Research Data Management

Dr. Juliane Jacob   **11.06.2024**

Center for Sustainable Research Data Management

- Central „operational unit" according to §93 HmbHG, assignment to VP 3
- Cooperation with RRZ and other data centers

- **Our services**
    - Consulting, training and information
    - Research Data Repository (UHH-RDR)
    - Research Information System (RIS)
    - Providing of Digital Object Identifier (DOI)
    - Tool and consulting for Data Management Plans (DMP)
    - Curation of (web-) applications / Heurist database toolbox

Photo: Pauli-Pirat

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Motivation

Good Scientific Practice and Research Data Management

- Quality assurance of scientific work
- Guidelines for ensuring good scientific practice and behavior in case of scientific misconduct

- What are my tasks?
- What do I have to do personally?
- What am I responsible for?
- How do I do it?

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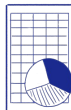# What do we mean by research data?

All data and materials used in research:

Measurement data, laboratory values, audio, video, texts, surveys, images, objects from collections, samples, algorithms, software, 3D data, scans, simulation data...

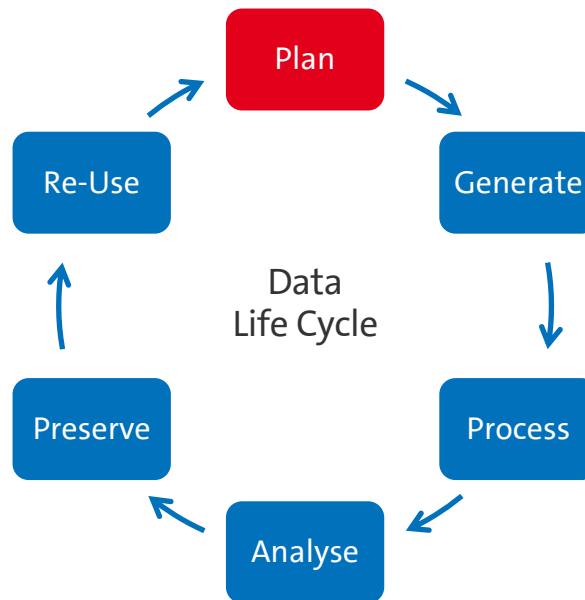All data types, file formats, kilobyte to exabyte...

$f(x)$

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What is Research Data Management?

„Process to ensure long-term usability of research data."

Longterm aspects
- Archive data, keep ready for at least 10 years
- Ensure data access in the case of closed access (data trustee, Treuhänder)
- Keep keys for encrypted data
- Keep software
- Maintenance of web applications

Daily Work
- Save work data
- Describe data
- Data exchange

Data Life Cycle: Plan → Generate → Process → Analyse → Preserve → Re-Use

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Daily Work

- Save data
  - Naming Convention → Versioning: 20240611_GWP_Gasser_v1.ppt
  - File formats, software
  - 3-2-1-Backup Rule

- Describe data
  - Metadata (Schema)
  - Documentation, READme file

- Exchange data (B-identifier)
  - UHH Share
  - UHH Cloud

READme

UHHShare

UHHCloud

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Archiving, publishing Data

- Finishing thesis or leaving UHH: Handing over data properly, network drives, local data storage, etc. will be deleted!

- Legal aspects: Copyright, usage rights, sensitive data...

- Publish data, posters... in UHH research data repository - www.fdr.uni-hamburg.de/ for testing https://staging.fdr.uni-hamburg.de/

- Publish articles open access https://www.oa.uni-hamburg.de/oaf

Repo

Test-Repo

OA-Fonds

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Why is RDM important?

- „Good Scientific Practice" – reproducable results

- Research data is expensive

- Data publication - data as a resource for new research

- RDM is very important for funders and applications

- DFG (checklist), EU, BMBF applications require Data Management Plans

- https://www.fdm.uni-hamburg.de/ueber-uns/a-nachrichten/fdm-dfg-checklist.html

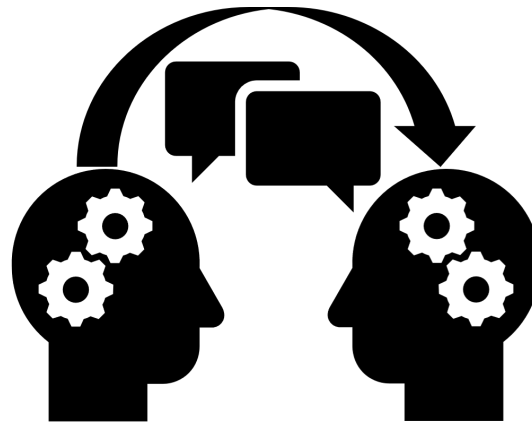Universität Hamburg
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What are best practices in RDM?

- Do it at all!!!

- Use established data formats and repositories, if available from your scientific community

- FAIR - Findable, Accessible, Interoperable, Re-usable

- Use persistent identifiers (DOI)

- Use open licenses if possible (Creative Commons licenses)

- Observe data protection, legal situation, ethics

- Always make descriptive metadata freely available

- "As open as possible, as closed as necessary"

Questions?

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