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Collaboration as a Guiding Principle to Achieve Resilience and Sustainability: The IEDA2 Data Facility

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Collaboration and partnerships are essential tactics to build true research data infrastructure and sustain an otherwise vulnerable research data ecosystem. If we collaborate and partner, we can leverage limited resources and capabilities, avoid duplication of effort, and converge on common technical and procedural approaches that will make networking of data systems substantially more effective and efficient.

Since its inception, IEDA2, a data facility, funded by the US National Science Foundation, has embraced collaboration and partnerships as a critical principle. Its mission statement acknowledges collaboration as foundational to developing sustainable data infrastructure for the Geosciences to ensure complementarity, interoperability, and sustainability of Geoscience data systems, to minimize duplication of effort, and to optimize effectiveness and efficiency of system operation, technical developments, and community engagement. In times of growing uncertainties in federal funding that put the uninterrupted operation of data services at risk, the substantial benefits of collaboration and partnerships are underscored. This presentation will provide an overview and analysis of the collaborative strategy employed by IEDA2 and how it benefits IEDA2's resilience and sustainability.

IEDA2 is a collaborative data facility that integrates the operation and development of several data systems – EarthChem, PetDB, the System for Earth Sample Registration SESAR, and the Library of Experimental Phase relations LEPR/traceDs – into a comprehensive suite of data service for data generated by the study of Earth and environmental sciences samples including geochemical, geochronological, experimental petrological, and mineralogical data. Thousands of researchers world-wide use IEDA2 data systems to make their samples discoverable; publish analytical or experimental data; and access and mine vast volumes of geochemical and experimental petrology data for new data-driven research.

IEDA2's collaborative approaches include the long-term partnership with the GEOROC/DIGIS group in Germany that has ensured compatible database structures, metadata, and vocabularies as well as complementary content which enables seamless transfer and integration of data between systems should data need to be rescued; the partnership with the Astromaterials Data System that leverages technical development efforts reducing costs; and collaboration with other data systems, e.g. StraboSpot, to take advantage of existing functionality and avoid unnecessary duplication of effort.