Funder Research Report: National Science Foundation

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Mission

The National Science Foundation (NSF) established by the National Science Foundation Act of 1950 strives "To promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense." With an annual budget of about $6.02 billion (fiscal year 2008), NSF funds approximately 20 percent of all federally supported basic research conducted by the United States' colleges and universities.

Types of Grants

NSF organizes its research and education support through seven directorates, each encompassing several disciplines:

- Biological Sciences (molecular, cellular, and organismal biology, environmental science)
- Computer and Information Science and Engineering (fundamental computer science, computer and networking systems, and artificial intelligence)
- Engineering (bioengineering, environmental systems, civil and mechanical systems, chemical and transport systems, electrical and communications systems, and design and manufacturing)
- Geosciences (geological, atmospheric and ocean sciences)
- Mathematical and Physical Sciences (mathematics, astronomy, physics, chemistry and materials science)
- Social, Behavioral and Economic Sciences (neuroscience, management, psychology, sociology, anthropology, linguistics and economics)
- Education and Human Resources (science, technology, engineering and mathematics education at every level, pre-K to grey)

NSF also supports research through several offices within the Office of the Director:

- Office of Cyberinfrastructure
- Office of Polar Programs
- Office of Integrative Activities
- Office of International Science and Engineering

National Science Foundation Reach

NSF receives about 40,000 such proposals each year, and funds about 10,000 of them. Those funded are typically the projects that are ranked highest in a merit review process. These reviews are carried out by panels of independent scientists, engineers and educators who are experts in the relevant fields of study, and who are selected by NSF with particular attention to avoiding conflicts of interest.

Eligibility

The National Science Foundation funds research and education in most fields of science and engineering. It does this through grants, and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the United States.

Application Process

Unless otherwise specified in the relevant program solicitation, proposers may opt to submit proposals via Grants.gov or via the NSF FastLane system.

- Proposals submitted via FastLane: Proposals should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide.
- Proposals submitted via Grants.gov: Proposals submitted via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide.

Recommendation

I would strongly recommend the NSF as a potential funding source to any team focused on science, technology, healthcare, or engineering. Projects that move the scientific objectives forward, and those that may be widely adapted to other organizations are well suited to NSF grants. The NSF funding pool is large enough to fund a vast array of projects, including large multi-year projects. Project teams must make sure that project goals are well defined, deliverables and project metrics in place, and a complete evaluation and dissemination plan are prepared and ready to stand up to a board of proposal reviewers.