Template for the NSF Data Management Plan - CISE Directorate

Please consult the solicitation and the guidance from the cognizant NSF directorate before preparing your data management plan. Consider including information on the following points when writing your plan.

1. **Types of Data -** Describe the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project. Describe the expected types of data to be retained and shared, and the plans for doing so. Describe the sources, products, formats and estimated size or amount.
    1. Includes not only original data, but also "metadata" (e.g., experimental protocols, software code written for statistical or experimental analyses, or for proof-of-concept).
    2. Not included - preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, communications with colleagues, physical objects (e.g., laboratory samples); Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and personnel and medical information and similar information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, such as information that could be used to identify a particular person in a research study

2. **Data and Metadata Standards**
    1. Describe 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.
    2. What form will the metadata take?
    3. Which metadata standards will you use and why have you chosen them?

3. **Policies for Access and Sharing and Appropriate Protection and Privacy -** Describe the policies for public access and sharing including provisions for appropriate protection of privacy, confidentiality, security and intellectual property. Who is likely to be interested in the data?
    1. The DMP should describe the period of time the data will be retained and shared.
    2. Investigators and grantees are encouraged to share software and inventions created under an award or otherwise make them or their products widely available and usable.
    3. Describe which data will be shared
    4. Describe the mechanisms and formats for storing data and making them accessible to others, which may include third party facilities and repositories
    5. Describe when the data will be shared.
    6. Describe any factors that limit the ability to manage and share data, e.g., legal and ethical restrictions on access to human subjects data.

4. **Data storage and preservation of access -** Describe the plans for archiving data, samples, and other research products, and for preservation of access to them. Describe how data are to be managed and maintained.

1. How long will/ should data be kept beyond the life of the project? Typical retention time for research data is three years after the final project close-out, with original data retained wherever possible. Some sponsors require a longer period of retention.

2. Will data be archived after the project ends? If so, describe which data and related information, where it will be housed, how it will be preserved and for how long.

3. What metadata/ documentation will be submitted alongside the data or created on deposit/ transformation in order to make the data reusable? Are software or tools needed to access the data and will these be archived?

4. What procedures for preservation, back-up, security and public access does the long-term storage have in place?

5. **Other considerations**
   1. The plan should cover how the data are to be managed and maintained.
   2. 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.
   3. Any costs should be explained in the Budget Justification pages.