

FY 2018 STRATEGIC OBJECTIVE PROGRESS UPDATES

In FY 2018, the National Science Foundation conducted Strategic Reviews (SRs) of the six Strategic Objectives in its 2018-2022 Strategic Plan, in response to the requirement of the GPRA Modernization Act 2010 Section 1116(f). Table 1 summarizes the analyses performed and the outcomes to date of each SR. The table also provides NSF's determination as to whether performance towards an Objective is making noteworthy progress, should pursue focused improvement, or neither.

Topic Selection and Conduct of the Strategic Review

In FY 2018, NSF developed topics by following the 2017 recommendation to apply strategic review methods more broadly to decision-making. Five cross-cutting issues, where the traditional directorate-based decision-making framework was likely to prove infeasible, were identified and mapped to NSF's six Strategic Objectives, new in FY 2018 under the new Strategic Plan. All were in response to larger administration activities which the Foundation was seeking to implement constructively and with minimal burden. Four arose from the agency reform effort, internally named *Renewing NSF*: workforce management, information technology, partnerships, and internal process improvements. The fifth SR developed out of NSF's efforts to use learning agendas to guide evidence-based policymaking.

The four *Renewing NSF* teams received the same charge: to assess the current status of the area, to develop a vision for their area, to relate it back to the larger *Renewing NSF* vision, and to identify next steps. A carefully facilitated Strategic Visioning process was used to accomplish this charge, to help teams define a compelling and collaborative vision of the future and a broad but flexible strategy for achieving that vision. The Learning Agenda SR also followed a facilitated process, in which the NSF INCLUDES program management team reflected on its prior actions and considered how having a Learning Agenda would have contributed to decision-making at each step of the program's lifecycle. Both approaches prioritized participatory decision-making, engaging dozens of participants in a novel collaborative approach to institutional learning and transformation.

Results and Follow-Up

All of the SRs generated broad suggestions for potential paths forward over the life of the new Strategic Plan. The *Renewing NSF* teams, instead of a focus on answering questions and developing prioritized recommendations, used the SR to articulate a vision for the future and suggest bold steps that could turn that vision into a reality. These visions and bold steps were used to generate widespread agency buy-in, first among leadership and then among agency staff, in a process of engagements in the summer and fall of 2018. Due to its more focused scope, the Learning Agenda SR team made recommendations for particular actions regarding using evidence to evaluate and inform programmatic decisions, practices that were reinforced by the eventual passage of the Foundations for Evidence-Based Policymaking Act.

NSF's Performance Improvement Officer (PIO) determined rankings by assessing the maturation stage of each SR's implementation plans. Since the strategic reviews concluded in the summer of 2018, multiple mechanisms for agency engagement and collection of feedback on the possible ways forward have been implemented.

Table 1. NSF’s 2018 Strategic Reviews results summary, rankings, and progress updates.

Strategic Objective and Ranking	Summary of Strategic Review Findings	Progress Update as of Spring 2019
<p>Objective 1.1 Knowledge</p> <p>Advance knowledge through investments in ideas, people, and infrastructure.</p> <p>Objective 1.2 Practice</p> <p>Advance the practice of research.</p> <p><i>Not Ranked</i></p>	<p>Focus area: Renewing NSF: Streamlining, standardizing, and simplifying processes and practices (S3). In this team’s vision, scientific discoveries and discoverers are catalyzed and enabled by S3 processes and practices. The four components to this vision are:</p> <ul style="list-style-type: none"> • Priorities must reflect NSF values: Flexibility, Efficiency, Quality and Accuracy, Effectiveness, Inclusion, Focus on Mission; • Evidence-based improvement becomes the NSF culture, leading to a dynamic, adaptive organization; • S3 will yield time for higher impact work; and • S3 must be achieved through, with and for NSF staff. 	<p>Motivated by the SR, NSF is exploring ways to prioritize and distribute grantmaking workload across the fiscal year. Two automation projects were chosen to demonstrate short-term, high-yield progress: internal document clearance and compliance checking of incoming proposals against published criteria.</p>
<p>Objective 2.1 Societal Impacts</p> <p>Support research and promote partnerships to accelerate innovation and to provide new capabilities to meet pressing societal needs.</p> <p><i>Ranked as Noteworthy Progress</i></p>	<p>Focus area: Renewing NSF: Expanding and deepening public and private partnerships. NSF envisions expanding partnerships to enhance the impact of its investments and contribute to American economic competitiveness and security. There are three components to this vision:</p> <ul style="list-style-type: none"> • A unified strategic vision to guide proactive identification and pursuit of partnerships that advance NSF’s mission; • Streamlined, flexible processes and tools for implementing a range of different types of partnerships, along with mechanisms for sharing knowledge and expertise; and • Systematic and continual evidence-based improvement of costs and benefits of partnerships, through evidence-based assessment. 	<p>The SR determined that a “partnerships toolkit” would be useful. The Partnerships Agency Priority Goal team is developing an “MoU Builder” tool, which would use pre-approved language and the answers to a set of standard questions to produce draft MoUs and focus the approval process on any non-standard areas. The APG team is also developing and testing a set of guiding questions to be asked early in the Partnership development process, which would ensure strategic alignment between NSF and its partners.</p>

Strategic Objective and Ranking	Summary of Strategic Review Findings	Progress Update as of Spring 2019
<p>Objective 2.2 STEM Workforce</p> <p>Foster the growth of a more capable and diverse research workforce and advance the scientific and innovation skills of the Nation.</p> <p><i>Not Ranked</i></p>	<p>Focus area: SR of NSF INCLUDES to illustrate a Learning Agenda. The SR team found that the Learning Agenda process, appropriately adapted, can support an overarching vision of NSF as a learning organization where policies and decisions are informed by evidence. It made three recommendations:</p> <ol style="list-style-type: none"> 1. Provide infrastructure, tools, capacity, and resources for organizational learning. 2. Provide incentives for contributing to organizational learning. 3. Build organizational learning into the way we do our work. 	<p>OIA’s Evaluation and Assessment Capability section (EAC) co-led this SR in response to the Commission on Evidence-Based Policymaking’s recommendation to “Develop ‘learning agendas’ to identify evidence-building priorities and needs.” EAC is spearheading pilot projects to inform implementation of the requirements of the Foundations for Evidence-Based Policymaking Act, which includes a mandate to establish and maintain Learning Agendas.</p>
<p>Objective 3.1 Human Capital</p> <p>Attract, retain, and empower a talented and diverse workforce.</p> <p><i>Ranked as Noteworthy Area for Improvement</i></p>	<p>Focus area: Renewing NSF: Adapting NSF’s work and workforce. To ensure NSF has a workforce skilled to meet the needs of the future, this team envisioned a workforce of the future where everyone can say:</p> <ul style="list-style-type: none"> • I add value and impact science. • We work anywhere, anytime and with anyone. • We broke down barriers and built up trust. • NSF bridged the gap between skills and needs. • My work has meaning and purpose, and we’re inspired to reach our full potential. • High performance is not only expected, but continually achieved. 	<p>Goals 7 and 8 in the FY 2020 Annual Performance Plan in this Chapter measure activities that arose from and/or support the direction suggested by this SR:</p> <ul style="list-style-type: none"> • To ensure that employee job requirements are aligned with competencies and skills needed for the future, starting in FY 2019, NSF is beginning to review and modernize existing position descriptions. • To foster a culture of inclusion through change management efforts, starting in FY 2019, NSF is encouraging the participation of all agency leaders in culture change activities.

Strategic Objective and Ranking	Summary of Strategic Review Findings	Progress Update as of Spring 2019
<p>Objective 3.2 Processes and Operations</p> <p>Continually improve agency operations.</p> <p><i>Not Ranked</i></p>	<p>Focus area: Renewing NSF: Making IT work for all (IT). This SR team proposed that NSF could lead the federal government in deploying smart IT solutions that help employees reach their full potential. Key elements of the vision for IT are that:</p> <ul style="list-style-type: none"> • IT should be an intuitive extension of people; • IT governance should be inclusive and transparent; • NSF should be an early adopter of emerging technologies; and • NSF should be a leader in leveraging the data revolution. 	<p>This Budget Request contains multiple references to activities that arose from, measure, and/or support the direction suggested by this SR, including:</p> <ul style="list-style-type: none"> • Organizational Excellence Chapter <ul style="list-style-type: none"> • AOAM, Information Technology investment • Program Accounts, Proposal Management Efficiencies investment • Performance Chapter, FY 2020 Annual Performance Plan Goal 9: Streamline and simplify user interactions with IT systems and functions that support the merit review process.