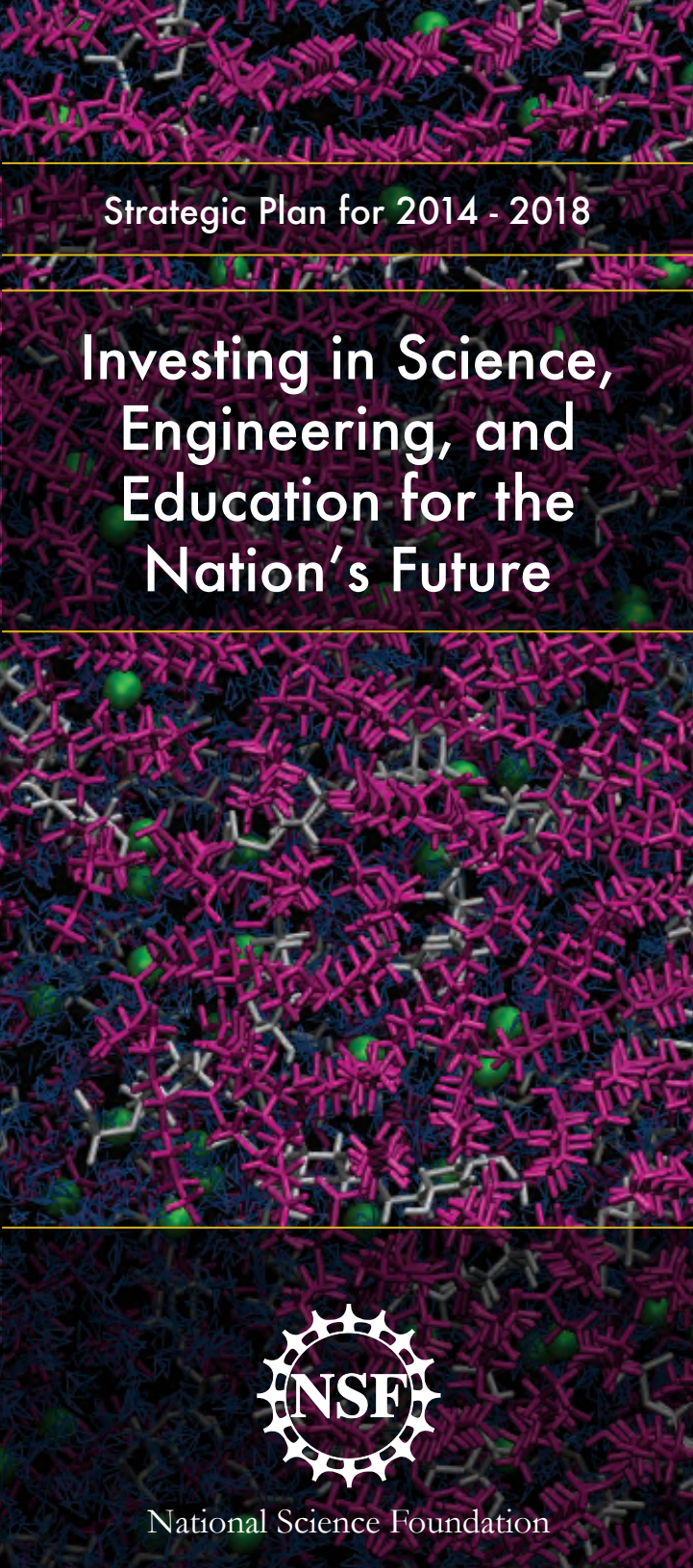
Strategic Plan for 2014 - 2018

Investing in Science, Engineering, and Education for the Nation's Future



National Science Foundation

The National Science Foundation (NSF) is an independent Federal agency that supports fundamental research at the frontiers of knowledge, across all fields of science and engineering (S&E), and S&E education. With an annual budget of about $7.2 billion (fiscal year 2014), the agency is the funding source for approximately 24 percent of all federally supported fundamental research conducted by America's colleges and universities. The NSF Strategic Plan defines the agency's mission, vision, goals, objectives, and core strategies.

MISSION

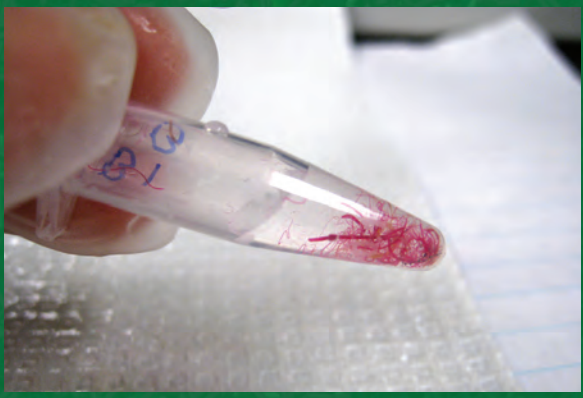
Our mission was established by Congress in legislation that created the agency. The NSF Act of 1950 (Public Law 81-507) sets forth the mission: "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes."

VISION

A Nation that creates and exploits new concepts in science and engineering and provides global leadership in research and education.

CORE VALUES

- Scientific Excellence
- Organizational Excellence
- Learning
- Inclusiveness
- Accountability for Public Benefit



Researchers collected marine nematodes from the Gulf of Mexico for studies of the impact of the Deepwater Horizon oil spill. *Credit: Dr. Holly Bik, University of California, Davis*

GOAL 1:
Transform the Frontiers of Science and Engineering

Objective 1: Invest in fundamental research to ensure significant continuing advances across science, engineering, and education.

Objective 2: Integrate education and research to support development of a diverse STEM workforce with cutting-edge capabilities.

Objective 3: Provide world-class research infrastructure to enable major scientific advances.

NSF support for CAVE2, the University of Illinois at Chicago next generation, large-scale virtual reality system, allows researchers to interact with data in innovative ways to solve cutting-edge problems. *Credit: Lance Long for Electronic Visualization Laboratory, University of Illinois at Chicago*

GOAL 2:
Stimulate Innovation and Address Societal Needs through Research and Education

Objective 1: Strengthen the links between fundamental research and societal needs through investments and partnerships.

Objective 2: Build the capacity of the Nation to address societal challenges using a suite of formal, informal, and broadly available STEM educational mechanisms.

S AND OBJECTIVES

Children examine a carbon nanotube model during NanoDays, an educational festival organized by the Nanoscale Informal Science Education Network. *Credit: Gary Hodges for the NISE Network*

GOAL 3:
Excel as a Federal Science Agency

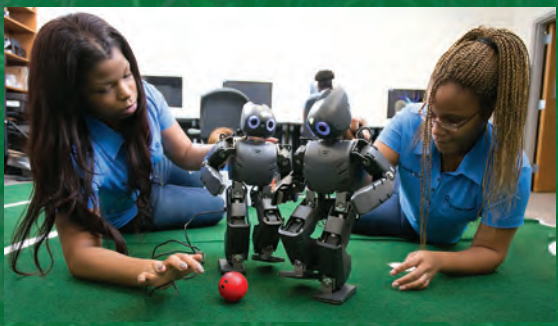
Objective 1: Build an increasingly diverse, engaged, and high-performing workforce by fostering excellence in recruitment, training, leadership, and management of human capital.

Objective 2: Use effective methods and innovative solutions to achieve excellence in accomplishing the agency's mission.

An international facility, the Atacama Large Millimeter/ submillimeter Array (ALMA) is the most sensitive, highest resolution, millimeter-wavelength telescope. *Credit: ALMA*

CORE STRATEGIES

- Envision the future of science and engineering through the eyes of the world's front-line researchers.
- Maintain a balanced portfolio that provides opportunities for research in all fields of S&E.
- Maintain a balanced portfolio with regard to the mechanisms of support.
- Selectively invest in targeted areas of research related to high priority societal needs.
- Foster the development of fundamental research and innovation.
- Integrate research and education to equip the continuous flow of STEM graduates with the latest ideas, technological know-how, and networks of contacts.
- Ensure diversity is at the forefront of all of NSF's internal and external activities to develop the Nation's intellectual potential.
- Maintain the public's trust by operating with transparency, accountability, integrity, and ethical conduct.
- Maintain NSF's reputation as the gold standard of merit review, while welcoming constructive criticism and seeking continuous improvement.



Support for the SpelBots robotics team at Spelman College is one example of NSF's efforts to increase participation by underrepresented groups in science and engineering. *Credit: Spelman College*

(Cover image) Organic molecules on a model of sea spray aerosol, studied by Center for Aerosol Impacts on Climate and the Environment researchers. *Credit: Paesani Group, University of California, San Diego*

IMPORTANCE OF SUPPORT OF FUNDAMENTAL RESEARCH

Investing in S&E is widely recognized as essential to ensure the Nation's future prosperity. Discoveries made possible through NSF's support of fundamental S&E research are key to sustaining the Nation's "innovation ecosystem." The Foundation's seamless integration of the education of future scientists, engineers, and educators into the broad portfolio of supported research generates groundbreaking discoveries and equips the future S&E workforce with the knowledge and experience to apply the most advanced concepts and technology to meet societal needs.

PERFORMANCE

The NSF Strategic Plan presents an evaluation framework to measure agency performance. Developing evaluation methodologies for activities such as fundamental research are challenging, but it is important that NSF assess the value of investment results and outcomes sought. The Strategic Plan describes core approaches and new methods for measuring the performance of the NSF portfolio.

The ice-capable U.S. Research Vessel *Sikuliaq* will advance science in areas such as ocean circulation and ecosystems, at high latitudes and in near-shore regions. *Credit: Terry Anderson, Sikuliaq Chief Engineer*

NSF 14-046

To review the full strategic plan, go to:
http://www.nsf.gov/about/performance/strategic_plan.jsp

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