

Workshop to Broaden the Diversity of the Skilled, **Technical Transportation** Workforce





Conference



NATIONAL Sciences
Engineering
Medicine

TRANSPORTATION RESEARCH BOARD

TRB National Summit on the Future of the Transportation Workforce Westminster, CO • June 2 - 4, 2025



TRANSPORTATION RESEARCH BOARD

Group Discussion: Next Steps



For each topic (and overall):

- 1. What was the most exciting idea or opportunity you've heard?
- 2. What was the most important takeaway from yesterday's discussions?
- 3. What key factors need to be considered for addressing barriers/potential challenges and achieving opportunities and goals?
- 4. What should we prioritize when thinking about the different opportunities and goals? What types of opportunities and initiatives would you want to support?
 - a. How much is funding a factor for these different initiatives?



NSF Workshop







Agenda

- I. NSF Build and Broaden Program
 Submission Criteria and Best Practices (20 min)
- II. Collaboration for Innovative Solutions to Research and Grant Funding Needs (50 min)
 - Group Formation & Instructions (NSF Group Facilitators, 5min)
 - Placing the Needs at the Hub (PI Assessments, 10 min)
 - Wraparound Support (Partner Assessments, 20 min)
 - <u>Identifying & Addressing Gaps</u> (5 min)
 - The Idea: Elevator Pitch (15 min)
- III. Sharing Elevator Pitches and Open Q&A(20 min)

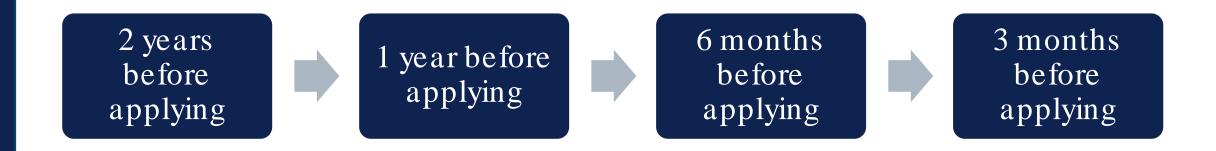


Common Myths about NSF funding

- 1. NSF only funds scholars at elite institutions
- 2. NSF only funds "famous" academics
- 3. Once declined, always declined
- 4. Advisory committees make funding decisions
- 5. NSF is only interested in quantitative approaches
- 6. Qualitative and quantitative approaches are mutually exclusive



Preparation timeline for prospective PIs

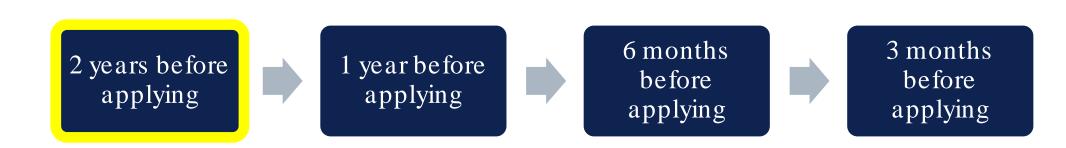


- Not exhaustive
- Not meant to be a rigid schedule
 - Many of these suggestions are still applicable &beneficial in the weeks leading up to proposal submission



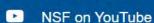
Get to know the "language of NSF"...

- 1. Find copies of proposals both funded and unfunded
 - NSF cannot provide these
 - Read them alongside a relevant solicitation
- 2. Consider serving as a panelist or reviewer
 - Submit CV to program officer in your discipline for consideration
- 3. Sign up for directorate email updates (SBE: https://new.nsf.gov/sbe)





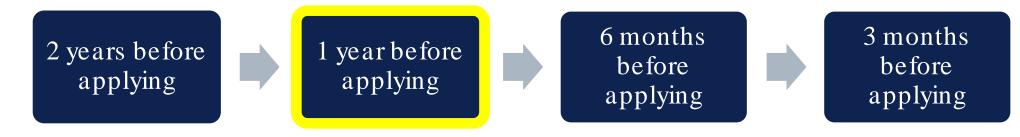




While developing your research ideas...

N5F 101

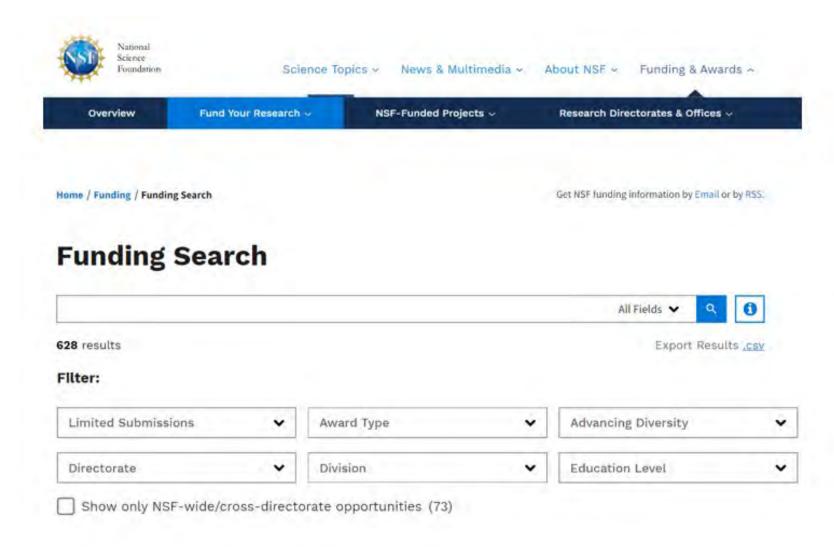
- 1. Read the **NSF 101** blog series
 - https://new.nsf.gov/science-matters/nsf101
- 2. Get to know your **SRO** & the process of submitting grants at your institution, including ethical approvals
 - Understand your institution's workflow process
- 3. Identify what makes you, your institution, or research idea **unique** and consider how to best convey this in your proposal
- 4. Narrow down programs that will be the **best fit** for your research





NSF Funding Search

https://beta.nsf.gov/ funding/opportunities





Explore a program page

How do I know if my research is relevant to a particular program?

Awards made through this program

Browse projects funded by this program

Map of recent awards made through this program

Broadens participation in the social, behavioral and economic sciences through support for research, training and research infrastructure at minority-serving institutions, including partnerships with and among those institutions.

Synopsis

Build and Broaden (B2) supports fundamental research and research capacity across disciplines at minority-serving institutions (MSIs) and encourages research collaborations with scholars at MSIs. Growing the science, technology, engineering and mathematics (STEM) workforce is a national priority. National forecasts of the impending shortage of workers with science and engineering skills and essential research workers underscore a need to expand opportunities to participate in STEM research (President's Council of Advisors on Science and Technology, 2012).

MSIs make considerable contributions to educating and training science leaders for U.S. economic growth and competitiveness. Yet NSF has received comparatively few grant submissions from, or involving, scholars at MSIs. Targeted outreach activities reveal that MSIs have varying degrees of familiarity with funding opportunities within NSF and particularly within the Social, Behavioral and

Expand +

Program contacts

Contact the program officer with any questions about the mission of the program or the proposal preparation and submission process.

Jorge Valdes Kroff Program Director	jvaldesk@nsf.gov	(703) 292-7902	SBE/OAD
Bela Jang Program Specialist	bejang@nsf.gov	(703) 292-7902	SBE/OAD

Program events



December 20, 2023 - Build and Broaden Informational Webinar

December 12, 2023 - Build and Broaden Program Office Hours

November 14, 2023 - Build and Broaden Program Office Hours

November 2, 2023 - Build and Broaden Workshop

Upcoming due dates

Full proposal

2025

January 16 2025 - Target date

© Third Thursday in January, Annually Thereafter

Program guidelines

Award information

Estimated number of awards

25 to 30 - Pending the availability of funds and quality of proposals

Proposals may only be submitted by certain types of PIs. Please see solicitation for details.

Limit on number of proposals per PI or

1 - An individual may be the principal investigator (PI) or co-PI for only one proposal for this program; i.e., no investigator, PI or co-PI, can be listed on the NSF proposal cover sheet on more than one proposal to the Build and Broaden Program per year.

There is additional eligibility information. Please see solicitation for details.

Review full program guidelines and learn how to submit a proposal in the latest solicitation.

Read the solicitation NSF 22-638

Share







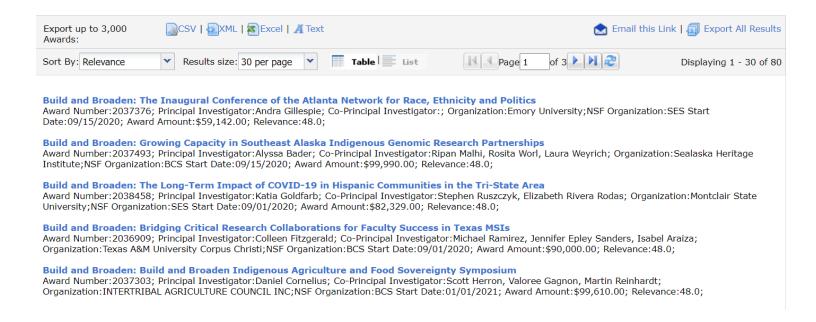






Find funded projects and read abstracts

What has been funded through a particular program?



ABSTRACT

This project funds the inaugural meeting of a new national research organization ,the Atlanta Network for Race, Ethnicity, and Politics (ANREP), comprised of political and social scientists living in and/or studying issues related to racial politics affecting the Southeastern United States. The purpose of this first meeting is to for attendees to critically evaluate workshop papers addressing theoretically-motivated research questions about the 2020 U.S. Presidential and Congressional elections and to provide professional development support to help attendees ultimately publish their papers. In addition, discussion will focus on institutionalizing the organizational framework and plans for the group. The conference goals align with NSF's mission to help advance the progress of science and the goal of diversifying the STEM community as it supports research on and by Americans who come from underrepresented racial and ethnic minority groups.

The proposed conference and network brings together scholars from Atlanta-area minority serving institutions, including historically Black colleges and minority-serving universities, with faculty from non-MSI research universities, to enhance scholarship, training, and career development in the study of race, ethnicity, and politics. The conference, held at Clark Atlanta University and Emory University in June 2021, uses the 2020 U.S. elections as substantive foci, the conference highlights research on and by African Americans, Hispanics, and Asian Americans. After a national call for papers, the proposed conference showcases 12 papers in four substantive panels, as well as a professional development panel on publishing.

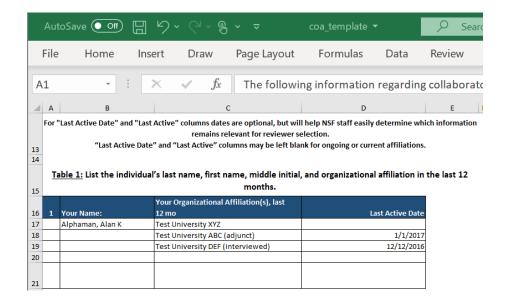
You can review the abstracts of awards made through a particular program

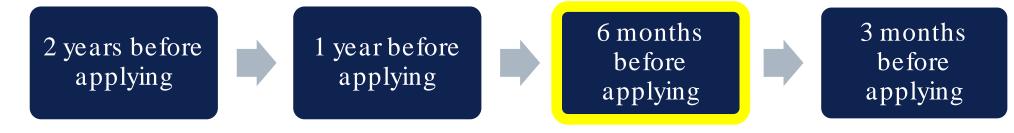


This award reflects NSF's statutory mission and has been deemed worthy of support through evaluation using the Foundation's intellectual merit and broader impacts review criteria.

Cover your bases...

- 1. Keep track of your collaborators
 - Prepare your Collaborators and Other Affiliations Information (COA) form early







Cover your bases (again)...

- 1. Keep track of your collaborators
 - Prepare your Collaborators and Other Affiliations Information (COA) form early
- 2. Find more details about the program you'd like to apply to





Find resources on the program page

Watch webinar recordings, read Frequently Asked Questions (FAQs), read program solicitation

Program contacts

Contact the program officer with any questions about the mission of the program or the proposal preparation and submission process.

Jorge Valdes Kroff Program Director	jvaldesk@nsf.gov	(703) 292-7902	SBE/OAD
Bela Jang Program Specialist	bejang@nsf.gov	(703) 292-7902	SBE/OAD

Program events

> Past

December 20, 2023 - Build and Broaden Informational Webinar

December 12, 2023 - Build and Broaden Program Office Hours

November 14, 2023 - Build and Broaden Program Office Hours

November 2, 2023 - Build and Broaden Workshop

October 10, 2023 - Build and Broaden Program Office Hours

September 12, 2023 - Build and Broaden Program Office Hours

November 2, 2022 - Diversifying Diversity: New Research Opportunities in the...

November 1, 2022 - Diversifying Diversity: New Research Opportunities in the...

> Additional program resources

Sign up to get NSF email updates about broadening participation in social, behavioral and economic science.

Learn more about NSF funding opportunities.

Sign up to be a reviewer for the Build and Broaden program <a>Z

Frequently Asked Questions (FAQs) about the Build and Broaden Program Solicitation

2023 Build and Broaden Program award announcement

Limit on number of proposals per PI or

1 - An individual may be the principal investigator (PI) or co-PI for only one proposal for this program; i.e., no investigator, PI or co-PI, can be listed on the NSF proposal cover sheet on more than one proposal to the Build and Broaden Program per year.

There is additional eligibility information. Please see solicitation for details.

Review full program guidelines and learn how to submit a proposal in the

Read the solicitation NSF 22-638

Share





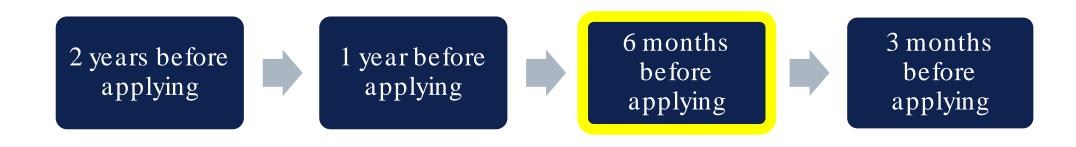


Published: September 30, 2022



Cover your bases (even more)....

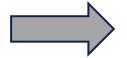
- 1. Keep track of your collaborators
 - Prepare your Collaborators and Other Affiliations Information (COA) form early
- 2. Find more details about the program you'd like to apply to
- 3. Have a question? Contact the program officer
 - Prepare a one-page synopsis of your project and submit to program officers for feedback





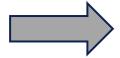
Example One-Pager

1. Overview



- Background
- Fit with program
- Research questions & hypotheses

2. Intellectual Merit



- Potential to advance knowledge
- Appropriate resources and expertise

3. Broader Impacts



- Potential to benefit society
- Contribution to achievement of specific societal outcomes



While polishing off your proposal...

- 1. Read and re-read the program solicitation
 - Identify solicitation-specific preparation instructions & review criteria

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via FastLane, Research.gov, or Grants.gov.

PROJECT SUMMARY

As described in the PAPPG, the Project Summary must include an overview of the project, a statement of intellectual merit, and a statement on the broader impacts of the project. If a partnership including an MSI or among MSIs is proposed, the proposal must also list information about the participating organization(s) and research discipline(s), as well as a statement describing the proportion of requested support to be spent on the MSI(s). Please include the following information as a bulleted list in the Overview section at the beginning of the project summary:

- · Participating MSI(s)
- . Description of the MSI(s) and MSI proportion of requested support
- · Research discipline(s) advanced by the project

PROJECT DESCRIPTION

Follow PAPPG guidelines when writing the Project Description. Under the "Broader Impacts" section, explain how the proposed research and associated activities will enhance career development, research trajectories, collaborative research networks, or professional training for faculty and students at the participating MSI(s).

Please also include the following additional separate sections in the Project Description:

Additional Solicitation Specific Review Criteria

B2 2.0 proposals will also be evaluated on the following:

- Intellectual quality of the proposed research and associated activities in research areas supported by SBE
- Potential of the proposed project to increase the quantity, quality, and capacity of research at the participating MSI(s)
- Impacts of the project upon the professional development of faculty and students at the participating MSI(s)
- If a partnership is proposed and the proposal is being submitted by more than a single PI at an MSI, the nature of the partnership among the participating institutions and investigators

2 years before applying



1 year before applying



6 months before applying

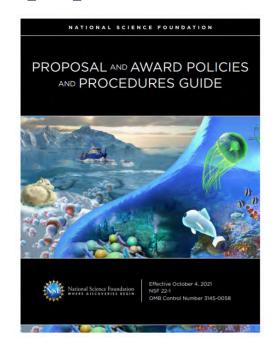


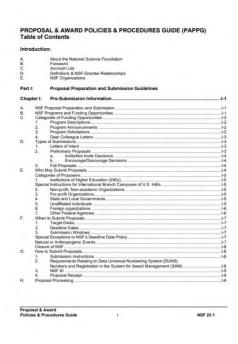
3 months before applying



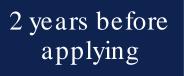
While polishing off your proposal (continued)...

- 1. Read and re-read the program solicitation
 - Identify solicitation-specific preparation instructions & review criteria
- 2. Consult the PAPPG











1 year before applying



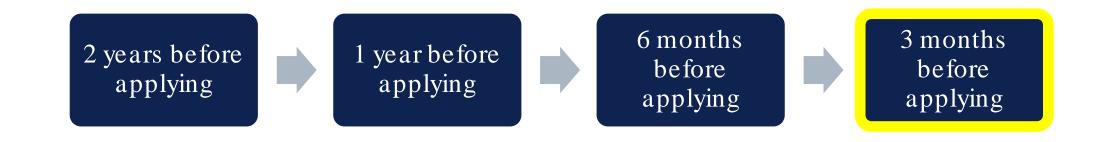
6 months before applying



3 months before applying

While polishing off your proposal (engage in)....

- 1. Read and re-read the program solicitation
 - Identify solicitation-specific preparation instructions & review criteria
- 2. Consult the PAPPG
- 3. Attend any outreach events
 - Many programs may hold office hours or offer webinars





While polishing off your proposal..continued

- 4. Make sure biosketch is updated
- 5. Make sure all ancillaries are completed
 - Facilities, Equipment, & Other Resources (FER); Current & Pending Support, etc.
- 6. Make sure ethical approvals are in the works
 - You do not need to have approval at the time of proposal submission
- 7. Get any letters of collaboration in order
 - Follow directions in the solicitation and PAPPG
- 8. Hound your research office and pay attention to internal deadlines





Review of the Build and Broaden Program Goals:



Expand the number of proposal submissions from minority-serving institutions (MSIs)



Increase the number of partitioning proposals between MSIs and non-MSIs Increase the number of partnerships and collaborative



Enhance research productivity, infrastructure and capacity in SBE sciences at MSIs



Solicitation Specific Review Criteria

Proposals will be evaluated based on the following:

- Intellectual quality of the proposed research and associated activities in research areas supported by SBE
- Potential of the proposed project to increase the quantity, quality, and capacity of research at the participating MSI(s)
- Impacts of the project upon the professional development of faculty and students at the participating MSIs
- If a partnership is proposed, the nature of the partnership among the participating institutions and investigators



Additional NSF programs to consider

STEM Education, Division of Equity for Excellence in STEM (EDU/EES)

- EDU Core Research (ECR: Core)
 - Supports research on STEMeducation in one or more of three research areas: STEMlearning and learning environments, broadening participation in STEM, and STEM workforce development.
 - Next proposal deadline: October 3, 2024. Contact: <u>ECR@nsf.gov</u>
- Tribal Colleges and Universities Program (TCUP)
 - Several opportunities that support tribal colleges and universities, including Alaska Native-serving institutions, and Native Hawaiian-serving institutions
- Hispanic Serving Institutions: Equitable Transformation in STEM Education (HIS)
 - Several opportunities that support capacity building at HSIs
- Historically Black Colleges and Universities Undergraduate Program (HBCU-UP)
 - Several opportunities that support undergraduate education and research at Historically Black Colleges and Universities
- Centers of Research Excellence in Science and Technology (CREST)
 - Center-level support for MSIs



Additional NSF programs to consider

Foundation-wide Opportunities

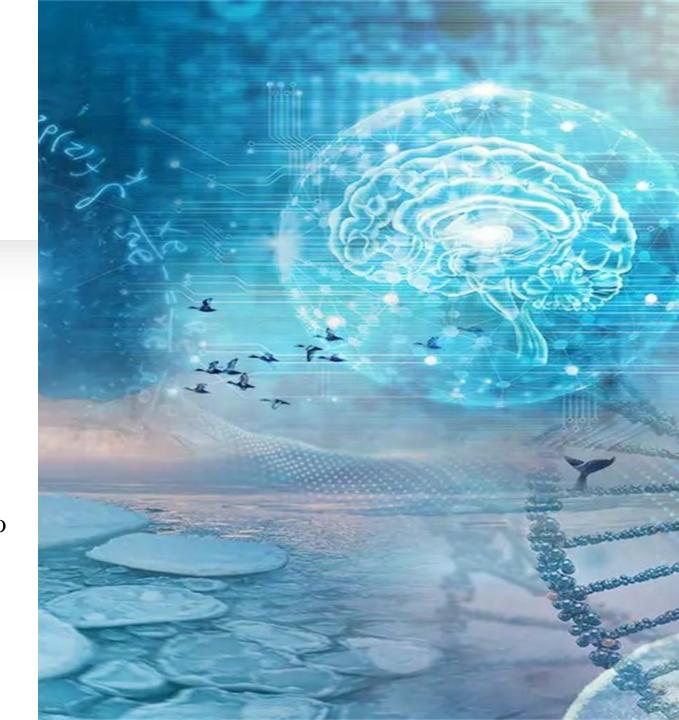
- Faculty Early Career Development Program (CAREER)
 - Provides stable support to early career researchers for them to develop careers not only as outstanding researchers but also as educators
 - Next proposal deadline: July 23, 2025. Contact: nsf-ccc@nsf.gov
- Mid-Career Advancement (MCA)
 - Supports opportunities for scientists and engineers at the associate professor rank, or equivalent, to substantively enhance and advance their research program through synergistic partnerships.
 - Next proposal deadline: Feb 1-March 3, 2025. Contact: MCA.info@nsf.gov
- Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA)
 - Supports research by faculty at predominantly undergraduate institutions either through research awards or as supplements to existing NSF awards for research visits.
 - Contact: ruiroa.sbe@nsf.gov



I. Collaboration for Innovative Solutions to Research and Grant Funding Needs

Group Formation & Instructions

- 5 min.
- Introduction of NSG Group Facilitators
- Check handout for group lists
- Meet in group rooms.
- Have Pland Partner Assessments ready to share.
- Identify at least one Notetaker



I. Collaboration for Innovative Solutions to Research and Grant Funding Needs



	NAS 125	NAS Members Room	NAS 250
NSF Breakout Groups	Jorge Valdes Kroff (NSF)	Wilson de Lima Silva (NSF)	April Bernard (NSF)
	Jason Abbott	Yuche Chen	Chrisy Currier
	Carita Ducre	Jessamyn Dupree	Jamaine Gibson
	Pat Greenfield	Tranell Guthrie	Jeremiah Hampton
	Antonne Henshaw	Stephanie Ivey	Bianca Jackson
	Valerie Lefler	Timothy Johnson	Matthew Medley
	Clark Martin	Jason Mitchell	Cynthia Mitchell
	Hilary Nixon	Megan O'Leary	Cherise Myers
	Jada Reid	Tyler Reeb	Todd Pisani
	Simone Soso	David Stephen	Peter Romine

I. Collaboration for Innovative Solutions to Research and Grant Funding Needs

Placing the Needs at the Hub

- 10 min.
- PI/IHE representatives briefly introduce themselves and share their Assessments
- Partners, listen and note areas of overlap with possible support
- Partners acknowledge needs heard and ask for clarification or elaboration if needed.
- Notetakers, summarize list of Needs.



I. Collaboration for Innovative Solutions to Research and Grant Funding Needs

Wraparound Support

- 20 min.
- Partners, briefly introduce themselves and share their Assessments
- PI/IHE reps, listen and note areas of overlap with possible needs
- PI/IHE reps acknowledge possible support heard and ask for clarification or elaboration if needed.
- Notetakers, summarize list of Needs x Support



I. Collaboration for Innovative Solutions to Research and Grant Funding Needs

Identifying & Addressing Gaps

- 5 min.
- Each group member acknowledge possible gaps between needs and support (list)
- Popcorn ideas about possible ways that funding from NSF or other agencies could help address them, if known. (list)
- Notetakers, summarize list of Gaps x possible Solutions



I. Collaboration for Innovative Solutions to Research and Grant Funding Needs

The Idea: Elevator Pitch

- 15 min.
- Working together, develop an elevator pitch to an NSF Program Officer (for example):
 - We, PI/IHE Representatives from _____
 - with support from the following partners _____
 - to provide
 - to provide ______
 would be able to address the following needs ______
 - NSF's B2 (and/or other) program would also help to address the following remaining gaps:
- Designate team member to pitch idea.





Jorge Valdés Kroff, PhD (he/him/él)
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SBE Office of Multidisciplinary Activities
Directorate for Social, Behavioral, and Economic Sciences

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