



Proposal Preparation & Merit Review NSF-Day Workshop

November 8, 2012

NCURA 54th Annual Meeting
Washington, DC





WHERE DISCOVERIES BEGIN



Panelists

Dragana Brzakovic

Senior Staff Associate, Office of the Director, Office of Integrative Activities

Jolene Jesse

Program Director, Directorate for Education & Human Resources (EHR), Division of Human Resource Development (HRD).

Jacqueline Meszaros

Science & Engineering Policy Analyst, National Science Board



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Proposal Preparation Topics Covered

- Find Funding Opportunities
- Proposal and Award Policies and Procedures Guide
- Sections of an NSF Proposal
- Proposal Development Strategies
- Budgetary Guidelines
- Support for Proposal Writing
- Grants for Rapid Response (RAPID) & EARly-
Concept Grants for Exploratory Research (EAGER)



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Find Funding Opportunities

The screenshot shows the NSF website's navigation menu. The 'FUNDING' tab is highlighted with a red circle. The menu items are:

- Search Funding Opportunities
- Browse Opportunities A-Z
- Recent Opportunities
- Due Dates
- Preparing Proposals
- Policies & Procedures
- Merit Review
- Interdisciplinary Research
- Transformative Research
- About Funding

The main content area features a banner for 'Understanding Bacterial Crowdsourcing' with a 'FULL STORY' button. Below the banner is a navigation bar with 'Advancing the Sciences', 'Funding & Supporting', and 'Inspiring & Educating' tabs, and a 'HIDE' button. The page also displays several news items with images and titles:

- VIMS Researchers Unravel Life Cycle of Blue-crab Parasite** (October 4, 2012)
- A Mammal Lung, In 3-D** (October 2, 2012)
- Home-based Assessment Tool for Dementia Screening** (October 2, 2012)
- URI Scientists: Marine Plants Can Flee to Avoid Predators** (October 1, 2012)
- White Shark Diets Vary With Age and**
- Disappearing Act**



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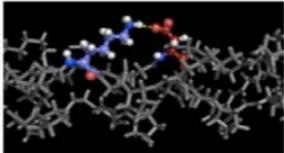
Find Funding Opportunities



September 27, 2012



Processes in Earth's Core
September 26, 2012



Rice University Lab Encodes Collagen
September 25, 2012



A Clock That Will Last Forever
September 24, 2012

NSF Funding & Research Community

SPECIAL NOTICES

Nominations for the 2013 Alan T. Waterman Award Are Being Accepted Through October 31, 2012

National Science Board Accepting Nominations for 2013 Honorary Awards in Science Leadership and Public Service Through November 1, 2012

NSF Notice of Intent to Revise American Recovery and Reinvestment Act (ARRA) Award General Terms and Conditions to Ensure Project Completion by September 30, 2013

NSF Information Related to the American Recovery and Reinvestment Act of 2009

EVENT CALENDAR

09 OCT	Center for e-Design IAB Meeting PARTNERSHIP MEETING
10	Advisory Committee for Geosciences

FUNDING OPPORTUNITIES

Search Funding Opportunities

Enter search term **GO**

Search by Program Area

Select One **GO**

VIEW ALL FUNDING OPPORTUNITIES >

Proposal and Award Policies and Procedures Guide
Prepare a Proposal
Upcoming Due Dates
Submit Proposal to FastLane



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NSF News and Information


National Science Foundation
 WHERE DISCOVERIES BEGIN

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News by Research Area
[Arctic & Antarctic](#)
[Astronomy & Space](#)
[Biology](#)

[An Advanced Cyberworld for Data Exploration](#)
 Released October 3, 2012
 News From the Field



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Other Ways to Find Funding



Use Grants.gov's search feature

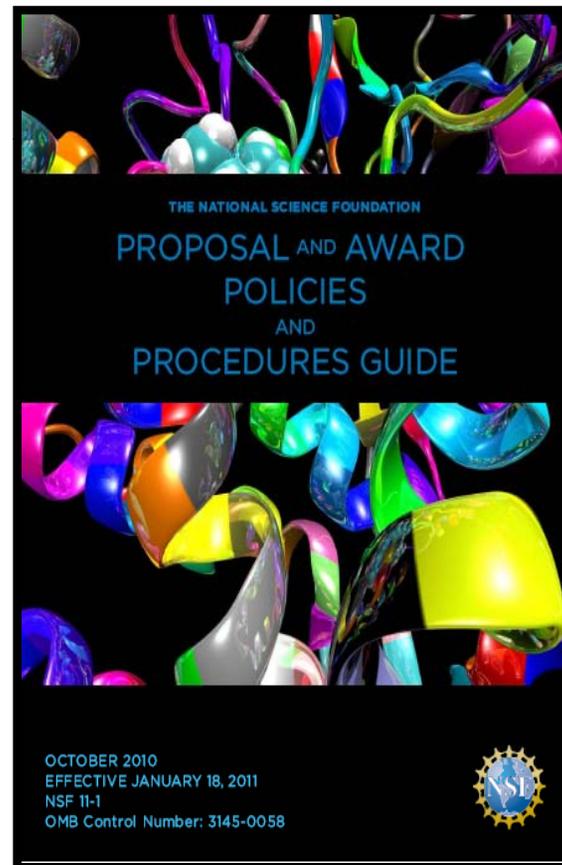


WHERE DISCOVERIES BEGIN



What is the Proposal & Award Policies & Procedures Guide?

The Proposal and Award Policies and Procedures Guide (PAPPG) contains documents relating to NSF's proposal and award process. It has been designed for use by both our customer community and NSF staff and consists of two parts:



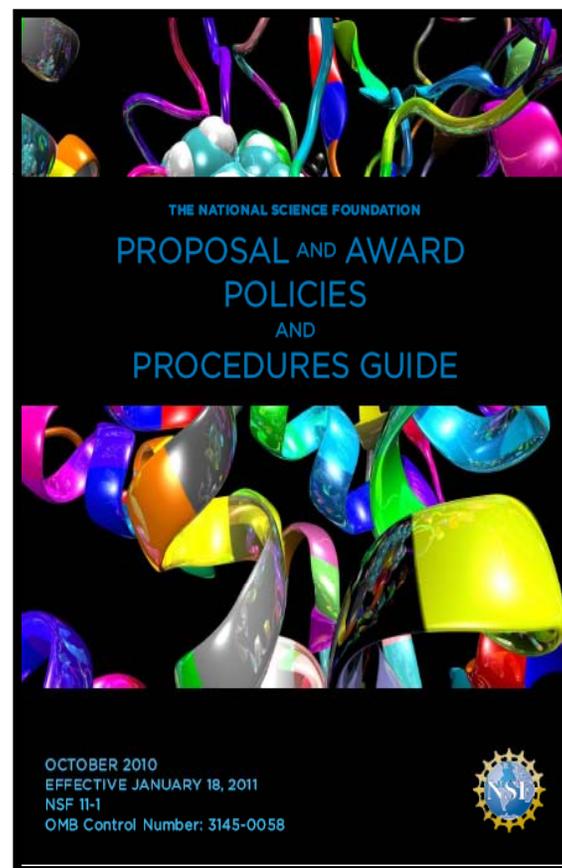


WHERE DISCOVERIES BEGIN



What is the Proposal & Award Policies & Procedures Guide?

Part I is NSF's proposal preparation and submission guidelines -- the NSF Grant Proposal Guide (GPG) and the NSF Grants.gov Application Guide.



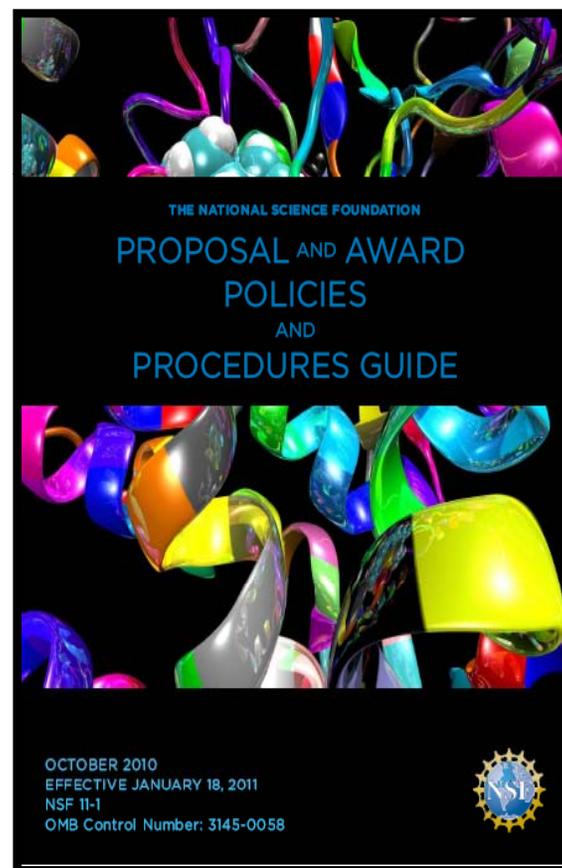


WHERE DISCOVERIES BEGIN



What is the Proposal & Award Policies & Procedures Guide?

Part II is NSF's award and administration guidelines -- the documents used to guide, manage, and monitor the award and administration of grants and cooperative agreements made by NSF.



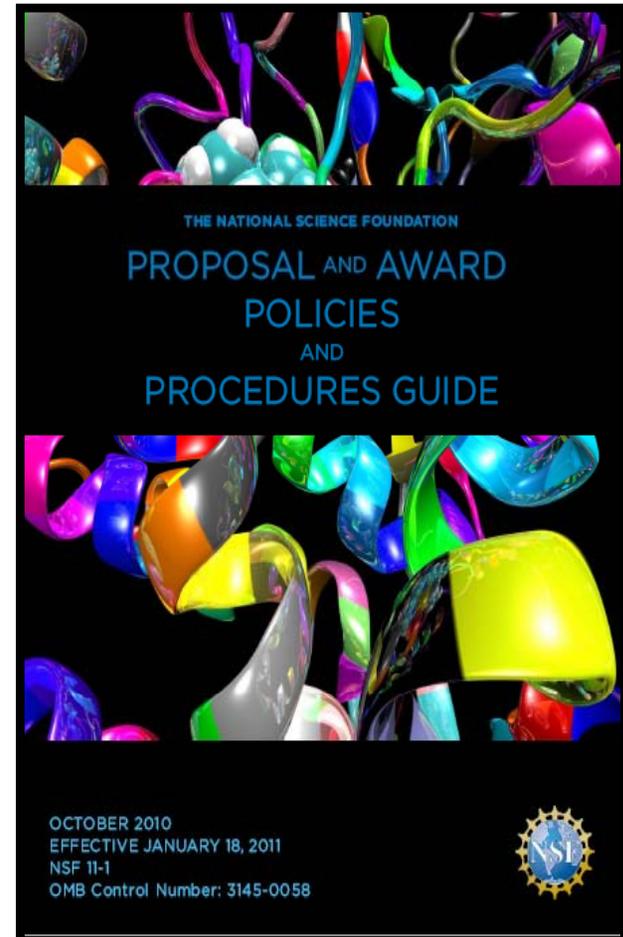


WHERE DISCOVERIES BEGIN



Grant Proposal Guide

- Provides guidance for preparation and submission of proposals to NSF
- Describes process – and criteria – by which proposals will be reviewed
- Outlines reasons why a proposal may be returned without review
- Describes process for withdrawals, returns & declinations





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Types of Funding Opportunities

Program Descriptions

Proposals for a **Program Description** must follow the instructions in the GPG.

Program Announcements

Proposals for a **Program Announcement** must follow the instructions in the GPG.

Program Solicitations

Proposals must follow the instructions in the **Program Solicitation**; the instructions in the GPG apply unless otherwise stated in the solicitation.

Dear Colleague Letters

Dear Colleague Letters are notifications of opportunities or special competitions for supplements to existing NSF awards.



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What to Look For in a Program Announcement or Solicitation

- **Goal of Program**
- **Eligibility**
- **Special proposal preparation and/or award requirements**



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Sample Cover Page of a Solicitation

Louis Stokes Alliances for Minority Participation (LSAMP)

PROGRAM SOLICITATION
NSF 12-564

REPLACES DOCUMENT(S):
NSF 11-543

 **National Science Foundation**
Directorate for Education & Human Resources
Division of Human Resource Development

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

- August 28, 2012
Bridge to the Doctorate
- October 05, 2012
First Friday in October, Annually Thereafter
Bridge to the Doctorate

**Program
Solicitation
Number**

**NSF
Directorates
and Offices
providing
funding for this
opportunity**



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Sample Cover Page of a Solicitation

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant or Cooperative Agreement

Estimated Number of Awards: 60



Up to 60 awards will be made across fiscal 2012 and 2013.

In FY 2012, up to 20 Bridge to the Doctorate (BD) grants will be made.

In FY2013, 20 Alliance grants (this includes 5 B2B), up to 15 Bridge to the Doctorate (BD) grants and up to 5 Broadening Participation Research (BPR) in STEM Education grants.

Anticipated Funding Amount: \$20,000,000



\$20,000,000 across fiscal years 2012 and 2013; Subject to the availability of funds.

Number of awards funded by the program per year

Funds available to the program per year



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Sample Cover Page of a Solicitation

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:

Alliance (including the B2B) and BD: To promote institutional commitments to increase the quality and quantity of under-represented minorities in STEM disciplines, the President or Provost of the lead institution should serve as the Principal Investigator. A full explanation should be provided for a PI designation in variance with this requirement. Co-principal investigators from partner institutions may be designated, as appropriate, for the project.

Broadening Participation Research in STEM Education: Eligible PI/co-PI(s) for proposals applying for educational research or evaluation support should be the individual conducting or responsible for the research or evaluation project. Other potential co-Principal Investigators include collaborators on the research project. At least one of the PI's must have experience in educational research.

Limit on Number of Proposals per Organization:

Alliances (including B2B) and BD: 1

Broadening Participation Research in STEM Education: No limit.

Limit on Number of Proposals per PI:

Alliances (including B2B): 1

Bridge to the Doctorate: 1

Broadening Participation Research in STEM Education: No limit

**Eligibility
information for
institutions/PIs
submitting
proposals**



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Types of Proposal Submissions

No Deadlines –
Proposals may be
submitted at any time



F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see [GPG I.H](#) for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates:** dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.
2. **Deadline dates:** dates after which proposals will not be accepted for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with [GPG Chapter II.A](#).



WHERE DISCOVERIES BEGIN



Types of Proposal Submissions

Target Dates –
Talk to the Program Office if you think you might miss the date



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Types of Proposal Submissions

Deadline Dates –
Proposals will not be accepted after this date and time (5 pm submitter's local time)



F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see [GPG I.H](#) for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

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Types of Proposal Submissions

Submission Windows –
Closing date converts to a
deadline date



3. Submission windows: designated periods of time during which proposals will be accepted for review by NSF. It is NSF's policy that the end date of a submission window converts to, and is subject to, the same policies as a deadline date.



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Types of Proposal Submissions

Letters of Intent –
Enables better management
of reviewers and panelists



1. Letter of Intent

Some NSF program solicitations require or request submission of a letter of intent (LOI) in advance of submission of a full proposal. A LOI is not binding. The predominant reason for its use is to help NSF program staff to gauge the size and range of the competition, enabling earlier selection and better management of reviewers and panelists. In addition, the information contained in a LOI is used to help avoid potential conflicts of interest in the review process.

A LOI normally contains the PI's and co-PI's names, a proposed title, a list of possible participating organizations (if applicable), and a synopsis that describes the work in sufficient detail to permit an appropriate selection of reviewers. A LOI is not externally evaluated or used to decide on funding. The requirement to submit a LOI will be identified in the program solicitation, and such letters are submitted electronically via the NSF FastLane System.

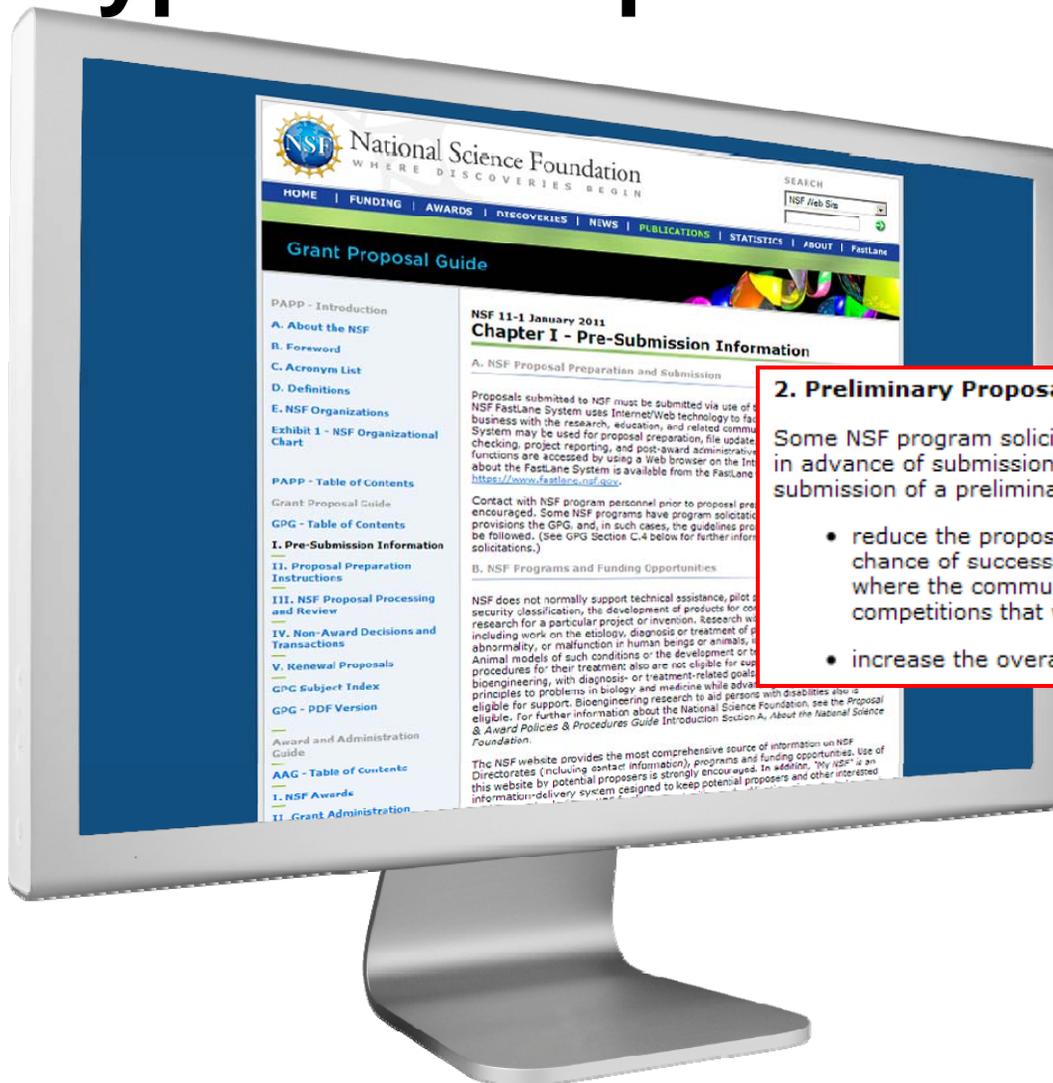


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Types of Proposal Submissions

**Preliminary Proposals –
Sometimes required,
sometimes optional**



2. Preliminary Proposal

Some NSF program solicitations require or request submission of a preliminary proposal in advance of submission of a full proposal. The two predominant reasons for requiring submission of a preliminary proposal are to:

- reduce the proposers' unnecessary effort in proposal preparation when the chance of success is very small. This is particularly true of exploratory initiatives where the community senses that a major new direction is being identified, or competitions that will result in a small number of actual awards; and
- increase the overall quality of the full submission.



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Cover Sheet (Required)

Many of the boxes on the cover sheet are electronically prefilled as part of the FastLane login process.

Example from FastLane

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION					
PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE (if not in response to a program announcement/solicitation enter NSF 09-1)					FOR NSF USE ONLY
NSF 98-164					NSF PROPOSAL NUMBER
FOR CONSIDERATION BY NSF ORGANIZATION UNIT(S) (indicate the most specific unit known, i.e. program, division, etc.)					0840812
CNS - NETWORKING RESEARCH					
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Data Universal Numbering System)	FILE LOCATION
08/03/2008	17	05050000 NCR	4097	0748118054568	02/10/2009 10:22am
EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)	SHOW PREVIOUS AWARD NO. IF THIS IS <input type="checkbox"/> A RENEWAL <input type="checkbox"/> AN ACCOMPLISHMENT-BASED RENEWAL		IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IF YES, LIST ACRONYM(S)		
NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE		ADDRESS OF AWARDING ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE			
NSF		Arlington, VA 222302000			
AWARDEE ORGANIZATION CODE (IF KNOWN)		US			
4102852000					
NAME OF PERFORMING ORGANIZATION, IF DIFFERENT FROM ABOVE		ADDRESS OF PERFORMING ORGANIZATION, IF DIFFERENT, INCLUDING 9 DIGIT ZIP CODE			
PERFORMING ORGANIZATION CODE (IF KNOWN)					
IS AWARDING ORGANIZATION (Check All That Apply) (See GPG II.C For Definitions)		<input type="checkbox"/> SMALL BUSINESS	<input type="checkbox"/> MINORITY BUSINESS	<input type="checkbox"/> IF THIS IS A PRELIMINARY PROPOSAL THEN CHECK HERE	
		<input type="checkbox"/> FOR-PROFIT ORGANIZATION	<input type="checkbox"/> WOMAN-OWNED BUSINESS		
TITLE OF PROPOSED PROJECT Neural Network Research					
REQUESTED AMOUNT	PROPOSED DURATION (1-60 MONTHS)	REQUESTED STARTING DATE	SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE		
\$ 400,000	0 months				
CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW					
<input type="checkbox"/> BEGINNING INVESTIGATOR (GPG I.G.2)		<input type="checkbox"/> HUMAN SUBJECTS (GPG II.D.6) Human Subjects Assurance Number _____			
<input type="checkbox"/> DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.C)		Exemption Subsection _____ or IRB App. Date _____			
<input type="checkbox"/> PROPRIETARY & PRIVILEGED INFORMATION (GPG I.D., II.C.1.d)		<input type="checkbox"/> INTERNATIONAL COOPERATIVE ACTIVITIES: COUNTRY/COUNTRIES INVOLVED (GPG II.C.2.j)			
<input type="checkbox"/> HISTORIC PLACES (GPG II.C.2.j)					
<input type="checkbox"/> SMALL GRANT FOR EXPLOR. RESEARCH (SGER) (GPG II.D.1)		<input type="checkbox"/> HIGH RESOLUTION GRAPHICS/OTHER GRAPHICS WHERE EXACT COLOR REPRESENTATION IS REQUIRED FOR PROPER INTERPRETATION (GPG I.G.1)			
<input type="checkbox"/> VERTEBRATE ANIMALS (GPG II.D.5) IACUC App. Date _____		PHS Animal Welfare Assurance Number _____			
PI/PD DEPARTMENT		PI/PD POSTAL ADDRESS			
Division of Information Systems		4201 Wilson Boulevard			
PI/PD FAX NUMBER		Arlington, VA 222301000			
703-292-3000		United States			
NAMES (TYPED)	High Degree	Yr of Degree	Telephone Number	Electronic Mail Address	
PI/PD NAME					
Terry Demo	PhD	2005	703-292-1000	td@nsf.gov	
CO-PI/PD					

Electronic Signature



Sections of an NSF Proposal

Project Summary (Required)

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length.

Proposals that do not separately address both merit review criteria will be returned without review.

Text from the GPG

- Organization Name (Identify the organization name of the primary site where the work will be performed, if different than the awardee);
- Street;
- City;
- State;
- Country; and
- 9-digit Zip Code.

For projects that support research infrastructure and tools, such as vessels, facilities, and telescopes, the project/performance site should correspond to the physical location of the research asset. For research assets or projects that are geographically distributed, the proposer should report information for the primary site, as defined by the proposer. For example, proposals for the operations and maintenance of research vessels may list the project/performance site as the vessel's home port.

(h) Other Information

Should any of the following items on the Cover Sheet apply to a proposal, the applicable box(es) must be checked.

- Beginning Investigator (See GPG I.G.2)
- Disclosure of Lobbying Activities (See GPG II.C.1e)
- Proprietary or Privileged Information (See GPG I.D.3 & II.C.1d)
- Historic Places (See GPG II.C.2)
- Rapid Response Grants (See GPG II.D.1)
- EARly-concept Grants for Exploratory Research (EAGER) (See GPG II.D.2)
- Vertebrate Animals¹⁹ (See GPG II.D.6)
- Human Subjects²⁰ (See GPG II.D.7)
- High Resolution Graphics/Other Graphics Where Exact Color Representation is Required for Proper Interpretation (See GPG I.G.1)
- International Cooperative Activities Country Name(s) (See GPG II.C.2)

b. 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".

¹⁹ If the proposal includes use of Vertebrate Animals, supplemental information is required. See GPG Chapter II.D.6 for additional information.

²⁰ If the proposal includes use of Human Subjects, supplemental information is required. See GPG Chapter II.D.7 for additional information.



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Project Description (Required)

The two merit review criteria should be addressed with the project description, which may not exceed 15 pages.

Text from the GPG

c. Table of Contents

A Table of Contents is automatically generated for the proposal by the FastLane system. The proposer cannot edit this form.

d. Project Description (Including Results from Prior NSF Support)

(I) Content

All proposals to NSF will be reviewed utilizing the two merit review criteria described in greater length in GPG Chapter III.

The Project Description should provide a clear statement of the work to be undertaken and must include: objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures. It must describe as an integral part of the narrative, the broader impacts resulting from the proposed activities, addressing one or more of the following as appropriate for the project: how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning; ways in which the proposed activity will broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.); how the project will enhance the infrastructure for research and/or education, such as facilities, instrumentation, networks, and partnerships; how the results of the project will be disseminated broadly to enhance scientific and technological understanding; and potential benefits of the proposed activity to society at large. Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website.

Plans for data management and sharing of the products of research, including preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products should be described in the Special Information and Supplementary Documentation section of the proposal (see GPG Chapter II.C.2.), for additional instructions for preparation of this section).

(II) Page Limitations and Inclusion of Universal Resource Locators (URLs) within the Project Description

Brevity will assist reviewers and Foundation staff in dealing effectively with proposals. Therefore, the Project Description (Including Results from Prior NSF Support, which is limited to five pages) may not exceed 15 pages. Visual materials, including charts, graphs, maps, photographs and other pictorial presentations are included in the 15-page limitation. PIs are cautioned that the Project Description must be self-contained and that URLs that provide information related to the proposal should not be used because 1) the information could circumvent page limitations, 2) the reviewers are under no obligation to view the sites, and 3) the sites could be altered or abolished between the time of submission and the time of review.

Conformance to the 15-page limitation will be strictly enforced and may not be exceeded unless a deviation has been specifically authorized. (GPG Chapter III.A contains information on deviations.)

(III) Results from Prior NSF Support

If any PI or co-PI identified on the project has received NSF funding in the past five years, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal. The following information must be provided:

- (a) the NSF award number, amount and period of support;
- (b) the title of the project;



Sections of an NSF Proposal

References Cited (Required)

Reference information is required, and proposers must follow accepted scholarly practices in providing citations for source materials.

Text from the GPG

- (c) a summary of the results of the completed work, including accomplishments related to the Broader Impact activities supported by the award and, for a research project, any contribution to the development of human resources in science and engineering;
- (d) publications resulting from the NSF award;
- (e) evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models, as described in any Data Management Plan; and
- (f) if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

Reviewers will be asked to comment on the quality of the prior work described in this section of the proposal. Please note that the proposal may contain up to five pages to describe the results. Results may be summarized in fewer than five pages, which would give the balance of the 15 pages for the Project Description.

(iv) Unfunded Collaborations

Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided in the supplementary documentation section of the FastLane Proposal Preparation Module. Collaborative activities that are identified in the budget should follow the instructions in GPG Chapter II.D.4.

(v) Group Proposals

NSF encourages submission of proposals by groups of investigators; often these are submitted to carry out interdisciplinary projects. Unless stipulated in a specific program solicitation, however, such proposals will be subject to the 15-page Project Description limitation established in Section (ii) above. PIs who wish to exceed the established page limitations for the Project Description must request and receive a deviation in advance of proposal submission. (GPG Chapter II.A contains information on deviations.)

(vi) Proposals for Renewed Support

A proposal for renewed support may be either a "traditional" proposal in which the proposed work is documented and described as fully as though the proposer were applying for the first time; or, an "Accomplishment-Based Renewal" (ABR) proposal, in which the Project Description is replaced by copies of no more than six reprints of publications resulting from the research supported by NSF during the preceding three to five year period, plus a brief summary of plans for the proposed support period. (See GPG Chapter V for additional information on preparation of Renewal Proposals.)

9. References Cited

Reference information is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified.²¹ Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only and must not be used to provide parenthetical information outside of the 15-page Project Description.

²¹If the proposer has a website address readily available, that information should be included in the citation, as stated above. It is not NSF's intent, however, to place an undue burden on proposers to search for the URL of every referenced publication. Therefore, inclusion of a website address is optional. A proposal that includes reference citation(s) that do not specify a URL address is not considered to be in violation of NSF proposal preparation guidelines and the proposal will still be reviewed.



Sections of an NSF Proposal

Biographical Sketches (Required)

Biographical sketches are required for all senior project personnel and must not exceed two pages in length, per individual.

Text from the GPG

f. Biographical Sketch(es)

(i) Senior Personnel

A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. (See GPG Exhibit II-7 for the definitions of Senior Personnel.) The following information must be provided in the order and format specified below.

Do not submit personal information such as home address; home telephone, fax, or cell phone numbers; home e-mail address; date of birth; citizenship; drivers' license numbers; marital status; personal hobbies; and the like. Such personal information is irrelevant to the merits of the proposal. If such information is included, NSF will make every effort to prevent unauthorized access to such material, but the Foundation is not responsible or in any way liable for the release of such material. (See also GPG Chapter III.G.)

(a) Professional Preparation

A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

Undergraduate Institution(s)	Major	Degree & Year
Graduate Institution(s)	Major	Degree & Year
Postdoctoral Institution(s)	Area	Inclusive Dates (years)

(b) Appointments

A list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.

(c) Publications

A list of: (i) up to five publications most closely related to the proposed project; and (ii) up to five other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified.

For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included.

(d) Synergistic Activities

A list of up to five examples that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

(e) Collaborators & Other Affiliations

- **Collaborators and Co-Editors.** A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of the proposal. Also include those individuals who are currently or have been co-editors of a journal, compendium, or conference proceedings during the 24 months preceding the submission of the proposal. If there are no collaborators or co-editors to report, this should be so indicated.



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Budget (Required)

Each proposal must contain a budget for each year of support requested. The budget justification should be no more than three pages for all years of the project combined.

Example from FastLane

SUMMARY PROPOSAL BUDGET				YEAR 1		FOR NSF USE ONLY		
ORGANIZATION NSF				PROPOSAL NO.	DURATION (months)			
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Terry Demo				AWARD NO.		Proposed	Granted	
A. SENIOR PERSONNEL: P/PI/D, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded CAL	NSF Funded ACAD	NSF Funded SUMR	Funds Requested By proposer	Funds granted by NSF (if different)
1.	Terry Demo - none		0.00	0.00	0.00	\$	400,000	\$
2.								
3.								
4.								
5.								
6.	(0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)		0.00	0.00	0.00		0	
7.	(1) TOTAL SENIOR PERSONNEL (1 - 6)		0.00	0.00	0.00		400,000	
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)								
1.	(0) POST DOCTORAL SCHOLARS		0.00	0.00	0.00		0	
2.	(0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)		0.00	0.00	0.00		0	
3.	(0) GRADUATE STUDENTS						0	
4.	(0) UNDERGRADUATE STUDENTS						0	
5.	(0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)						0	
6.	(0) OTHER						0	
TOTAL SALARIES AND WAGES (A + B)							400,000	
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							0	
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							400,000	
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)								
TOTAL EQUIPMENT							0	
E. TRAVEL								
1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							0	
2. FOREIGN							0	
F. PARTICIPANT SUPPORT COSTS								
1. STIPENDS \$ _____							0	
2. TRAVEL _____							0	
3. SUBSISTENCE _____							0	
4. OTHER _____							0	
TOTAL NUMBER OF PARTICIPANTS (0)				TOTAL PARTICIPANT COSTS			0	
G. OTHER DIRECT COSTS								
1. MATERIALS AND SUPPLIES							0	
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0	
3. CONSULTANT SERVICES							0	
4. COMPUTER SERVICES							0	
5. SUBAWARDS							0	
6. OTHER							0	
TOTAL OTHER DIRECT COSTS							0	
H. TOTAL DIRECT COSTS (A THROUGH G)							400,000	
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) (Rate: , Base:)								
TOTAL INDIRECT COSTS (F&A)							0	
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							400,000	
K. RESIDUAL FUNDS							0	
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$ 400,000	\$
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$				
PI/PI/D NAME Terry Demo				FOR NSF USE ONLY				
ORG. REP. NAME* Terry Demo				INDIRECT COST RATE VERIFICATION				
				Date Checked	Date Of Rate Sheet	Initials - ORG		

1 *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Current & Pending Support (Required)

This section of the proposal calls for information on all current and pending support for ongoing projects and proposals.

Example from FastLane

Current and Pending Support (See GPG Section II.C.2.h for guidance on information to include on this form.)	
<small>The following information should be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.</small>	
Investigator:	Other agencies (including NSF) to which this proposal has been/will be submitted:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support	
Project/Proposal Title:	
Source of Support:	Total Award Period Covered:
Total Award Amount: \$	
Location of Project:	
Person-Months Per Year Committed to the Project.	Cal: Acad: Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support	
Project/Proposal Title:	
Source of Support:	Total Award Period Covered:
Total Award Amount: \$	
Location of Project:	
Person-Months Per Year Committed to the Project.	Cal: Acad: Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support	
Project/Proposal Title:	
Source of Support:	Total Award Period Covered:
Total Award Amount: \$	
Location of Project:	
Person-Months Per Year Committed to the Project.	Cal: Acad: Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support	
Project/Proposal Title:	
Source of Support:	Total Award Period Covered:
Total Award Amount: \$	
Location of Project:	
Person-Months Per Year Committed to the Project.	Cal: Acad: Summ:

*If this project has previously been funded by another agency, please list and furnish information for immediately preceding funding period.

Page G-0 USE ADDITIONAL SHEETS AS NECESSARY



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Facilities, Equipment, and Other Resources (Required)

This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed.

Example from FastLane

FACILITIES, EQUIPMENT & OTHER RESOURCES

FACILITIES: Identify the facilities to be used at each performance site listed and, as appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Use "Other" to describe the facilities at any other performance sites listed and at sites for field studies. USE additional pages as necessary.

Laboratory:

Clinical:

Animal:

Computer:

Office:

Other:

MAJOR EQUIPMENT: List the most important items available for this project and, as appropriate identifying the location and pertinent capabilities of each.

OTHER RESOURCES: Provide any information describing the other resources available for the project. Identify support services such as consultant, secretarial, machine shop, and electronics shop, and the extent to which they will be available for the project. Include an explanation of any consortium/contractual arrangements with other organizations.



WHERE DISCOVERIES BEGIN



Sections of an NSF Proposal

Special Information and Supplementary Documentation

This segment should alert NSF officials to unusual circumstances that require special handling; more information can be found in the GPG Chapter II.C.2.j.

Text from the GPG

Costs of entertainment, amusement, diversion and social activities and any costs directly associated with such activities (such as tickets to shows or sporting events, meals, lodging, rentals, transportation and gratuities) are unallowable. Travel, meal and hotel expenses of grantee employees who are not on travel status are unallowable. Costs of employees on travel status are limited to those allowed under the governing cost principles for travel expenses.

(b) Meals and Coffee Breaks

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

(c) Alcoholic Beverages

No NSF funds may be spent on alcoholic beverages.

Additional information on charging certain types of costs generally associated with meetings and conferences to NSF awards is available in AAG Chapter V.C.5.

h. Current and Pending Support

This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed. The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel must be included, even if they receive no salary support from the project(s). The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months per year to be devoted to the project, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including NSF. Concurrent submission of a proposal to other organizations will not prejudice its review by NSF. Note the Biological Sciences Directorate exception to this policy, however, delineated in GPG Chapter I.G.2.

If the project now being submitted has been funded previously by a source other than NSF, the information requested in the paragraph above must be furnished for the last period of funding.

i. Facilities, Equipment and Other Resources

This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the resources that the organization will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., budget justification, project description). The description should be narrative in nature and must not include any quantifiable financial information. Reviewers will evaluate the information during the merit review process and the cognizant NSF Program Officer will review it for programmatic and technical sufficiency.

Although these resources are not considered cost sharing as defined in 2 CFR § 215.23 (OMB Circular A-110), the Foundation does expect that the resources identified in the Facilities, Equipment, and Other Resources section will be provided, or made available, should the proposal be funded. AAG Chapter II.B.1 specifies procedures for use by the awardee when there are postaward changes to objective, scope or methodology.

j. Special Information and Supplementary Documentation

Except as specified below, special information and supplementary documentation must be included as part of the Project Description (or part of the budget justification), if it is relevant to determining the quality of the proposed work. Information submitted in the following areas is not considered part of the 15-page Project Description limitation. This Special Information and Supplementary Documentation section also is not considered an appendix. Specific guidance on the need for additional documentation may be obtained from the organization's sponsored projects office or in the references cited below.



WHERE DISCOVERIES BEGIN



Proposal Development Strategies

Key Questions for Prospective Investigators

- **What do you intend to do?**
- **Why is the work important?**
- **What has already been done?**
- **How are you going to do the work?**



WHERE DISCOVERIES BEGIN



Proposal Development Strategies for Individual Investigators

- **Determine your long-term research and education goals**
- **Develop your bright idea**
 - **Survey the literature**
 - **Contact other investigators currently working on the same subject**
 - **Prepare a brief concept paper**
 - **Discuss with your colleagues and mentors**
- **Read solicitation instructions carefully**



WHERE DISCOVERIES BEGIN



Proposal Development Strategies for Individual Investigators

- **Prepare to carry out your project**
 - **Determine available resources**
 - **Realistically assess your needs**
 - **Develop preliminary data**
 - **Present to your colleagues, mentors, and students**
- **Determine possible funding sources**
- **Understand the ground rules**



WHERE DISCOVERIES BEGIN



Proposal Development Strategies: Mentoring for Postdoctoral Researchers

- Proposals that include funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals.**
- Proposed mentoring activities will be evaluated as part of the merit review process, under NSF's broader impacts merit review criterion.**



WHERE DISCOVERIES BEGIN



Proposal Development Strategies: Mentoring for Postdoctoral Researchers

- **Mentoring activities may include:**
 - Providing career counseling, training in the preparation of grant proposals, or training in responsible professional practices
 - Developing publications and presentations
 - Offering guidance on techniques to improve teaching and mentoring skills
 - Providing counseling on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas



WHERE DISCOVERIES BEGIN



Proposal Development Strategies: Mentoring for Postdoctoral Researchers

- **Proposals that identify a postdoc on the budget but do not include a maximum one-page mentoring plan as a supplementary document will be prevented from submission in FastLane.**
- **For collaborative proposals, the lead organization must submit a mentoring plan for all postdoctoral researchers supported under the entire collaborative project.**



WHERE DISCOVERIES BEGIN



Data Management Plan Requirements

- **All proposals are required to include, as a supplementary doc, a data management plan of up to 2 pages.**
- **Plan should describe how the proposal will conform to NSF policy on dissemination and sharing of research results.**
- **A valid Data Management Plan may include only the statement that no detailed plan is needed, as long a clear justification is provided.**
- **Plan will be reviewed as part of the intellectual merit and/or broader impacts of the proposal.**



WHERE DISCOVERIES BEGIN



Data Management Plan Requirements

The screenshot shows the NSF website's navigation menu with links for HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT, and FastLane. The main content area is titled "Dissemination and Sharing of Research Results" and includes sections for "NSF Data Sharing Policy" and "NSF Data Management Plan Requirements".

Dissemination and Sharing of Research Results

NSF Data Sharing Policy

Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants. Grantees are expected to encourage and facilitate such sharing. See [Award & Administration Guide \(AAG\) Chapter VI.D.4](#).

NSF Data Management Plan Requirements

Proposals submitted or due on or after January 18, 2011, must include a supplementary document of no more than two pages labeled "Data Management Plan". This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. See [Grant Proposal Guide \(GPG\) Chapter II.C.2.j](#) for full policy implementation.

Requirements by Directorate, Office, Division, Program, or other NSF Unit

Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units, are provided below. If guidance specific to the program is not provided, then the requirements established in [Grant Proposal Guide, Chapter II.C.2.j](#) apply.

Please note that if a specific program solicitation provides guidance on preparation of data management plans, such guidance must be followed.

- Engineering Directorate (ENG)
 - [Directorate-wide Guidance](#)
- Geological Sciences Directorate (GEO)
 - [Division of Earth Sciences](#)
 - [Integrated Ocean Drilling Program](#)
 - [Division of Ocean Sciences](#)
- Mathematical and Physical Sciences Directorate (MPS)
 - [Division of Astronomical Sciences](#)
 - [Division of Chemistry](#)
 - [Division of Materials Research](#)
 - [Division of Mathematical Sciences](#)
 - [Division of Physics](#)
- Social, Behavioral and Economic Sciences Directorate (SBE)
 - [Directorate-wide Guidance](#)

[Data Management & Sharing Frequently Asked Questions \(FAQs\)](#) - updated November 30, 2010

<http://www.nsf.gov/bfa/dias/policy/dmp.jsp>



WHERE DISCOVERIES BEGIN



Budgetary Guidelines

Information regarding budgetary guidelines can be found in both the **GPG** and in the **Award & Administration Guide (AAG)**, as well as NSF program solicitations

Amounts should be:

- **Realistic and reasonable**
- **Well-justified and should establish need**
- **Consistent with program guidelines**

Eligible costs consist of:

- **Personnel**
- **Equipment**
- **Travel**
- **Participant support**
- **Other direct costs**
(e.g., subawards, consultant services, computer services, and publications costs)



WHERE DISCOVERIES BEGIN



NSF Cost Sharing Policy

- Inclusion of voluntary *committed* cost sharing is prohibited in solicited & unsolicited proposals.
 - To be considered voluntary committed cost sharing, the cost sharing must meet all of the standards of [2 CFR § 215.23](#), to include identification of cost sharing on the NSF budget.
 - Line M will be “grayed out” in FastLane.
- Organizations may, at their own discretion, continue to contribute any amount of voluntary uncommitted cost sharing to NSF-sponsored projects.



WHERE DISCOVERIES BEGIN



Find Support for Proposal Writing

- **NSF Publications**
 - Program announcements and solicitations
 - Proposal & Award Policies & Procedures Guide
 - Program Web pages
 - Funded project abstracts
 - Reports and special publications
- Targeted workshops
- Program Officers
- Mentors on Campus
- Former panelists
- Sponsored Research Office
- Successful proposals

Finally, serving as a reviewer is helpful as well!



WHERE DISCOVERIES BEGIN



Grants for Rapid Response Research (RAPID)

The RAPID funding mechanism is for projects having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events.



WHERE DISCOVERIES BEGIN



Grants for Rapid Response Research (RAPID)

- Requests may be for up to \$200K and for one year of duration
- The project description is expected to be brief; no more than five pages
- Only internal merit review is required for RAPID proposals. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed



WHERE DISCOVERIES BEGIN



EARLY-concept Grants for Exploratory Research (EAGER)

- **The EAGER funding mechanism may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches.**
- **This work is considered especially "high risk-high payoff" because it involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives.**



WHERE DISCOVERIES BEGIN



EARLY-concept Grants for Exploratory Research (EAGER)

- **Requests may be for up to \$300K and for two years of duration**
- **Only internal merit review is required. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed**
- **No-cost extensions, and requests for supplemental funding may be requested but are subject to full external merit review**



WHERE DISCOVERIES BEGIN



Merit Review

Topics Covered

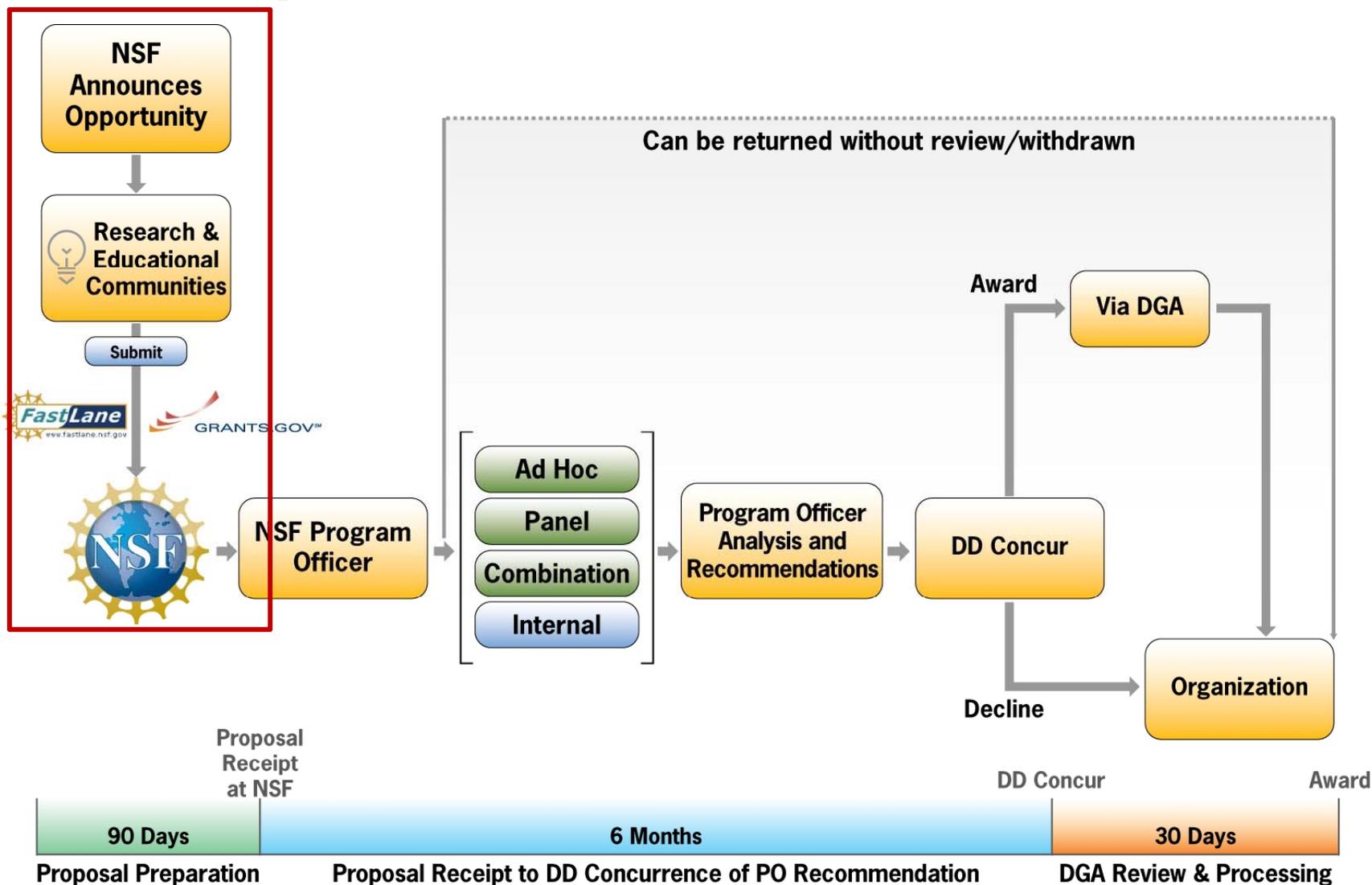
- **Proposal and Award Timeline**
- **Proposal Preparation and Submission**
 - Reminders When Preparing Proposals
- **Proposal Review and Processing**
 - Program Officer Review
 - Proposal Review Criteria
 - Types of Reviews
 - Becoming a Reviewer
 - Managing Conflicts of Interest
 - Funding Decisions
- **Award Processing**
 - Issuing the Award



WHERE DISCOVERIES BEGIN



NSF Proposal & Award Process Timeline





WHERE DISCOVERIES BEGIN



Reminders When Preparing Proposals

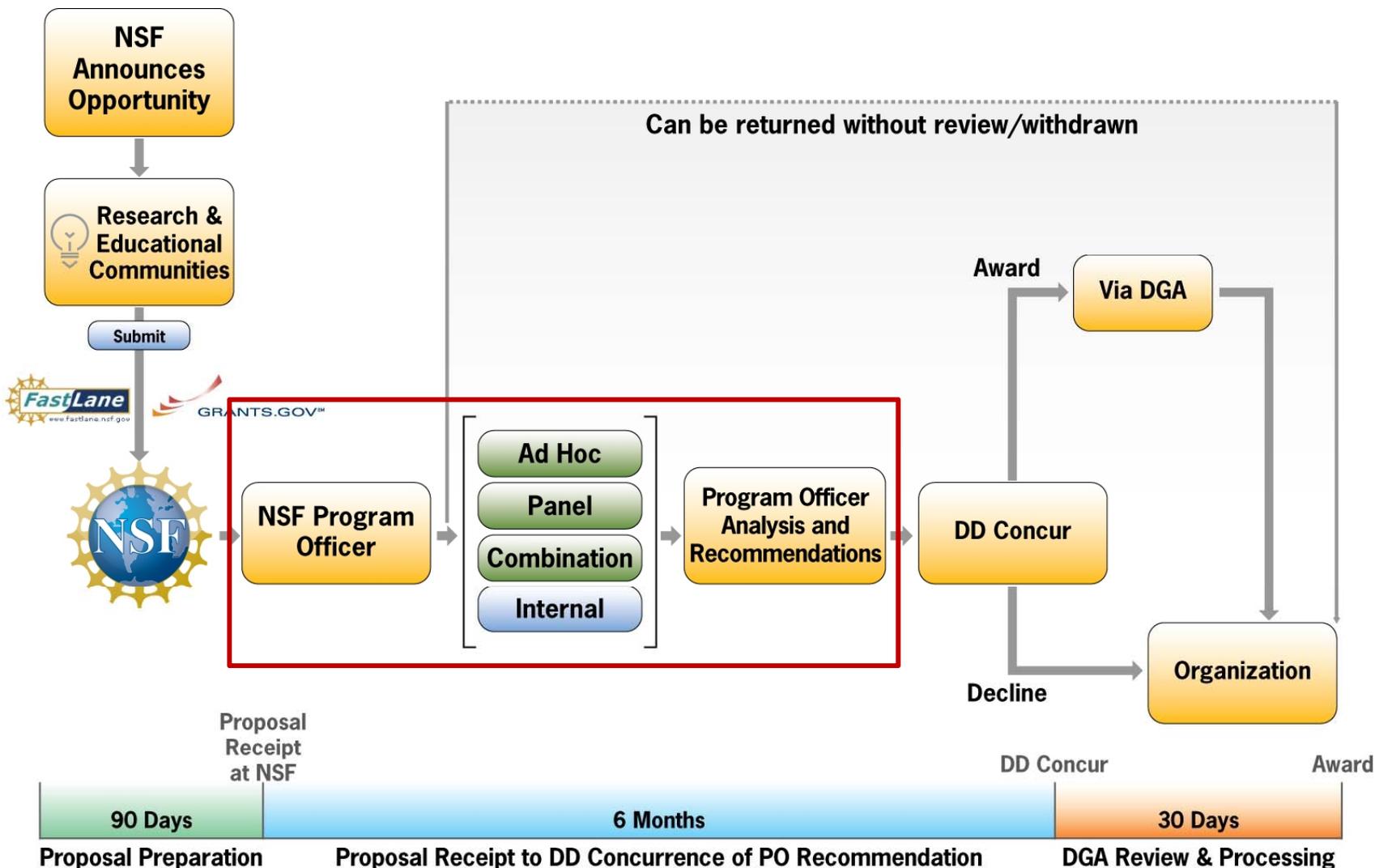
- **Read the funding opportunity; ask a Program Officer for clarifications if needed**
- **Address all the proposal review criteria**
- **Understand the NSF merit review process**
- **Avoid omissions and mistakes**
- **Check your proposal to verify that it is complete!**



WHERE DISCOVERIES BEGIN



Proposal Review and Processing





WHERE DISCOVERIES BEGIN



Program Officer Review

- **Upon receipt at NSF, proposals are routed to the correct program office.**
- **NSF staff conducts a preliminary review to ensure they are:**
 - Complete;
 - Timely; and
 - Conform to proposal preparation requirements.
- **NSF may return a proposal without review if it does not meet the requirements above.**
 - The return without review process will be discussed in greater detail later in the session.



WHERE DISCOVERIES BEGIN



Proposal Review Criteria

- Throughout the review process, proposals are evaluated against:
 - National Science Board approved merit review criteria:
 - What is the intellectual merit of the proposed activity?
 - What are the broader impacts of the proposed activity?
 - Program specific criteria (stated in the program solicitation).

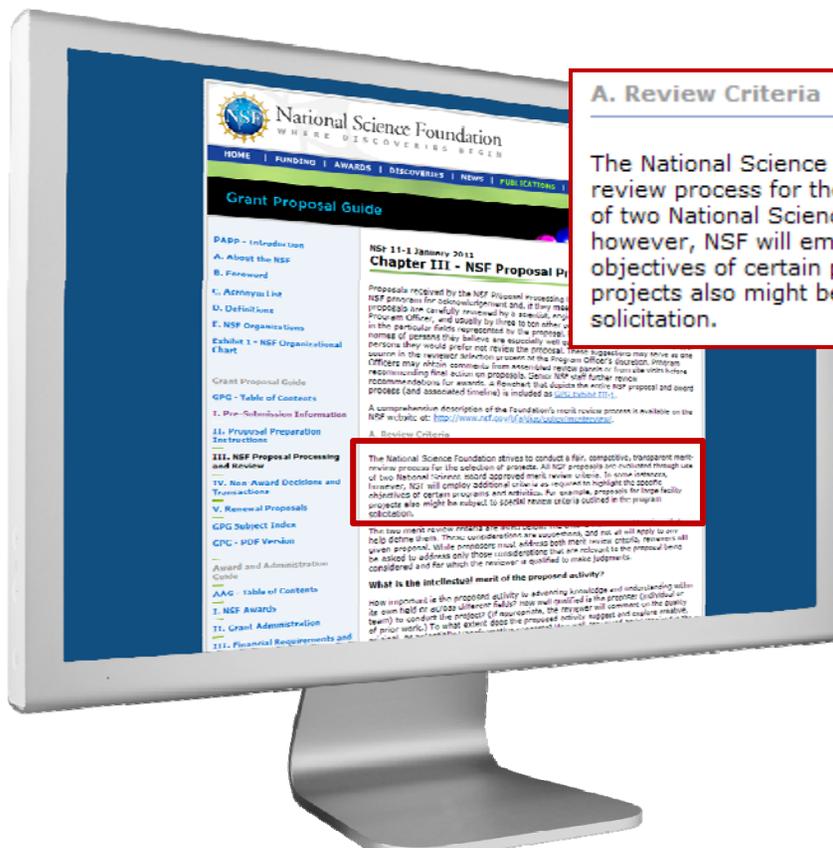


WHERE DISCOVERIES BEGIN



Merit Review Criteria

The Grant Proposal Guide (GPG) contains a description of the Merit Review Criteria



A. Review Criteria

The National Science Foundation strives to conduct a fair, competitive, transparent merit-review process for the selection of projects. All NSF proposals are evaluated through use of 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. For example, proposals for large facility projects also might be subject to special review criteria outlined in the program solicitation.

The National Science Foundation strives to conduct a fair, competitive, transparent merit-review process for the selection of projects. All NSF proposals are evaluated through use of 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. For example, proposals for large facility projects also might be subject to special review criteria outlined in the program solicitation.

The merit review criteria are:

- 1. Intellectual Merit
- 2. Broader Impacts

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 adjacent fields? How well qualified is the proposer (individual or team) to conduct the project (if applicable, the reviewer will comment on the quality of prior work)? To what extent does the proposed activity suggest and evaluate creative and/or methodological approaches to the proposed activity?



WHERE DISCOVERIES BEGIN



Intellectual Merit Considerations

- **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 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?**



WHERE DISCOVERIES BEGIN



Broader Impacts Considerations

- How well does the activity advance discovery and understanding while promoting teaching, training, and learning?
- How well does the activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic)?
- To what extent will the activity 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?

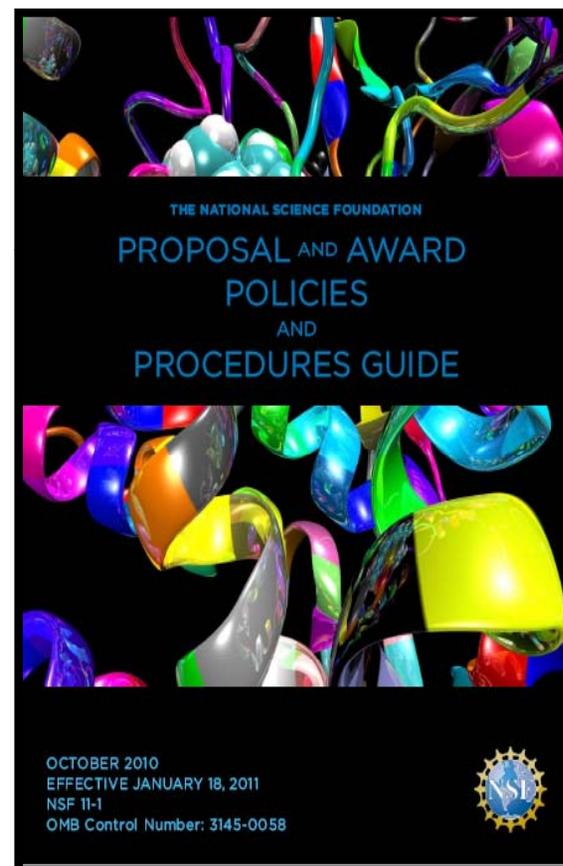


WHERE DISCOVERIES BEGIN



Examples of Broader Impacts

The GPG contains examples of Broader Impacts. For further information, visit:



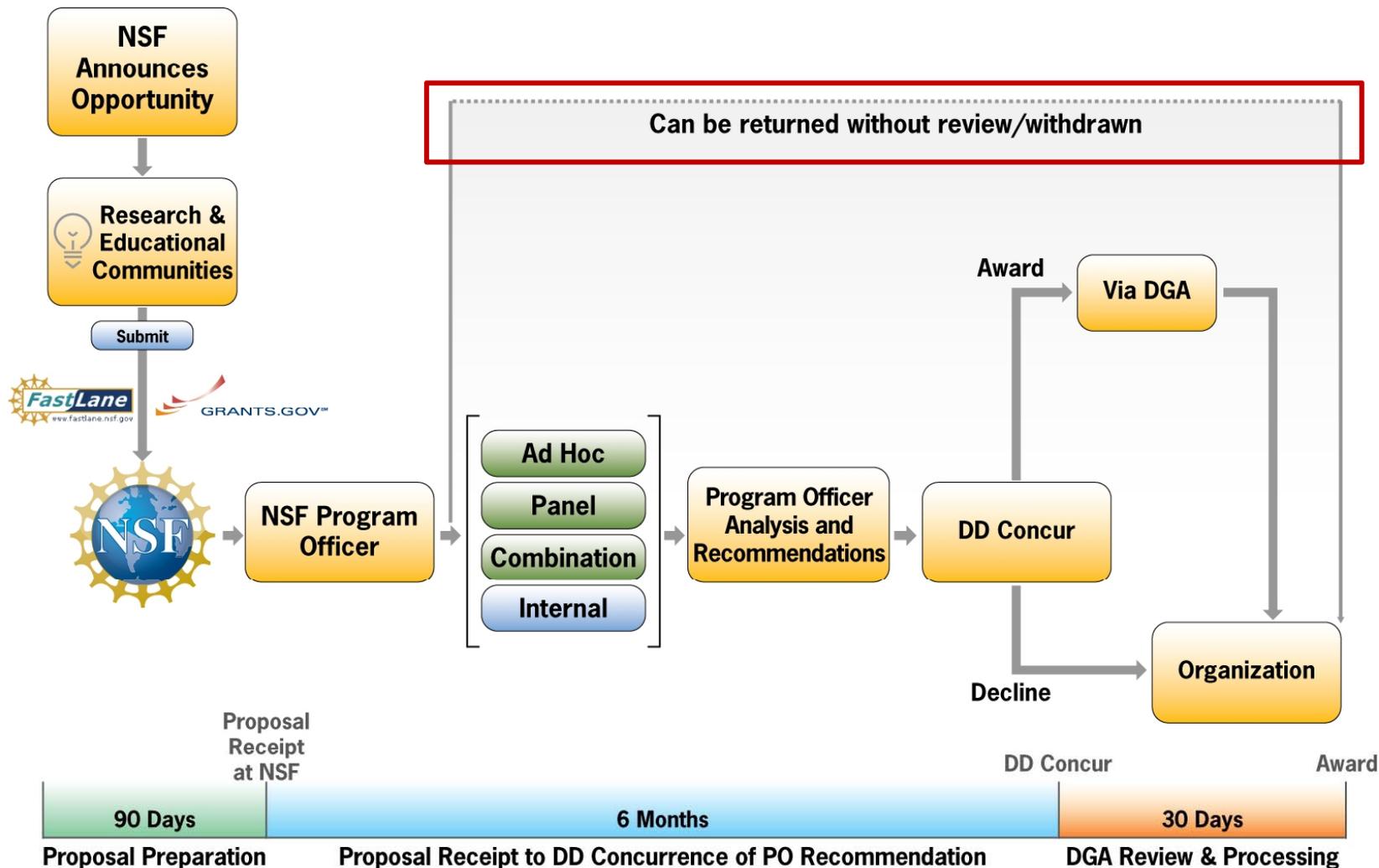
<http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>



WHERE DISCOVERIES BEGIN



Proposal Review and Processing





WHERE DISCOVERIES BEGIN



Return of Proposals Without Review

- **Per Important Notice 127, *Implementation of new Grant Proposal Guide Requirements related to the Broader Impacts Criterion*:**
 - Proposals that do not separately address both criteria within the one-page Project Summary **will be** returned without review.
- **Per the GPG postdoctoral researcher mentoring requirement:**
 - Proposals that include postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals.
 - The mentoring plan must not exceed one page per project.
- **Per the GPG data management plan requirement:**
 - Proposals must be included as a supplementary document.



WHERE DISCOVERIES BEGIN



Other Reasons for Return of Proposals Without Review

- It is inappropriate for funding by the National Science Foundation.
- It is submitted with insufficient lead time before the activity is scheduled to begin.
- It is a full proposal that was submitted by a proposer that has received a “not invited” response to the submission of a preliminary proposal.
- It is a duplicate of, or substantially similar to, a proposal already under consideration by NSF from the same submitter.



WHERE DISCOVERIES BEGIN



Other Reasons for Return of Proposals Without Review

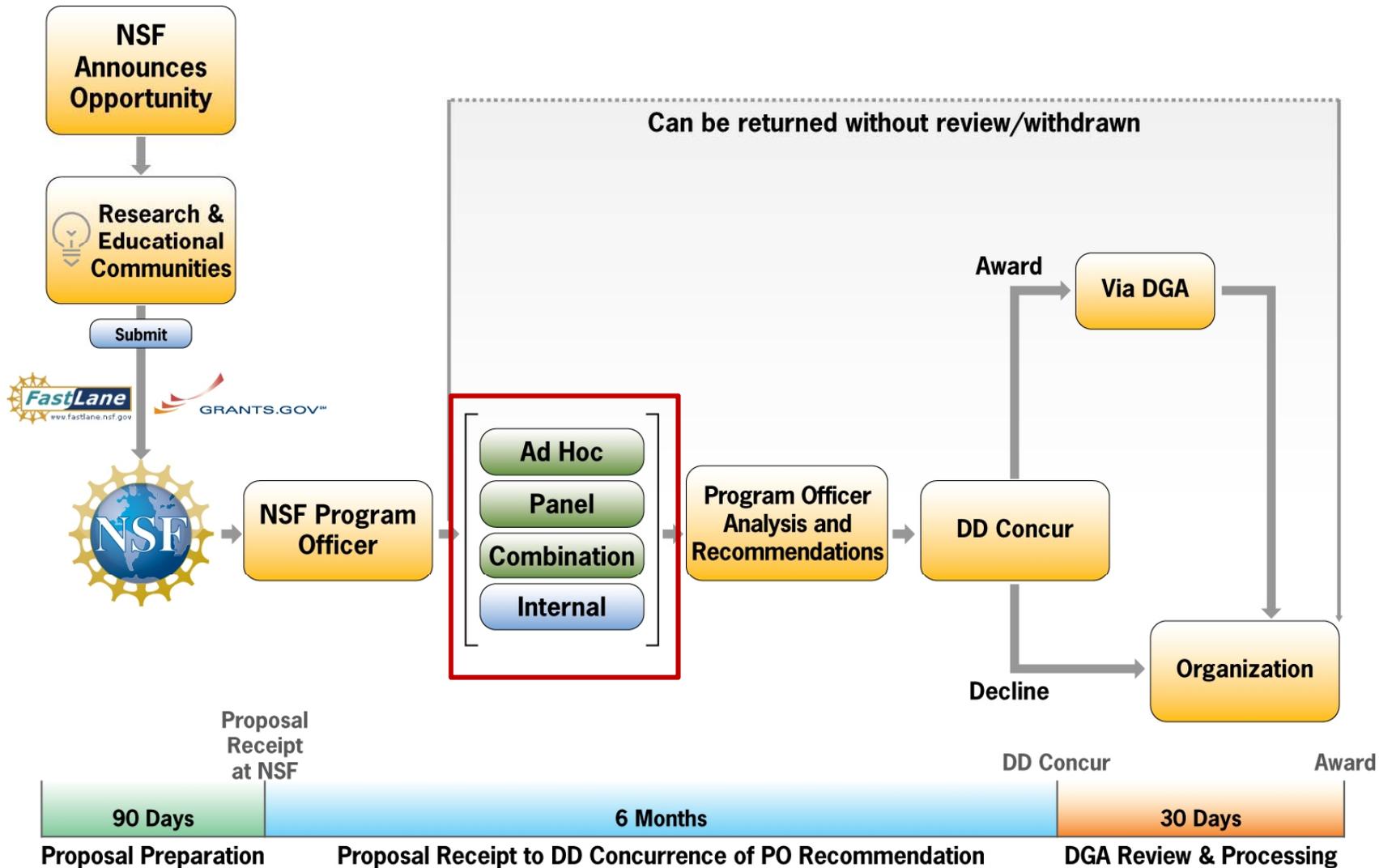
- It does not meet NSF proposal preparation requirements, such as page limitations, formatting instructions, and electronic submission, as specified in the GPG or program solicitation.
- It is not responsive to the GPG or program announcement/solicitation.
- It does not meet an announced proposal deadline date (and time, where specified).
- It was previously reviewed and declined and has not been substantially revised.
- It duplicates another proposal that was already awarded.



WHERE DISCOVERIES BEGIN



Proposal Review and Processing





WHERE DISCOVERIES BEGIN



Types of Reviews

- **Ad hoc: proposals sent out for review —**
 - *Ad hoc* reviewers usually have specific expertise in a field related to the proposal.
 - Some proposals may undergo *ad hoc* review only.
- **Panel: Face-to-face sessions conducted by reviewers mainly at NSF but also in other settings**
 - Panel reviewers usually have a broader scientific knowledge.
 - Some proposals may undergo only a panel review.
 - Some proposals may undergo reviews by multiple panels (especially for those proposals with cross-cutting themes).



WHERE DISCOVERIES BEGIN



Types of Reviews

- **Combination: some proposals may undergo supplemental *ad hoc* reviews prior to or after a panel review.**
- **Internal: review by NSF Program Officers only—**
 - Examples of internally reviewed proposals:
 - Proposals submitted to Rapid Response Research Grants (RAPID)
 - Proposals submitted to EARly-concept Grants for Exploratory Research (EAGER)
 - Proposals for conferences or workshops



WHERE DISCOVERIES BEGIN



How are Reviewers Selected?

- **Types of reviewers recruited:**
 - Reviewers with specific content expertise
 - Reviewers with general science or education expertise
- **Sources of Reviewers:**
 - Program Officer's knowledge of the research area
 - References listed in proposal
 - Recent professional society programs
 - Computer searches of S&E journal articles related to the proposal
 - Former reviewers
 - Reviewer recommendations included in proposal or sent by email
- **Three or more external reviewers per award are selected.**



WHERE DISCOVERIES BEGIN



How Do I Become a Reviewer?

- **Contact the NSF Program Officer(s) of the program(s) that fit your expertise:**
 - Introduce yourself and your research experience.
 - Tell them you want to become a reviewer for their program.
 - Ask them when the next panel will be held.
 - Offer to send a 2-page CV with current contact information.
 - Stay in touch if you don't hear back right away.



WHERE DISCOVERIES BEGIN



What is the Role of the Reviewer?

- **Review all proposal material and consider:**
 - The two NSF merit review criteria and any program specific criteria.
 - The adequacy of the proposed project plan including the budget, resources, and timeline.
 - The priorities of the scientific field and of the NSF program.
 - The potential risks and benefits of the project.
- **Make independent written comments on the quality of the proposal content.**



WHERE DISCOVERIES BEGIN



What is the Role of the Review Panel?

- **Discuss the merits of the proposal with the other panelists**
- **Write a summary based on that discussion**
- **Provide some indication of the relative merits of different proposals considered**



WHERE DISCOVERIES BEGIN



Why Serve on an NSF Panel?

- **Gain first-hand knowledge of the merit review process**
- **Learn about common problems with proposals**
- **Discover proposal writing strategies**
- **Meet colleagues and NSF Program Officers managing the programs related to your research**



WHERE DISCOVERIES BEGIN



Managing Conflicts of Interest in the Review Process

- **The primary purpose is to remove or limit the influence of ties to an applicant institution or investigator that could affect reviewer advice.**
- **The secondary purpose is to preserve the trust of the scientific community, Congress, and the general public in the integrity, effectiveness, and evenhandedness of NSF's merit review process.**



WHERE DISCOVERIES BEGIN



Examples of Affiliations with Applicant Institutions

- **Current employment at the institution**
- **Other association with the institution, such as being a consultant**
- **Being considered for employment or any formal or informal reemployment arrangement at the institution**
- **Any office, governing board membership, or relevant committee membership at the institution**



WHERE DISCOVERIES BEGIN



Examples of Personal Relationships with Investigator or Project Director

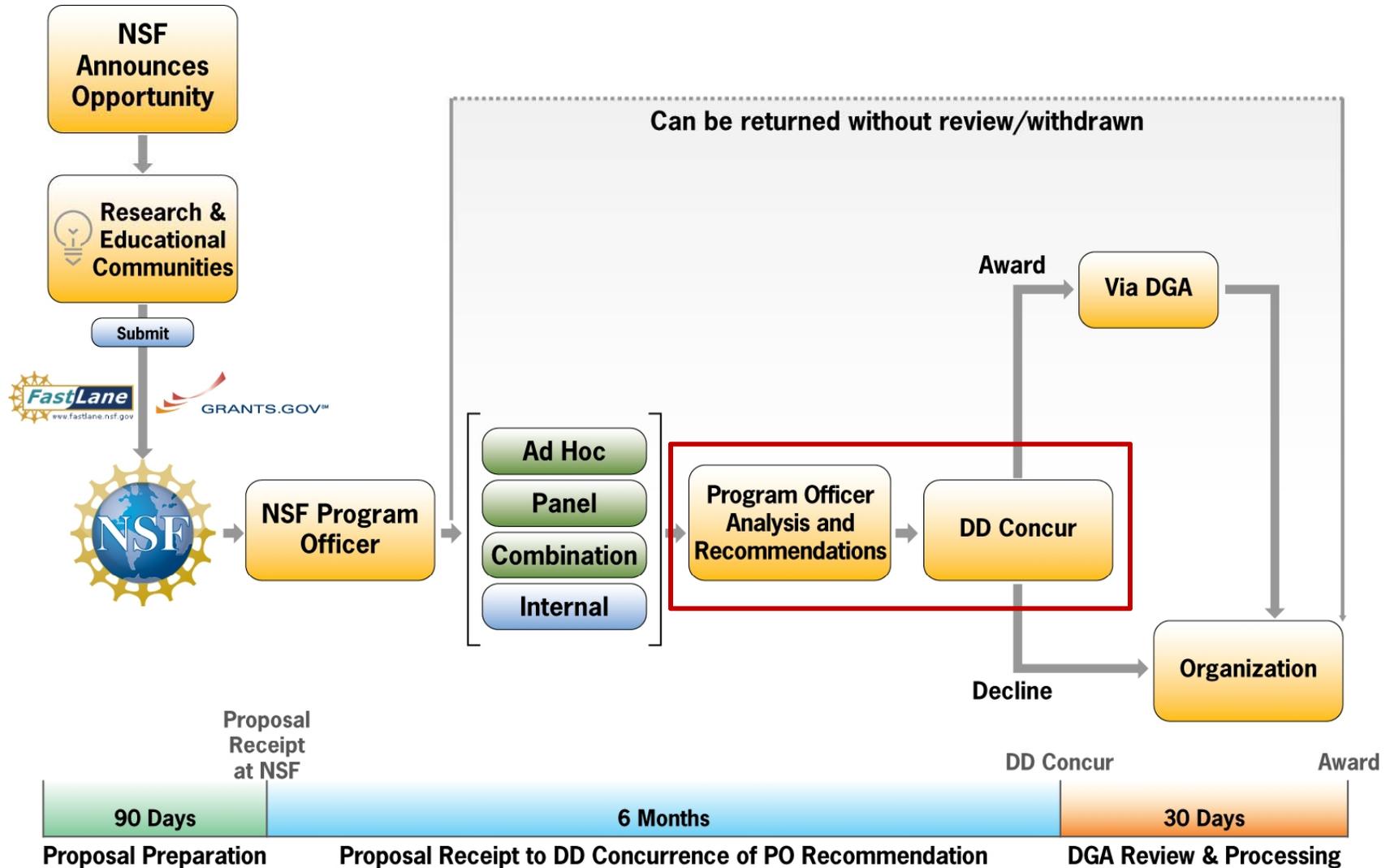
- **Known family or marriage relationship**
- **Business partner**
- **Past or present thesis advisor or thesis student**
- **Collaboration on a project or book, article, or paper within the last 48 months**
- **Co-edited a journal, compendium, or conference proceedings within the last 24 months**



WHERE DISCOVERIES BEGIN



Proposal Review and Processing





WHERE DISCOVERIES BEGIN



Funding Decisions

- **The merit review panel summary provides:**
 - Review of the proposal and a recommendation on funding.
 - Feedback (strengths and weaknesses) to the proposers.
- **NSF Program Officers make funding recommendations guided by program goals and portfolio considerations.**
- **NSF Division Directors either concur or reject the Program Officer's funding recommendations.**



WHERE DISCOVERIES BEGIN



Feedback from Merit Review

- Reviewer ratings (such as: E, VG, G, F, P)
- Analysis of how well proposal addresses both review criteria: Intellectual Merit and Broader Impacts
- Proposal strengths and weaknesses
- Reasons for a declination (if applicable)

If you have any questions, contact the cognizant Program Officer.



WHERE DISCOVERIES BEGIN



Documentation from Merit Review

- **Verbatim copies of individual reviews, excluding reviewer identities**
- **Panel Summary or Summaries (if panel review was used)**
- **Context Statement (usually)**
- **PO to PI comments (formal or informal, written, email or verbal) as necessary to explain a decision**



WHERE DISCOVERIES BEGIN



Examples of Reasons for Declines

- **The proposal was not considered to be competitive based on the merit review criteria and the program office concurred.**
- **The proposal had flaws or issues identified by the program office.**
- **The program funds were not adequate to fund all competitive proposals.**



WHERE DISCOVERIES BEGIN



Revisions and Resubmissions

- **Points to consider:**

- Do the reviewers and the NSF Program Officer identify significant strengths in your proposal?
- Can you address the weaknesses that reviewers and the Program Officer identified?
- Are there other ways you or your colleagues think you can strengthen a resubmission?

As always, if you have questions, contact the cognizant Program Officer.



WHERE DISCOVERIES BEGIN



NSF Reconsideration Process

- **Explanation from Program Officer and/or Division Director**
- **Written request for reconsideration to Assistant Director within 90 days of the decision**
- **Request from organization to Deputy Director of NSF**



WHERE DISCOVERIES BEGIN



Possible Considerations for Funding a Competitive Proposal

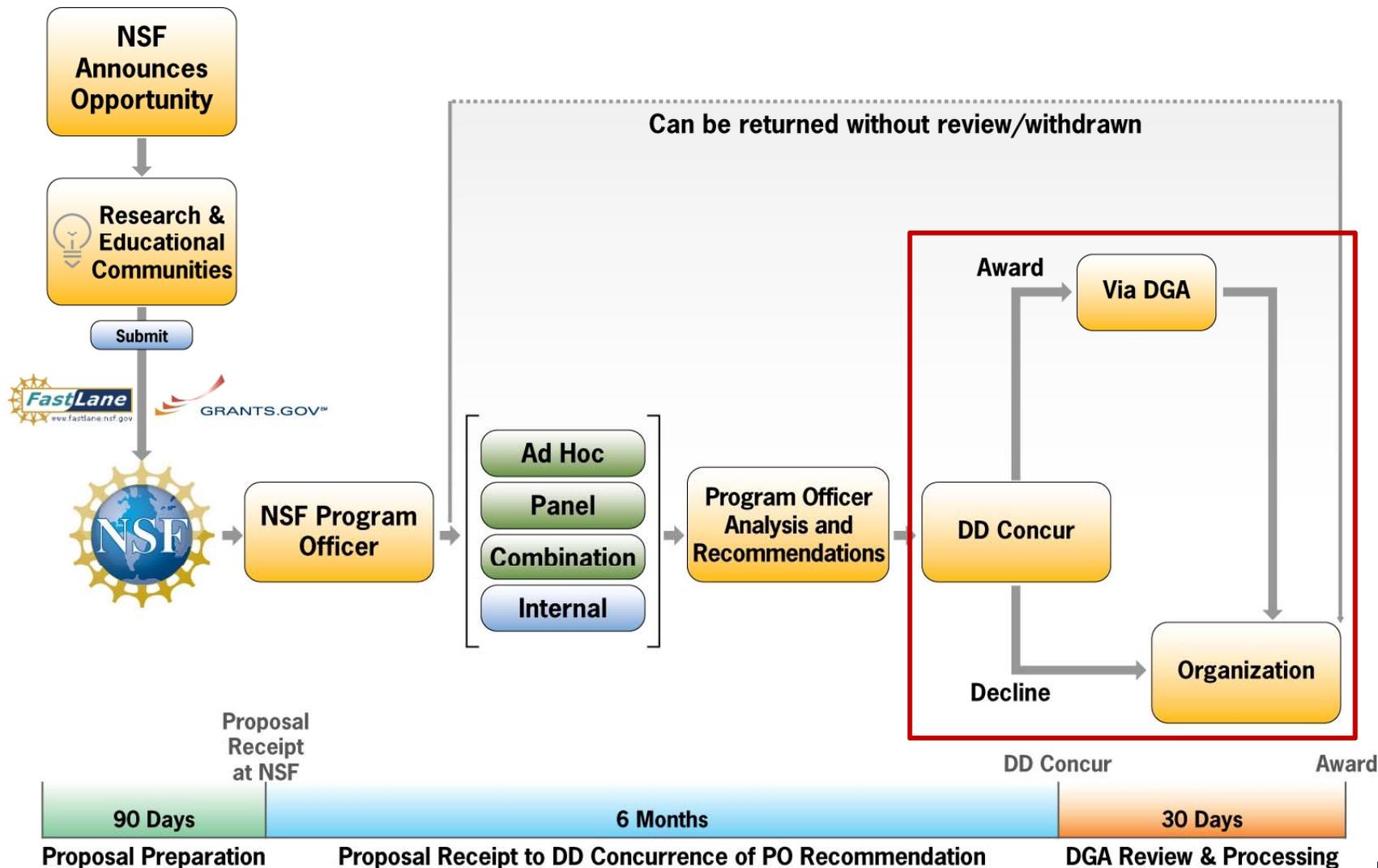
- Addresses all review criteria
- Likely high impact
- Broadening participation
- Educational impact
- Impact on institution/state
- Special programmatic considerations (e.g. CAREER/RUI/EPSCoR)
- Other support for PI
- “Launching” versus “Maintaining”
- Portfolio balance



WHERE DISCOVERIES BEGIN

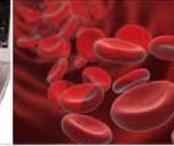


Award Processing





WHERE DISCOVERIES BEGIN



Issuing the Award

- **NSF's Division of Grants and Agreements (DGA) reviews the recommendation from the program office for business, financial, and policy implications.**
- **NSF's grants and agreements officers make the official award as long as:**
 - The institution has an adequate grants management capacity.
 - The PI/Co-PIs do not have overdue annual or final reports.
 - There are no other outstanding issues with the institution or PI.



WHERE DISCOVERIES BEGIN



For More Information

Go to NSF's Home Page (<http://www.nsf.gov>)

Merit Review

Merit Review Home

- [Phase I: Proposal Preparation and Submission](#)
- [Phase II: Proposal Review and Processing](#)
- [Phase III: Award Processing](#)
- [Non-Award Decisions and Transactions](#)
- [Merit Review Facts](#)
- [Why You Should Volunteer to Serve as an NSF Reviewer](#)
- [Additional Resources](#)
- [Contact Us](#)

Proposals and Awards

Merit Review

NOTICE: Effective January 14, 2013, the National Science Foundation will implement revised merit review criteria based on the National Science Board (NSB) report, National Science Foundation's Merit Review Criteria: Review and Revisions. View the [Merit Review Website](#) that is effective for proposals submitted or due on or after January 14, 2013.

Through its merit review process, the National Science Foundation (NSF) ensures that proposals submitted are reviewed in a fair, competitive, transparent, and in-depth manner. The merit review process is described in detail in Part I of the NSF [Proposal & Award Policies & Procedures Guide \(PAPPG\)](#); the [Grant Proposal Guide \(GPG\)](#). The GPG provides guidance for the preparation and submission of proposals to NSF.

The goal of this Merit Review website is to help you better understand the NSF merit review process as well as identify resources for additional information (including applicable chapters in the GPG). Sections of this website include:

- [Phase I: Proposal Preparation and Submission](#)
- [Phase II: Proposal Review and Processing](#)
- [Phase III: Award Processing](#)
- [Non-Award Decisions and Transactions](#)
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- [Why You Should Volunteer to Serve As An NSF Reviewer](#)
- [Additional Resources](#)
- [Contact Us](#)



WHERE DISCOVERIES BEGIN



For More Information

Ask Early, Ask Often!

[nsf.gov/staff](https://www.nsf.gov/staff)

[nsf.gov/staff/orglist.jsp](https://www.nsf.gov/staff/orglist.jsp)

[nsf.gov/about/career_opps/rotators/index.jsp](https://www.nsf.gov/about/career_opps/rotators/index.jsp)