Research Data Management

What’s in it for me?
So, what is Research Data Management I hear you ask?

Well before we start on the management let’s think about research data...

What is it? What forms could it take?
According to the UTS (draft) Research Data Management Policy research data may include:

* Experimental results and the contents of lab books
  * Numerical and graphical results
  * Simulations, modelling and software
    * Images or visualizations
  * Surveys and questionnaires
    * Records of interviews
* Clinical records of treatments and test results
* And anything else needed to validate results
Ok, so now let’s ponder some reasons why this data needs to be carefully managed...
The Horror..... (Aka The Why)

Harvard Freezer Malfunction Destroys Dozens of Brains, Sets Back Autism Research by Years

No shit: how I lost my one-of-a-kind collection and my girlfriend, too

For his PhD, Daniel Bennett had built a unique set of faecal samples from a rare lizard. When it was destroyed, he really hit bottom.

Retraction Watch

Studio Stories: The Movie Vanishes

Disney/Pixar
7 years ago • 179,828 views
Toy Story 3 is available now! Click here to order: http://bit.ly/9DyXF3 Toy Story 3 now available on Four-Disc Blu-ray/DVD Combo...
To prevent horror, and to serve various altruistic ideals, there’s the carrot shaped stick that is the draft UTS Research Management Policy*. It touches on all the big important RDM issues.

* You can find the draft policy on staff connect. Just search for ‘research management policy’
This is the Research Project Lifecycle
All of the RDM based material pertinent to us is in 4.4 – ‘Managing and reporting activities throughout project’
4.4.1.1 – Research Data Management Plans
(the researcher must...)

* Develop and maintain a Research Data Management Plan where research data are collected or created as part of a research project

* Register every RDMP in the approved UTS system for Research Data Management (Stash)

Some other bodies: some journals, ERA, ARC and NHMRC grant recipients require an RDMP too, but you can use the one RDMP to please all these masters
4.4.1.2 – Storage of Research Data
(The researcher must...)

* Store research data within the University’s storage systems and infrastructure. Local copies may be retained for use during the research project.
* Take reasonable steps to keep research data and primary materials secure
* Properly document research data and primary materials throughout their lifecycles and cataloguing with the appropriate metadata*
*Appropriate metadata*

Isn’t directly specified in the document but...

- Stash fields can help you identify them
- Think ‘whatever I need to understand this again in 5 years’
  - The library may be able to help
- Forthcoming guidelines from UTS may also assist
  - RDM Class 2 elaborates on this
4.4.1.3 – Retention and disposal of research data

Researchers are responsible for retaining and managing sufficient research data in order to:

- Support the case of intellectual property ownership
- Defend research findings
- Support the reproducibility of the research findings
- Enable further research by sharing research data where appropriate, particularly where the data may be difficult or impossible to replicate
- Settle allegations to do with research integrity breaches
- Dispose of the research data safely and securely at the end of the agreed retention period*

*Note: Disposal should be in accordance with legal and ethical requirements.
*Appropriate Retention Periods*

- Are not specified for an HDR (but you do need to submit your data as part of your candidacy)
  - Are 5 years in most other cases
  - 7 years for contract research
- Retention period can also be longer than 5 years if the research
  - Is genomic
  - Involves indigenous populations
  - Is of ‘national significance’
4.4.1.4 – Access to research data

Research data should be made as accessible as possible to interested parties, in line with the Open Access Policy with the following limitations:

* Where commercial, commercialisation, legal, technical, privacy, or ethical constraints exist that prevents sharing of data
* The researchers have the right to keep research data associated with publications confidential until the results have been published.
4.4.2.1 – IP

* Uni owns IP on staff research projects in most cases
* HDR’s usually own their own IP unless other arrangements are made.
To Synthesise – what you must do:

- Keep a data management plan
- Lodge the plan in Stash or what becomes of its children over time
- Submit your data to your supervisor when you submit your PHD thesis (not mentioned in the policy doc I don’t think)
- Store and label your data in such a way so that any research findings are verifiable and reproducible for as long as you are required to hang onto it
- Keep the data where the uni wants you to keep it – Network drives, Cloudstor, and others as appropriate (Obey the 3-2-1 rule! 3 copies, on 2 different media, with 1 offsite copy
- RDM Class 3 elaborates on this)
- Keep your data confidential until published
And then what should/might do is:

Make the data accessible to interested parties, if possible:
This can be done by:

* Ticking the ‘**open, free access under license**’ box in Stash
* Uploading a record of the (or even the actual data) to a data repository
* Just fielding enquiries from someone who looks you up in the future
On the whole data sharing issue:

* There is data that kind of has to be shared – eg: genomic sequences, astronomic surveys, Antarctic research.
* There is data that can’t be shared – identified medical data, pending patents, commercial in confidence, etc.
* There is data that has to be held onto for longer than other eg:– Indigenous, ‘significant value’, genomics.
  * RDM class 4 elaborates on this
Okay, onto data management plans

You may recall that some of the obligations you have when doing research here is to make a data management plan and to lodge it with the preferred tool at UTS – this tool is called Stash

Stash will be updated at some point but you won’t lose your data. New features will include the ability to connect your research data to the record. ITD will be creating new and improved infrastructure to allow for this

https://stash.research.uts.edu.au/redbox/administration/home

we can show you how to make a draft DMP now if you like...
The next 3 classes cover...

RDM 2 covers file naming, file structures and metadata

RDM 3 covers data storage and data security

RDM 4 covers data sharing and data archiving
Bye!

*Oh and please contact UTS Library or me for a consultation on any of this content at any time.

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