APPENDIX: EXPERT EVALUATIONS AND ASSESSMENTS

Excellence in management and fiscal responsibility are essential to sustain and enhance NSF's global leadership. NSF uses a variety of methods to determine the quality and effectiveness of our investments throughout their lifetime. Multiple levels of expert review and external evaluation provide guidance for continuous improvement in decision-making and management.

A. MERIT REVIEW

NSF's merit review system is recognized internationally as the best practice for review, assessment, and selection of projects, based upon proposals that are evaluated using two criteria: the intellectual merit of the proposed activity and its broader impacts. Intellectual merit encompasses the potential of the research to advance knowledge, qualifications of researchers, organizational capacity, and the originality and creativity of the proposed activity. Broader impacts include aspects of teaching and learning, integration of research and education, technology transfer, societal benefits, technological innovation, infrastructure development, and opportunities to include a diversity of participants, particularly from underrepresented groups in science. Proposals may also be evaluated according to additional criteria that are specific to the funding opportunity.

The merit review process helps assure that awards made by NSF are of the highest quality, are relevant to NSF goals and objectives, and have an appropriate balance for the resulting portfolio. The quality of the merit review process and its effectiveness in achieving NSF's strategic goals are evaluated through two additional levels of review: Committees of Visitors (COVs) and Advisory Committees (ACs).

B. COMMITTEES OF VISITORS (COVs)

Each COV consists of external experts who review actions taken on proposals for one or more programs. These experts are selected to ensure independence, programmatic coverage, and balanced representation. They most often represent academe, industry, government and the public sector. COVs conduct detailed reviews of the materials associated with individual proposal actions. They assess the integrity and efficiency of the system for proposal review and the accomplishments of the awardees. COV members are asked to justify their

NSF staff and external review panels continuously evaluate programs and proposals to ensure that meritorious research is supported.

assessments and provide supporting examples or highlights that illustrate performance and progress toward performance goals.

COVs assess approximately one-third of NSF's programs each year (see schedule within the annual NSF Performance and Accountability Report[4]) with a major focus on evaluating the merit review process. NSF Assistant Directors (ADs) respond to each COV report with plans for improvement covering the next three years. COV reports and AD responses are publicly available on the NSF Web site[5]. This transparency is essential for accountability and to maintain public confidence in NSF's polices and practices. These COV program evaluations were one input into the development of this plan.

C. ADVISORY COMMITTEES (ACs)

Directorates, Offices and some Foundation-wide programs have Advisory Committees composed of external experts. ACs not only review COV reports and examine Directorate and Office responses to COV recommendations, but also provide advice on priorities and program effectiveness.

The Advisory Committee for GPRA (Government Performance and Results Act) Performance Assessment, AC/GPA, provides advice and recommendations on NSF's performance in accomplishing our goals and objectives. This external com-

4. http://www.nsf.gov/publications/pub_summ.jsp?ods_key=par
5. http://www.nsf.gov/od/oia/activities/cov/

mittee primarily reviews accomplishments from NSF-funded research together with COV reports and management's responses. Their review identifies potential systemic issues and helps to assure that the COV process is of consistently high quality across Directorates and Offices.

The Advisory Committee for Business and Operations, AC/B&O, includes members from the research administration, education management and business communities, including business professionals and academics in the fields of interest. The committee provides advice related to NSF's business practices and operations, including innovative approaches to the achievement of excellence in internal operations and stewardship.
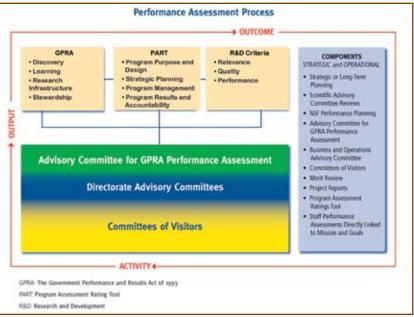
D. Additional Assessments

NSF values the opinion of the science, engineering and education community. We pay careful attention to the advice offered in reports by the National Academies, including National Research Council reports, national and international science organizations, professional societies, workshops, interagency working groups and advisory committees. We use this input to inform strategic planning and to assess management practices.

A variety of other assessment tools are used to evaluate management excellence. NSF's performance record includes eight continuous years of "clean" audit opinions. NSF has also achieved the highest ratings in the President's Management Agenda[6] for Human Capital, Financial Performance, Electronic Government and Budget-Performance Integration, and received the highest rating of "Effective" in all programs rated by OMB in its Program Assessment Rating Tool (PART) evaluations[7]. The most important PART measures, together with other annual goals, are included in NSF's annual performance budget and the agency Performance and Accountability Report (PAR). ACs, COVs and other ongoing assessment processes are valuable in ensuring continued success in PART evaluations and annual progress toward the long-term strategic goals.

Beyond setting agency-wide annual goals in the budget, NSF takes the additional step of obtaining independent verification and validation of our performance results each year before reporting them to the Office of Management and Budget, Congress and the public through the PAR. One example of an annual goal and an indicator of

Performance Assessment Process

GPRA: The Government Performance and Results Act of 1993
PART: Program Assessment Rating Tool
R&D: Research and Development

efficient, effective management of the merit review process is dwell time, the time from proposal submission to the time a funding decision is available to the investigator submitting the proposal. The quantitative measure for dwell time is balanced by also ensuring a high-quality review process. Timely responses to Principal Investigators are critical but must not adversely impact review quality. Results from this and other quantitative goals are available to NSF management and staff through an online Enterprise Information System that shows performance at NSF-wide, Directorate, Division and program levels.

Finally, in addition to the extensive annual PAR, NSF will report on annual Foundation performance through a concise Performance Highlights document. Over the next five years, NSF will continue to improve management excellence, with a continuing emphasis on linking together information technology, human capital and financial management to support outcomes resulting from the core processes of merit review, award management and oversight, performance assessment and accountability, resource allocation, knowledge management, and internal and external communication strategies.

---

6. NSF was the first agency across government to achieve "green" (highest rating) in Financial Performance and also the first for "green" in Electronic Government (see www.results.gov). NSF remains "red" (lowest rating) for status on Competitive Sourcing, public-private job competitions.
7. As of the FY2007 PART evaluations, NSF is the only agency with multiple PART programs to earn the highest rating across-the-board in all programs.