Midwest Big Data Hub Letters of Intent for NSF 16-510

Edward Seidel

Director, NCSA

Founder Prof. of Physics, Prof of Astronomy

On behalf of the Midwest Big Data Hub











Brian Athey

Sarah Nusser Beth Plale Josh Riedy Ed Seidel

SEEDCorn: Sustainable Enabling Environment for Data Collaboration (aka MBDH)











- A partnership of academia, government, industry, nonprofits
- Over 100 partners already
 - Colleges, Universities, Medical Centers, of all types
 - Industry, Non-profits, NGOs
 - States, cities, communities
 - Looking for others to join!
- See website: midwestbigdatahub.org
- NSF Calls for Proposals for Spokes and Planning Grants
 - Primary topic of this webinar: all draft LOIs welcome, in all areas!
 - Other (non-NSF) sources of funding will be sought as well











NSF Calls for Proposals

- The Hub is a structure that supports spokes
 - Governance, communications, working groups, workshops, etc.
 - May be able to support pilot projects on data sharing
 - Current NSF solicitation aiming at Spokes that should connect to Hub
 - Communities to address societal Grand Challenges
 - Helping to automate big data life cycle
 - Enabling access to and increasing use of data sets
- We invite you to consider proposals and/or planning grants
 - See http://midwestbigdatahub.org/proposals/ for information
 - This webinar part of process to facilitate community development
- NSF anticipates up to 20 spokes and planning grants across all four hubs











Guidelines (derived from Solicitation)

- Proposed Spoke activities must align with the priorities of the Midwest BD Hub
- The proposed Spoke should be action-oriented, making measurable progress towards specific goals within their topic area, using Big Data technologies.
- Results from the Spoke activity must contribute to the education and training missions of the Midwest BD Hub.
- Proposals should be submitted by organizations that have past successful experiences engaging in Big Data innovation activities.
- Proposals must identify the need to be formally connected to a regional BD Hub and reasons why the proposed activities will be significantly strengthened through linkage with the Midwest BD Hub.
- Spokes must have a clearly defined mission statement with goals and corresponding metrics of success.
- Spokes should be collaborative projects, including multiple institutions and/or multiple states. International collaborations are encouraged.
- Approval from the Midwest BD Hub in the form of a Letter of Collaboration.











Key Requirements for Midwest Hub LOIs

- Submissions due to us at <u>MBDH@iastate.edu</u> by Dec 9 11:59 PM CT
 - Two page draft LOI, compliant with NSF guidelines (see solicitation)
 - One page to address MBDH requirements
 - Strong potential to generate high impact
 - Clear goals, metrics, timeline, and plan for project and its sustainability
 - Collaborative team involving multiple sectors, institutions and states
 - Connection to workforce advancement, data accessibility, tool development and other broader impacts
 - Clear relationship to Hub's current Spoke themes and expected collaboration with Hub activities
 - Regional Hub resources you hope to utilize
 - Partial list given on web site
 - One page on budget: how much funding, how used











Next Steps

- December 16, 2015: We notify all proposers of decision on support letters. Possible outcomes:
 - Indicate support for spoke or planning grant
 - Multiple groups with similar spoke areas possible
 - Spoke proposals in all areas are possible (even if no working group now)
 - Support not recommended
- MBDH Steering Committee meet Dec 16 to plan
 - Spring meetings, activities, etc
 - Election of long term steering committee
 - All hands meeting in January (date, place TBD)











Next Steps

- Dec 9 onward: We will try to work with supported groups to prepare for proposals
- January 12, 2016: Final LOI due at NSF
- February 12, 2016: Proposals submitted to the Hub for review and preparation of Letters of Collaboration
- February 22, 2016: Hub Letters of Collaboration returned to proposers
- February 25, 2016: Full proposals submitted to NSF
- Spring 2016 and beyond: we will have series of workshops, meetings, etc to move the hub and spokes forward













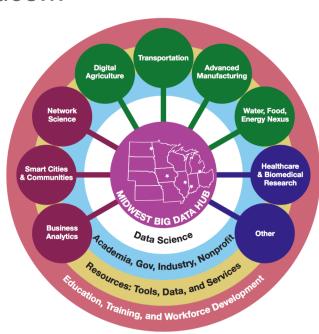
Note: What we call "Rings" are just like spokes for LOIs!

CURRENT SPOKE DESCRIPTIONS

Spokes Currently Identified by MBDH

(Leaders across Midwest for each area!)

- Network Science
 - Including Data Intensive Research in the Social, Behavioral, and Economic Sciences....
- Urban Science
 - Including Smart and Connected Communities...
- Business Analytics
- Digital Agriculture
- Transportation
- Advanced Manufacturing
- Food, Energy, Water
- Healthcare & Biomedical Research
 - Including neuroscience...
- Others as proposed...
 - Including Data Privacy



Spokes and Hub part of synergistic ecosystem

Crosscutting Rings Supported by MBDH

Data Science

- Including Data Intensive Research in the Social, Behavioral, and Economic Sciences...
- Replicability and Reproducibility in Data Science

Education

Including new approaches to STEM learning environments...

Data Tools and Services

Rings are spoke-like entities with cross spoke impact

