

NSF 21-025

Frequently Asked Questions (FAQs) for NSF 21-511, Accelerating Research through International Network-to-Network Collaborations (AccelNet) Program Solicitation

PROJECT FORMULATION

- 1. How do I know if my project is more appropriate for AccelNet or for another program at NSF?
- 2. How does NSF define "network" and "network of networks" for the purposes of the AccelNet program?
- 3. Can AccelNet proposals focus on catalyzing a single new research network or a single link between one domestic network and one foreign network?
- 4. Can you provide additional guidance on the stakeholders who may be included in the networks of networks? In addition to the U.S. research networks and complementary networks abroad, would a partnership with national lab or professional association be considered appropriate as one of the networks to link in the network of networks?
- 5. Is the competition open to all research areas that NSF supports?
- 6. What is meant by accelerating the process of scientific discovery in the AccelNet program, which is not intended to support primarily research activities or research infrastructure?

PROPOSAL TRACKS

- 7. What features signal a project is appropriate for submission to the Design or Implementation track?
- 8. Is it necessary to successfully complete a Design project prior to submitting a proposal for an Implementation project?
- 9. Can you provide additional guidance on what is intended for preparing the next generation for success in conducting and leading multi-team international

collaborations? Is assessment of the professional development activities required for both tracks?

BUDGET AND AWARD INFORMATION

- 10. Can funds for travel of U.S. students and scholars to domestic sites for exchanges be included in the budget?
- 11. Can funds for travel of international partners be included in the budget?
- 12. How should travel for students and postdoctoral researchers who participate in the professional development activities be budgeted?
- 13. Can I fund a postdoctoral researcher or a graduate research assistant on this grant?
- 14. Can I fund a project coordinator on this grant?
- 15. Can you provide additional guidance on who should attend the annual Project Awardee Meetings?
- 16. Can you provide more guidance on the Award Reporting Requirements and their purpose?

ELIGIBILITY AND PROPOSAL SUBMISSION

- 17. Will proposals that do not meet the eligibility requirements for submission and/or proposal preparation instructions be returned without review?
- 18. The solicitation states that international partners cannot be listed as co-Pls. Can you clarify if they can be part of the leadership team?
- 19. Are for-profit companies eligible to submit proposals? Can you provide further guidance how companies and other organizations could engage in AccelNet?

RESOURCES

PROJECT FORMULATION

1. How do I know if my project is more appropriate for AccelNet or for another program at NSF?

Rather than supporting primarily research or research infrastructure, AccelNet is aimed at fostering connections among U.S. research networks and complementary networks

abroad. The AccelNet program has key differences from past and current funding opportunities involving networks that support the formation of new groups and networks, such as the Research Coordination Network Program. Other NSF programs support research infrastructure, for example the Human Networks and Data Science - Infrastructure Program.

As stated in the AccelNet solicitation, the goals of the program are to (1) accelerate the process of scientific discovery, and (2) prepare students, postdoctoral scholars, and early-career researchers for success in conducting and leading multi-team international collaborations.

To be appropriate for the AccelNet program, proposed networks of networks must:

- Focus on a research theme in a field(s) funded by NSF that the research community and/or NSF recognizes is a grand research challenge that requires significant international coordination.
- Engage international coordination among research networks at a scale and complexity that would not be possible within a single research network, within a single nation, or through the normal modes of NSF research support.
- Propose well-conceived plans to address the AccelNet program goals and be of service to the research community to enable future discoveries in the field(s).

Projects not aligned with the scope or goals outlined would not fit the AccelNet call. Projects that focus on support for conducting research are not appropriate for the program. The program is not intended to support primarily capacity building abroad. AccelNet is also not intended to support projects seeking to expand the use or implementation of particular approaches, practices, interventions, or tools.

2. How does NSF define "network" and "network of networks" for the purposes of the AccelNet program?

In this solicitation, a network is considered to be formed of geographically distributed teams of researchers who cooperate within or across fields to collect and share resources, knowledge, and expertise. A network is not a set of faculty at a university or science facility. As an open group of distributed researchers, a network must have members from various institutions and engage at scales larger than lab-to-lab collaborations focused on a particular experiment or project. Thus, "networks" include diverse teams of investigators spanning multiple institutions who may be informally or formally recognized for their common focus on a research area.

A network of networks is a federation of individual, component networks and must include multiple independent groups of distributed researchers who cooperate on a broad research theme. Thus, the envisioned network-to-network collaborations must

forge new linkages among research networks to create novel synergies and leverage expertise, data, facilities, sites, and/or other resources.

A research network may be formally or informally recognized, thus may or may not have a network name, website, or similar identification features. A proposed network of networks may include linkages across networks of various stages of maturity.

The international networks of networks that are proposed should have the potential to expand beyond the original participants and involve active participation by investigators and students based on their involvement in a research network, not affiliation with a particular institution. Thus, participants in a network of networks' activities are expected to involve individuals from institutions beyond those of the submitting organization(s).

3. Can AccelNet proposals focus on catalyzing a single new research network or a single link between one domestic network and one foreign network?

No. A proposed international network of networks must consist of a scope beyond an individual network or a single network-to-network connection. A proposal to create a single new network by linking primarily research teams at one or several U.S. universities with research teams in one or more universities abroad to effectively function as a large international research group collaborating on a discrete research project would not meet the intended scope of the AccelNet program.

Projects submitted to the AccelNet program solicitation must demonstrate a collaboration scope that involves multiple networks. Proposed networks of networks must include a minimum of three networks - whether projects are submitted to either the Design or Implementation track. Descriptions of the size, scope, and scale, and maturity of the networks to be linked must be included in the project description of the proposal.

4. Can you provide additional guidance on the stakeholders who may be included in the networks of networks? In addition to the U.S. research networks and complementary networks abroad, would a partnership with national lab or professional association be considered appropriate as one of the networks to link in the network of networks?

As stated in the AccelNet solicitation, a proposed network of networks may include stakeholders from universities, government agencies, non-profit organizations, and private industry, so long as the goals are focused on advancing the frontiers of science, engineering, and STEM education. An entity such as a government agency, science user facility, or chartered organization established to support specific needs of a research community would not fit the AccelNet definition of a research network (defined above), but could be a stakeholder in the network of networks. Such entities may play roles along with the research networks in the networking, professional development,

dissemination, or other project activities.

Projects that propose to link research infrastructure must go beyond the aggregation of databases, for example, to clearly articulate the research networks of users of the resource to be linked. Thus, proposals should make distinctions between networked resources and the network of researchers who will coordinate efforts to address knowledge gaps and research needs for the field(s).

5. Is the competition open to all research areas that NSF supports?

Yes. Proposals will be accepted in any field or combination of fields of science, engineering, or STEM education research supported by NSF, or convergent fields that cut across NSF-supported disciplines.

However, submitted proposals must focus on research grand challenges that are either (a) identified by the research community as priorities for transformative discoveries or (b) specified in NSF initiatives such as the NSF Big Ideas or in active program solicitations. Proposals must document that the research community and/or NSF views the overarching research theme of the proposal as a research grand challenge by including citations of reports or articles, and /or reference to NSF programs, as appropriate.

6. What is meant by accelerating the process of scientific discovery in the AccelNet program, which is not intended to support primarily research activities or research infrastructure?

Coordination of ideas, expertise, and resources among multiple research networks to tackle knowledge gaps and research needs to advance the field(s) must be central to proposals submitted to this call. Proposals should clearly articulate how the proposed network-to-network collaboration will go beyond existing efforts in the field(s) and add substantial value.

It is expected that project teams will be knowledgeable about and leverage domestic and foreign investments in the collaborative effort for mutual benefit. The research, training, and/or infrastructure resources to be leveraged should be clearly identified and the new synergies that will be created in the network of networks should be described.

It is expected that the networks of networks will develop protocols for communication, collaboration, decision-making, data management, intellectual property, shared-use infrastructure, and other network activities, facilities, or products that reduce the barriers to international collaboration. Thus, the structure and activities of the proposed network of networks should facilitate the process of scientific discovery in research grand challenges that require international coordination. Plans should be informed by the

science of team science.

PROPOSAL TRACKS

7. What features signal a project is appropriate for submission to the Design or Implementation track?

Proposals submitted to the Design track should involve networks in an early stage of coordination (e.g., identifying research and professional development needs, priorities, and goals, developing partnerships and collaboration strategies). Proposals submitted to the Implementation track should involve networks with an operational core of communication that have prioritized shared goals and research directions, identified knowledge gaps, and made plans for organizational and governance structure. Review carefully the "Full Proposal Preparation Instructions" in the program solicitation (NSF 21-511) that outline specific information that must be provided in proposals for each track.

8. Is it necessary to successfully complete a Design project prior to submitting a proposal for an Implementation project?

No. The two tracks are not intended to be a required progression. Consider carefully the level of maturity of the proposed networks and their connections to determine whether a Design or Implementation track is appropriate for your proposed project.

9. Can you provide additional guidance on what is intended for preparing the next generation for success in conducting and leading multi-team international collaborations? Is assessment of the professional development activities required for both tracks?

The AccelNet program supports the development of a globally engaged U.S. science and engineering workforce. Students, particularly graduate students, postdoctoral scholars, and early-career researchers should receive professional development activities and global research perspectives that enhance skills and leadership in international collaboration. Rather than intending for full-time training programs or other efforts typically limited to specific university departments, the AccelNet program calls for professional development and leadership opportunities that do not require affiliation with a submitting institution.

The activities designed to meet the goal of preparing the next generation to conduct and lead multi-team international research networks should be aligned with the scope and duration of a Design or Implementation track project. Projects submitted to the Design track do not need to include assessment plans unless pilot tests of professional development activities are planned. Projects submitted to the Implementation track are

expected to present plans to evaluate the professional development activities and track the career development of participating graduate students and postdoctoral scholars. Proposals should articulate the skills and competencies for international collaborative work that are the target for the professional development activities designed for students and postdoctoral researchers. The goals of professional development opportunities should be clear. Innovative approaches to international collaboration experiences and exchanges are encouraged.

BUDGET AND AWARD INFORMATION

10. Can funds for travel of U.S. students and scholars to domestic sites for exchanges be included in the budget?

As the AccelNet program aims to facilitate collaborations across U.S. and international networks, the program will not support scholar exchanges between domestic sites unless international collaborators are also joining the U.S. students and/or scholars at the domestic site of the exchange program.

11. Can funds for travel of international partners be included in the budget?

Funds may be requested for foreign counterparts and foreign students to travel to network meetings or professional development activities held in the U.S. Funds may not be requested for travel of international partners for locations other than the U.S. For example, travel funds may not be requested for foreign scholars and/or students to travel within Asia or between Africa and Europe.

12. How should travel for students and postdoctoral researchers who participate in the professional development activities be budgeted?

Travel and related costs for students and postdoctoral researchers who are participants in the professional development activities should be budgeted under F. Participant Support Costs.

13. Can I fund a postdoctoral researcher or a graduate research assistant on this grant?

Funds may be requested for postdoctoral researcher salary for effort devoted to the network-to-network activities.

The AccelNet program is not intended to cover the usual costs of graduate education, such as tuition or health benefits, or typical graduate education experiences within a student's home institution. It is also not intended to support the research experiences for graduate students enrolled only at the lead organization. Thus, full-time graduate research support or their tuition fees are not allowed. However, funds may be requested

for graduate student effort devoted to the network-to-network activities.

14. Can I fund a project coordinator on this grant?

Adequate funding for the administrative and coordination activities should be included.

15. Can you provide additional guidance on who should attend the annual Project Awardee Meetings?

Fundamentally, the AccelNet Project Awardee meetings are intended to foster community development and enhance project capacity. As is stated in the solicitation, all projects must include funding for at least one and up to four representatives of the project to attend each awardee meeting during the proposed lifetime of the award. Participation of multiple project representatives is particularly important in the first year of an award because sessions at that meeting will include facilitated discussions about project organization, structure, and plans. Representation of multiple networks and career stages is encouraged.

16. Can you provide more guidance on the Award Reporting Requirements and their purpose?

The solicitation specifies that AccelNet awards require additional reporting requirements for inclusion in Annual Reports and that awardees will be required to participate in program-level evaluation. The reporting requirements focus on metrics of success and documentation of the international engagement. The purpose is so that NSF can assess implementation processes and progress toward program level outcomes.

ELIGIBILITY AND PROPOSAL SUBMISSION

17. Will proposals that do not meet the eligibility requirements for submission and/or proposal preparation instructions be returned without review?

Yes. Proposals that do not comply with the solicitation and NSF Proposal & Award Policies & Procedures Guide will be returned without review. The eligibility requirements (Section IV of the solicitation) include who may submit proposals and limits the number of proposals per Principal Investigator (PI) or co-PI. Full proposals must include the materials and supplementary documents specified in the solicitation.

18. The solicitation states that international partners cannot be listed as co-Pls. Can you clarify if they can be part of the leadership team?

Yes. As stated in the solicitation, foreign collaborators should be listed as "Unfunded Collaborators" rather than included as PI, co-PI, or Senior Personnel in the proposal. In keeping with the solicitations intent for projects to leverage resources across partners

for the mutual benefit, engagement of international partners in the project leadership team and other key roles in the network of networks is appropriate.

19. Are for-profit companies eligible to submit proposals? Can you provide further guidance how companies and other organizations could engage in AccelNet?

No. As stated in the solicitation, proposals may be submitted by either:

- Institutions of Higher Education (IHEs) Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members. Special Instructions for International Branch Campuses of U.S. IHEs: If the proposal includes funding to be provided to an international branch campus of a U.S. institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the U.S. campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

Companies and stakeholders in industry, government, and other organizations can participate in meaningful ways in the proposed network of networks even though they are not eligible to submit proposals. For example, individuals from industry or other organizations may be participants in activities of network of networks or may be consultants in the professional development activities or other activities. Stakeholders in industry, government, and other sectors may also play important roles in providing research and educational resources that may be leveraged across the network of networks.

RESOURCES

Resources specific to the AccelNet program are available on the program website:

Network of Networks

SESYNC Networks of Networks Workshop: Presentations and Resources

Advisory Subcommittee Report: Input on Accelerating Research Through International Network-to-Network Collaboration

Reports from two recent NSF-funded workshops may also be useful:

A recent NSF-funded workshop examined approaches to "Broadening"

Participation of Underrepresented Minorities in STEM Research Abroad." The 2020 report from the workshop, funded by NSF award OISE-1848137, is available at: https://www.utep.edu/engineering/imse/stemresearchabroad

A recent NSF-funded workshop entitled "Best Practices in International Research Experiences for Graduate Students" examined various aspects of international experiences for STEM graduate students; the report is available at https://nsfworkshop.wp.tulane.edu/wp-content/uploads/sites/378/2019/04/NSF-2019-Workshop-on-International-Research-Experiences-Final-Report.pdf

Repositories of resources on the science of team science are available from:

National Cancer Institute's Team Science Toolkit: https://www.teamsciencetoolkit.cancer.gov/Public/Home.aspx

International Network for the Science of Team Science - Mendeley Science of Team Science (SciTS) Library: https://www.inscits.org/scits-library