

## The National Science Foundation Administration and Management Strategic Plan Executive Summary

The National Science Foundation's (NSF) leadership in advancing the frontiers of science and engineering research and education is complemented by its commitment to excellence in Administration and Management (A&M). The agency has a solid history of leveraging its agile, motivated workforce, its mission-essential management processes, and its state-of-the-art technological resources to promote the progress of science and engineering through investments in *people, ideas, and tools*.

For more than 50 years, NSF's high-performing workforce has enabled discovery, learning, and innovation across the science and engineering frontier in research and in education. New customer-focused eGovernment capabilities have significantly improved the agency's ability to solicit, review, select, award, manage and report results on government-funded research and education projects. The agency's paper-based work processes have evolved to capitalize on technology-enabled ways of doing business, allowing the agency to serve as an effective and capable steward of the taxpayer's resources.

Global trends in science and engineering research and education, as well as emerging societal trends clearly influence the agency's A&M priorities and approaches. As the importance of science and engineering discovery, learning and innovation becomes more prominent, so too does public scrutiny. The agency must operate with due emphasis on accountability, openness, and responsiveness to constituents. In keeping with the realities of today's world, NSF must appropriately secure its resources and provide adequate safeguards for its working environment and critical systems.

NSF's focus on demonstrating management excellence is sharpened through attention to specific issues. For example, the [President's Management Agenda](#) (PMA) mandates that NSF, like other agencies, must demonstrate consistent results through proven management practices in human capital management, eGovernment, competitive sourcing, financial management, and budget and performance integration. In addition, the agency proactively addresses management challenges identified through internal review and oversight as well as those identified by its partners, including the agency's Inspector General, committees of experts representing the science and engineering community, and the General Accounting Office.

While NSF's A&M Strategic Plan directly supports several key initiatives, it is also directly linked to the functional growth of the agency. Moreover, the *plan* supports the collective goal to maintain NSF's position as a government-wide leader in administration and management. Specifically, the A&M Strategic Plan is a working roadmap and set of goals that drive the effective development and strategic management of the agency. The growth of the agency is directly supported through three significant administration and management strategic goals. These goals described in the A&M Strategic Plan are:

- Strategic Management of **Human Capital** - a diverse, agile, results-oriented cadre of NSF knowledge workers committed to enabling the agency's mission and to constantly expanding their abilities to shape the agency's future;

- Ongoing Development of Effective and Efficient **Business Processes** - strategically aligned business processes that integrate and capitalize on the agency's human capital and technology resources; and
- Sustained Investments in **Technologies and Tools** - flexible, reliable, state-of-the-art business tools and technologies designed to support the agency's mission, business processes, and customers.

The realization of these goals demands a sustained commitment to business innovation—knowing what the agency does, how it does it, and how it will evolve. Accordingly, implementation strategies capitalize on the complex interdependencies between *Business Processes*, *Technologies and Tools* and *Human Capital* investments. They support NSF's science and engineering research and education mission and acknowledge and respond to stakeholder needs, including those of individual researchers and educators and those of the agency's institutional partners.

### **NSF Business Analysis: A Systemic Approach**

In an effort to achieve our A&M strategic goals, NSF will initiate a multi-year Business Analysis to conduct a comprehensive study of NSF's business processes, workforce management and information technology management.

The outcomes of this analysis will guide long-term administration and management investments that promise important results for the agency's mission operations. The analysis will enable NSF to respond to challenges such as the management of an increasingly multidisciplinary research and education portfolio and management and oversight of a growing number of complex large facility projects. It will also help us respond to issues raised in the PMA and to government-wide issues identified by the General Accounting Office.

This analysis will focus on five NSF mission-focused, core business processes that define how the agency delivers value to scientists, engineers, and educators as well as to the nation and form the framework for the analysis:

#### **1. Resource Allocation**

*Setting the right priorities.* A resource management process that incorporates performance results and other inputs to prioritize agency programmatic and management investments across organizational levels, resulting in a balanced, performance-based portfolio.

#### **2. Merit Review**

*Identifying people, ideas, and tools with the greatest impact.* A fair, competitive, transparent merit review process for selecting projects, managed in the context of priorities, and through which the agency realizes its outcome goals.

#### **3. Award Management and Oversight**

*The award cycle, beginning to end.* A collaborative, multi-functional award management and oversight process that (1) is informed by appropriate risk management strategies, (2) ensures performance outcomes are appropriately identified, (3) optimizes connections between discovery, learning, innovation and widespread practice through effective evaluation and communication, and (4) verifies that projects are in compliance with award agreements and federal regulations.

#### 4. Knowledge Management

*The right information, in the right place, at the right time.* A comprehensive set of information management and communications activities that capture, synthesize and share new knowledge generated by NSF and NSF investments – in order to provide the agency’s many stakeholders with reliable, timely and accessible information about agency priorities and opportunities, and resulting science and engineering outcomes and contributions.

#### 5. Performance Assessment and Accountability

*The highest standards of excellence and integrity.* A thorough performance assessment and accountability process that develops and measures effective performance indicators and ensures the agency is held accountable for meeting its mission and goals.

### Project Goals

The following Business Analysis goals are enumerated in the A&M Strategic Plan:

- Document each of the agency’s *core business processes* and define its contribution to the NSF mission
- Develop future-looking *business process scenarios* and criteria for success
- Define process effectiveness and efficiency improvements that capitalize on *best practices*
- Design a *human capital management plan* to provide next-generation human capital capabilities
- Develop an *integrated technologies and enterprise architecture plan* for future systems in support of the agency’s business processes

### Addressing the President’s Management Agenda

In support of NSF’s tradition of innovation and creative leadership, the A&M Strategic Plan initiatives align perfectly with the PMA initiatives, which are:

- Strategic Management of Human Capital
- Expanding Electronic Government
- Competitive Sourcing
- Improved Financial Performance
- Budget and Performance Integration

The relationship between the PMA, NSF’s A&M Strategic Plan and NSF’s mission critical Business Processes is illustrated in the chart below.



NSF is poised as the government leader in administration and management. With the implementation of the A&M Strategic Plan and Business Analysis, our world-class workforce and cutting-edge business processes will support our growing agency and ensure continued leadership and innovation.