

National Science Foundation (nsf.gov): NSF-CISE: Computer and Information Science and Engineering

Types of data

The Data Management Plan should describe the types of data, metadata, scripts used to generate the data or metadata, experimental results, samples, physical collections, software, curriculum materials, or other materials to be produced in the course of the project.

Guidance:

- [Data Management Guidance for CISE Proposals and Awards](#)
- [NSF Proposal & Award Policies & Procedures Guide \(PAPPG\)](#)
- [NSF Frequently Asked Questions \(FAQs\) for Public Access](#)

Data and metadata standards

The Data Management Plan should address the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies). It should also cover any other types of information that would be maintained and shared regarding data, e.g. the means by which it was generated, detailed analytical and procedural information required to reproduce experimental results, and other metadata.

Guidance:

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- [NSF Proposal & Award Policies & Procedures Guide \(PAPPG\)](#)
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Policies for access, sharing, and privacy

The Data Management Plan should address the policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements. It should cover any factors that limit the ability to manage and share data, e.g. legal and ethical restrictions on access to human subject data.

Guidance:

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Policies for re-use, re-distribution, derivatives

The Data Management Plan should address the policies and provision for re-use, re-distribution, and the production of derivatives.

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- [NSF Proposal & Award Policies & Procedures Guide \(PAPPG\)](#)
- [NSF Frequently Asked Questions \(FAQs\) for Public Access](#)

Plans for archiving and preservation

The Data Management Plan should address the plans for archiving data, samples, and other research products, and for the preservation of access to them. It should cover the period of time the data will be retained and shared; how data are to be managed, maintained, and disseminated; and mechanisms and formats for storing data and making them accessible to others, which may include third party facilities and repositories.

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Additional Guidance on Selecting or Evaluating a Repository:

The following questions are intended to assist PIs and panel members to prepare Data Management Plans and to evaluate them during merit review, respectively. The questions are sequential, that is, if (1) applies, then the remaining questions are irrelevant unless (2) also applies or the PI chooses to deposit the data or software in multiple repositories. The more detailed questions, (4)-(6), apply if (1) and (2) do not.

1. Does the solicitation specify a repository for the data or software?
2. Does the PI's home institution have an institutional repository that mandates local deposit of the data/software?
3. Is there a discipline-relevant repository used by the research community either as the expected repository for data/software or as the expected repository for discovering and reusing data/software?
4. Is the repository sustainable? And if not, are there contingency plans?
5. Does the repository require at least minimal identification and description of the data product sufficient to enable discovery, access, and retrieval? For purposes of data citation, NSF requires a persistent identifier and some level of metadata including acknowledgment of the creator/author and federal support.
6. Has the PI made any contingency plans in the event a designated repository becomes unavailable?

Roles and responsibilities

The Data Management Plan should clearly articulate how the PI and co-PIs plan to manage and disseminate data generated by the project. The plan should outline the rights and obligations of all parties as to their roles and responsibilities in the management and retention of research data, and consider changes that would occur should a PI or co-PI leave the institution or project. It should describe how the research team plans to deposit data into any relevant and appropriate disciplinary repositories that are appropriately managed and that are likely to maintain the metadata necessary for future use and discovery. Any costs associated with implementing the DMP should be explained in the Budget Justification.

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