

RESEARCH DATA MANAGEMENT

Daniel Vrinceanu

Department of Physics
Texas Southern University,
Houston



SCIENCE RESEARCH REQUIRES RECORDING DATA

All data is organized curated and preserved and may or may not need to be shared.

Data is recorded with various technologies and on different media: supercomputer and lab notebook.

Different stages in research cycle need different components of Data Managements:

- Planning and Designing
 - Creation and Collection
 - Analysis and Collaboration
 - Evaluation and Archival
 - Dissemination and Sharing
 - Long term access and Reuse
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PLANNING AND DESIGNING



Sketch the fundamental principles and specific axes for the Data Management Plan



Onboarding checklist, recruiting and training, surveying



Documentation, Metadata
File formats



Data Use agreements for stakeholders

CREATION AND COLLECTION

File and
directory naming
convention for
research group

Version control

Readme files

Quality control

Data integrity

Instrument
protocols

ANALYSIS AND COLLABORATION



ELECTRONIC AND
MANUAL
LABORATORY
NOTEBOOKS



ANALYSIS READY
DATASETS



IMAGE
MANAGEMENT



COLLABORATION
TOOLS AND
SOFTWARE,
JUPYTERHUB



GROUP MEETING
NOTES AND
MINUTES

EVALUATION AND ARCHIVAL



DATA
DESTRUCTION



DATA
RETENTION
POLICY



INTELLECTUAL
PROPERTY



ARCHIVE AND
RECORDS
MANAGEMENT



DATA SAFETY
AND SECURITY

DISSEMINATION AND SHARING



Data repositories,
internal or external,
specialized + generic



Data sharing formats,
selection, packaging



Scholarly products:
poster and oral
presentations



Pre-prints, manuscripts,
articles in professional
journals

LONG TERM ACCESS AND REUSE

Active and intermediate term arrangements

Reproducibility of research

Offboarding checklist

Open access for community

Long term archival
