

KIDA Research Data Hub: A Semantic-Web Platform for FAIR Data Sharing Supporting the One Health Paradigm and Risk Assessment

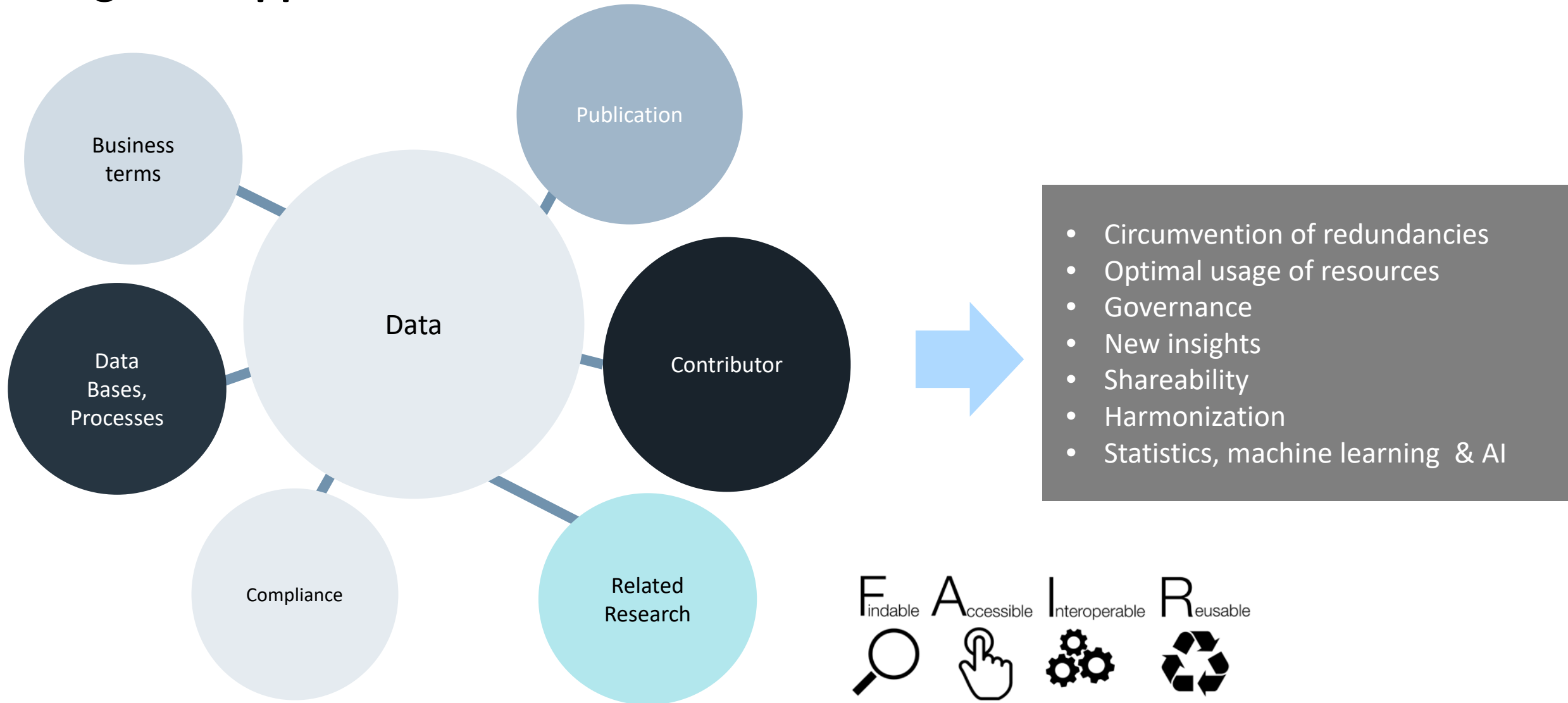
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Integrated approaches for data is essential

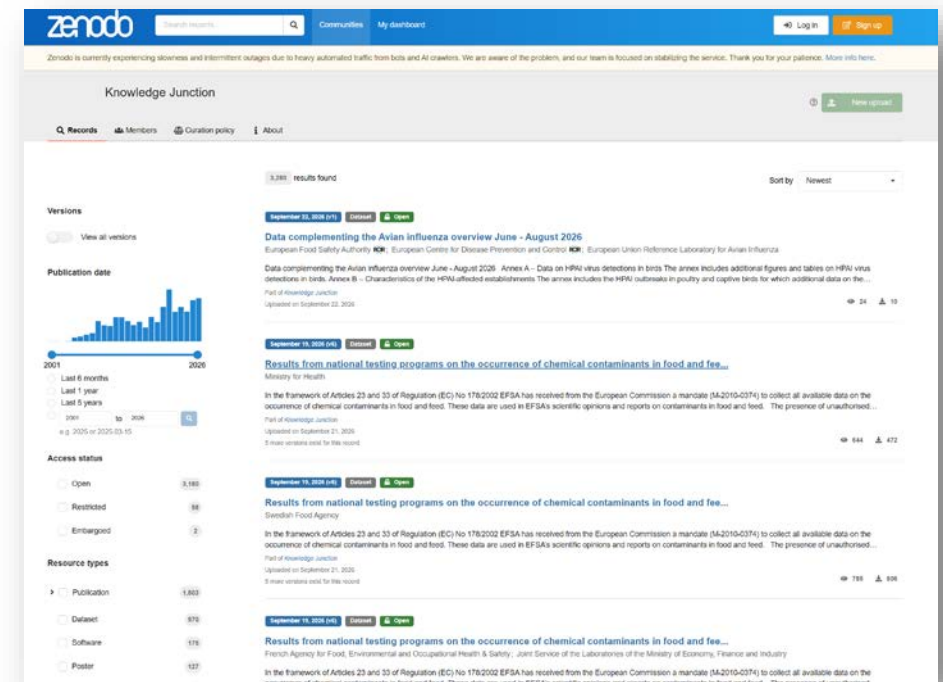


What is already out there?

- Public data repositories
- Storing of metadata
- Providing data with DOI's
- Data get's accessible
- Findable

BUT:

- Missing contexts and descriptions of raw data
- Don't provide the full view
- They do not solve the data spaghetti in an institution



Data Repository: Zenodo

A platform to get a 360° data insight

Data Catalogue Infrastructure



KIDA Research Data Hub

Access and query Linked Open Data of the KIDA project.

[Learn more →](#)

Publish and
browse
data



Private Research Data Hub

Access and query your research as Linked Data.

[Learn more →](#)

Manage
your data
and
attached
publications



Vocabulary Search

Explore and search through our comprehensive vocabulary database.

[Learn more →](#)

Browse
through
commonly
used
terminology



SPARQL

Query and explore data using SPARQL endpoint

[Learn more →](#)

Query
dedicated
objects or
analyze

KIDA Research Hub

Browse and search
data and publications

Share data

Get data insights

Search through standardized
terms

The screenshot displays the KIDA Research Data Hub interface. At the top, there is a logo and the title "KIDA Research Data Hub". Navigation links include "Analytics Dashboard" and "Vocabulary Search". Below the header, a summary shows "Datasets 10" and "Vocabularies 1". The main section is titled "Public Datasets (10)" and includes a search bar, a "Sort by" dropdown set to "Title", and buttons for "ASC", "Catalog View", and "Research View". Three dataset cards are visible:

- Dataset 1:** "A summary of the characteristics of publications about the epidemiology of human and animal leptospirosis in Kenya". It includes a table summary, a Creative Commons license link, an upload date of 28.5.2026, and a related publication from PLOS Neglected Tropical Diseases.
- Dataset 2:** "Distribution of animals seropositive for C. burnetii, Leptospira, and Brucella with animal and household characteristics". It includes a table summary, a Creative Commons license link, an upload date of 28.5.2026, and a related publication from Microorganisms.
- Dataset 3:** "Distribution of seroprevalence estimates for the three bacterial zoonoses [2026-07-02 15:46:41Z]". It includes a table summary, a Creative Commons license link, an upload date of 2.7.2026, and a related publication from Microorganisms.

360° Data

Dataset metadata

Dataset content

Crosslinks

BI features

Publication

Home / Research Data Hub / Dataset Details

A large fingerprinting dataset of proton nuclear magnetic resonance spectra of wine products

Vocabulary Service Share Edit Metadata

Overview Publications (1)

Validated modeling for German white wine varietal authentication based on headspace solid-phase microextraction online coupled with gas chromatography mass spectrometry fingerprinting

[Read article](#) [View on semopenalex.org](#) DOI 10.1021/jf502042c

Vocabulary

Browse through
different
ontologies

Connection of
data with domain
models

Health Surveillance Ontology

Vocabulary Details

Vocabulary Metadata

Description

The Health Surveillance Ontology (HSO) focuses on "surveillance system level data", that is, data outputs from surveillance activities, such as number of samples collected, cases observed, etc. It aims to support One-Health surveillance, covering animal health, public health and food safety surveillance. "Surveillance" is defined as any activity that collects information which is analysed to inform disease control (<https://www.fp7-risksur.eu/terminology/glossary>). A typical example of a One-Health surveillance activity, in this context, is the investigation of foodborne zoonotic outbreaks.

Browse Classes & Concepts

Explore the class and concept hierarchy of this vocabulary

Concept Hierarchy

Filter tree...

- bacterial infectious disease
 - campylobacteriosis
- primary bacterial infectious disease
 - salmonellosis
- > • awaiting ontology review/placement 1
- > • entity 2
 - planning

bacterial infectious disease > primary bacterial infectious disease > salmonellosis

salmonellosis

http://purl.obolibrary.org/obo/DOID_0060859

OWL Class Ontology

DEFINITION

A primary bacterial infectious disease caused by the bacteria of the genus Salmonella. It has symptoms diarrhea, fever, vomiting, and abdominal cramps 12 to 72 hours after infection. In most cases, the illness lasts four to seven days, and most people recover without treatment.

RELATIONSHIP MAP

```
graph TD; A[primary bacteria...] -.->|SUPERCLASS| B[salmonellosis];
```

SUPERCLASSES

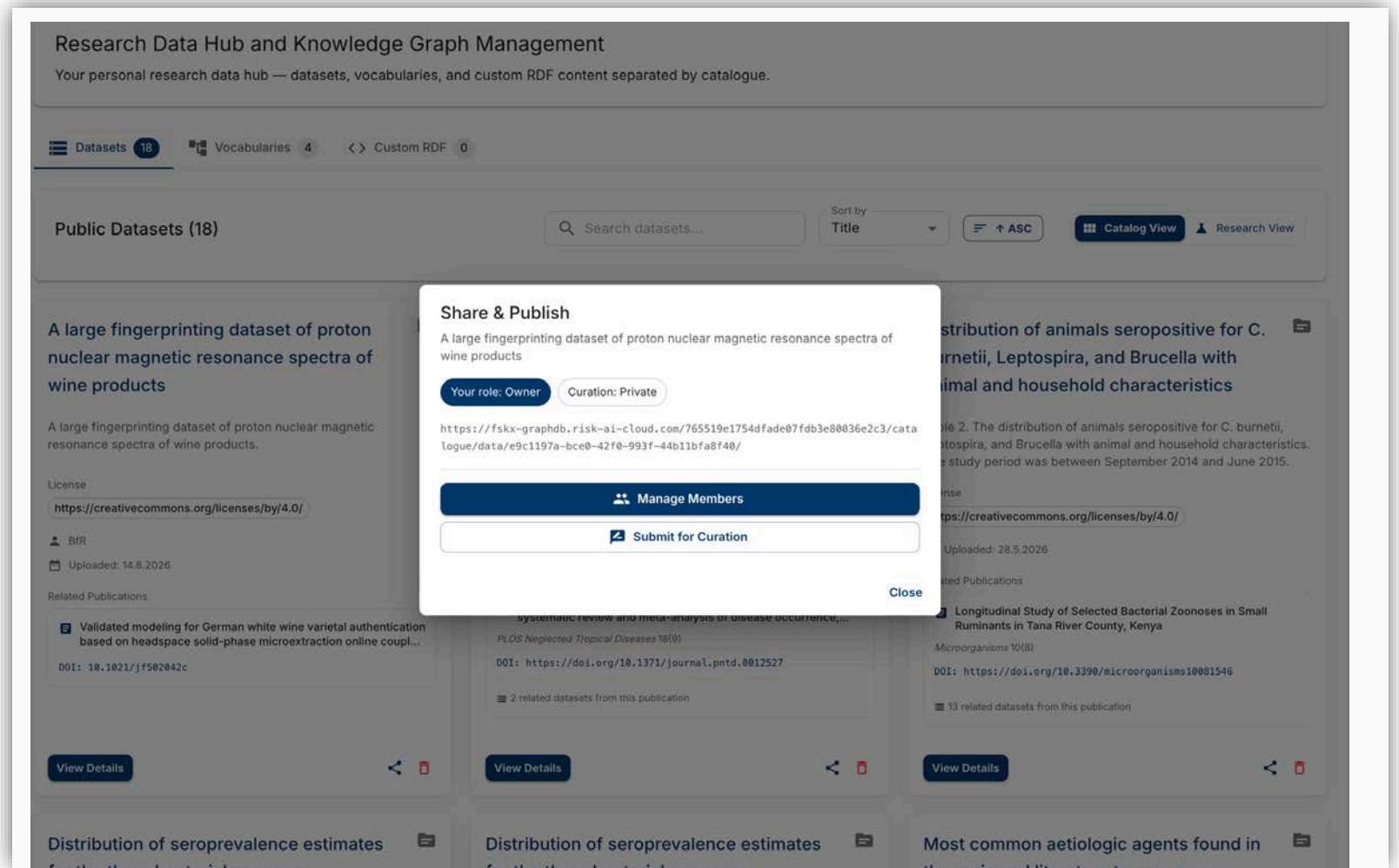
Private Research Hub

Browse and search
own data files

Browse through publications

Share your data

Integrate own ontologies and
thesauri



Manage your data

The semantic web as technological back bone?

Benefits

- Reusable entities and improved knowledge by linking concepts
- Data becomes machine readable
- Semantically rich format
- Data modelling becomes flexible
- Open Source and vendor independent

Disadvantages

- Linking entities is difficult and hard to scale
- Maturity of tools (Academic)
- RDF and Semantic Web technologies are niche

Outlook

- **Simplified data upload:** Upload data and its metadata directly within the app
- **Data federation:** Query and access distributed data sources through a single interface
- **Ontology harmonization:** Harmonize collected vocabularies, identify target and core ontologies, and use them as the basis for a business ontology
- **Improved search:** Faceted search and conversational querying ("Talk to your data")

Thank you



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Gesundheit schützen

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