ASU and CAP LTER research data solutions

Stevan R. Earl1,2, Philip Tarrant2

1 Julie Ann Wrigley Global Institute of Sustainability and Innovation, Arizona State University, Tempe, AZ 85287-5402
2 Knowledge Enterprise Research Data Management Office, Arizona State University, Tempe, AZ 85287-5402

getting started

The Arizona State University (ASU) Research Data Management (RDM) office, ASU Library, and the CAP LTER Information Manager offer research data management services and technology solutions for ASU research projects. This research data management team can assist with the preparation of data management plans, undertake technology needs assessments, provide subsidized computing resources and data storage, and assist with data publication.

data management planning

- Many funding agencies now require proposals to include information regarding how research data will be collected, managed, published, and preserved. The RDM office can help you create a data management plan (DMP), and provide boilerplate DMP text that you can copy, paste, and modify for inclusion in your proposal.
- ASU recommends and supports DMPTool, a web-based authoring tool with funder-specific templates that will guide you through the process of creating a DMP.

research support

get organized

Sound project organization is essential to successful research.
- Version control tools, such as Git coupled with GitHub or GitLab, are immensely valuable for managing projects.
- The Open Science Framework is a free, open platform from the Center for Open Science to manage research projects and enable collaboration.
- Electronic Research Notebook (ERN), often referred to as an electronic laboratory notebook, provides a multi-functional data manager that can quickly and accurately import protocols, notes, observations, and other research data to organize information in one place while embedded links to data files and other information help ensure that resources are not lost or misplaced. ASU has licensed LabArchives as our ERN solution, making the product available to faculty, staff, and students at no cost.

finding data

The RDM office can help investigators to find data, such as through the CAP LTER data portal that houses CAP LTER project data from long-term monitoring programs and experiments, and investigator-provided data.

storing data

The RDM office provides a Storage Selector to help identify the most appropriate storage option for research data. Optimal storage solutions are identified based on project needs and preferences with the tool presenting a synopsis of options to help guide the researcher.

publishing research data

Making primary research data publicly accessible is a growing expectation within the scientific communities, and is enforced increasingly by funding agencies and publishers.
- Publishing research data is a cornerstone of the LTER, and project participants are expected to publish research data within a reasonable time after the research concludes.
- Data products may include raw data, models, classified or processed images, or any other research-generated data entity.
- Rich metadata (data about the data) should accompany data to facilitate reuse.
- Most LTER data are published in the Environmental Data Initiative (EDI) data repository, which meets publishing requirements.
- The RDM office can help investigators to publish their data to the EDI, ASU library, or other domain-relevant data repository.

resources

- scan the barcode in the upper-right corner for a link to this poster
- resources highlighted in this poster
  - DMPTool https://dmp-tool.org/
  - ORCID https://orcid.gios.asu.edu
  - LabArchives https://researchdata.asu.edu/electronic-research-notebook/
  - CAP LTER data catalog https://data.sustainability-innovation.asu.edu/cap-portal/home.jsp
  - ASU RDM https://rto.asu.edu/research-data-management/
  - ASU Library RDM https://lib.asu.edu/research/datamanagement
  - ASU data science https://lib.asu.edu/data
  - EDI data portal https://portal.edirepository.org/nis/home.jsp
- contacts
  - CAP LTER Informatics caplter.data@asu.edu
  - Research Data Management Office research.data@asu.edu

acknowledgements

Based upon work supported by the NSF under grants DEB-1832016 and DEB-1637590; opinions, findings, conclusions, or recommendations are those of the author(s) and do not necessarily reflect the views of the NSF.