

**University of Stuttgart**

FoKUS – Kompetenzzentrum für Forschungsdaten

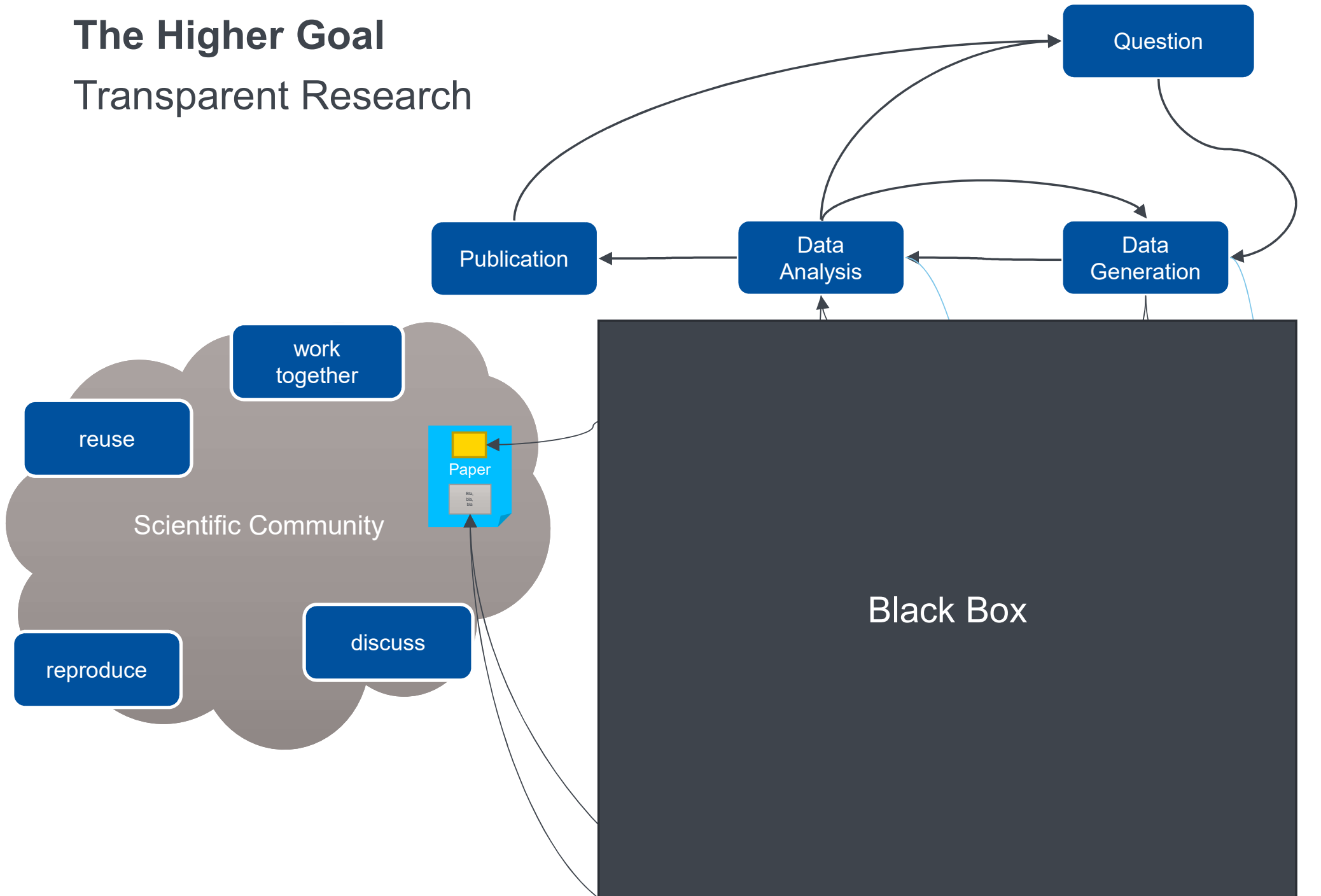


# Erschließung von Forschungsdaten

im Datenrepositorium DaRUS der  
Universität Stuttgart

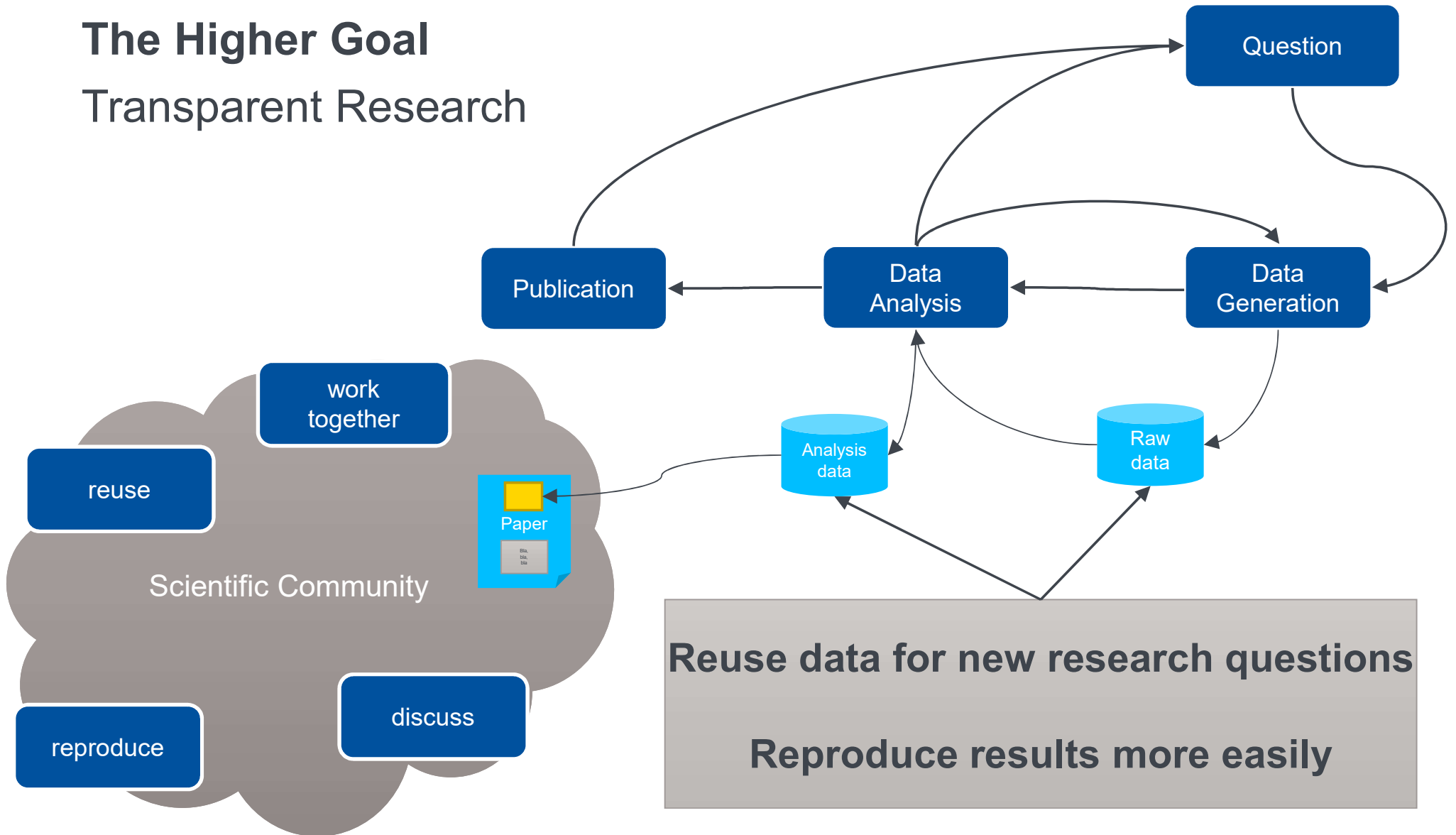
# The Higher Goal

## Transparent Research



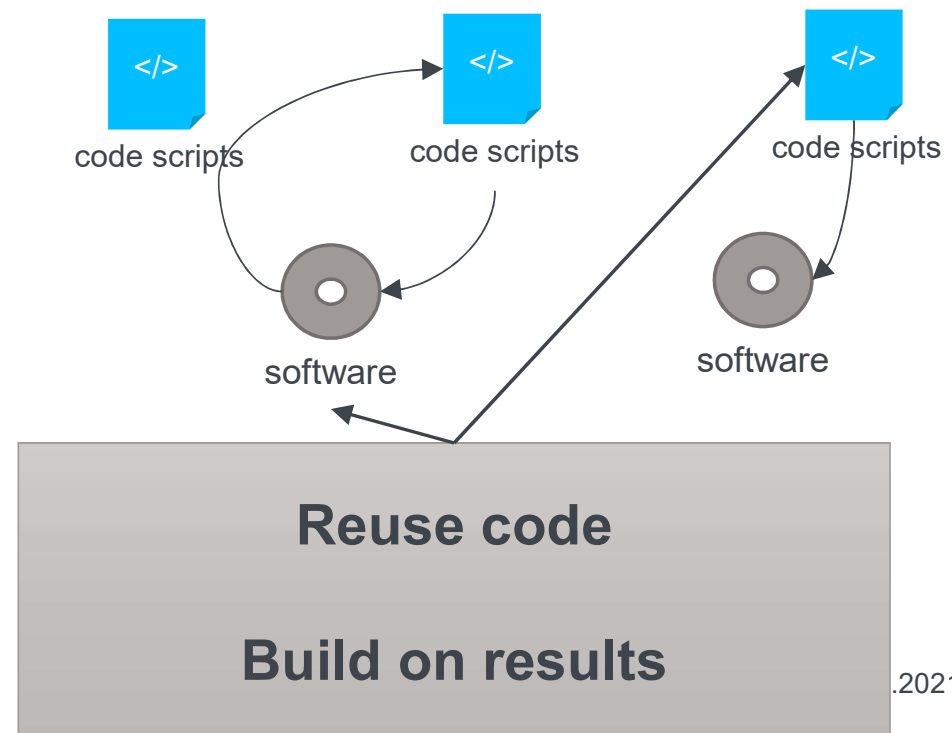
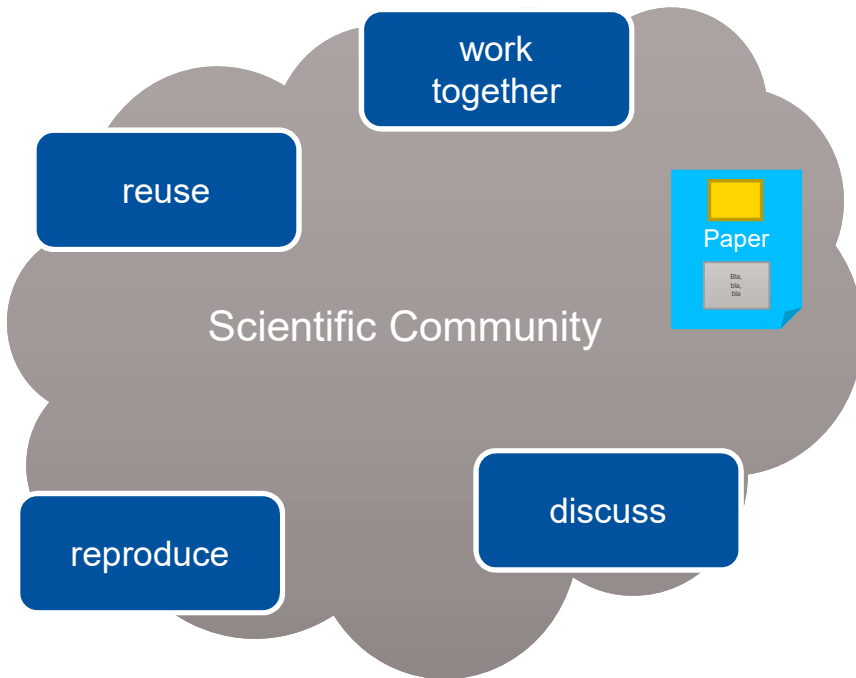
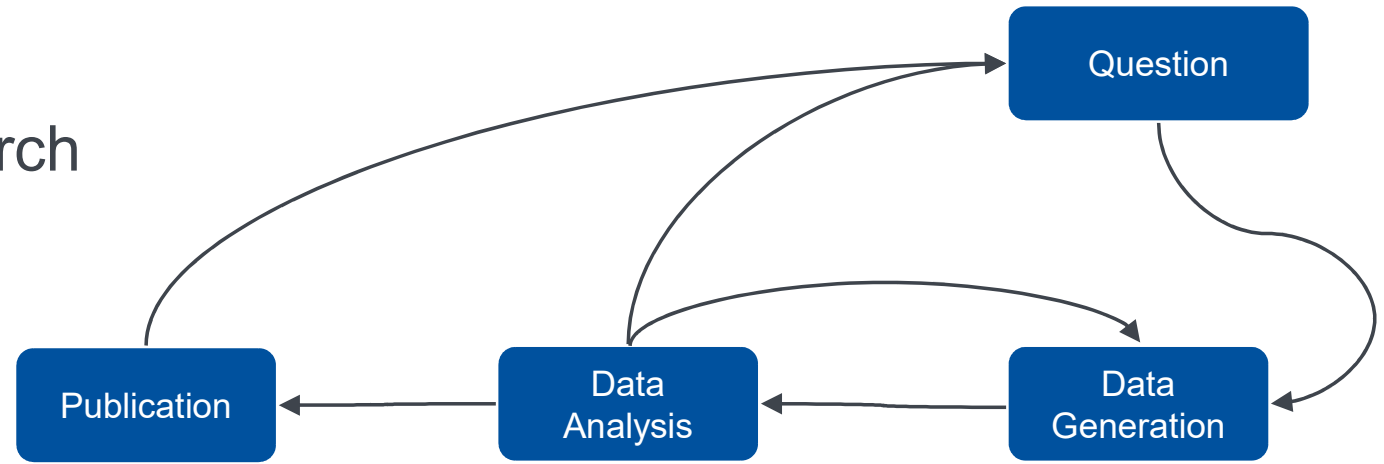
# The Higher Goal

## Transparent Research



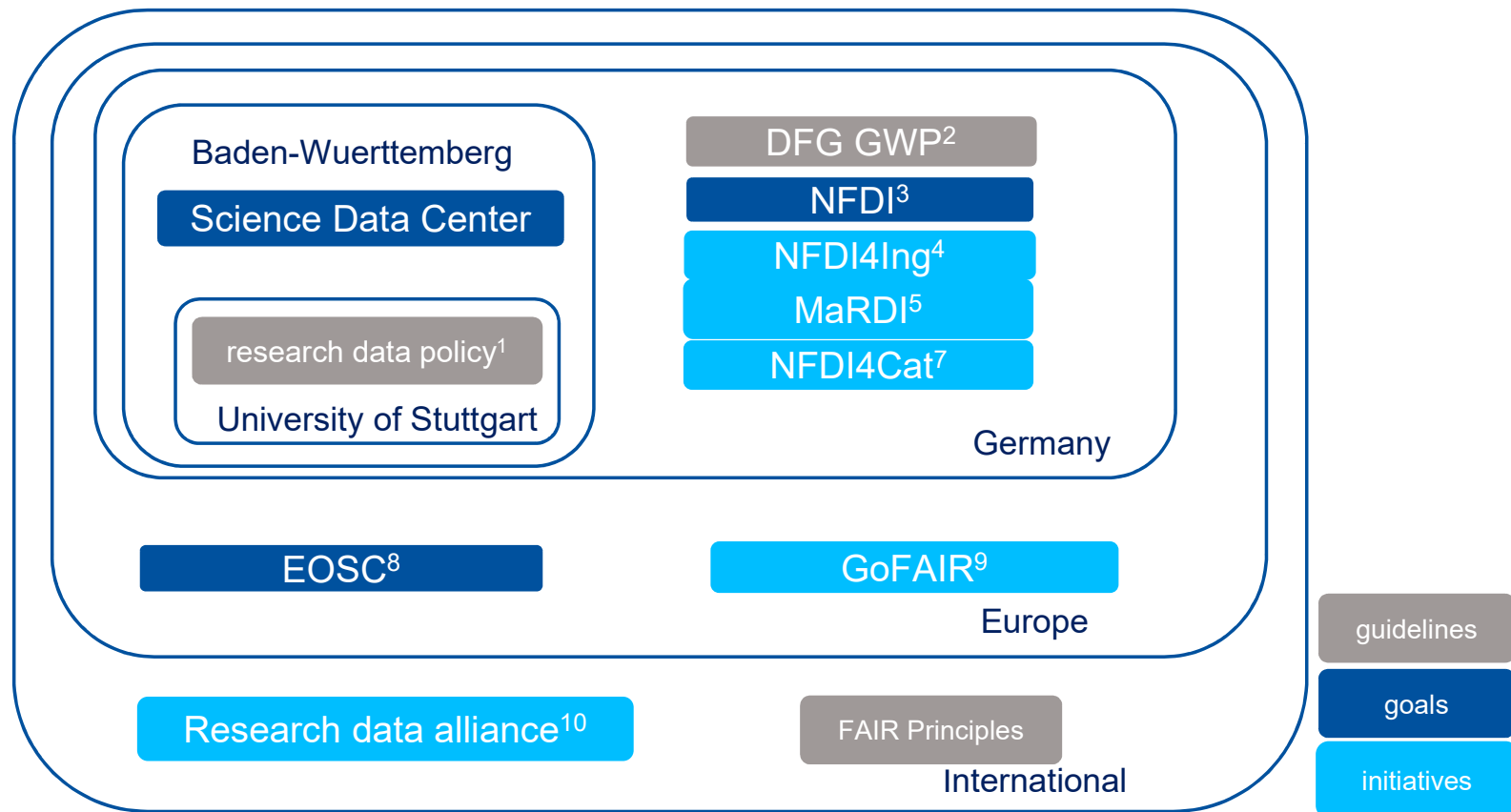
# The Higher Goal

## Transparent Research



# Politics

## Initiatives and developments



<sup>1</sup> <https://www.izus.uni-stuttgart.de/fokus/Dokumente/FoDa-Policy.pdf>,

<sup>2</sup> [https://www.dfg.de/foerderung/antrag\\_gutachter\\_gremien/antragstellende/nachnutzung\\_forschungsdaten/](https://www.dfg.de/foerderung/antrag_gutachter_gremien/antragstellende/nachnutzung_forschungsdaten/)

<sup>3</sup><https://nfdi.de>, <sup>4</sup><https://nfdi4ing.de>, <sup>7</sup><https://nfdi4cat.org>, <sup>6</sup><https://nfdixcs.org> <sup>5</sup><https://www.mardi4nfdi.de/>

<sup>8</sup><https://eosc-portal.eu/>, <sup>9</sup><https://www.go-fair.org/>, <sup>10</sup> <https://www.rd-alliance.org/>,

# FAIR data

Data should be:

- **F**indable

persistent identifiers

- **A**ccessible

open

protocols

authorization

accessible

searchable

- **I**nteroperable

standardized

metadata

rich

- **R**eusable

using  
vocabularies

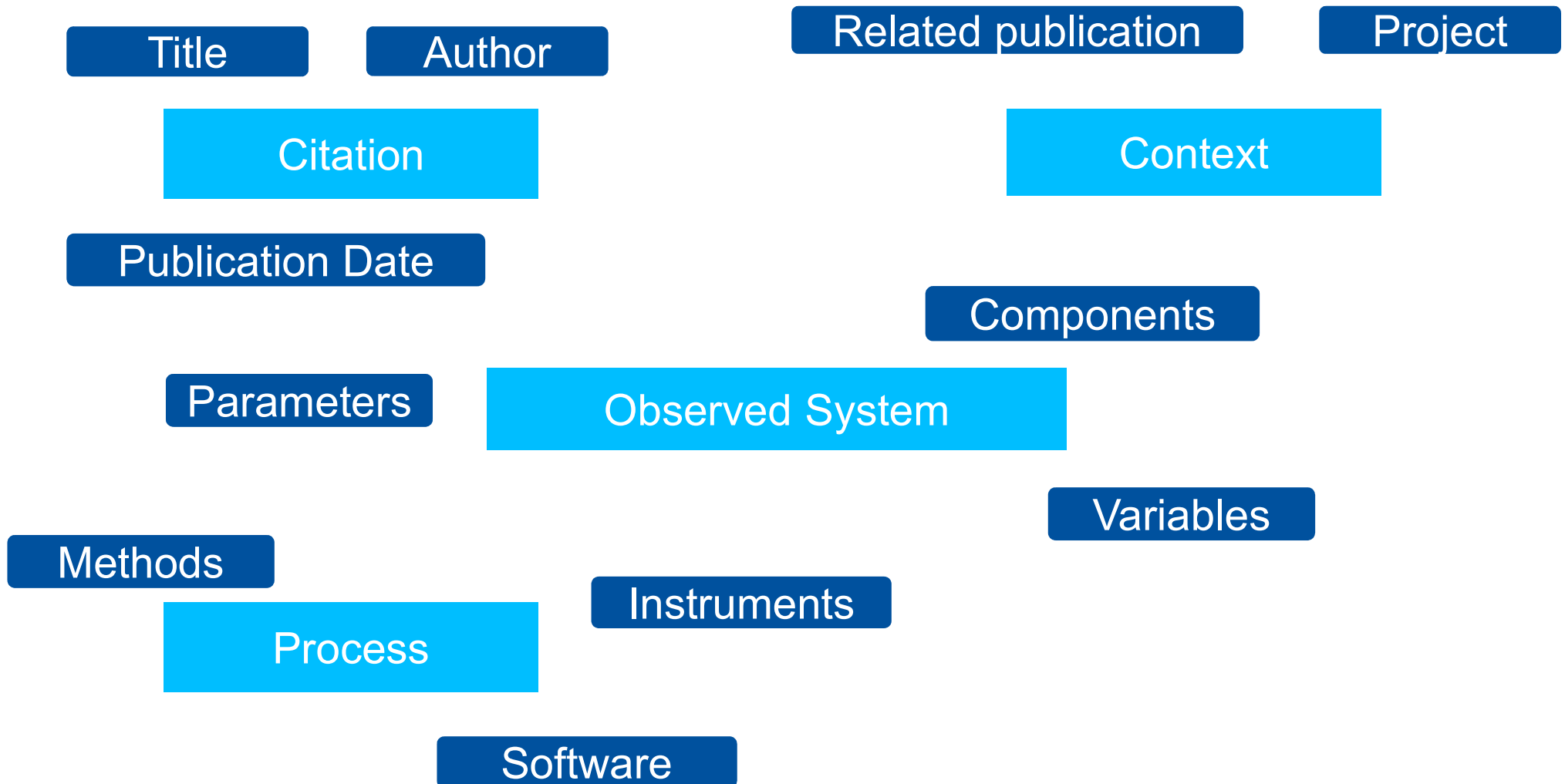
documenting  
provenance

licenses

<https://www.force11.org/group/fairgroup/fairprinciples>

# Metadata

Data about Data



# Realisation with DaRUS (<https://darus.uni-stuttgart.de> )

## Data repository of the University of Stuttgart

Based on the open source software [Dataverse](#) (Harvard IQSS)

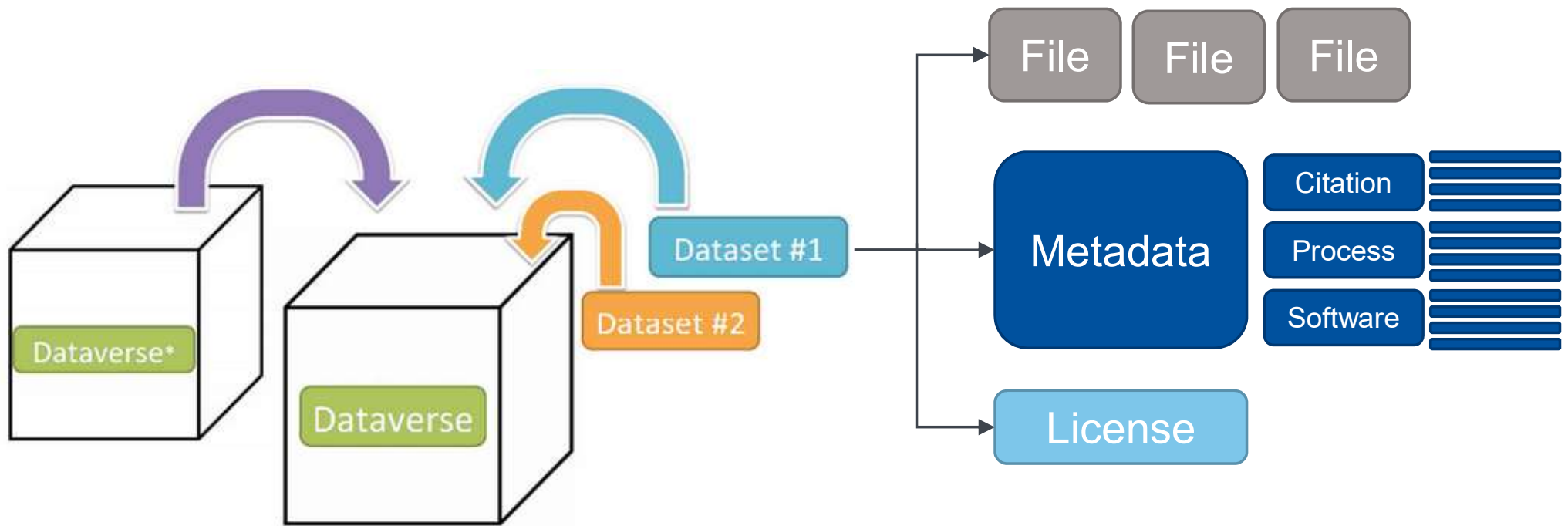
The screenshot displays the DaRUS data repository interface. At the top, there is a 'Metrics' section showing '137,633 Downloads' and 'Contact' and 'Share' links. Below this, a banner reads 'This is the data Repository of the University of Stuttgart.' A carousel of featured institutions follows, including SFB 1313, SFB 1333 'Molecular heterogeneous catalysis in confined geometries', the Institute of Biochemistry and Technical Biochemistry, and the Institute of Applied Mechanics (MIB). A search bar is present with the text 'Search this dataverse...' and a magnifying glass icon, followed by a link to 'Advanced Search'. The main content area shows search results for 'Code for effective heat conductivity in thin porous media', dated Nov 2, 2021, by Scholz, Lena; Bringedal, Carina. The results list includes filters for 'Dataverses (518)', 'Datasets (968)', and 'Files (47,539)', along with a 'Dataverse Category' section listing 'Research Project (375)', 'Research Group (58)', 'Organization or Institution (48)', 'Laboratory (8)', and 'Journal (7)'. The results are sorted and show '1 to 10 of 1,486 Results'.



# DaRUS

## Data repository of the University of Stuttgart

- Hierarchical structure of Dataverses
- Discipline specific metadata per Dataverse
- Roles/Rights management per Dataverse



Source: Dataverse User Guide,  
<http://guides.dataverse.org/en/latest/user/dataverse-management.html>

# Datasets and Dataverses

DaRUS > SFB 1333 "Molecular heterogeneous catalysis in confined geometries" > SFB 1333 A1+B2 - Buchmeiser group, IPOC-MSF >

## Replication data of Buchmeiser group for: "Cationic tungsten imido alkylidene N-heterocyclic carbene complexes for stereospecific ring-opening metathesis polymerization of norbornene derivatives"

Version 1.0



Musso, Janis; Benedikter, Mathis; Gebel, Paul; Gramm, Vincent; Schowner, Roman; Buchmeiser, Michael, 2021, "Replication data of Buchmeiser group for: "Cationic tungsten imido alkylidene N-heterocyclic carbene complexes for stereospecific ring-opening metathesis polymerization of norbornene derivatives"", <https://doi.org/10.18419/darus-2222>, DaRUS, V1

Cite Dataset ▾

[Learn about Data Citation Standards.](#)

Access Dataset ▾

Contact Owner

Share

Dataset Metrics 📊

0 Downloads 📄

Subject 📄

Chemistry

Keyword 📄

Ring-opening metathesis polymerization, Organometallic chemistry

Related Publication 📄

J. V. Musso, M. Benedikter, P. Gebel, V. Gramm, D. Wang, R. Schowner, M. R. Buchmeiser, Cationic tungsten imido alkylidene N-heterocyclic carbene complexes for stereospecific ring-opening metathesis polymerization of norbornene derivatives, *Polymer Chemistry* 2021, 12, 5979-5985. doi: [doi.org/10.1039/D1PY01158H](https://doi.org/10.1039/D1PY01158H)

Notes 📄

Due to the involvement of many students over several years, not all primary data files of NMR spectra could be uploaded. Some spectra are uploaded as .fid files (nmr spectra of kinetics measurements), others as mestrenova files (all spectra of complexes and polymerizations except Figure S33-S37).

Data Generation 📄

Experiment

Files

Metadata

Terms

Versions

# Metadata schemes

Citation Metadata

Process Metadata

Engineering Metadata

Software Metadata

Author

Related Publication

Title

Keywords

Description

Topic Classification

Methods

Tools

Parameters

Object of Research

Variables

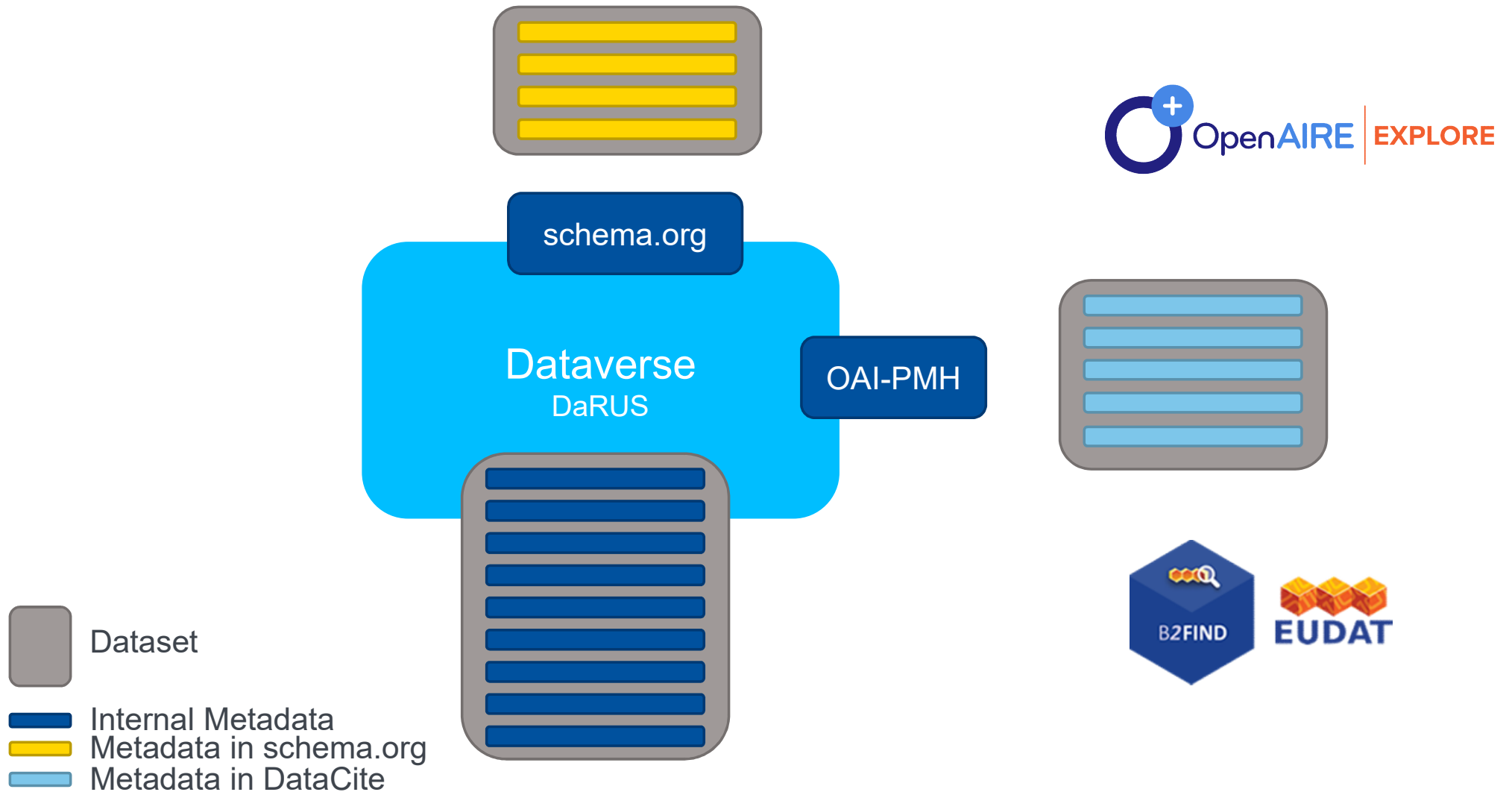
Programming Language

Operating System

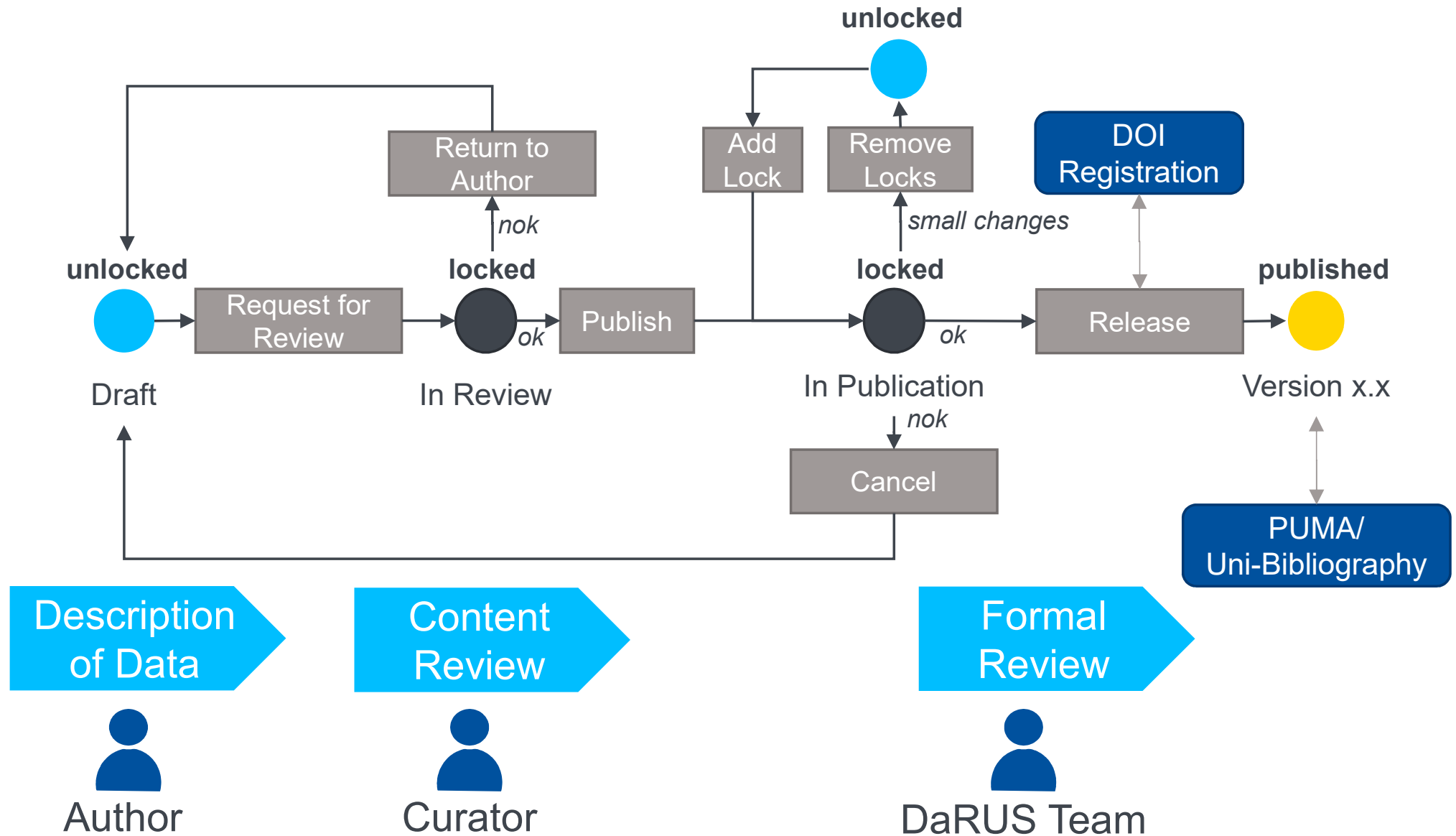
Dependencies

# Export and Harvesting

## Dataset Search

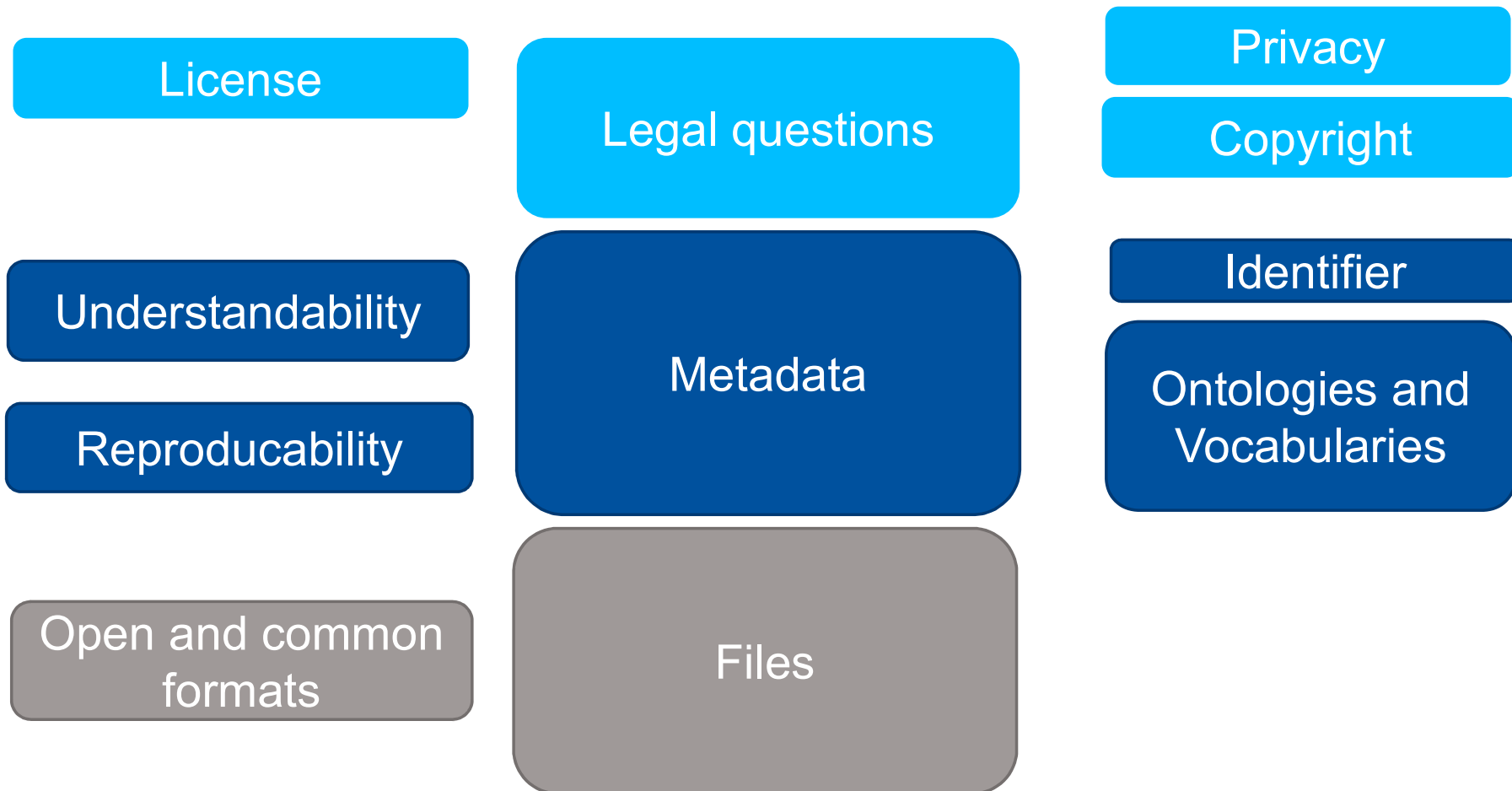


# Ensuring Data Quality



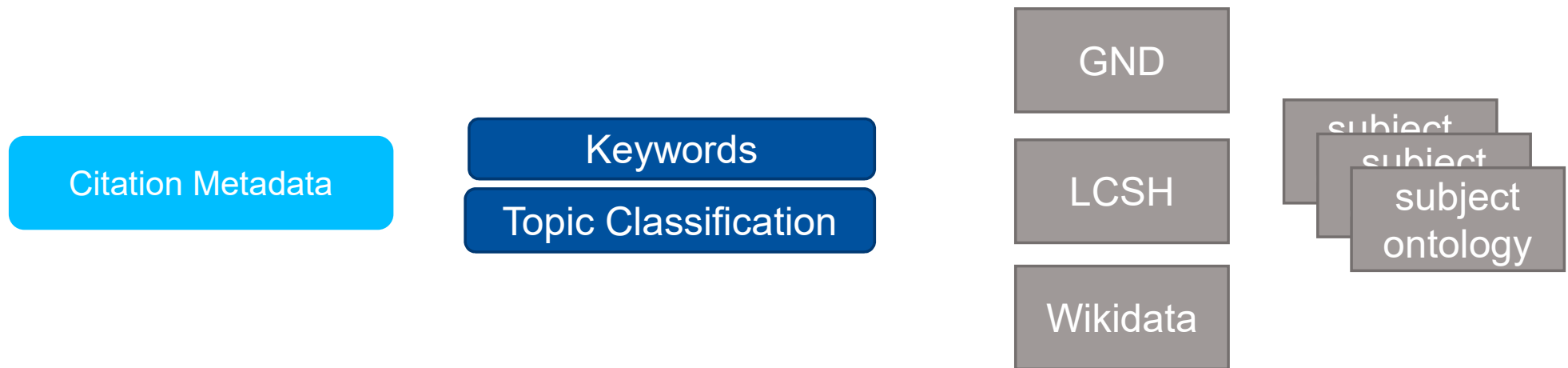
Checklists and more information: <https://www.izus.uni-stuttgart.de/en/fokus/darus/publication/>

# Formal review of research data and code



# Connecting Ontologies and controlled Vocabularies

## Status Quo



### Keyword ?

Ring-opening metathesis polymerization (LCSH) <https://id.loc.gov/authorities/subjects/sh2020006731>  
Organometallic chemistry (LCSH) <https://id.loc.gov/authorities/subjects/sh86004134>

### Topic Classification ?

Polymers (LCSH) <https://id.loc.gov/authorities/subjects/sh85104660>  
Organometallic chemistry (LCSH) <https://id.loc.gov/authorities/subjects/sh86004134>

### Related Publication ?

J. V. Musso, M. Benedikter, P. Gebel, V. Gramm, D. Wang, R. Schowner, M. R. Buchmeiser, Cationic tungsten imido alkylidene N-heterocyclic carbene complexes for stereospecific ring-opening metathesis polymerization of norbornene derivatives, *Polymer Chemistry* 2021, 12, 5979-5985. doi: [doi.org/10.1039/D1PY01158H](https://doi.org/10.1039/D1PY01158H) <https://doi.org/10.1039/D1PY01158H>

# Connecting Ontologies and controlled Vocabularies

## Status Quo

Manual Research in Portals like:

- Linked Open Vocabularies: [LOV](#)
- [Ontobee](#)
- Direct research: [GND](#), [Wikidata](#), [LCSH](#)
- Terminology Services: [NFDI4Ing](#), [NFDI4Chem](#)
- Registries for Ontologies: [BARTOC](#), [fairsharing](#)

GND

LCSH

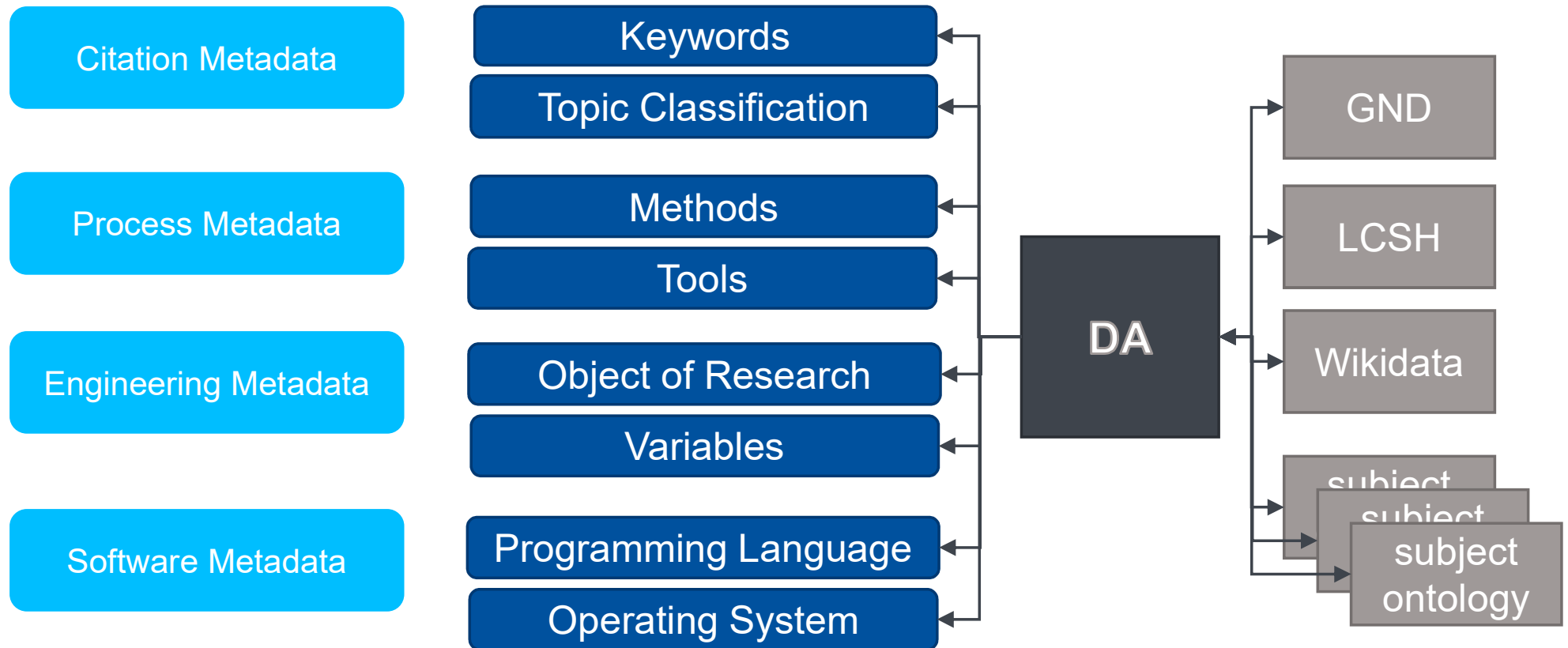
Wikidata

subject  
subject  
subject  
ontology



# Connecting Ontologies and controlled Vocabularies

## Objective





University of Stuttgart  
Germany

**Thank you!**



**Dorothea Iglezakis, Sibylle Hermann**

e-mail [fokus@izus.uni-stuttgart.de](mailto:fokus@izus.uni-stuttgart.de)

phone +49 (0) 711 685-83648

Universität Stuttgart

FoKUS - Competence Center for Research Data Management

<https://www.izus.uni-stuttgart.de/fokus>