Roles and responsibilities

The DMP should clearly articulate how "sharing of primary data" is to be implemented. It should outline the rights and obligations of all parties as to their roles and responsibilities in the management and retention of research data. It must also consider changes to roles and responsibilities that will occur should a principal investigator or co-PI leave the institution. Any costs should be explained in the Budget Justification pages.

We, the [university's name] University research team, will adhere to the NSF policy on the dissemination and sharing of research results of this project and other projects, as articulated in PAPPG Chapter XI.D.4.

We will promptly prepare the significant findings and relevant research results from the work conducted and submit them for publication, with authorship that accurately reflects the contributions of those involved. We are to share with other researchers, ethicists, the engineering community, and people who are interested in global components in professional ethics, at no more than incremental cost and within a reasonable time, the primary data, in any format, and other supporting materials created or gathered in the course of work under the NSF grant.

We shall ensure that confidential or privileged information is released only in a format which protects the privacy of individuals and organizations and subjects involved. We shall keep survey respondents information confidential. Only the PIs and co-PIs at [university's name] have access to information survey respondents’ names or IDs which will never be available to anyone outside or in any kind of reporting. IRB requirements for the use of human subject in research will be followed. The PIs will ensure that findings will be shared with others via the online Ethics Center for Engineering and Science and at the biennial PI meetings held at NSF.

Expected data

The Data Management Plan should describe the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project. It should then describe the expected types of data to be retained.

During the funding period, the anticipated research products include:

[example]

[i. A literature study report and a compilation of abstracts of literature
   ii. national and international survey questionnaire and survey summary on the impact of global components on civil engineering and broader engineering disciplines
   iii. course materials, lecture notes, powerpoint, course syllabi developed during the Lecture Exchange Series (LES)
   iv. Case study manual or course pack that consists of ethical case scenarios, best practices for ethics solutions to these cases, training and reference materials, and discussion of the various engineering professional codes of conduct
   v. Paper publications in journals and conference proceedings, and presentations
   vi. Smart phone and tablet Apps for ethical practice for civil and construction engineering and for broader discipline including ethical training materials
   vii. A Discussion Group in LinkedIn to be created on Global Components in Ethics in Engineering. ]

Period of data retention
The DMP should describe the period of data retention. Minimum data retention of research data is three years after conclusion of the award or three years after public release, whichever is later.

["Minimum data retention of research data is three years after conclusion of the award or three years after public release, whichever is later."
]

**Data formats and dissemination**

The DMP should describe the specific data formats, media, and dissemination approaches that will be used to make data available to others, including any metadata. Policies for public access and sharing should be described, including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements.

Research centers and major partnerships with industry or other user communities must also address how data are to be shared and managed with partners, center members, and other major stakeholders. Publication delay policies (if applicable) must be clearly stated. Investigators are expected to submit significant findings for publications quickly that are consistent with the publication delay obligations of key partners, such as industrial members of a research center.

During the period of research, the PIs and co-PIs will monitor the data management process by addressing this issue in the monthly project meetings. Data management and dissemination implementation will be included in the annual and final reports to NSF CCE STEM Management. The research products will be presented in each annual report, as well as the final report. We will prepare “Guidelines for Managing and Disseminating the Research Products” for this research at the outset of the project. During the project duration, the Teams will ensure the Guidelines to be implemented for long-term and the research products to be broadly disseminated to academic institutions, industries, professional communities and interested people around the world.

The execution and any update of this DMP will be discussed in the final report including data and publications produced during the award; how data is to be retained after the award expires; verification that data will be available for sharing; discussion of community standards for data format; how the data will be disseminated; the format that will be needed to make data available to others.

**Data storage and preservation of access**

The DMP should describe physical and cyber resources and facilities that will be used for the effective preservation and storage of research data. In collaborative proposals or proposals involving sub-awards, the lead PI is responsible for assuring data storage and access.

During the funding period, the anticipated research products include:

1. A literature study report and a compilation of abstracts of literature
2. National and international survey questionnaire and survey summary on the impact of global components on civil engineering and broader engineering disciplines
3. Course materials, lecture notes, powerpoint, course syllabi developed during the Lecture Exchange Series (LES)
4. Case study manual or course pack that consists of ethical case scenarios, best practices for ethics solutions to these cases, training and reference materials, and discussion of the various engineering professional codes of conduct
5. Paper publications in journals and conference proceedings, and presentations
6. Smart phone and tablet Apps for ethical practice for civil and construction engineering and for broader discipline including ethical training materials
vii. A Discussion Group in LinkedIn to be created on Global Components in Ethics in Engineering.

During the entire process, the PIs and co-PIs will carefully manage and disseminate the data at each development stage. Any products that will be uploaded into the public media will be carefully reviewed by the senior personnel and the advisory board. Beta-testing and review by the Advisory Board will be conducted for any products that will be published onto websites or other public medias.

All data related to this research will be properly and securely stored on the servers maintained by [institution names] for backup purpose. Secured Cloud technology will be used to store the data and products.