

LOVE YOUR DATA!

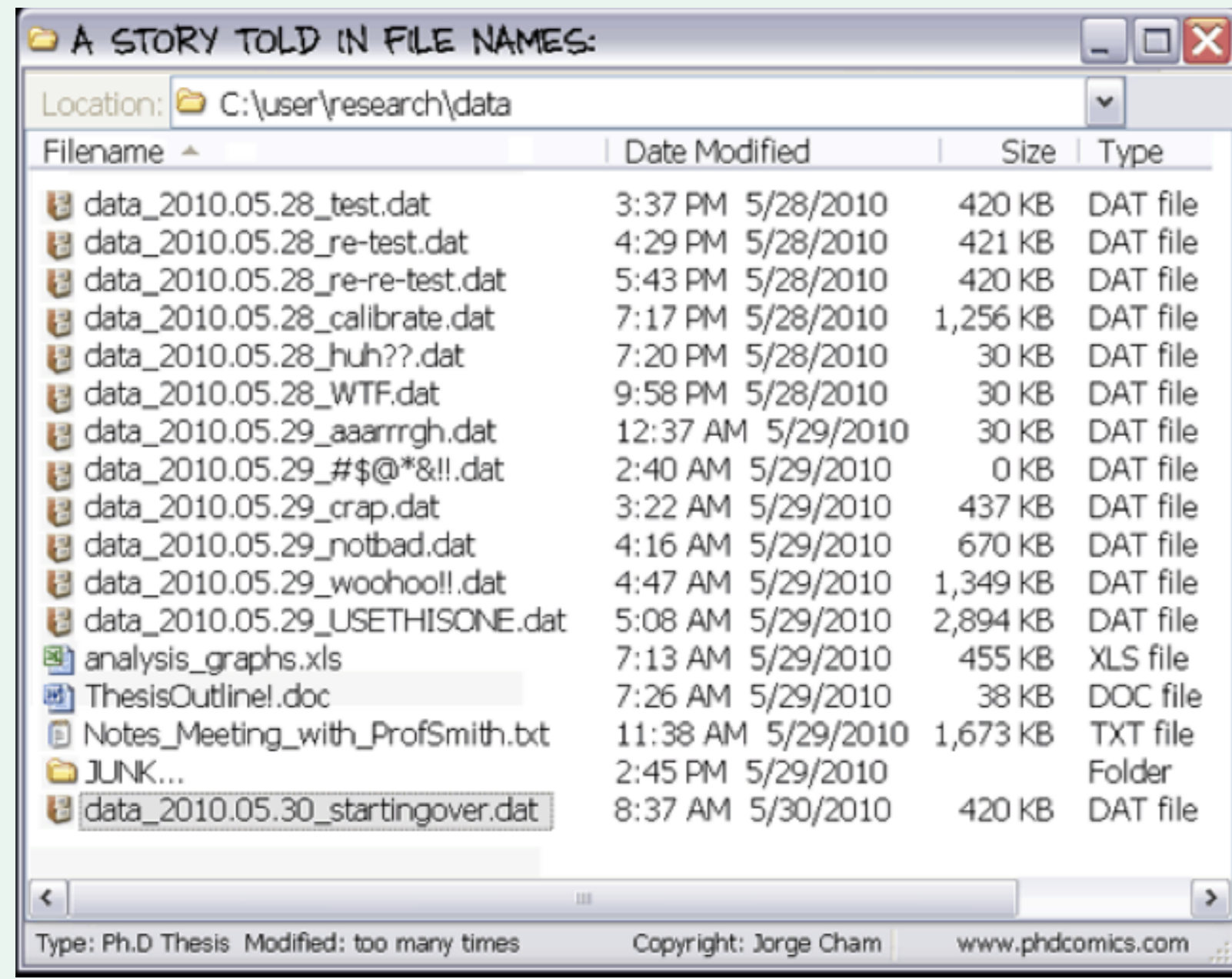
How to make sure your data is safe and sound – a starter

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1001
0101
0010
1010

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"Piled Higher and Deeper" by Jorge Cham; www.phdcomics.com

COMMON SITUATION (?)

- Where is my precious file?
- Is this the latest version?
- How did I generate this?
- What does 'SAM1' mean!?

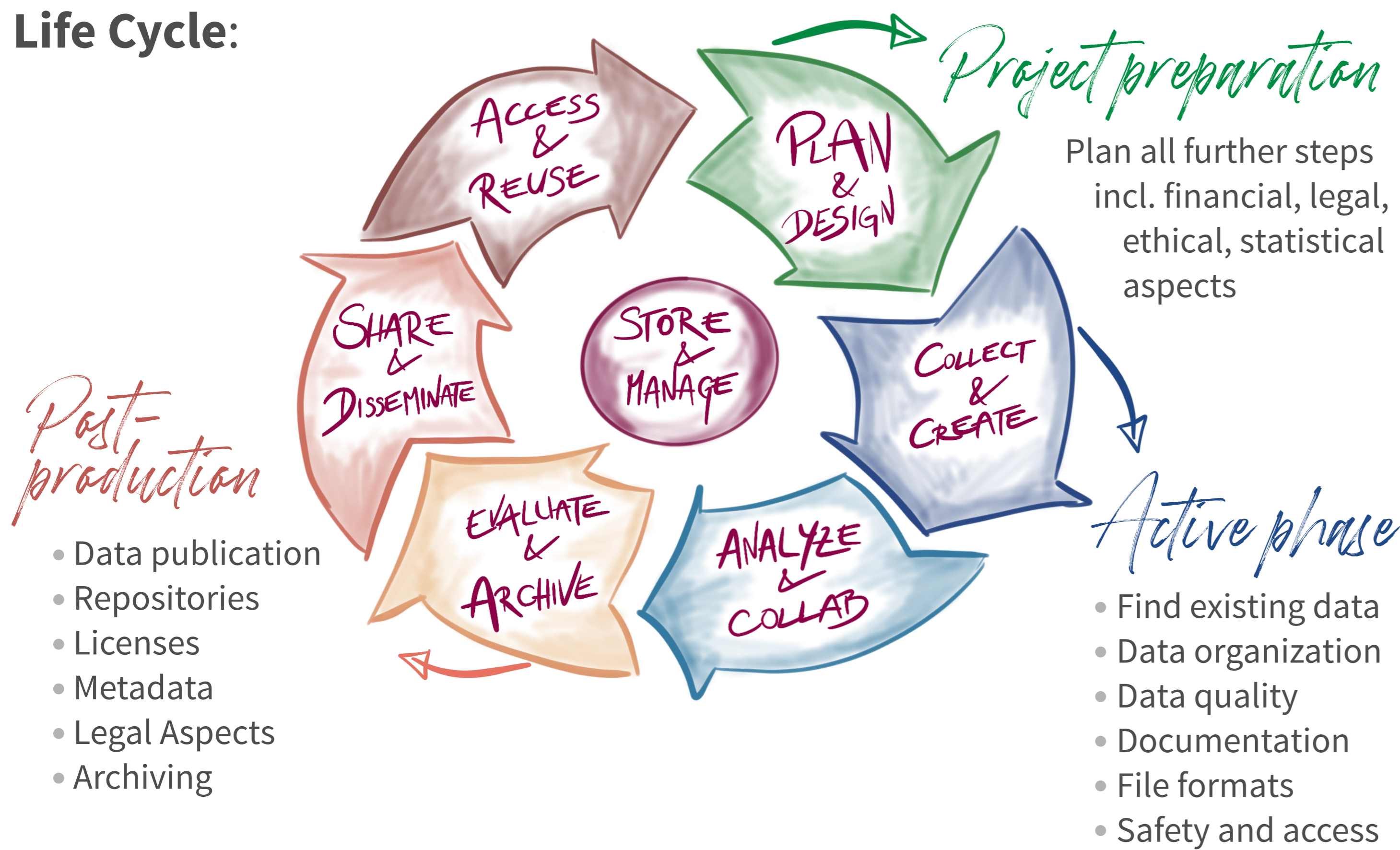


Panic & Confusion

Help yourself (and others) to keep track with

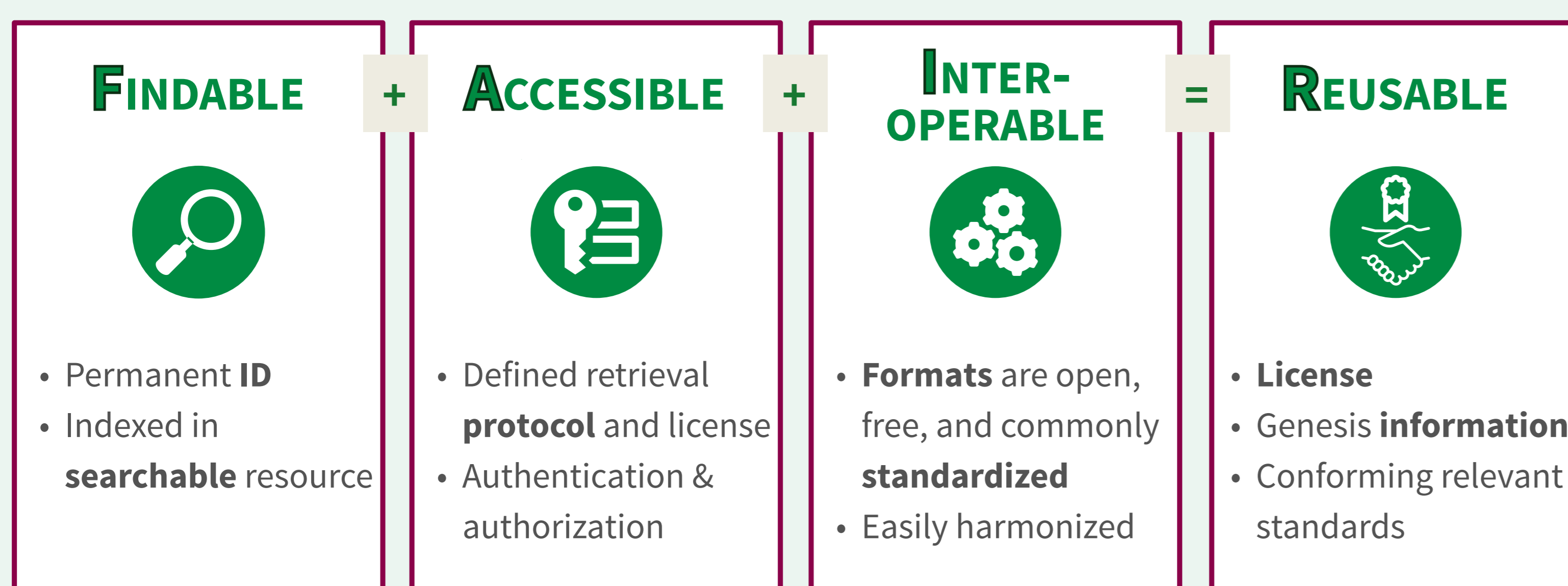
WHAT'S TO KEEP IN MIND?

Research Data undergoes a Life Cycle:



The entirety of all these data handling measures is called **Research Data Management**, their common *goal* is to:

make **data & metadata** **accessible, reusable** and **verifiable** in the **long term** and **independent of particular people** [2], following the **FAIR data principles** [3]:



3 FIRST, EASY STEPS

Label folders and files consciously

Left-padded numbers Deliberate separation

Example: .../01_Project/01_Data/02_Analyzed/

Date in ISO 8061 Species Code File Extension
2022-10-05_00045_MUS_brain_mCher.tiff
Sample ID Tissue Relevant Detail

Aim for readability (humans & machines) What distinguishes each file? Avoid special characters!

Document your work and metadata

Use the Electronic Lab Notebook! Write READMEs for projects, experiments, and files.

Record conventions, abbreviations, sources and answer all the W-questions!

Backup with the 3-2-1 rule

Have at least 3 copies... ...on at least 2 different storage media. Store 1 copy somewhere else, e.g., in a cloud.

YOUR BENEFITS [4]



NEXT STEPS

Commit to care for your data!

Make it a habit: Label, document, backup!

Make it known: Talk to your peers!

Make it official: Write a Data Management Plan!

Make it easy: Use templates, find help, ask your Data Steward



[1] Youtube Video: Data Sharing and Management Snafu in 3 Short Acts (2013)

[2] Website: forschungsdaten.info
Everything you need to know about RDM (German)

[3] Wilkinson et al. (2016) The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3:160018. doi: 10.1038/sdata.2016.18

[4] McKiernan et al. (2016) Point of View: How open science helps researchers succeed. eLife 5:e16800. doi.org/10.7554/eLife.16800