Scientific Data Management
in the TRR 170

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What are Data?

Research data are

- Samples
- Observational
- Experimental
- Simulation data
- Derived or compiled data

… stored in various formats

… <u>to produce original research results</u>

What is Scientific Data Management?

- Data management is how you care for your scientific data:

  - Organization and structuring of long-term archiving

  - Preservation and curation

  - Accessibility

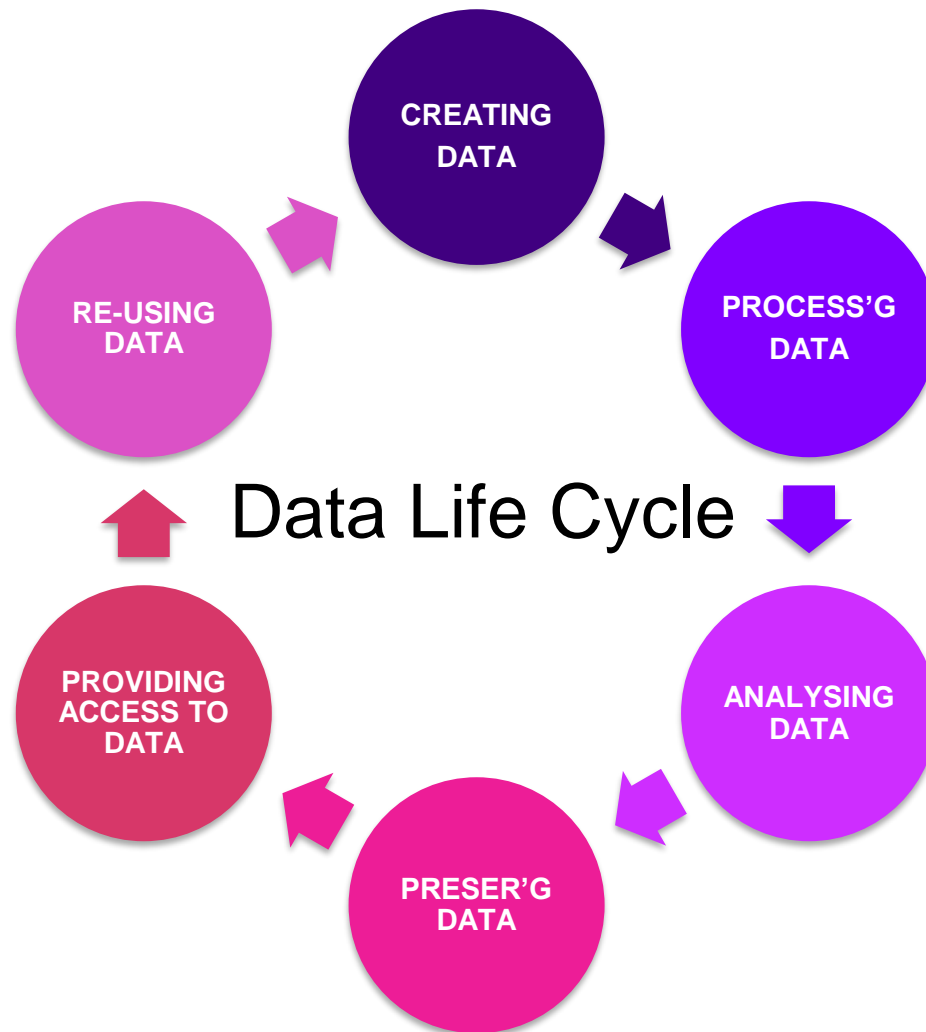# Why Should You Manage Your Data?

- Scientific data are the cornerstone of research

- 2010: Funding bodies of Alliance of Science Organisations

- 10/2015: DFG

Requirements:

- – Transparency & Integrity
- – Compliance
- – Availability

Data Management Plan & Policy

CREATING DATA → PROCESS'G DATA → ANALYSING DATA → PRESER'G DATA → PROVIDING ACCESS TO DATA → RE-USING DATA

Data Life Cycle

Creating a Data Management Plan

- Types of data

- Standards to be used for data formats

- Where will data, samples, and other research products be stored during TRR170

- How to preserve and curate after?

Metadata

- … considers future use of data

- ... protocol needed for structured information on data:
  - Reliability of data
  - Makes data use easier

- … good documentation of the data:
  - Where did it come from? Who created it?
  - History of changes documented ?
  - Restrictions on how it can be used?

Creating a Data Policy

- Access and sharing of these data
  - Protection of privacy, confidentiality, intellectual property, etc.

  - When to share data: after 2 years … ?

Tools to Store & Trace Data

- CMS: Content management system (Typo 3, Drupal)

- Web portal for accessing data storage environment

  - Hub for data exchange between TRR170 projects and others

  - Data transfer through interface (wiki)

  - Depositing data in a repository or archive

  - Safe way of ensuring long-term preservation & curation

  - Preservation & curation services are offered by libraries of research institutions and universities

- Traceability of data

  - Assignment of digital object identifier (DOIs) to published data

Benefits of traceable scientific data

- ## Data used by planetary or other scientific communities ….

  …. data re-analysis by others => evaluating its quality

  …. improve relevance of your research by confirming findings

  …. initiate new research

  …. enable researcher to follow up on older research questions

Benefits of following through a data management & policy plan

– Increase your citation rate

Next steps ….

- Create a data management plan

- Establish a data policy

- Create a download area at

www.trr170-lateaccretion.de