



Proposer overview of Natcast processes and policies for competitions and awards

Revision History

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Introduction

Natcast is a purpose-built, non-profit entity designated to operate the National Semiconductor Technology Center (NSTC) by the Department of Commerce. Established by the CHIPS and Science Act of the U.S. government, the NSTC is a public-private consortium dedicated to semiconductor R&D in the United States. The NSTC will convene industry, academia, and government from across the semiconductor ecosystem to address the most challenging barriers to continued technological progress in the domestic semiconductor industry, including the need for a skilled workforce. To advance and enable disruptive innovation and promote a skilled workforce, Natcast will be engaged in both internal and external projects. Many of the external projects will be awarded through a competitive proposal process.

This document provides a high-level overview of our approach to managing the competition and award processes. The purpose of the overview is to give the NSTC membership (which is also the NSTC proposer community) a sense of how we address process integrity issues including confidentiality, fairness, and rigorous decision-making.

Competitive Project Process Overview

The Natcast approach to external funding involves five major steps for investing in high-impact projects. As experience is gained with early R&D and workforce programs, we expect to broaden the ways and means of supporting the NSTC mission.

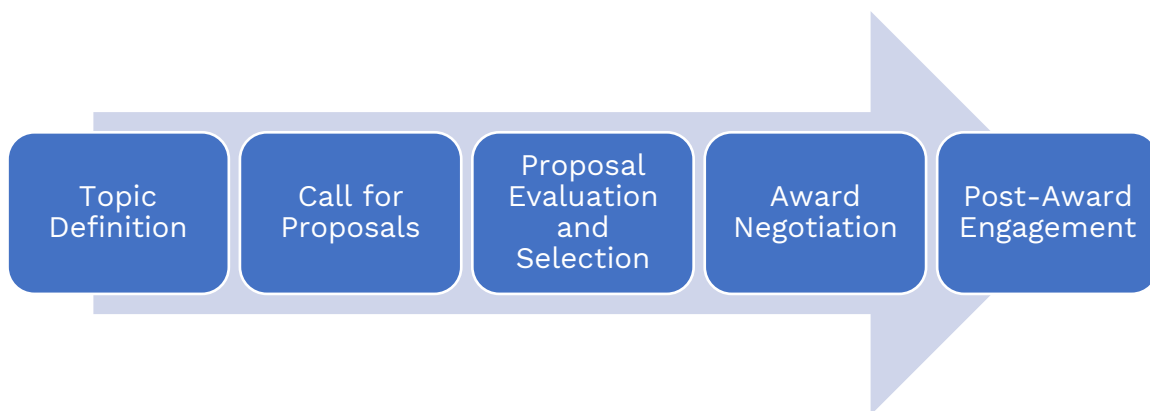


Figure 1: Natcast external research process flow

Stage 1: Topic Definition

Responsibility for external programs and their definition lies in the hands of Natcast program managers (PMs) who are empowered to use a variety of means including, but not limited to, member and community input, advisory board findings, internal

research insights, literature reviews, workshop findings, and requests for information. As topics are identified and refined, an internal decision process determines whether and when the topic is ready to be solicited and funded. During the topic definition phase, PMs hone the concept and any supporting programmatic elements. All discussions during this phase, up until the release of a formal Call for Proposals (CFP), are non-binding and may or may not be realized in a specific funded program.

Stage 2: Call for Proposals

Once a competition topic has been internally approved, the PM creates and issues a CFP that defines the concept, expectations, goals, objectives, and requirements for proposals and projects. The CFP will include both necessary background and clarification of the R&D and/or workforce concept (for example goals and metrics) and relevant programmatic requirements (such as deliverables, intellectual property, research security, fundamental research declarations, workforce data, and resource sharing requirements). Many of these programmatic requirements will influence the award terms and conditions, as discussed in Stage 4 (Award negotiation).

In the CFP, the PM will specify the evaluation criteria that will be used by reviewers to evaluate the merits of a particular project proposal. The CFP will also specify the selection factors that will be used to design the overall project portfolio from the subset of proposals that were deemed selectable in the merit review process. To the extent possible, a proposal template will be offered to assist proposers in providing the information needed to evaluate the proposal. In some cases, a concept paper phase may be included in the solicitation process. If a concept paper phase is included, the CFP will specify whether it is a requirement of subsequent full proposal submission, and if and how feedback will be given.

Following the publication of any CFP, an opportunity will be offered for the public to ask questions about published CFPs. Frequently asked questions and answers (FAQ) may be posted on the Natcast web site. As such, proposers should not include proprietary information in their questions.

Natcast may host “informational webinars” related to a CFP. If information offered in a webinar or other event conflicts with the information provided in a CFP, the conflicts will be resolved in favor of the most recently published version of the CFP. As such, informational webinars held prior to publication of a CFP may either avoid specifics or explicitly call out that certain specifications (dates, goals, etc.) are “anticipated.”

For R&D program CFPs, Natcast will hold a “Proposers’ Day” meeting after the publication of a CFP to describe the program concept, answer questions, and support teaming. Attendance at these Proposers’ Day events is not required for submitting a proposal. Materials from the Proposers’ Day event will be made available to proposers. In general, Natcast will make use of hybrid meeting technology to support remote participation.

PMs and the proposer community are encouraged to engage in open discourse including after CFP publication. Open discourse can result in better proposals and/or save the proposer time and money if out-of-scope ideas can be identified early. However, after a CFP is published, PMs and the proposer community are limited in their interactions. In particular, substantive communications between PM and proposer must come through a public Q&A process and/or through a formal concept paper feedback process (if supported as part of the CFP process). In the context of those communications, PMs will not offer constructive (i.e. specific) recommendations on how to modify a proposal, nor attempt to influence proposers to adopt their own ideas. However, in the context of those communications, PMs may provide input on whether a proposer's idea is in or out of scope, and in the case of R&D programs, they may articulate strengths and weaknesses of an idea relative to stated evaluation and/or selection criteria.

Stage 3: Proposal Evaluation and Selection

Once the deadline for a CFP has closed, submitted proposals will be subject to administrative review for basic conformance to CFP requirements. Conforming proposals will be advanced to a merit review phase and evaluated based on their individual merits by a set of qualified reviewers in accordance with the published evaluation criteria. Differences in reviewer selectability opinions will be resolved by the PM. The proposals which are deemed "selectable" during the merit review phase will then be jointly considered in accordance with additional selection factors as stated in the CFP. Based on the merit review and selection factors, a portfolio of proposals will be recommended by the PM for award subject to negotiation of an award agreement. This recommendation will undergo further review by a designated executive who serves as the "merit review official". The merit review official reviews both the decision logic and integrity of the review process.

Reviewers may be chosen from government agencies, non-profit institutions such as Federally Funded Research and Development Centers (FFRDCs), academia, and industry such that they have the necessary expertise, have been vetted for research security risk (if applicable to the program), and have agreed to non-disclosure terms and conflict of interest provisions. Reviewers will be subject to conflict of interest mitigations, if they are identified. Future R&D CFPs will clarify if reviewers will only be considered from only a specific subset of the semiconductor ecosystem, for example, federal employees and contractors.

Proposals are held in strict confidence within the designated review team and such personnel as required during the selection approval process. Given that reviewers may include government personnel, proposers should be aware that proprietary information must be marked as such to prevent public disclosure of this information under the Freedom of Information Act (FOIA).

Stage 4: Award Negotiation

After a portfolio of proposals has been approved for award negotiation, proposal teams are notified of their status and individual awards are negotiated with the relevant proposers. Decisions may not be appealed. This negotiation process includes any scope adjustments and/or improvements that may have been identified during the proposal evaluation and selection process. For example, a PM may have recommended a proposal for partial funding, or the research security review may have surfaced necessary improvements to a research security plan. Once the parties have come to agreement on contractual terms and conditions, the award agreement may be executed.

If the parties mutually agree, an early announcement may be made concerning proposals selected for award negotiation.

Stage 5: Post-Award Engagement

Following award, Natcast PMs will organize meetings, at least quarterly, with awardees throughout the duration of the award for the following purposes:

- To help the awardee remain current with PM insights about emerging developments in the field and other relevant developments (post-award teaming opportunities, emerging programs, etc.) related to the topic of the CFP.
- To swiftly identify, address, and resolve any risks or challenges that could hinder an awardee's ability to successfully complete the work described in the award agreement.
- To verify that awardees are adhering to the established timelines and achieving the planned milestones.
- To ensure that awardees are following all the necessary policies, including, if applicable, those concerning research security.

Working together on these external programs, Natcast and the awardee/member community will reinforce and extend U.S. technology leadership in semiconductors by identifying and advancing promising research initiatives in foundational semiconductor technologies and workforce solutions. In addition to providing funding for promising research and workforce solutions, these awards will create assets for NSTC members, including sample designs, methodologies, curricula, and intellectual property (IP) for the broader community.

Questions and feedback

This overview will be updated on an as-needed basis with clarifications and/or policy changes. We welcome questions feedback on our competition and award policies at natcast-guide-team@natcast.org.