Call for Proposals
Midwest Big Data Innovation Hub
Community Development and Engagement Program

Overview

The NSF-funded regional Big Data Innovation Hubs were created in 2015 to facilitate data science opportunities around grand challenges. The Midwest Big Data Innovation Hub (MBDH) seeks to catalyze new activities in our stakeholder community by competitively allocating resources for "Community Development and Engagement" (CDE) opportunities in the 12-state Midwest region.

We invite proposals for collaborative activities (see Program Scope, below) that will further develop the MBDH community in at least one of the Hub's five Priority Areas and/or one of the Hub's Crosscutting Theme Areas:

1. **Advanced Materials and Manufacturing** - Addressing data challenges to enable effective research data management in materials science, accelerating time-to-market for new materials and manufacturing processes, and preparing a data-literate workforce.
2. **Digital Agriculture** - Building partnerships around data sharing, best practices, and new technologies, such as sensors and UAVs.
3. **Smart & Resilient Communities** - Bringing together community members and stakeholders from multiple sectors to explore data challenges and opportunities. Often closely aligned with other theme areas, such as health, water, agriculture, and education/workforce development.
4. **Water Quality** - Exploring data challenges shared by all stakeholders in local, regional, and national watersheds, including academic scientists, municipal water managers, local community interests, and industry innovators.
5. **Big Data in Health** - Building translational collaborations between academic research, clinicians, health advocates, and industry.
6. **Data Science Education and Workforce Development** - Building regional capacity in data science education, skills training, workforce development, and open curricula.
7. **Cyberinfrastructure and Data Sharing** - Sharing curated information, best practices, and access to open tools; developing communities and processes for sharing data.

To view more details of the Hub's activities around each of these Priority Areas and Crosscutting Theme Areas, please visit the MBDH Priority Areas web page.

We particularly encourage activities that bring together partners from academia, industry, government, NGOs/not-for-profit organizations, community members, and that introduce new partners to data science, including historically underrepresented groups.

Individual investigator research projects are outside the scope of this call.

Program Scope

We encourage proposals that include partnerships with small institutions, minority-serving institutions (MSIs), government agencies, and industry participants that provide preliminary materials for subsequent funding. Proposals submitted for Community Development and Engagement (CDE) support could include, but are not limited to, the following kinds of activities:

- Proposal-development workshops that address capacity building in one or more of the MBDH Priority Areas, or which help the Hub move toward long-term sustainability. These could include solicitations from relevant programs at NSF, other funding agencies, or foundations.
- Partnerships between industry, government, and academia that focus on domain expert-driven hackathons and data challenges, particularly those focused on student mentoring and skill development.
- Development of curricula or best practices for online data science education to address workforce-development opportunities, including underrepresented and nontraditional students.
- Activities that convene stakeholders around research data management topics, such as developing data sharing agreements, data quality standards and best practices, or use cases for interdisciplinary data collaboration. The MBDH supports the FAIR and CARE principles.
- Summer Institutes for data science education, including for early-career researchers.
- Proposals for matching industry internships in the MBDH Priority Areas to foster longer-term relationships or to develop student workforce pipelines, especially for underserved institutions.
- Train-the-Trainer events on data science topics that focus on one or more of the MBDH Priority Areas.
- Efforts to extend data science training and workforce development to nontraditional students, local government employees and community organizations such as nonprofits, or to members of underrepresented groups.

The CDE projects from round 1 are examples of relevant activities, but we encourage proposers to think creatively.

Preference will be given to activities or events occurring within the 12-state Midwest region, and which are open to participants from outside the host institution. (See Eligibility requirements, below.)

Successful proposals will help to reduce the friction between the development and use of data and data infrastructure and will help build capacity in data science expertise in the Midwest through workforce development, training, and education.

Proposals should include a draft agenda or project plan for the activity, and describe how the results of the community engagement activity are anticipated to move the proposed area forward. Examples of engagement outcomes might include drafting proposals for funding, position papers, best practices documents, curricula, or learning outcomes for training events.

Project Support

Project activities are a partnership between the project teams and the MBDH. Support for proposals that are selected will primarily be made in the form of in-kind staff time to assist with project coordination support, administrative and logistical support, and event facilitation if those are not available from the proposer's home institution. Participant support for attendees (especially students and qualifying speakers) may also be available. Proposers must follow NSF PAPPG rules, including developing codes of conduct for events (the MBDH can assist with this).

Support requested from the MBDH should be clearly described in the project plan as distinct from activities the proposing team intends to lead. More detailed guidance is provided in the proposal template. We encourage proposers from small institutions and MSIs to include salary support in their budgets if that is a deciding factor in their ability to participate. *No direct funding will be awarded to proposers unless otherwise negotiated.*

Activities should be completed within 18 months of award. Due to the ongoing pandemic and travel restrictions at most institutions, virtual events and activities are preferred. The MBDH Seed Fund Steering Committee may review its guidelines regarding award completion as the situation evolves.

We anticipate supporting 3–4 projects in this cycle.

Eligibility

- Lead proposer(s) (PI) must be primarily affiliated with an academic, governmental, or nonprofit organization within the 12-state Midwest Big Data Hub region (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin).
- Lead PIs are limited to one proposal per funding cycle as lead proposer.
- To broaden participation, grow the MBDH community, and ensure a transparent and fair process, proposers who are current PIs or co-PIs of the MBDH must include collaborators who are not currently affiliated with the MBDH.

- MBDH Seed Fund Steering Committee members must recuse themselves from the review of any proposals from their home institutions, or that involve their own work, or that of their family members, current students or employees, or current collaborators.

Participation and review will follow standard NSF conflict-of-interest policies.

Deliverables

- A brief final written report of the project activities and outcomes is required, due within 90 days of the completion of the project. The scope of the report is dependent on the nature of the project activities.
  - The MBDH is required by NSF to report data about the number and characteristics of participants in engagement activities, and information about outcomes and impacts.
  - Successful applicants are required to collaborate with the Hub's administration and external evaluators to develop and implement measures to gather the aforementioned required data.
- Awardees are strongly encouraged to make content, resources, tools, etc., developed during CDE activities available to the broader stakeholder community, as appropriate, using standard NSF practices, open source, FAIR, CARE, or other models as suggested guidelines.
- Awardees are also encouraged to work with the MBDH Communications team to make the project visible within the region through the Hub's communications channels, as well as via webinars and events.
- In all presentations, papers, posters, and other public communications, awardees should acknowledge support from the Midwest Big Data Innovation Hub and the National Science Foundation under NSF award # 1916613.

Review Criteria

Reviewers are members of the MBDH Seed Fund Steering Committee. Steering Committee members are selected from the at-large MBDH stakeholder community, are not members of the Hub's leadership team, and do not receive compensation. They operate independently, represent the diversity of Hub constituents and Hub areas of interest, and demonstrate independence of judgment and expertise in the area assigned to them.

Successful proposals will support community engagement via a well-defined activity that is intended to advance one or more of the Hub's Priority Areas and/or Crosscutting Theme Areas. Details of the Priority Areas and Crosscutting Theme Areas can be consulted on the MBDH website.

The following criteria will be used by the MBDH Seed Fund Steering Committee to prioritize support:

1. Does the activity help advance one or more of the Priority Areas and/or Crosscutting Theme Areas of the Hub?
2. Does the activity engage new participants, especially underrepresented groups and smaller institutions, in the Hub community?
3. Does the activity generate new partnerships with industry, government, and/or nonprofits?
4. Is the proposed timeline and budget realistic for the stated goals?
5. Does the project plan address sustainability where appropriate, such as identifying opportunities for future external funding from government agencies, foundations, or industry, and include plans for continued collaboration?

Timeline

Activity	Date
Informational webinar	Previously recorded
This call has a rolling deadline for submissions on EasyChair. Please notify us (info@midwestbigdatahub.org) that you intend to develop a proposal before submitting.	Currently open
Target date for notification of award/decline Awardees may initiate planning process with MBDH staff immediately	Within 30 days of proposal submission
Final reports due	Within 90 days of completion of the activity
Outcomes assessment	Following completion of each project

About the Community Development and Engagement Program

Under the terms of the Midwest Big Data Innovation Hub Cooperative Agreement with NSF, the MBDH must commit a portion of its budget to develop new initiatives via a competitive process. This process is administered by the MBDH Seed Fund Steering Committee, composed of members of the MBDH stakeholder community who are not members of the leadership team, and do not receive compensation.

Contact Information

Potential applicants may contact the Midwest Big Data Innovation Hub to learn more about the Community Development and Engagement Program and the Hub's broader efforts to build a data science community in the region. Email: info@midwestbigdatahub.org