

# Midwest Big Data Innovation Hub

## Collaboration Cafe

March 2023



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UNIVERSITY

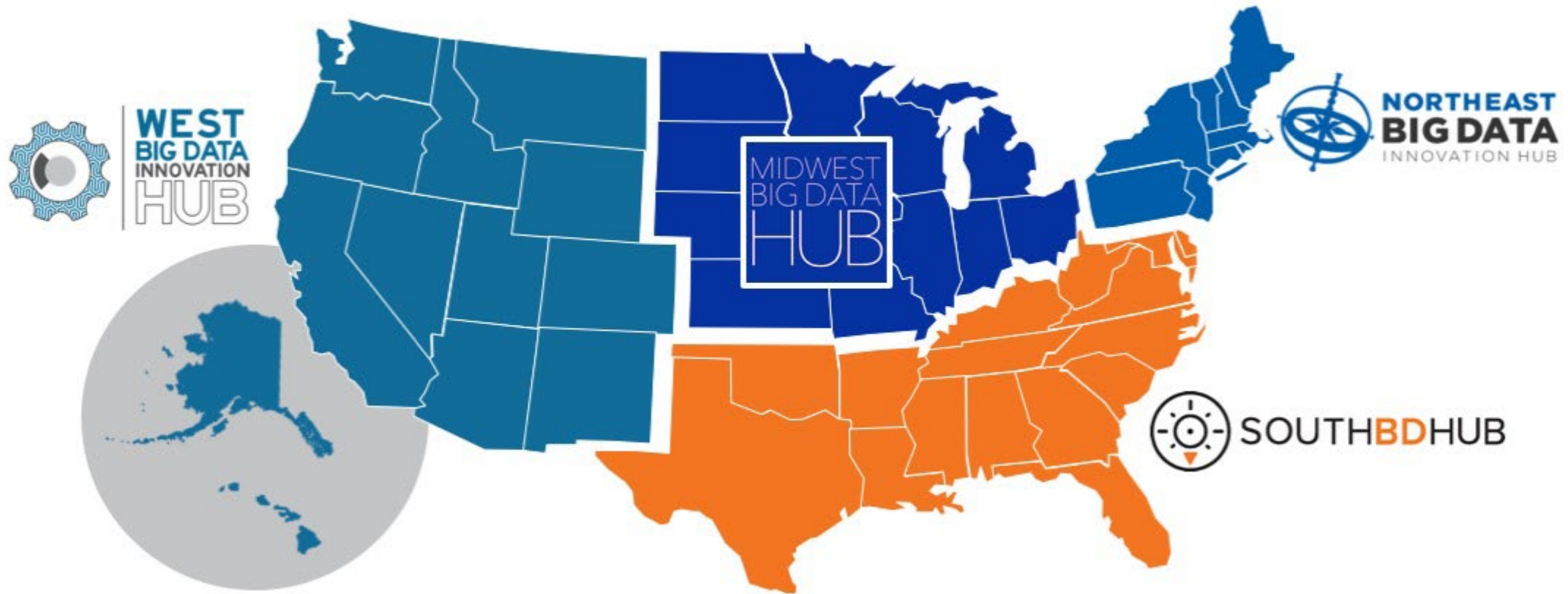


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# Four regional Hubs, One national mission



## What We Do

Engage communities, share resources, and build partnerships that harness data science to address societal and scientific challenges.



# Priority Areas and Cross-cutting Themes

- Advanced Materials and Manufacturing
  - Big Data in Health
  - Digital Agriculture
  - Smart & Resilient Communities
  - Water Quality
- 
- Data Science Education and Workforce Development
  - Cyberinfrastructure and Data Sharing

# Collaboration Cafe webinar series

## Goals:

- Building regional capacity for large-scale proposal response
- Growing a cross-disciplinary network of data science collaborators
- Elevating early career researchers
- Creating a more diverse data science community by actively engaging with non-R1 institutions, including minority-serving institutions (MSIs), tribal colleges and universities (TCUs), and predominantly undergraduate institutions (PUIs)
- Partnering with industry, government, nonprofits, and civic organizations to support translational research and transition-to-practice activities

## Regular segments:

- Funding opportunity walkthroughs
- Lessons learned from prior awardees
- Researcher lightning talks
- Speed networking
- Small group discussions

# Collaboration Cafe resources

- [MBDH website](#)
  - Web page with upcoming sessions
  - Short form for engagement
- [Slack community](#)
  - Networking
  - Input on future sessions
  - New solicitations
- [Shared Google Drive](#)
  - Running notes doc
  - Relevant prior awards to Midwest institutions
- [YouTube playlist](#) of webinar recordings

## Cafe Ground Rules

- Multi-disciplinary team science is a core focus here - all proposal ideas are welcome for discussion
- Research proposals are competitive; some people may not be willing to discuss the details of their projects in this venue
- Private conversations in breakout rooms or Slack private messages are private
- Participating in Collaboration Cafe activities falls under our [NSF Code of Conduct](#)

# MBDH engagement on proposals

There are multiple opportunities to have MBDH participate on proposals for this program, or other projects:

- Engagement partner: Communications, outreach, community assessments, participation in Hub events and activities
  - Non-exclusive Letter of Collaboration
  - Minimal to no funding to MBDH
- Collaborative partner: Engagement roles + involvement in developing and managing project activities
  - Non-exclusive Letter of Collaboration, subaward, co-PI roles, etc.
  - Funding to recover costs of MBDH staff time and other expenses
- **Note:** The MBDH is a neutral party and often provides non-exclusive Letters of Collaboration to multiple proposers to a solicitation

# Preliminary needs assessment

- Perceived need for a group to convene a multidisciplinary, cross-sector network of people working with water data and cyberinfrastructure
- Diverse audience: Researchers and practitioners, local / state governments, federal agencies, industry
- Regional and national interests
  - Aquatic invasive species
  - Great Lakes water quality
  - PFAS in drinking water / wastewater / surface water / groundwater
  - Climate impacts and mitigation / adaptation (e.g., flooding)
  - Transboundary issues (scarcity, rights)
- CI tools, resources, services, workforce development

# March Solicitation: NSF RCN program

## Research Coordination Networks



NSF 23-529	Proposals due: anytime <a href="#">[Program overview]</a>
Program goals	<ul style="list-style-type: none"> <li>“To advance a field or create new directions in research or education by supporting groups of investigators to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic, and international boundaries.”</li> </ul>
Size and duration (max)	<ul style="list-style-type: none"> <li>Up to \$500,000 over 5 years</li> </ul>
Number of awards (est)	<ul style="list-style-type: none"> <li>Approx. 16-20 awards per fiscal year (recently: avg of 18 projects at \$10m total)</li> </ul>
LOI/preproposal?	<ul style="list-style-type: none"> <li>No, but “PIs are encouraged to discuss suitability of an RCN topic with a program officer that manages the appropriate program.” (Mandatory for proposals submitted to CISE, ENG, SBE, and TIP.)</li> </ul>
Eligibility limits & other guidance	<ul style="list-style-type: none"> <li>Two- and four-year U.S. institutions</li> <li>Non-profit, non-academic organizations (e.g., museums, research labs)</li> <li>No collaborative (i.e., multi-institution) proposals</li> </ul>





# NSF RCN proposal guidance (from the solicitation)

## Program goals

- “Provides opportunities to foster new collaborations, including international partnerships where appropriate, and address interdisciplinary topics.”
- “Innovative ideas for implementing novel networking strategies, collaborative technologies, training, broadening participation, and development of community standards for data and metadata are especially encouraged.”
- “RCN awards are not meant to support existing networks; nor are they meant to support the activities of established collaborations. RCN awards also do not support primary research.”

## Multi-directorate program

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| <ul style="list-style-type: none"> <li>• Directorate for Biological Sciences</li> <li>• Directorate for Computer and Information Science and Engineering</li> <li>• Directorate for Engineering</li> <li>• <b>Directorate for Geosciences</b></li> <li>• Directorate for Social, Behavioral and Economic Sciences</li> </ul> | <ul style="list-style-type: none"> <li>• Office of Integrative Activities</li> <li>• Directorate for STEM Education</li> <li>• Directorate for Technology, Innovation and Partnerships</li> <li>• *Dynamics of Integrated Socio-Environmental Systems (<a href="#">DISES</a>)</li> </ul> |
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# NSF RCN proposal guidance (from the solicitation)

All proposals must follow this guidance:

1. Clear theme for RCN topic / focus, with supporting theory / methodology
2. Single lead organization with RCN coordination by PI
3. A steering committee representative of the communities in the network
4. Description of participant network, and plans for inclusive development
5. Clearly defined management and coordination plan
6. Well-defined plans for information sharing and maintenance during and subsequent to award
7. International participation where appropriate



# NSF RCN review guidance (from the solicitation)

- Standard NSF “Merit Review Principles and Criteria”
  - “Intellectual Merit”
  - “Broader Impacts”
- Additional Review Criteria for RCN proposals
  - “RCN proposals will be evaluated for their creativity, innovation, and potential to advance, transform, or establish new areas of science, engineering, technology translation or education.”
  - “RCN proposals will be evaluated on their approach to creating new networks of scientists and researchers who have not previously worked together and to fostering convergence and collaboration through the proposed project. RCN proposals cannot use resources to fund primary research or to sustain existing networks.”
  - “For all RCN proposals involving international collaborations, reviewers will consider: mutual benefits; true intellectual collaboration with the foreign partner(s); benefits to be realized from the expertise and specialized skills, facilities, sites and/or resources of the international counterpart; and active engagement of U.S. students and early-career researchers in the RCN activities.”

# Discussion

- What water data needs exist in the Midwest (and beyond) that collaborators could partner to address?
- What does a water data community look like to you?
- What activities are at the right level of readiness?
- What kinds of community-building activities have you been engaged in?

## Next steps

- Engage with others in water data and CI to solicit community needs
- Develop a 1-page concept to share with prospective partners and NSF
- Develop a full proposal for submission by May/June 2023

# Get involved

- <https://midwestbigdatahub.org/cafe>
- [info@midwestbigdatahub.org](mailto:info@midwestbigdatahub.org)

## April 19, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET

- Topic: Use-Inspired CI Research and Implementation
- Solicitation: CISE Community Research Infrastructure (CCRI) (22-509)

## May 17, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET

- Topic: Building Regional CI Capacity
- Solicitation: NSF Campus Cyberinfrastructure (CC\*) (23-526)



Get Involved ▾

MBDH Collaboration Cafe

Community Development and Engagement Program

Community Advisory Panel

Midwest Carpentries Community

Data Science Student Community

Regional Activities

Event in a Box Tool Kit

Explore Funding Opportunities

Join a Working Group

