Foreign-Born Scientists and Engineers and the U.S. Workforce

November 9, 2021
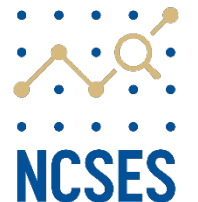
"As more countries offer their students reasons to stay in their own country for their education or to return home after earning a degree, the U.S. could face a shortage in a critical segment of its workforce." (*National Science Board*, 2020)

Who is NCSES and What is ADC?

At NCSES we provide critical information on the scientific progress that drives American well-being

Research and Development Statistics

S&E Education and S&E Workforce Statistics

America's DataHub will be an enduring national asset where people and data securely come together to benefit us all

Statistical Agency with Legal Authority

Activities

- ☑ Expand public access to federal survey data
- ☑ Acquire and integrate administrative and other non-traditional data sources
- ☑ Provide data-linkage capabilities
- ☑ Ensure privacy protection protocols are followed
- ☑ Foster working relationships among all levels of government and non-government
- ☑ Analyze data and produce new and improved data products
- ☑ Expand information dissemination through new media

Outcomes

Modernized data infrastructure

Increased innovation

Expanded partnerships

Key Issue

Evidence building to understand the availability and demand for global science and engineering training and talent

ADC will bridge the knowledge gap

INFORMATION GAPS AND DISPARATE DATA...
about global science and engineering talent

POLICY-RELEVANT EVIDENCE...
about global science and engineering talent

Return on investment

Privacy

Presumption of accessibility

Data access and linking

Permanent residency and citizenship

Models

KNOWLEDGE GAP

Key evidence building considerations range from return on investment to data accessibility

- What is the ROI on U.S. training of FBSEs?

- How many FBSEs go on to gain permanent resident status in the U.S. or become U.S. citizens?

- Do FBSEs return to their country of citizenship and what contributions do they make to the global science and engineering enterprise after they complete their education?

- What are key challenges with accessing, linking, and using information on FBSEs?

- What are the successful approaches to using the presumption of accessibility in the Evidence Act?

- What privacy preserving techniques can be used to protect confidentiality?

- What models and estimation methods are best suited to fill information gaps?

- Are the resulting data and models fit to use to inform policy discussions?

There are many informational gaps on FBSEs

- We lack comprehensive information on:
  - FBSEs who come to the U.S. after their training
  - FBSEs who earn associate's, bachelor's, and master's degrees in the U.S. (but not doctorates)
  - FBSEs at all levels in terms of their patterns for staying in the U.S. after their education/training and their international mobility patterns

Filling those gaps will require working with disparate data sources

- Existing data and analyses on FBSEs are spread across government agencies, academic institutions, and non-profit entities

- Bringing together such information will require:
  - Obtaining access to traditional and organic data sources
  - Securely linking that data
  - Working with co-mingled information
  - Evaluating the fitness for use of the resulting information

Request for Solutions (RFS)

https://www.americasdatahub.org/opportunities/

RFS Topic

- Whitepapers and full proposals must address this specific topic area

- See RFS Attachment 1 for full FBSE description

- Multiple awards anticipated, total value of all those awards is estimated between $3,500,000 and $5,000,000.

Two Step Process

- Whitepaper followed by Full Proposal

- Whitepapers are mandatory, cannot submit a Full Proposal without first submitting a corresponding Whitepaper

- Government will provide Whitepaper feedback and invite select offerors to submit Full Proposal

- Do not need to be an ADC member to respond, but If selected for award, offeror must join ADC if not already a member

Whitepaper Submission

- RFS Attachment 2 includes format

- Limited to **3 pages plus cover**

- Submit in Word format

Whitepaper Cover Page

- Working title of the proposed project

- Names, phone numbers, mailing and e-mail addresses for the principal technical and contractual points of contact (person or persons authorized to negotiate on the behalf of the offeror and who can contractually obligate the offeror organization)

- DUNS number of the submitting organization (if available)

- Project partners, if any

- Date of submission

- Proprietary data restrictions, if any

Whitepaper Content

- **Summary Statement:** Provide a succinct statement of the aim of the project and proposed approach. In most cases, the summary statement will be no longer than a paragraph.

- **Context:** Briefly describe the current state of information and/or research in the area.

- **Scope of Work:** Describe the general scope of work planned for this activity. This section shall describe (as applicable) the methods, testing, software development, field work, and analysis activities, as well as the data required or to be generated or acquired, in sufficient detail to communicate the breadth of activities proposed. A detailed work breakdown structure is not required.

- **Evidence Building Outcomes and Dissemination Plan:** Identify the evidence expected from the project.

- **Project Team:** List all team members proposed for the project. Briefly describe each organization's roles and responsibilities on the project. Provide a short synopsis of each key person's education, experience, and other qualifications applicable to the proposed project, as well as any supervisory relationships. Address any potential conflicts of interest and any proposed mitigation.

- **Unique Capabilities:** Briefly describe any unique capabilities that the team possesses that may reduce project risk or duration or may improve project financial performance. The anticipated benefits of partnerships between organizations associated with the project should also be highlighted here.

Whitepaper Content (cont.)

- **Schedule:** Provide milestones for the proposed project that include start, finish, and major activity completion times. Express milestone dates as the number of weeks from project start.

- **Intellectual Property Rights:** Describe any limitations on any intellectual property (patents, inventions, trade secrets, copyrights, or trademarks) that will impact the Offeror's performance of the contract or impact the Government's subsequent use of any deliverable under the contract. The Offeror must describe the intellectual property in sufficient detail to describe the limitations (Data assertions of the Offeror or any subcontractor, potential patent licenses required by the Government, etc.), and to describe why or how the Government can accomplish the stated objectives of this RFS with the limitations described or proposed by the Offeror.

- **Rough Order of Magnitude (ROM):** Provide an estimate based on the technical approach proposed in the whitepaper. The following chart (tailored as appropriate) shall be included in the whitepaper.

Whitepaper Submission Form

Offeror Information

Offeror Organization *

Offeror Address

Offeror City

Offeror State

Offeror Zip Code

https://atisc.formstack.com/forms/adc_fbse_rfs

Whitepaper Submission Form (cont.)

Are you currently a "Non-traditional Entity"? *

☐ Yes

☐ No

"Non-traditional entity" means an entity (construed in its broadest sense to include qualified large and small businesses, universities, non-profits, philanthropic organizations, partnerships, joint ventures, and other entity forms) that is not currently performing and has not performed, for at least the three-year period preceding the solicitation of sources by NSF for the procurement or arrangement, under any NSF procurement contract or NSF instrument of financial assistance.

Whitepaper Submission Form (cont.)

POC Information

Technical POC Name *

First Name

Last Name

Job Title *

Technical POC Email *

Technical POC Phone *

Is the Contracts POC the same as the Technical POC?

Whitepaper Submission Form (cont.)

AMERICA'S DATAHUB
CONSORTIUM

Submission

Whitepaper Title *

Whitepaper Submittal

○ I prefer to upload the whitepaper to this form (attachment will be unencrypted)

○ I prefer to send the whitepaper via encrypted email to adc-contracts@ati.org (may be done before or

after submitting this form)

Whitepaper Upload

Choose File   Remove File   No File Chosen

File names must not contain spaces or special characters

Additional Comments

Whitepaper Evaluation/Feedback

- Whitepapers will be evaluated for overall technical value to the Government's area of interest, within the context of available funding.
  - The Government will consider the degree of the potential impact on the realization of ADC, NCSES, and project goals and the reasonableness of estimated costs for each whitepaper submitted.
  - The Government will also consider the offeror's capability to perform the work based on the technical approach, background, and referenced resources provided in the whitepaper.
- The Government may request full proposals for whitepapers that are deemed to have value to its objectives and are found to fit within funding constraints.
- Whitepapers are not evaluated, or considered, as part of the full proposal evaluation process.
- ADC CMF will notify each offeror of the disposition of their whitepaper.

Full Proposal Submission

- RFS Attachment 3 includes general format
  - Volume 1 - Technical Proposal
  - Volume 2 - Cost Proposal
- Only select offerors (received favorable whitepaper feedback) can submit a full proposal
- Submission guidance will be provided to select offerors

Full Proposal Evaluation Criteria

- **Technical**
  - Approach - the degree to which the proposed project:
    - (i) meets the objectives outlined in [RFS] Attachment 1;
    - (ii) will result in or lead to a replicable framework that can be used to address similar issues;
    - (iii) demonstrates innovativeness; and
    - (iv) informs other strategic priorities like the National Secure Data Service.
  - Teaming - The degree to which the proposed project includes a diverse team of qualified performers to include use of non-traditional entities. (See RFS for non-traditional definition)
- **Cost**
  - The CMF will perform an analysis and will provide the results to the Government. This effort may entail the CMF requesting additional information from the Offeror.
  - The Government will determine whether the Offeror's total evaluated cost/price is fair and reasonable.

The criteria are listed in order of relative importance

Base Agreement

- If selected for award, the Base Agreement must be signed at that time.

- Any Project Agreements will be awarded under the Base Agreement.

- Note Article XVI Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors

Timeline

	Date Estimate
Request for Solutions Release	Nov 5
FBSE Webinar	Nov 9
Whitepaper Deadline	Nov 19 - 3 PM ET
Whitepaper Feedback	Nov 30
Proposal Deadline	Dec 17 - 3 PM ET
Offeror Notifications	Dec 21
Award Projects	Dec 23

Any deadline updates will be communicated via email

Communications

- RFS Related: ADC-Contracts@ati.org
- General/Membership: adc@ati.org

Visit the ADC Website

https://www.americasdatahub.org/

Events, Solicitations, Project Awards, News, Members and more. Join ADC today!