Panel Study of Income Dynamics Competition (PSID)

PROGRAM SOLICITATION
NSF 20-573

REPLACES DOCUMENT(S):
NSF 05-541

National Science Foundation

Directorate for Social, Behavioral and Economic Sciences
Division of Social and Economic Sciences

Letter of Intent Due Date(s) ***(required)*** (due by 5 p.m. submitter's local time):

June 08, 2020

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

August 04, 2020

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 20-1), which is effective for proposals submitted, or due, on or after June 1, 2020.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Panel Study of Income Dynamics (PSID) Competition

Synopsis of Program:

The Panel Study of Income Dynamics (PSID) is a longitudinal survey of a nationally representative sample of U.S. families begun in 1968. The PSID has collected 41 waves of data on the same families and their descendants as of 2019.

The PSID collects data on a wide range of economic, social, demographic, geospatial, and health factors that affect the well-being of American families. The PSID has consistently obtained wave-to-wave re-interview response rates of more than 90%. Data are made available to scholars, students, and the public for research, analysis, and education activities within 12 months of data collection.

Recent innovations include adding a representative sample of families who immigrated to the U.S. between 1997 and 2017, adding new tools for training and data dissemination, new geospatial identifiers for PSID employer addresses, and the development of a web-based version of the PSID questionnaire.

The Economics Program in the Directorate of Social, Behavioral, and Economic Sciences (SBE) may make one award to support the collection of the NSF-funded content in the 2021 and 2023 waves of the PSID. We anticipate an NSF award of at least $17 million and at most $20 million to support two waves of data collection, dissemination activities, and outreach. The expected start date is January 1, 2021.

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.

- Nancy A. Lutz,W13243, telephone: (703) 292-7280, email: nlutz@nsf.gov

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

- 47.075 --- Social Behavioral and Economic Sciences

Award Information

Anticipated Type of Award:

Continuing Grant

Estimated Number of Awards: 1

We anticipate one award.

Anticipated Funding Amount: $17,000,000 to $20,000,000

We anticipate one award to total $17-$20 million over 48 months. The award amount, number of awards, and award size and duration are subject to the 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.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 1

Institutions are restricted to submitting only one proposal for this solicitation.

Limit on Number of Proposals per PI or Co-PI: 1

Principal Investigators, co-principal investigators, and senior personnel are restricted to submitting only one proposal for this solicitation.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is required. Please see the full text of this solicitation for further information.
- **Preliminary Proposal Submission:** Not required

Full Proposals:

- Full Proposals submitted via FastLane: *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

- **Letter of Intent Due Date(s) *(required)*** (due by 5 p.m. submitter's local time):

June 08, 2020

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

  August 04, 2020

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

Summary of Program Requirements

I. **Introduction**
II. **Program Description**
III. **Award Information**
IV. **Eligibility Information**
V. **Proposal Preparation and Submission Instructions**
  A. Proposal Preparation Instructions
  B. Budgetary Information
  C. Due Dates
  D. FastLane/Research.gov/Grants.gov Requirements
VI. **NSF Proposal Processing and Review Procedures**
  A. Merit Review Principles and Criteria
  B. Review and Selection Process
VII. **Award Administration Information**
  A. Notification of the Award
  B. Award Conditions
  C. Reporting Requirements
VIII. **Agency Contacts**
IX. **Other Information**

I. INTRODUCTION

The Panel Study of Income Dynamics (PSID) is a longitudinal survey of a nationally representative sample of U.S. families begun in 1968. The PSID has collected 41 waves of data on the same families and their descendants as of 2019. The PSID collects data on a wide range of economic, social, behavioral, demographic, geospatial, and health factors that affect the well being of American families. The PSID has consistently obtained wave-to-wave re-interview response rates of more than 90%.

More information about the PSID is available at: https://psidonline.isr.umich.edu/.

In 2016, a group of scholars organized by the National Academy of Science's Committee on National Statistics conducted a study of the future of the "Big 3" Surveys that are funded in whole or part by the National Science Foundation. The PSID is one of those surveys, along with the General Social Survey (GSS) and the American National Election Studies (ANES). More information about the membership of the committee and its discussions can be found here: https://sites.nationalacademies.org/DBASSE/CNSTAT/DBASSE_180296.

The members of the committee praised the surveys but also raised several concerns. The discussion by this committee informs this solicitation. Specifically, NSF encourages proposers to this solicitation to include in their proposal improvements in data archiving and dissemination, especially activities which will make the data more easily available to a wider audience, increase interactions between the principal investigators of the GSS and the ANES, and methodological innovations such as the use of incentives, new measures, question wording and placement, and new methods of data collection.

The PSID currently consists of several elements:

- *The "NSF core" data collection*, 45 minutes of questionnaire content from approximately 10,000 households. This part of the PSID is funded by the National Science Foundation. The data are collected biennially via an interview with one member of each household. The current awardee has piloted a web-based questionnaire as an alternative to the long-standing PSID computer assisted telephone interviewing (CATI) method.
- *Additional modules* that add another 35 minutes of questionnaire content to the main PSID, also collected from the same families. These modules are again conducted via CATI and web.
- *Additional supplemental studies.* The two current supplemental studies focus on child development and the transition to adulthood.

This award will not fund the additional modules and supplemental studies that are part of the full PSID.

II. PROGRAM DESCRIPTION

The Panel Study of Income Dynamics provides fundamental data infrastructure for the social, behavioral, and economic sciences. The award will fund the following activities:

- Two waves (2021 and 2023) of data collection on the historic core PSID sample of approximately 10,000 families and 45 minutes of content that will advance the quality of scientific inquiry and knowledge about the economics and social well-being of US families;
- Survey instrument development and innovation based on scientific expertise in relevant social, behavioral and economic sciences;
- Survey design that allows the addition of modules to meet the needs of federal agencies and other potential funders, should such agencies or organizations choose to fund specific modules;
- Post data collection editing, processing, and generation of constructed variables, data files and code books;
- Data dissemination through a cutting-edge web-based data archive;
- Access to restricted data through a secure data enclave for researchers who enter into a restricted use contract with the awardee;
- Provision of user assistance via email, web tutorials, and specialized training events
- Support for a Governance Board; and
- Interaction with the principal investigators of the ANES and GSS.

It is expected that in meeting these functions the PSID will explore and innovate cutting edge methods and technologies for data collection, curation, and dissemination. This includes continued work to make a web-based questionnaire available to PSID respondents.

The current awardee (the University of Michigan) has successfully solicited funding from other Federal agencies, most notably two parts of the National Institutes of Health(NIH); the National Institute for Aging (NIA) and the Eunice Kennedy Shriver National Institute for Child Health and Development (NICHD). This funding has been used to fund an additional 35 minutes of questionnaire content, additional supplemental studies, and additional processing and dissemination activities. The NSF award resulting from this solicitation will not fund these activities, but the ability to incorporate such modules by other sources is an important part of the design of the core PSID. The current awardee will provide any new awardee with the data, documentation, and data collection software developed with past federal PSID funding.

The PSID's current Board of Governance is an independent group. Board members are independent of the NSF and the current awardee; they represent the interests of the research and policy communities that use the PSID. New board members are nominated by the current board and serve for two-year, renewable terms. It is expected that proposals will be designed so that the Board will continue to fulfill its important functions.

This award will not support secondary data analysis or investigator-based research.

Project Descriptions should address the Principal Investigators' ability and capacity to meet the following scientific infrastructure objectives:

- Scientific and methodological expertise and resources for questionnaire development and innovation;
- Collection of 2 biennial waves of questionnaire data from the families in the core sample (approximately 45 minutes of NSF-funded content) while maintaining the current wave-to-wave re-interview response rate;
- Maintain continuity and the high quality of this data set;
- Process, edit and release raw data, generated variables, and code books within 12 months of collection;
- Maintain security of the data;
- Maintain cyberinfrastructure to disseminate/share data while also expanding and innovating in data dissemination tools as the technology develops;
- Developing new methods to illustrate and advance the use and analysis of the data to a variety of audiences; and
- Maintain the following functions:
    - Secure access for approved researchers to sensitive/restricted data;
    - User help; and
    - Bibliographic and award archive.

Project Descriptions should also address the following project management issues:

- The role of the Governance Board;
- Standards for data archiving and acquisition including possible data linkages;
- Plans for managing and integrating NSF-funded PSID functions.

Project Descriptions must include a section titled "Expected Project Significance". This section should address, in separate sub-sections, the intellectual merit and the broader impacts of the project. One sub-section must explain how the next years of the PSID will generate new insight and understanding of how social and economic factors affect the well-being of U.S. families. The second subsection should discuss the potential broader impacts, including contributions to education and broadening participation of underrepresented groups in the science pipeline. This includes, but is not limited to, how the project will provide innovative opportunities for training women, minorities, and other groups underrepresented in the areas of social science that the project includes. It also includes how PSID results may promote efforts to broaden participation of underrepresented groups in other aspects of U.S. society.

Special Requirements and Restrictions

If a project is being undertaken by researchers at multiple institutions, a single organization must be identified as the lead organization. A single proposal

describing the entire project must be submitted by the organization with funds distributed among partner organizations via subawards from the lead organization. Direct submission of linked collaborative sets of proposals by multiple organizations is not permitted.

III. AWARD INFORMATION

Estimated program budget, number of awards and average award size and duration are subject to the availability of funds. The expected start date is January 1, 2021, with an expiration date of December 31, 2024. The awardee will continue to provide the PSID's core shared-use databases, research platforms, and educational tools on cyclical, intergenerational and life-course measures of economic and social behavior.

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 labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization: 1

Institutions are restricted to submitting only one proposal for this solicitation.

Limit on Number of Proposals per PI or Co-PI: 1

Principal Investigators, co-principal investigators, and senior personnel are restricted to submitting only one proposal for this solicitation.

Additional Eligibility Info:

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent *(required)*:

To expedite the review process for the PSID competition proposals, a Letter of Intent to submit a proposal must be submitted via Fastlane by 5:00 PM, submitters local time, on the due date. The Letter of Intent must contain the following information:

- The title of the project
- The names and affiliations of the principal investigators and other senior personnel and professionals, including any consultants or principal investigators on subawards, and
- The names of all participating institutions.

One Letter of Intent per research team should be submitted. Failure to meet the Letter of Intent deadline will disqualify a proposal from consideration. Letters of Intent are not evaluated for scientific merit; rather, they are used to assemble review panels with appropriate expertise. Please direct any questions about the letter to the Program Director.

Letter of Intent Preparation Instructions:

When submitting a Letter of Intent through FastLane in response to this Program Solicitation please note the conditions outlined below:

- Submission by an Authorized Organizational Representative (AOR) is required when submitting Letters of Intent.
- A Minimum of 0 and Maximum of 4 Other Senior Project Personnel are permitted
- A Minimum of 0 and Maximum of 2 Other Participating Organizations are permitted
- Submission of multiple Letters of Intent is not permitted

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

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal & Award Policies & 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. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- 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.C.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.

Proposal Cover Sheet

For the program solicitation number, use the number listed at the top of this solicitation. (Grants.gov users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page.)

For the NSF organizational unit, select SES-Economics. No co-reviews will be allowed for these proposals. (Grants.gov users: Refer to Section VI.1.2. of the NSF Grants.gov Application Guide for specific instructions on how to designate the NSF Unit of Consideration.) The title of the proposal should describe the project in concise, informative language so that a scientifically or technically literate reader could understand what the project is about. The title of the proposal should include the following prefix to designate the specific kind of proposal being submitted, with the substantive title of the project following the prefix: **PSID:**

Provide complete information requested on the Cover Sheet for the principal investigator (PI) and for up to four co-principal investigators (co-PIs), including current contact information.

Project Description

The Project Description is limited to 30 pages in length.

1. PSID Research Project

With the exceptions noted below, proposers may organize the different components, including the requirements outlined in Section II above, of the project description as they wish. **The following sections MUST be included under separate headings in the project description:**

- ***Management Plan.*** The following information should be provided: (1) a description of the management structure that will enable the team to work effectively; and (2) specification of the qualifications of each of the senior personnel as well as the contribution they are expected to make to the project. This section increases in importance as the number of senior personnel or institutions involved in the project increases. The management plan usually is between 1 and 2 pages in length.
- ***Expected Project Significance.*** This section should clearly specify what proposers expect will be the results and contributions of the project. The section should include a separate subsection to address the expected Broader Impacts. The Expected Project Significance section should clearly specify how the proposed work will advance basic knowledge and make intellectual contributions across multiple social, behavioral, and economic science fields. It should also convey expected benefits to society, including enhancing opportunities for underrepresented groups in the science pipeline. (The inclusion of the Broader Impacts subsections in this required section fulfills the general requirement in the PAPPG or the equivalent section of the NSF Grants.gov Application Guide requiring a separate section within the Project Description labeled "Broader Impacts.").

Special Information and Supplementary Documentation

Following are supplementary documents for which special instructions are provided for proposals submitted in response to this solicitation that supplement guidance in the PAPPG and the *NSF Grants.gov Application Guide*:

NSF-Required Supplementary Documentation

Data-Management Plan

All proposals must include a plan for data management and sharing the products of research. The data management plan must be no longer than 2 pages in length and must be included as a supplementary document.

The data management plans must address all five of the points specified in Chapter II, Section C.2.j of the NSF PAPPG and the comparable section of the NSF Grants.gov Application Guide. Proposers are especially encouraged to specify how they intend to make data, software, and other products of the research readily available to potential users through institutionally based archives, repositories, or distribution networks so that the products may be easily accessed by others over long time periods.

PSID-Required Supplementary Documentation

Cybersecurity Plan

All proposals must include a two-page plan for ensuring the security of all data that may be accessible via electronic means. In addition, the plan must indicate how confidentiality and anonymity will be maintained for data that may be linked to administrative or other kinds of data. If an award is made, the plan will need to be maintained.

Confirmation Statements from All Senior Personnel

Because an individual may serve as one of the senior personnel on only one PSID proposal submitted in response to this solicitation, each person who will serve as the senior personnel for a project described in a proposal must include a statement that confirms their participation in this project and that specifies that they are not participating as a PI, co-PI, or member of the senior personnel on any other project seeking PSID support.

The following statement from each individual serving as a member of the Senior Personnel on a project must be included as a supplementary document in the proposal. (This statement may be in the form of a signed statement or a statement sent by e-mail to the PI.)

To: NSF PSID Competition

From: _____
(Printed name of the individual collaborator or name of the organization and name and position of the official submitting this memo)

By signing or transmitting this message electronically, I acknowledge that I am a PI, co-PI, or other member of the senior personnel for the project outlined in the proposal titled "_____(proposal title)_____," with _____(PI name)_____ as the Principal Investigator.

In addition, I confirm that I am not a PI, co-PI, or other member of the senior personnel for any other project submitted for the PSID competition.

Signed: _____

Organization: _____

Date: _____

If an individual is involved as PI, co-PI, or other member of the senior personnel on two or more PSID proposals submitted, all proposals with which that person is associated will be returned without review.

Other Allowable Types of Supplementary Documentation

The following kinds of documentation may be included as supplementary documentation in a PSID proposal.

Letters of Collaboration

Brief statements, whether written as letters or as free-standing e-mail messages from individuals and/or organizations that will work with the PIs and/or provide assistance for the proposed project, may be included as supplementary documents. Such letters are not needed from individuals included as senior personnel on a project or from subawardee organizations because their involvement in the project is affirmed by the inclusion of their biographical sketches and/or subaward budgets.

Letters of collaboration should focus on the willingness of the letter's author to collaborate or provide assistance for the project in ways that have been outlined in the proposal. Such letters should not argue for support of the project by articulating in greater detail what activities the collaborator will undertake and/or by elaborating reasons for supporting the project. Such additional text may be included in the project description of the proposal but is not permitted in a supplementary document.

The Economics program directors strongly recommend the use of a template like the following for letters of collaboration. If this template or very similar text is not used, the text provided by the letter's author must be equally brief and to the point. Inclusion of longer letters may result in the PIs being forced to remove such letters (with no other changes to the proposal permitted) or in NSF's returning the proposal without review.

Suggested template for a letter of collaboration. (This statement may be in the form of a signed statement or a statement sent by email to the PI.)

To: NSF PSID Competition

From: _____ [Insert the name of the individual collaborator or insert the name of the organization and the name and position of the official submitting this statement]

By signing below or by transmitting this message electronically, I acknowledge that I/my organization [Choose appropriate text] will collaborate in and/or assist with the conduct of the project described in the proposal titled "_____" [Insert proposal title] with _____ [Insert the PI's name] as the Principal Investigator.

I/My organization [Choose appropriate text] will provide assistance as described in the project description of this proposal.

Signed: _____

Organization: _____

Date: _____

IRB Certifications

Proposers are reminded to see PAPPG, Chapter II.D.5 for NSF policies on proposals involving human subjects.

Research in Undergraduate Institutions (RUI) Supplementary Documentation

If the PSID proposal is being submitted from a primarily undergraduate institution, the two supplementary documents described in the Facilitating Research at Primarily Undergraduate Institutions: Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA) solicitation are permissible in proposals submitted to the PSID competition. Those supplementary documents are a certification of RUI eligibility and a separate RUI impact statement. Prepare these documents in accordance with instructions in the RUI/ROA solicitation.

Note that the RUI/ROA solicitation includes instructions that specify that if a predominantly undergraduate institution is submitting an RUI proposal for the PSID competition, it should select the number of the RUI/ROA solicitation for the cover sheet, but it should then select the SES-Economics program as the NSF unit to consider the proposal, and it should include reference to the proposal being submitted for the GSS competition in the first sentence of the

project summary. Although the proposal may be formally submitted in response to the RUI/ROA solicitation, the proposal must otherwise be compliant with all requirements in the PSID solicitation.

Supplementary Documentation NOT Allowed in PSID Proposals

Letters of Support

As specified in Chapter II, Section C.2.j of the NSF Proposal & Award Policies & Procedures Guide and the comparable section in the NSF Grants.gov Application Guide, letters of support are not permitted in NSF proposals unless specifically authorized in a solicitation. The GSS solicitation does NOT allow the submission of letters of support as supplementary documents. Letters from others that expound on and/or articulate in detail what activities a collaborator may undertake may be included in the project description, although inclusion of such letters must be accommodated within the 25 pages permitted for the project description.

Research Instruments, Data, Publications, and Other Nonpermissible Supplementary Documentation

Documentation that elaborates on how research will be conducted is not permitted as supplementary documentation. Survey or interview protocols, lists of data to be examined or already collected, graphics related to the project, and other such documentation may be included within the 30 pages permitted for the project description, but they may not be included as supplementary documents.

Reprints of publications or other materials that provide additional evidence of the past work of the researchers are not permitted as supplementary documents.

If a principal investigator has any uncertainty regarding the possible appropriateness of any document to be included as supplementary documentation, the investigator should contact the program director, usually well in advance of the proposal submission deadline.

Appendices

No appendices are permitted.

Other Issues to Address When Preparing a Proposal for This Solicitation

Proposals Involving Multiple Organizations

In the case of proposals involving multiple organizations, a single organization must be identified as the lead, and a single proposal describing the entire project must be submitted by that organization. Funds may be distributed among partner organizations via subawards from the lead organization. A budget on the standard NSF budget form should be submitted for each subawardee. The requirement for a single organization to submit the sole proposal for a project is designed to facilitate effective coordination among participating organizations and to avoid difficulties that ensue in funded projects when individuals change organizations and/or cease to fulfill project responsibilities.

Of the two types of collaborative proposal formats described in the NSF Proposal & Award Policies & Procedures Guide, this solicitation allows only a single proposal submission with subawards administered by that lead organization. **Direct submission of linked collaborative sets of proposals by multiple organizations is not permitted.**

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

C. Due Dates

- **Letter of Intent Due Date(s)** ***(required)*** (due by 5 p.m. submitter's local time):

  June 08, 2020

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

  August 04, 2020

D. FastLane/Research.gov/Grants.gov Requirements

For Proposals Submitted Via FastLane or Research.gov:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: https://www.fastlane.nsf.gov/a1/newstan.htm. 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 FastLane or Research.gov user support, call the FastLane and Research.gov Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov or rgov@nsf.gov. The FastLane and Research.gov Help Desk answers general technical questions related to the use of the FastLane and Research.gov systems. 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 the NSF FastLane system for further processing.

Proposers that submitted via FastLane or 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 *Building the Future: Investing in Discovery and Innovation - NSF Strategic Plan for Fiscal Years (FY) 2018 - 2022*. 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.C.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.C.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 underrepresented minorities 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 merit review criteria apply. Please see the full text of this solicitation for further information.

These criteria apply to the scientific infrastructure objectives listed in Section II.

- Extent to which the research team possesses the scientific and methodological expertise and resources for questionnaire development and innovation;
- Ability to collect of 2 biennial waves of questionnaire data from the families in the core sample (approximately 45 minutes of NSF-funded content) while maintaining the current wave-to-wave re-interview response rate;
- Quality of the plans to maintain continuity and the high quality of this data set;
- Capacity to process, edit and release raw data, generated variables, and code books within 12 months of collection;
- Capacity to maintain security of the data;
- Quality of the plans to maintain cyberinfrastructure to disseminate/share data while also expanding and innovating in data dissemination tools as the technology develops;
- Capacity to develop new methods to illustrate and advance the use and analysis of the data to a variety of audiences;
- Ability to maintain the following functions:
    - Secure access for approved researchers to sensitive/restricted data;
    - User help;
    - Bibliographic and award archive.; and
- Quality of the project management plans, including the role of the Board of Governance, the standards for data archiving and acquisition including possible data linkages, and the plans for managing and integrating NSF-funded PSID functions.

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.

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 applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees 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 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 a Grants Officer in the Division of Grants and Agreements. 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.

Special Award Conditions:

The membership of the Board of Governance will be nominated and selected according to the terms of the existing Board of Governance charter.

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:

- Nancy A. Lutz, W13243, telephone: (703) 292-7280, email: nlutz@nsf.gov

For questions related to the use of FastLane or Research.gov, contact:

- FastLane and Research.gov Help Desk: 1-800-673-6188

  FastLane Help Desk e-mail: fastlane@nsf.gov.

  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.E.6 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) 292-7827
- **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 awardees 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 applicants 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
Office of the General Counsel
National Science Foundation
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