



U.S. National
Science Foundation

FY 2027

Annual Evidence Plan



FISCAL YEAR	AGENCY NAME	AGENCY ACRONYM
2027	U.S. National Science Foundation	NSF



EVIDENCE PLAN

I am pleased to present NSF's FY 2027 Annual Evidence Plan. This plan reflects NSF's continued commitment to building and using evidence to inform decision making and improve the efficiency of our operations. Our approach upholds key tenets of the Administration's pledge to restore Gold Standard Science, by emphasizing data collection and evidence building activities that are relevant, reproducible, and transparent.

The evaluations, research activities, and data analyses outlined in this Evidence Plan are designed to generate actionable insights that inform strategic planning, budget formulation, program management, and operational decision making across the agency. Specifically, the activities will:

- Increase NSF's ability to measure the impact of our investments, ensuring prudent use of government resources;
- Identify barriers to identification and mitigation of research security risks, in order to more effectively safeguard the integrity of NSF-funded research; and
- Assess NSF's ability to improve the efficiency of our operations and reduce burden on applicants for NSF funding.

NSF is committed to ensuring that evidence generated through the plan is timely, relevant, and meaningfully incorporated into agency decision-making processes. Further, this plan fulfills our agency's statutory obligations under the Foundations for Evidence-Based Policymaking Act of 2018, Title I – Federal Evidence-Building Activities, Section 312 (a) and (b). (5 USC § 312)]

Brian Stone
 Chief of Staff, Performing the Duties of the NSF Director
 U.S. National Science Foundation

SECTION I | EVIDENCE PLAN SUMMARY

This section provides a snapshot of the agency’s Priority Questions, evidence activities to answer them, and the alignment of each Priority Question to relevant Administration priorities.

PRIORITY QUESTION	KEY EVIDENCE ACTIVITY(IES)	RELATED ADMINISTRATION PRIORITY(IES)
<p>1 What data and methods can help NSF systematically measure and track agency-level outcomes and impacts of NSF investments?</p>	<ul style="list-style-type: none"> ▪ NSF Impact Framework (NIF) 	<ul style="list-style-type: none"> ▪ NSF Strategic Goal 1 – Ensure American excellence and national security through investments in transformative research and innovation ▪ EO 14332 – Improving Oversight in Federal Grantmaking ▪ EO 14303 – Restoring Gold Standard Science
<p>2 How can NSF better identify and mitigate research security risks across the science and technology enterprise?</p>	<ul style="list-style-type: none"> ▪ Identify and mitigate research security risks 	<ul style="list-style-type: none"> ▪ NSF Strategic Goal 1 – Ensure American excellence and national security through investments in transformative research and innovation ▪ EO 14303 – Restoring Gold Standard Science ▪ CHIPS and Science Act of 2022 ▪ November 2025 Office of Science and Technology Policy (OSTP) Request for Information: Accelerating the American Scientific Enterprise
<p>3 How effective have NSF merit review reforms been at reducing burden on applicants and improving NSF’s operational efficiencies?</p>	<ul style="list-style-type: none"> ▪ Merit review assessment on burden reduction 	<ul style="list-style-type: none"> ▪ NSF Strategic Goal 3 – Accelerate NSF’s impact by optimizing capability and modernizing operations ▪ NSF Objective 3.2 – Ensure accountable agency operations through Gold Standard Science and maintain effective use of federal funds ▪ EO 14303 – Restoring Gold Standard Science

SECTION II | EVIDENCE ACTIVITIES

This section details the key evidence activities being undertaken to answer the agency’s Priority Questions, including evaluations. Evaluation, as defined under requirements of the Foundations for Evidence-Based Policymaking Act of 2018, is an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency.

Activity A: NSF Impact Framework

Supports Priority Question(s)...	1	2	3	4	5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description	<p>The NSF Impact Framework (NIF) is an agency-wide framework to measure the outcomes and impacts of NSF investments that support economic growth. The objective of NIF is to enhance the efficiency and effectiveness of NSF's processes to document, track, and assess the returns on its investments, while minimizing the administrative burden on awardees associated with impact reporting. The evidence-building activities to develop NIF in FY 2026 and FY 2027 are the first steps toward providing essential evidence to NSF leadership on the optimal use of NSF resources. NSF will also use this information to communicate the value of NSF initiatives and demonstrate accountability for use of taxpayer funds. Analyses proposed as part of this pilot may lead to recommendations on leveraging technology to reduce administrative burden and achieve resource efficiencies. As an agency-wide initiative, NIF supports all NSF programs in the Federal Program Inventory.</p> <p>NSF will pilot an approach for measuring the outcomes and impacts of NSF's investments. Methods for developing a pilot NIF may include a literature review, interviews or focus groups with NSF subject matter experts, natural language processing to analyze and synthesize qualitative information contained in reports, and statistical analyses of quantitative data to design and test a multidimensional measurement tool. The measurement approach will take into account existing primary data sources to minimize the need for additional data collection. Existing data sources include proposal and award data, Research Performance Progress Reports, and statistics produced by the National Center for Science and Engineering Statistics (NCSES). NSF will also leverage externally available data sources as needed.</p> <p>In FY 2026, NSF will design and assess methodological approaches for measuring the outcomes and impacts of a subset of NSF investments, including common metrics such as job creation, patents developed, creation of knowledge that may lead to future innovations, and other economic and societal impacts of scientific investments. In FY 2027, NSF will pilot one of the approaches to assess whether the NIF applies to the subset of NSF investments included in the pilot, and whether the NIF can be standardized and scaled to a broader set of investments to effectively and efficiently measure NSF outcomes and impacts.</p>				
Alignment to Priority(ies)	<p>NIF supports NSF's Strategic Goal 1. Ensure American excellence and national security through investments in transformative research and innovation. Through development of an agency-wide framework for measuring outcomes and impact, NSF can better target investments to the types of projects that will advance national priorities, grow the economy, and improve American's lives. This is consistent with Administration priorities to strengthen accountability in federal grantmaking. Further, work done to develop NIF will adhere to the core tenets of Gold Standard Science, including transparency and reproducibility.</p>				
Topics	<p>Scientific impact, outcome metrics, impact metrics, science metrics, impact framework, research impact</p>				

Activity B: Identify research security risks

Supports Priority Question(s)...	1	2	3	4	5
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Description	<p>NSF has dedicated considerable effort and resources to working with the research community and its partners to equip researchers with the information and tools necessary to ensure that their work is protected, clarify security issues and mitigate risks, and foster transparency, disclosure, and other practices that reflect the values of research integrity. In FY 2027, through the Office of the Chief of Research Security Strategy and Policy (OCRSSP), NSF will assess whether current policies and practices support the agency’s ability to manage malign foreign interference risks while promoting beneficial international collaboration. The results of these efforts will be used to inform key agency decision-making, including potential updates to policy and guidance, adjustments to NSF’s risk-mitigation posture, enhanced collaboration with interagency and international partners, and improvements to training and resources. Because research security is an agency-wide priority, this work will support all NSF programs in the Federal Program Inventory.</p> <p>NSF will assess data from multiple sources to gain insights into how researchers and institutions experience research security challenges and whether NSF requirements, guidance, and support are useful tools for capacity building around risk mitigation. NSF will use data collected through the NSF Safeguarding the Entire Community in the U.S. Research Ecosystem (SECURE) Program⁵, including research security landscape analyses, research security training and outreach data, research security risk-modeling products, and community feedback from research security practitioners. NSF will also use data generated by the Research on Research Security (RoRS) Program⁶ portfolio. The RoRS Program supports interdisciplinary, evidence-based research to enhance understanding of security risks, practices, and policies to safeguard the U.S. research enterprise. Finally, NSF will obtain data through engagements with research security stakeholders.</p> <p>OCRSSP will carry out these activities over a 12-month period beginning in FY 2026. Major steps include identifying and reviewing relevant RoRS projects, synthesizing evidence generated through the SECURE Program, conducting stakeholder engagements, and generating a summary of key findings regarding barriers to identification and mitigation of research security-based risks in the science and technology (S&T) enterprise.</p>
Alignment to Priority(ies)	<p>This work supports the Administration’s priorities to strengthen national security, maintain U.S. competitiveness in critical and emerging technologies, and ensure the American people are the primary beneficiaries of U.S. federal research investments. Specifically, it aligns with NSF’s Strategic Goal 1. Ensure American excellence and national security through investments in transformative research and innovation. These activities will support continued implementation of NSF’s Gold Standard Science implementation plan, as well as legislative mandates in the CHIPS and Science Act of 2022 directing NSF to develop risk mitigation capabilities that do not impede U.S. scientific leadership. These activities are relevant to the November 2025 Office of Science and Technology Policy (OSTP) Request for Information: Accelerating the American Scientific Enterprise, including improved clarity on how the federal government can strengthen research security to protect sensitive technologies and dual-use research while minimizing compliance burdens on researchers.</p>
Topics	Research security, risk management, research security risk

Activity C: Merit Review Process Assessment

Supports Priority Question(s)...	1	2	3	4	5
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Description	<p>Through its merit review process, the U.S. National Science Foundation ensures the proposals it receives are reviewed in a fair, competitive, transparent, and in-depth manner. Recent and planned changes to the merit review process are intended to modernize and streamline the proposal review</p>
-------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>process, reducing burden on the science and technology enterprise and ensuring more efficient use of and greater accountability for public funds. As the current merit review process changes are implemented, NSF proposes to assess the extent to which these modernization efforts are effectively reducing burden on applicants and leading to efficiencies in NSF processes. The outputs of this assessment will inform future process improvements and program initiatives, including applicant-level capacity-building efforts. This assessment may also serve as model for other grant-making and research agencies. As an agency-wide initiative, the Merit Review Process Assessment will support all NSF programs in the Federal Program Inventory.</p> <p>In the merit review process assessment, NSF will analyze administrative and customer experience data sources, minimizing collection of additional data. Analyses will use data to assess NSF's effectiveness in streamlining its processes, such as average time from proposal submission to notification of the funding decision, review hours per proposal, and the number of proposals that are returned without review. To assess burden reduction on applicants, NSF will build on prior analyses and assess reductions in the number and complexity of funding opportunities and requirements in financial assistance policies with time spent on the proposal development processes. Satisfaction and burden data from prior surveys of applicant experience of the merit review process and the resulting recommendations will also be reviewed.</p> <p>NSF will conduct these evidence building activities in FY 2026 and FY 2027, in alignment with its FY 2026-2027 Agency Priority Goal on reducing burden in the science and technology enterprise.</p>
Alignment to Priority(ies)	<p>Evidence building activities under the merit review process assessment are in alignment with OSTP Director Kratsios' goal to reduce administrative burdens on federally funded researchers. The merit review process assessment supports consistent implementation of modernizing efforts and evidence-based decisions regarding merit review process improvements. This assessment demonstrates NSF's adherence to the scientific principles outlined in the Executive Order on Gold Standard Science by applying the core tenets in its own operations and modeling the same standards of rigor and transparency expected of the scientific community.</p> <p>The merit review process assessment also supports implementation of NSF's FY 2026-2030 Strategic Plan including Strategic Goal 3. Accelerate NSF's impact by optimizing capability and modernizing operations, and Objective 3.2 Ensure accountable agency operations through Gold Standard Science and maintain effective use of federal funds. This work will directly support NSF's FY 2026-2027 Agency Priority Goal to, "Streamline NSF's proposal and award management processes to reduce administrative burden on the science and technology (S&T) enterprise and ensure maximal impact of taxpayer dollars.</p>
Topics	Merit review, modernization, assessment, merit review reform, reform