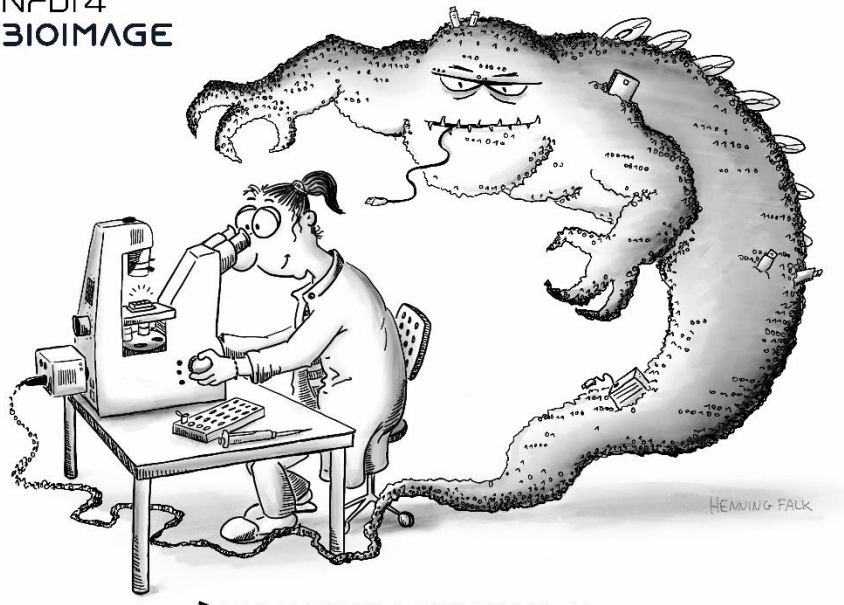
NFDI4
BIOIMAGE



DISCOVERING THAT YOUR
MICROSCOPIC SPECIMENS PRODUCE MACROSCOPIC DATA.

Microscopy modalities often generate large, complex image files stored in proprietary formats, making them difficult to manage and share. To effectively use these files throughout research, suitable storage solutions are needed, allowing frequent data access. **Sharing** and **reusing** this data require the ability to load large bioimaging files from remote sites over the Internet without downloading the entire file. NFDI4BIOIMAGE fosters developing **OME-Zarr**, a next-generation file format designed to become a standard for cloud-ready, large high-dimensional imaging data.

Find more information at
https://nfdi4bioimage.de

NFDI4BIOIMAGE is a consortium of the National Research Data Infrastructure (Nationale Forschungsdateninfrastruktur) NFDI - https://nfdi.de

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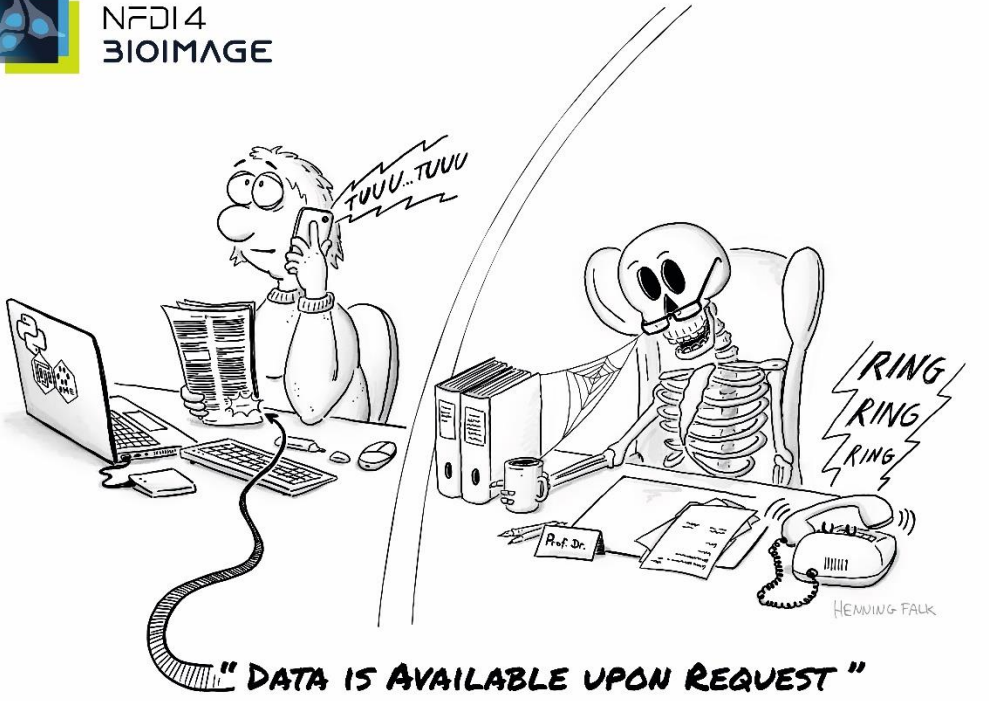

"Data is Available upon Request"

Providing the original data behind a scientific publication can be challenging, particularly when dealing with large, complex datasets. Simply stating that data would be available upon request is not enough and often does not hold true. Data should be **findable, accessible, interoperable, and reusable (FAIR)**. This ensures that professional data scientists will be able to retrieve and reuse data for further analysis, develop novel processing and analysis tools, and assess data quality and reliability.

Publish your data in a bioimaging-specific data repository using open file formats with rich metadata.

How? NFDI4BIOIMAGE is here to help:
find more information at
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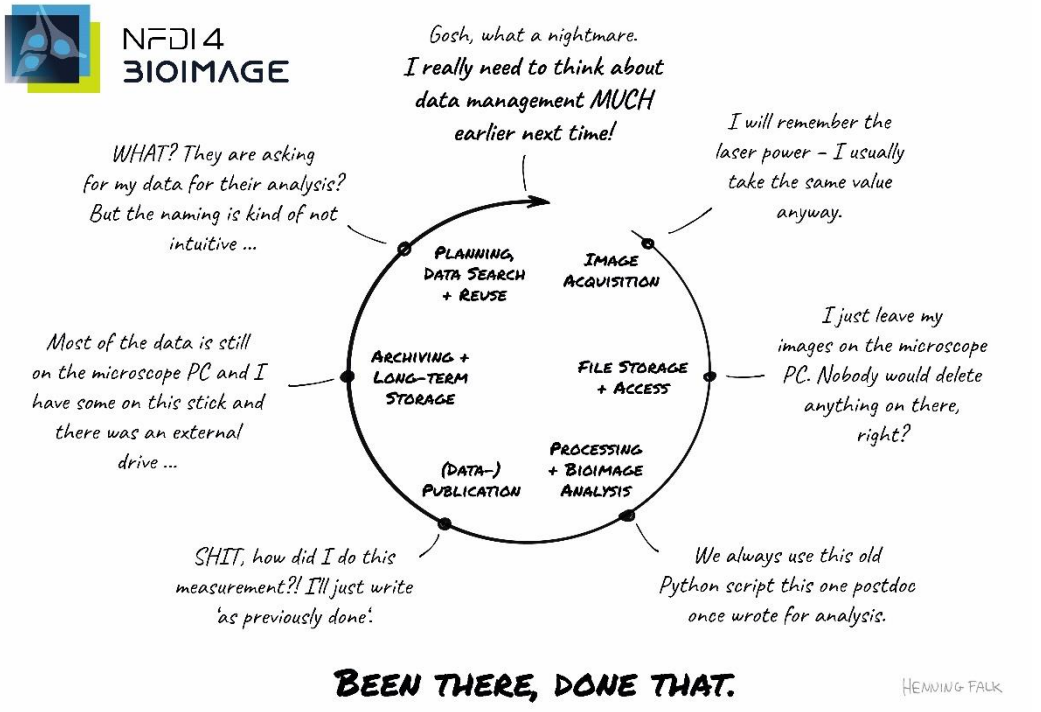
NFDI4BIOIMAGE is a collaboration project comprising legally independent partners. The consortium is legally non-independent and does not act autonomously towards third parties.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Gosh, what a nightmare.
I really need to think about data management MUCH earlier next time!
I will remember the laser power – I usually take the same value anyway.
I just leave my images on the microscope PC. Nobody would delete anything on there, right?
We always use this old Python script this one postdoc once wrote for analysis.
SHIT, how did I do this measurement?! I'll just write 'as previously done'.
Most of the data is still on the microscope PC and I have some on this stick and there was an external drive ...
WHAT? They are asking for my data for their analysis? But the naming is kind of not intuitive ...
PLANNING, DATA SEARCH + REUSE
IMAGE ACQUISITION
FILE STORAGE + ACCESS
PROCESSING + BIOIMAGE ANALYSIS
(DATA-) PUBLICATION
ARCHIVING + LONG-TERM STORAGE
BEEN THERE, DONE THAT.
HENNING FALK

Professionalizing your research data management practices not only makes your data reusable after publication, but also benefits you throughout your research journey. Begin by planning your research process ahead to pave yourself a smooth path along the **bioimaging data life cycle**. Writing a **data management plan (DMP)** upfront and using it as an adaptable guidance along the way will make your science more effective and efficient - for your future self and for science at large by sharing your data in a **public repository**. Reach out to the **NFDI4BIOIMAGE Data Stewardship team** for support on bioimage data management.

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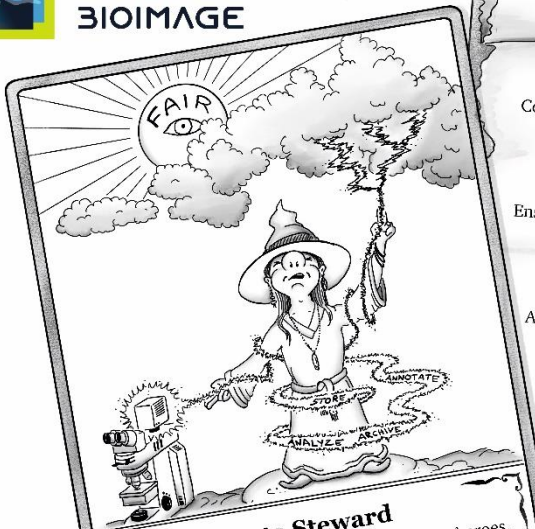

Data Steward

The mighty Data Stewards are the unsung heroes, ensuring that microscopy data – the precious foundation of science – remains unwaveringly strong and accessible in the digital ether.

From: **House of Light Microscopy**

Knowledge Crystallization
Converts complex bioimage data management spells into easy workflow magic.
+3 clarity and user satisfaction

Preservation Prodigy
Ensures the precious bioimaging data treasure is findable for future generations.
+4 data safeguard

Access Wizard
Acts as the gatekeeper to data accessibility without compromising on security.
+4 access consistency

Training Tutor
Conducts illuminating workshops that decode the enigma of data stewardship.
+3 knowledge retention and engagement

HENNING FALK

Overwhelmed by managing your research data? Handling, organizing, curating, annotating, and sharing scientific data can be quite challenging, especially in bioimaging. At **NFDI4BIOIMAGE's Help Desk**, you'll find enthusiastic scientists with a special expertise in managing complex bioimaging data. Don't hesitate to reach out for tips, guidance, support, or even just a friendly chat about our shared passion: achieving excellent data for excellent science. Make your data **findable, accessible, interoperable, and reusable (FAIR)** to maximize its potential as part of your publication. The **NFDI4BIOIMAGE Data Stewards** are here to help.

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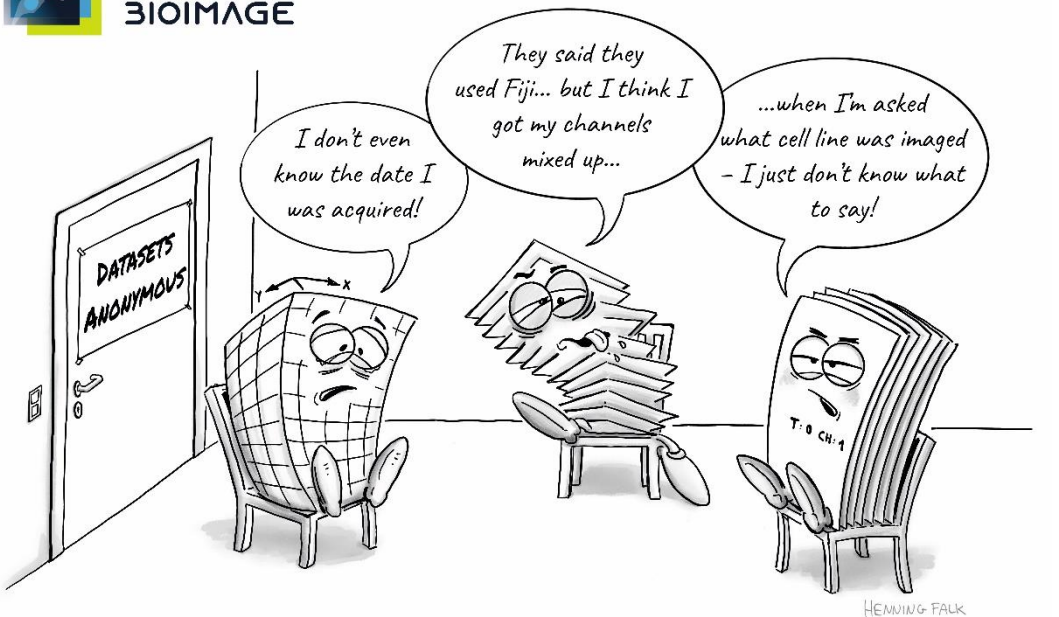
NFDI4 BIOIMAGE



DATA ANNOTATION MATTERS.

Bioimaging data provides unique insights into living and non-living matter with high spatial and temporal resolution, but the complexity of these experiments can present challenges. Metadata annotation is therefore essential for detailing the methods used in a bioimaging experiment and the way data was generated. This helps ensure your data is reusable and trustworthy.

Help make your data **findable, accessible, interoperable, and reusable (FAIR)**. Annotate your data with **rich, descriptive metadata that comply with community standards**, and share it in open file formats through **public repositories** – benefiting both your future self and the scientific community.

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