

PERFORMANCE RESULTS



This scanning electron micrograph of tree rings from an ancient Siberian pine show the effects of catastrophic summer cooling that froze sap in the tree's cells. Magnification 35x.

In assessing the return on its investments, NSF is guided by its GPRA (Government Performance and Results Act of 1993) Strategic Plan and Annual Performance Plan. The Foundation's Strategic Plan provides the framework for and establishes NSF's long term strategic outcome goals. The Foundation's Annual Performance Plan establishes the annual goals for the programmatic and management activities that enable the agency to accomplish its mission. The FY 2003 Annual Performance Plan and the FY 2003 Budget Request were developed concurrently to ensure a direct link between programmatic activities, strategic goals, and resources.¹

GPRA performance assessment has been a particular challenge for NSF and other agencies whose mission involves long-term investments in research and education. This is primarily due to (1) the difficulty of linking research outcomes to annual investments and the annual budget, since outcomes often appear years or decades after the initial investment, and (2) the fact that assessing research results is inherently retrospective and requires the qualitative judgment of experts.

NSF has developed and OMB has approved an alternative format: using external expert review panels to assess research results and reporting research outcome goals on a qualitative rather than a quantitative basis. The academic research community has used external expert panels to review research results and outcomes for many years. In a report issued in May 2003, the General Accounting Office identified NSF as one of five exemplary federal agencies that have successfully conducted evaluative activities and incorporated an evaluation culture.

FY 2003 Performance Scorecard

For FY 2003, NSF's annual performance goals are divided into Strategic Outcome Goals and Management Goals.

- **Strategic Outcome Goals** focus on the long-term results of NSF grants and programs. They represent what the Foundation seeks to accomplish with its investments in science and engineering research and education. To accomplish its mission to promote scientific progress, NSF invests in the best people with the best ideas and provides them with the tools they need. The outcomes from these awards illustrate the success of such investments.

¹ For a comprehensive discussion of NSF's performance goals, results, and related issues, see the *FY 2003 Performance and Accountability Report* at www.nsf.gov/pubs/ods/getpub.cfm?par. NSF's GPRA Strategic Plan, FY 2003 Annual Performance Plan, and FY 2003 Budget Request are available on the Foundation's website (www.nsf.gov).

- **Management Goals** relate to the effectiveness and efficiency of NSF’s activities and how well we serve our customers. NSF’s management goals address the proposal and award process, the award portfolio, award oversights, and facilities management. They also address NSF’s business practices and human resources and workforce issues.

In FY 2003, NSF achieved 70 percent of its annual performance goals. It was successful in achieving all four annual performance goals associated with the Strategic Outcome Goals of People, Ideas, and Tools and 10 of 16 Management Goals.

FY 1999 to FY 2003 Performance Results					
Percentage of GPRA Goals Achieved					
	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Annual Strategic Outcome Goals	100% (5 of 5)	75% (6 of 8)	80% (4 of 5)	100% (4 of 4)	100% (4 of 4)
Management Goals	67% (10 of 15)	60% (12 of 20)	61% (11 of 18)	74% (14 of 19)	63% (10 of 16)
Total	75% (15 of 20)	64% (18 of 28)	65% (15 of 23)	78% (18 of 23)	70% (14 of 20)



Note: Management Goals include goals that have been identified in prior years as Investment Process Goals.

FY 2003 STRATEGIC OUTCOME GOALS AND RESULTS

Strategic Outcome	Performance Goal ²	RESULT
PEOPLE: Developing a diverse, internationally competitive, and globally engaged workforce of scientists, engineers, and well-prepared citizens.		
Workforce Development	<p>Demonstrate significant achievement in the majority of the following indicators:</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Development of well-prepared researchers, educators, or students whose participation in NSF activities provides experiences that enable them to explore frontiers or challenges of the future. • Contributions to development of a diverse workforce through participation of underrepresented groups in NSF activities. • Development or implementation of other notable approaches/new paradigms that promote progress toward the People outcome goal. <p>Result: External expert assessment determined that the Foundation has demonstrated significant achievement in each of the performance indicators associated with this goal.</p>	
K–12 Education Reform	<p>Significantly enhance the quality of K–12 mathematics and science education available to all students in Math and Science Partnership schools.</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Provide support for high quality programs addressing issues related to teacher workforce capacity. • Document evidence within Partnership school systems of the infrastructure needed to improve math and science education and to measure improvement. <p>Result: Significant achievement was demonstrated in both indicators.</p>	
<p>KEY:</p> <ul style="list-style-type: none"> Indicates goal was achieved in FY 2003. Indicates goal was not achieved in FY 2003. 		

² These performance goals are stated in the alternate form provided for in GPRA legislation.

FY 2003 **STRATEGIC OUTCOME** GOALS AND RESULTS

Strategic Outcome	Performance Goal ²	RESULT
<p>IDEAS: Enabling discovery across the frontier of science and engineering, connected to learning, innovation, and service to society.</p>	<p>Demonstrate significant achievement in the majority of the following indicators:</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Discoveries that expand the frontiers of science, engineering, or technology. • Connections between discoveries and their use in service to society. • Partnerships that enable the flow of ideas among the academic, public, or private sectors. • Leadership in fostering newly developing or emerging areas. <p>Result: External expert assessment determined that the Foundation has demonstrated significant achievement in each of the performance indicators associated with this goal.</p>	
<p>TOOLS: Providing broadly accessible, state-of-the-art, and shared research and education tools.</p>	<p>Demonstrate significant achievement in the majority of the following indicators:</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Develop or provide tools that enable discoveries or enhance the productivity of research or education communities. • Partnerships with local, state, or federal agencies, national laboratories, industry, or other nations to support and enable the development of large facilities or other infrastructure. • Develop or implement other notable approaches/new paradigms that promote progress toward the Tools outcome goal. <p>Result: External expert assessment determined that the Foundation has demonstrated significant achievement in each of the performance indicators associated with this goal.</p>	






² These performance goals are stated in the alternate form provided for in GPRA legislation.

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FY 2003 MANAGEMENT GOALS AND RESULTS

	Performance Goal	RESULT
PROPOSALS AND AWARDS PROCESSES		
Use of Merit Review	Allocate at least 85 percent of basic and applied research funds to projects that undergo merit review.	
Implementation of Merit Review Criteria: Reviewers	Have at least 70 percent of reviews with written comments address aspects of both generic review criteria.	
Implementation of Merit Review Criteria: Program Officers	Have at least 80 percent of program officers' funding decisions comment on aspects of both generic review criteria. Explanation: An evaluation of a statistically determined sample of FY 2003 review analyses was undertaken to determine the extent to which program officers used both review criteria. The study determined that approximately 53 percent of review analyses commented on aspects of both merit review criteria. To improve performance, the issue of what constitutes comments on aspects of both generic review criteria will be clarified.	
Customer Service: Time to Prepare Proposals	Make 95 percent of program announcements publicly available at least three months before the proposal deadline or target date.	
Customer Service: Time to Decision	Inform applicants about funding decisions within six months of receipt for 70 percent of the proposals.	
AWARD PORTFOLIO		
Award Size	Increase the average annualized award size for research grants to \$125,000, compared with the goal of \$113,000 in FY 2002.	
Award Duration	Maintain the FY 2002 award duration goal of 3.0 years for research grants. Explanation: Progress toward this goal depends on the Foundation's budgetary resources. Program directors must balance competing requirements: increasing award size, increasing the duration of awards, and making more awards. The Foundation will continue to focus on increasing award size and duration in order to improve the efficiency of the research process.	
KEY:  Indicates goal was achieved in FY 2003.  Indicates goal was not achieved in FY 2003.		

FY 2003 **MANAGEMENT GOALS AND RESULTS**

	Performance Goal	RESULT
AWARD OVERSIGHT AND FACILITIES MANAGEMENT		
Construction and Upgrade of Facilities	<p>Keep negative cost/schedule variances within 10 percent of the approved project plan for 90 percent of construction, acquisition, and upgrade projects.</p> <p>Explanation: 88 percent of the projects (30 out of 34) successfully kept negative cost/schedule variances to less than 10 percent of approved project plans. The Foundation will continue to work with facility managers to improve performance in this area.</p>	
Operations and Management of Facilities	<p>Keep operating time lost due to unscheduled downtime to less than 10 percent of the total scheduled operating time for 90 percent of operational facilities.</p> <p>Explanation: 87 percent of facilities (26 out of 30) successfully kept unscheduled downtime to less than 10 percent. The Foundation will continue to work with on-site facility managers to improve performance in this area.</p>	
BUSINESS PRACTICES		
Electronic Business: Award Transfers	<p>Have 90 percent of award transfers for principal investigators received through FastLane and processed electronically.</p>	
Electronic Business: E-Jackets	<p>Continue to advance “E-business” by implementing Phase III of the Electronic Jacket application.</p> <p><i>Performance Indicator:</i> Implement the electronic capability for assigning proposal processing tasks, forwarding proposals to other programs as necessary, and delegating proposal action authority.</p> <p>Explanation: Phase III capabilities were developed as planned but implementation was delayed to ensure that staff was properly trained and ready to use the new capabilities. Phase III was available for staff to use in November 2003.</p>	
Information Technology Security	<p>Maintain and enhance the agency-wide security program to ensure adequate protection of the Foundation’s information technology infrastructure and critical assets.</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Have approved security plans on file for 95 percent of major systems. • Document certification and accreditation of 95 percent of major systems. 	

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FY 2003 MANAGEMENT GOALS AND RESULTS

	Performance Goal	RESULT
HUMAN RESOURCES/WORKPLACE/WORKFORCE		
NSF Staff Diversity: Planning	<p>Ensure that diversity considerations are embedded in activities related to agency staffing of scientists and engineers.</p> <p><i>Performance Indicator:</i> Initiate development of an agency diversity plan for scientists and engineers.</p>	
NSF Staff Diversity: Appointments	<p>Increase the number of staff science and engineering and management appointments from underrepresented groups from the FY 2000 base.</p> <p>Explanation: While the goal of hiring more women was achieved, the Foundation was not successful in increasing the number of minorities hired. FY 2003 results were identical to the FY 2000 baseline for minority hires.</p> <p>In FY 2004, additional emphasis will be placed on hiring female and minority employees. An additional staff member will be hired to specifically address diversity issues. In addition, the Diversity Plan, which is under development, will help provide strategies for recruiting and retaining a diverse staff.</p>	
Workforce Learning	<p>Align or develop through the National Science Foundation Academy, competency-based curricula that provide cross-functional, work-based, team-learning opportunities.</p> <p><i>Performance Indicator:</i> Initiate development of new courses or revision of existing ones to address program management, leadership development, and technology and business process training.</p>	
Workforce Planning	<p>Develop competency-based, occupation classification alternatives that support the Foundation's strategic business processes and capitalize on its technology-enabled business systems.</p> <p><i>Performance Indicators:</i></p> <ul style="list-style-type: none"> • Identify workforce competencies for all current NSF job families. • Initiate identification of competency-based classification alternatives. 	
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