

# Documenting your research data along the way: tips and tools

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It happens all too often: researchers fail to use data collected by [themselves](#) or by [others](#) due to a lack of documentation. Documentation refers to information about your research data. It is meant to make your data understandable – to others who might want to reuse it, but also to your future self. Wageningen University & Research Library provides courses and advice on data documentation. In this blog post, we discuss what to document, and give tips & tools for documenting throughout the research process.

## What to document?

In short, you should document all information needed to understand your data. Think of:

- General project information: title of the study, people involved and their roles, etc.
- Methodological information: methods of data collection and analysis, instrument calibrations, etc.
- Data-specific information: variable names and definitions, units of measurement, etc.

Documentation is often added to a dataset in a separate README.txt file. [This page](#) gives more information on README-files including a template you can use.

## How do I document?

The trick to good documentation is to start long before you create the README-file – it's best to document your data *throughout* your research. If you wait until the end, chances are that you will no longer remember what variable P2\_scomF stands for, or how you got to the figures in a certain column.

A few tips for continuous documentation:

- Try a generic tool like [OneNote](#) for keeping and organising notes. You can structure these notebooks to your own research. Once you have finished your research, you can easily select the notes you wish to add to your dataset (e.g. as a README-file).
- Use an electronic lab notebook for structured documenting. Your group might have a shared

e-lab notebook tool you can use. One example is [eLabJournal](#).

- If you use a proprietary software such as OneNote or a e-lab notebook, make sure to export or convert your documentation to an [open file format](#) when you make it available to others. This way, people do not need the original software to open the files – and the files will remain readable even if the software becomes obsolete.
- Do you work with spreadsheets? The free tool [Colectica for Excel](#) allows you to add documentation to your spreadsheets. Think of the explanation of variables and code lists. You can also export these to create separate documentation files.
- If you work with scripting languages, such as R or Python, take a look at [Jupyter Notebook](#). With this free, web-based tool you create one single document showing code snippets and their results in place. This provides a step-by-step overview of your data processing and analysis. Find examples of Jupyter notebooks by research domain [here](#). This page also provides a list of journal articles with documentation in Jupyter notebooks.

## Put it to the test!

How do you know if your final documentation is understandable to others? Put it to the test! Simply give your dataset with documentation to somebody else. If this person has trouble understanding your data, there's room for improvement. Of course you can always contact [Data Management Support](#) if you need help.

Good luck documenting your data!

Join the new [Research Data Management](#) group on Intranet for more tips & tricks, events, and other data info.

