### 25 Things for Data and Subject Librarians An overview of practical, free, online resources and tools that you can begin using today to incorporate research data management into your support practices.

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… to help data and subject librarians engage in research data management!

### Learning Resources

Data supporters have different professional backgrounds and are learning to provide services related to research data.

1. A “top ten” list of recommendations for libraries to get started with research data management from LIBER, or check out RISE for more advanced libraries,  
   [edu.nl/qtaff](http://edu.nl/qtaff) & [edu.nl/b93ug](http://edu.nl/b93ug)
2. Relevant concepts are presented in a glossary at the Essentials 4 Data Support training website, [edu.nl/emgym](http://edu.nl/emgym)
3. Understand the life of research data with examples of data life cycles at JISC and at RDNL,  
   [edu.nl/p4nke](http://edu.nl/p4nke) & [edu.nl/j8cr6](http://edu.nl/j8cr6)
4. Check out MANTRA for more training modules for data supporters,  
   [edu.nl/mq9ah](http://edu.nl/mq9ah)
5. Read the current literature on research data management and contribute to the list,  
   [edu.nl/t8kd8](http://edu.nl/t8kd8)
6. Check out the Library Carpentry and Top 10 FAIR things, as well as the Turing Way,  
   [edu.nl/qmc3a](http://edu.nl/qmc3a) & [edu.nl/uvbk4](http://edu.nl/uvbk4) & [edu.nl/feukf](https://edu.nl/feukf)

### Outreach

Data supporters are answering questions about data from researchers and are reaching out to assess the data needs of their researchers and students.

1. Facilitate a community of researchers who are interested in communicating with the larger community, like the Data Champion Initiative, or join the Open Science Communities,  
   [edu.nl/mgxe3](https://edu.nl/mgxe3) & [edu.nl/xrt9m](http://edu.nl/xrt9m)
2. Develop engagement materials, such as the Best Practices of Data Management by DataOne or RDM Starter Kit by GOFAIR, and explore best practices by other institutions,  
   [edu.nl/4tgtk](http://edu.nl/4tgtk) & [edu.nl/bffv4](http://edu.nl/bffv4) & [edu.nl/d7f98](https://edu.nl/d7f98)
3. Learn which local infrastructures and policies are in place to support researchers by checking LCRDMs RDM Put into Practice,  
   [edu.nl/43pqf](http://edu.nl/43pqf)

### Data Management Plans

Data supporters are becoming familiar with funder requirements and consulting with researchers to help them write and implement effective data management plans.

1. Help researchers to write and implement effective data management plans via DMPonline, the DCC and the LIBER catalogue of public DMPs, and outreach materials like the LCRDM Ten Tips for Writing a DMP; the RDMOrganiser might also be of help for institutions and researchers,  
   [edu.nl/qxtbt](http://edu.nl/qxtbt) & [edu.nl/7abtb](http://edu.nl/7abtb) & [edu.nl/hh8yk](http://edu.nl/hh8yk) & [edu.nl/w7r8k](http://edu.nl/w7r8k) & [edu.nl/hbpbh](https://edu.nl/hbpbh)

### Metadata

Data supporters are helping to organize and describe research data and developing standards for metadata to make data more easily discovered, understood and preserved.

1. Determine what metadata standard are appropriate to recommend or apply,  
   [edu.nl/ct8en](http://edu.nl/ct8en) & [edu.nl/8bt7r](https://edu.nl/8bt7r)
2. Learn about the FAIR principles to understand the importance of metadata,  
   [edu.nl/knb87](http://edu.nl/knb87)
3. When writing or assessing documentation, use best practices, such as the Cornell Guide to writing ‘readme’ style metadata,  
   [edu.nl/xmrq6](https://edu.nl/xmrq6)
4. Understand file formats preferred by archives as explained by Essentials 4 Data Support,  
   [edu.nl/dpper](https://edu.nl/dpper)

### Citing Data & Code

Data supporters promote the scientific value of data and code, by encouraging and enabling data and code citation, and assigning identifiers to datasets.

1. Learn how to cite data and code in publications and learn to explain data citation principles,  
   [edu.nl/jnvxv](http://edu.nl/jnvxv) & [edu.nl/tukgt](http://edu.nl/tukgt)

### Privacy & Data Licensing

When collecting and sharing data and code, researchers need to deal properly with licenses and protect confidential and sensitive data.

1. Check out the Netherlands Code of Conduct for Research Integrity and the Data Ethics Decision Aid,

[edu.nl/djguy](http://edu.nl/djguy) & [edu.nl/f3bbm](http://edu.nl/f3bbm)

1. Don’t hesitate to contact local and national experts on issues related to data protection. Use Health-RIs ELSI Service Desk for health data,  
   [edu.nl/nxprx](http://edu.nl/nxprx)
2. Read the guidelines for privacy, the General Data Protection Regulation, for data protection and security. Watch this video by Anne Mérat on Data Protection Impact Assessment,   
   [edu.nl/qaj6j](http://edu.nl/qaj6j) & [edu.nl/6qqby](http://edu.nl/6qqby) & [edu.nl/kty43](https://edu.nl/kty43)
3. Read the guidelines for data and software reuse and licencing,   
   [edu.nl/3ujnt](http://edu.nl/3ujnt) & [edu.nl/gdyy9](http://edu.nl/gdyy9) & [edu.nl/6bn3d](http://edu.nl/6bn3d)& [edu.nl/uwwcg &](http://edu.nl/uwwcg) [edu.nl/u4yvj](https://edu.nl/u4yvj)

### Data Repositories

Trustworthy data repositories provide an important step towards FAIR data. Data uploaded to a repository will usually be assigned a persistent identifier, will be described with metadata according to the standard chosen by the repository, will be released with a license and will be made available via a standard, open protocol.

1. Find an appropriate repository by searching the re3data.org registry, the FAIRsharing registry,   
   the Springer Nature list of repositories, or theDataCite Repository Finder; don’t forget the Dutch data repositories DANS EASY and 4TU.ResearchData; Zenodo might come in handy where integration with GitHub and code sharing is necessary,  
   [edu.nl/uq3qj](https://edu.nl/uq3qj) & [edu.nl/xdubh](http://edu.nl/xdubh) & [edu.nl/jcqru](https://edu.nl/jcqru) & [edu.nl/ftk48](https://edu.nl/ftk48) & [edu.nl/9ttbm](https://edu.nl/9ttbm) & [edu.nl/m9r6p](https://edu.nl/m9r6p) & [edu.nl/fpnvf](https://edu.nl/fpnvf) & [edu.nl/qja33](https://edu.nl/qja33)
2. Take a look at trustworthy digital repository certifications such as CoreTrustSeal, the NESTOR Seal and ISO 16363,  
   [edu.nl/nn9vx](http://edu.nl/nn9vx) & [edu.nl/bfhn7](http://edu.nl/bfhn7) & [edu.nl/6v4c3](http://edu.nl/6v4c3)
3. Find tools that are available to help with digital preservation using the Digital Preservation Handbook, the Open Preservation Foundation resources, or follow the archiving tips by RDNL,  
   [edu.nl/vaxwg](http://edu.nl/vaxwg) & [edu.nl/gpxy8](https://edu.nl/gpxy8) & [edu.nl/99xug](http://edu.nl/99xug)

### Community of Practice

Data supporters are connecting with each other and a larger community of stakeholders to develop solutions and share best practices for research data management.

1. Examples of support communities are the LCRDM Pool of Experts, the DTL Data Stewards Interest Group and the UKB Working Group on Research Data,  
   [edu.nl/dd8hj](http://edu.nl/dd8hj) & [edu.nl/jgccq](http://edu.nl/jgccq) & [edu.nl/34rdb](http://edu.nl/34rdb)
2. Subscribe to a mailing list to keep in touch with colleagues and receive updates about developments, for instance via the LCRDM national or the JISC international mailing list,  
   [edu.nl/7yhf6](https://edu.nl/7yhf6) & [edu.nl/trrh4](https://edu.nl/trrh4)
3. Join the Research Data Alliance! Belong to an international community and help build social and technical bridges to enable data sharing; join the RDA activities in the Netherlands!  
   [edu.nl/gxgm4](https://edu.nl/gxgm4) & [edu.nl/74myw](https://edu.nl/74myw)

### Contact Information

This document is an audience-specific version (for data and subject librarians) of the 23 Things for/by the Dutch community, created by the LCRDM task group RDA 23 Things ([lcrdm.nl](http://lcrdm.nl)). The original 23 Things can be found at [edu.nl/w7e34](http://edu.nl/w7e34), the LCRDM adaption for the Dutch community can be found at [doi.org/10.5281/zenodo.3465895](http://doi.org/10.5281/zenodo.3465895). If you have any relevant resources for the 23 Things, please contact the LCRDM coordinator.  
  
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