Funding agencies do not passively fund research projects that are disconnected from a long-term, well-thought-out research agenda and research investment strategy. Basic research agencies (e.g., NSF, NIH) often see themselves as leaders in a national dialogue on research topics and directions, and as key players in defining and driving that national agenda for fundamental research. The federal mission agencies (e.g., DOE, DoD, DARPA, EPA, NASA, NOAA, etc.) fund research, either basic or applied, that falls within the scope of their mission objectives and brings value-added benefits to that mission. This can be a source of surprise, and even frustration, to applicants new to the research funding enterprise, who may believe that a good idea alone will merit funding, regardless of how connected it is to a particular agency’s mission and investment priorities. However, agencies fund only very good ideas that clearly advance their mission, vision, and strategic research plan.

Therefore, the more knowledgeable you are about a funding agency’s mission, strategic plans, research culture, investment priorities, and the rationale behind them, the better able you will be to write a more compelling and competitive proposal narrative. This agency-specific knowledge allows you to more convincingly describe how your proposed research is relevant to the research objectives spelled out in the solicitation, as well as place your research in the broader context of the agency’s strategic research plan. How well you convince reviewers that your research will play a key role in advancing the agency’s mission-critical objectives as listed in the solicitation, or in the guidelines for unsolicited submissions, will be the determining factor in the decision whether or not to fund your proposal.

Many research programs funded by federal agencies, and some private foundations, grow out of an evolving consensus among the national research community on the most promising future directions in specific research topic areas. These directions and priorities, in turn, are translated into funding opportunities at the agencies, or are incorporated into an agency’s strategic plans and given an investment priority level within the agency. These reports may be published at the National Academies, for example, or be posted to agency websites. (All National Academy reports are downloadable in pdf format for free.) In many cases, these reports and studies will be cited with a URL link in the solicitation or program guidelines. It is always wise to review these reports, particularly the executive summary, to become more knowledgeable and better informed on possible persuasive arguments you might advance in your research narrative. These reports can
help you enhance the perceived significance of your research by clarifying for program officers and reviewers the value of your research to the agency mission. Often, educational programs targeted at universities, e.g., curriculum reform or undergraduate research, are developed through the same process. It is not uncommon, for example, for reports of the National Academies, the American Association for the Advancement of Science, or similar associations to significantly influence funding directions at one or more agencies, and for those reports to form the underpinnings of subsequent solicitations.

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Understanding the origins, underpinnings, and rationale behind funding solicitations will help you better frame your claims of research merit and thereby better position you to write a competitive proposal narrative.

Some agencies, such as the National Science Foundation and National Institutes of Health, are composed of directorates and divisions, or institutes and centers, and these, too, have defined missions, strategic plans, investment priorities, and cultures, at times almost acting as autonomous funding agencies in themselves. It may, therefore, also be necessary to understand the mission, culture, and priorities of the particular organizational unit to which you will be submitting your proposal. Other agencies, e.g., DOE, NOAA, DoD, NASA, etc., may often have very dispersed mission areas with multiple research offices acting autonomously. In these cases, it is important to familiarize yourself sufficiently with the agency and program websites in order to become very knowledgeable about the mission, culture, and research investment priorities of that part of the agency that most fits your research expertise and interests.

A successful proposal allows the funding agency to form a partnership with the submitting institution and principal investigator that will help carry out the agency’s vision, mission, and strategic research goals. As the applicant, you must understand the nature of this partnership and the expectations of the funding agency, both during proposal development and throughout a funded project. Analysis of the funding agency helps you better understand several key elements common to every competitive proposal narrative:

Who is the audience (e.g., agency program officers and reviewers) and how are they best characterized in terms of the expertise they bring to the review process?

What is the best way to address them?

What is a fundable idea and how does it support the agency’s research investment priorities?

How are claims of research uniqueness and innovation best supported in the proposal text and connected to the agency’s research objectives?

How do you best communicate your passion, excitement, commitment, and capacity to perform the proposed research to review panels and program officers?