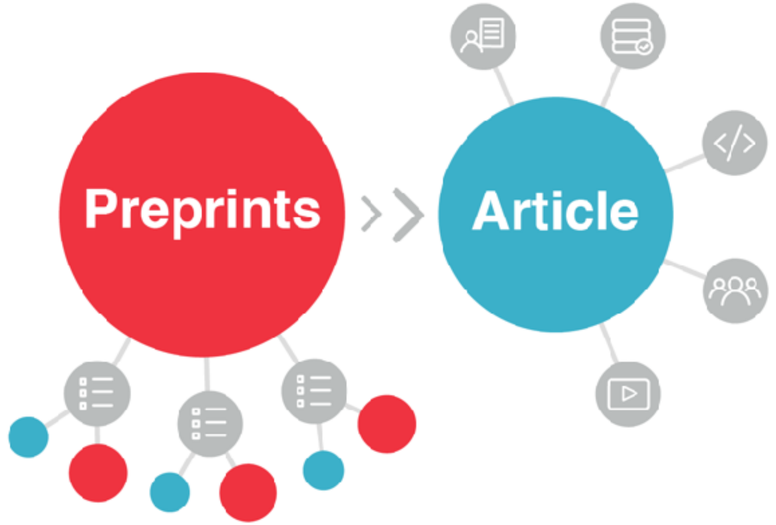

# Research Graph Meta Model

Version 2.0 (Aug 2016)

http://researchgraph.org/schema/

# Find

- Providing information and identifiers for content helps everyone simply and easily distinguish between similar works
- Our members register a wide range of content types with us including: books & book chapters, journal articles, conference proceedings, technical reports, standards, working papers, preprints



# Find

- Providing information and identifiers for content helps everyone simply and easily distinguish between similar works
- Our members register a wide range of content types with us including: books & book chapters, journal articles, conference proceedings, technical reports, standards, working papers, preprints

# Re-use

- We have metadata from over 89 million content items and thousands of publishers, and we make that available so that it can be used by lots of different systems, services, databases, libraries and researchers
- Computer-readable

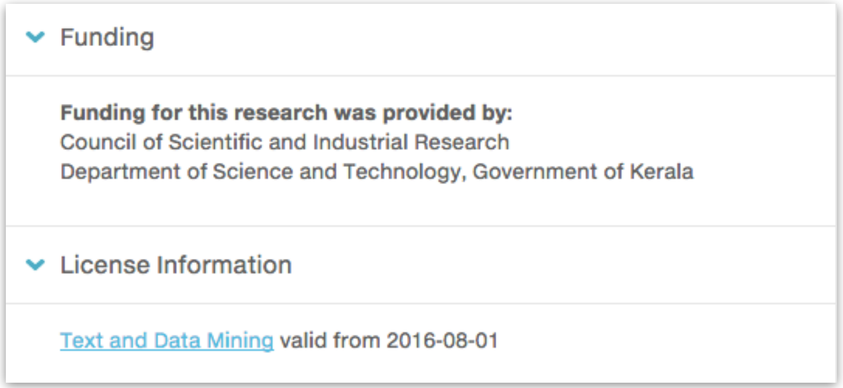
# Cite

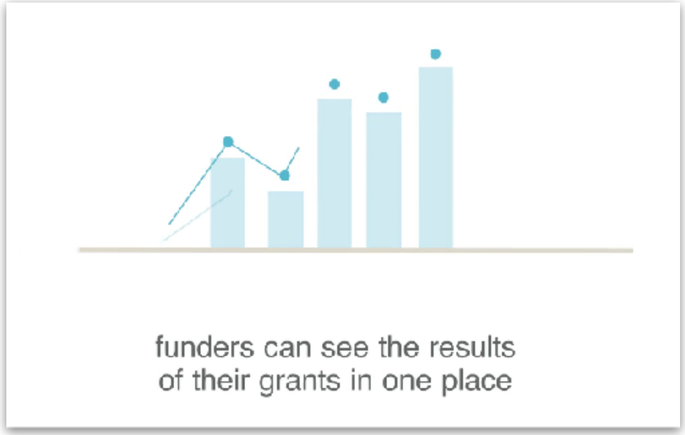
- Our members link their reference lists using the DOI
- Joining Crossref means entering this reciprocal agreement with thousands of participants
- We can also show members who goes on to cite their publications in future

**Cite this article**
Jahn N, Tullney M. (2016) A study of institutional spending on open access publication fees in Germany. *PeerJ* 4:e2323 https://doi.org/10.7717/peerj.2323

# Acknowledge and link

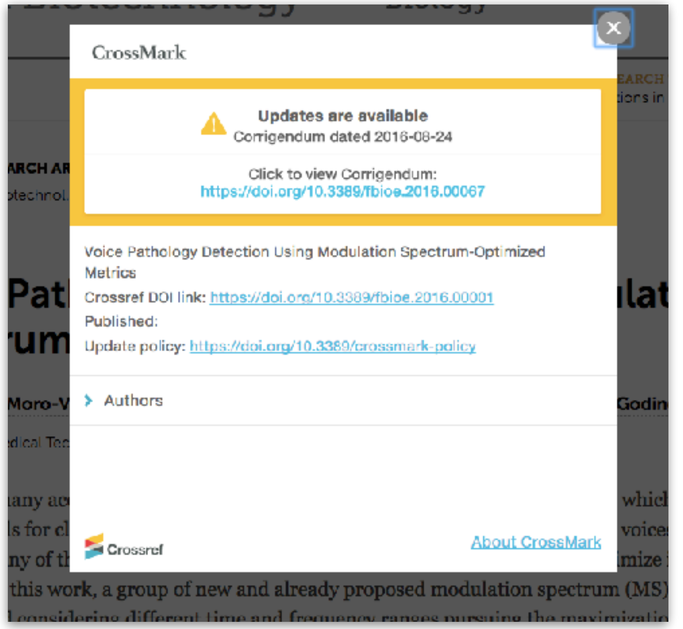
- We collect standardised metadata on who funded a piece of research
- We make this information freely available
- Helping reporting at funding organisations and helps publishers see who is driving content to them



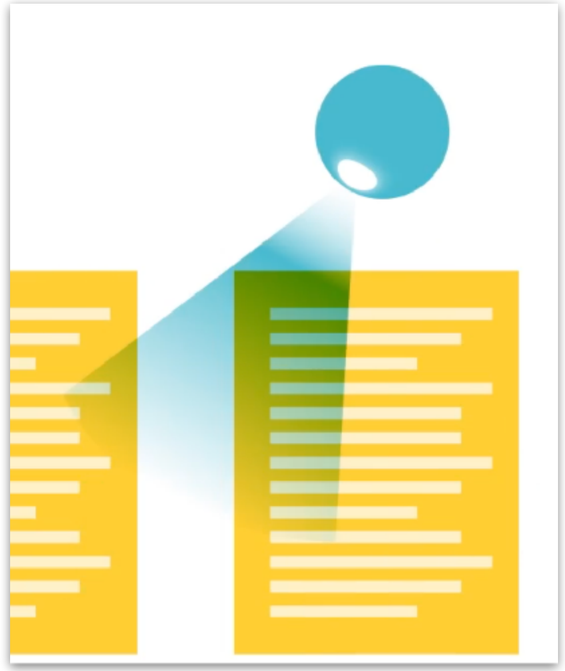
# Assess

- DOIs are persistent because our members update them so that content can still be discovered, even if it moves
- Post-publication changes:
  - Corrections
  - Retractions
  - Supplementary information
- Can be shown using Crossmark



# Assess

- Members who participate in our Similarity Check service can check papers for originality before they are published
- Papers checked against a large database
- iThenticate system produces report
- Trust and stewardship of content
- Author education



# Find out more!

- License information: what can I do with this content?
- Linked clinical trial information
- Archiving information
- Full-text links directly to the article

# Find out more!

- License information: what can I do with this content?
- Linked clinical trial information
- Archiving information
- Full-text links directly to the article