Materials Science Data Management Survey: How the present can inform our future

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The purpose of materials science (MS) is to improve the function, effectiveness, efficiency, and economy of products benefiting humanity by enabling component and system production (National Research Council (NRC)**,** 1999. Like its cognate fields in STEM research and education, MS is increasingly digital and data-intensive. Additionally, data and information are often collected in ways designed to address local needs and in the context of specific applications. As a result data can be difficult to locate, exchange, integrated, and reuse for new purposes. A survey of a representative sampling of MS related universities, government labs, and government funded research centers about data management interests, needs, and practices is under development in order to analyze what currently exists and where different directions in MS data practices and storage may come together.

The survey is identifying current data management interests, needs, and practices regarding:

- Use of data formats for data exchange and retrieval of materials data.
- Application of practices for managing materials data to support discovery, interoperability, preservation, and reuse.
- Implementation and mapping of vocabulary and ontologies to describe materials data.