

## Plan Overview

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*A Data Management Plan created using DMPTool*

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## Science and Engineering Network for Solar Energy Innovations

The EPSCoR Track II consortium will generate a broad array of data including: experimental data tabular data; spectral data, analytical data from ion chromatography, mass spectral data, fluorescence lifetime data, transient absorption and quantum yields of photoproducts. With the exception of long-term instrumentation data, most data sets collected by EPSCoR will be small in size (< 10 MB). Currently, we anticipate that no more than 25 GB of data will be collected as part of the project with the larger data volumes associated with rmedia data products, videos, and learning modules.

Most of the data collected (by volume) will be spectral by nature; i.e. NMR, optical absorption, IR, transient absorption. These data will be documented using tools that support the ISO 19115 metadata standard. Some of the data collected will be textual in nature and will be saved as text, MS Word, and pdf documents (e.g., supplementary info, experimental notes). Any tabular data collected will be captured in spreadsheets or data tables and saved in .csv files for long-term accessibility; we plan to make use of the DataUp tool available through DataONE that converts Excel spreadsheets into preservation-ready products and that enables the creation of associated metadata. In addition, presentation data such as pptx, or project files will be archived within the Track I EPSCoR Owncloud.

Data will be made available through several mechanisms. First, during the data and information gathering portion of the project, most data will be available to all project participants via a password-controlled website that houses the virtual lab notebook, copies of non-copyrighted materials, drafts of working white papers and publications, and other data and information generated during the course of the project. The exception includes data and information related to inventions that are to be patented.

Data collected through this project may be embargoed for a period of up to one year to allow time for publication by students and researchers; any exceptions to this embargo period must be approved by the Project Director in writing. There will be no charge for data and information and they will be easily discoverable and acquired via the EPSCoR data portal. The research will be conducted in full compliance with both federal and University regulations.

Our policy towards accessing the data will be structured so that it's available upon request. There are no charges for this data and in as much as this proposal was primarily constructed within the SENSEI team via Dropbox, we envision using a similar intitial repository for team data.

ntended or foreseeable users of the data include other researchers, business and industry, educators, governmental and nongovernmental organizations, and educators and students. The data can be made available upon request via email to those interested in any of the uploaded documents. We wish to invoke a one year data embargo on any uploaded material until the manuscript or patent has been approved for publication, etc. Intellectual property rights belong to the originating lab/university where results were obtained.

In addition to preliminary data sharing via Dropbox, our consortium may make use of the Track I repository system known as Owncloud. This system has been set up as part of the Track I EPSCoR award and contains several policies of data preservation, term of project and sharing that will be invoked in our Track II proposal.

Key data such as published spectral data and associated ISO 19115 compliant metadata will be preserved for the long-term after transformation to generic, preservation-ready formats.

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