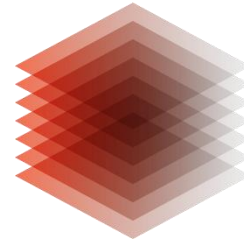


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Towards a reference implementation for open scientometric indicators: the ROSI project

Christian Hauschke, Technische Informationsbibliothek (TIB)
euroCRIS Membership Meeting 2019
University of Münster, 20th November 2019

Overview

1. The ROSI project
2. Registry of Open Scientometric Data Sources
3. Concepts, entity types etc.
4. User studies
5. Reference implementation

Overview on the ROSI project

Reference Implementation for Open Scientometric Indicators

Management

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Team

Svantje Lilienthal, Grischa Fraumann

Funding

Federal Ministry of Education and Research (BMBF)

Duration

1 October 2018 – 30 September 2020



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Federal Ministry
of Education
and Research

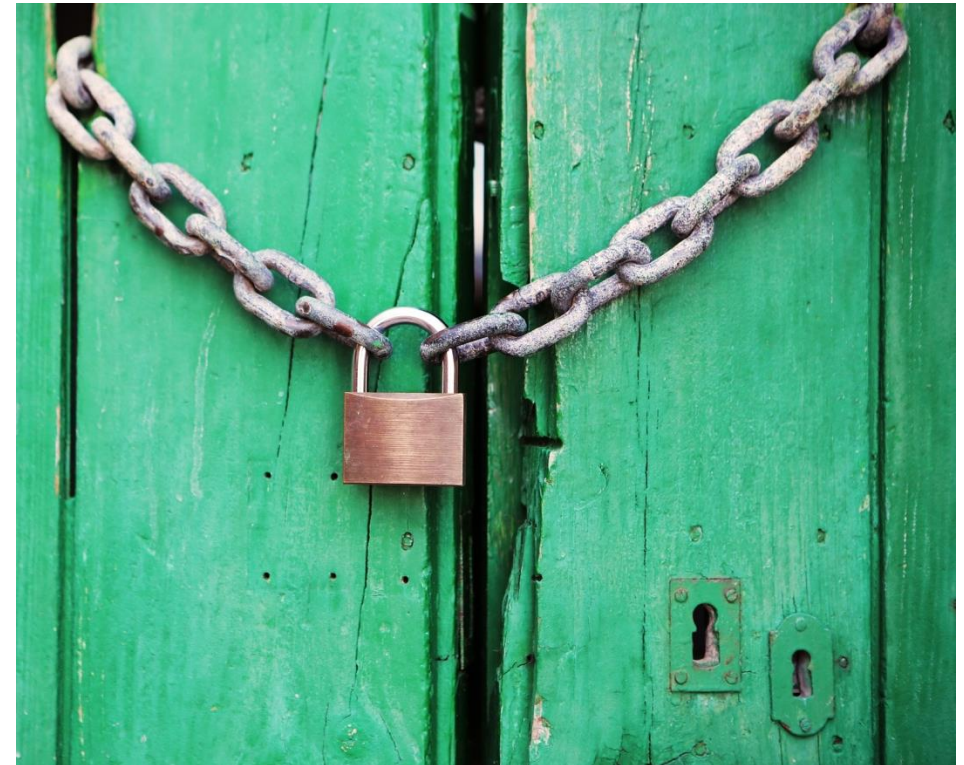
Quantitative research
on the science sector



tib.eu/rosi-project

Background

- research assessment relies on some criticized indicators and is based on **obscure data**
- research evaluation driven by research **administration**, policy and funding
- needs and perceptions of **researchers** often neglected



Background



- we need **open** scientometric data, indicators and infrastructures
- we want the scientific **community** in control
- We want **researchers** to be in control

That means:

- scientometric data based on **open data sources**
- involving the scientific community selecting
 - **data sources,**
 - **indicators** and
 - **visualizations**



Project roadmap

-  analyze **OPEN DATA SOURCES**
-  develop a **DATA MODEL**
-  implement a reusable **PROTOTYPE** for customizable scientometric indicators
-  design prototype based on **USER NEEDS**

Registry of Open Scientometric Data Sources

Collecting metadata about open scientometric data sources
openly and collaboratively



- ✓ Metadata schema
- ✓ Data model with entity types and concepts

The Registry is available at:
<https://labs.tib.eu/rosi/>

Registry of Open Scientometric Data Sources

ROSI

TIB

This site is under construction.

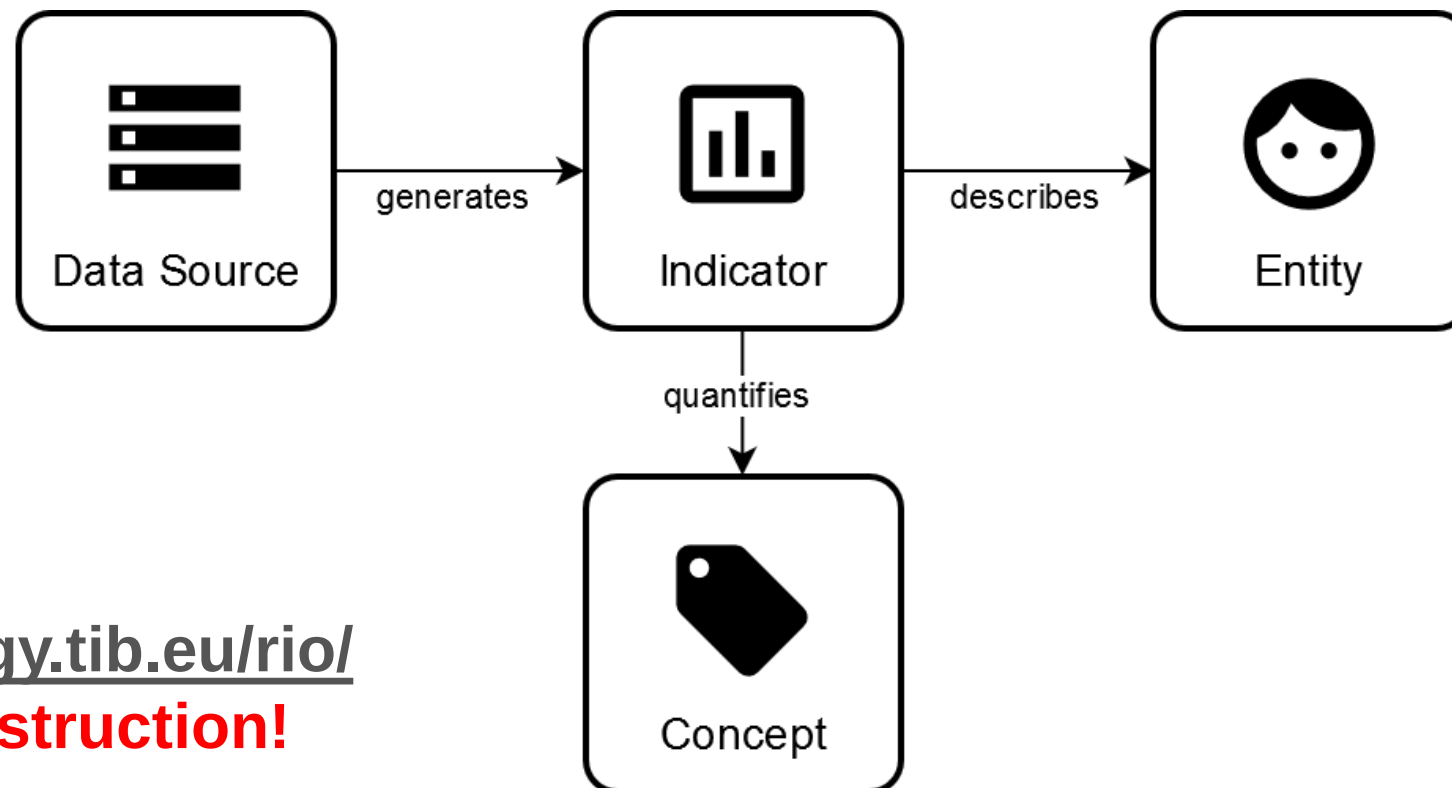
The diversity of scientometric data sources is large – and new ones are constantly being published, existing ones are changing, and others are being switched off. It is almost impossible to maintain a complete overview. In this Registry of Open Scientometric Data Sources we collect and describe several data sources for open, i.e. freely licensed scientometric information. [Read more](#)

[Add new data source](#)

Show entries Search:

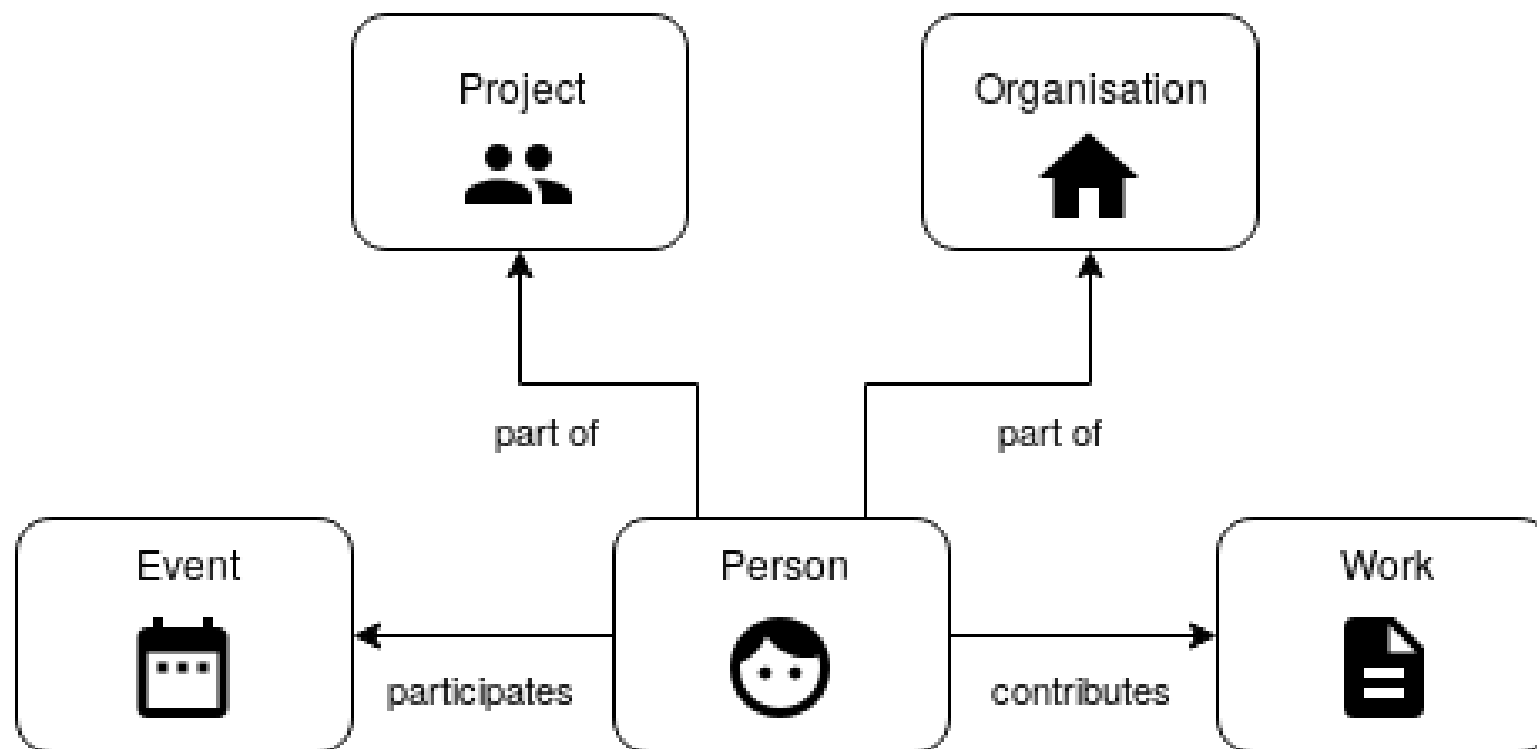
#	Name	Description
1	Directory of Open Access Journals (DOAJ)	The Directory of Open Access Journals (DOAJ) provides a list of open access journals. Journals need to apply for a review process before they can be included into DOAJ.
2	dissemin	Dissemin detects papers behind pay-walls and invites their authors to upload them in one click to an open repository.
3	Crossref Event Data	The Event Data service captures data on discussions about about scholarly content in non-traditional places (online platforms for discussion, publication and social media) and acts as a hub for the storage and distribution of this data. The service provides a record of instances where research has been bookmarked, linked, liked, shared, referenced, commented on etc, beyond publisher platforms. For example, when datasets are linked to articles, articles are mentioned on social media or referenced in Wikipedia.
4	OpenAIRE	"OpenAIRE's mission is closely linked to the mission of the European Commission: to provide unlimited, barrier free, open access to research outputs financed by public funding in Europe." https://www.openaire.eu/mission-and-vision
5	NOA Scientific Image Search	"Harvesting, analysis and efficient reuse of scientific images using Wikimedia infrastructures"
6	BASE	"BASE is one of the world's most voluminous search engines especially for academic web resources. BASE provides more than 120 million documents from more than 6,000 sources. You can access the full texts of about 60% of the indexed documents for

ROSI core model



<http://ontology.tib.eu/riol/>
Under Construction!

Entity types



Concepts

Societal Impact



The impact that a work has within society. Recognition from societal groups or for societal activities; measurable impact e.g. via patents, citations in policy documents, mentions in (social) media.

Openness



Compliance of a person or work to Open Science Standards (e.g. FAIR research data, social openness (readability etc.))

Community



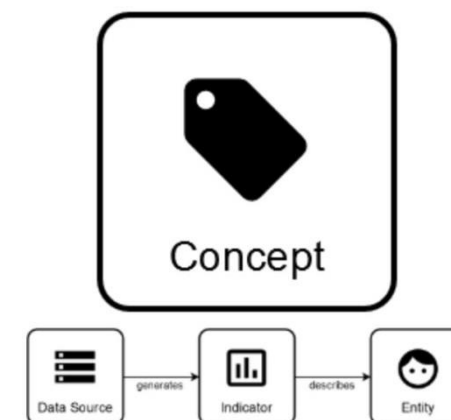
Involvement in the scientific community, e.g. participation in conferences, peer review and editorial activities, and learned societies, etc.

Scientific Impact



The impact that a work has within the scientific community; is mostly based on citation-based indicators (e.g. publication impact as measured through citations)

The ROSI Project



User studies (interviews and workshops)

1st phase: **qualitative interviews** with researchers

- Perception on scientometrics, research evaluation, data sources, visualisations, indicators, etc.

2nd phase: **workshops** with researchers

- Evaluation of prototype
- Usability tests

3rd phase: **qualitative interviews** with researchers

- Evaluation of final prototype

➤ Results to be published in a user handbook

Sneak preview: First results

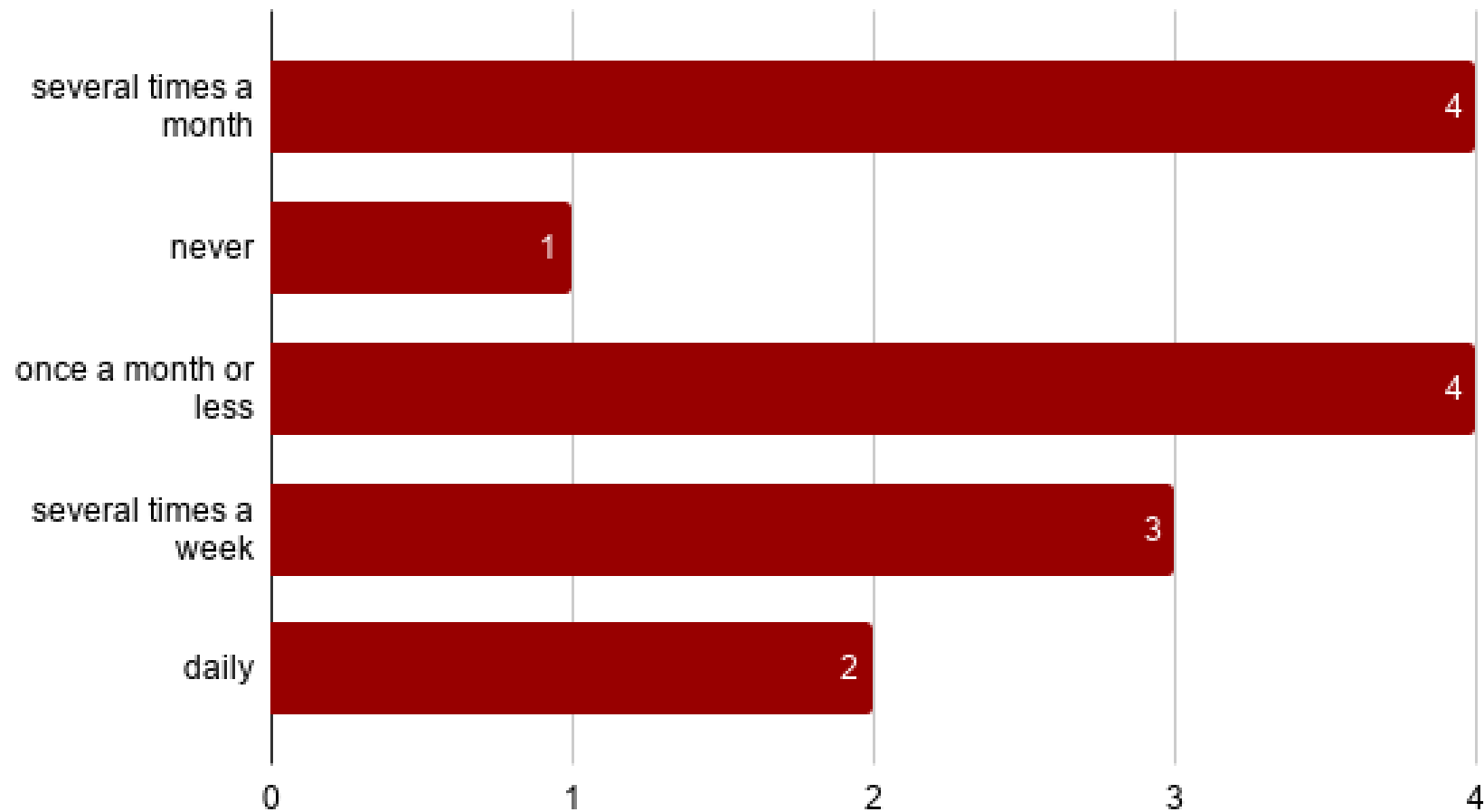
Discipline	Research Assistant	Doctoral Candidate	Professors	Total
Social Sciences	1	1	1	3
Humanities		2		2
Mathematics and Natural Sciences	4	1	2	7
Engineering		1	1	2
Total	5	5	4	14

A selection of suggested concepts

Suggestion	Relations to ROSI concepts
Teaching of Early Career Researchers	Community, Societal Impact
Added value for the wider public	Societal Impact
Research Ethics / good scientific practice,	Community, Scientific Impact
Responsible Research	Societal Impact
Research quality	Scientific Impact, Community

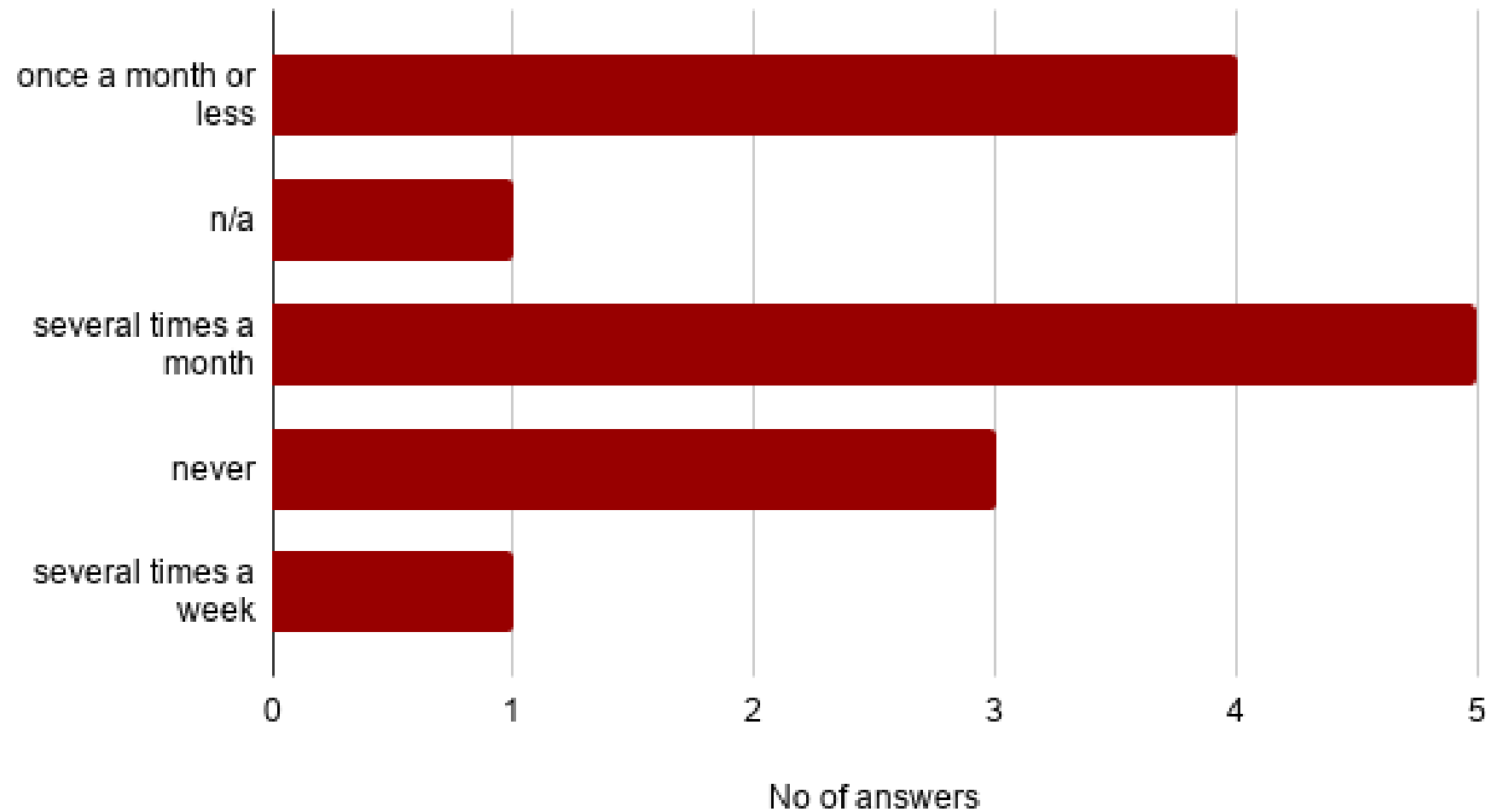
Usage of research profiles

Searching literature

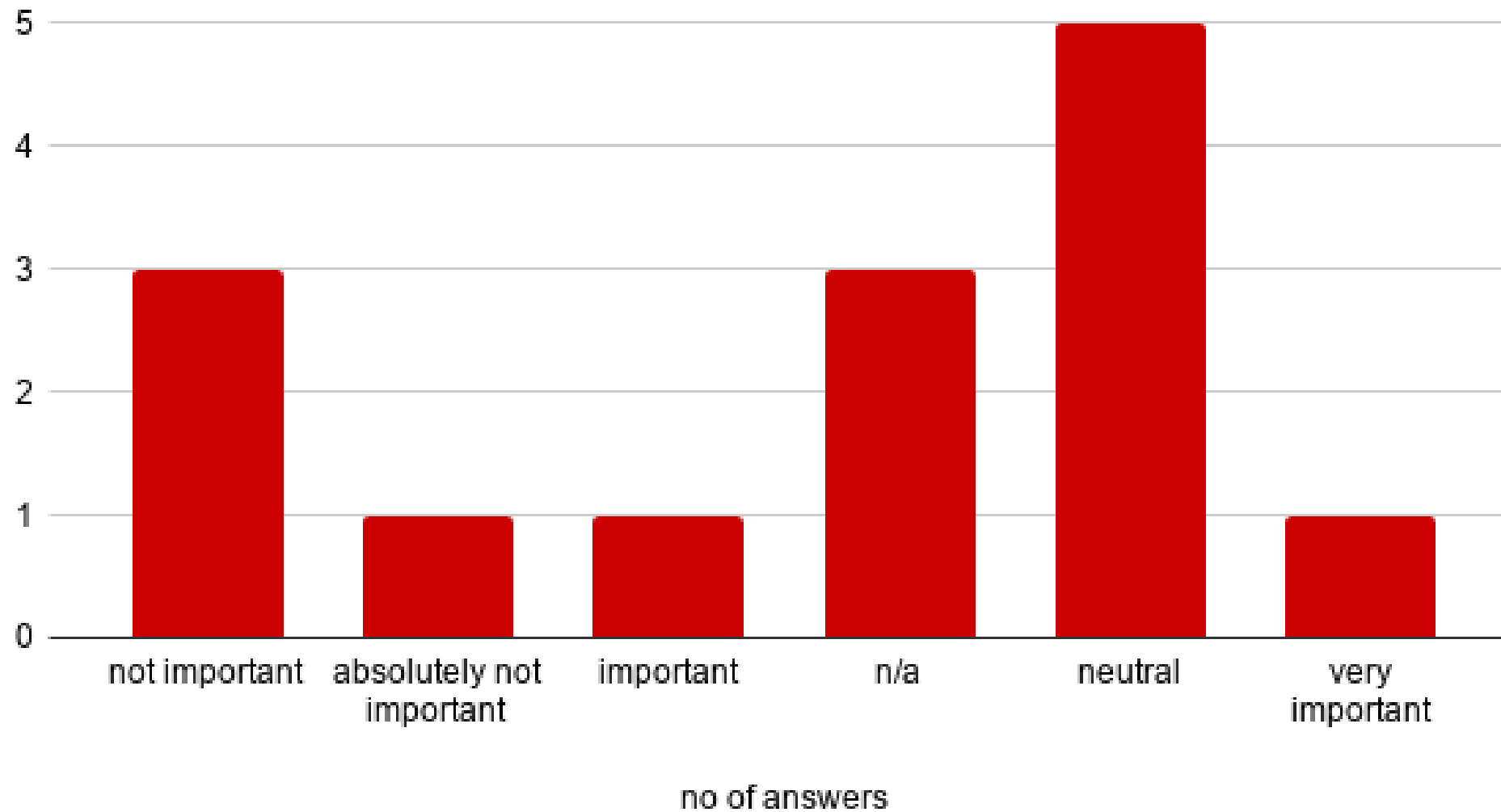


Usage of research profiles

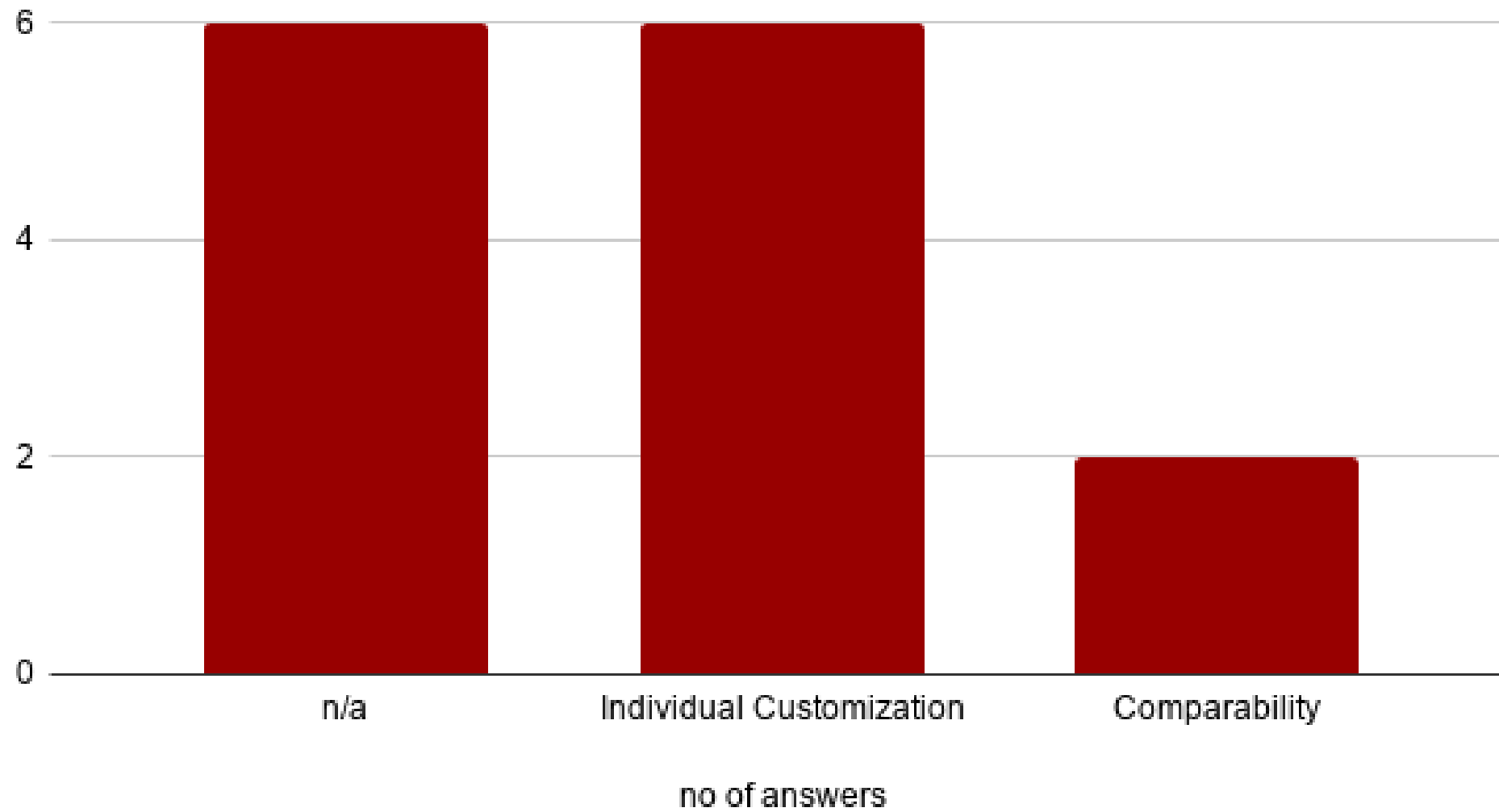
Usage of own profile

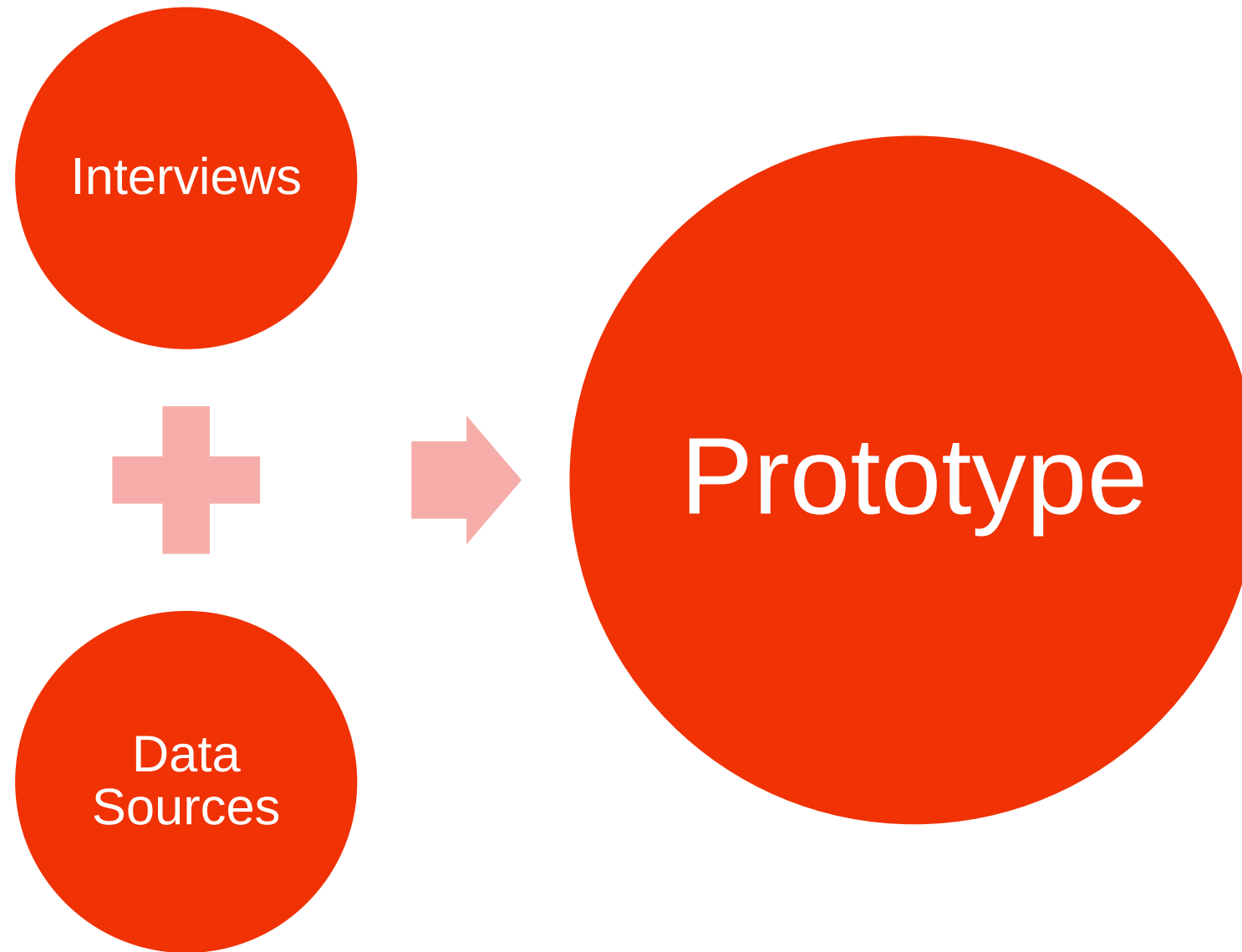


Comparability of profiles



Compare or customize?





Reference implementation I



Users will be able to select

- data sources,
- indicators and,
- visualisations.

<https://labs.tib.eu/roshi/prototype/>

Bibliometrics: The Leiden Manifesto for research metrics

Default publication

Customize!

Overview

Scientific impact

Societal impact

Community

Openness

Scientific Impact



Societal Impact



Community



Openness



Visualize your impact

[Home](#) [About](#)



Identifier

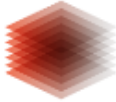
Visualize!

[example 1](#) [example 2](#) [example 3](#) [example 4](#) [example 5](#)

Reference Implementation II

TIB VIVO




TIB VIVO [BETA]

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[Events](#)
[Capability Map](#)



Hauschke, Christian


Positions
 Mitarbeiter, Open Science Lab , Programmbereich C - Forschung und Entwicklung 2016 -

Research Areas


[Communication in learning and scholarship](#) (LCSH)
 [Library science](#) (LCSH)
 [Linked data](#) (LCSH)
 [Open access publishing](#) (LCSH)

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selected publications

academic article
 VIVO: a system for research discovery. Journal of Open Source Software. 4:1182. 2019  6
 Problematische Aspekte bibliometrie-basierter Forschungsevaluierung. Informationspraxis. 5. 2019
 Open Science und die Bibliothek - Aktionsfelder und Berufsbild. Mitteilungen der Vereinigung Österreichischer Bibliothekarinnen und Bibliothekare. 72. 2019
 The Research Core Dataset (KDSF) in the Linked Data context. Procedia Computer Science. 146:29-38. 2019
 Anforderungen an Forschungsinformationssysteme in Deutschland durch Forschende und Forschungsadministration - Zusammenfassung zweier Studien. Informationspraxis. 4. 2018
[... more](#)



[Co-author Network](#)
[Map of Science](#)

Research profile ownership

- Researchers often have multiple identities
 - Different research areas
 - Different networks
 - Different phases in a career
 - Different employers
- A research profile is a digital representation of one of these identities



Research profile ownership means giving researchers control about their scholarly identity, including (but not limited) to their publicly shown scientometric indicators.

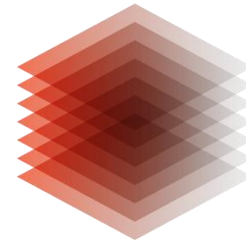
Summary

ROSI develops a reference implementation with **open** scientometric data together with the scientific **community**.



Participate and help to fill the registry!

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Thank you for your attention!

tib.eu/rosi-project

rosi.project@tib.eu

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