

Evaluating the Performance of the Basic Research Enterprise in the U.S.



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Agency Accountability Report

- Annual Financial Statement
- Independent Auditors' Report
- Performance Results and Related Issues
- Management Challenges
- Management's Discussion and Analysis



The U.S. Government Performance Results Act Requires:

- A 5-year Strategic Plan for the Agency
- An Annual Performance Plan
- An Annual Performance Report
- Submitted with the Proposed Agency Annual Budget



National Academy of Sciences Recommendations for Research Evaluation:

- Evaluate regularly through expert review
- Using performance indicators of Quality
- Relevance
- Leadership
- International Leadership criterion not evaluated at this time



NSF Goals for Strategic Outcomes

- **PEOPLE** – Developing “a diverse, internationally competitive and globally engaged workforce of scientists, engineers, and well-prepared citizens.”
- **IDEAS** – Enabling “discoveries across the frontier of science and engineering, connected to learning, innovation, and service to society.”
- **TOOLS** – Providing “broadly accessible, state-of-the-art shared research and education tools.”



NSF Goals for Management

- Proposal and award process
- Award Portfolio
- Facilities Management
- Business Practices
- Human Resources and workplace



NSF Has a Mix of Quantitative and Qualitative Goals

The Management and Investment Process goals are mostly Quantitative

- Percent of proposals submitted electronically
- Staff training for information technology
- Customer service--time to decision



Outcome Goals are Mostly Qualitative

- NSF awards lead to important discoveries; new knowledge and techniques, both expected and unexpected, within and across traditional disciplinary boundaries; and high-potential links across these boundaries, as judged by independent external experts.
- Judged either successful or unsuccessful for the program
- Rolled up and reported out for the total NSF investment, in the aggregate
- Results from any prior investments are accepted in the year reported
- Because basic research results cannot be anticipated on a specific timeline.



The NSF Proposal Review Process and Evaluation of Outcomes

- All research proposals reviewed by at least 3 external peers
- Reviewed by program staff for portfolio balance
- Each Program evaluated every 3 years by a Committee of Visitors (scientist, engineers, industrialists, educators)
- Committee of Visitors evaluate process and research results
- Committee of Visitors reports are appraised by Directorate Advisory Committees composed of researchers and end users of new knowledge
- Committee of Visitors and Advisory Committees report on GPRA Goals appropriate to each



Key Issues Encountered Along the Way

- Developing rational goals and indicators
- Developing systems to capture necessary data for reporting
- Verification and Validation
- Attribution
- What defines a Program
- Outsider evaluations of your evaluations = workload
- Timing of various cycles for next plans/reports
- Rekindling of Applied VS Basic Research debate



Impacts of the Government Performance and Results Act

- 1) Usefulness to the Agency - management
- 2) Usefulness for budgeting and planning
- 3) We do not know the impact of achieving the Outcome goals
- 4) Usefulness of the reported results



Mercatus Center

2nd Annual Performance Report Scorecard: Which Federal Agencies Inform the Public?

Evaluation Criteria:

- 1) Transparency--Does the agency report its accomplishments in a transparent fashion?
- 2) Public benefits--Does the report focus on documenting tangible public benefits the agency produced?
- 3) Leadership--Does the report show evidence of forward-looking leadership that uses performance information to devise strategies for improvement?



Next Steps

- Merging of Accountability Report with Performance Report--like a business Annual Report - all submitted with Annual Budget
- Continuing to move toward totally electronic environment
- Continued to focus on human resource needs
- Streamline/simplify reporting requirements, make user friendly by supplying necessary data/information
- Search for more effective ways for Basic Researchers to tell their stories



Reports Referenced

1) NSF GPRA Performance Report for FY 2000

<http://www.nsf.gov/od/gpra>

2) Implementing the Government Performance and Results Act for Research

<http://www.nap.edu/books/0309075572/html/>

<http://www.nap.edu>

3) 2nd Annual Performance Report Scorecard: Which Federal Agencies Inform the Public?

www.mercatus.org

4) NSF FY 2000 Accountability Report

<http://www.nsf.gov/bfa/dfm/stmtpg.htm>

5) Slides of this presentation located at:

<http://www.nsf.gov/od/oia/presentations/start.htm>

