

## RADAR Cloud

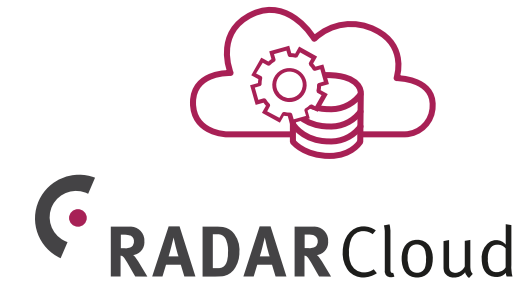
- Generic research data repository („All-in-One-Cloud“)
- Target groups: publicly funded research institutions and universities in Germany
- FIZ Karlsruhe: provider, contract partner, development, operation
- KIT and TU Dresden: data storage (3 copies on tape)
- TIB: DOI registration (DataCite)

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## RADAR Core Features:

- Archiving:**
- Secure storage without publication
  - Flexible retention period (5, 10, 15 years)
  - Flexible access management
- Publishing:**
- Secure storage with publication (DataCite DOI)
  - Unlimited retention period (at least 25 years)
  - Optional embargo period (1-12 months or unlimited)
  - Metadata indexing (RADAR, DataCite, Harvesting via OAI-PMH)
- Peer Review:**
- Secure link for reviewers



2017  
RADAR  
Cloud

2013-2016  
DFG Project  
Phase

2019  
OAI-  
Provider

2021  
RADAR  
Local

2021  
Subject  
Specific  
Metadata

since 2022  
Publication  
Services for  
Scientific  
Communities

2022  
FAIR  
Signposting

2022  
Update  
of RADAR  
Metadata  
Schema

2025  
Statewide  
Research Data  
Portal

2023  
FAIRness  
Assessment  
Challenge

2023  
Schema.org  
Knowledge Graph  
SPARQL Endpoint

2025  
AI-Support

2025  
Terminology  
Services  
4NFDI

2024/25  
WebDAV Support  
---  
GitLab/GitHub  
Import

2025  
More  
Download  
Options

## DFG Project Phase

- Interdisciplinary project team
- Goal: development of a cross-disciplinary research data repository for specific scientific fields ("long-tail")

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## OAI-Provider

- In-house development by FIZ Karlsruhe (open source)
- High-performance metadata harvesting (OAI-PMH incl. support of sets) by EUDAT / B2Find (2020) by BASE (2023)



## RADAR Local as alternative operating variant

- For institutions that want to have RADAR operated by FIZ Karlsruhe as a local instance under their own domain and on their own IT-infrastructure
- Docker containers facilitate operation on own IT



## Free Publication Services for Scientific Communities

- Target group: researchers from the subject communities of chemistry, cultural studies and history
- Complement the portfolio of subject repositories
- 2022: RADAR4Chem, RADAR4Culture
- 2025: RADAR4Memory

RADAR  
for CULTURE

RADAR  
4Chem

RADAR  
for memory

## Update of RADAR Metadata Schema (v 9.1)

- Integration of further standard data: ROR, Integrated Authority File (GND)
- Integration of further licenses for research data and software



## FAIR Signposting

- Typed links in HTTP link header of RADAR dataset landing pages
- Improves machine readability and actionability as important part of the Fair Digital Object (FDO) framework

## Schema.org Ontology | Knowledge Graph | SPARQL Endpoint

- Optimization of Schema.org ontology compliance improves discoverability and interpretability of RADAR data publications by web search engines, e. g. Google Dataset Search
- Linked Open Data (LOD) approach by using JSON-LD and Turtle serialisation
- Daily creation of RADAR knowledge graphs based on Schema.org vocabulary
- Support of a RADAR SPARQL Endpoint for standardized querying of the knowledge graphs

schema.org

## FAIRness Assessment Challenge

- Participation in support measure of the EU project FAIR-IMPACT
- Significant increase of FUJI score as indicator for the FAIRness of a data publication (up to 91%)



FAIR-IMPACT  
Expanding FAIR solutions across EOSC



Automated FAIR Data  
Assessment Tool



## Three Additional Data Import Options

### WebDAV Support

- Convenient import of research data (files and folders)
- Maximum flexibility for organizing dataset content, even with larger data volumes
- Supported by numerous WebDAV clients (e. g. WinSCP) and operating systems

### GitLab / GitHub Import

- Direct import of GitLab / GitHub content (public and private repositories)
- Import of the standard branch or individual branches
- Ensures long-term availability of software versions and projects
- Specific versions of a GitLab / GitHub repository can be clearly referenced and cited using DOIs



## Integration of Terminology Services 4NFDI

- Integration of standardized terminologies in metadata field "Keywords" via German NFDI basic service TS4NFDI
- Promotes interpretability, findability, and integration of research data into knowledge graphs and semantic infrastructures
- Update of RADAR Metadata Schema (v 9.2)



## More Download Options (in Progress)

- Open dataset after publication/archiving: Selective streaming of individual files and folders from the packed .tar archive (BagIt standard)
- Enables preview of data in the future and data transfer for versioning
- .zip download of the dataset for reviewers before publication

## AI-Support for Metadata Annotation (explorative works)

- Operation of a self hosted AI infrastructure containing Fair-Way Service and RADAR Keyword Service
- AI-assisted metadata enrichment, enabling e. g. the automatic extraction of metadata like relevant keywords
- AI-assisted FAIRness checks, offering feedback and suggestions to improve the FAIRness of datasets



FAIRsharing.org  
standards, databases, policies  
10.25504/FAIRsharing.601a27

FAIRsharing.org  
standards, databases, policies  
10.25504/FAIRsharing.3b3157

FAIRsharing.org  
standards, databases, policies  
10.25504/FAIRsharing.0db6d6

FAIRsharing.org  
standards, databases, policies  
10.25504/FAIRsharing.f64bbe

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Download Poster



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