Research Data Management

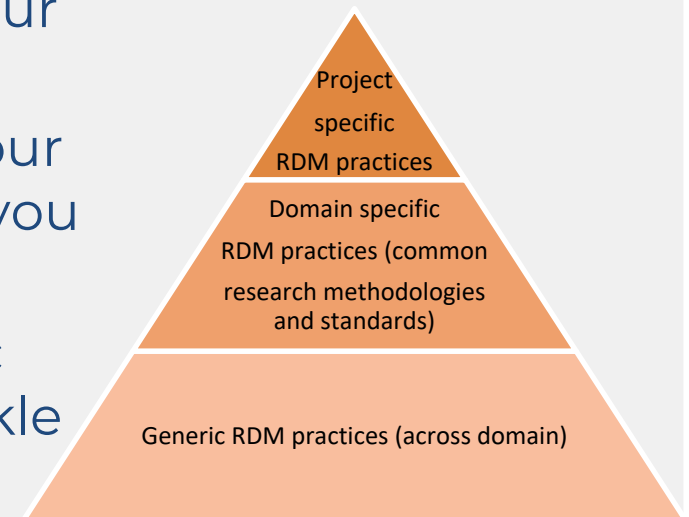2 February 2021

RDM: what is it?

RDM (i.e. **Research Data Management**) is the active and intentional care for the information (objects) used or generated during a research project and throughout the entire research lifecycle.

It is a general term that covers how you organize, structure, describe, store, preserve, and prepare for potential reuse what you consider "data" for the purpose of your research.

BTW: *all this can apply much more broadly…*

Why RDM: data matter!

- Research data is becoming a **first-class research output** in the scholarly communication landscape, much like your publications

- They are an asset:
  - **For you**: they ground your claim, be cited for your data as much as your publications
  - **For the research community**: your data can be re-used as much as you re-use other researcher's data
  - **For the society**: maximize public money return of investment, tackle global societal issues

Project specific RDM practices

Domain specific RDM practices (common research methodologies and standards)

Generic RDM practices (across domain)

The Open Science context

"Open science describes the practice of carrying out scientific research in a completely transparent manner, and making the results of that research available to everyone. Isn't that just 'science'?"

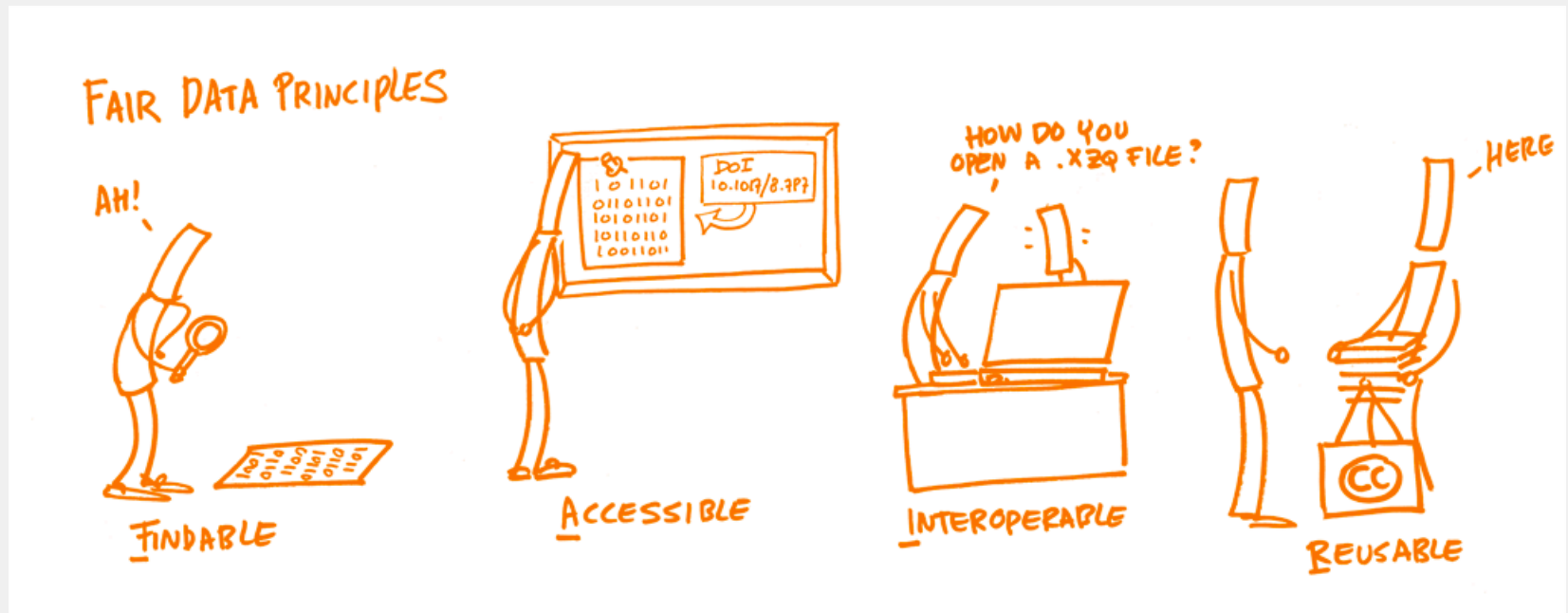*Watson M., When will "open science" become simply "science"? Genome Biol. 2015;16:101*

Let's rephrase a little…

"As **open** as possible and as **closed** as necessary"

https://fairaware.dans.knaw.nl/
https://satifyd.dans.knaw.nl/
https://www.fairsfair.eu/fairsfair-data-object-assessment-metrics-request-comments

Home » Research » Library

Europe's social science research library

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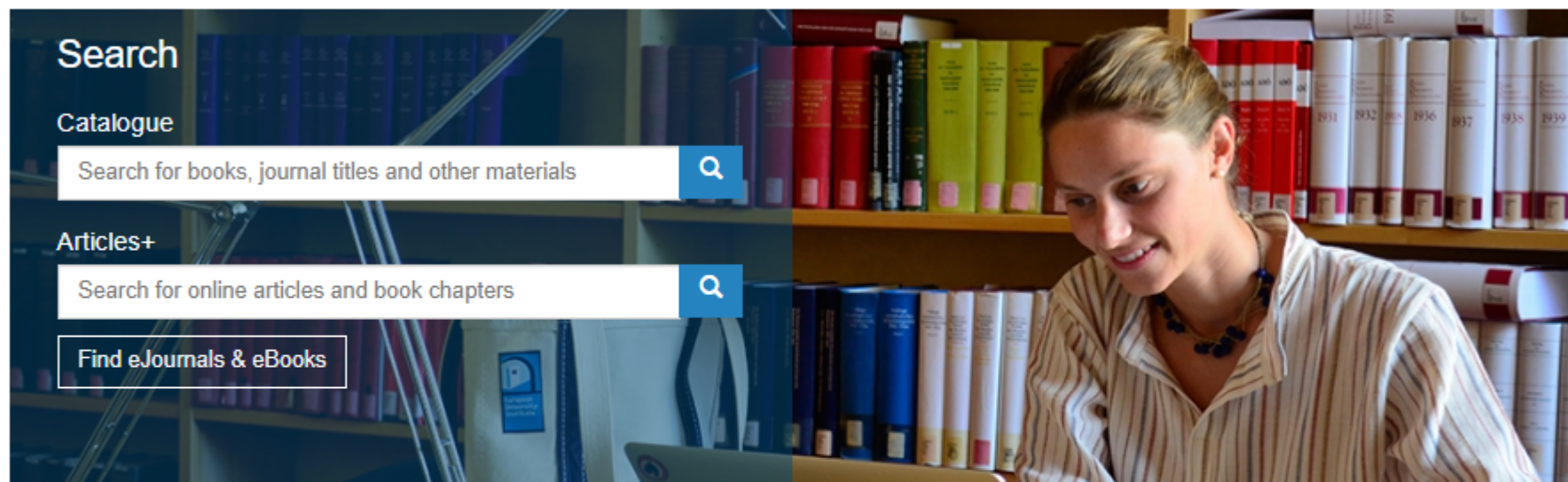
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Latest News

Library director's welcome
Watch the recorded message for all 2020 EUI newcomers

Book sanitisation
The EUI acquired six devices for the sanitisation of books

Library agreements for Open Access: publication fees waived

Home » Research » Library » **Research Data Services**

Research Data Services

‣ Inter-disciplinary **Introduction to Library Data Resources and Services**: Badia Theatre, 14:00, Wednesday 16 September and via Zoom
‣ The EUI Library supports (i) data discovery (ii) data use and (iii) data preservation and sharing
‣ Write to Thomas Bourke, econlibrary@eui.eu for support.

DATA PORTAL

The EUI Library Data Portal provides access to Library-licensed macroeconomic, micro-socioeconomic and Europe-related databases. 72 data resource guides provide information on coverage, variables, user networks, online manuals and terms and conditions of use. The Data Portal also provides information about the Library's restricted micro data server.

DATA SERVICES

Click below for information about data discovery; data use; data management plans; data protection and copyright; data preservation and sharing; data in EU-funded projects and the EUI Research Data collection in the Cadmus repository. For assistance, please write to resdata@eui.eu or visit one of the Library information desks: Badia Fiesolana 085 or Villa La Fonte 035.

EUI Research Data

EUI members can submit their research datasets for inclusion in the EUI Research Data collection in the Cadmus repository. To submit a dataset for inclusion, please complete the Library's online form. Library staff will make an appointment for transfer of data and documentation.

| EUI Library Data Portal and data discovery | Data protection, copyright and ethical use | Data management plans (DMPs) | Managing data during the project cycle | EUI research data preservation and sharing | Research Data in EU funded projects | Qualitative data in the humanities and social sciences | EUI infrastructure, software and support |

1. LIBRARY DATA PORTAL AND DATA DISCOVERY

The Library maintains a Data Portal which provides access to licensed resources for EUI members and introduces open data resources of relevance to EUI research themes. All resources indexed in the Data Portal have an online guide with (i) data description and scope (ii) time-period coverage and release/wave

Data Management Plans

- DMPs are short documents describing;
  - How data is generated and/or sourced
  - How data is used, elaborated and organised
  - How data, and data subjects, are protected
  - How data, tools, &c. are described and documented
  - How data is stored and secured *during* the research project
  - How data authorship and credit are assigned
  - How data is preserved
  - Whether, how, when and under what terms, research data outputs can be shared.

Welcome.

DMPonline helps you to create, review, and share data management plans that meet institutional and funder requirements. It has been jointly developed by the Digital Curation Centre (DCC) and the University of California Curation Center (UC3).

Screencast on how to use DMPonline

Sign in

Email address *
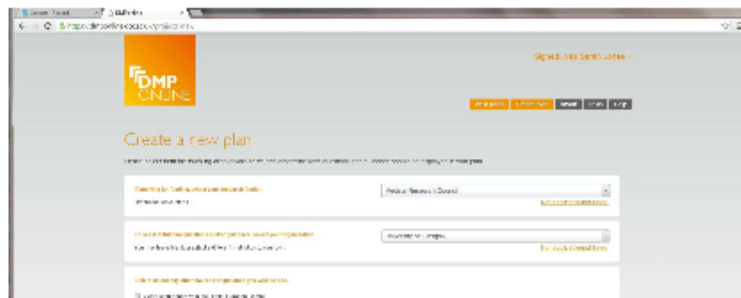
Password *

Forgot your password?

☐ Remember me

Sign in

Or, sign in with your institutional credentials (UK users only)

Create account

New to DMPonline? Create an account today.

EUI

My Dashboard

The table below lists the plans that you have created, and that have been shared with you by others. You can edit, share, download, make a copy, or remove these plans at any time.

Project Title ⬍	Template ⬍	Edited ▾	Role	Test	Visibility	Shared	
ADEMU DMP	Horizon 2020 DMP	20-11-2018	Owner	☐	Private	Yes	Actions▾

Create plan

European University Institute LIBRARY

Data set description

ADEMU project partners will generate three kinds of data:

- Standard empirical macroeconomic data (20-year time-series and international comparisons). Project partners contributing: all partner institutions.
- Data generated by simulation/calibration and testing of theoretical/structural models for the purpose of monetary policy scenario planning (eg. stress testing, back testing). Project partners contributing: EUI, Barcelona GSE, TSE and Cambridge.
- Experimental data generated from subject-response experiments (decisional, bounded, rational response). Project partners contributing: EUI and Barcelona GSE.

The data will be useful to other researchers, central banking policymakers, macroeconomic policymakers, the public and the media.

The data will be the basis for published scientific findings, including open access ADEMU working papers; scholarly articles, book chapters and reports.

Simulated data and accompanying models will provide insights into different policy scenarios. Both (i) the data and (ii) the simulation software code, will be shared to permit other scholars and policymakers to replicate, re-use and undertake new research using ADEMU data and tools.

Statistical packages to be used include: Stata, GAUSS, R, MatLab, Python and Excel.

Guidance Share note

EC Guidance

Data Protection

- Special terms and conditions apply to access and use of micro-socioeconomic and qualitative data, reflecting the sensitive nature of data observations about human subjects, families and households.

- **Persons, families and households cannot be identifiable in any dataset**. The collection and use of observations relating to ethnicity, health, orientation, religion, biometrics &c. are subject to data protection laws.

Anonymisation & Pseudonymisation

- **Anonymisation** removes all links to personal data (name, date of birth, location &c.)

- **Pseudonymisation** entails substituting personally identifiable information with a unique identifier that is not connected to their actual identity, using techniques such as coding.

'Ethics and Data Protection' European Commission, 2018, p.7
https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-data-protection_en.pdf

Anonymisation

- Remove direct identifiers from a dataset (names, postcodes, workplace, telephone numbers &c.).

- Aggregate or reduce the precision of a variable such as age by year of birth rather than the day, month and year. Report a general level of geo-referencing (not most detailed geo-codes).

- Generalise meanings; reduce the precision or textual meaning of a variable.

- Restrict the upper or lower ranges to hide outliers.

Pseudonymisation

- Explain if research design cannot accommodate anonymisation (eg. follow-up wave of survey)

- Replace personal identifiers (such as name) with a unique identifier (code).

- Describe coding system / codebook

- Clarify data security measures and how links to research subjects will be handled

- Delete the data once the retention period has expired.

Folders, files, variables, format and versioning

- The structure of datasets should be carefully considered early in the project
- Dataset design varies by conventions of discipline and sub-discipline, medium, types of variables, units of analysis &c.
- Clear and consistent metadata for folders, files, variables and versioning, helps facilitate future findability, accessibility, interoperability and reusability (FAIR Principles)
- Different file versions should be systematically named, using standardised version numbering and date system (YYYY-MM-DD)
- Avoiding special characters and spaces
- Temporary identifiers should be removed from the schema.

Documentation and codebooks

- Clear and accurate documentation should be provided about the purpose and context of the research project, and about the research data output

- Good documentation makes datasets findable, accessible, interoperable and re-usable

- Documentation should include a description of folders, files, variables, versioning, and – where applicable – information about problematic values, missing observations and weightings

- Codebooks, questionnaires and data dictionaries should be included. A concise note on methodology should be included.

Security and backup *during* the research project

- During the research project it is important to keep data secure at all times

- Use a desktop computer for data elaboration, and make regular backups on the EUI network server

- In accordance with contractual agreements, micro-socioeconomic data at the EUI can only be accessed and elaborated on a desktop computer, after completing the required Library registration protocols.

Data protection, informed consent of data subjects

- The mode of consent obtained from subjects depends on the nature of the research project, the kind of data collected, and how and when the data will be used. Where possible, it is recommended to obtain **written consent**, using a template appropriate to the discipline or sub-discipline in which the research is being conducted.

Sensitive data protocols

Departments ▾ Programmes ▾ Robert Schuman Centre ▾ School of Transnational Governance ▾ Max Weber Programme ▾ Historical Archives ▾ Library ▾

Home » Research » Library » Research Data Services » **SensitiveData**

Support for Access to and Use of Sensitive Data at the EUI

‣ Some data issuers require the EUI to guarantee extra security for access to, and use of, sensitive data
‣ EUI members who require support with contract workflow, infrastructure requirements and data management plans, should proceed as follows:

- Write to econlibrary@eui.eu providing:

    - Name of data issuer

    - Title of dataset, with internet link (if available)

    - Names of all project participants, with email contacts

    - Details of access to, and use of, the data required:

        ○ Does the data issuer require a contract with the individual end-user(s)?
        ○ Does the data issuer require an institutional EUI contract ('guarantor') and/or signature of the EUI Data Protection Officer?
        ○ Are there special conditions regarding access to the data (eg. remote protocol)?
        ○ Are there special conditions regarding use of the data at the EUI?
        ○ Does the data issuer require that the data be used on a stand-alone, off-line computer?
        ○ Does the data issuer require that the data be used in a secured room?
        ○ Will any external project collaborators be working with the data?
        ○ Are any other requirements stipulated by the data issuer?

- Some data providers require EUI Ethics Committee approval and/or DPO oversight. The Principal Investigator should initiate the request(s)

- For data which is financed by EUI Departmental or Centre budgets, the local Financial Manager should be informed

- If required by the data issuer, the ICT Data Security Officer can provide a description of ICT security protocols and infrastructure

- EUI members who require a secured room - or dedicated PC - to access and use data, should contact their local Departmental / Centre Administrator.

Terms and conditions of use for licensed electronic resources

Access to and use of electronic resources is generally governed by copyright laws and individual license agreements (binding legal contracts) which define the specific terms of use and restrictions under which individuals can use the resource and the Library may make access available to its users, whether on and off-campus.

All individual users must comply with the specific Terms of Use or License Agreement for the applicable electronic resource. Users are individually responsible for their compliance with the terms and conditions of use.

Questions on specific terms and conditions may be adressed to euiref@eui.eu

Terms of Use: General Restrictions

Access to the electronic resources listed on the EUI Library website and catalogue is restricted to current members of the EUI, and in some cases, to on-site users of EUI, for the purposes of research, teaching, and private study.

Under EUI Library's license agreements for electronic resources, **users may not:**

‣ Allow anyone other than an authorized user to use the licensed materials
‣ Modify or create a derivative work of the licensed materials without the permission of the licensor
‣ Remove, obscure or modify any copyright or other proprietary notices included in the licensed materials
‣ Use the licensed materials for commercial purposes
‣ Systematically download, distribute, or retain substantial portions of information (more information below)

Examples of "excessive" or "systematic" downloading, which is prohibited:

‣ Rapidly downloading one article after another
‣ Continuously downloading tables of contents, search results, citations, or output
‣ Downloading entire issues or volumes of an eJournal
‣ Downloading the entire content of an eBook or multimedia resource
‣ Using robots, spiders, or other automated programs to download from online resources

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　Report an access problem
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Research Data Guide
EUI Library
8th edition
2020

Guide on

GOOD DATA PROTECTION PRACTICE
IN RESEARCH

SAGE Research Methods

EUI members have access to SAGE Research Methods providing eBooks and tools in support of all aspects of social science methodology.

The platform provides full-text, searchable access to the SAGE 'green book' and 'blue book' series:

‣ Quantitative Applications in the Social Sciences (QASS) eBooks
‣ Qualitative Research Methods eBooks.

All eBooks are also indexed in the Library Catalogue. The SAGE Research Methods user guide and training videos, are at this link.

SAGE Research Methods provides a Methods Map to help navigate methods, concepts and techniques. The Project Planner is a step-by-step guide to starting, developing and completing a research project. The Methods Map and Project Planner can be accessed via the 'Research Tools' link in the top menu of the homepage.

The methods' sections provide step-by-step information on all aspects of social science research cycles – including the formulation of research questions, research design, project management and data collection – as well as specific techniques (eg. structured and semi-structured interviews).

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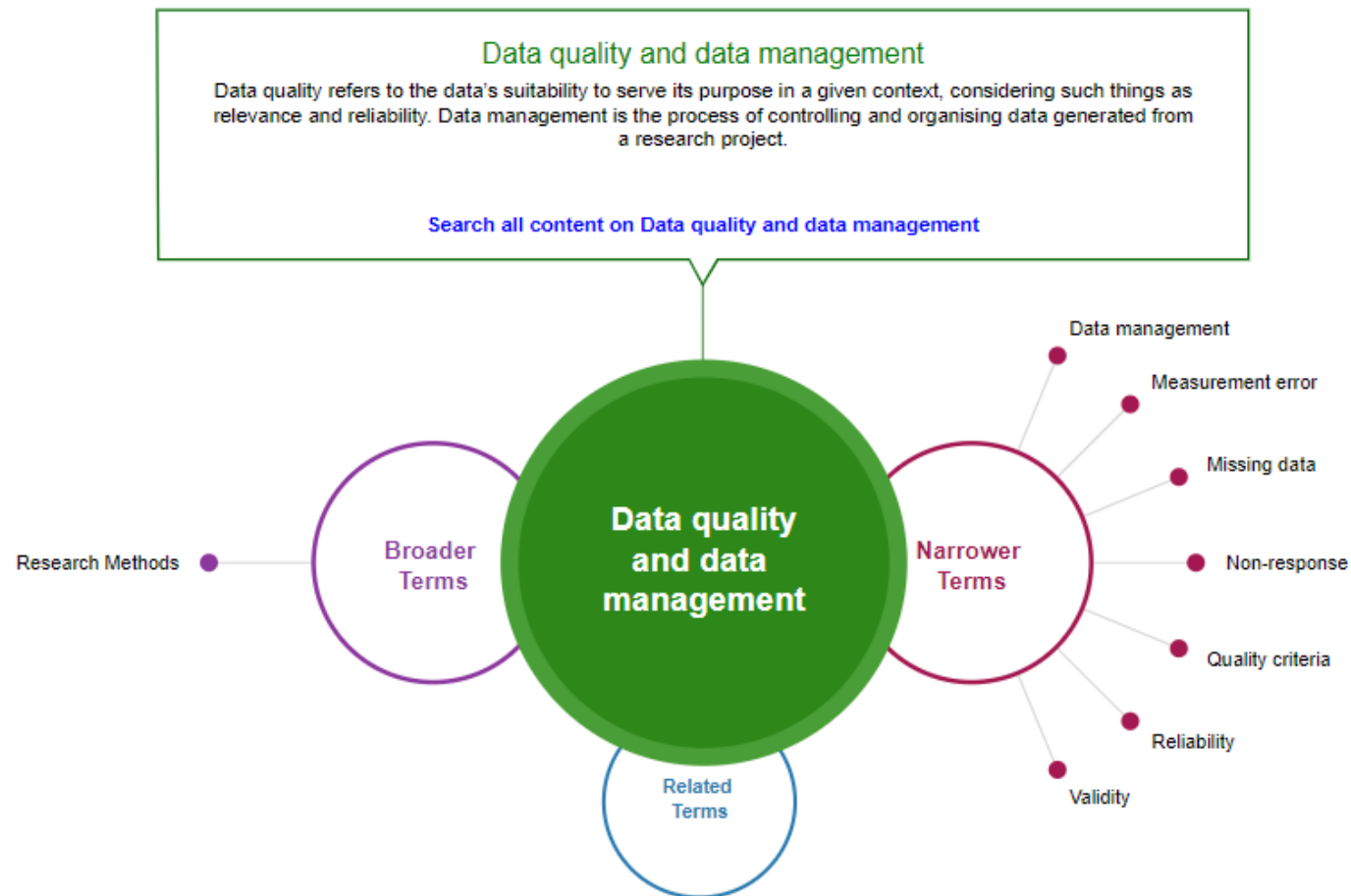European Union Information
History & Civilization
Law
Political & Social Sciences

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Methods Map

Data quality and data management

Data quality refers to the data's suitability to serve its purpose in a given context, considering such things as relevance and reliability. Data management is the process of controlling and organising data generated from a research project.

Search all content on Data quality and data management

Data management

Measurement error

Missing data

Research Methods ●   **Broader Terms**   **Data quality and data management**   **Narrower Terms**   Non-response

Quality criteria

Reliability

Validity

Related Terms

Home » Research » Library » Research Data Services

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EUI Research Data

The **EUI Research Data community** provides access to datasets generated from EUI research.

> Read more on how to manage your data on the Open Science Research Data Management page. (Data Management Plans, Research Project Cycle, Preservation and Sharing, and Data in EU projects)

> Submit your research data directly using the Submission Form or contact ResData@eui.eu

Collections in this community

ECO Datasets

HEC Datasets

RSCAS Datasets

SPS Datasets

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Recent Submissions

Title: Mobility and border control in response to COVID-19 dataset
Author(s): ADER, Leslie; DZANKIC, Jelena 🆔 ⓘ; HOFFMEYER, Paula; MITTMASSER, Christin; PEDERSEN, Oliver; PICCOLI, Lorenzo 🆔 ⓘ; PONT, Aurélie; RAUSIS, Frowin; SIDLER, Petra

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How to Submit Datasets to the Cadmus Repository

‣ EUI members can submit their research datasets for inclusion in the EUI Research Data collection in the Cadmus repository

‣ The first step is to complete the form below. The Library will then make an appointment for data transfer

‣ By submitting this form, EUI members certify that the dataset for reposit is the result of original data generation, or is the output of significant, value-added, elaboration of pre-existing sources

‣ Further information is available in the lower part of this page.

EUI
Research
Data

Dataset metadata submission form

Name of data submitter or principal investigator *

First   Last

EUI email *

Title of dataset *

Name(s) of dataset creator(s) *

EUI email contact(s) of dataset creator(s) *

Year of completion of dataset *

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‣ Data topics
‣ Economic research resources
‣ EUI Research Data
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‣ Google Dataset Search
‣ Horizon 2020 data support
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‣ Macroeconomic data
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‣ One-stop guide
‣ re3data repository registry
‣ Registration for micro data
‣ Remote computing / Citrix

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Metadata

- Can be a 'Checklist' for Open Data
  - Title, names of creator(s)
  - Description – 'data abstract'
  - Source(s)
  - Creation date
  - Spatial / temporal coverage
  - Format
  - Location of data
  - Access status and embargo
  - Licence
  - Funding Statement
  - Related publications

Title: InDivEU - party preferences data
Author(s): TELLE, Stefan [P] [iD]; CICCHI, Lorenzo [P] [iD]; FERREIRA DA SILVA, Frederico [P]; GARZIA, Diego [P] [iD]; REILJAN, Andres [P]; TRECHSEL, Alexander H. [P]
Date: 2020
Type: Dataset
Series/Number: EUI Research Data; 2020; Robert Schuman Centre for Advanced Studies
Abstract: This dataset contains party positions on questions of (differentiated) European integration. It contains data on more than 400 parties and covers 28 countries (EU27 + UK). The data was retrieved from two pre-existing ...

Title: Gunners and artillery of the Spanish monarchy (1560-1610) dataset
Author(s): COSSART, Brice [P]
Date: 2020
Type: Dataset
Series/Number: EUI Research Data; 2020; Department of History and Civilization
Abstract: This dataset has been built by Brice Cossart during his PhD at the European University Institute (Florence, Italy) between 2012 and 2016, for a dissertation entitled "les artilleurs et la Monarchie Catholique: fondements ...

Title: European capital movements (FDI) 1958-2018 dataset
Author(s): TASCON-FERNANDEZ, Luis Julio [P] [iD]
Date: 2020
Type: Dataset
Series/Number: EUI Research Data; 2020; Robert Schuman Centre for Advanced Studies
Abstract: The European Capital Movements (FDI) 1958-2018 Dataset aims to bring together the main quantitative sources on the behaviour and performance of capital movements in and from Europe. In brief, the study covers the main ...

Title: International travel restrictions in response to the COVID-19 outbreak dataset
Author(s): PICCOLI, Lorenzo [P] [iD]; DZANKIC, Jelena [P] [iD]; PERRET, Andreas; RUEDIN, Didier; JACOBS-OWENS, Timothy
Date: 2020

EUI Library Data Portal

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‣ For data support, contact Thomas Bourke

Macroeconomic data	Micro-socioeconomic data
Macro short descriptions	**Micro short descriptions**
Banking data - S&P Global Market Intelligence	Adult Education Survey - Eurostat
Central and Eastern European data	Amadeus European company data - BvD / Moody's
ComExt: Intra- and Extra-EU trade	Competitiveness Research Network Europe
Comparative constitutions data - Constitute	Consumer Expenditure Survey - USA
Comparative Political Data Sets	Current Population Survey - USA
Cross-National Time-Series	DNB Household Survey - Netherlands
Data Repositories Registry - re3data.org	ECRI European household lending data
Datastream - macroeconomic and market data	EU-LFS: Labour Force Survey
Demographic Yearbook - UN	EU-SILC: Statistics on Income & Living Conditions
Direction of Trade Statistics - IMF	EUDO data on European democracy
Electoral and parliamentary data	Eurobarometer surveys
EUI Research Data	EUROMOD tax and benefits simulator
European Capital Markets Institute - ECMI	European Community Household Panel
European Central Bank data	European occupational health data - ESENER
European Data Portal - EC	European Social Survey

DATA PORTAL

- Classification of statistical data
- Conditions of use
- Crisis Research - 2020
- Data Guide - EUI
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- European, EU & Euro Area data
- Google Dataset Search
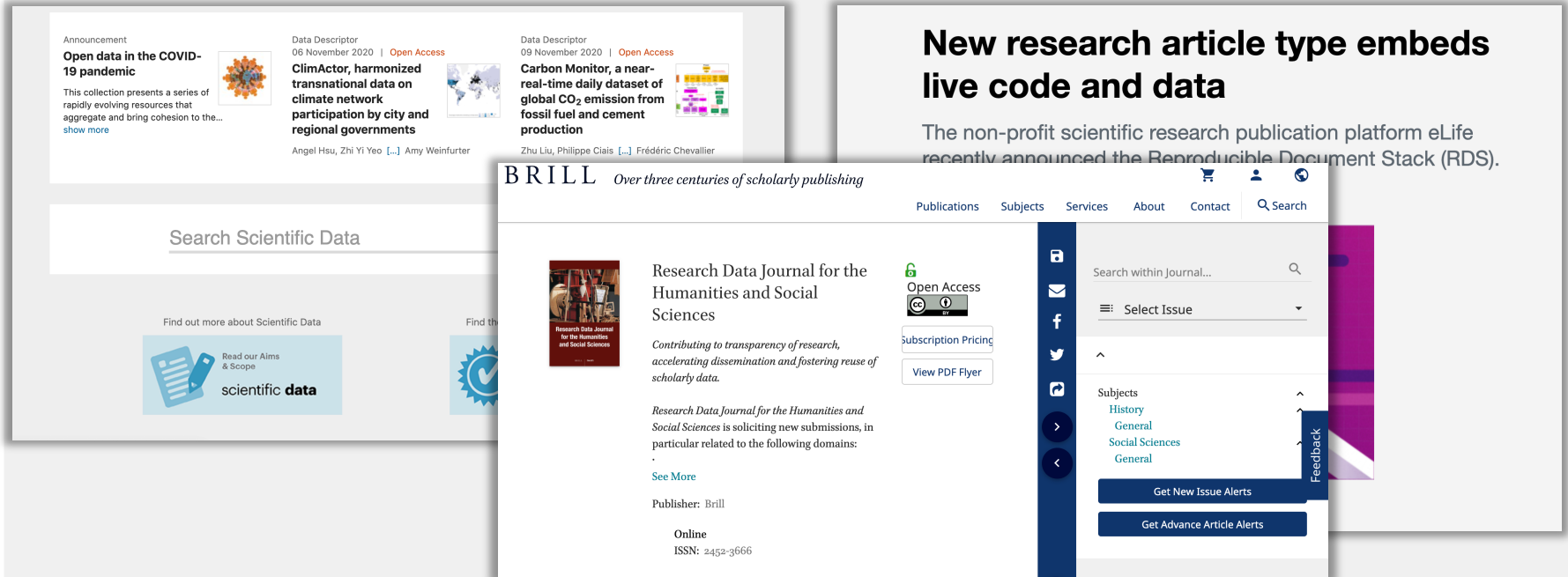- Horizon 2020 data support

Beyond RDM: Data Publishing tips

https://www.cessda.eu/Training/Training-Resources/Library/Data-Management-Expert-Guide/6.-Archive-Publish/Data-publishing-routes

Beyond RDM: data journals

- https://brill.com/view/journals/rdj/rdj-overview.xml

- https://www.mdpi.com/journal/data

- https://www.journals.elsevier.com/data-in-brief

- https://www.nature.com/sdata/

- https://openhumanitiesdata.metajnl.com/

Data sharing: opportunities

- For **you**
  - Make your work more visible (and citable, and impactful)
  - Better engage with the research community(ies)
  - Increase (interdisciplinary) collaboration
- For the **research community**(ies)
  - Foster knowledge discovery / efficient science
  - Reduce access barriers to knowledge
  - Increase reproducibility
- For the **society** at large
  - Boost innovation & economic growth
  - Save public money & make a better world

Data sharing: challenges

(You might find along your way)

- Cultural barriers
  - "This is how I have always done it / I was taught to do it"
  - "I do not have time for this / What do I get out of it?"
- Technical and legal barriers
  - "I do not know how to do it"
  - "I already have all the tools I need"
  - "My datasets contain sensitive data"
  - Copyright law (e.g.: for TDM)
  - Licencing agreements

P.S. this is true for all Open Science practices!

Wrap up

- Proper RDM is throughout the research lifecycle
- DMPs as "living documents" shall be considered an intrinsic component of research practices: as natural as writing a paper
- Horizon Europe Framework Programme (2021-2027): RDM and DMPs to be formally evaluated in upcoming grant proposals
- Open Science and FAIR RDM to be the norm: it is not a matter of "if" it is a matter of "when"
- Be proactive: ride the wave instead of being carried by it!

Thank you!

Questions?

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Info Specialist ECO
✉ econlibrary@eui.eu

Simone Sacchi
Open Science Librarian
✉ simone.sacchi@eui.eu

https://www.eui.eu/Research/Library/ResearchDataServices

https://www.eui.eu/Research/EUIPublications

**Open Science Team
Chat with us!**
Every Thursday at 11:00
on Zoom

Research Data Management

2 February 2021