

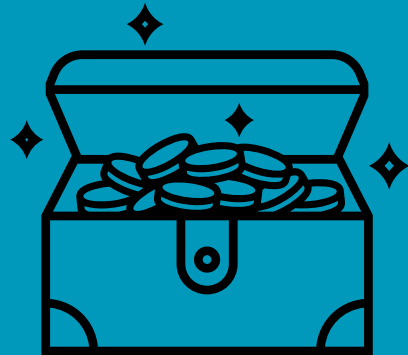
Persistent Identifiers (PIDs): Are there still important PIDs missing? Investigation on agreements with publishers

Open Repositories

11/June/2026

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Stein, Alexander Wagner, Silke Weiheit

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- The openCost project
- Metadata of a publication
- Where to store cost data?
- Integrating agreements/contracts into repositories
- Metadata schema
 - Agreements/Contracts
- New PID: openCost-ID
- Registry of Agreements

The project openCost

- **Project partners:** University Library of Regensburg, Bielefeld University Library, Deutsches Elektronen-Synchrotron DESY Hamburg
- Funded by the German Research Foundation (DFG)
- **Goals:**
 - Creating a technical infrastructure that allows to comprehensively record **all** publication costs and subsequently make them **freely** accessible by means of standardized interfaces
 - Enabling cost transparency on an institutional, national, and international level

Project focus

- Development of a **standardized metadata schema** for the collection/recording and transfer of data on publication costs
- Implementation of an open interface for **harvesting** and querying this data
- Extension of the **Electronic Journals Library** (EZB) with special functions for displaying information on open access publication costs and on the assumption of cost

Project focus

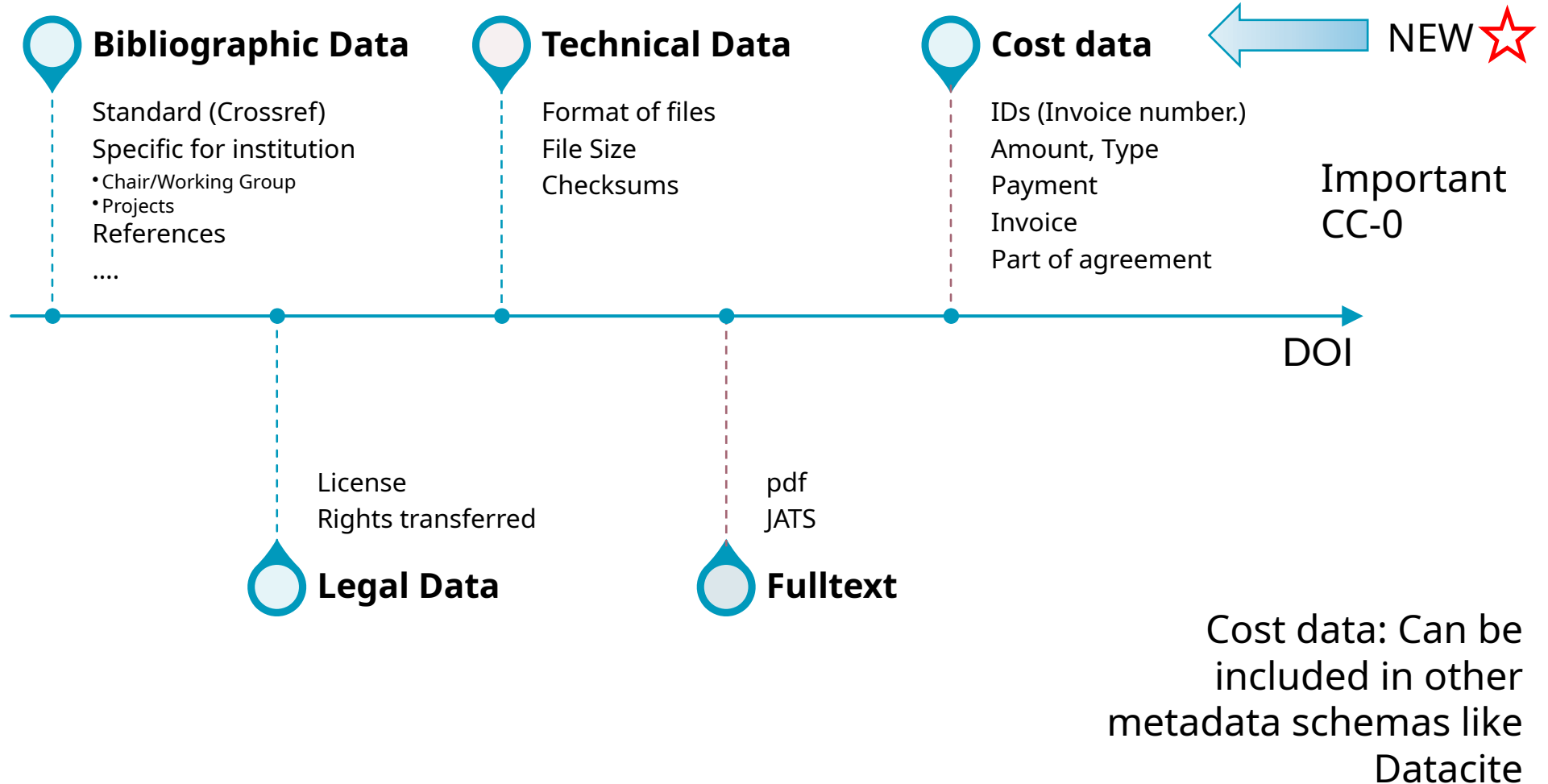
- Development of a internal **metadata schema** for the recording of data on publication costs as a superset of the exchange format
- Provide an validator for the exchange format
- Extension of the **Electronic Journals Library** (EZB) with a new, unique, and persistent identifier for any agreements with publishing institutions including Diamond Open Access and Open Access infrastructures

Metadata of publication

Extending the metadata of a publication with costs associated for publishing



Metadata of publication



What are Cost Data for publication?

1. Payment for a single article (APC), book (BPC), conference publication (CPC) etc.

→ Cost data can directly be included in article metadata

2. The publication is published Open Access, because it is part of a contract

- How can someone identify the contract?
- Possible additional cost on article level (e.g. page charges, colour charges)

Types of Agreements with publisher with some kind of publishing component

- Contract clause, which allows additional deposit in institutional repository, e.g. the Version of Record (VoR)
 - German national license
- Subscription with publishing component (institutional level, either fixed payment or based on number of publications)
 - Transformative Agreement, Vouchers
- Consortial Contracts with fixed payments
 - SCOAP³
- Payments for Diamond Open Access
 - Sponsorships, Memberships, Subscribe2Open etc.

Repositories

Achievement of transparency in the transformation process to open access



Repositories

- Repositories as designated location for sustainable publication of research results
 - Parallel publication of Gold, Hybrid and Diamond Open Access Publications
- Further: Source of excellent metadata
 - Metadata is automatically gathered from various sources: Crossref, DataCite, OpenAlex
- Enrichment with local requirements to obtain additional value
 - institutions, chairs, and local identifiers to obtain additional value
- Funding of research: funder and project number
 - provision of financial information, no exact figures

Where to store data on publication costs?

- Metadata of a publication that is stored in a repository:
 - **Bibliographic metadata:** all data describing the publication
 - **Technical metadata:** technical information and data about the publication
 - **Legal metadata:** mainly rights that are assigned to the publication
 - **Administrative metadata:** all relationships between a publication to an organization
- Metadata in library or management systems:
 - Cost data, but no information about the publication
 - Difficult to expand
 - Transformative agreements: publications have to be assigned to single payments
 - Diamond Open Access: Maybe there is no payment

Cost data in repositories

Advantages:

- Open System
- Possibility of modeling own metadata
- Free combination of metadata
- Enabling statistical analyses
- Budget planning for libraries: Publication costs
- Standardized interfaces (OAI-PMH and APIs) for easy and automated data exchange

Article part of Agreement

Articles of transformative agreements, community models, diamond open access



Information about related agreements

Case 1: Mentioned in copyright

Published by the American Physical Society under the terms of the Creative Commons Attribution 4.0 International license. Further distribution of this work must maintain attribution to the author(s) and the published article's title, journal citation, and DOI. Funded by SCOAP 3

Case 2: Mentioned in Acknowledgement - Funding

Open Access funding enabled and organized by Projekt DEAL.

Others: No mention at all

???

Information about related agreements

Case 1: Mentioned in copyright

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Case 2: Mentioned in Acknowledgement - Funding

Open Access funding enabled and organized by Projekt DEAL.

Others: No mention at all

???

Is this information
Findable
Accessible
Interoperable
Reusable

Why is a publication published under a CC-by license in a repository

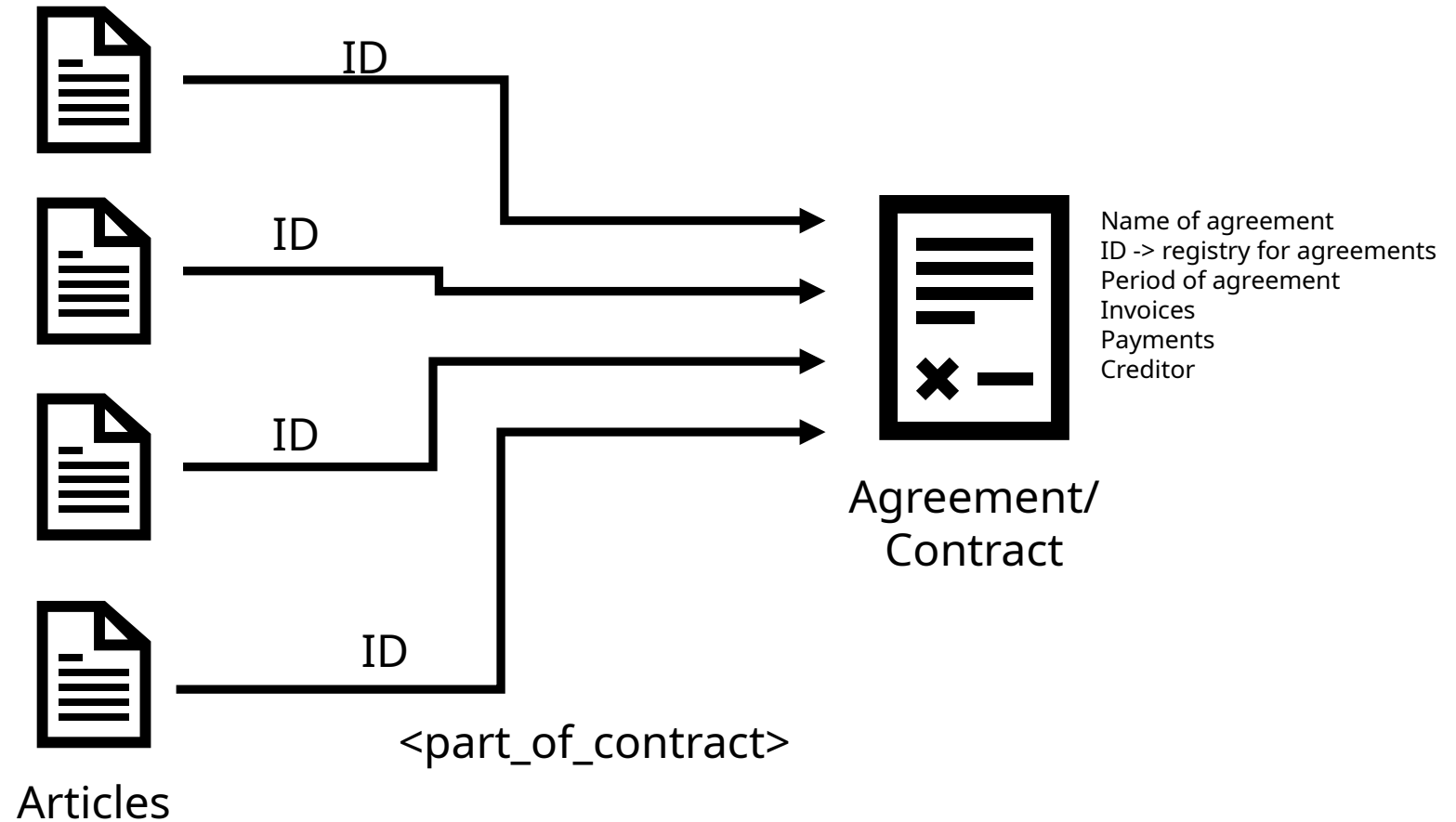
Possible reasons:

- Primary publication in the repository
 - Phd Thesis
 - Preprints/working paper
 - university press
- Republished
 - Transformative agreement
 - Consortia (SCOAP³)
 - Diamond OA
 - Without financial support of the institution
 - With financial support of the institution

No information about funding of publication just of funding of research

New Entity in Repository: Contract

Reference in Article Metadata to Contract



Contract entity

```
<contract>
  <contract_name>DEAL</contract_name>
  <institution>...</institution>
  <invoice_group>...
    <payment>...</payment>
  </invoice_group>
</contract>
```

```
contract:{
  contract_name:DEAL,
  institution:{...},
  invoice_group>:{...
    payment:{...}
  }
}
```

Solution for:

Machine Readable Data

Exchange of data possible via

- OAI-PMH
- API

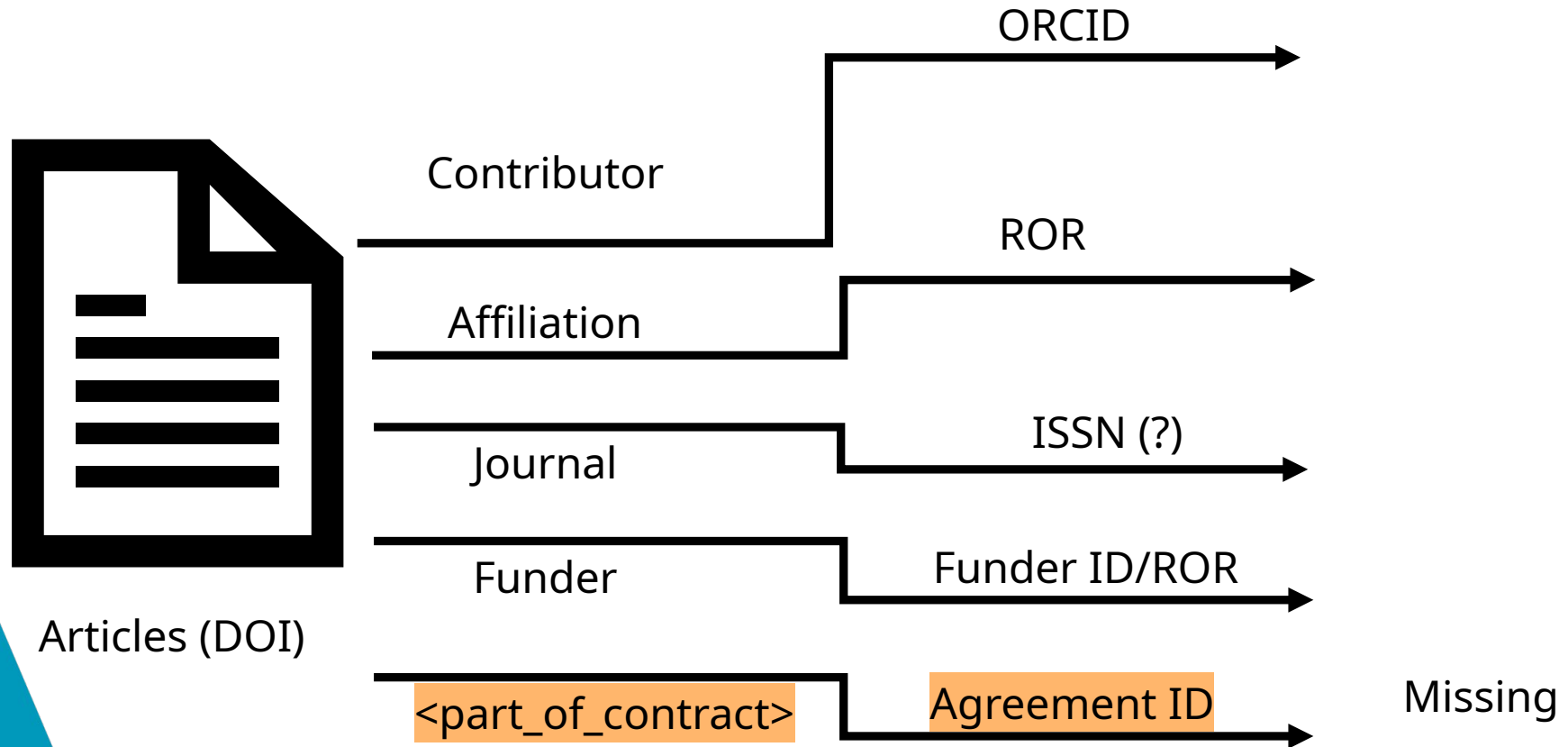
Remaining Problems:

local metadata

Name not always well defined

Ambiguity of name contracts

Connection of an article with different entities



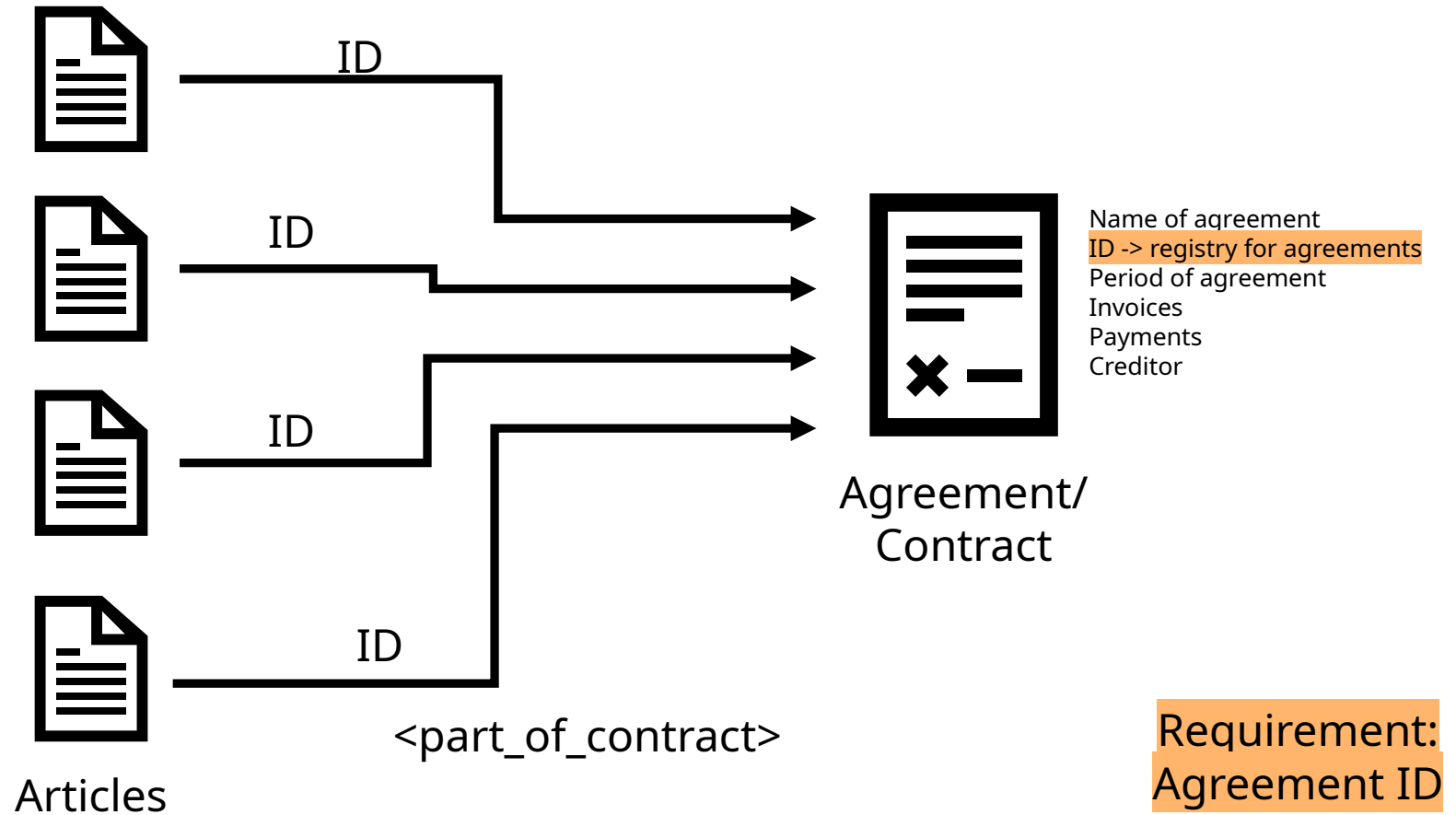


New PID: openCost-ID

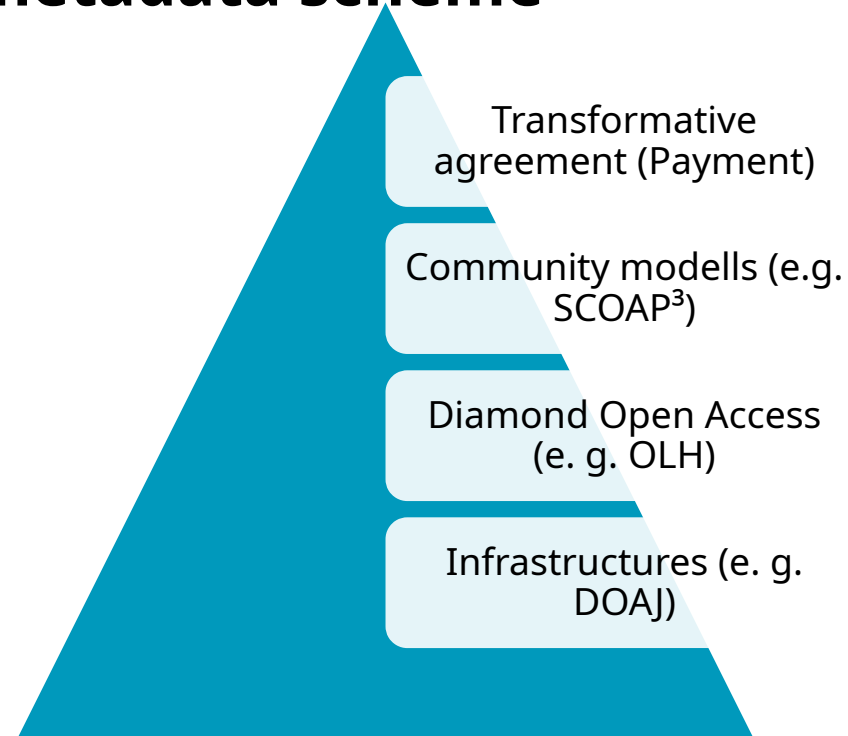
Create a registry für Agreements/Contracts with a uniquely and persitent ID analogous to ORCID, ROR etc.



New Entity in Repository: Contract Reference in Article Metadata to Contract



Flexibility of metadata scheme



See Transparency to Sustain Open Science Infrastructure, <https://tsosi.org/>



Important:

No payments on registry level

Must include consortia models but also institutional agreements



New Registry openCost-Registry for publishing agreements

<https://opencost.de>



Agreement ID (with Negotiator, e.g. consortia)

oc-[Provider][Start_Date][Negotiator]-[Number_substructure]

Examples: oc-koala2026tib-1

(<https://opencost.de/oc-koala2026tib-1>)

Metadata

- Name of Agreement*
- Provider Name (Consortia, Publisher)*
- Negotiator (Consortia Lead, Institution)
- Date: Start – End
- Substructure (e.g. specific subject)
- URL (Link to the Webpage)

* Mandatory fields

Agreement ID (without Negotiator, e.g. individuell contract)

oc-[Provider][Start_Date]-[Number_substructure]

**Examples: oc-koala2026tib-1
(<https://opencost.de/oc-koala2026tib-1>)**

Metadata

- Name of Agreement*
- Provider Name (Consortia, Publisher)*
- Negotiator (Consortia Lead, Institution)
- Date: Start – End
- Substructure (e.g. specific subject)
- URL (Link to the Webpage)

* Mandatory fields

Search & Browse the registry

[Login](#) [Create Account](#)[Home](#)

openCost Registry

The opencostid is a **unique, machine-readable identifier** for contracts and business models in the field of scholarly publishing. It enables agreements to be uniquely identified and linked to the participating institutions and the journals involved. In this way, the opencostid creates greater transparency and facilitates analysis, monitoring, and data exchange between systems.

It complements existing services such as the ESAC Registry by mapping not only information on transformative agreements but also on other business models such as memberships or Subscribe-to-Open. The goal is to provide as comprehensive and practical a representation of the current contractual landscape as possible.

The opencostid registry is managed within the context of the Electronic Journals Library (EZB), but is independent of EZB membership and is available worldwide free of charge.

[An overview of all opencostids already assigned can be found here](#)

[Advanced Search](#)

Requesting an opencostid

By registering a contributor account and logging in to this site, you are able to submit missing agreements to openCost registry. Editors will approve requests and new opencostids are assigned automatically.

Contact

[Project Partners](#)[Email Us](#)

The openCost Project

The aim of **openCost** is to create a technical infrastructure enabling publication costs to be accessed freely via standardized interfaces and formats. This facilitates cost transparency at institutional and (inter-)national level.

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openCost conference 2026



[openCost metadata schema in GitHub](#)

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O...

[OAPublishing Collective](#) (1)
[OAPublishing Collective \(Institutional Membership, Hosting\)](#) (1)
[OAPublishing Collective: MedienPädagogik](#) (1)
[Open Book Collective](#) (1)

[Open Book Publishers \(Institutional Support\)](#) (1)
[Open Commons of Phenomenology \(Institutional Support\)](#) (1)
[Open Library Economics \(ZBW\) \(Institutional Support\)](#) (1)
[Open Library of Humanities](#) (1)

<https://www.opencost.de>



Koala: Informatik und Mathematik (TIB) 2025-2027

opencostid: [oc-koala2025tib-1](#)

Alternative Agreement Title: KOALA Informatik und Mathematik (TIB) 2025-2027

Date Start: 2025

Date End: 2027

Provider Name: Koala

Agreement Substructure: Informatik und Mathematik

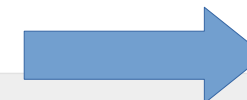
Negotiator Name: TIB

URI: <https://opencost.de/id/eprint/4>

Export Format ASCII Citation Export

<https://www.opencost.de>

Propose new agreement/contract

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Login/Create Account to register new contracts

[Home](#)

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[openCost metadata schema in GitHub](#)

<https://www.opencost.de>

Next Step: Integration of Electronic Journal Library (EZB)

<https://ezb.ur.de/>

The Electronic Journals Library is a service to facilitate the use of scholarly journals on the internet. It offers a fast, structured and unified interface to access full-text articles online.

The EZB contains 86967 journals which are accessible free of charge to anyone. Furthermore, the participating libraries provide their users access to the journals they subscribe to.

Connection to

- Participating **institutions**
 - i.e. institutions paying for publishing or sponsorship etc.
- **Journals** within the agreements
 - List of journals, where publishing is free either
 - For participating institutions
 - For all authors

First Use Cases

Reporting of Payments

- For German Research Foundation (DFG)
- Starts June 2026

Transparency

- Including openCost ID in OpenAPC
- Possibility to see all payments and publications of one agreement even over more institutions

Conclusion

First time, that cost are published

Freely available

Standardized

Human readable

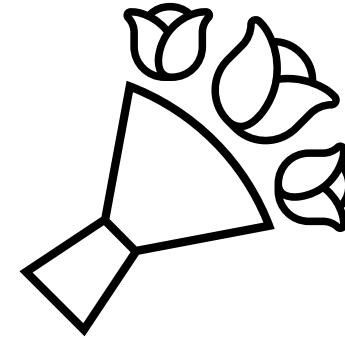
Machine readable

Fulfilling **FAIR**-principles

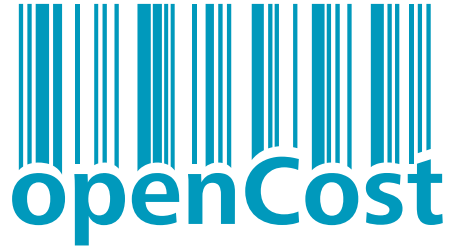


Thanks

- openCost
- DFG-Grant 457354095



- Team
- Julia Bartlewski, Christoph Broschinski, Dirk Pieper (Bielefeld)
- Lisa-Marie Stein, Alexander Wagner (Hamburg)
- Bianca Schweighofer (thanks for slides), Colin Sippl, Lisa-Marie Stein, Alexander Wagner, Silke Weisheit (Regensburg)



Thank you for the attention!

- Website: <https://opencost.de/en>
- openCost publications: <https://www.opencost.de/en/publications/>
- openCost mailing list: opencost.info@mailman.uni-regensburg.de
- Github repository: <https://github.com/opencost-de/opencost>
- Contains the schema and its documentation (including FAQs, tabular description, XSD file for formal verification, and folder with valid sample files)
- Tracks the evolution of the schema in a transparent way