Although data management is a crucial aspect of every researcher's work, it is often overlooked. Researchers typically invest more time in contemplating the right research questions, experiments, and analyses, neglecting to allocate sufficient time to consider data management. Consequently, without adequate organization of files and folders, data can be lost, leading to a decrease in research quality. To address this, data stewards are now hired to educate researchers on data management practices. It is our role to provide researchers with the necessary tools and training for effective implementation in their day-to-day research activities.

Efforts have been made to assist students by providing recommendations and guiding them in getting started with data management practices. For example, Briney's worksheet for creating file naming conventions to label research data descriptively and consistently has been highly effective in aiding researchers in labeling their files. However, having excellent file names won't suffice if you lack a directory structure to organize all your data.

Considering which directory structure to follow is a critical early step in starting a project, as it is easy to end up in disarray. This step is pivotal to implement at the beginning of the project, because if you don't have a folder structure and create one later, the transition is time-consuming, so better invest time at the beginning to have a well-structured folder structure.

While there are many recommendations and best practices for file organization, the most challenging part is often getting started. Therefore, we aim to assist you by summarizing the best practices for folder organization and providing a practical example of an optimal folder structure which you can download from our github page.

When creating a directory structure, you should first consider: Who are you designing your system for? Is it just for yourself? For a small team? For a department? It is important to understand how your department or teams operate because that should be reflected in your file structure. Next, start by figuring out what types of files you'll generate or use. You can't predict everything, but try to imagine as many as you can. Think beyond just your experiments—consider paperwork, presentations, and other stuff too. Then, divide your main folder into sections and sketch out your hierarchy based on these different types of files to visualize relationships.

**Best practices:**

* It is always best to follow your lab system if there is one. If not, then you should develop your own system based on the following recommendations. Additionally, if their lab already has a system in place, they should check these recommendations to see if any improvements are needed.
* Create a file inventory
* The core principle is every project is one folder, and then comes further thinking of the subfolders.
* Folder and subfolder names should reflect the content of the folder, not the names of researchers or staff
* Have project structure templates readily available, leaving one blank as a template for future projects.
* The first thing to create when making a folder structure is a README.txt
  + All folders should have a README.txt file.
* Avoid overlapping categories
  + Preventing duplication and ensuring that each file or document has a single, logical location within the hierarchy.
* Once you put your new organizational system into place, be sure to always put your files where they’re supposed to go

**Our template:**

* The folder structure template presented in this paper offers a practical solution to the challenges of data organization faced by life sciences PhD students. By implementing this template, students can streamline their research workflows, improve reproducibility, and contribute to the advancement of scientific knowledge. To facilitate adoption, the folder structure template is accompanied by comprehensive guidelines for implementation and customization. These guidelines provide step-by-step instructions on setting up the folder structure, naming conventions, file organization, version control. Additionally, the template is designed to be flexible, allowing users to adapt it to their specific research needs and preferences.
* The folder structure template consists of a hierarchical arrangement of directories and subdirectories tailored to accommodate any type of data commonly encountered in life sciences research. Each directory serves a specific purpose and is organized according to the principles of logical grouping, and ease of navigation.
* We've also included templates for README files

**Stuff to include:**

* Considerations for computational projects
* Just add references