Responsible Design, Development, and Deployment of Technologies (ReDDDoT)

PROGRAM SOLICITATION

NSF 24-524

National Science Foundation
Directorate for Technology, Innovation and Partnerships
Directorate for Social, Behavioral and Economic Sciences
Directorate for Biological Sciences
Directorate for Computer and Information Science and Engineering
Directorate for Geosciences
Directorate for STEM Education

Ford Foundation

The Patrick J. McGovern Foundation

Pivotal Ventures

The Eric and Wendy Schmidt Fund for Strategic Innovation

Siegel Family Endowment

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

April 08, 2024

Phase 1: Planning Grants, Translational Research Coordination Networks, Workshops

April 22, 2024

Phase 2: Project proposals

IMPORTANT INFORMATION AND REVISION NOTES

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:

Responsible Design, Development, and Deployment of Technologies (ReDDDoT)

Synopsis of Program:

The Responsible Design, Development, and Deployment of Technologies (ReDDDoT) program invites proposals from multidisciplinary, multi-sector teams that examine and demonstrate the principles, methodologies, implementations, and impacts associated with responsible design, development, and deployment of technologies in practice, focusing especially on the key technologies specified in Section 10387 of the CHIPS and Science Act of 2022. The program is a collaboration between NSF and philanthropic funders Ford Foundation, The Patrick J. McGovern Foundation, Pivotal Ventures, The Eric and Wendy Schmidt Fund for Strategic Innovation, and Siegel Family Endowment. A key goal of the program is to support and strengthen collaborations across disciplines and sectors, for example, academia, industry, and non-profits. The program also aims to ensure that ethical, legal, and societal considerations and community values are embedded across technology lifecycles to generate products that promote the public's wellbeing and mitigate harm.

The broad goals of the ReDDDoT program include:

- Stimulating activity and filling gaps in research, innovation, and capacity building in the responsible design, development, and deployment of technologies;
- Creating broad and inclusive communities of interest that bring together key stakeholders to better inform practices for the design, development, and deployment of technologies;
- Educating and training the science, technology, engineering, and mathematics (STEM) workforce on approaches to responsible design, development, and deployment of technologies;
- Accelerating pathways to societal and economic benefits while developing strategies to avoid or mitigate societal and economic harms; and
- Empowering communities, including economically disadvantaged and marginalized populations, to participate in all stages of technology development, including the earliest stages of ideation and design.

In FY 2024, the program includes a Phase 1 for proposals for Planning Grants—to facilitate collaborative transdisciplinary and multi-sector activities in anticipation of submission of larger proposals; Translational Research Coordination Networks—to help initiate a community of practice relevant to one or more of the FY 2024 priority areas described below; and Workshop proposals[1]—to raise awareness and identify relevant approaches and needs in one or more technology area(s). The program also includes a Phase 2 for Project proposals in topics in the priority areas where there is already demonstrable maturity.

In FY 2024, the Planning Grant, Translational Research Coordination Network, and Phase 2 Project proposals should all focus on one or more of the following three technology areas, selected as priority areas from the list of technology areas enumerated in the CHIPS & Science Act: artificial intelligence, biotechnology, or natural and anthropogenic disaster prevention or mitigation including, but not limited to, climate change mitigation and environmental sustainability. Projects that cover multiple of these priority areas, and/or include other areas in addition to one or more of the priority areas are also welcome.

Workshop proposals, on the other hand, may choose foci from the full range of key technology areas and national, societal, and geostrategic challenges described in Section 10387 of the CHIPS and Science Act of 2022, as listed in section II.C.1 below.

1 Also referred to as conferences in PAPPG Chapter II.F.9.

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.

- Chaitanya K. Baru, Senior Advisor, TIP/OAD, telephone: (703) 292-4596, email: redddot@nsf.gov
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- Frederick M. Kronz, Program Director, SBE/SES, telephone: (703) 292-7283, email: redddot@nsf.gov
- Clifford Weil, Program Director, BIO/MCB, telephone: (703) 292-4668, email: redddot@nsf.gov

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

- 47.041 --- Engineering
- 47.049 --- Mathematical and Physical Sciences
- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences
- 47.076 --- STEM Education
- 47.079 --- Office of International Science and Engineering
- 47.083 --- Office of Integrative Activities (OIA)
- 47.084 --- NSF Technology, Innovation and Partnerships

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 28 to 36

Phase 1 will fund an estimated ~10-12 Planning Grants (up to $300,000 each for no more than 2 years), 2 Translational Research Coordination Networks (up to $500,000 each for 3-4 years), and ~8-10 Workshops (up to $75,000 each).

Phase 2 will fund an estimated 8-12 Project proposals ($750,000-$1,500,000 each for 3 years).

Anticipated Funding Amount: $16,000,000

Total funding is $16,000,000, subject to availability of funds.

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.
- For-profit organizations: U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies, community organizations, and similar organizations located in the U.S. that are directly associated with educational or research activities or that bring relevant expertise/perspectives.
- State, Local, and Tribal governments, limited to agencies, offices, divisions, or other units specifically dedicated to innovation, economic and/or workforce development.
- Tribal Nations: An American Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a federally recognized tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. §§ 5130-5131.

Who May Serve as PI:

The project leadership team should include individuals with experience and expertise in topics and areas broadly associated with responsible design, development, and/or deployment of technologies.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

There are no restrictions or limits.

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):

  April 08, 2024

  Phase 1: Planning Grants, Translational Research Coordination Networks, Workshops

  April 22, 2024

  Phase 2: Project proposals

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:

Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements:

Standard NSF reporting requirements apply.

TABLE OF CONTENTS

I. INTRODUCTION

The CHIPS and Science Act of 2022 called on the National Science Foundation's (NSF's) Directorate for Technology, Innovation and Partnerships (TIP) to take a leadership role in creating mutually beneficial research and technology development partnerships and collaborations among institutions of higher education, non-profits, industry, governments, civil society, and public communities. This includes capacity building and promoting research for the public good, as well as developing approaches to mitigate risks to society proactively.

Consistent with these goals and in partnership with philanthropic funders, Ford Foundation, The Patrick J. McGovern Foundation, Pivotal Ventures, The Eric and Wendy Schmidt Fund for Strategic Innovation, and Siegel Family Endowment, the NSF Responsible Design, Development, and Deployment of Technologies (ReDDDoT) program seeks to support and strengthen such cross-sector collaborations and facilitate the embedding of ethical, legal, and societal considerations and community values across the lifecycle of technology creation and use. Each stage of a technology's lifecycle provides opportunities for meaningful engagement with stakeholders so that the process is guided in a responsible way to generate products that promote the public's wellbeing and mitigate harm. A wide array of values could shape and be considered in such a process, including but not limited to accountability, equity, inclusion, sustainability, transparency, accessibility, safety, fairness, sensitivity to culture and context, privacy, and security.

To this end, the goals of the ReDDDoT program include:

- Stimulating activity and filling gaps in research, innovation, and capacity building in the responsible design, development, and deployment of technologies;
- Creating broad and inclusive communities of interest that bring together key stakeholders to better inform practices for the design, development, and deployment of technologies;
- Educating and training the science, technology, engineering, and mathematics (STEM) workforce on approaches to responsible design, development, and deployment of technologies;
- Accelerating pathways to societal and economic benefits while developing strategies to avoid or mitigate societal and economic harms; and
- Empowering communities, including economically disadvantaged and marginalized populations, to participate in all stages of technology development, including the earliest stages of ideation and design.

In this way, ReDDDoT is aligned with Section 10398 of the CHIPS and Science Act of 2022.

II. PROGRAM DESCRIPTION

The ReDDDoT program invites proposals from multidisciplinary, multi-sector teams that examine and demonstrate the principles, methodologies, implementations, and impacts associated with responsible design, development, and deployment of technologies, focusing especially on key technologies.

Critical to advancing these goals is supporting multi-sector collaborations involving universities, industry, government, non-profit and professional organizations, community members and organizations, and others. It is particularly important to explore and include approaches that enable and empower all communities, to include economically disadvantaged and marginalized populations, to participate in all stages of technology development, including the earliest stages of ideation and design. Undertaking such collaborative stakeholder involvement can be challenging. It may be necessary to build new capacity and structures, or expand upon existing ones, to facilitate such stakeholder involvement.

An integrative transdisciplinary approach is crucial, with strategic combinations drawn from a broad array of fields including, for example, computing, sociology, public policy, geosciences, engineering, biological sciences, economics, ethics, and the law. For the impact of the work to be sustained, it is also critical to develop a workforce with relevant and necessary skills in academia, industry, government, and civil society.

A. Priority Areas and Types of Activities

In FY 2024, proposals for Planning Grants, Translational Research Coordination Networks, and Project proposals should focus on one or more of the following three priority areas: *artificial intelligence, biotechnology, or natural and anthropogenic disaster prevention or mitigation* including, but not limited to, climate change mitigation and environmental sustainability. Projects that cover multiple priority areas and/or include other areas in addition to the priority areas, are also welcome. In contrast, Workshop proposals may focus on any of the key technology areas and national, societal and geostrategic challenges delineated in Section 10387 of the CHIPS and Science Act of 2022 .

A variety of approaches could support the advancement of knowledge and practice in support of the ReDDDoT program goals. The program will consider projects that are exploratory in nature as well as projects that build on and expand efforts already underway. This includes work in developing, applying, and building capacity in public interest technology, i.e., the study and application of technology expertise to advance the public interest in a way that generates public benefits and promotes the public good. The program will also consider projects based on existing or emerging industry practices or standards that facilitate safe and ethical technology creation and implementation. The following is an illustrative—not exhaustive—list of the types of ReDDDoT project activities:

Research. A typical activity might study the impacts of current or new ReDDDoT paradigms. Examples of potential topics in this domain include:

- Research on how stakeholder communities can create or apply ongoing, effective governance mechanisms that adapt to technological change.
- Research on effective models for responsible technology co-design and knowledge co-production with stakeholders from multiple sectors.

Implementation. A typical activity might involve a transdisciplinary, multi-sector collaboration that demonstrates and strengthens a responsible development approach for a specific technology or technology application. Examples of potential topics in this domain include:

- Frameworks for ethical, legal, and societal considerations to shape the design, development, or deployment phases of key technologies, as well as the study of differences in how such considerations are approached in different technology areas.
- Conduct of use-inspired and translational research in collaboration with relevant stakeholders to work toward envisioning technologies, products, and services for the public good.

Methodologies and tools. A typical activity might develop or assess methodologies/tools that enable ReDDDoT approaches. Examples of potential topics in this domain include:

- Development and analyses of ways key principles such as safety, trust, transparency, fairness, or accountability can be collaboratively defined and operationalized in a key technology area.
- Study and implementation of effective methods for incorporating and optimizing guardrails in the technology development process, such as codes of conduct, ethical guidelines, or technology audits.
- Evaluation and sharing of best practices on assessing and integrating fairness into technology design and development.

Infrastructure to support education, training, and stakeholder engagement. A typical activity might support collaborations and/or educational programs necessary to sustain ReDDDoT approaches. Examples of potential topics in this domain include:

- Facilitation and expansion of experiential learning programs, including internships, clinics, client-based projects embedded in courses, and inclusion of practitioners as teachers and mentors.
- Enhancing capacity to enable authentic, durable stakeholder engagement, where those most impacted by emerging technologies are able to shape the development and are involved in and drive its use and assessment.
- Development, refinement, or expansion of curricula/instructional material as well as certification and degree programs for future researchers or practitioners in fields or areas relevant to responsible technology development, including responsible and ethical conduct of research (RECR) approaches that break down disciplinary or sector silos.

As stated above, these examples are meant to be illustrative and do not constitute an exhaustive listing. Projects may cut across multiple types of activities. ReDDDoT projects are expected to share results across a broad array of relevant audiences to extend the impact of the work, whether in building capacity, enhancing the culture of innovation, accelerating pathways to public benefit while minimizing harms, or other areas of impact.

B. The Project Team, Collaborations, and/or Partnerships

PIs and co-PIs may be from academic institutions, community organizations and other non-profit organizations, or companies. The proposal is expected to clearly identify the roles, responsibilities, and contributions of each collaborator or partner. The proposal should also indicate how

relevant stakeholders from across disciplines and sectors such as (but not limited to) academia, industry, government, and non-profit and community organizations will be fully integrated in project activities, as appropriate for the project type and topic.

Projects are encouraged to promote inclusion in their leadership, collaborations, and other project activities. Depending on the project, this could include authentic engagement with individuals and communities most impacted by relevant technologies, including via civil society organizations with missions and expertise in equity, policy, community interests and well-being, and other relevant areas; state, local, or tribal governments; and a broad range of academic institutions, including predominantly undergraduate institutions, Minority Serving Institutions (MSIs), as well as institutions in jurisdictions eligible for the Established Program to Stimulate Competitive Research (EPSCoR).

The composition and expertise of the project team and integration of relevant stakeholders will be factors in the merit review of the proposals (see Additional Solicitation Specific Review Criteria section).

C. Proposal Types

In FY 2024, the ReDDDoT program has two deadline dates, one for Phase 1 proposals and the other for Phase 2 proposals.

C.1. Phase 1 proposals: *Planning Grants, Translational Research Coordination Network, Workshops.*

The objectives for proposals in Phase 1 should be around building transdisciplinary and multi-sector communities and collaborations to explore and prepare for work focusing on the key ReDDDoT program goals.

Planning Grants (~10-12 awards). Planning Grant proposals should focus on one or more of the three FY24 priority areas described above in Section II.A. Projects that cover multiple priority areas and/or include other areas in addition to the priority areas, are also welcome.

The goal of Planning Grants should be to facilitate collaborative transdisciplinary and multi-sector activities in anticipation of submission of larger proposals to the program in the future. A Planning Grant may engage in activities to help identify stakeholders and build necessary relationships; identify research gaps, questions, and hypotheses; and/or describe potential approaches to solutions. Activities may include, but are not limited to, travel, workshop organization, stakeholder meetings, data collection, preliminary experiments, and pilot studies. It is expected that at the conclusion of the Planning Grant activity, teams would be prepared and ready to submit a Phase 2 proposal responsive to a future ReDDDoT program solicitation.

Please note that the ReDDDoT 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 Planning Grant proposal in response to this solicitation, the "Research" type of proposal should be selected in Research.gov.

ReDDDoT Planning Grant proposal budgets should be no more than $300,000 with a performance period of 2 years or less.

Translational Research Coordination Network (~2 awards). Translational Research Coordination Network (TRCN) proposals should promote use-inspired translational research activities to help initiate a community of practice relevant to one or more of the FY 2024 priority areas described above in Section II.A. Projects covering multiple priority areas and/or including other areas in addition to the priority areas are welcome. The proposed TRCN project should jump start new community activity across multiple disciplines and sectors, and not propose funding for on-going operation of existing networks or established collaborations. It should include a strong plan for dissemination of results to diverse stakeholders. International participation is encouraged where appropriate.

ReDDDoT TRCN proposal budgets should not exceed $500,000 for 3 to 4 years and *a single organization must serve as the submitting organization, with other organizations involved as subawards. Separately submitted collaborative proposals are not permitted.*

Workshops (~8-10 awards). ReDDDoT Workshop proposals may address one or more of the key technology areas and/or national, societal, and geostrategic challenges delineated in Section 10387 of the CHIPS and Science Act of 2022 which include: (1) Artificial intelligence, (2) High performance computing, (3) Quantum information systems, (4) Robotics & advanced manufacturing, (5) Natural & anthropogenic disaster prevention or mitigation, (6) Advanced communications and networking technology, (7) Biotechnology, (8) Data storage, distributed ledger technologies, & cybersecurity, (9) Advanced energy & industrial efficiency technologies, and (10) Advanced materials science. The five national, societal, and geostrategic challenge areas are (1) U.S. national security, (2) U.S. manufacturing and industrial productivity, (3) U.S. workforce development and skills gaps, (4) Climate change and environmental sustainability, and (5) Inequitable access to education, opportunity, or other services.

The objectives of these workshops should be to raise awareness and identify approaches and needs relevant to ReDDDoT in one or more technology/challenge area(s); explore and refine opportunities for future projects; and facilitate building of relationships/trust to enable substantive transdisciplinary and multi-sector collaborations. In particular, workshops should enable participants to learn how to work together to apply shared values of serving the public good and minimizing harm at all stages of the technology lifecycle. Outcomes from workshops could help inform ReDDDoT program priorities.

A workshop could, for example, describe the landscape of ReDDDoT opportunities centering around a specific technological and/or challenge

area; examine opportunities and gaps in methodologies for applying responsible technology approaches; and/or create a research agenda for the design, development and deployment of a specific technology that is based on relevant societal needs and values. Workshops should include participants that cover a broad range of expertise and experiences in key areas, such as research in relevant scientific areas, including key technologies; community perspectives, values, and technology use; industry priorities and approaches; government responsibilities as a user and overseer of technologies; and legal and ethical issues. Workshop proposals are encouraged to consider participation by relevant international experts in areas where there may be significant ongoing translational efforts in like-minded countries.

Workshop proposals should be prepared in accordance with the guidelines provided for Conference Proposals in Chapter II.F.9.

ReDDDoT Workshop proposal budgets should be no more than $75,000, with a duration of no more than one year.

C.2. Phase 2 Project proposals (~8-12 awards).

The Phase 2 opportunity is intended for projects with an established track record in the priority areas with teams that have experience in use-inspired and translational activities in responsible design, development, and deployment. Projects covering multiple priority areas and/or including other areas in addition to the priority areas are welcome. The activities described above in Section II.A are only illustrative of the types of efforts that may be possible and not meant to be an exhaustive list.

Phase 2 Project proposals must include a Collaboration Plan (1 to 3 pages) that is submitted as a supplementary document. This plan must describe the structure of the collaborative activities in the project, and how these activities will be nurtured, monitored, and sustained for the overall benefit of the project.

ReDDDoT Phase 2 Project proposal budgets should be between $750,000 and $1,500,000 with a performance period of 3 years. The minimum budget amount of $750,000 reflects the minimum expected level of effort for these projects which are required to be transdisciplinary in nature involving multi-sector expertise.

D. About Other NSF Funding Opportunities

There are multiple NSF opportunities that complement the ReDDDoT program goals, including by advancing multi-sector collaboration and community partnerships, researching and shaping key technologies to tackle national, societal, and geostrategic challenges, and enabling STEM workforce training in issues affecting ethical and responsible use of technology. PIs may wish to consider whether these other NSF programs are better aligned with the focus of their proposed work. The NSF programs include but are not limited to:

Ethical and Responsible Research (ER2)

Science and Technology Studies (STS)

Dear Colleague Letter: CO2 Removal and Solar Radiation Modification Strategies: Science, Governance and Consequences

Dear Colleague Letter: Extreme, Compound, and Cascading Hazards (EC2H)

Civic Innovation Challenge (CIVIC)

Safe Learning-Enabled Systems

Designing Accountable Software Systems (DASS)

Using the Rules of Life to Address Societal Challenges (URoL:ASC)

Grant Opportunities for Academic Liaison with Industry (GOALI)

Harnessing the Data Revolution: Data Science Corps (DSC)

III. AWARD INFORMATION

Anticipated Type of Award: Standard Grant

Estimated Number of Awards:

- Phase 1 will fund an estimated ~10-12 Planning Grants (up to $300,000 each for no more than 2 years), 2 Translational Research Coordination Networks (up to $500,000 each for 3-4 years), and ~8-10 Workshops (up to $75,000 each).
- Phase 2 will fund an estimated 8-12 Project proposals ($750,000-$1,500,000 each for 3 years).

Anticipated Total Funding Amount: $16,000,000, subject to availability of funds.

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.
- For-profit organizations: U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies, community organizations, and similar organizations located in the U.S. that are directly associated with educational or research activities or that bring relevant expertise/perspectives.
- State, Local, and Tribal governments, limited to agencies, offices, divisions, or other units specifically dedicated to innovation, economic and/or workforce development.
- Tribal Nations: An American Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a federally recognized tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. §§ 5130-5131.

Who May Serve as PI:

The project leadership team should include individuals with experience and expertise in topics and areas broadly associated with responsible design, development, and/or deployment of technologies.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

There are no restrictions or limits.

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.

Organizations that are new to NSF proposal submission and funding are encouraged to review the Prospective New Awardee Guide**.**

The following information supplements the guidelines and requirements in the NSF PAPPG and NSF Grants.gov Application Guide:

Proposal Set-up:

Please note that the ReDDDoT 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 Planning Grant proposal in response to this solicitation, the "Research" type of proposal should be selected in Research.gov.

ReDDDoT Translational Research Coordination Network proposals must be submitted by a single organization, with other organizations involved via subawards. *Separately submitted collaborative proposals are not permitted.*

When preparing a ReDDDoT Workshop proposal in response to this solicitation, follow the guidelines for Conference Proposals contained in Chapter II.F.9 in the PAPPG and select the "Conference" type of proposal in Research.gov.

Proposal Title:

Phase 1

Titles of Phase 1 Planning Grant proposals **must begin with "ReDDDoT Phase 1: Planning Grant:**"

Titles of Phase 1 Translational Research Coordination Network proposals **must begin with "ReDDDoT Phase 1: TRCN:**"

Titles of Phase 1 Workshop proposals **must begin with "ReDDDoT Phase 1: Workshop:**" Please note that Research.gov will automatically insert the prepended title, "Conference".

Phase 2

Titles of Phase 2 Project proposals **must begin with "ReDDDoT Phase 2:**"

Supplementary Document:

Phase 2 Project proposals must include a 1-3 page Collaboration **Plan section that must be submitted as a Supplementary Document. This plan must describe the structure of the collaborative activities in the project, and how these activities will be nurtured, monitored, and sustained for the overall benefit of the project.**

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

C. Due Dates

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

  April 08, 2024

  Phase 1: Planning Grants, Translational Research Coordination Networks, Workshops

  April 22, 2024

  Phase 2: Project proposals

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/ProposalPreparationandSubmission.html. 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

Additional solicitation-specific review criteria are important considerations for the proposal and the project. In addition to NSF's standard merit review criteria, the following solicitation-specific criteria will be applied to all proposals submitted to this program, across all proposal categories:

- Is it evident that the project is addressing potential areas of need with respect to advancing strategies for responsible design, development and deployment of technology?
- Does the proposal include mechanisms to share project results broadly across relevant disciplines and sectors?
- Are the composition and expertise of the project team and the plans to integrate relevant stakeholders appropriate to meet the project goals in enabling or demonstrating responsible design, development and deployment of technology?

B. Review and Selection Process

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

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.

Relevant information about the proposals under consideration for funding along with the corresponding unattributed reviews and/or panel summaries may be shared with representatives from NSF's partners in this program at the Ford Foundation, The Patrick J. McGovern Foundation, Pivotal Ventures, The Eric and Wendy Schmidt Fund for Strategic Innovation, and Siegel Family Endowment, as appropriate. The partners and their representatives will not be participating in the merit review process and do not intend to serve as panel observers but have committed to providing annual contributions to NSF for the purpose of funding proposals awarded under this solicitation.

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.

Special Award Conditions:

Recipients under this agreement will be required to include appropriate acknowledgment of the support of the Partners and NSF in reports and/or publications on work performed under this award. An example of such an acknowledgement would be: "This material is based upon work supported by NSF grant #xxxxxxx under the NSF Responsible Design, Development, and Deployment of Technologies (ReDDDoT) program, which is jointly sponsored by NSF and the Ford Foundation, The Patrick J. McGovern Foundation, Pivotal Ventures, The Eric and Wendy Schmidt Fund for Strategic Innovation, and Siegel Family Endowment."

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:

- Chaitanya K. Baru, Senior Advisor, TIP/OAD, telephone: (703) 292-4596, email: redddot@nsf.gov
- Danielle F. Sumy, Program Director, TIP/ITE, telephone: (703) 292-4217, email: redddot@nsf.gov
- Nasser Alaraje, Program Director, EDU/DUE, telephone: (703) 292-8063, email: redddot@nsf.gov
- Nicholas F. Anderson, Program Director, GEO/AGS, telephone: (703) 292-4715, email: redddot@nsf.gov
- Jason D. Borenstein, Program Director, SBE/OAD, telephone: (703) 292-4207, email: redddot@nsf.gov
- Vishal Sharma, Program Director, CISE/CNS, telephone: (703) 292-8950, email: redddot@nsf.gov
- Frederick M. Kronz, Program Director, SBE/SES, telephone: (703) 292-7283, email: redddot@nsf.gov
- Clifford Weil, Program Director, BIO/MCB, telephone: (703) 292-4668, email: redddot@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.

For questions related to the ReDDDoT program contact:

- The NSF ReDDDoT Team at redddot@nsf.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

- **Location:** 2415 Eisenhower Avenue, Alexandria, VA 22314
- **For General Information** (NSF Information Center)**:** (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**

  Send an e-mail to: nsfpubs@nsf.gov

  or telephone: (703) 292-8134
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by proposers will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding proposers or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
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