

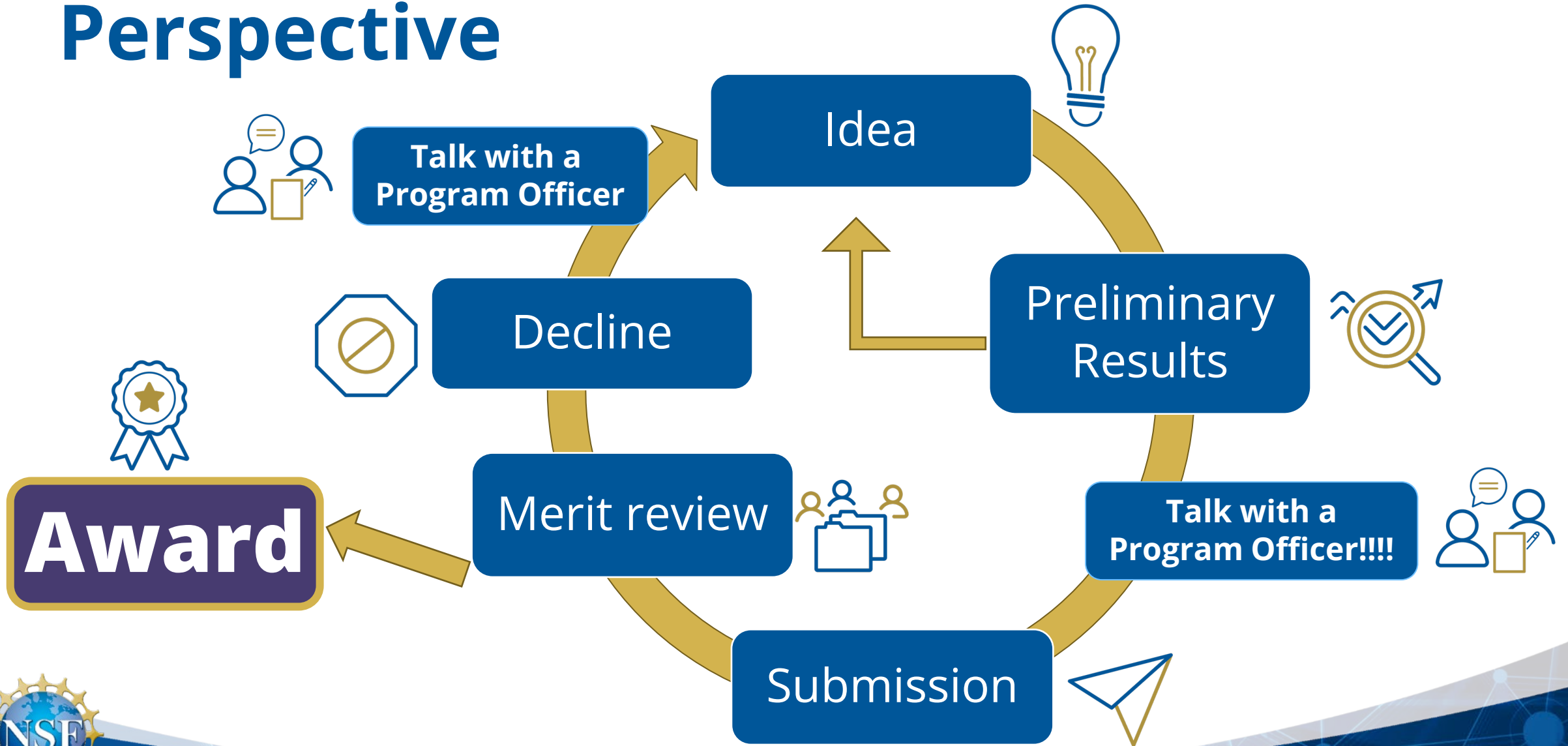


NSF Review Process: Who, What, Where, When, How

Matthew Buechner, PhD (mbuechne@nsf.gov)
Program Director, Molecular and Cellular Biology
Directorate for Biological Sciences (BIO)

Georgia-Ann Klutke, PhD (gaklutke@nsf.gov)
Program Director, Civil, Mechanical and Manufacturing Innovation
Directorate for Engineering (ENG)

Proposal Submission Process: PI Perspective



So who reviews your proposal?

Experts in the broad domain of your proposal – your colleagues!

Could be individual experts in your specific area (*ad hoc review*) or a panel of general programmatic experts (*panel review*).

Reviewers provide advice to the program director and feedback to the PI; program directors make recommendations.

Note that the use of adhoc/panel review varies across NSF



Reviewers apply NSF Merit Review Criteria

- **Intellectual Merit (IM):**
how will the proposed activities to advance knowledge and understanding?
- **Broader Impacts (BI):**
how will the proposed activities benefit society and advance desired societal outcomes?
- **Solicitation-specific Criteria**

Historically Black Colleges and Universities - Excellence in Research (HBCU-EiR)

PROGRAM SOLICITATION NSF 23-598

REPLACES DOCUMENT(S): NSF 20-542



National Science Foundation
Office of Integrative Activities
Directorate for Biological Sciences
Directorate for Computer and Information Science and Engineering
Directorate for STEM Education
Directorate for Engineering
Directorate for Geosciences
Directorate for Mathematical and Physical Sciences
Directorate for Social, Behavioral and Economic Sciences
Directorate for Technology, Innovation and Partnerships

Letter of Intent Due Date(s) (required) (due by 5 p.m. submitter's local time): July 13, 2023

Second Thursday in July, Annually Thereafter
Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

October 17, 2023

Third Tuesday in October, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

Prospective PIs are strongly encouraged to contact the cognizant program officer(s) listed in the solicitation, or the core program officer(s) from the most relevant NSF research program (referred to hereafter as the secondary unit of consideration) in advance of proposal submission to discuss the fit and appropriateness of their research idea for the NSF program. Information about NSF's research programs may be found at https://www.nsf.gov/about/research_areas.jsp, together with information about programs providing non-research funding opportunities. Designation of a secondary unit of consideration is now required for both the Letter of Intent and full proposal. Deadlines for submission of both the Letter of Intent and full proposal have been changed. The maximum available percentage of the budget that can be allocated for equipment increased to 30%.

An individual may serve as PI or co-PI on only one proposal per deadline.

An individual may serve as PI or co-PI on a maximum of 2 HBCU-EiR awards during the course of their career.

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

SUMMARY OF PROGRAM REQUIREMENTS



5 Review Elements

IM

BI

1. Will the work advance knowledge, and benefit society?
2. Is the work creative or potentially transformative?
3. Is the work plan sensible, and how will they know if they're successful?
4. Is the team qualified?
5. Do they have adequate staff support and facility resources?



What do panelists look for in Intellectual Merit?

1. **Is the question important?** Will the work advance knowledge, or just be incremental in nature?
2. **Do you have strong background** (papers from other labs), **and preliminary data** (either your papers, or new results from you lab) to support asking this question?
3. **Is the proposal hypothesis-based**, not just exploratory? [Not always essential, but frames the work for panelists]
4. **Are all the aims independent** (e.g. Aim 2 does not depend on Aim 1)?
5. **Will your plan test the questions** you ask, and if you get an unexpected answer, **do you have alternatives** to continue the work?
6. **Can you do all the experiments you plan, OR** do you have **collaborators** for those that you need help with? **Include a timeline.**



What are Broader Impacts?

- **Broader Impacts make clear the value of the project** to the Nation and can be accomplished in many ways
 - **through the research itself** (e.g., methods to build more resilient supply chains)
 - **through the activities directly related to the research** (e.g., supporting graduate students and undergraduate researchers)
 - **through other activities** that are supported by, but complementary to, the project
- **Broadening Participation and Integrating Research and Education are two of NSF's Broader Impact goals**
- **Go above and beyond what you are already paid to do**
- **Consult <https://www.researchinsociety.org/>**



When writing your proposal, think like a reviewer

Build the proposal to make a strong case for BI and IM

Reviewers assess how well the PI has made the case for BI and IM; both review criteria must be fully addressed

Reviewers are discouraged from reading in or inferring beyond what is written in the proposal – don't make them guess!



Being Declined is a Part of the Process

- **Stay Calm** and **Do NOT Get Discouraged!**
 - Read the reviews and Panel Summary **more than once**
 - **Ask others to interpret the reviews for you**; gain perspective.
 - **Reflect** on your next moves after you have had time to digest the feedback (Reviews, Panel Summary, PD Comments, Context Statement)
 - **Contact your Program Director**
- **BE PERSISTENT: Resubmit after** addressing significant weaknesses
 - Send a Revision, not a Rebuttal
 - Do you need more preliminary data?
 - What were the common themes in the reviews?
 - Is one component better than another?
 - Where are significant strengths that you can build upon for resubmission?



CONTACT A PROGRAM OFFICER!!

(We are not scary! Promise!)



Now how does this work?

**Welcome to a mock panel, with
the roles of panelists and
program director played by**



Tell us what you think!

- Use the QR code to let us know your thoughts on the session and how we can improve.
- Your feedback will not be shared with anyone outside of NSF.
- Each session has a different QR code.

