I'd now like to turn the meeting over to your host, Dr. Manish Parashar.

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Good Afternoon

I am delighted to welcome you to this webinar.

As many of you know OAC (Office of Advanced Cyberinfrastructure) seeks to foster the advanced cyberinfrastructure ecosystem that is critical to the advancement of all areas of science and engineering research and education. For over a decade, OAC's (and ACI and OCI before it) investments in cyberinfrastructure research and research cyberinfrastructure have consistently enabled new innovations and discoveries.

Data cyberinfrastructure and services are an integral part this cyberinfrastructure ecosystem and the Big Data Hubs program, now a part of the OAC portfolio, is an important part of these investments. The program and the existing Hubs have already made significant contributions, and we were delighted to announce this new second round of the program.

I do hope you find this webinar informative.

I will now turn it over to Drs. Al Suarez and Beth Plale who are the cognizant program officers for the program.

Hello, thank you for your interest in this revised Big Data Regional Innovation Hubs solicitation. We are very excited about it!

I am Beth Plale, a program director in CISE Office of Advanced Cyberinfrastructure. I am a rotator from Indiana University Bloomington, into my second year at NSF. Also with me (off-camera and to my left) is Al Suarez, also in the Office of Advanced Cyberinfrastructure.

Today we will summarize key aspects of the new Big Data Regional Innovation Hubs solicitation. We will contextualize the current solicitation by pointing out changes in the fast-moving landscape of big data that have occurred in the last 3 years since the 2015 solicitation. We will point out changes to the solicitation and the award framework, then speak to the anticipated areas of accomplishment and additional review criteria. We will then take your questions.

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The original solicitation, which dates back to 2015, established four BD Hubs, one in each of the four Census regions of the United States. There's a West, a Midwest, Northeast, and a South. The overarching goal of the program was for each BD Hub to engage local and regional stakeholders in big data research with the objective of building a sustained national big data ecosystem. The regional focus is thus a complement to the project focus of most awards.

In the intervening years since the last solicitation, over the period of 2015 to 2018, the BD Hubs and BD Spokes awards together have contributed to a national ecosystem for big data.   Data science, however, is changing, with recent attention through workshops and scholarly studies on workforce development and curriculum. The solicitation points to at least one of these studies. Then there are NSF's 10 big ideas – long term research and process ideas at frontiers of science and engineering. So in the last 3 years, we have seen developments in data science, accomplishments by the Hubs and Spokes, and the big ideas. So let's look at one of the 10 big ideas in more detail.

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One of the 10 big ideas that impacts the solicitation we are talking about is Harnessing the Data Revolution, it's called HDR for short. HDR promotes engagement of NSF's research community in the pursuit of fundamental research in data science and engineering.   It envisions an ecosystem of data science research, education, workforce development, and cyberinfrastructure activities.

I'm please to say the NSF BD Hubs solicitation is aligned with the HDR big idea.

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Moving on to revision highlights. We will go over the revisions to the current solicitation in comparison to the 2015 solicitation. The current solicitation has revised eligibility: At least one PI or co-PI of a proposal submitted in response to this solicitation must be a PI, co-PI, or Senior Personnel on one of the four currently-funded BD Hubs projects. Let me repeat that: At least one PI or co-PI of a proposal submitted in response to this solicitation must be a PI, co-PI, or Senior Personnel on one of the four currently-funded BD Hubs projects. So this eligibility criteria encourages continuity for members of the BD Hub network while keeping leadership of the activity open to newcomers. That's a large change.

Additionally, the duration of a given award period has been extended from three to four years. The level of funding per award has been increased from $500K/yr to $1M/yr. These are in response to feedback we have received from the community. A portion of a proposal budget - We will talk about this next point later – must be allocated to a "Seed Fund"

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Moving on to the award framework

NSF expects to make up to 4 awards at a maximum of $4,000,000 total per award

The awards are up to 4 years duration,
Speaking to the seed fund: a proposal needs to contain a $250,000/yr seed fund allocated on competitive basis and managed through community governance
The awards will be in the form of Cooperative Agreements; we are looking at a lightweight form of the cooperative agreement. This is a commitment to the interaction with NSF that the existing Hubs have embodied.
Each project will have a Steering Committee, and the Steering Committee is responsible for defining policy and processes for allocating the Seed Fund. This way it becomes a community activity.
The BD Hub must have an Executive Director, which his unchanged from the existing solicitation.

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With respect othte 2018 solicitation goals:
The goals of the 2018 solicitation are a continued operation of a national network of Big Data Hubs.   The solicitation reaffirms NSF's commitment to the four BD Hubs, each as a network of stakeholders, resources, and activities; BD Hubs catalyze new research and create economic and societal good.

The solicitation reaffirms NSF's commitment to the regional orientation of the Hubs.   While BD Hubs activity is not limited to within a region, the regional focus is unique within the HDR big idea ecosystem.

Finally, through the mechanism of the seed fund, the BD Hubs can serve as and incubator of formative stage ideas that then go on to be funded as independent projects.

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Continuing on with the 2018 solicitation goals, there is an asserted emphasis on data science, and Big Data is encompassed within data science. Also is responsive to developments in education and workforce training in data science.

The solicitation will set up a lightweight cross-BD Hubs coordination network with the intention of the BD Hubs, with this lightweight national coordination network, serving as a cohesive unit that can respond to new opportunities such as may arise in Harnessing the Data Revolution.

The solicitation goal is also community participation in decision-making such as around seed fund that I spoke of.

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We speak to anticipated areas of accomplishment.

The accomplishments are what one looks at over the period of 4-years. The accomplishments of an individual BD Hub over this 4-year period are the accomplishments of the collective, inclusive community around the BD Hub. These accomplishments are the activities that are stimulated through and by the existence of the BD Hub.

The Executive Director (ED) and the ED office play a critical role in the BDHub's success through both direct action and also supporting action. The ED office is expected to stimulate some activity, lend support to other activity, and then fully carry out a potential third form of activity. So it's stimulating, lending support, and fully carrying out, in the capacity of the ED office.

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With respect to the specific anticipated areas of accomplishment listed in the solicitation, they leverage and in some cases refine the activities of the BD Hubs under the 2015 solicitation, acknowledging the good work that's been done to date.   There are three broad areas in which accomplishments are anticipated, and I point you to the solicitation for a full list of example activities. Those three broad areas are Programmatic activities, Socio-technical shared resources/services, Data science education and workforce development. Those are the three and let me come back to the first one.

Programmatic activities on behalf of the community, such as ideation services, transformative initiatives. I think the Hubs have demonstrated success in these areas.

Second, Socio-technical shared resources/services would be the Hubs go beyond just programmatic activities and we've seen examples of these and looking forward this might include something like a findable, accessible, interoperable, and reusable coordination hub, a central repository of resources and/or expertise, such as around data use agreements; brokering partnerships to stimulate innovation in data science. So again, both technical and socio-technical resources and services.

The third area being Data science education and workforce development such as responding to regional needs for data science education and workforce training, connecting within region; Student internships with industry; and serving as a forum for broadening participation in data science.

And again, these anticipated areas of accomplishment leverage on and refine activities that the BD Hubs have accomplished under the 2015 solicitation.

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Moving on, the solicitation has additional review criteria. NSF always recommends that you pay careful attention to additional review criteria. This is in addition to the proposal's intellectual merit and broader impacts.

The panel reviewers will be asked to assess the degree to which the proposal is, and I'll just read these off:

- Is concrete in defining activities and services
- Is an Organizational model that is broadly representative
- Reaches a broad community of stakeholders within a region, and can respond materially to its needs
- Contributes to a lightweight national BD Hubs coordination body
- Has an Evaluation plan for improved project performance
- And draws on prior experience in BD Hubs activity for minimal community disruption.

The solicitation also has special criteria for data management plans; please review that carefully also.

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As a way of stimulating questions from the audience, there are several questions that we have received earlier that we will go over before taking your questions. The first question is this:

Q: I am a co-PI of an active Spoke award. Should I reach out to the BD Hub that wrote a letter of support for my award?

A: It's a good idea for the BD Spoke to reach out to the BD Hub with whom you are connected to reassert the mutually beneficial Spoke/ Hub relationship as the BD Hubs applicants define their priorities. I recommend a contact there.

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Another question that we received is this:

Q: The data science network that I am part of is thinking of applying to become a BD Hub. Are we eligible?

A: Yes, you may be. I'm just drawing back to the eligibility criteria: Just one of your set of PIs or co-PIs must be a PI, co-PI, or Senior Personnel on one of the four currently-funded BD Hubs projects.
So to find out who are PI and co-PI for an existing BD Hub, you can find that using the NSF award's search (https://www.nsf.gov/awardsearch/) criteria, and using "BD Hubs" as the search criteria and it will bring up the existing Hubs and PI/coPI list.

To find out who are Senior Personnel for existing BD Hub, we ask that you contact the BD Hub in the original region of your submission.

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One more question:

Q: Are the BD Hubs who were funded under the 2015 solicitation, Big Data Regional Innovation Hubs (BD Hubs, NSF 15-562) continuing?
A: The awards that fund the four BD Hubs under the 2015 solicitation were 3 year awards that are coming to an end.

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That includes the informational portion of our presentation. We ask that you ask us your question or submit questions to BDHubQueries@nsf.gov

Thank you.

These slides, an audio recording, and a script of this webinar will be available at http://www.nsf.gov/events/