Rīgas Stradiņa Universitāte

Research Data Lifecycle at RSU

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Science Department

Visit of Finnish Library Representatives to Riga Stradiņš University Library

14 April 2023

IN THE PRESENTATION

Why research data management?

Research data lifecycle at RSU

News in Latvia and at RSU

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RESEARCH DATA LIFECYCLE AT RSU

Why research data management?

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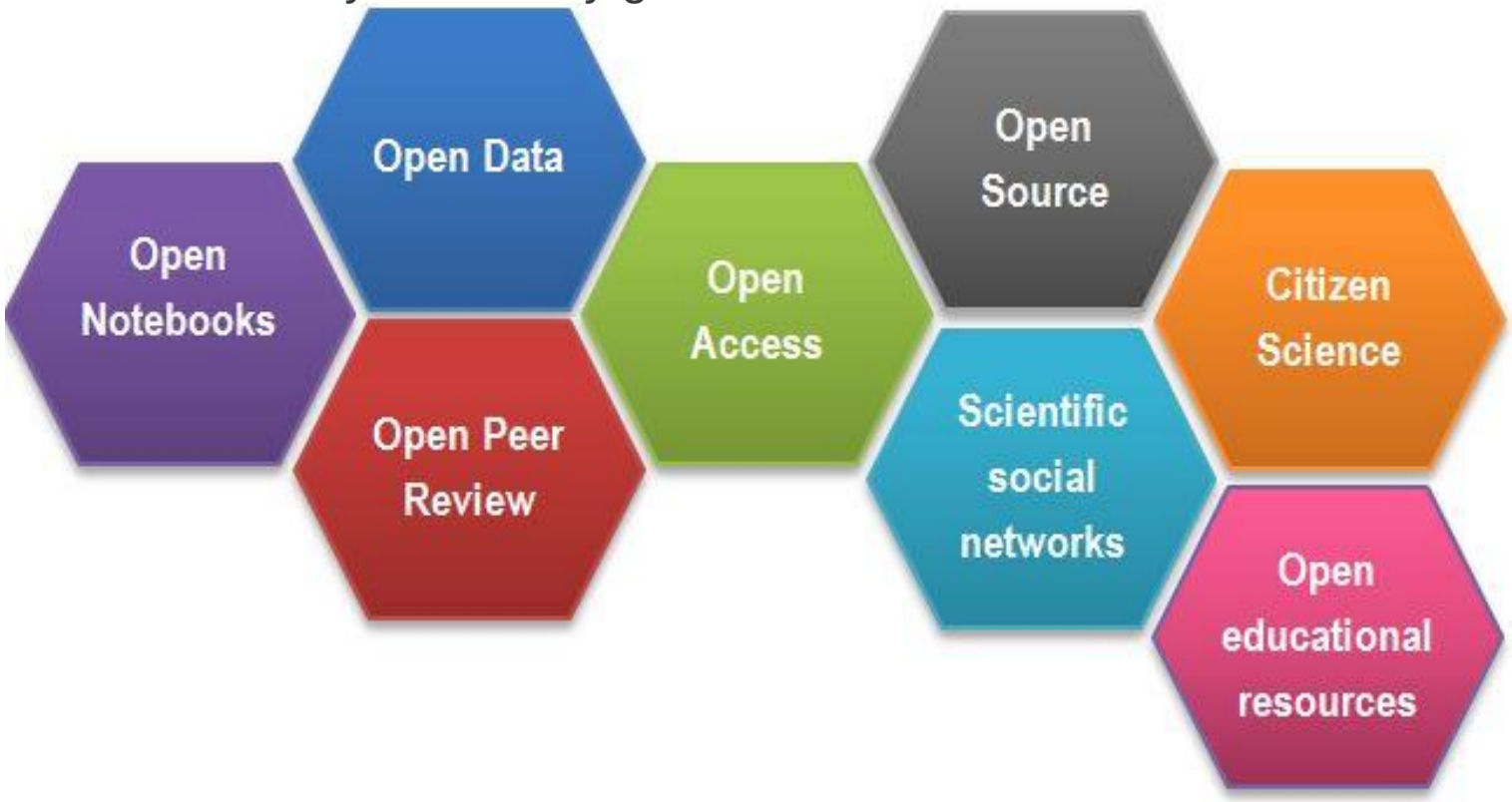
Open Science and Open data

«Data is open if you can access them freely, use, modify and share with anyone for any goals»



Responsible research and innovations

Main principles:

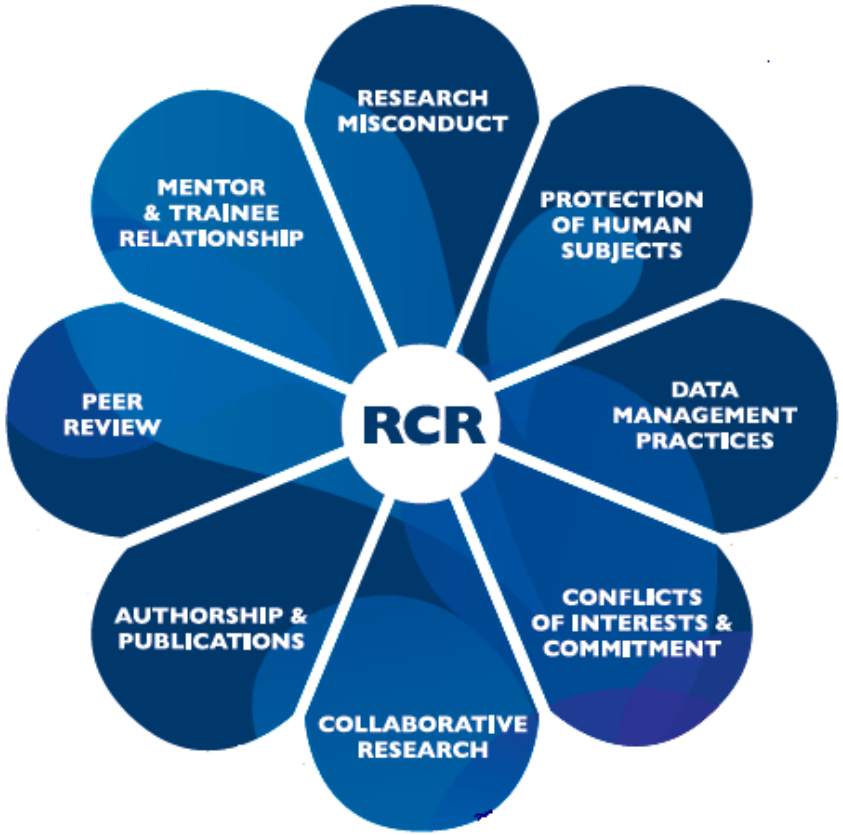
- Research shall give benefits to the society
- Research shouldn’t cause harm
- Dignity – research shall promote dignity towards individual
- FAIRness – research shall help to make the world a better place

Main values:

- openness
- transparency
- reproducibility

Source: presentation «Open Science, Open Access, Open Data», Louise Bezuidenhout, Data Archiving and Networked Services

Responsible conduct of research



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FAIR principles

Findable:

F1. (meta)data are assigned a globally unique and persistent identifier;

F2. data are described with rich metadata;

F3. metadata clearly and explicitly include the identifier of the data it describes;

F4. (meta)data are registered or indexed in a searchable resource;

Accessible:

A1. (meta)data are retrievable by their identifier using a standardized communications protocol;

A1.1 the protocol is open, free, and universally implementable;

A1.2. the protocol allows for an authentication and authorization procedure, where necessary;

A2. metadata are accessible, even when the data are no longer available;

Interoperable:

I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.

I2. (meta)data use vocabularies that follow FAIR principles;

I3. (meta)data include qualified references to other (meta)data;

Reusable:

R1. meta(data) are richly described with a plurality of accurate and relevant attributes;

R1.1. (meta)data are released with a clear and accessible data usage license;

R1.2. (meta)data are associated with detailed provenance;

R1.3. (meta)data meet domain-relevant community standards;

doi: 10.1038/sdata.2016.18

RESEARCH DATA LIFECYCLE AT RSU

Research data lifecycle

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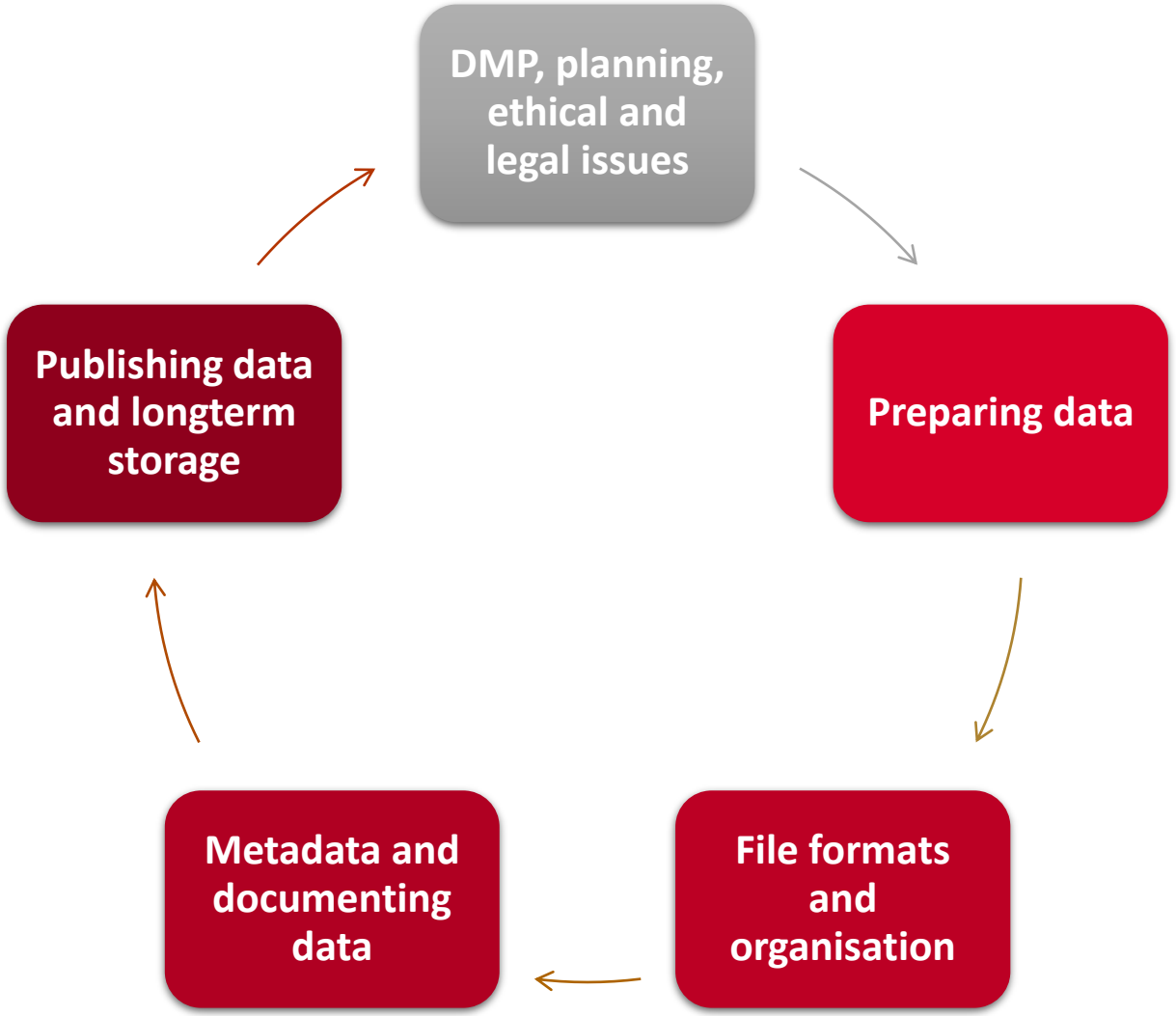
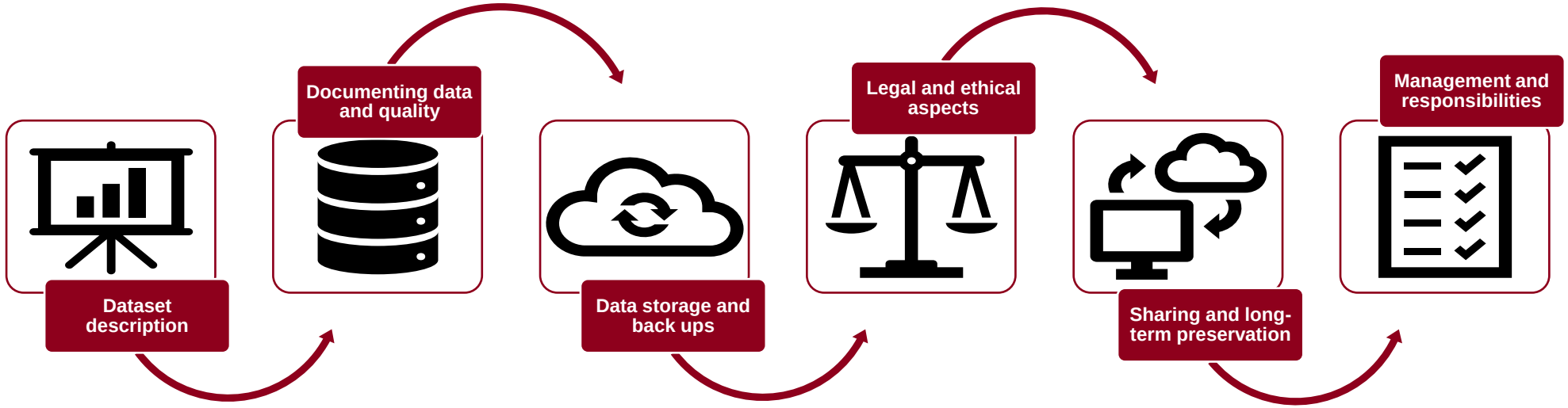
Principle steps in RDM



Data management plan (DMP)



DMPTool

DMPONLINE

argos

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Preparing data

Principles for collecting and generating data

Appropriate software to collect data and to process them

Pseudonymisation/anonymisation

Describing and coding data

IBM® SPSS® Statistics

NVIVO

File formats and structure

We are aiming to make data easily accessible and usable in long-term

- Data formats such as .csv, .txt., .pdf etc.
- Consistent approach to organising and storaging data
- File naming convention
- Logical folder structure

zotero

Documenting data and metadata

To make data reproducible in future we:

- Require at least minimum metadata (DDI standard for repository + field specific metadata)
- Methodology description for capturing data
- Codebook to explain variables and values
- Questionnaires (for surveys and interviews)
- ReadMe.txt to describe the dataset and how to reproduce it

Advisable also:

- Laboratory notes and experimental protocols
- Software documentation (and even source code for specific research software)

Avots: https://dmeg.cessda.eu/Data-Management-Expert-Guide/2.-Organise-Document/Documentation-and-metadata

Publishing data and longterm storage

Publish and promote your datasets:

- Open metadata standard (DDI)
- Back-ups
- Automatic licencing (Common Creatives)
- Unique identifier (DOI)
- Open and restricted access
- Automatic versioning
- Metadata is harvested to some of the most popular registries in Europe

re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

EUROPEAN OPEN SCIENCE CLOUD

DataCite

OpenAIRE

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Re-using research data

We encourage researchers to re-use already existing datasets in order to:

- Reduce time and financial resources
- Give more space for analysis
- Enhance cooperation with other researchers

re3data.org REGISTRY OF RESEARCH DATA REPOSITORIES

DataCite

EUROPEAN OPEN SCIENCE CLOUD

OpenAIRE EXPLORE

FAIRsharing.org standards, databases, policies

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R3D

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Latvian Open Science strategy (2021-2027)

- **Standardized DMPs for research projects**

Principles: minimal burden to researchers, alignment with standards and APIs, automated (as much as possible)

- **DataverseLV research data repository network**

Federated system, will include also metadata from RSU Dataverse

- **Participation in European Open Science Cloud (EOSC)**

- **Higher Education and Science IT Shared Service Centre (VPC)**

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Current data-driven projects

- Towards Implementing the RSU Data Repository and the FAIR Data Principles (funded by MikroTik)

- National Research Programme in Biomedicine, Medical Technologies and Pharmacology

- Implementing FAIR Principles in the Field of Occupational Safety and Health (funded by H2020 project EOSC-Future)

- VirA

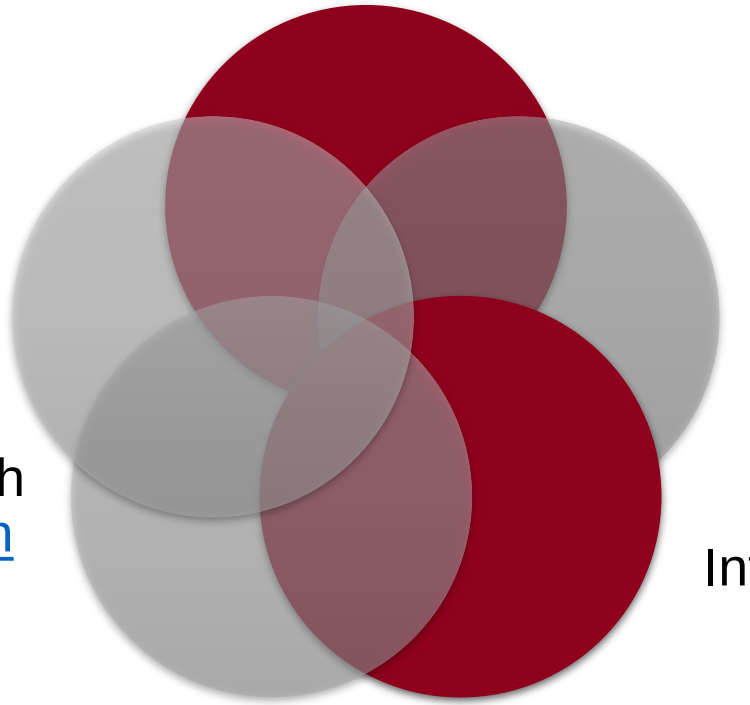
The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952376

- Participation in SHARE and EATRIS

Digital Transformation Roadmap

Moving towards introducing new research software and AI tools/approaches

Participation in development of relevant legislation (Data secondary use, EHDS, Biobanks)



Internal regulations and guiding materials

Cooperation with European Open Science Cloud (EOSC), participation in INFRA-EOSC projects

Intensification of data-driven research, cooperation with European RIs

More on our website

Research data management is an integral and significant part of research curricula. It helps organise research and makes it more transparent, as well as improves impact of research results. Research data management enables validation, replication of research and re-use data for new research.

HOME

FAIR PRINCIPLE IMPLEMENTATION

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Thank you for your attention!

Questions:

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