NSF 24-534: Civic Innovation Challenge (CIVIC)

A Research and Action Competition Driven By Community Priorities

Program Solicitation

Document information

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National Science Foundation
Directorate for Computer and Information Science and Engineering
Directorate for Engineering
Directorate for Geosciences
Directorate for Social, Behavioral and Economic Sciences
Directorate for Biological Sciences

U.S. Department of Energy, Vehicle Technologies Program

Department of Homeland Security, Science & Technology Directorate

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

May 01, 2024

      Stage 1

February 10, 2025

      Stage 2

📄 Table Of Contents

Important Information And Revision Notes

- The NSF Directorate for Biological Sciences has joined the program.
- The solicitation includes updated language for both Track A and Track B.
- Maximum allowable budgets for Stage 1 Planning Grants have been increased to $75,000.
- The solicitation includes an update to the solicitation-specific review criteria.
- The Dear Colleague Letter (NSF 23-027) on USDA/NIFA participation in Stage 2 of the program does not apply to this solicitation.

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) that is in effect for the relevant due date to which the proposal is being submitted. The NSF PAPPG is regularly revised and it is the responsibility of the proposer to ensure that the proposal meets the requirements specified in this solicitation and the applicable version of the PAPPG. Submitting a proposal prior to a specified deadline does not negate this requirement.

Summary Of Program Requirements

General Information

Program Title:

Civic Innovation Challenge (CIVIC)
A Research and Action Competition Driven By Community Priorities

Synopsis of Program:

The Civic Innovation Challenge (CIVIC) is a research and action competition that accelerates the transition to practice of foundational research and emerging technologies into communities through civic-engaged research. By addressing priorities at the local scale that are relevant across the US, CIVIC is laying the foundation for a broader and more fluid exchange of research and technology capabilities and civic priorities through joint partnerships involving civic partners and the research community. CIVIC funds projects that pilot state-of-the-art solutions to community challenges over 12 months, following a six-month planning phase, and have the potential for lasting impact in the partnering community as well as the potential to be scaled and implemented in other communities. Additionally, the foundation for CIVIC projects should be rooted in maturing and transitioning state-of-the-art research in disciplines, including but not limited to computer science, engineering, geosciences, biological sciences, and social sciences.

CIVIC is uniquely designed to enable transition to practice of innovations into communities, as follows: (1) CIVIC flips the community-university dynamic, by empowering communities and researchers to jointly identify civic priorities ripe for innovation and to address these priorities as equal partners; (2) CIVIC focuses on research-centered solutions that are ready for piloting in and with communities on a short timescale, where real-world outcomes can be evaluated within 12 months; (3) CIVIC requires a coalition of communities and civic partners and a multi-disciplinary set of researchers to co-create and execute pilot projects; and (4) CIVIC organizes and fosters nationwide "communities of practice" around high-need problem areas that allow for meaningful knowledge sharing and cross-site collaboration during both the pre-development and piloting stages.

For this solicitation, civic partnership and engagement activities, communities, and academic and civic partners must be based in the United States or its protectorates. For purposes of clarity, civic partners may include local, state, or tribal government officials; non-profit representatives; community organizers or advocates; community service providers; and/or others working to improve their communities.

CIVIC is organized as a two-stage competition with two tracks centered around the following topic areas:

- Track A. Climate and Environmental Instability - Building Resilient Communities through Co-Design, Adaption, and Mitigation
- Track B. Bridging the gap between essential resources and services & community needs.

In Stage 1, approximately 35-40 Planning Grant awards will be made – each with a budget of up to $75,000 for six months to undertake planning and team development activities. These include solidifying the team, maturing the project plans, and preparing a well-developed full proposal for submission to Stage 2. **Only Stage 1 CIVIC recipients can submit to the CIVIC Stage 2 competition.**

In Stage 2, approximately 20 Full Awards will be made. These will be selected from Stage 1 award recipients. For Stage 2, proposals will be considered with budgets up to $1,000,000 for up to 12 months. Proposals must describe how the PIs will execute and evaluate their research-centered pilot projects.

Throughout both stages, NSF award recipient (2223449) MetroLab Network (metrolabnetwork.org, nsfcivicinnovation.org) will foster "communities of practice" through in-person and virtual activities, aimed at enhancing the teams' capacity-building, networking, impact, and ability to create methods and solutions transferable to other communities.

The CIVIC research and action competition is jointly supported by NSF's Directorate for Computer and Information Science and Engineering (CISE); Directorate for Engineering (ENG); Directorate for Geosciences (GEO); Directorate for Social, Behavioral, and Economic Sciences (SBE); Directorate for

Biological Sciences (BIO); and the Department of Energy (DOE), and the Department of Homeland Security (DHS).

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

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Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.041 --- Engineering
- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences
- 81.049 --- Office of Science Financial Assistance Program
- 97.108 --- Department of Homeland Security, Science & Technology Directorate

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 55 to 60

Approximately 35-40 Planning Grants (Stage 1) and approximately 15-20 Full Awards (Stage 2) are anticipated across the program, subject to the quality of proposals and availability of funds, which may differ for each track. **Note: Only Stage 1 CIVIC recipients can submit to the CIVIC Stage 2 competition.**

Anticipated Funding Amount: $22,300,000 to $25,600,000

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds and quality of proposals received. Budgets for Stage 1 Planning Grants are up to $75,000 and Stage 2 Full Awards are up to $1,000,000.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US 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 US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or co-PI:

For Stage 1: an individual may participate as PI or co-PI in at most two proposals.

For Stage 2: an individual may participate as PI or co-PI in only one proposal.

In the event that an individual exceeds this limit, proposals received within the limit will be accepted based on earliest date and time of proposal submission. This limitation includes proposals submitted by a lead organization and any subawards included as part of a collaborative proposal involving multiple institutions. No exceptions will be made.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
  - Full Proposals submitted via Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
  - Full Proposals submitted via Grants.gov: *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov* guidelines apply (Note: The *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide).

B. Budgetary Information

- **Cost Sharing Requirements:**

  Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:**

  Not Applicable

- **Other Budgetary Limitations:**

  Not Applicable

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

  May 01, 2024

Stage 1

February 10, 2025

Stage 2

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review criteria apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions:

Standard NSF award conditions apply.

Reporting Requirements:

Standard NSF reporting requirements apply.

I. Introduction

The Civic Innovation Challenge (CIVIC) is a research and action competition designed to build a more cohesive research-to-innovation pipeline and foster a collaborative spirit between communities and researchers. CIVIC aims to flip the community-university dynamic by empowering communities and researchers to jointly identify civic priorities ripe for innovation and to address these priorities as equal partners. Together, academic and civic partners leverage scientific and community expertise to make progress towards addressing the themes in the two tracks specified in this solicitation.

CIVIC aims to accelerate the transition to practice of foundational research and emerging technologies and approaches into communities through civic-engaged research, while deepening cooperation and information sharing across sectors and regions. Whereas many community-university partnerships take years to provide tangible benefits to communities, CIVIC funds projects that rapidly pilot state-of-the-art technologies and ideas over 12 months, following a six-month planning phase, and have the potential for lasting impact in the partnering community as well as the potential to be scaled and implemented in other communities.

II. Program Description

A. Overview

CIVIC is laying a foundation for a broader and more fluid exchange of research interests and civic priorities that will create new instances of collaboration and accelerate the impacts of scientific discovery for public benefit. This goal will be achieved by maturing and transitioning state-of-the-art research in disciplines, including but not limited to computer science, engineering, geosciences, biological sciences, and social sciences, through support for projects that are ready for piloting in and with communities on a rapid timescale, with significant potential for real-world impact that can be delivered and evaluated within 12 months. A CIVIC project should address community-challenges identified via tight collaboration between civic and academic partners, with the goal of achieving concrete impacts in the communities. Project outcomes should also be scalable and sustainable within the partnering community and have aspects that are transferable to other communities across the US.

CIVIC is comprised of two tracks:

Track A: Climate and Environmental Instability - Building Resilient Communities through Co-Design, Adaption, and Mitigation

This track supports projects that pilot community-driven, innovative, and actionable research-centered approaches and technologies that focus on strengthening the resilience of a community and its economy to climate- and associated environmentally-related instability and disasters such as extreme heat events, flooding, wildfires, etc. Projects may target specific function(s) and aspects of a community such as utilities, communications, and other critical infrastructure; public health; transportation and mobility, food and agriculture; water security; ecosystem services; residential and commercial buildings; financial services; education and workforce development; community planning; and other services at individual, household, neighborhood, city, or regional scales. Projects can involve cyber, physical, environmental, biological, and/or social components. Multi-domain teams consisting of research and civic partners should co-create scalable pilot projects that lead to measurable community impact and outcomes. Teams may consider and incorporate the needs of economically disadvantaged and marginalized populations that are especially susceptible to increasing climate-and environmental stress and its resulting impacts. Teams are encouraged to also consider a system's thinking perspective around environmental sustainability and thresholds, and implications for public safety and wellbeing.

As civic-academic teams assess impactful, local pilot projects that protect communities against climate risk and disasters, they may consider questions such as but not limited to:

- What is urgently needed for the partnering community to strengthen the resilience of its built or natural environment — or its economy and services within a specific sector, in the face of current and future climate conditions and cascading hazards?
- What novel adaption and mitigation approaches can be implemented to reduce greenhouse gas emissions and promote decarbonization, while mobilizing capital, investment, and public support at scale?
- What are the policy, health, environmental, and economic implications of the proposed pilot project on the community?

Track B: *Bridging the gap between essential resources and services & community needs*

This track is centered on enhancing peoples' access to essential resources and services, where better accessibility could significantly improve quality of life and community resilience. Gaps and inequities in resource and service allocations result from long-standing, systemic issues around accessibility, economic disparity, poorly designed interfaces, or the result of disruptions caused by a shock or disaster. Examples of relevant areas for this track include food and water security, transportation and mobility, housing, workforce training and development, recreational facilities and access to the natural world, healthcare, education, social services, financial services, and digital inclusion. Proposers are encouraged to leverage anchor institutions in their community that are focused on delivering or providing access to one or more resources or services to a set of end-users which may include socioeconomically disadvantaged groups and vulnerable populations (such as the elderly and those who are physically disabled). Multi-domain teams of research and civic partners must co-create scalable pilot projects that will lead to measurable, inclusive, and equitable outcomes.

Proposing teams should consider questions that include, but are not limited to:

- What inefficiencies or inequities in access or distribution exist regarding a given type of service, and are the problems occurring as a result of, for example, gaps in information, lack of coordination, a technological divide, design flaws, limited resources, inadequate community voice, or lack of infrastructure?
- What innovative technological, financial, social, or organizational approaches can be used to improve access to and coordination of essential resources and services, thus improving the connection between service providers and service seekers? How might community-wide expertise and innovative thinking be brought to bear?
- What is needed to deploy secure digital platforms and tools that leverage emerging advancements in artificial intelligence, sensing, and other related fields, while building and ensuring trust in their fairness, security, privacy, and robustness?
- What are the holistic requirements in terms of social, physical, environmental, and digital infrastructure that can realistically be designed, developed, and/or deployed within communities in a 12-month time frame to promote successful outcomes?

For all proposals (Track A or Track B), the project team must include civic partners working together with researchers to develop, pilot, and evaluate the proposed project. Civic partners may include local, state, or tribal government officials;

non-profit representatives; community organizers or advocates; community service providers; and/or others working to improve their communities. In addition, teams may choose to engage with industry partners. To be true partners in these activities, it is encouraged in the Stage 1 Planning Grants and Stage 2 Full Awards for civic partner(s) to receive an appropriate distribution of funds in the project budget, if allowable by the participating organization. Although only universities and non-profit organizations are eligible to receive funds directly from NSF, other civic partners and organizations (including local, tribal, and state governments and industry) may receive funding via subawards from the recipient organization.

For this solicitation, civic partnership and engagement activities, communities, and the academic and civic partners must be based in the United States or its protectorates.

NSF is committed to broadening participation among underrepresented groups, institutions, and geographic regions. This is essential to the health and vitality of our Nation. Teams are encouraged to work directly with members of underrepresented groups as team members and/or to carry out civic partnership and engagement activities`

Proposals should anticipate providing Institutional Review Board (IRB)/Institutional Animal Care and Use Committee (IACUC) approvals as appropriate prior to award.

B. Project Categories

The CIVIC program comprises two stages, Stage 1 Planning Grants and Stage 2 Full Awards. Stage 1 projects will be selected through an open proposal submission. However, only Stage 1 participants will be allowed to submit proposals for Stage 2. For Stage 2 projects, the PI must be the same as Stage 1, but other changes in the team composition are allowable.

Stage 1. Planning Grants (PGs). Projects funded in this stage will provide support for a period of six months with a budget not to exceed $75,000. Each of these projects will undertake a range of planning activities in anticipation of submitting a Stage 2 proposal, such as strengthening collaborations with relevant partners and communities, solidifying the deliverables and the academic and civic partner team members' roles, and refining the vision and plan for executing the research-centered pilot project.

Stage 2. Full Awards (FAs). Projects funded in this stage will provide support for a period of 12 months with a budget not to exceed $1,000,000. Each Stage 2 project will pursue a research-centered pilot project in either one of the two tracks specified in this solicitation. Teams will define clear roles for the civic and research organizations, describe expected research and community impacts, identify risks in execution and their possible mitigation, and provide plans for scaling the project as well as project sustainability beyond the period of the award.

C. "Community-of-Practice" Activities

MetroLab Network, supported by NSF award 2223449, will lead a range of activities critical to the success of CIVIC, including outreach, capacity building, recipient support, and joint-funder engagement. MetroLab Network will foster "communities-of-practice" through in-person and virtual activities aimed at enhancing the teams' capacity-building, networking, impact, and ability to ultimately create methods and solutions transferable to other communities.

CIVIC recipients must participate in cohort activities led by MetroLab Network and the NSF CIVIC program team, with a combination of in-person or virtual events. Projects must send a minimum of two team members to participate in these activities, including the PI and preferably another member of the project representing a sector different from the PI. For example, if the PI applies via a non-profit, they may send a second team member from academia; local, state, or tribal government; service provider; or another sector represented on the team. An alternate representative may attend these events, if approved by NSF.

Recipients must participate in the following activities, which will be held either in-person or virtual. Stage 1 recipients must participate in a one- or two-day kickoff workshop and a two-day event near the end of the six months, including a showcase of progress to date on the first day. Stage 2 recipients must participate in a two-day kick-off event, a two-day mid-year workshop, and a one-day showcase at the end of the projects. Each Stage 2 recipient will also be required to participate in a bimonthly discussion with NSF and possibly partnering agencies, to share project and partnership updates

including progress towards sustaining and scaling promising project outcomes. Details of these activities, including whether they will be held in-person or virtual will be provided to the recipients. Additional virtual activities will be provided to the recipients, including those focused on capacity-building and networking.

At the showcases at the end of Stage 1 and Stage 2, recipients will present demonstrations and/or summarize progress made during their awards. In addition, each team will prepare content that includes a one-page graphic summary of their project and a video of up to five minutes describing the project. Award recipients agree that the resulting presentation material may be posted online for public access and/or shared by NSF with interested parties. NSF anticipates the documents may be posted on a MetroLab Network or other appropriate website.

Proposing teams must include in their budgets travel to these events. The events are anticipated to be located in the Washington, DC area.

III. Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 55-60

Approximately 35-40 Planning Grants (Stage 1) and approximately 15-20 Full Awards (Stage 2) are anticipated across the program, subject to the quality of proposals and availability of funds, which may differ for each track. Note: Only Stage 1 CIVIC recipients can submit to the CIVIC Stage 2 competition.

Anticipated Funding Amount: $22,300,000-$25,600,000

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds and quality of proposals received. Budgets for Stage 1 Planning Grants are up to $75,000 and Stage 2 Full Awards are up to $1,000,000.

IV. Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US 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 US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or co-PI:

For Stage 1: an individual may participate as PI or co-PI in at most two proposals.

For Stage 2: an individual may participate as PI or co-PI in only one proposal.

In the event that an individual exceeds this limit, proposals received within the limit will be accepted based on earliest date and time of proposal submission. This limitation includes proposals submitted by a lead organization and any subawards included as part of a collaborative proposal involving multiple institutions. No exceptions will be made.

Additional Eligibility Info:

Proposals for Stage 2 may only be submitted by Stage 1 recipients. The PI must be the same, however other changes in the team composition are allowable.

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 Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov*. The complete text of the *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

Multi-Institutional Proposals: For collaborative proposals involving multiple institutions, the proposal must be submitted by one lead institution with funding for all other participating institutions made through subawards. See PAPPG Chapter II.E.3.a for additional information. **Proposals submitted as separately submitted collaborative proposals (as described under PAPPG Chapter II.E.3.b) will be returned without review**.

Please note that the Stage 1 Planning Grant proposals described in this solicitation are a solicitation-specific project category and are separate and distinct from the type of proposal described in Chapter II.F.1 of the PAPPG. **When preparing a Stage 1 Planning Grant proposal in response to this solicitation, the "Research" type of proposal should be selected.**

Cover Sheet:

Proposal Title: The title of Stage 1 Planning Grant proposals must begin with "CIVIC-PG Track A" or "CIVIC-PG Track B". Titles for Stage 2 Full Award proposals must begin with "CIVIC-FA Track A" or "CIVIC-FA Track B".

The rest of the proposal title should describe the project in concise, informative language so that a scientifically- or technically-literate reader can understand the aims of the project. The title should emphasize the expected outcome of

the project and be suitable for use in the public press.

Project Description:

All proposals must include all sections required by the PAPPG, including Broader Impacts, and Results from Prior NSF Support.

Stage 1. Planning Grant (PG) Proposals

Project Description: PG proposals should describe how the team will use the planning grant period to refine their team, ideas, and research-based pilot project in order to prepare for submission of a Stage 2 Full Award. The Project Description for PG proposals is limited to 7 pages in length. PG proposals exceeding 7 pages in length will be returned without review. References do not count as part of the page limits.

The Project Description must include separate sections labeled Vision for a Research-Centered Pilot Project, Civic Partnerships and Engagement, Broader Impacts, and Results from Prior NSF Support. A subsection labeled Research Questions must be included as part of the Vision for a Research-Centered Pilot Project section. Proposals lacking one or more of these sections or subsection will be returned without review. Additional details about these sections follows:

1) Vision for a Research-Centered Pilot Project must be the central focus of the Project Description. This section must outline the vision and goals of the pilot project that would be carried out within a real-world context in Stage 2; indicate the partners involved in the project; and the tasks to be performed during the Stage 1 PG. It should also include a description of the respective roles of each organization. Note that teams must propose a vision for Stage 2 outcomes and products that go beyond a model, policy, best practices document, or academic publications.

- **Research Questions** must detail technical and social science research questions, hypotheses, and research gaps that will be explored during the planning period in order to refine the Stage 2 pilot project.

Teams should consider the following as they develop their vision for a Research-Centered Pilot Project:

- In what ways does the envisioned Stage 2 pilot project go beyond the state-of-practice and state-of-the-art?
- Is the envisioned Stage 2 pilot project suitable for the fast-paced timeline of CIVIC?
- Who are the members of the team, including academic and civic partners, and why is each relevant for the project? Are there gaps in expertise that will be addressed during the planning period?
- What are the activities to be undertaken during the Stage 1 PG to prepare the team to propose a competitive Stage 2 proposal?

2) Civic Partnerships and Engagement must describe the community(ies) where the activities will be undertaken and detail how the team will work together to "close the loop" and achieve significant impact with their proposed activities. NSF expects strong collaboration across the PG team. Details of the collaboration should be included, both previous partnerships and engagement and the specific proposed roles and responsibilities for this project.

Teams may wish to consider the following as they develop their civic partnership and engagement plans:

- Who from the community should be engaged in the project? This may include city or state departments or agencies, regional councils of government, human and social service providers, city planners or land/resource managers, as well as other potential partners who are interested in addressing the specific topic, enhancing service provision, and/or creating better approaches for residents to inform a region, city, or community.
- How will the collaborative approach break down barriers between academia, civic organizations, and local and state governments to achieve desired impact?
- From the community's perspective, do the proposed activities address a problem of significance? In what ways has the community worked to address this problem previously? Why does the community believe this problem will benefit from inclusion of researchers?
- Is there a need for skill building or workforce development elements in order for the community to be an integral part of the pilot project and adopt the pilot project outcomes long term?

- What combination of civic partner(s), civic engagement activities, and research outputs will enable the project team to "close the loop" and achieve significant impact with their proposed activities?
- Does the team have the capacity to undertake a fast-paced research-centered pilot project in Stage 2, including the ability to meet regularly?

3) Broader Impacts must include the content described in the NSF PAPPG.

4) Results from Prior NSF Support must include the content described in the NSF PAPPG.

Stage 2. Full Award (FA) Proposals

Project Description: The Project Description for Full Award proposals is limited to 15 pages in length. References do not count as part of the page limit.

The Project Description must provide details on a research-centered pilot project within a real-world context and describe how the civic partnership and engagement components infuse and support the proposed project. It should summarize activities conducted during the PG and how these activities have prepared the team for the FA, as well as the ability for a rapid start-up of the pilot project at the onset of the award. Proposals must include separate sections labeled Research-Centered Pilot Project; Civic Partnerships and Engagement; Broader Impacts; Results from Prior NSF Support; Management Plan; Evaluation Plan; and Scalability, Sustainability, and Transferability.

A subsection labeled Research Questions must be included as part of the Research-Centered Pilot Project section. Proposals lacking one or more of these sections or the subsection will be returned without review. Additional details about these sections follows:

1) Research-Centered Pilot Project section must be the central focus of the Project Description. This section must outline the proposed pilot project and its goals; preparatory activities carried out, including those from the PG; tasks to be performed during execution of the FA; and the roles of each team member along with the role of their respective organization. Note that teams must propose a vision for Stage 2 outcomes and products that go beyond a model, policy, best practices document, or academic publication(s). Priority will be given to projects that are scalable and generalizable to other communities.

- **Research Questions** must detail technical and social science research questions, hypotheses, and research gaps that will be explored during the proposed project.

Teams should consider the following as they develop their Research-Centered Pilot Project:

- In what ways does the proposed pilot project go beyond the state-of-practice and state-of-the-art?
- What technologies and/or prior work are being leveraged for this project? What were the results from the PG and how have they supported the vision for the FA?
- How ready is the proposed project for demonstration in the selected community within 12 months with the available award size for CIVIC?
- If changes in the team happened from Stage 1 to Stage 2, what are the reasons for those changes and what are the additional capabilities of the new members?
- Why are the proposed activities best suited for collaboration between researchers, communities, and civic partners, rather than as independent efforts? How will the team members work together during the execution of the FA and will civic partners be able to receive funds?
- What are the constraints within which the project must work (e.g., availability of paid and unpaid individuals contributing to the project, deployment and operations restrictions or conventions in the community, and cost of the proposed activities)?
- Who will be impacted by these activities? Is this impact sufficiently large to warrant investment of time and future funds on the part of the community? Will the proposed activities receive the necessary "buy-in" from the local government and citizens in order to achieve the desired impact?
- What resources and infrastructure from the partnering community will be leveraged for the proposed activities?
- How do considerations of equity, access, and data privacy factor into the proposed solution(s)?

2) Civic Partnerships and Engagement must describe the community(ies) in which the activities will be undertaken and detail how teams will work together to "close the loop" and achieve significant impact with their proposed activities. Details of the collaboration should be included, both previous partnerships and engagement and the specific proposed roles and responsibilities for this project.

Teams should consider the following as they are developing their civic partnership and engagement plans:

- Who from the community should be engaged in the project?
- From the community's perspective, do the proposed activities address a problem of significance? In what ways has the community worked to address this problem previously? Why does the community believe this problem will benefit from inclusion of research?
- Is there a need for the pilot project to involve skill building or workforce development elements in order for the community to adopt and sustain the pilot outcomes?
- What combination of civic partner(s), civic engagement activities, and research outputs will enable the project team to "close the loop" and achieve significant impact with their proposed activities?
- Does the team have the capacity to undertake a fast-paced, research-centered pilot project, including the ability to meet regularly?

3) Broader Impacts must include the content described in the PAPPG.

4) Results from Prior NSF Support must include the content described in the PAPPG.

5) Management Plan. The Project Description for FA proposals must contain a Management Plan that describes the specific roles and responsibilities of all members of the team: PI, co-PIs, other Senior Personnel, and other partners. This section should describe the expertise each member or group brings to the project, including to the technical and/or social-science dimensions, access to the target community, and management of project tasks. If any member of the team is not included in the budget, describe the reason.

In addition, teams should consider the following:

- How will the project be managed across academic disciplines, institutions and organizations, and community(ies)? Identify specific collaboration mechanisms that will enable cross-discipline and cross-sector integration of teams. How did this approach work during the Planning Grant award period? Note that although the lead PI must be from an institution of higher education or non-profit organization, teams are encouraged, as it makes sense for a given project, to designate funds for other member(s) of the team to participate in the project.
- Who will be involved in carrying out tasks over the course of the project? Consider including a timeline with principal tasks and associated interactions.
- How will the team address issues such as data sharing, data governance, and any intellectual property developed during the project?

6) Evaluation Plan. Teams should have a plan to monitor and adjust the proposed pilot project activities to ensure that they are meeting the envisioned goals of the involved set of partners and communities. The Evaluation Plan should be specific to the project's proposed goals and milestones, which includes the effectiveness of the multi-domain, civic-academic partnerships. For example, it should describe criteria, metrics, and methods for assessing progress, impact, and outcomes. Evaluations may use methods most appropriate for measuring community impact (e.g., qualitative and/or quantitative assessment, periodic and/or longitudinal analyses, and public participation in data collection).

7) Scalability, Sustainability, and Transferability. In the design of their 12-month pilot projects, teams should consider the scalability, sustainability, and transferability of successful outcomes.

Teams should consider addressing the following:

- What is the vision for scaling the project to full implementation in the context of the team's proposed project?
- How will the team sustain the project beyond the period of NSF support to increase impact beyond the pilot stage? Examples include partnerships with civic partners who can build and facilitate local, long-term support or relevant technical training of the local community/end users.

- Although the focus of the proposed activities should be on a pilot project that is specific to the team's local community, projects should not simply propose a point solution but must have components that are transferable to other communities. This section should describe the aspects that may be transferable.

Supplementary Documents:

Proposers are required to submit all Supplementary Documents required in the PAPPG. Information on Project Personnel and Partner Institutions is also required. Biographical sketches for civic partners not designated as senior personnel are strongly encouraged as are Letters of Collaboration. See below for more details.

1. Project Personnel and Partner Institutions: All proposals (Stage 1 and Stage 2) must have current, accurate information of all personnel and institutions involved in the project. The list must include all PIs, co-PIs, Senior Personnel, funded/unfunded Civic Partners, Consultants or Collaborators, Subawardees, Postdocs, and project-level advisory committee members. This list should be numbered and include (in this order) Full name, Organization(s), and Role in the project, with each item separated by a semi-colon. Each person listed should start a new numbered line. For example:

- Maria Velasquez; XYZ University; PI
- Kiara Williams; Office of Governor X; coPI (Subawardee)
- John Jones; University of PQR; Senior Personnel (Subawardee)
- Jane Brown; XYZ University; Postdoc
- Bob Adams; ABC City Council; Funded Civic Partner (Subawardee)
- Mary White; Welldone Church; Unfunded Collaborator

Proposals that do not contain Project Personnel and Partner Institutions with the appropriate information will be returned without review.

2. Biographical Sketches for civic partners not designated as Senior Personnel: As required in the PAPPG, Biographical Sketches are required for Senior Personnel and are to be included in the Biographical Sketches section. Proposers are strongly encouraged to also include, in the "Other Personnel Biographical Information" section of Research.gov or as a Supplementary Document in Grants.gov, Biographical Sketches for all other civic partners listed in the Project Personnel and Partner Institutions Supplementary Document. Proposers should follow the guidance on Biographical Sketches specified in the NSF PAPPG but may leave the "Products" section blank if not relevant for a given individual.

3. Letters of Collaboration: Letters of collaboration explicitly describing roles and responsibilities of civic and academic partners are strongly encouraged for Stage 1 and Stage 2. Letters should be provided in the Supplementary Documents section and each collaboration letter is limited to 2 pages in length. Letters that primarily serve as endorsements of the team or project or letters of support are explicitly excluded and may result in the proposal being returned without review.

Teams may alternatively choose to use the recommended format for letters of collaboration contained in the NSF PAPPG:

"If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment or Other Resources section of the proposal."

Collaborative activities that are identified in the budget should follow the instructions in the NSF PAPPG. Any substantial collaboration with individuals not included in the budget should also be described in the Facilities, Equipment and Other Resources section of the proposal and documented in a Letter of Collaboration from each collaborator.

Collaborators and Other Affiliations (COA) Information:

Proposers should follow the guidance specified in Chapter II.D.2.h of the NSF PAPPG.

Note the distinction to the list of Project Personnel and Partner Institutions specified above under Supplementary Documents: the listing of all project participants is collected by the project lead and entered as a Supplementary

Document. COA information must be separately provided as a Single Copy Document for each individual identified as a senior/key person on the project. Note that Single Copy Documents are only available to NSF staff.

CIVIC Proposal Preparation Checklist:

The following checklist is provided as a reminder of solicitation specific requirements that should be checked before submitting a proposal to this solicitation. This is a summary of the requirements described above. For the items marked with (RWR), the proposal will be returned without review if the required item is not compliant at the submission deadline.

- (RWR) Proposals must be submitted by one lead organization with funding for all other participating institutions made through subawards.
- (RWR) Proposals submitted as separately submitted collaborative proposals (as described under PAPPG Chapter II.E.3.b) will be returned without review.
- Proposal titles must begin with either "SCC-CIVIC-PG Track A", "SCC-CIVIC-PG Track B", "SCC-CIVIC-FA Track A", or "SCC-CIVIC-FA Track B".
- (RWR) Project Description must not exceed 7 pages for Stage 1 Planning Grant proposals.
- (RWR) Sections labeled "Vision for a Research-Centered Pilot Project" (Stage 1) or "Research-Centered Pilot Project (Stage 2); "Civic Partnerships and Engagement"; "Broader Impacts" and "Results from Prior NSF Support" are required within the Project Description for all proposals.
- (RWR) A subsection labeled "Research Questions" is required within the "Vision for a Research-Centered Pilot Project" (Stage 1) or "Research-Centered Pilot Project" (Stage 2) section of the Project Description for all proposals.
- (RWR) Sections labeled "Management Plan", "Evaluation Plan", and "Scalability, Sustainability, and Transferability" are required within the Project Description for Stage 2 Full Award proposals.
- (RWR) Project Personnel and Partner Institutions information is required as a Supplementary Document for all proposals.
- (RWR) For Stage 1: an individual may participate as PI or co-PI in at most two proposals.
- (RWR) For Stage 2: an individual may participate as PI or co-PI in only one proposal.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Budget Preparation Instructions:

Budgets must include travel to Washington, DC for two participants to attend community-of-practice activities listed in section II.C. For both Planning Grants and Full Awards, the activities involve a two-day kick-off workshop and a two-day showcase event at the end of the project. Full Awards activities also include attendance at a two-day mid-year workshop.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

  May 01, 2024

  > Stage 1

  February 10, 2025

  > Stage 2

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationa For Research.gov user support, call the Research.gov Help Desk at 1-800-381-1532 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: https://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to Research.gov for further processing.

The NSF Grants.gov Proposal Processing in Research.gov informational page provides submission guidance to applicants and links to helpful resources including the NSF Grants.gov Application Guide, Grants.gov Proposal Processing in Research.gov how-to guide, and Grants.gov Submitted Proposals Frequently Asked Questions. Grants.gov proposals must pass all NSF pre-check and post-check validations in order to be accepted by Research.gov at NSF.

When submitting via Grants.gov, NSF strongly recommends applicants initiate proposal submission at least five business days in advance of a deadline to allow adequate time to address NSF compliance errors and resubmissions by 5:00 p.m. submitting organization's local time on the deadline. Please note that some errors cannot be corrected in Grants.gov. Once a proposal passes pre-checks but fails any post-check, an applicant can only correct and submit the in-progress proposal in Research.gov.

Proposers that submitted via Research.gov may use Research.gov to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF Proposal Processing And Review Procedures

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior

NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years (FY) 2022 - 2026*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.D.2.d(i). contains additional information for use by proposers in development of the Project Description section of the proposal). Reviewers are strongly encouraged to review the criteria, including PAPPG Chapter II.D.2.d(i), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and other underrepresented groups in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

- Is it evident that the envisioned CIVIC project is (a) addressing a community priority with an impactful pilot that has the potential to be scaled and sustained, and (b) driven by strong partnerships between the necessary set of civic institutions and organizations, researchers, and other partners and other community partners?
- Is the proposed pilot project well-suited for execution in the fast-paced 12-month timeframe of the CIVIC program, including a rapid start-up at the onset of Stage 2?
- Does the proposal clearly articulate the desired impact of its planning activities or envisioned pilot, with well-defined metrics and benchmarks for evaluating progress and success?

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, Site Visit Review, or Reverse Site Review.

NSF will manage and conduct the review process of proposals submitted in accordance with NSF standards and procedures, as described in further detail below. The review and award recommendations will be coordinated by a CIVIC Interagency Working Group comprising program directors from the CIVIC program in CISE, ENG, GEO, SBE, and BIO, and program directors from DHS and DOE. Relevant information about proposals and reviews of proposals will be shared between the participating funding organizations as appropriate. This Working Group will make joint decisions. For projects to be funded by DHS and DOE, those agencies will transfer funds to NSF, and NSF will make the awards.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell proposers whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new recipients may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements or the Division of Acquisition and Cooperative Support for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

VII. Award Administration Information

A. Notification of the Award

Notification of the award is made to *the submitting organization* by an NSF Grants and Agreements Officer. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the

program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)*; or Research Terms and Conditions* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Administrative and National Policy Requirements

Build America, Buy America

As expressed in Executive Order 14005, Ensuring the Future is Made in All of America by All of America's Workers (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's Build America, Buy America webpage.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

VIII. Agency Contacts

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- David Corman, Program Director, CISE/CNS, telephone: (703) 292-8754, email: dcorman@nsf.gov
- Vishal Sharma, Program Director, CISE/CNS, telephone: (703) 292-8950, email: vsharma@nsf.gov
- Ralph Wachter, Program Director, CISE/CNS, telephone: (703) 292-8950, email: rwachter@nsf.gov
- Linda Bushnell, Program Director, CISE/CNS, telephone: (703) 292-8950, email: lbushnel@nsf.gov
- Daan Liang, Program Director, ENG/CMMI, telephone: (703) 292-2441, email: dliang@nsf.gov
- Siqian Shen, Program Director, ENG/CMMI, telephone: (703) 292-7048, email: siqshen@nsf.gov
- Barbara Ransom, Program Director, GEO/RISE, telephone: (703) 292-7792, email: bransom@nsf.gov
- Sara Kiesler, Program Director, SBE/SES, telephone: (703) 292-8643, email: skiesler@nsf.gov
- Christopher Balakrishnan, Program Director, BIO/DEB, telephone: (703) 292-2331, email: cbalakri@nsf.gov
- Kirsten Schwarz, Program Director, BIO/DEB, telephone: (703) 292-2416, email: kschwarz@nsf.gov

For questions related to the use of NSF systems contact:

- NSF Help Desk: 1-800-381-1532
- Research.gov Help Desk e-mail: rgov@nsf.gov

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

IX. Other Information

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at https://www.grants.gov.

About The National Science Foundation

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.F.7 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

> The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.
> To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at https://www.nsf.gov
>
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