Research Data Management & Data Curation Services: Unisa Library and Information Services

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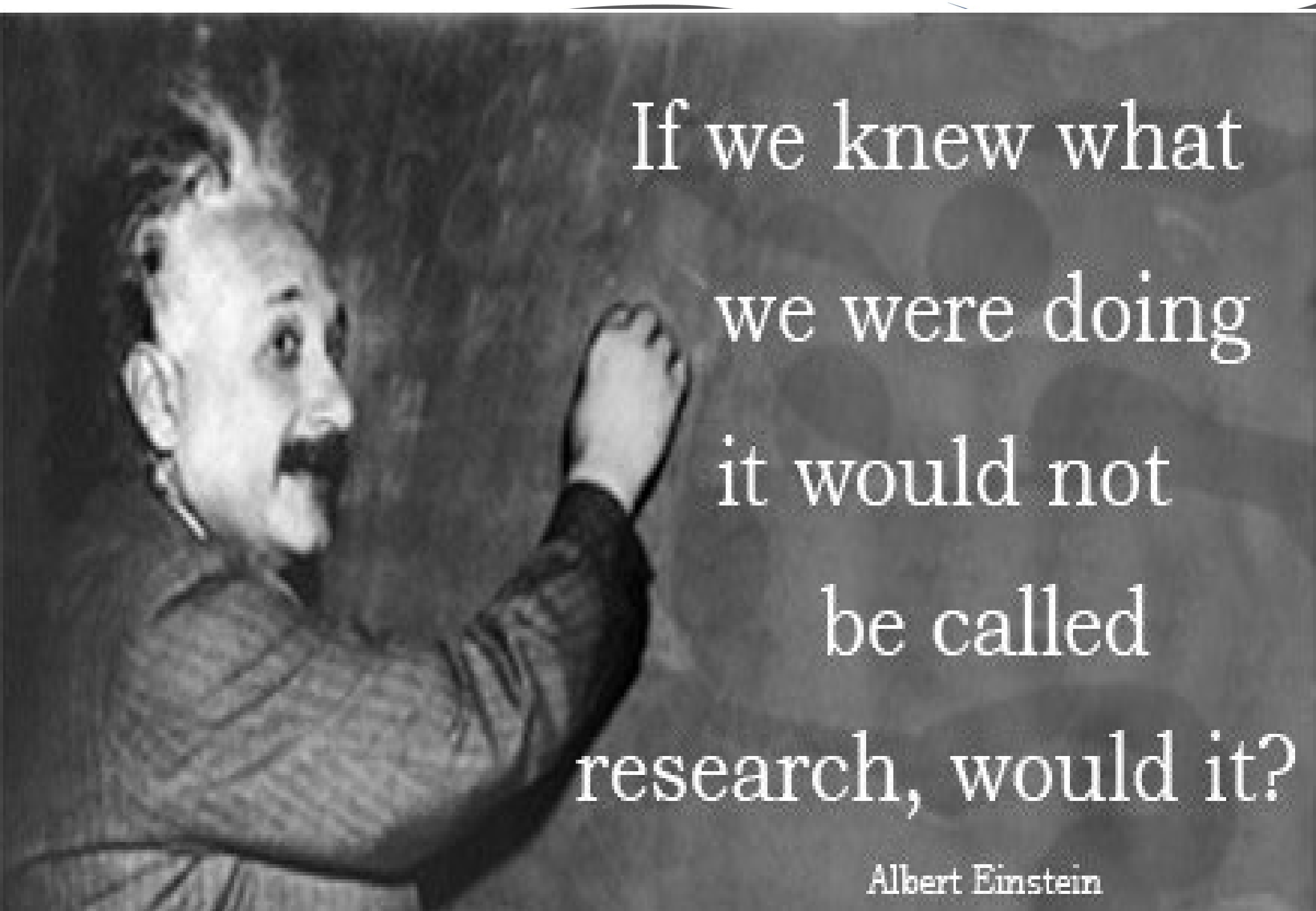
CGS: Training Workshop: 28 October 2021

Define tomorrow.

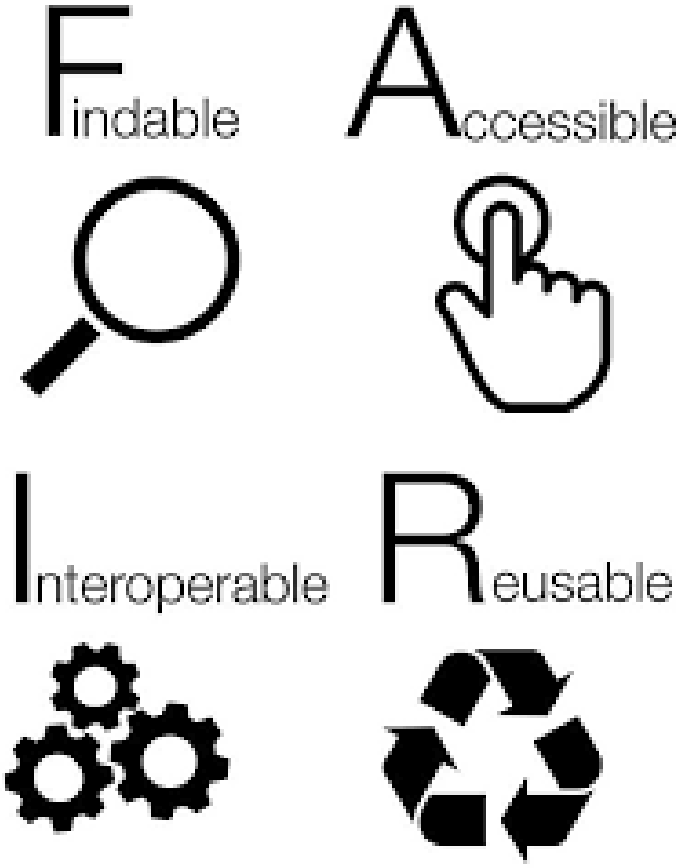
UNISA university of south africa


If we knew what
we were doing
it would not
be called
research, would it?
Albert Einstein

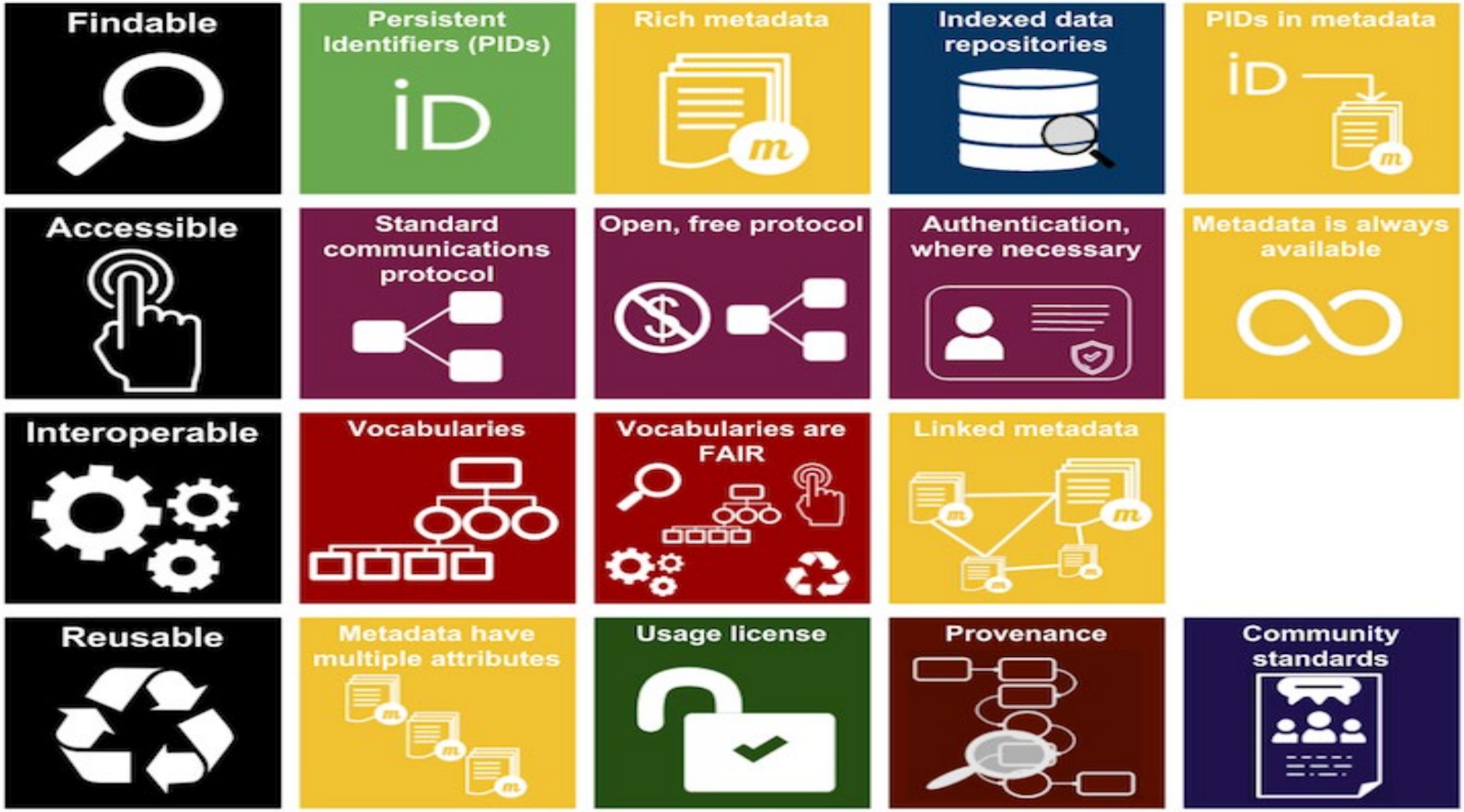
Open Science

- researchers, governments, research funding agencies/scientific community itself
- primary outputs of publicly funded research results – publications and the **research data**
- **Publicly accessible** in digital format with **no or minimal restriction** as a means for accelerating research;
- enhancing transparency and collaboration, and fostering innovation.
- open science focus on 3 areas:
  - **open access,**
  - **open research data,**
  - **and open collaboration**
- enabled through ICTs

OECD, 2015: http://www.oecd-ilibrary.org/making-open-science-a-reality_5jrs2f963zs1.pdf



FAIR Data Principles


Findable
Persistent Identifiers (PIDs)
Rich metadata
Indexed data repositories
PIDs in metadata
Accessible
Standard communications protocol
Open, free protocol
Authentication, where necessary
Metadata is always available
Interoperable
Vocabularies
Vocabularies are FAIR
Linked metadata
Reusable
Metadata have multiple attributes
Usage license
Provenance
Community standards

WHY RESEARCH DATA MANAGEMENT?

- **Rigorousness**: basing metrics on the best possible data in terms of accuracy and scope;
- **Recognition**: recognising that quantitative evaluation should support – but not supplant – qualitative, expert assessment;
- **Transparency**: keeping data collection and analytical processes open and transparent, so that those being evaluated can test and verify the results;
- **Diversity**: accounting for variation by field, and using a range of indicators to reflect and support a plurality of research and researcher career paths across the system;
- **Reflexivity**: recognising and anticipating the systemic and potential effects of indicators, and updating them in response.
- **Storage:** short- and long-term storage for safety, sharing, benchmarking and comparison

"What if we don't change at all ...
and something magical just happens?"

Context

- Many academic and research institutions are exploring opportunities to better support researchers in sharing their data
- Funder requirements, institutional and journal data sharing policies, and new trends in
- research reproducibility signal that academic research will become increasingly more open in the coming years.

Why manage your data

- Good research practice
- Data sharing
- Reproducibility
- Re-use
- Safe keeping and long term preservation
- Citations
- Visibility

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Statement on Open Access to Research Publications from the National Research Foundation (NRF)-Funded Research

Background

The National Research Foundation (NRF) was established through the National Research Foundation Act (Act No.23 of 1998). As an independent statutory agency, the organisation promotes and supports research in South Africa largely through the country's Higher Education Institutions (HEIs), National Research Facilities and Science Councils with a view to generating knowledge and promoting high-level research capacity within the National System of Innovation (NSI).

Supporting scientific research through public funding is important for growing the knowledge

In addition, the data supporting the publication should be deposited in an accredited Open Access repository, with the provision of a Digital Object Identifier for future citation and referencing.

- Accelerated transformation and globalisation of science, and
- Rapid transformation of this knowledge into innovative and developmental applications for the benefit of society.

Statement

The NRF recognises the importance of Open Access to science and research while at the same time appreciating that Open Access will continue to evolve in response to societal needs, achieving overarching policy harmonisation and new innovative publishing business models.

From 01 March 2015, authors of research papers generated from research either fully or partially funded by NRF, when submitting and publishing in academic journals, should deposit their final peer-reviewed manuscripts that have been accepted by the journals, to the administering institution Repository with an embargo period of no more than 12 months. Earlier Open Access may be provided should this be allowed by the publisher. If the paper is published in an Open Access journal or the publisher allows the deposit of the published version in PDF format, such version should be deposited into the administering institutional

Data supporting publication

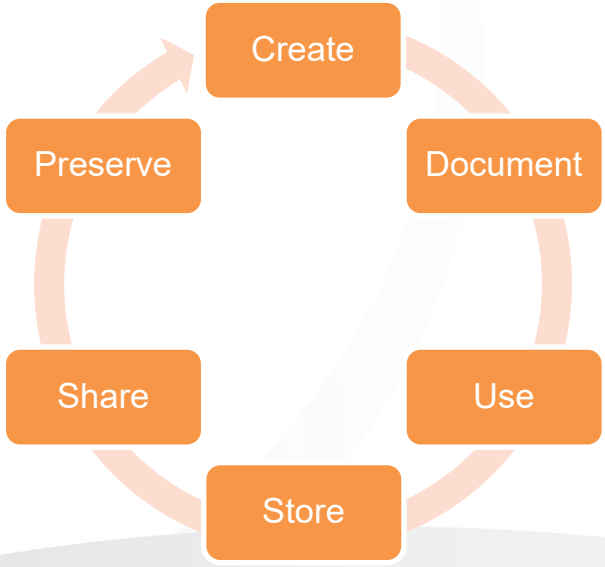
- NRF ***Funder expectations***:
- Research Data that underlies the findings reported in a journal article/ conference paper/thesis as set out in the NRF Open Access Statement.
- Deposit in a repository and ensure it is possible is reusable.

Benefits: Researcher Incentives

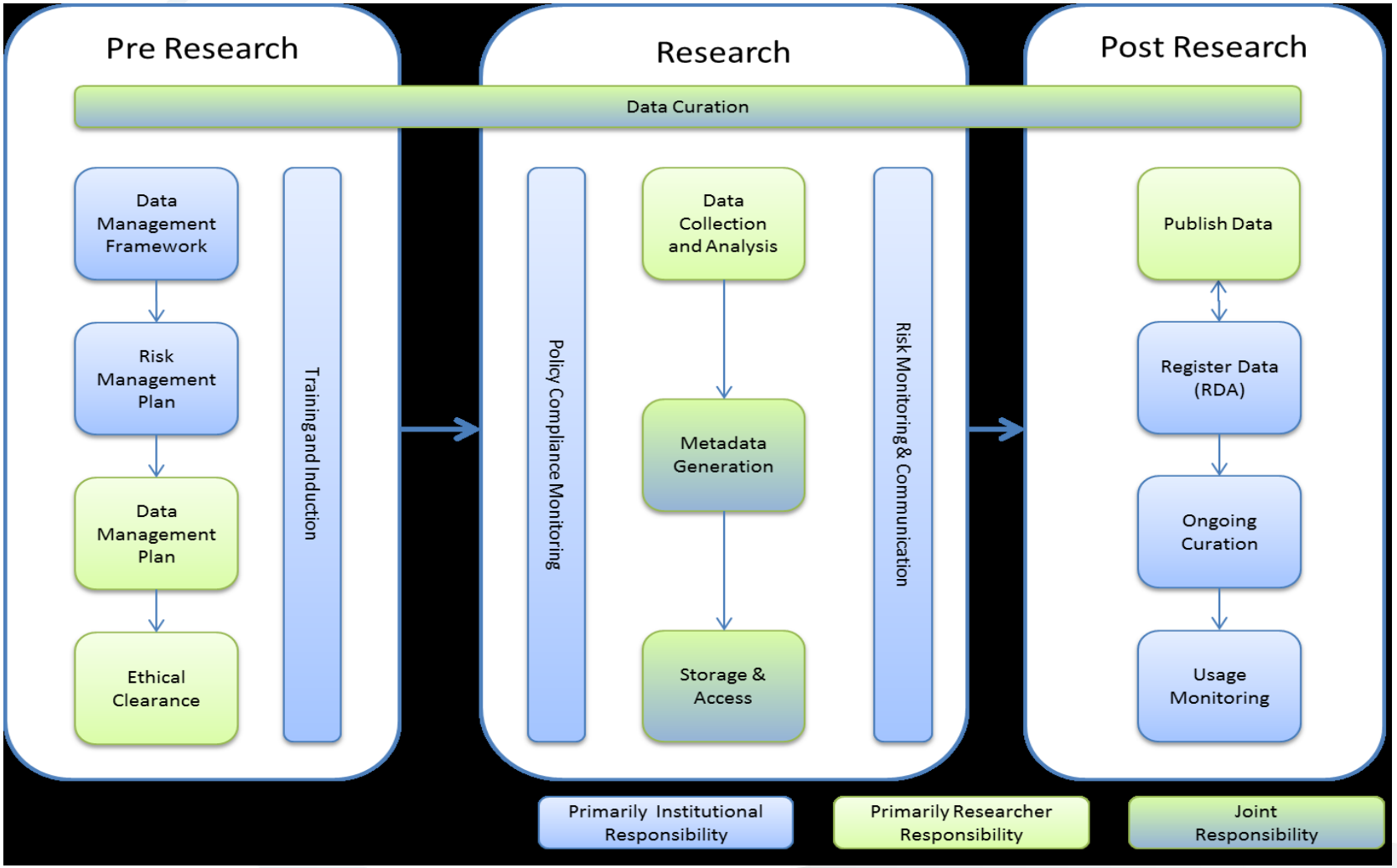
- Increased visibility
- Opportunities for reuse
- Collaborations with other data users
- Improved reputation as researcher
- More potential for citations
- Funder requirements
- Safe guarding
- Results verification
- Good research practice

What is involved in RDM?

- Data Management Planning
- Creating data
- Documenting data
- Accessing / using data
- Storage and backup
- Sharing data
- Preserving data



Steps in Research Data Management



Data curation

- All stages
- Rich metadata
- Access continuum: private, shared, public

Data Management Planning (DMP)

DMPs are written at the start of a project to define:

- What data will be collected or created?
- How the data will be documented and described?
- Where the data will be stored?
- Who will be responsible for data security and backup?
- Which data will be shared and/or preserved?
- How the data will be shared and with whom?

Why develop a DMP?

DMPs are often submitted with grant applications, but are useful whenever researchers are creating data.

They can help researchers to:

- Make informed decisions to anticipate & avoid problems
- Avoid duplication, data loss and security breaches
- Develop procedures early on for consistency
- Ensure data are accurate, complete, reliable and secure

Current status

- RDM Policy approved 05 August 2021
- Unisa Data Repository:

https://unisa.figshare.com/browse

- RDM Website
- RDM Libguide
- Data deposit form
- SADMP:DIRISA

https://secure.dirisa.ac.za/SADMPTool/

In development?

- UNISA Data Management Plan
- Terms of data re-use
- Terms of data deposit
- Research repositories synchronisation
- UNISAIR and Data Repository submission guidelines in CGS procedures for Masters and Thesis submissions
- Figshare submission guidelines


Learning is a team sport...
UNISA

Thank you

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