

Innovation Corps - Regional Node Program (I-Corps Node)

PROGRAM SOLICITATION

NSF 12-586



National Science Foundation

Office of Integrative Activities

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

Office of Cyberinfrastructure

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

October 19, 2012

October 18, 2013

October 20, 2014

IMPORTANT INFORMATION AND REVISION NOTES

Important Reminders

A revised version of the *NSF Proposal & Award Policies & Procedures Guide (PAPPG)*, [NSF 11-1](#), was issued on October 1, 2010 and is effective for proposals submitted, or due, on or after January 18, 2011. Please be advised that the guidelines contained in [NSF 11-1](#) apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 18, 2011, must also follow the guidelines contained in [NSF 11-1](#).

Cost Sharing: The PAPPG has been revised to implement the National Science Board's recommendations regarding cost sharing. Inclusion of voluntary committed cost sharing is prohibited. In order to assess the scope of the project, all organizational resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal. The description should be narrative in nature and must not include any quantifiable financial information. Mandatory cost sharing will only be required when explicitly authorized by the NSF Director. See the PAPP Guide Part I: *Grant Proposal Guide (GPG) Chapter II.C.2.g(xi)* for further information about the implementation of these recommendations.

Data Management Plan: The PAPPG contains a clarification of NSF's long standing data policy. All proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units are available on the NSF website at: <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>. See [Chapter II.C.2.j](#) of the GPG for further information about the implementation of this requirement.

Postdoctoral Researcher Mentoring Plan: As a reminder, each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. Please be advised that if required, FastLane will not permit submission of a proposal that is missing a Postdoctoral Researcher Mentoring Plan. See [Chapter II.C.2.j](#) of the GPG for further information about the implementation of this requirement.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Innovation Corps - Regional Node Program (I-Corps Node)

Synopsis of Program:

The National Science Foundation (NSF) seeks to develop and nurture a national innovation ecosystem that builds

upon fundamental research to guide the output of scientific discoveries closer to the development of technologies, products and processes that benefit society.

The National Science Foundation plans to build upon the I-Corps program and establish a National Innovation Network comprised of I-Corps Regional Nodes that will support the needs for innovation research and education. NSF is seeking to build a network of regional nodes that will work cooperatively to establish, utilize and sustain a national innovation ecosystem that further enhances the development of technologies, products and processes that benefit society. The interconnected nodes of this network may be diverse in research areas, resources, tools, programs, capabilities, and in geographic locations - while the network will have the flexibility to grow or reconfigure as needs arise. I-Corps Regional Nodes will foster understanding on how to: 1) identify, develop and support promising ideas that can generate value, 2) create and implement tools and resources that enhance our nation's innovation capacity, 3) gather, analyze, evaluate and utilize the data and insight resulting from the experiences of those participating in the I-Corps program and 4) share and leverage effective innovation practices on a national scale - to improve the quality of life for the U.S. citizenry.

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.

- Don L. Millard, telephone: (703) 292-4620, email: dmillard@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 --- Education and Human Resources
- 47.080 --- Office of Cyberinfrastructure

Award Information

Anticipated Type of Award: Continuing Grant

Estimated Number of Awards: 4

Anticipated Funding Amount: \$2,000,000

\$ 2,000,000 in FY13, pending availability of funds

Single-institution Proposer: \$350,000 per year for up to three years

Two-institution Team: \$750,000 per year for up to three years

Three-institution Team: \$1.25 million per year for up to three years

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

PI Limit:

The PI must be an academic Administrative Lead at the level of Dean or higher.

Limit on Number of Proposals per Organization: 1

Limit on Number of Proposals per PI: 1

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposals:**
 - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
 - 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: http://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. proposer's local time):
 - October 19, 2012
 - October 18, 2013
 - October 20, 2014

Proposal Review Information Criteria

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

Award Administration Information

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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I. INTRODUCTION

America's prosperity has originated in part from the ability to capitalize economically on ground-breaking discoveries from science and engineering research. Simultaneously, a knowledgeable, creative workforce has maintained the country's global leadership in critical areas of technology. These important discoveries and capable workforce resulted from substantial, sustained investment in science and engineering. A strong capacity for translating fundamental scientific discoveries into powerful engines of innovation is essential to maintain our competitive edge in the future.

The National Science Foundation (NSF) supports fundamental research and education in science and engineering. NSF's dual role, unique among government agencies, results in new knowledge and tools as well as a capable, innovative workforce. These complementary building blocks of innovation have led to revolutionary technological advances and wholly new industries.

Through this initiative, NSF seeks to develop and nurture a national innovation ecosystem that builds upon fundamental research to guide the output of scientific discoveries closer to the development of technologies, products and processes that benefit society.

II. PROGRAM DESCRIPTION

I-Corps Regional Nodes must contribute to the National Innovation Network in the following three ways:

Level 1 Contribution - I-Corps Regional Training:

Nodes will demonstrate the capacity to deliver an innovation-enhancing training program based on the hypothesis/validation "Customer Development" curriculum used to support NSF I-Corps teams (see www.nsf.gov/i-corps).

The training will be offered at least once a year to institutions' research/academic community across disciplines. The selection and makeup of the participating teams will be coordinated by the I-Corps Regional Node and may include students, faculty, researchers and other local and regional stakeholders. The instructor team must consist of at least three trainers. In addition to the instructors, at least three members from the local investment community must be identified as potential volunteers for the training. When an I-Corps Regional Node award is made, the instructor-team will be required to participate in at least one NSF I-Corps cohort, delivered at an existing I-Corps Node, prior to delivering the training at their own site.

It is expected that assessment and evaluation data, resulting from the I-Corps regional training activities, will be openly shared among other NSF-awarded Innovation Corps nodes.

NOTE: NSF may call upon I-Corps Regional Nodes up to twice a year to host approximately 25-30 I-Corps teams in the delivery of the NSF-selected I-Corps curriculum. If NSF requests a Node to deliver the standard I-Corps curriculum, the I-Corps Regional Node will collaborate with NSF or an NSF designee to provide the I-Corps training. The budget for delivering the I-Corps curriculum will be negotiated at the time that such a request is made and should not be included as part of the response to the current solicitation.

Level 2 Contribution - I-Corps Node Regional Infrastructure:

I-Corps Regional Nodes will develop near-term tools and resources that will impact and expand the benefits of the entire I-Corps program within a 2-3 year timeframe.

Proposers are expected to identify models, to be leveraged for broad dissemination and implementation, of effective innovation content, curricula, and teaching/learning practices - detailing the specific activities, goals and measurable outcomes that will be associated with the proposed efforts. In addition, nodes will be required to develop and submit/utilize a logic model that describes the aspects of the proposed effort (e.g., inputs, activities, outputs and outcomes) and the associated data that will be used to measure any commensurate change/success/achievement. Proposers should consider how such activities will benefit the innovation network and how other nodes would be able to utilize/leverage their prospective Level 2 contributions.

Level 2 efforts should also address the issues associated with accelerating the diffusion/adaption/adoption of effective innovation practices in the national ecosystem, while further building entrepreneurial capacity in the node environments. Specific geographic locations may not have all that is necessary to create successful outcomes in a particular technology area. The innovation network, along with its nodes and effective linkages, can help foster connections to such an area and, ultimately, help produce success at scale.

Level 3 Contribution - I-Corps Node Blue Sky Research:

I-Corps Regional Nodes will identify and pursue longer-term (5+ year) research and development projects that meet the goals of the I-Corps program.

I-Corps Regional Nodes will be expected to leverage and analyze data from Level 1 and Level 2 contributions. Key activities will focus on: 1) developing an understanding of how institutions can improve support for innovation ecosystems; 2) sharing and developing methods for successfully scaling effective practices and models that foster innovation; 3) exploring how the National Innovation Network can enable new collaborations among geographic regions to support commercialization--independent of geographic locations; 4) examining and tracking the I-Corps teams' dynamics, activities and outcomes; and 5) identifying and proposing improvements to the I-Corps curriculum materials, training practices, and National Innovation Network utilization.

Considerations for Network Nodes

The I-Corps Regional Nodes in the National Innovation Network will have considerable autonomy in their operation, management, and oversight as part of the overall network. Each institution must commit to providing the necessary infrastructure, including appropriate personnel, equipment and facilities, in support of a networked community. Nodes must embrace a culture of open access to data, educators, researchers and mechanisms for encouraging non-traditional participants from diverse disciplines.

Proposers are encouraged to form partnerships among regional institutions. Collaborations of up to three institutions are encouraged. When more than one institution is involved, a plan for unified leadership across the institutions must be provided.

Coordinating Features of the Regional Nodes

Nodes should have the following features:

- Coordination of innovation research, education, outreach and commercial development programs across the network;
- Appropriate mixture of geographically distributed personnel and institutions that provide diverse and complementary capabilities to support current and anticipated needs for fostering innovation across a broad spectrum of science and engineering domains;
- Effective management structure to ensure close linkage and cooperation among the nodes such that they operate as a cohesive national network;
- Seamless methods of network operation that support projects across the network, through development and utilization of compatible internet-based networking/collaboration tools;
- Dissemination of shared knowledge to research and development communities;
- Promotion of diversity among students, faculty, staff, management, and outreach activities;
- Methods for assessment and metrics of node/network performance and impact;
- Planning processes to accommodate emerging areas and future growth of external/internal node participants, including adding new participants to, or dropping existing participants from, the network; and
- Fostering of additional support from non-NSF sources, including other Federal agencies, State governments, and the private sector.

Proposals must clearly demonstrate an ability and willingness to enable these features.

III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

The anticipated funding amount for FY13 is \$ 2,000,000

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

PI Limit:

The PI must be an academic Administrative Lead at the level of Dean or higher.

Limit on Number of Proposals per Organization: 1

Limit on Number of Proposals per PI: 1

Additional Eligibility Info:

A competitive proposal for an I-Corps Node will be led by an institution having an already existing unit whose goal is to assist faculty, students and other academic personnel to engage in entrepreneurial activities and transition scientific and technological innovations. Such units are typically called: innovation centers, entrepreneurial centers, technology incubators, etc. Their mission is to provide resources to individuals and teams in the form of space, seed funding, entrepreneurial mentoring, curriculum, or other assets needed to transition technology into the marketplace.

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 Grants.gov or via the NSF FastLane system.

- 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 Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 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: (http://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) 292-7827 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.4 of the Grant Proposal Guide provides additional information on collaborative proposals.

Proposals submitted to the I-Corps Regional Nodes Program deviate from the traditional format of a research proposal as described in NSF's GPG.

An I-Corps Regional Node proposal consists of the following parts:

Cover Sheet:

The cover sheet is automatically generated by FastLane or Grants.gov based on information entered into the "Cover Sheet."

Please note: The title should include, as a prefix, the name I-Corps Node. For example:

"I-Corps Node: Smytheson Center for Entrepreneurism"

Project Summary:

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and include a statement of objectives and methods to be employed. It must clearly address in separate statements (within the one-page summary):

- the intellectual merit of the proposed activity; and
- the broader impacts resulting from the proposed activity.

It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate lay reader. **Proposals that do not separately address both merit review criteria within the one-page Project Summary will be returned without review.**

To that end, proposers are encouraged to include separate headings within the one page document for both "Intellectual Merit" and "Broader Impacts".

Table of Contents:

The table of contents is automatically generated by FastLane or Grants.gov.

Project Description:

An I-Corps Regional Node proposal should include information organized in the most effective way to present a compelling story about why the proposed Node should be funded and why it will be effective at all three levels described above. The Project Description is limited to 15 pages and should address the bulleted topics.

Level 1 Contribution - I-Corps Regional Training

Please describe:

- How your current entrepreneur/innovation center is managed and functions, including lead personnel;
- The physical facilities, available resources and staffing;
- How you recruit individuals or teams to receive support from your center, how they are vetted, the number of individuals or teams assisted each year;
- The role of your institution's faculty and in-residence personnel;
- The role of venture capitalists and mentors and how you recruit members from the local investment community to participate in your Node's activities;
- Your capacity to deliver an innovation-enhancing training program (in terms of instruction and curriculum);
- How your center's teaching faculty are recruited and evaluated;
- The technology innovation practices, resources provided, entrepreneurial training, mentoring, commercialization launches, coaching, and curriculum used in your center;
- How processes and practices would change or be augmented to support the activity of an NSF I-Corps Regional Node;
- Noteworthy start-up success stories, competitions that were held, and publicity your center or projects have received;
- The assessment/evaluation data you collect and the follow-up you do with respect to projects that have been supported and/or launched by your center;
- A plan for the promotion of diversity among students, faculty, staff and management.

Level 2 Contribution - I-Corps Node Regional Infrastructure

Please describe:

- Coordination of innovation research, education, outreach and commercial development programs across the network;
- Mixture of geographically-distributed personnel and institutions that provide diverse and complementary capabilities to support current and anticipated needs for fostering innovation across a broad spectrum of science and engineering domains;
- Management structure to ensure close linkage and cooperation among the nodes such that they operate as a cohesive national network;
- If the node team consists of multiple institutions, describe how the team plans to manage across administrative boundaries;
- A plan for fostering additional support from non-NSF sources, including other Federal agencies, state governments, and the private sector;
- A plan for seamless methods of network operation that support projects across the network, through development and utilization of compatible internet-based networking/collaboration tools;
- Models of effective innovation content, curricula, and teaching/learning practices that will be implemented and disseminated;
- Approaches to accelerating the diffusion/adaption/adoption of effective innovation practices in the national ecosystem;
- Specific activities, goals, and measureable outcomes that will be associated with the proposed efforts;
- Data that will be used to measure any commensurate change/success/achievement;
- Methods for assessment and metrics of node/network performance and impact;
- Other near-term contributions.

Level 3 Contribution - I-Corps Node Blue Sky Research

Please describe:

- Long-term research and development projects that meet the goals of the I-Corps program;
- Planning process to accommodate emerging areas and future growth of external/internal node participants, including adding new Nodes to, or dropping existing Nodes from, the network;
- Methods for developing, sharing, and successfully scaling effective practices and models that foster innovation;
- How the network can enable new collaborations among geographic regions to support commercialization opportunity development;
- How the I-Corps teams' dynamics, activities and outcomes will be examined and tracked;
- How the materials, training practices, and other aspects of I-Corps curriculum will be assessed and disseminated;
- Other areas of activity focused on long-term deliverables.

References Cited

Provide a comprehensive listing of relevant reference sources.

Biographical sketches

A biographical sketch for each team member (two pages maximum per team member) must be provided, highlighting technical expertise and track records in successful technology and business development and be prepared in accordance with the requirements specified in the GPG. Exhaustive academic resumes are not appropriate.

Biographical sketches for non-compensated resources who will provide oversight for Level II and Level III activity and may contribute to the training effort of Level I activity.

Proposal Budget

Funding for the Innovation Corps Regional Node Program is limited to a maximum of \$1.25 million per year for a three-institution team; \$750,000 per year for two-institution teams and \$350,000 per year for single institution applicants. The award duration will not exceed three years.

The budget should include funds for Principal Investigator (PI) travel to one I-Corps Node meeting per year.

The I-Corps Regional Node Program will not fund legal expenses for commercialization.

Current and Pending Support

The proposal should provide information regarding all research to which the PI and Co-PIs have committed time or have planned to commit time. If none, state NONE. **Current and Pending Support must be uploaded for each of the team member. Note that this proposal is considered "pending" and therefore MUST appear on each Current and Pending Support submission.**

Facilities, Equipment, and Other Resources

Discuss requirements for and the availability of equipment, instrumentation, and facilities required for the proposed project. The description should be narrative in nature and must not include any quantifiable financial information.

Supplementary Documents:

Letters of commitment from local and regional stakeholders (not to exceed 3).

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. proposer's local time):

October 19, 2012

October 18, 2013

October 20, 2014

D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane 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.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

- **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:

http://www07.grants.gov/applicants/app_help_reso.jsp. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding 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.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. 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 who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the 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.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

Additional Solicitation Specific Review Criteria

In addition to the standard review criteria, a demonstrated command of the currently-deployed I-Corps curriculum will be part of the consideration process. Because I-Corps Regional Nodes will support cross-discipline teams, a demonstration of support from institution leadership will be an important consideration in the review of I-Corps Regional Node proposals.

Coordinating Features of the Regional Nodes are also important aspects. Consequently, proposals must clearly demonstrate an ability and willingness to enable these:

- Coordination of innovation research, education, outreach and commercial development programs across the network;
- Appropriate mixture of geographically distributed personnel and institutions that provide diverse and complementary capabilities to support current and anticipated needs for fostering innovation across a broad spectrum of science and engineering domains;
- Effective management structure to ensure close linkage and cooperation among the nodes such that they operate as a cohesive national network;
- Seamless methods of network operation that support projects across the network, through development and utilization of compatible internet-based networking/collaboration tools;
- Dissemination of shared knowledge to research and development communities;
- Promotion of diversity among students, faculty, staff, management, and outreach activities;
- Methods for assessment and metrics of node/network performance and impact;
- Planning processes to accommodate emerging areas and future growth of external/internal node participants, including adding new participants to, or dropping existing participants from, the network; and
- Fostering of additional support from non-NSF sources, including other Federal agencies, State governments, and the private sector.

NSF staff also will give careful consideration to the following in making funding decisions:

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- 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.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. 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 is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, 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.

In all cases, 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 and 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.

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 letter, 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 letter; (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 letter. 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 http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 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 *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

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 at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after 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 that PI. 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 FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational), publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report 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.

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:

- Don L. Millard, telephone: (703) 292-4620, email: dmillard@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@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, National Science Foundation Update is a free e-mail subscription service 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 Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the [NSF web site](#).

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at <http://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 provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 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 <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **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 Systems of Records, [NSF-50](#), "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and [NSF-51](#), "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). 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
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

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