



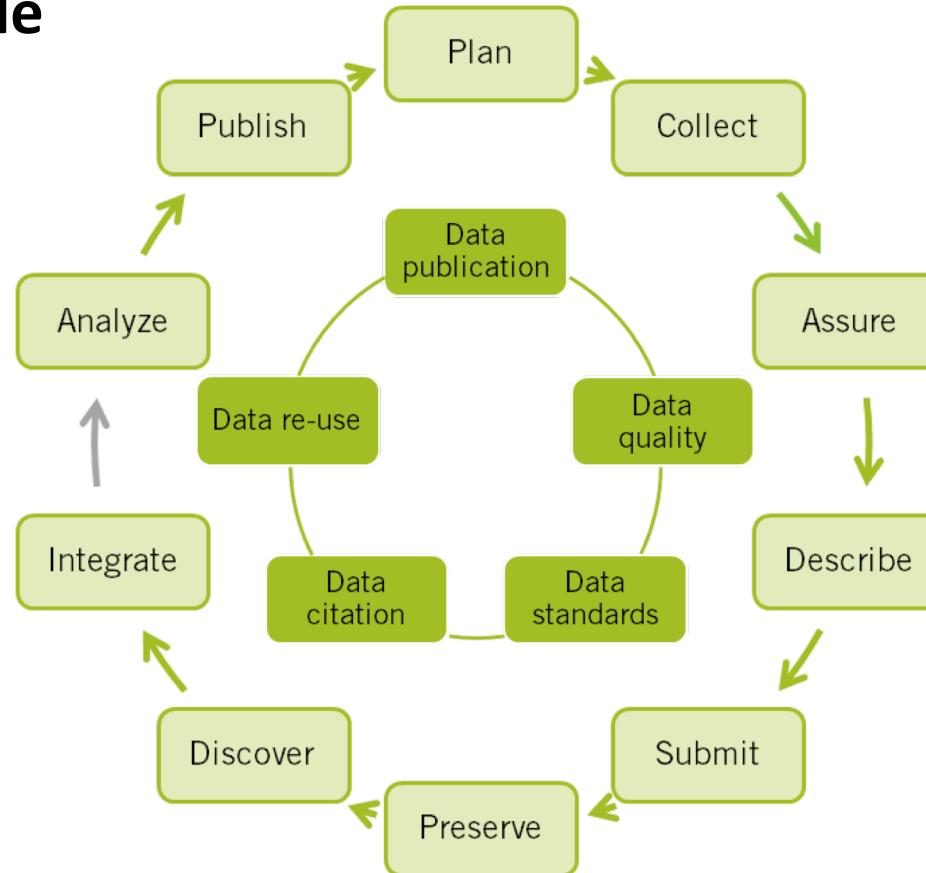
Research Data Management

Falko Glöckler

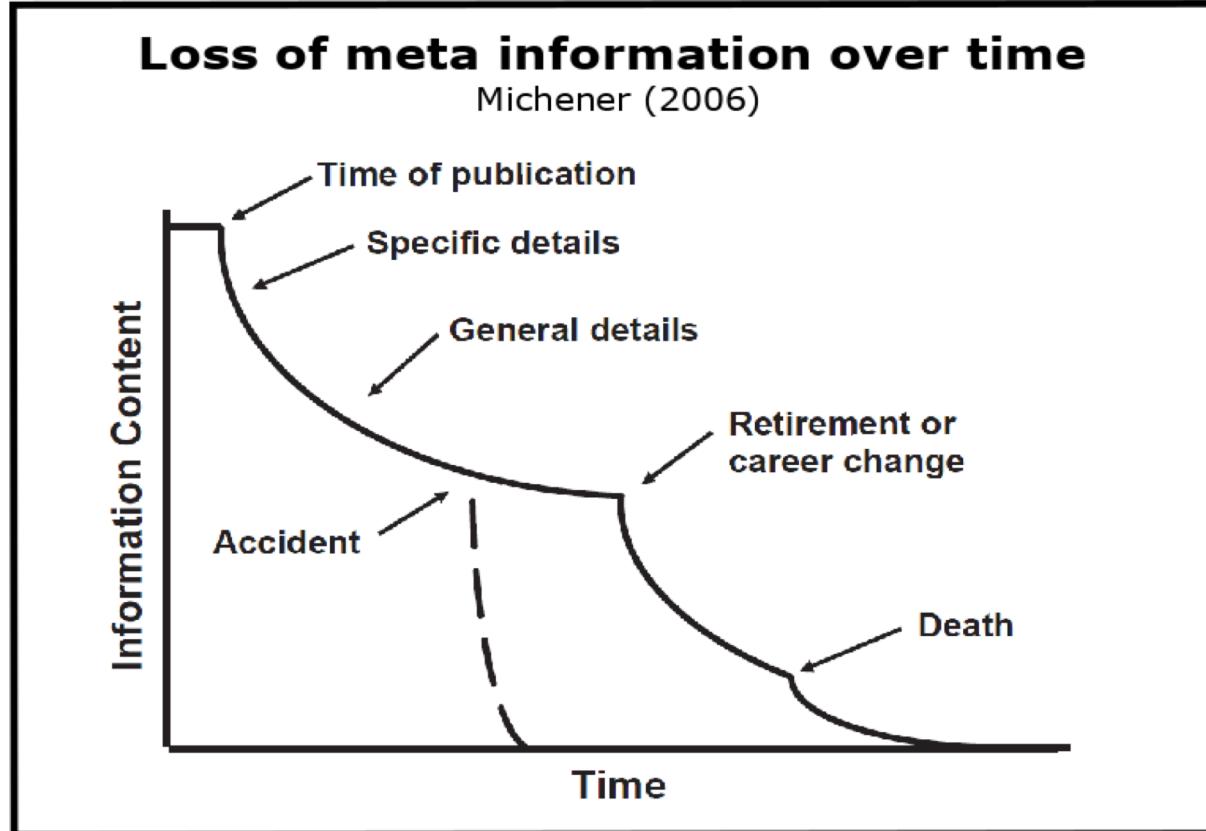


collection formats
information BEXIS QUALITY version
metadata BEIname FILE
research access values identifier citation
archive DESCRIBE CURATION propose
submit www digital
process analyse environment
PUBLISH data life cycle
introduction collect GFBio SHARING

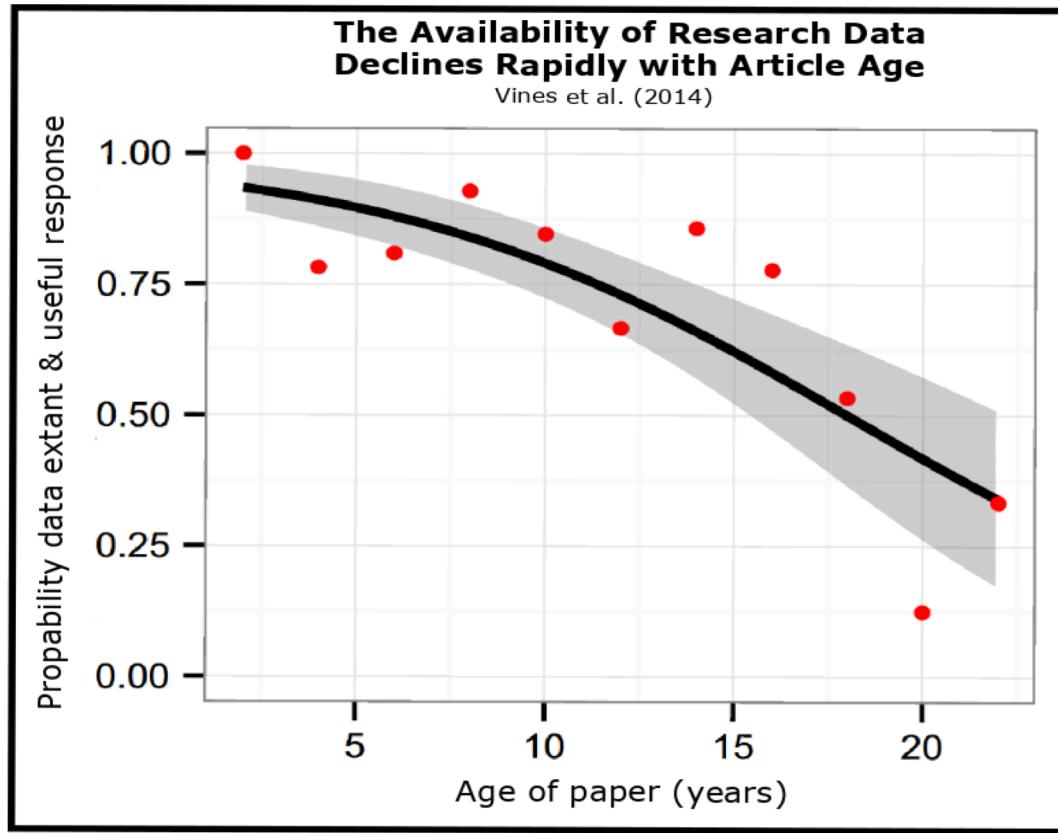
Data Life Cycle



Loss of Metadata

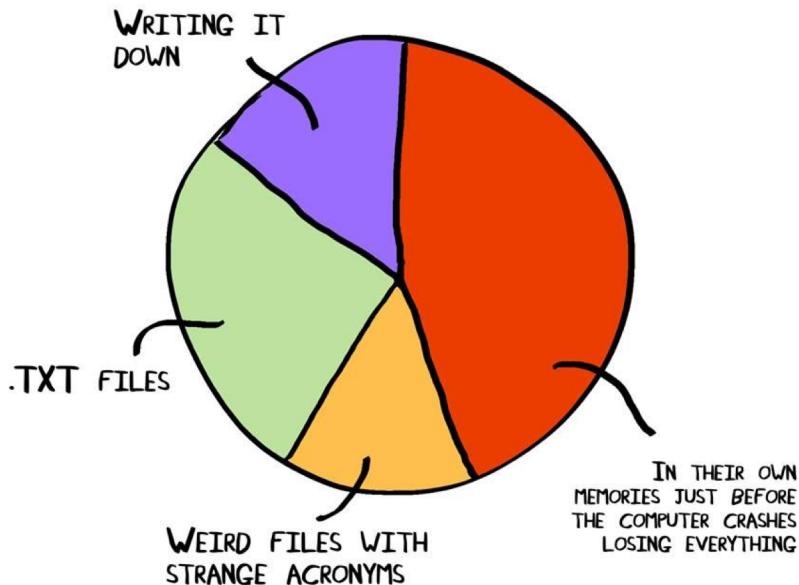


Loss of Research Data

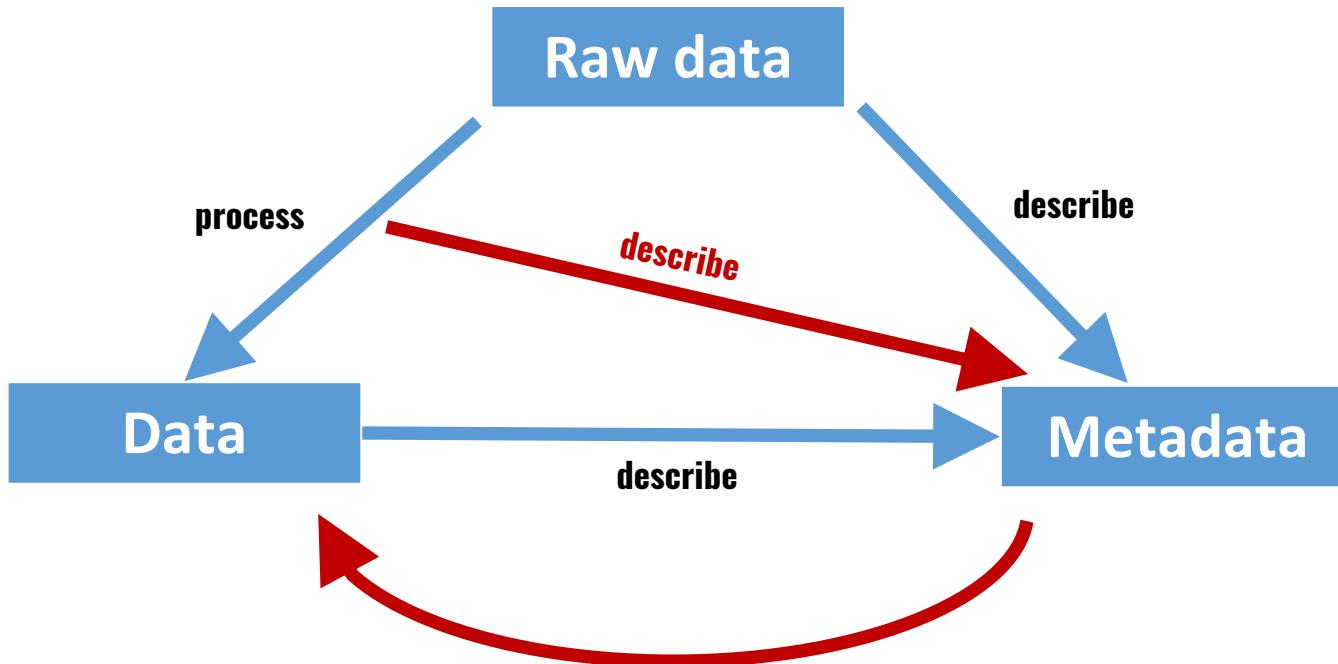


HOW SCIENTISTS SAVE IMPORTANT DATA

ERRANTSCIENCE.COM



Raw data vs. processed data vs. metadata



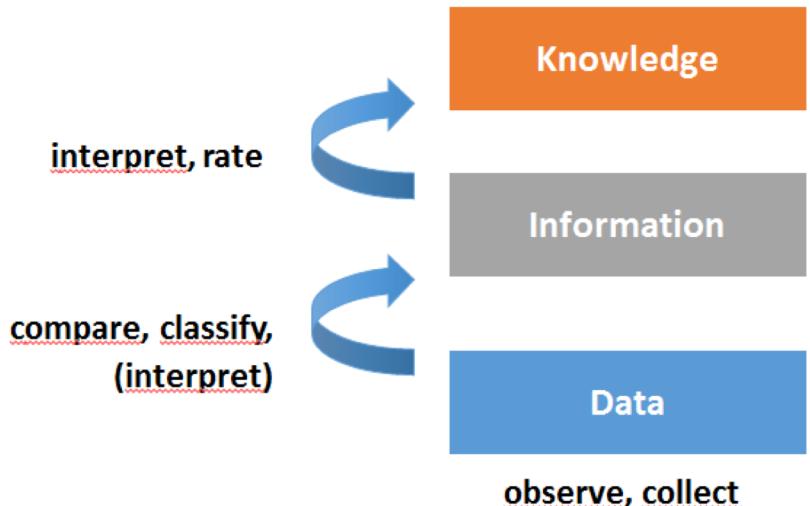
Someone's metadata might be
someone else's data.

Research Data Management (RDM)

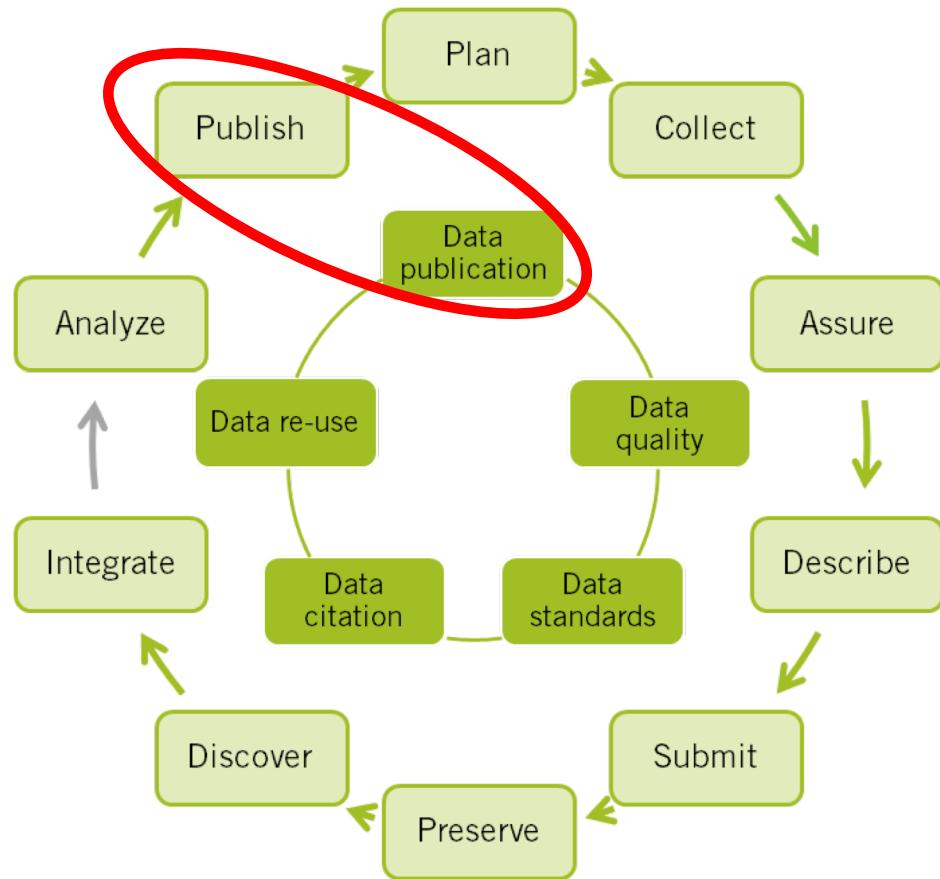
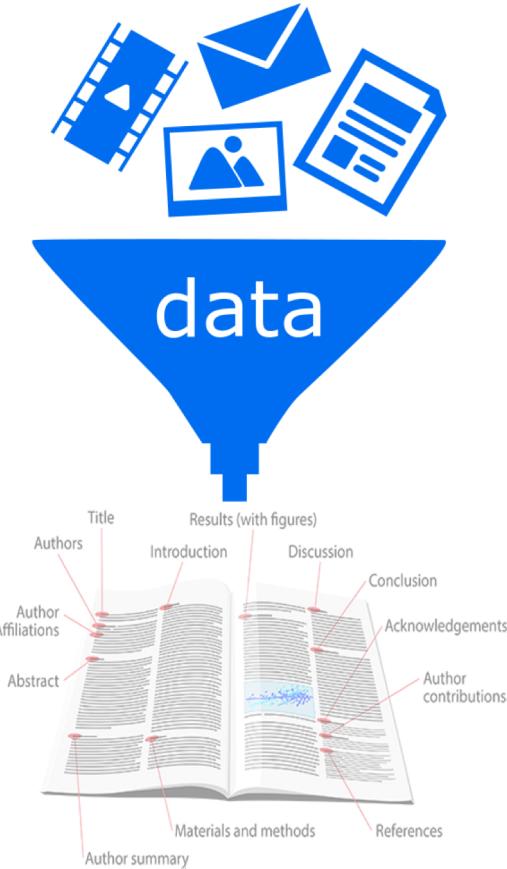
„All processes of transforming, selecting and storing research data for long-term accessibility, availability, verifiability and re-usability“

Ideally RDM ...

- › ... preserves all data & metadata,
- › ... documents all processes comprehensively,
- › ... does not restrict data re-use,
- › ... is agnostic about interpretation and implicit knowledge

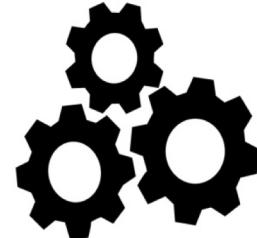


Data Publication



Data Repositories , Data Journals, Data Portals

Findable Accessible Interoperable Reusable



- Wilkinson et al. (2016)
- <https://www.force11.org/group/fairgroup/fairprinciples>

Data Management Plan (DMP)

ALWAYS REMEMBER TO PLAN AHEAD

Image by skeeze/ CC0

Create your DMP by answering questions like:

- › Which data will be generated or (re-)used?
- › Which data need to be archived?
- › Who is responsible for specific documentation of metadata?
- › How long should the data be preserved?
- › Who can re-use the data and how?
- › etc.

Data Management Plan (DMP)

ALWAYS REMEMBER TO PLAN AHEAD

Image by skeeze/ CC0

Some tools:

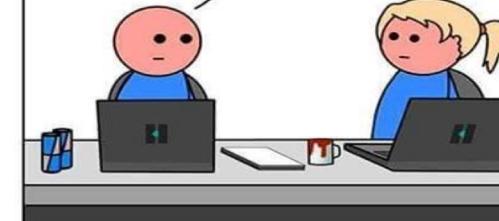
- › GFBio DMP Tool <https://www.gfbio.org/data/plan>
- › DMP Online <https://dmponline.dcc.ac.uk/>
- › DMP-Tool <https://dmptool.org/>
- › RDMO <https://rdmorganiser.github.io/>

Thanks for your attention!

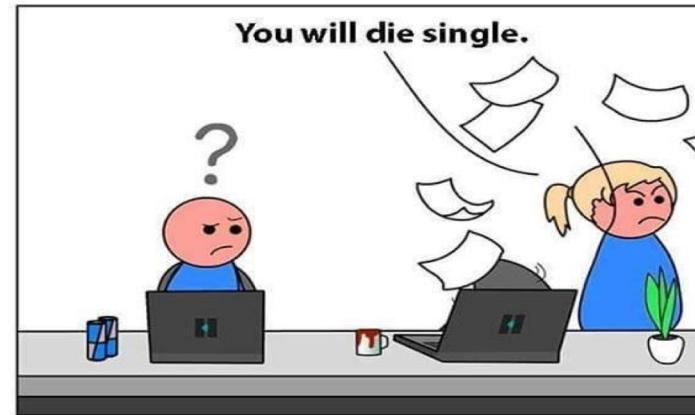
What is your idea of a perfect date.



DD/MM/YYYY, other formats can be really confusing.



You will die single.



Recommendation for Sessions

- WS85 Data lifecycles for open ecological and biodiversity research
- ST02 Biodiversity Data Quality - how it affects science
- SI37 Making long term ecological research data FAIR
- SP79 Agrobiodiversity in the era of open government, FAIR data, and public access policy

... and of course each session on data standards, data quality, data re-use and publication is relevant in the context of data management!



References

- › Michener, W. K. (2006). Meta-information concepts for ecological data management. *Ecological Informatics*, 1(1), 3–7. doi:[10.1016/j.ecoinf.2005.08.004](https://doi.org/10.1016/j.ecoinf.2005.08.004)
- › Vines, T. H., Albert, A. Y. K., Andrew, R. L., Débarre, F., Bock, D. G., Franklin, M. T., ... Rennison, D. J. (2014). The Availability of Research Data Declines Rapidly with Article Age. *Current Biology*, 24(1), 94–97. doi:[10.1016/j.cub.2013.11.014](https://doi.org/10.1016/j.cub.2013.11.014)
- › Wilkinson, M. D., Dumontier, M., Aalbersberg, Ij. J., Appleton, G., Axton, M., Baak, A., ... Bourne, P. E. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3(1). doi:[10.1038/sdata.2016.18](https://doi.org/10.1038/sdata.2016.18)