

FY 2016 STRATEGIC OBJECTIVE PROGRESS UPDATES

In FY 2016, the National Science Foundation conducted Strategic Reviews (SRs) of the seven Strategic Objectives in its 2014-2018 Strategic Plan, in response to the requirement of the GPRA Modernization Act 2010 Section 1116(f). This table 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.

Strategic Objective and Ranking	Summary of Strategic Review Analysis	Strategic Review Outcomes
<p>Strategic Goal 1 Objective 1 Invest in fundamental research to ensure significant continuing advances across NSF science, engineering, and education. <i>Not Ranked</i></p>	<p>Focus area: The Science of Broadening participation. The Strategic Review investigated NSF's investment in the science of broadening participation (SBP), defined as fundamental social science and education research to identify and understand the factors that foster or hinder participation, retention, and success of members of underrepresented groups in STEM fields. SBP can help NSF enhance its investment in programs and activities that focus on building the capacity of the scientific workforce.</p>	<p>The SR identified the following action as follow-up: "Investigate efficient and effective means for synthesizing the results of SBP research, disseminating that knowledge, and utilizing it to improve the effectiveness of research and education programs." Discussions on how to implement this recommendation began in FY 2016.</p>
<p>Strategic Goal 1 Objective 2 Integrate education and research to produce a diverse STEM workforce with cutting-edge capabilities. <i>Ranked as Noteworthy Progress</i></p>	<p>Focus area: Graduate Education. The Strategic Review examined how NSF can improve measurement of its investments in graduate education in light of current trends in the diversity of career pathways of STEM graduate students.</p>	<p>The SR identified two follow-up actions:</p> <ul style="list-style-type: none"> • Change the term for graduate students supported on grants from "research assistant" to "research trainee" as a mechanism to reinforce strategic and educational objectives. • Encourage NCSES to consider whether to revise the NSF/NIH Survey of Graduate Students and Postdoctorates in Science and Engineering to collect data on masters versus doctoral students separately. <p>A suggestion to consider the impacts of the first recommendation was added to the Strategic Framework for Investments in Graduate Education, FY 2016-FY 2020.</p> <p>The second recommendation was completed in FY 2016.</p>

<p>Strategic Goal 1 Objective 3 Provide world-class research infrastructure to enable major scientific advances. <i>Ranked as a Focus Area for Improvement</i></p> <p>Strategic Goal 3 Objective 1 Build an increasingly diverse, engaged, and high-performing workforce by fostering excellence in recruitment, training, leadership, and management in human capital. <i>Not Ranked</i></p> <p>Strategic Goal 3 Objective 2 Use effective methods and innovative solutions to achieve excellence in accomplishing the agency’s mission. <i>Not Ranked</i></p>	<p>Focus area: Human Resources and Business Practices in the Oversight of Facilities. The combined Strategic Review of three of NSF’s Objectives focused on human resource and business practices pertaining to the NSF staff responsible for oversight of major facilities.</p>	<p>The SR identified a number of follow-up actions. Work to implement all of them began in FY 2016:</p> <ul style="list-style-type: none"> • The Large Facilities Working Group will identify a minimum set of competencies needed by NSF staff responsible for the oversight of major facilities. • Directorates will ensure Position Descriptions and Individual Development Plans (IDPs) are up to date when staff are assigned to a given facility. • The Large Facilities Program Officer (PO) Forum will incorporate opportunities for facilities programs to present lessons learned or best practices that work within NSF culture. • The Large Facilities Office will explore options for improving informal knowledge transfer across organizational units. • NSF should seek opportunities to partner with other agencies (e.g. take NASA, DOE courses) and consider developing NSF-specific training where cost-effective. • LearnNSF should be modified to better capture informal learning activities.
<p>Strategic Goal 2 Objective 1 Strengthen the links between foundational research and societal needs through investments and partnerships. <i>Not Ranked</i></p> <p>Objective 2 Build the capacity of the Nation to address societal challenges using a suite of formal, informal, and broadly available STEM educational mechanisms. <i>Not Ranked</i></p>	<p>Focus area: The Broader Impacts (BI) criterion of NSF’s merit review process. The combined Strategic Review investigated the broader impacts (BI) criterion of NSF’s merit review process (the other criterion is intellectual merit). Defined as, “the potential for the proposed activity to benefit society or advance desired societal outcomes,” the BI criterion is the mechanism through which the merit review process communicates the importance of societal benefit to its potential awardees.</p>	<p>The SR recommended that NSF “Provide standard training on BI to program directors, panel reviewers, and COVs.” This recommendation is being implemented. A video orientation to the review process, including a segment explaining the BI criterion, was developed in FY 2016 and is available to all program officers and panelists. The BI segment is also available to COVs.</p>