

# Data Access Alternatives: Artificial Intelligence Supported Interfaces

## Request for Solutions

**Dr. May Aydin**

NCSES, Science Advisor

**Dr. Christina Freyman**

NCSES, Deputy Division Director

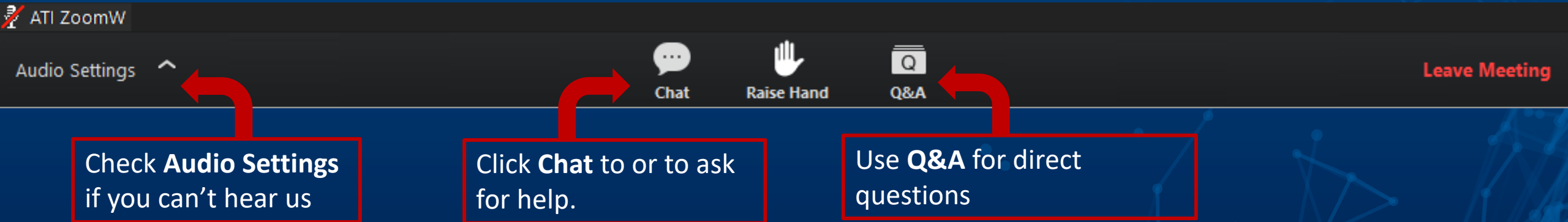


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## Housekeeping Items:

- All attendees are on mute and will not be able to unmute themselves.
- Please use the “chat” function for technical difficulties only.
- Place all questions in the Q&A Box.
- Please check your audio settings if you are having difficulties hearing us.



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# Background



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# America's DataHub Consortium (ADC)

**Vision:** To be an enduring national asset, where eligible people and secure data come together for collaborative research and decision-making that will benefit the American public.

21 projects awarded since 2022



Support cutting-edge data infrastructure



Build data security capabilities to further increase privacy protections and public trust



Develop new ways of acquiring and linking data to yield valuable insights into critical issues

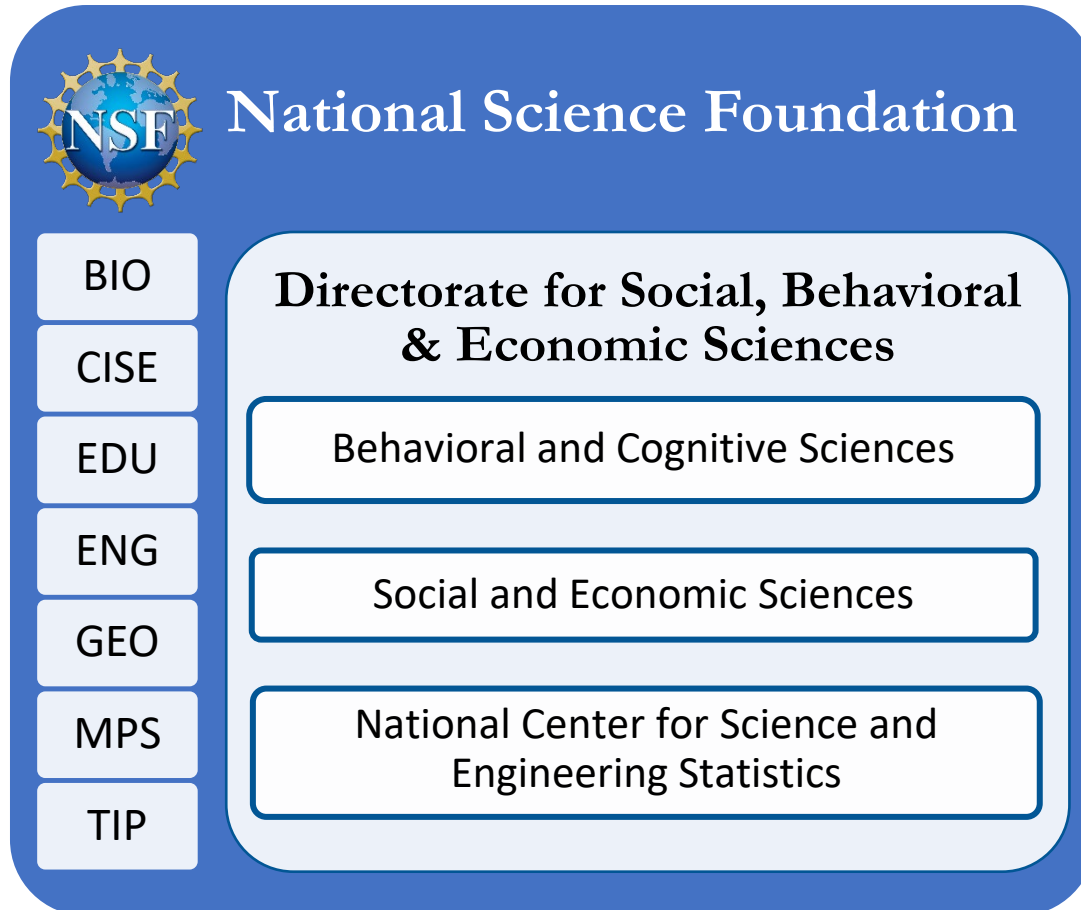


Provide novel and innovative analyses



Share lessons learned for similar activities across the Federal government

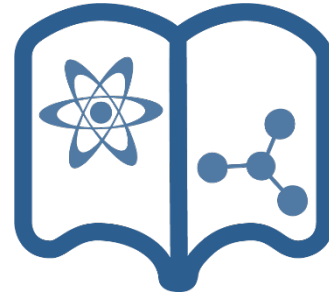
# Placed within NSF's SBE Directorate, NCSES is one of 13 principal federal statistical agencies



# NCSES's mission is to serve as a federal clearinghouse for objective data that provide key insights into the S&E enterprise



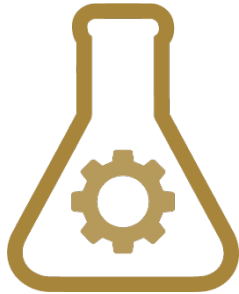
**Science & Engineering  
Workforce**



**STEM Education**



**Innovation & Global  
Competitiveness**



**Research & Development**



**Government Funding  
for S&E**



**Higher Ed R&D**



# The idea of a transformational NSDS to coordinate data linking, secure access, and support innovation everywhere has a distinguished lineage

## The pathway to the NATIONAL SECURE DATA SERVICE

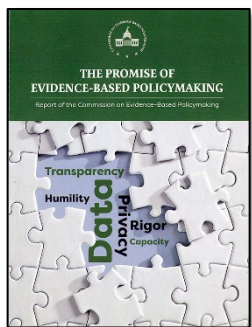
2016

2018

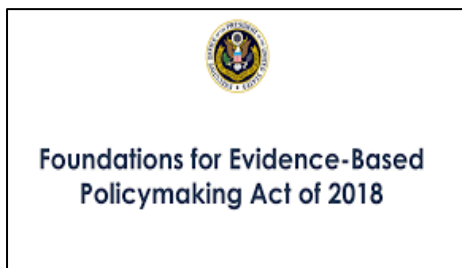
2020

2021

2022



Commission on Evidence-Based Policymaking



National Secure Data Service Demonstration Project

# A vision for the NSDS

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The NSDS is envisioned as a government-wide set of shared services. It serves as a **front door** and a central hub for users to discover shared services and resources and to utilize the NSDS data access and linkage infrastructure.



**Shared services and resources** will include a data concierge service to direct users on their evidence-building journey, toolkits for data protection and synthetic data, communities of practice where users can connect, and platforms to promote transparency concerning the use of government data.



The **data access and linkage infrastructure** will enable users to securely access, link, and analyze powerful, high value data. The NSDS access infrastructure will complement agency enclaves and the Federal Statistical Research Data Center (FSRDC) network while addressing gaps in coverage. The NSDS will also facilitate secure data linkages in support of distinct, authorized projects.



# New Request for Information Released

## Use Cases to Inform a Future National Secure Data Service (NSDS)

**Objective:** This RFI encourages response from a broad and diverse group of communities, including but not limited to individuals and organizations that conduct work in research, policy, program, and education. The goal is to gather current and anticipated research, policy, program, and education use cases for an NSDS, and to also identify current and anticipated challenges and barriers that could be addressed through the use of an NSDS.

The submission deadline is June 14, 2024, at 5 PM ET. Membership in ADC is not required for submission.

Learn more and submit a form on the ADC Opportunities Page, [www.americasdatahub.org/opportunities](http://www.americasdatahub.org/opportunities)

# Data Access Alternatives: Artificial Intelligence Supported Interfaces DAA-24

**Dr. Christina Freyman**

NCSES, Deputy Division Director



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# Background

The CHIPS and Science Act authorizes the establishment of a National Secure Data Service Demonstration Project to develop, refine and test models for data linking and data access for statistical purposes, in support of national evidence building.

The ACDEB Year 2 report recommended supporting functions and features that encourage a high-quality user experience.

The ACDEB Year 2 report encouraged opportunities to automate where possible to address complex user needs.

This opportunity explores the use of innovative, AI approaches to establishing a data concierge service, in particular interfaces to discover relevant data and acquire access to that data.



# Key Objective

- **Create and test** machine-learning-backed or “artificial intelligence” (AI)-backed user experiences with federal statistical data.
- **Improve** on the current state of user interactions based on obtaining answers to questions via search engines or emailing federal staff or contractors.
- **Develop and pilot** an AI chat bot (or the like) that answers users text queries submitted via an interface.



# Project will identify

- If AI or other machine-learning approaches can be utilized to improve user access to federal statistical information.
- How needed services and support could potentially be integrated into a data concierge service for a National Secure Data Service.
- The extent to which information returned by a chatbot maintains fidelity to the requirements of the Information Quality Act.



# Respondents

- Respondents should propose a solution that will use public federal statistical data from a limited number of statistical agencies, including the National Center for Science and Engineering Statistics and others to be determined, to answer a series of query questions requesting existing statistics or graphics.
- Proposers are encouraged to propose other future states that will meet the key objective of increasing user access to federal statistical information through a machine-backed interface.



# Deliverables

At a minimum, offerors will provide the following if selected for award. Proposers should outline the additional deliverables they will provide in the provision of this solution.

- **Project plan outlines** key milestones and timelines.
- **Monthly status reports** on progress towards project objectives.
- **Quarterly lessons learned** based on what has been learned during the last quarter.
- **Final report** detailing tool capabilities and limitations, data sources used to train models and derive responses to queries, and a compilation of lessons learned.
- The tool with **technical documentation** required for maintenance and replicability. The tool should be developed using or resulting in open-source software or code, which should be made publicly accessible (say on github or equivalent) and accompanied by complete documentation of the tool.
- **A set of recommendations** to enable AI-driven search and discovery of content on federal statistical agencies' websites.
- **A transition plan** to transfer the tool to an .gov platform.



# Questions?



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# Request for Solutions (RFS) Requirements

**Ms. Alexis Hirr**

Contracts Manager

Advanced Technology International (ATI), ADC Consortium Management Firm (CMF)

[americasdatahub.org/opportunities](https://americasdatahub.org/opportunities)

*The official source of information regarding the solicitations is included in the Request for Solutions posted on the ADC website. If you act on information from other sources, it is at your own risk.*



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# RFS Summary

## Project Topic

- Proposals must address the specific topic area.
- See Attachment 1 of the RFS for full topic description

## Project Awards

- It is anticipated there will be one award.

## Period of Performance

- 12 Months



## One Step Process

- Offerors will submit a detailed technical and cost proposal for award evaluation.
- You do not need to be an ADC member to respond. However, if you're selected for award, you must join ADC (if not already a member).



# Full Proposal Submission

- RFS Attachment 2 includes format
  - Volume 1: Technical Proposal
    - Limited to **8 pages plus cover page**
  - Volume 2: Cost Proposal
    - No page limit
  - Submit in Word format
  - Submission form: [https://atisc.formstack.com/forms/adc\\_daa\\_rfs](https://atisc.formstack.com/forms/adc_daa_rfs)



# Full Proposal 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
- Unique Entity ID (UEI) of the Offeror (if available)
- Project partners, if any
- Date of submission
- Proprietary data restrictions, if any



# Volume 1: Technical Proposal Content

- **Executive Summary**

- **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.
- **Proposed Approach:** Explain how the proposed approach will meet the objectives outlined in Attachment 1, result in or lead to a replicable framework that can be used to address similar issues, and inform other strategic priorities like the National Secure Data Service.



# Volume 1: Technical Proposal Content *(Continued)*

- **Statement of Work**

- **Work Scope:** Describe the work to be accomplished as part of the project, organized as it is expected to be performed. Separate the work effort into major tasks and subtasks as numbered paragraphs or in a table.
- **Deliverables:** All project deliverables should be clearly listed and described.
- **Future Phases:** Proposals may include a discussion of optional, future phases of work. The original phase or work shall in no way depend on work described under future phases to meet the program criteria.

***Do not include company-sensitive or proprietary data included in the Statement of Work***



# Volume 1: Technical Proposal Content *(Continued)*

- **Capabilities and Experience**
  - List all proposed project partners and indicate if they are a non-traditional entity (as defined in the RFS)
  - Identify all key personnel on the team and briefly describe each person's roles and responsibilities; organize the team by organization name.
  - Describe how the capabilities and experience of key personnel and organizations relate to the project.
    - Serves to demonstrate the ability to successfully conduct the proposed research or project, including access to critical resources for the project.
  - Identify any supervisory relationships and who will be the main point of contact for regular check-ins during the project.
  - Provide resumes (2-page maximum) for all key personnel in an appendix, which is not included in the page limit.





# Volume 1: Technical Proposal Content *(Continued)*

## • Capabilities and Experience *(continued)*

- Designate any graduate students or postdoctoral fellows funded by the proposed research.
  - If named, provide a half-page (maximum) biographical sketch of their background and research interests as part of the resume appendix.
- Describe any unique capabilities that may reduce project risk, reduce project duration, and/or improve project financial performance.
- Address any potential conflicts of interest and any proposed mitigation. Additionally, complete and submit Exhibit 1 – Organizational Conflicts of Interest Certificate.



# Volume 1: Technical Proposal Content *(Continued)*

- **Intellectual Property Rights**

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



## Volume 2: Cost Proposal Content

- **The Cost Proposal shall contain the following information:**
  - **Agreement Type:** Identify the preferred agreement type (e.g., firm fixed price, cost-plus-fixed-fee, etc.) and include the rationale for that agreement type.
    - Final agreement type will be subject to agreement between selected offeror and the Government.
  - **Cost Estimate:** Account for entire cost of project, broken down for each phase of the proposed work. Contractor format for the cost estimate is acceptable.



# Volume 2: Cost Proposal Content *(Continued)*

- **Program Funds**

- **Labor – Offeror only:** Provide a description of each labor category or person with associated labor rate and hours.
- **Travel – Offeror only:** List of the number of trips, number of days and travelers per trip, and cost purpose of each trip.
- **Team Members/Subcontractors/Consultants:** List all team member/subcontractor/consultant and associated totals.
- **Material/Equipment – Offeror only:** List all items and provide justification and basis of cost for each (i.e., catalog pricing, vendor quote, previous purchase, etc.).
- **Other Direct Costs – Offeror Only:** List all items and provide justification and basis of cost for each (i.e., catalog pricing, vendor quote, previous purchase, etc.).
- **Indirect Costs – Offeror Only:** Provide a breakout of all indirect costs and indicate if indirect rates are Government approved, citing approval date and federal agency. If indirect rates are not approved, provide an explanation on how the proposed indirect rates are appropriate for pricing.
- **Profit/Fee:** Indicate any proposed profit/fee.



## Vol 2: Cost Proposal Content *(Continued)*

- **Cost Share (not required)**

- **Cash (labor, travel, etc.):** As applicable, provide a description of each labor category, details on travel, list of materials, etc.
- **In Kind (use of equipment, space/ buildings, intellectual property):** Must provide basis of cost.



# Full Proposal Submission Form

## Offeror Information

Offeror Organization \*

Offeror Address

Offeror City

Offeror State

Offeror Zip Code



## Full Proposal Submission Form *(Continued)*

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.



# Full Proposal Submission Form *(Continued)*

## 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?

Yes

No





# Full Proposal Submission Form *(Continued)*

## Submission

Proposal Title \*

Proposal Submittal

- I prefer to upload the proposal to this form (attachments will be unencrypted)
- I prefer to send the proposal via encrypted email to [adc-contracts@ati.org](mailto:adc-contracts@ati.org) (may be done before or after submitting this form)

Volume I: Technical Proposal Upload

[Choose File](#) [Remove File](#) No File Chosen

File names must not contain spaces or special characters

Volume II: Cost Proposal Upload

[Choose File](#) [Remove File](#) No File Chosen

File names must not contain spaces or special characters

Additional Comments



# 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.

- **Cost**

- The CMF will perform an analysis and will provide the results to the Government; 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.*



# Timeline

	Date (Estimate)
Request for Solutions Release	April 19
Webinar	April 22
Teaming Speed Networking Event ( <i>next slide</i> )	April 23
Full Proposal Deadline	May 10, 3PM ET
Offeror Notifications	Late May
Award Projects	June

*Any deadline updates will be communicated via email.*



# Teaming Resources

- **Teaming Speed Networking Event on April 23 1:30 PM ET**
- The event aims to help organizations find potential partners for this RFS. Each presenting organization will have a maximum of three minutes to highlight its capabilities and specify if they are looking to serve as a prime contractor, subcontractor, or either.
- Visit the “Events” page to learn more and to register for the event!

<https://www.americasdatahub.org/events/>



# Teaming Resources (continued)

- ADC Member Profile Database\*
  - Searchable by member demographics and capabilities, includes POC info for each member.
- Need a teaming partner outside of ADC or other resources?
  - Email [ati@govmates.com](mailto:ati@govmates.com) with who you are looking for.
  - More information is available at [govmates.com/ati](https://govmates.com/ati).

\*Requires access to Members Only website. Request access [here](#).

*Not a member, but want to access these resources? [Join today](#) — it's free!*



# Stay Engaged

✉ Solicitation and Contract Related Questions: [ADC-Contracts@ati.org](mailto:ADC-Contracts@ati.org)

✉ General/Membership Questions: [adc@ati.org](mailto:adc@ati.org)

✉ Join the ADC Mailing List: <https://www.americasdatahub.org/adc-mailing-request-form/>

## Visit the ADC Website

Stay in the loop with ADC events, solicitations, project awards, news, members, and more!

[www.americasdatahub.org](http://www.americasdatahub.org)



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# Questions?



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