



Leibniz-Informationszentrum  
Wirtschaft  
Leibniz Information Centre  
for Economics



# Making Data Citable

## The German DOI<sup>®</sup> Registration Agency for Social and Economic Data: da|ra

Stefanie Grunow  
(ZBW-Leibniz Information Centre for Economics, Kiel/Hamburg)

Brigitte Hausstein  
(GESIS Leibniz Institute for Social Sciences, Berlin)

# Overview

---

1. Introduction
2. Persistent Identifiers and DOI®
3. DataCite: Goal, membership, structure
4. The German Registration Agency „da|ra“  
Technical framework | Metadata | Policy | Services



# Introduction: Where do we stand?

---

- ▶ Data is difficult to manage after project funding ends
- ▶ No direct access to data
- ▶ No widely used method to identify datasets
- ▶ No widely used method to cite datasets
- ▶ No effective way to link between datasets and articles
- ▶ Datasets are not included in impact analysis

# Persistent Identifier

---

= name for a digital resource which will remain the same regardless of where the resource is located

ARK +++ **doi<sup>®</sup>** +++ Handle System<sup>®</sup> +++ LCCN +++ LSID +++ PURL +++ URN



Digital Object Identifier (DOI<sup>®</sup>) System

10.3478/33.2

DOI prefix suffix

# doi><sup>®</sup> System

---



PI System der International DOI Foundation (IDF)

based on the Handle system<sup>®</sup> designed by the Corporation for National Research Initiatives (CNRI)



Registration Agencies



DataCite  
International Data Citation

# DataCite

---

- ▶ Establishes easier access to scientific research data
- ▶ Increases acceptance of research data
- ▶ Supports persistent identification of data using the DOI system
- ▶ Supports archiving of data for verification and re-use



- ▶ DataCite is a global consortium founded in London | Dec 2009

# Membership

Currently fifteen members across ten countries



1.000,000 records registered with DOI names so far

## Members

- AUS Australian National Data Service (ANDS)
- CAN Canada Institute for Scientific and Technical Information
- CH Library of the ETH Zurich
- DK Technical Information Center of Denmark
- FR Institute for Scientific and Technical Information
- GER German National Library of Science and Technology (TIB)  
German National Library of Medicine (ZB MED)  
GESIS - Leibniz Institute for Social Science
- NL TU Delft Library
- UK The British Library
- USA California Digital Library (CDL)  
Purdue University Libraries

## New members 2011

- GER German National Library of Economics (ZBW)
- S The Swedish National Data Service (SNDS)
- USA Office of Scientific and Technical Information (OSTI), US Department of Energy

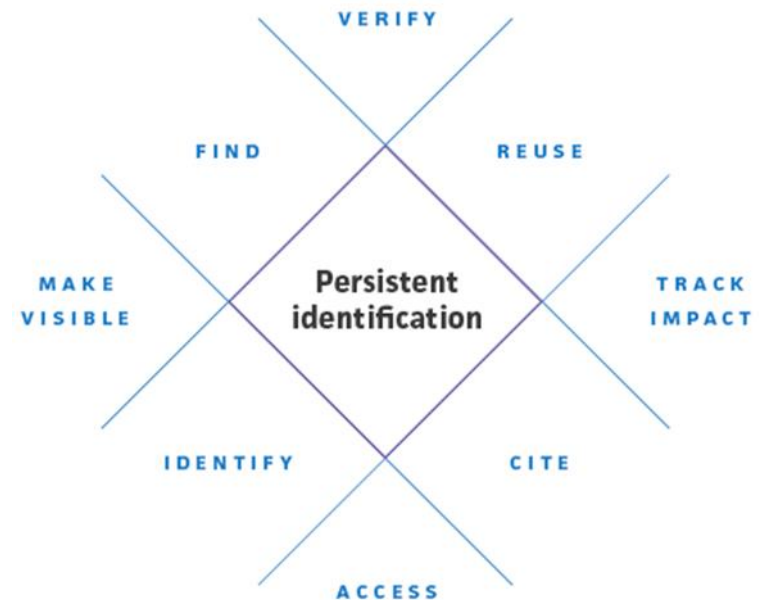
## Associated Members

- UK Digital Curation Centre
- USA Microsoft Research

# Supporting the community

---

- ▶ **Researchers** by enabling them to locate, identify, and cite research datasets with confidence
- ▶ **Data centers** by providing workflows and infrastructure to identify and cite datasets
- ▶ **Publishers** by enabling research articles to be linked to the underlying data





# Structure and responsibilities

## DataCite (registration agency):

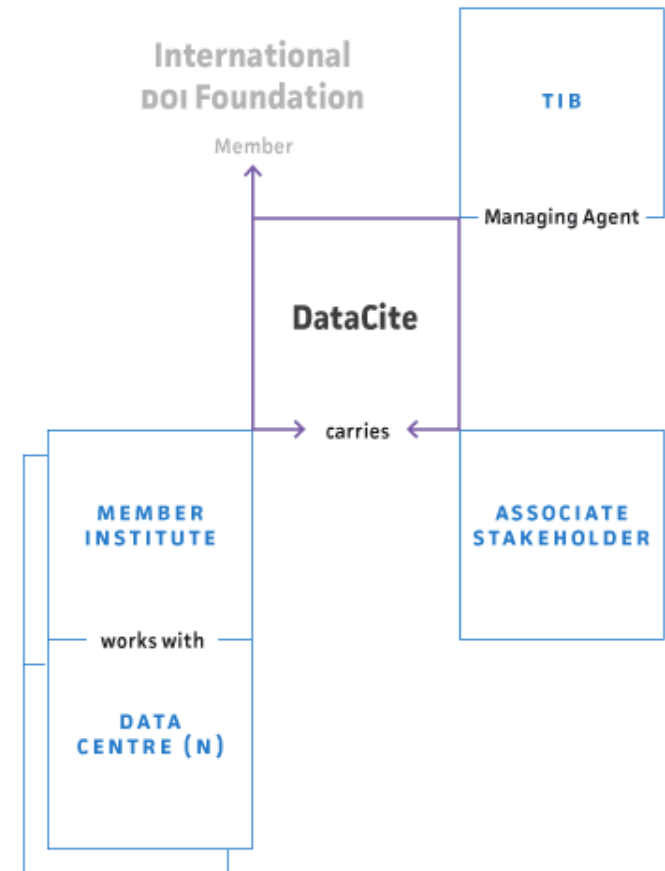
- ▶ Maintains the resolution infrastructure
- ▶ Maintains a searchable database of metadata
- ▶ Manage DOI over the long term
- ▶ Establishes best practice

## Allocation agencies (DC member institutes):

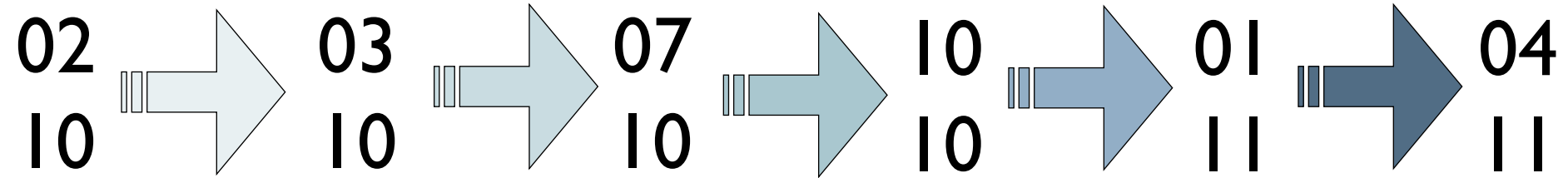
- ▶ Creating the identifier
- ▶ Quality assurance
- ▶ Maintains a searchable database of metadata
- ▶ Establishes best practice

## Publishing agents (data centers, data publishers):

- ▶ Data storage and access
- ▶ Creating and updating metadata



# Pilot project da|ra



GESIS became member of DataCite

Start of the pilot project "da|ra"

Beta version of the DOI registration system

da|ra metadata schema  
da|ra policy

First data set registered

4572 DOI names registered

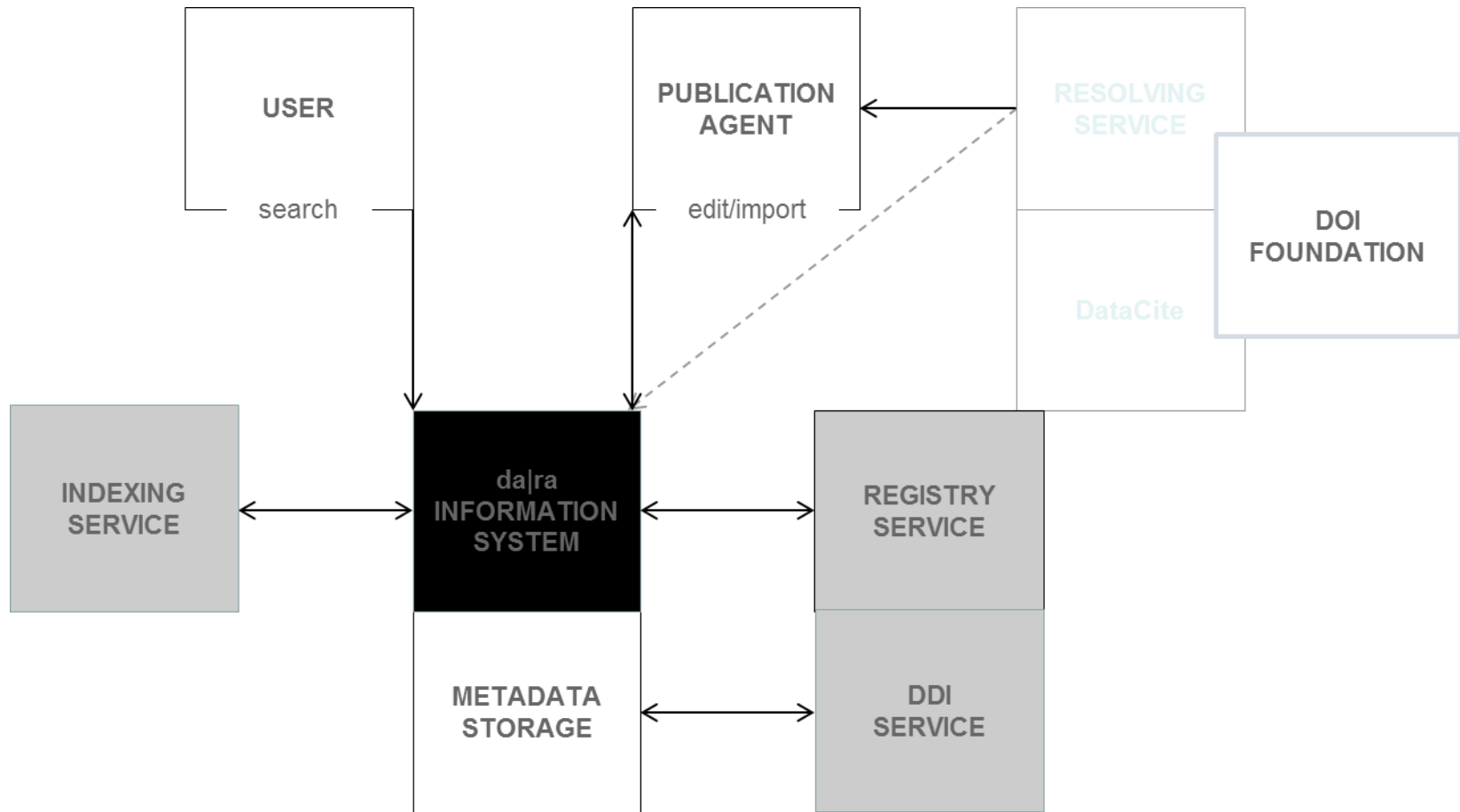
Service open to social science data centres

MoU with the Leibniz Information Center for Economics (ZBW)

OECD meta data included

Project "Registration portal for Social and Economic data" started negotiation with data centers started (SOEP, NEPS, DZA, ZPID)

# Technical infrastructure of da|ra (Service Oriented Architecture)



# da|ra Metadata schema

---

- ▶ Description of social science and economic research data
- ▶ Service for data users and providers
- ▶ Compliant with DOI- and DataCite metadata schema
- ▶ Compliant with DDI (study level)
- ▶ Beta version: 34 elements, among them 16 mandatory
- ▶ Catalogue supports visibility of research data
- ▶ Edit and upload facility for meta data, import via interface

# da|ra Policy framework

---

## da|ra policy

General policy for the assignment of Digital Object Identifiers (DOI)



## Service Level Agreement (SLA)

Basis for the cooperation with publication agents



## Guidelines & Best practices (Datacite)

# Register: Who & what?

---



## Who?

- ▶ Data Archives
- ▶ Research Data Centers
- ▶ Service Data Centers
  - ▶ Future: Individual Researchers (via self archiving)

## What?

- ▶ Survey data
- ▶ Aggregate data
- ▶ Micro data
- ▶ Qualitative data
  - ▶ Future: Pictures, further data formats, scales

# da|ra Services

---



04/2011: 4480 registered DOI names



# Example: Data citation

gesis Leibniz Institute for the Social Sciences

da|ra Registration agency for social science data

Home Metadata search Deutsch Contact Login

You are here: [Metadata search](#)

Metadata search

- Extended search
- List of studies

## Quicksearch on metadata

Go!

1. [European Values Study 2008: Integrated Dataset \(EVS 2008\)](#)  
DOI: [doi:10.4232/1.10059](#)  
Version: 1.0.0  
Principal Investigator: Jean-Francois Tchernia (Tchernia Etudes Conseil, France) [\(other\)](#)  
Date of Collection: 27-03-2008 to 02-08-2009  
Publication Agent: GESIS - Leibniz-Institut für Sozialwissenschaftler
2. [European Values Study 2008: Integrated Dataset \(EVS 2008\)](#)  
DOI: [doi:10.4232/1.10188](#)  
Version: 2.0.0  
Principal Investigator: Tchernia, Jean-Francois (Tchernia Etudes Conseil, Paris, France) [\(other\)](#)  
Date of Collection: 27-03-2008 to 15-03-2010  
Publication Agent: GESIS - Leibniz-Institut für Sozialwissenschaften

Number of Studies: 2

Impressum

© GESIS

EVS (2010): European Values Study 2008, 4th Wave, Integrated Dataset. GESIS Data Archive, Cologne, Germany, ZA4800 Data File Version 2.0.0 (2010-11-30), **doi:10.4232/1.10188.**



# Thank you for your attention!

---

Stefanie Grunow

ZBW – Leibniz-Information Centre for Economics

[s.grunow@zbw.eu](mailto:s.grunow@zbw.eu)

Brigitte Hausstein

GESIS – Leibniz Institute for Social Sciences

[brigitte.hausstein@gesis.org](mailto:brigitte.hausstein@gesis.org)

► For further information visit:

<http://www.gesis.org/dara>

<http://www.zbw.eu>

<http://www.datacite.org/>

