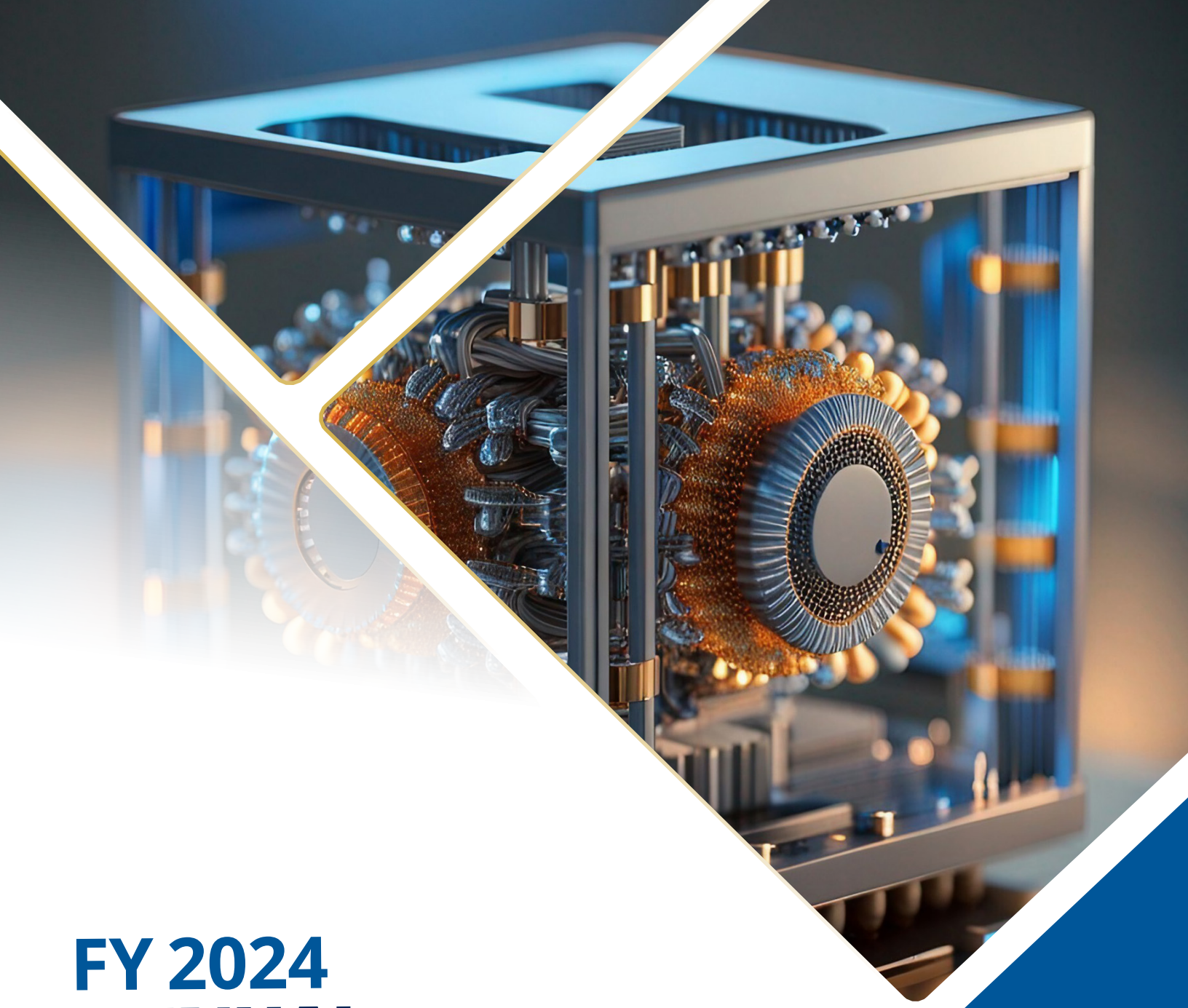


FY 2024 ANNUAL PERFORMANCE REPORT

U.S. National Science Foundation

FY 2022-2026 Strategic Plan Framework: Strategic Goals and Objectives

The U.S. National Science Foundation (NSF) Strategic Plan for fiscal years (FYs) 2022-2026: *Leading the World in Discovery and Innovation, STEM Talent Development, and the Delivery of Benefits from Research*,[1] includes four strategic goals—Empower, Discover, Impact, and Excel—that form the core of the plan. These themes focus on expanding frontiers, engaging people, and delivering solutions. Under each goal are two strategic objectives, which together encompass all areas of agency activity.

FY 2022-2026 Strategic Framework, Strategic Goals, and Objectives

Strategic Goal	Strategic Objective
1. Empower: Empower Science, Technology, Engineering and Mathematics (STEM) talent to fully participate in science and engineering	**1.1 Ensure accessibility and inclusivity –** Increase the involvement of communities underrepresented in STEM and enhance capacity throughout the nation.
	1.2 Unleash STEM talent for America – Grow a diverse STEM workforce to advance the progress of science and technology.
2. Discover: Create new knowledge about our universe, our world, and ourselves	**2.1 Advance the frontiers of research –** Accelerate discovery through strategic investments in ideas, people, and infrastructure.
	2.2 Enhance research capacity – Advance the state of the art in research practice.
3. Impact: Benefit society by translating knowledge into solutions	**3.1 Deliver benefits from research –** Advance research and accelerate innovation that addresses societal challenges.
	3.2 Lead globally – Cultivate a global science and engineering community based on shared values and strategic cooperation.
4. Excel: Excel at NSF operations and management	**4.1 Strengthen at speed and scale –** Pursue innovative strategies to strengthen and expand the agency's capacity and capabilities.
	4.2 Invest in people – Attract, empower, and retain a talented and diverse NSF workforce.

NSF Performance Management Framework

NSF's Annual Performance Report builds upon key aspects of the Government Performance and Results Act (GPRA) Modernization Act of 2010 and the Evidence Act.[2] These include Agency Priority Goals and Strategic Reviews, which enable agencies to consider data beyond annual output measures when evaluating agency performance, and the framework established by the four types of evidence defined in the Office of Management and Budget (OMB) guidance: Foundational Fact Finding, Policy Analysis, Performance Measurement and Program Evaluation.

[1] NSF's strategic plan is available at https://www.nsf.gov/news/special_reports/strategic_plan/.

[2] The Foundations for Evidence-Based Policymaking Act of 2018 (the Evidence Act) is available at www.congress.gov/115/plaws/publ435/PLAW-115publ435.pdf.

Components of Evidence, as Presented in OMB M-19-23 and M-21-27[3]

The Annual Performance Report presented in this chapter includes goals, indicators, and other information that relate directly to three of these components of evidence:

- *Annual Goals* are the primary focus of the Annual Performance Report and are included in the "Performance Measurement" category of evidence. They answer the question, "What progress is the implemented approach making toward objectives and goals, on key measures, and against set targets?"
- *Other Information and Context* includes indicators in the "Foundational Fact Finding" category of evidence and answers the question, "What can we understand about the problem, existing approaches, and the target populations?"
- *Evaluation Highlights* draw upon NSF's Annual Evaluation Plan, are included in the "Program Evaluation" category of evidence, and answer the questions, "To what degree is our implemented approach causing the desired outcomes/impact? How much effect? For whom? Under what conditions?"

[3] OMB Memorandum M-21-27 "Evidence-Based Policymaking: Learning Agendas and Annual Evaluation Plans" may be accessed at www.whitehouse.gov/wp-content/uploads/2021/06/M-21-27.pdf; OMB Memorandum M-19-23 "Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Learning Agendas, Personnel, and Planning Guidance" may be accessed at www.whitehouse.gov/wp-content/uploads/2019/07/M-19-23.pdf.

This multi-faceted framework will provide valuable information and insights for strengthening NSF's programs and investments, as well as highlight how science and engineering research and education generate a dynamic set of benefits and impact. For each Strategic Objective, there are one or more annual goals as well as other related information and context. Due to the broad scope of NSF work, these goals and other indicators may reflect different programs and aspects of NSF operations. A comprehensive list of goals and other indicators is listed below.

Strategic Objective		Annual Goals	Other Indicators
Empower	1.1	1.1a: Agency Priority Goal: Increase representation 1.1b: Expand geographic diversity in STEM research	Minority-Serving Institution counts/funding Emerging Research Institution counts/funding Principal Investigator demographics
	1.2	1.2: Increase utilization of NSF's Education and Training Application (ETAP)	STEM Workforce Demographics U.S. Science and Engineering Degrees Conferred
Discover	2.1	2.1: Major facility projects on schedule and budget	
	2.2	2.2: Mid-scale infrastructure projects on schedule and budget	
Impact	3.1	3.1: Funding from NSF Partnerships	Partnership counts Small Business Innovation Research (SBIR) program demographics I-Corps demographics
	3.2	*No goal*	International collaborations
Excel	4.1	4.1a: IT System Availability 4.1b: Make Timely Proposal Decisions	Internal customer satisfaction with IT Data strategy implementation Budget Themes
	4.2	4.2a: Employee engagement; Human Resources internal customer satisfaction 4.2b: Foster a Culture of Inclusion	2023 FEVS Diversity, Equity, and Inclusion Index

Organizational Health and Performance

In April 2023, OMB issued M-23-15: "Measuring, Monitoring, and Improving Organizational Health and Organizational Performance in the Context of Evolving Agency Work Environments."[4] The primary aim of M-23-15 is to ensure that agency decisions regarding work environments continually improve the organization's health and performance. NSF identified a core set of organization health and performance metrics related to human capital, employee engagement, information technology (IT), facilities, financial management, and program workload. These metrics are tracked and discussed with NSF leadership quarterly and have informed performance goals under Strategic Goal 4: Excel.

[4] OMB Memo M-23-15 www.whitehouse.gov/wp-content/uploads/2023/04/M-23-15.pdf.

Strategic Goal 1, Empower: Empower STEM talent to fully participate in science and engineering

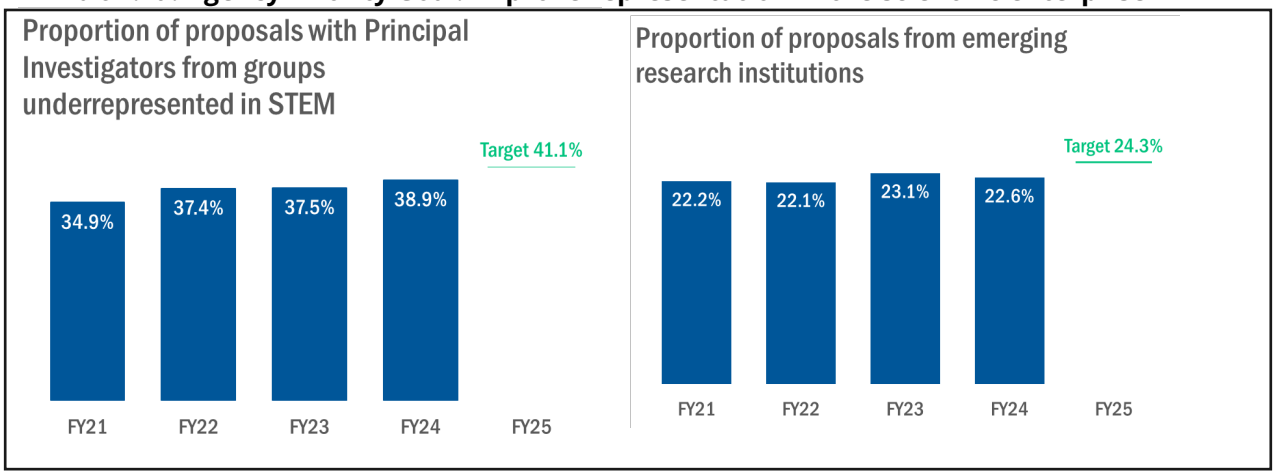
Strategic Objective 1.1: Ensure accessibility and inclusivity. Increase involvement of communities underrepresented in STEM and enhance capacity throughout the nation.

Annual Goal 1.1a: Improve representation in the scientific enterprise [Agency Priority Goal][5]

Goal Statement: Increase the proportion of proposals received 1) with principal investigators (PIs) from groups underrepresented in STEM and 2) from emerging research institutions (ERIs) by 10 percent over the FY 2022 baseline.

About this Goal: This Agency Priority Goal (APG) is part of NSF's efforts to "create opportunities everywhere" by identifying and addressing individual, institutional, and geographic barriers to innovation, partnerships, and opportunities in STEM. Among the awards NSF makes annually, the proportion of awards with PIs from groups underrepresented in STEM is not on par with their representation in the STEM workforce, which in turn is below the relative proportions of the total population. The aim of the APG is to improve representation in the scientific enterprise by pursuing actions that will lead to an increase in proposal submissions led by individuals from groups underrepresented in STEM and from underserved communities.

Exhibit 1.1a. Agency Priority Goal: Improve representation in the scientific enterprise



[5] More information on the APG is available at: https://www.performance.gov/agencies/nsf/apg/fy-24-25/goal-1/.

Exhibit 1.1a. Agency Priority Goal: Improve representation in the scientific enterprise (continued)

FY 2024 2025 APG **Annual Goal 1.1a: Improve representation in the scientific enterprise**		**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**
Proportion of proposals with PIs from groups underrepresented in STEM[6]	Target					41.1%
	Results	34.9%	37.4%	37.5%	38.9%	
Proportion of proposals from emerging research institutions (ERIs)[7]	Target					24.3%
	Results	22.2%	22.1%	23.1%	22.6%	

Discussion of FY 2024 Result: The APG is a two-year goal with an FY 2025 target to increase the proportion of proposals with PIs from groups underrepresented in STEM and from emerging research institutions by 10 percent over the FY 2022 baselines. NSF completed a re-baseline for this measure from FY 2021 data to FY 2022 data based on the most recent Higher Education and Research Data (HERD) survey released in November 2023. In FY 2024, the proportion of proposals with PIs from groups underrepresented in STEM rose above the FY 2022 baseline. The proportion of proposals from ERIs fell slightly from FY 2023, but remained above the FY 2022 baseline. Throughout FY 2024, NSF advanced the work of improving representation in many ways: showcasing the APG and related efforts in the Equity Ecosystem Expo and new online hub; developing tools, including a toolkit and dashboard, and training materials on how to use them; and launching a group of APG champions throughout the Foundation.

[6] PIs from groups underrepresented in STEM include: women, persons with disabilities, or the following racial/ethnic groups: African American/Black, American Indian/Alaska Native, Hispanic/Latino, and Native Hawaiian/Pacific Islander. These categories may be updated to align with new standards for reporting race and ethnicity in federal reports.

[7] The proportion of proposals from emerging research institutions was recalculated for all years, based on the 2022 Higher Education Research and Development (HERD) survey, available at: https://ncses.nsf.gov/surveys/higher-education-research-development/2022.

Annual Goal 1.1b: Expand geographic diversity in STEM research

Goal statement: Increase the percentage of NSF's research funding to institutions in EPSCoR jurisdictions.

About this Goal: Increasing funding to institutions in EPSCoR jurisdictions will support NSF's goal of expanding the geography of innovation.[8] STEM talent is found throughout the United States, but opportunities to leverage these talents are not equally available everywhere. NSF's Established Program to Stimulate Competitive Research (EPSCoR) seeks to advance research capacity in jurisdictions (i.e., states and territories) that receive relatively small proportions of the federal research budget. EPSCoR approaches this work through investment in research infrastructure, co-funding in partnership with NSF directorates and offices, and outreach to investigators and institutions in EPSCoR jurisdictions. However, truly expanding the research capacity of institutions in EPSCoR jurisdictions is an all-of-NSF activity.

The CHIPS and Science Act of 2022 sets annual targets for NSF funding to institutions in EPSCoR jurisdictions through 2029. In addition, the Act authorizes a gradual increase in percentage of NSF funding of scholarships, graduate fellowships and traineeships, and postdoctoral awards to support institutions in EPSCoR jurisdictions, along with prioritization of investments in research capacity building activities for EPSCoR jurisdictions. NSF is developing tools and strategies to track and achieve these targets, including prioritization of funding that enables sustainable growth in the research competitiveness of EPSCoR jurisdictions.

Exhibit 1.1b. Annual Goal: Expand geographic diversity in STEM research

Annual Goal 1.1b: Expand geographic diversity in STEM research		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Percentage of NSF funding to institutions in EPSCoR jurisdictions[9]	Target				15.5%	16.0%
	Results				15.9%	19.6%

Discussion of FY 2024 Result: The FY 2024 target of 16.0 percent, like that for FY 2023, was established in the CHIPS and Science Act. NSF was able to achieve its EPSCoR target through a coordinated approach of (1) developing and growing NSF funding opportunities that support enhancing research capacity in EPSCoR jurisdictions and (2) enhancing EPSCoR relevant knowledge through an expanded NSF in-reach and outreach to EPSCoR jurisdictions. More information on the EPSCoR results can be found in the EPSCoR annual report.

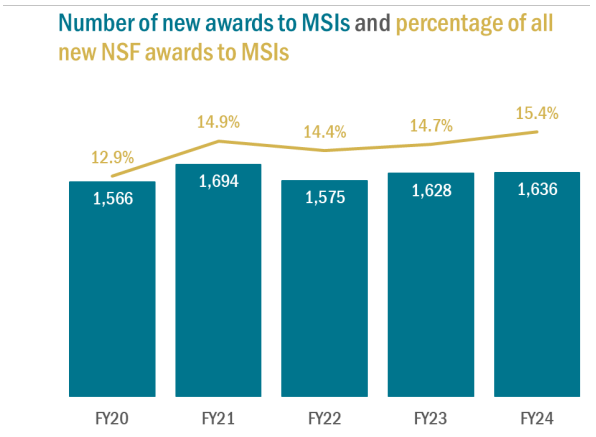
[8] A map of all EPSCoR eligible jurisdictions is available at https://new.nsf.gov/funding/initiatives/epscor/epscor-criteria-eligibility.

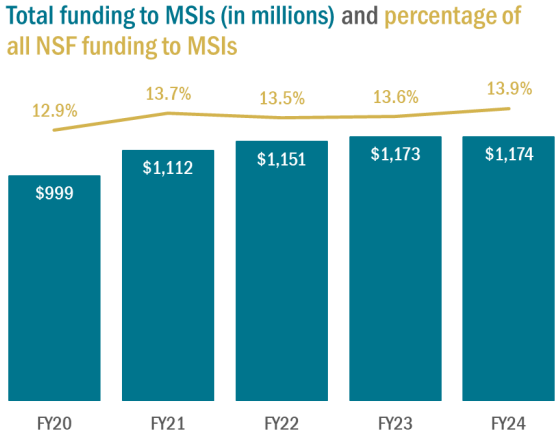
[9] Targets for FY 2023 through FY 2026 are taken from Section 10325 of the CHIPS and Science Act of 2022. www.congress.gov/117/plaws/publ167/PLAW-117publ167.pdf.

Other Information and Context related to Strategic Objective 1.1

NSF Funding to Minority-Serving Institutions: Minority-serving institutions (MSIs)[10] have considerable influence on educating and training science leaders, thereby contributing to U.S. economic growth and competitiveness. As shown in Exhibit 1.1c, NSF tracks MSI support to monitor the impacts of the APG and many Broadening Participation programs.[11]

Exhibit 1.1c. NSF Funding to Minority Serving Institutions (MSIs)[12]



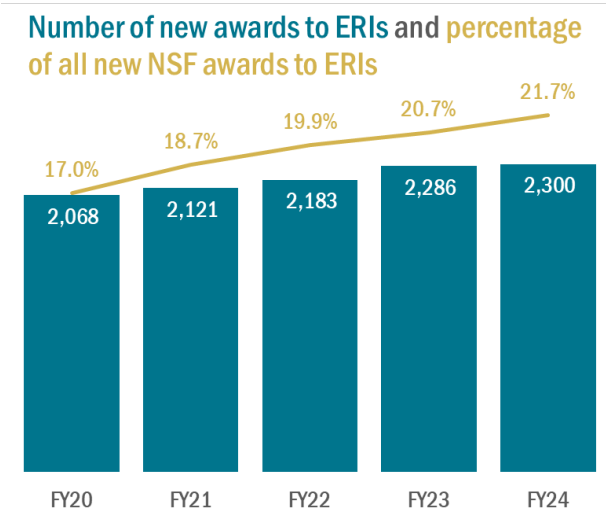


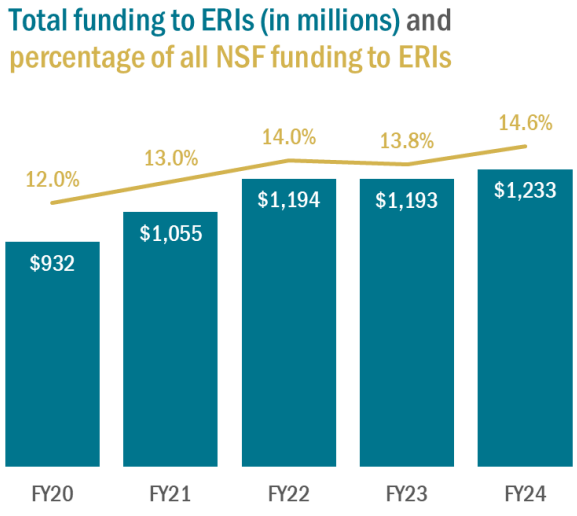
NSF Funding to MSIs		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Number of new awards funded to MSIs	Actuals	1,566	1,694	1,575	1,628	1,636
Percentage of all new NSF awards to MSIs	Actuals	12.9%	14.9%	14.4%	14.7%	15.4%
Total funding for all awards to MSIs (millions)	Actuals	$999	$1,112	$1,151	$1,173	$1,174
Percentage of all NSF funding to MSIs	Actuals	12.9%	13.7%	13.5%	13.6%	13.9%

[10] MSIs include the following institution types: Disabled Serving, High African American Enrollment, Historically Black Colleges and Universities, High American Indian Serving, Native Alaskan Serving, Native Hawaiian Serving, Pacific Islander, Tribal Colleges, Majority Minority Serving, and Hispanic Serving.
[11] More information on Broadening Participation programs is available at: www.nsf.gov/od/broadeningparticipation/bp_portfolio_dynamic.jsp.
[12] FY 24 data based on NSF by the Numbers dashboard as of October 18, 2024 using MSI filter based on institution status in 2022. The dashboard may be accessed at https://tableau.external.nsf.gov/views/NSFbyNumbers/Trends.

NSF Funding to Emerging Research Institutions: Exhibit 1.1d displays the number of, and total funding amounts for, new awards to institutions designated as Emerging Research Institutions (ERIs). These are important indicators for gauging the impacts of NSF's efforts to "create opportunities everywhere." This work is undertaken through ongoing programs and activities devoted to broadening participation, as well as new activities such as GRANTED,[13] which focuses on addressing systemic barriers within the nation's research enterprise by improving research support and service capacity at emerging, developing and underserved research institutions.

Exhibit 1.1d. NSF Funding to Emerging Research Institutions (ERIs)[14]



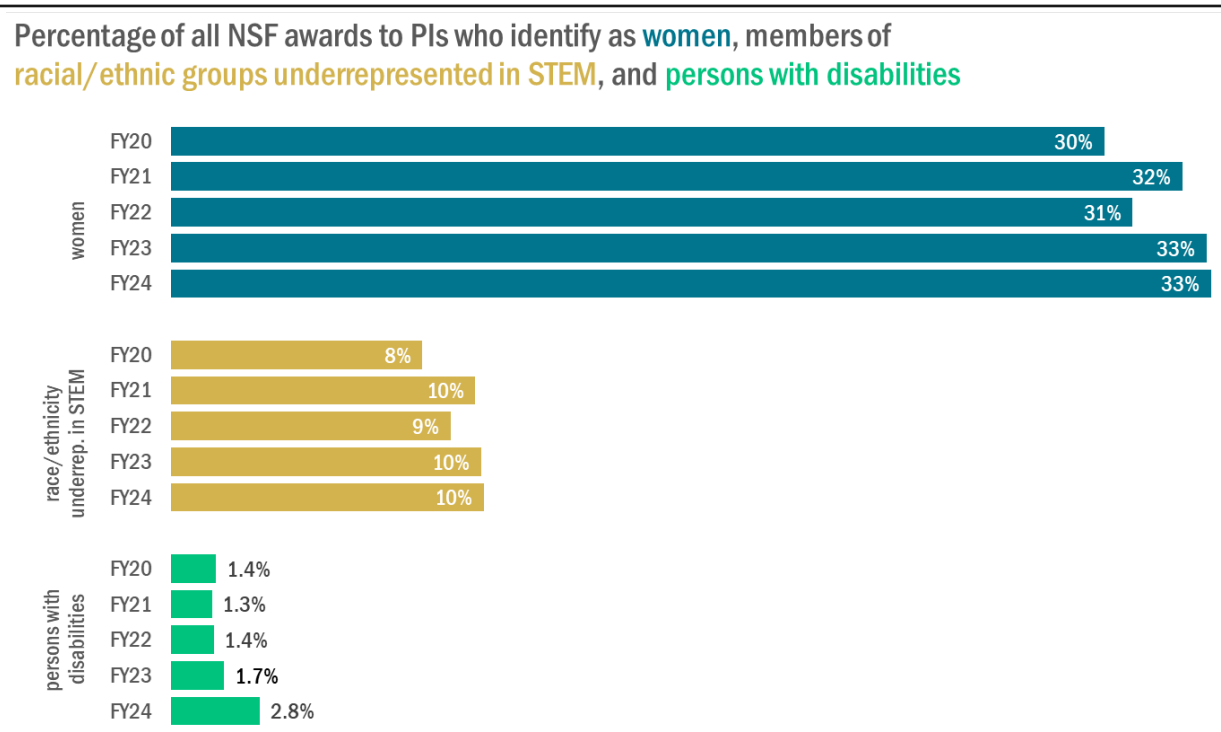


NSF Funding to ERIs		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Number of new awards funded to ERIs	Actuals	2,068	2,121	2,183	2,286	2,300
Percentage of all new NSF awards to ERIs	Actuals	17.0%	18.7%	19.9%	20.7%	21.7%
Total funding for all awards to ERIs (millions)	Actuals	$932	$1,055	$1,194	$1,193	$1,233
Percentage of all NSF funding to ERIs	Actuals	12.0%	13.0%	14.0%	13.8%	14.6%

[13] For more information on GRANTED: https://new.nsf.gov/funding/initiatives/broadening-participation/granted.
[14] The CHIPS and Science Act of 2022 defines an Emerging Research Institution as an institution of higher education with an established undergraduate or graduate program that has less than $50,000,000 in federal research expenditures. Data for all reported years based on NSF by the Numbers dashboard as of October 18, 2024 using ERI filters based on institution status in 2022. The dashboard may be accessed at https://tableau.external.nsf.gov/views/NSFbyNumbers/Trends.

NSF Funding to Principal Investigators from Groups Underrepresented in STEM: NSF's APG is to increase the proportion of proposals with principal investigators from groups underrepresented in STEM and from emerging research institutions. The number of awards with principal investigators from groups underrepresented in STEM is an important indicator that NSF's efforts to increase proposal rates are yielding increased investments to create opportunities everywhere.

Exhibit 1.1e: NSF Awards with Principal Investigators (PIs) from Groups Underrepresented in STEM[15]



NSF awards with PIs from groups underrepresented in STEM		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Number of new awards with PIs who identify as women (percentage of all new awards)	Actuals	3,620 (30%)	3,656 (32%)	3,362 (31%)	3,650 (33%)	3,510 (33%)
Number of new awards with PIs who identify as members of racial/ethnic groups under-represented in STEM[16] (percentage of all new awards)	Actuals	973 (8%)	1,099 (10%)	976 (9%)	1,092 (10%)	1,055 (10%)
Number of new awards with PIs who identify as persons with disabilities (percentage of all new awards)	Actuals	173 (1.4%)	147 (1.3%)	149 (1.4%)	186 (1.7%)	299 (2.8%)

[15] Data pulled from internal dashboard to track Agency Priority Goal progress on 10/18/2024.
[16] See footnote 6 on page 5.

Strategic Objective 1.2: Unleash STEM talent for America. Grow a diverse STEM workforce to advance the progress of science and technology.

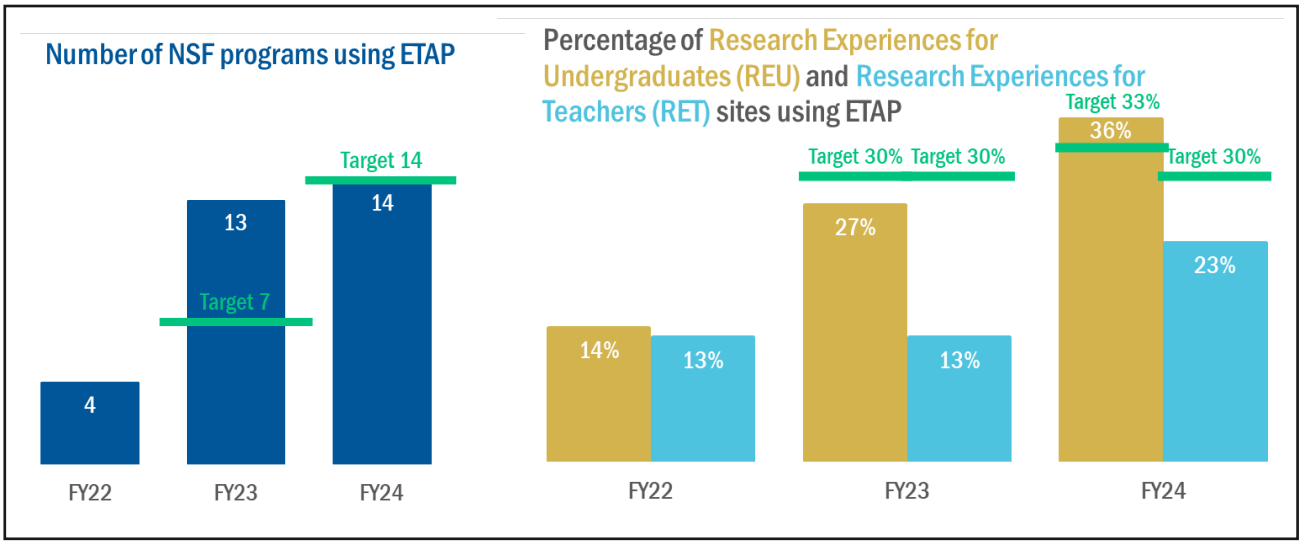
Annual Goal 1.2: Increase utilization of NSF's Education and Training Application (ETAP)

Goal Statement: Increase both (1) the number of programs leveraging NSF's Education and Training Application (ETAP) to connect individuals (undergraduate, graduates, teachers) with NSF educational opportunities, and (2) the percentage of awards utilizing ETAP within targeted programs.[17]

About this Goal: Prior to establishing ETAP, NSF had no single system for collecting self-reported information on applicant or participant characteristics. ETAP provides a secure online application platform for collecting such information from applicants interested in NSF-funded education and training opportunities, such as research experiences, scholarships, and fellowships. ETAP collects applicant level information directly from individuals interested in NSF-funded education and training opportunities.

Greater use of ETAP will improve NSF's data on participants in NSF-funded education and training programs, improving the agency's ability to make informed program and policy decisions related to Strategic Objective 1.2. As ETAP usage expands, this centralized online infrastructure will allow NSF to have more comprehensive and detailed information. Such information enables NSF to understand each program's reach and to conduct evaluations with increasing levels of rigor.

Exhibit 1.2a. Annual Goal: Increase utilization of the Education and Training Application (ETAP)



[17] More information on ETAP can be found at https://etap.nsf.gov.

Exhibit 1.2a. Annual Goal: Increase utilization of ETAP (continued)

Annual Goal 1.2: Increase utilization of ETAP		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Number of NSF programs using ETAP	Target				7	14
	Results			4	13	14
Percentage of awards using ETAP in Research Experiences for Undergraduates (REU) Program	Target				30%	33%
	Results			14%	27%	36%
Percentage of awards using ETAP in Research Experiences for Teachers (RET) program	Target				30%	30%
	Results			13%	13%	23%

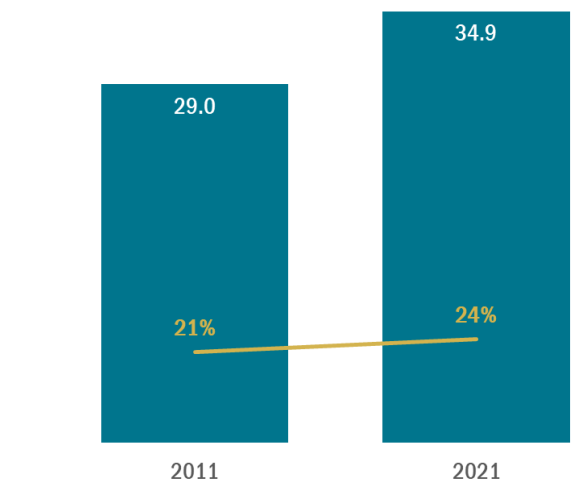
Discussion of FY 2024 Result: In FY 2024, NSF met the target of 14 programs onboarded onto the ETAP system, surpassed the target for the REU program, and fell short of the target for the RET program. The percentage of REU awards utilizing ETAP in FY 2024 was 36%, exceeding the goal of 33%. Although the RET program did not achieve its FY24 target, its usage rate of 23% marks a meaningful improvement from FY 2023.

Other Information and Context related to Strategic Objective 1.2

Although NSF is only one of many federal, non-profit, and private entities involved in growing the STEM workforce, knowledge of general workforce and demographic trends among those in STEM occupations informs the strategies NSF deploys in this area. The National Center for Science and Engineering Statistics (NCSES), a principal statistical agency within NSF, collects, analyzes, and disseminates objective information on the U.S. science and engineering enterprise, including its workforce. NCSES reports highlight data that are particularly relevant to this Strategic Objective and its emphasis on growing a diverse STEM workforce.

Exhibit 1.2b provides overall figures for the U.S. STEM Workforce and shows it has grown over the past decade both in total and as a share of overall U.S. employment.

Exhibit 1.2b: U.S. STEM Workforce[18]



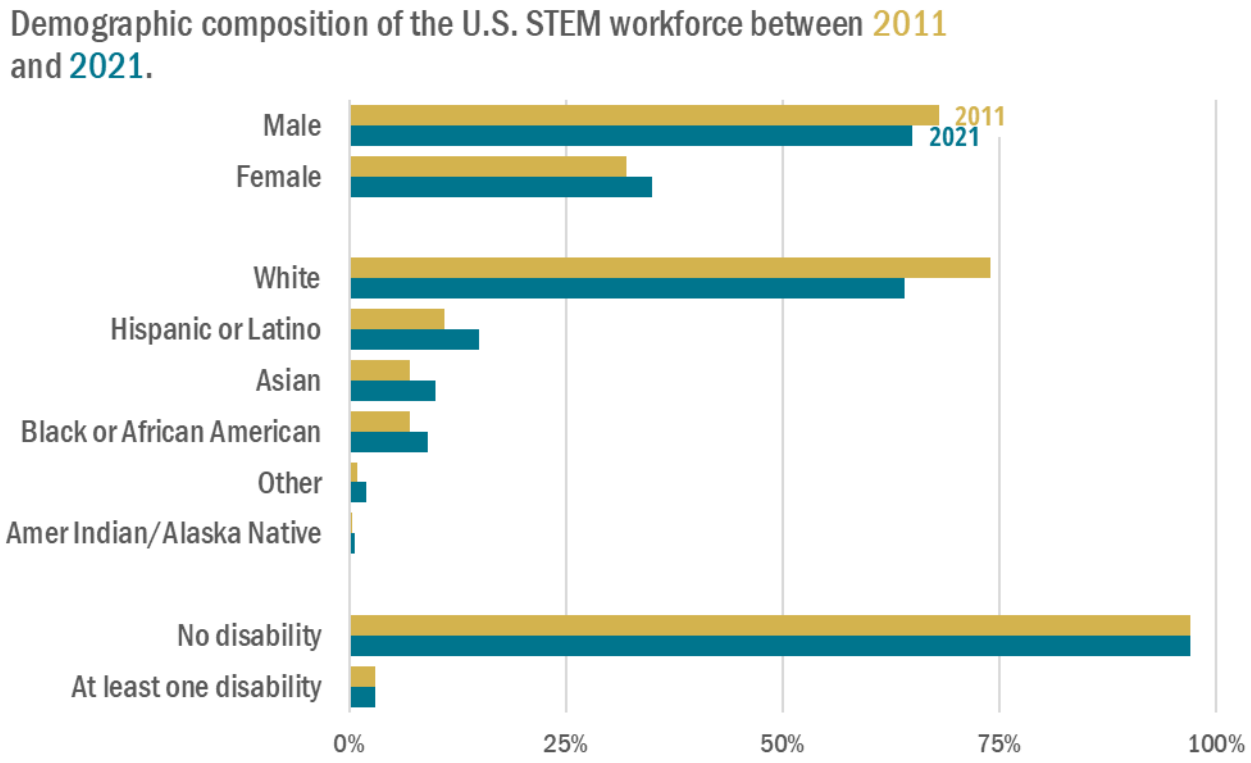
U.S. STEM Workforce		2011	2021
Total U.S. employees in STEM occupations (in millions)	Actuals	29.0	34.9
Percentage of total U.S. Employees	Actuals	21%	24%

Exhibit 1.2c displays data on the participation in the U.S. STEM Workforce by demographic group. These data were published in the January 2023 report, Diversity and STEM: Women, Minorities, and Persons with Disabilities. Based on that report, women made up about one-third of the U.S. STEM workforce in 2021, less than their representation in the employed U.S. population (48 percent). In addition, Blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives

[18] National Center for Science and Engineering Statistics, *Diversity and STEM: Women, Minorities, and Persons with Disabilities,* 2023. Figure 2-2, "STEM workforce ages 18-74, by sex, ethnicity, race, and disability status: 2011 and 2021." The report is available at https://ncses.nsf.gov/pubs/nsf23315/report/the-stem-workforce#growth-in-the-stem-workforce-between-2011-and-2021.

collectively represented 24 percent of the U.S. STEM workforce in 2021, though represent 30 percent of the employed U.S. population.

Exhibit 1.2c. Demographic composition of the U.S. STEM workforce[19]

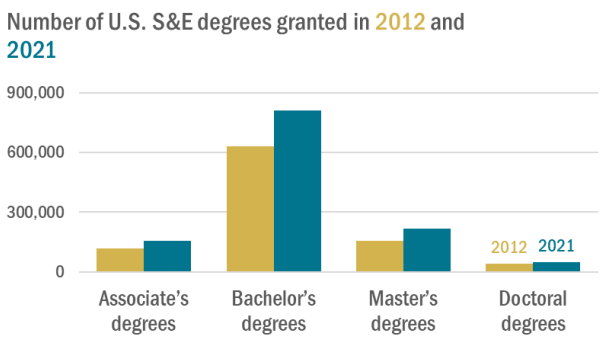


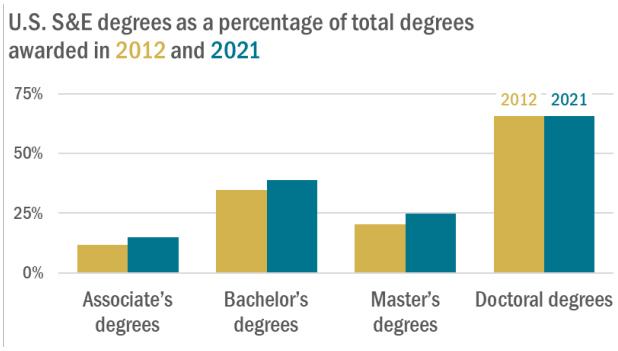
Demographic composition of the U.S. STEM Workforce: 2011 and 2021		2011	2021
Male	Actual	68%	65%
Female	Actual	32%	35%
White	Actual	74%	64%
Hispanic or Latino	Actual	11%	15%
Asian	Actual	7%	10%
Black or African American	Actual	7%	9%
Other	Actual	1%	2%
American Indian/Alaska Native	Actual	0.4%	0.6%
No disability	Actual	97%	97%
At least one disability	Actual	3%	3%

[19] National Center for Science and Engineering Statistics, *Diversity and STEM: Women, Minorities, and Persons with Disabilities,* 2023. Figure 2-2, "STEM workforce ages 18-74, by sex, ethnicity, race, and disability status: 2011 and 2021." The report is available at https://ncses.nsf.gov/pubs/nsf23315/report/the-stem-workforce#growth-in-the-stem-workforce-between-2011-and-2021.

Degrees granted in science and engineering fields in the U.S. have continued to increase, both in overall numbers and as a percentage of overall degrees granted, as seen in Exhibit 1.2d.

Exhibit 1.2d. U.S. Science and Engineering (S&E) Degrees Conferred[20]





U.S. Science and Engineering Degrees Conferred, by Level		2012	2021
Associate's degrees (percentage of degrees in all fields)	Actual	118,662 (11.6%)	155,029 (14.9%)
Bachelor's degrees (percentage of degrees in all fields)	Actual	628,836 (34.7%)	811,706 (38.9%)
Master's degrees (percentage of degrees in all fields)	Actual	154,402 (20.3%)	217,146 (24.9%)
Doctoral degrees (percentage of degrees in all fields)	Actual	40,878 (65.7%)	47,763 (65.6%)

[20] National Science Board, National Science Foundation. 2023. Higher Education in Science and Engineering. Science and Engineering Indicators 2022. Figures HED-11 and HED 12. NSB-2023-32. Alexandria, VA. Available at https://ncses.nsf.gov/pubs/nsb202332/.

Strategic Goal 2, Discover: Create new knowledge about our universe, our world, and ourselves.

Strategic Objective 2.1: Advance the frontiers of research. Accelerate discovery through strategic investments in ideas, people, and infrastructure.

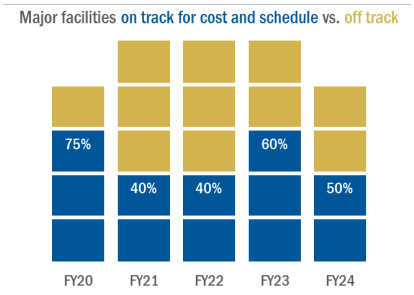
Annual Goal 2.1: Ensure that Major Facility Infrastructure Investments are on Track

Goal Statement: Ensure program integrity and responsible stewardship of Major Facility investments that have a Total Project Cost (TPC) greater than $100 million. Keep negative cost and schedule variance at or below 10 percent for all (100 percent) of the Major Facility projects in the Construction Stage that are between 10 and 90 percent complete.

About this Goal: Modern and effective research infrastructure is critical to maintaining U.S. international leadership in science and engineering. NSF's major multi-user research facilities (Major Facilities) are transformative in nature, with the potential to shift the paradigm in scientific understanding. Realizing the benefits of new Major Facility investments is based on ensuring their timely completion within budget and planned scope. The use of Earned Value Management (EVM) is required for all Major Facilities in the Construction Stage. Cost and schedule variance are key EVM indicators of whether a project is on track relative to the project plan.

NSF performs oversight activities of the Major Facility recipient's EVM System that ensure reliability of EVM metrics and reinforce the importance of recipient project management and accountability. Therefore, these metrics provide an indication of the effectiveness of NSF's oversight of projects in construction. This goal only considers the Major Facility projects under construction that are between 10 and 90 percent complete, because EVM data are less meaningful at early and late stages of the project. For projects surpassing the 90 percent completion threshold, performance is tracked against specific milestones rather than relying on EVM data.

Exhibit 2.1. Annual Goal: Ensure that Major Facility Infrastructure Investments are on Track



Annual Goal 2.1: Ensure that Major Facility Infrastructure Investments are on Track		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Major Facility Construction Projects: Percentage Meeting Cost and Schedule Targets	Target	100%	100%	100%	100%	100%
	Results	75%	40%	40%	60%	50%

Discussion of FY 2024 Result: In FY 2024, five projects were in the Construction Stage, with four of these—Regional Class Research Vessels (RCRV), Antarctic Infrastructure Modernization for Science (AIMS), Compact Muon Solenoid (CMS), and A Toroidal LHC Apparatus (ATLAS)—being tracked against this goal. The Vera C. Rubin Observatory (Rubin) is instead monitored against milestones for the remaining 3% work to completion. As of September 30, 2024, all four projects are on track for cost performance, and two (CMS and RCRV) are on track for schedule performance. ATLAS and AIMS experienced delays beyond their control, though both are actively exploring scope options to regain schedule alignment. NSF continues to monitor these projects closely, but no corrective actions have been deemed necessary at this time.

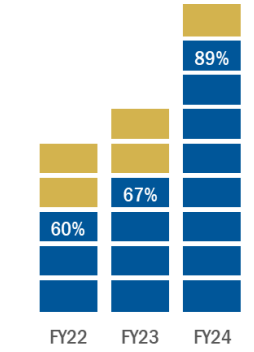
Strategic Objective 2.2: Enhance research capability. Advance the state of the art in research practice.

Annual Goal 2.2: Ensure that Mid-Scale Infrastructure Investments are on Track

Goal Statement: Ensure program integrity and responsible stewardship of Mid-Scale Facility investments that have a Total Project Cost (TPC) greater than $20 million and are using Earned Value Management (EVM) principles. Keep negative cost and schedule variance at or below 10 percent for all (100 percent) of the Mid-Scale Facility projects in the Construction Stage that are between 10 and 90 percent complete.

About this Goal: Modern and effective research infrastructure is critical to maintaining U.S. international leadership in science and engineering. NSF's Mid-Scale Research Infrastructure programs are intended to meet the research community's needs for modern research infrastructure at a scale that is otherwise difficult for individual institutions to acquire. The objectives are to transform scientific and engineering research fields with new infrastructure while simultaneously training early-career researchers in the development, design, implementation, and use of cutting-edge infrastructure. Projects in this portfolio have costs that fall below the $100 million threshold for a Major Facility project but exceed $4 million.[21] Use of EVM is optional on Mid-Scale Research Infrastructure projects and generally requires more scaling and tailoring when used. For mid-scale projects that cost more than $20 million to implement, tracking project performance through EVM metrics is one method for ensuring proper NSF oversight and stewardship of Federal funds, and nine of the 11 mid-scale projects with costs above $20 million are using EVM.

Exhibit 2.2. Annual Goal: Ensure that Mid-Scale Infrastructure Investments are on Track



Annual Goal 2.2: Ensure that Mid Scale Infrastructure Investments are on Track		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Mid-Scale Research Infrastructure Projects: Percentage Meeting Cost and Schedule Targets	Target	Track cost and schedule for all defined projects		100%	100%	100%
	Results	N/A	Achieved	60%	67%	89%

Discussion of FY 2024 Target: In FY 2024, the performance of nine Mid-scale Research Infrastructure projects with total project costs greater than $20 million was tracked using EVM. All nine of these projects were more than 10 percent complete and therefore constitute the FY 2024 portfolio for this target: the Ice Cube Neutrino Observatory Upgrade (ICNO-U), the Laser Interferometer Gravitational-Wave Observatory A+ Upgrade (NICHE), the AIR: SP Garage & Vehicle Maintenance Facility (VMF) Arch Interface (AIR:SP), the AIR: South Pole Station Blue Building Lifting System And ARO Raise (AIR:SOUTH POLE), AIR SPOT Improvement Project (AIR:SPOT), the High Magnetic Field Beamline (HMF), Network

[21] Although Mid-Scale Research Infrastructure projects begin at the threshold of $4 million, this goal tracks those most likely to propose using Earned Value Management principles, with total project costs of $20 million or more.

for Advanced NMR (NAN), the Grid-Connected Testing Infrastructure for Networked Control of Distributed Energy Resources (DERConnect) and Research Data Ecosystem (RDE). All nine projects reported being on track for cost performance and eight out of nine (ICNO-U, AIR:SP, AIR:SOUTH POLE, AIR:SPOT, HMF, NAN, DERConnect and RDE) are on track for schedule performance. NICHE is addressing a schedule delay beyond its control by compressing its construction timeline to return to on-schedule performance.

Strategic Goal 3, Impact: Benefit society by translating knowledge into solutions.

Strategic Objective 3.1: Deliver benefits from research. Advance research and accelerate innovation that addresses societal challenges.

Annual Goal 3.1: Funding from NSF Partnerships

Goal Statements:

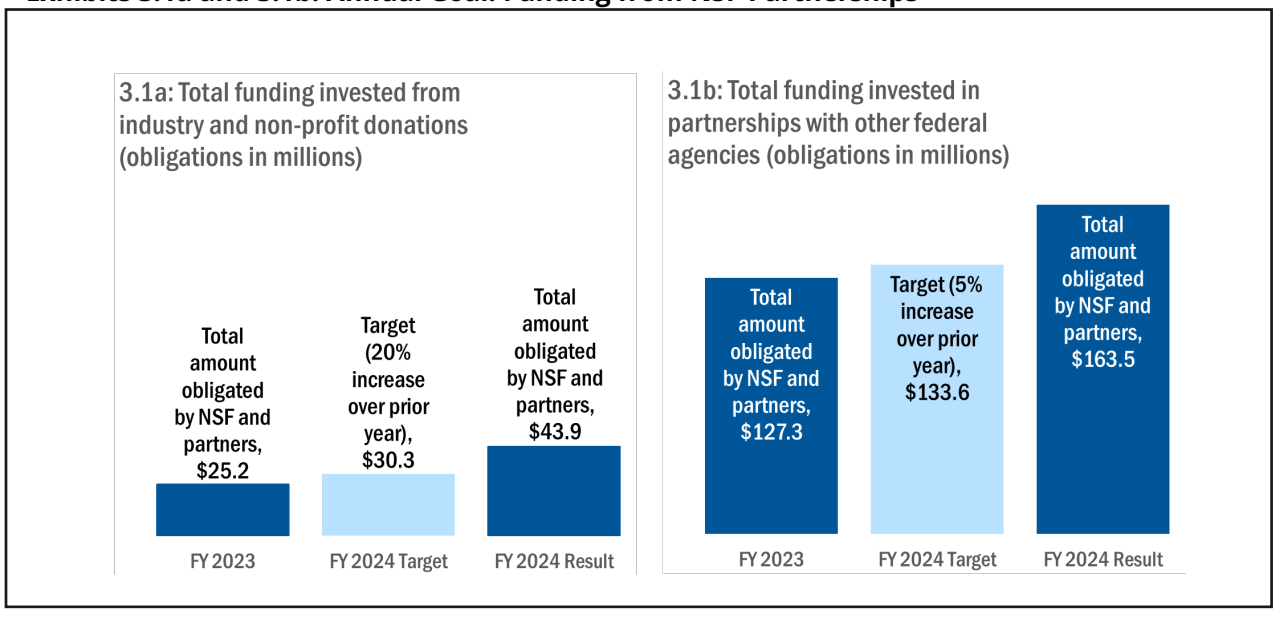
- 3.1a: Increase the funding invested from industry and non-profits that NSF programs leverage to support the science, technology, engineering, and mathematics (STEM) enterprise, by 20 percent over the prior fiscal year.
- 3.1b: Increase the funding invested from other federal agencies that NSF programs leverage to support the science, technology, engineering, and mathematics (STEM) enterprise, by 5 percent over the prior fiscal year.

About this Goal: NSF recognizes strategic partnerships as fundamental drivers for expanding and diversifying our nation's research and innovation capabilities. These collaborations are instrumental in broadening geographic representation in research activities, enhancing demographic diversity in innovation, advancing NSF's core priorities and those of the National Science Board, and supporting the broader U.S. STEM community's objectives.

This initiative aligns with our FY 2022-2026 Strategic Plan and builds upon previous Agency Priority Goals (APGs). These include "Strategic Engagement in Partnerships" (FY 2020-2021) and "Expand Public and Private Partnerships" (FY 2018-2019). These efforts have culminated in a comprehensive NSF-wide partnership strategy encompassing strategic outreach initiatives, process optimization, and enhanced communication frameworks.

Our current focus is on quantifying NSF's effectiveness in leveraging partnership funding, particularly for collaborations that shape research directions, accelerate knowledge translation from NSF's research portfolio, and address critical national needs across technological, societal, and economic domains. While partnership quantities remain an important contextual indicator, our emphasis is on measuring their impact and effectiveness in advancing NSF's mission.

Exhibits 3.1a and 3.1b: Annual Goal: Funding from NSF Partnerships



Exhibits 3.1a and 3.1b: Annual Goal: Funding from NSF Partnerships (cont)

Increase funding invested from industry, non-profits, and other federal agencies that NSF programs leverage to support the STEM enterprise.		FY 2023	FY 2024
3.1a: funds ($ millions) obligated from industry and non-profits	Target	Baseline	$30.3
	Result	$25.2	$43.9
3.1b: funds ($ millions) obligated through partnerships with other federal agencies	Target	Baseline	$133.6
	Result	$127.3	$163.5

Discussion of FY 2024 Result: NSF exceeded its targets for both 3.1a and 3.1b. This success can be attributed to several key developments in NSF's partnership enterprise, including the maturation of internal processes and tools. One advancement was the establishment of the Strategic Partnerships Hub within the Directorate for Technology, Innovation and Partnerships (TIP), which coordinates partnership activities across the Foundation and focuses on the development of new partnerships while maintaining existing ones. Additionally, NSF implemented a new enterprise application to centrally track all partnerships, which is integrated into business processes to ensure comprehensive partnership tracking and enhanced process management.

The unit of analysis for measure 3.1a is obligations of external funding related to a formalized direct partnership between NSF and an industry or nonprofit organization. The unit of analysis for measure 3.1b is obligations of external funding related to a formalized direct partnership between NSF and another federal agency. Obligations made by NSF and obligations made by the partner are counted. For 3.1a, NSF obligated $34.7 million that had been received from industry and non-profit partners, and those partners obligated at least $9.2 million directly to the awardees. For 3.1b, NSF obligated $52.3 million that had been received from other federal partners, and other agencies themselves obligated at least $111.2 million directly to the awardees.

Other Information and Context related to Strategic Objective 3.1

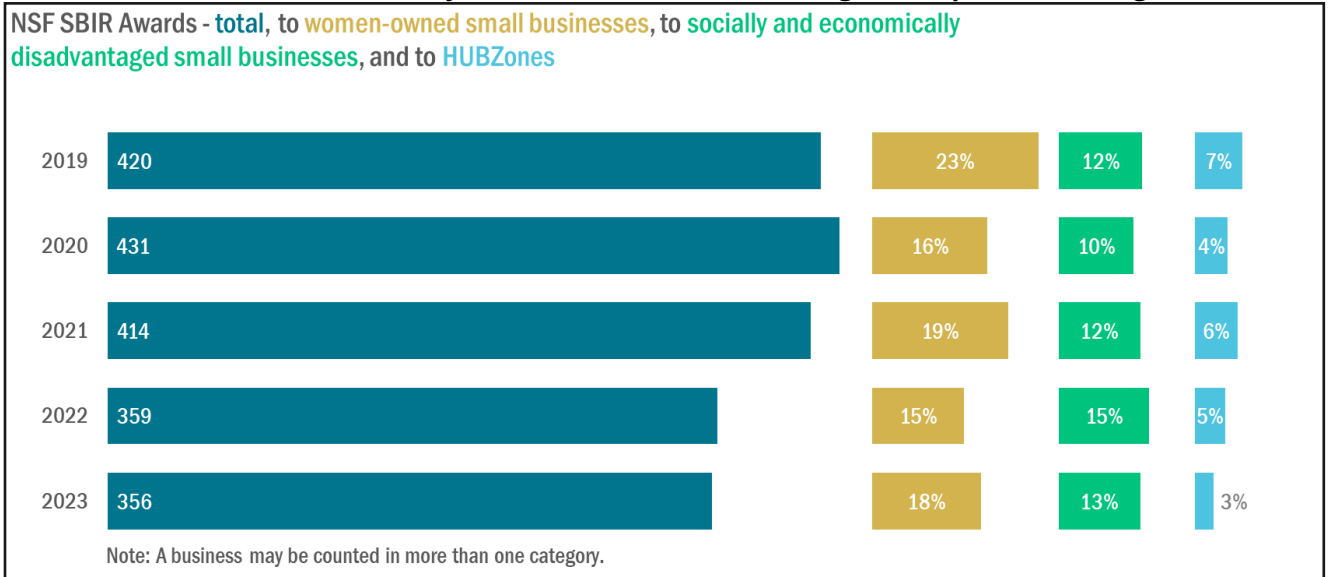
Partners and Partnerships Counts: In addition to strategically increasing the funding NSF leverages through its partnerships, the agency monitors the number of direct partnerships in which its directorates and offices engage and the number of unique partners. In FY 2024, NSF entered into 113 new direct partnerships spanning 81 partners, an increase from FY 2023 actuals of 82 new partnerships with 52 partners. For this metric, new direct partnerships are defined as formal agreements between NSF and other external organizations (federal agency, industry, non-profit, international) resulting in a solicitation, Dear Colleague Letter, or other funding opportunity issued in that fiscal year. Each funding opportunity includes one or more partnerships and one or more partners. The number of partners reported for each fiscal year is therefore a count of the distinct, external organizations associated with these new direct partnerships.

Accelerate innovation that addresses societal challenges: Strategic Objective 3.1 also reflects NSF's commitment to supporting use-inspired research and the translation of research results to the market and society. This strengthens the intense interplay between foundational and use-inspired work, enhancing the full cycle of discovery and innovation. The NSF Strategic Plan discusses "supporting mechanisms and training for researchers in techniques to promote the beneficial uptake of the results of their use-inspired research; and diversifying the research workforce to bring a broader range of perspectives to the generation of research questions." This performance plan provides demographic information about two major programs that accelerate technology transfer and development: the Small Business Innovation Research (SBIR) program, which invests in hundreds of early-stage startups

annually, and Innovation Corps (I-Corps), which provides experiential entrepreneurial education to further the nation's innovation ecosystem.

Small Business Innovation Research (SBIR): NSF has long recognized the importance of providing support to small businesses working to translate research findings into technological innovations and established the first SBIR program in 1977. Today, NSF is one of 11 federal agencies that provides research and development funding to small businesses through SBIR. The SBIR program at NSF funds almost all areas of technology and market sectors to transform scientific and engineering discoveries into products and services with commercial and societal impact.

Exhibit 3.1c. Number and diversity of small businesses receiving start-up funds through SBIR[22]

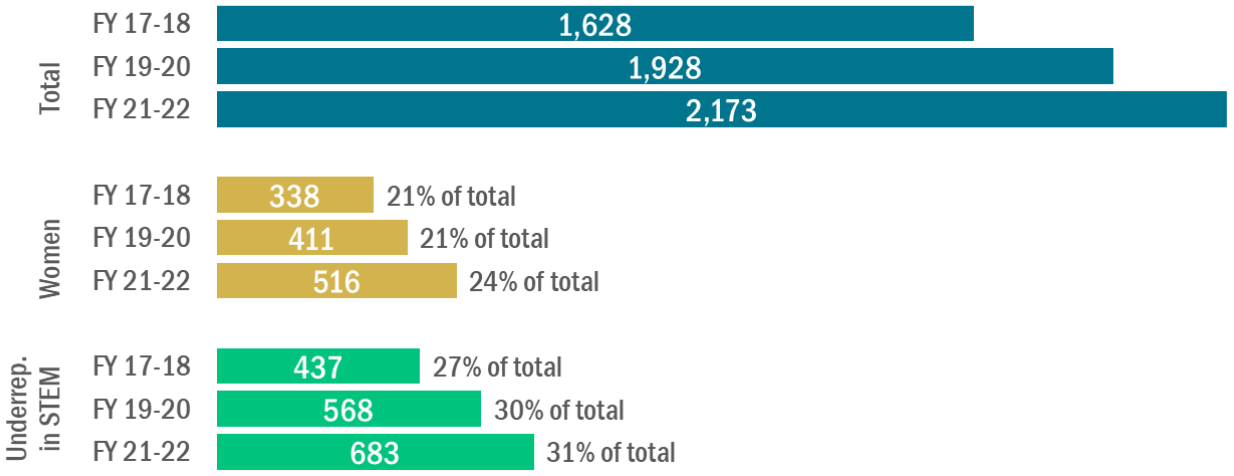


Number and diversity of small businesses receiving start up funds through SBIR		2020	2021	2022	2023	2024
Total new awards (Phases 1 and 2)	Actuals	431	414	359	356	Available Q2 FY25
Number (and percentage) of awards to women-owned small businesses	Actuals	68 (16%)	80 (19%)	54 (15%)	64 (18%)	Available Q2 FY25
Number (and percentage) of awards to socially and economically disadvantaged small businesses	Actuals	44 (10%)	48 (12%)	53 (15%)	48 (13%)	Available Q2 FY25
Number (and percentage) of awards to Historically Underutilized Business Zones (HUBZone)	Actuals	19 (4%)	25 (6%)	18 (5%)	11 (3%)	Available Q2 FY 25

NSF's I-Corps: The I-Corps program connects NSF-funded science and engineering research with the technological, entrepreneurial, and business communities, fostering a national innovation ecosystem that links scientific discovery with technology development, societal needs, and economic opportunities. Through I-Corps training, academic researchers can reduce the time needed to translate a promising idea from the laboratory to the marketplace or other relevant societal setting.

[22] Data for this metric can be found at https://www.sbir.gov/awards.

Exhibit 3.1d. Number and diversity of entrepreneurs trained through I-Corps[23]



Number and diversity of entrepreneurs trained through I Corps		FY 2019 2020	FY 2021 2022
Total trained	Actuals	1,928	2,173
Number (and percentage) who identified as women	Actuals	411 (21%)	516 (24%)
Number (and percentage) who identified as a member of a group underrepresented in STEM[24]	Actuals	568 (30%)	683 (31%)

[23] Data for this metric are available on page 39 of the Appendix of the following report: https://nsf-gov-resources.nsf.gov/2023-06/TIP_I-CorpsReport_2023_Final_6.21.2023.508.pdf

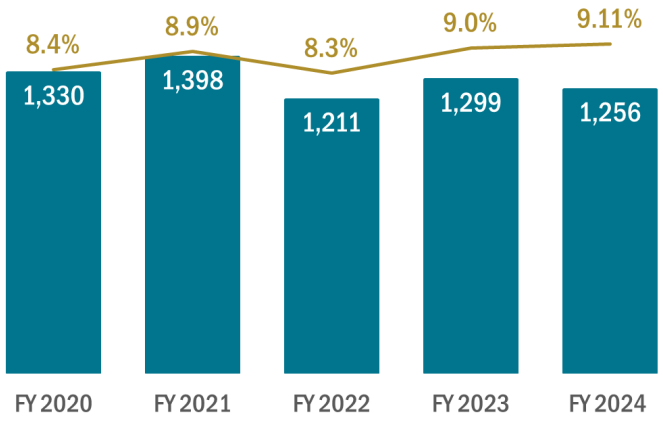
[24] Groups underrepresented in STEM include individuals who identify on their I-Corps project proposals as 1) women, 2) race as Black or African American, American Indian, Alaska Native, and/or Native Hawaiian or other Pacific Islander, 3) of Hispanic origin, and/or 4) having a disability.

Strategic Objective 3.2: Lead globally. Cultivate a global science and engineering community based on shared values and strategic cooperation.

Information and Context related to Strategic Objective 3.2

International Collaborations. NSF's commitment to leading globally reflects the critical importance of research and innovation as drivers of future growth. Through its programming, NSF facilitates international scientific collaborations on all seven continents and provides opportunities for researchers to enhance their work through international cooperation. Collaboration with international partners is defined by the inclusion of joint design or implementation of research with foreign entities or personnel, and/or the engaging of foreign entities or personnel in conducting research. Exhibit 3.2 presents data on NSF awards with international collaborations. This is one of several data points that contributes to an overall picture of NSF's reach and success in global leadership of science and engineering.

Exhibit 3.2. International collaborations.



International collaborations		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
NSF awards that include collaborations with international partners	Number	1,330	1,398	1,211	1,299	1,256
	Percentage	8.4%	8.9%	8.3%	9.0%	9.1%

The data for years since FY 2020 show a small increase in the share of awards that involve international collaborations. This steady change may indicate that the U.S. research community and international collaborators have recovered from the pandemic and are once again actively partnering. Internal data show that recovery is led by increases in infrastructure- and field-based sciences.

Strategic Goal 4, Excel: Excel at NSF operations and management.

Strategic Objective 4.1: Strengthen at speed and scale. Pursue innovative strategies to strengthen and expand the agency's capacity and capabilities.

Annual Goal 4.1a: IT systems availability

Goal Statement: Ensure availability of IT resources for NSF staff and the broader research community.

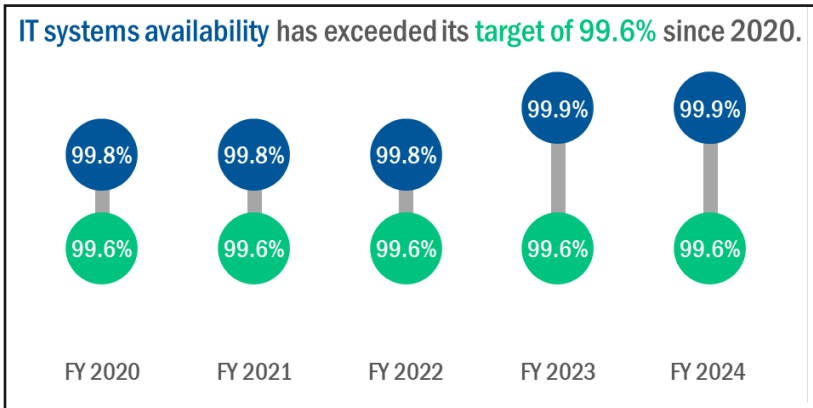


Exhibit 4.1a. Annual Goal: IT systems availability

Annual Goal 4.1a: Provide robust and reliable IT services		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
NSF IT systems availability	Target	99.6%	99.6%	99.6%	99.6%	99.6%
	Result	99.8%	99.8%	99.8%	99.9%	99.9%

About this Goal: The availability of information technology (IT) systems is integral to delivering excellent, equitable, and secure federal services and customer experience. NSF prioritizes the availability of its IT services and coordinates downtime for critical maintenance and service releases to minimize disruption. This goal supports the President's Management Agenda pillars of "Strengthening and empowering the federal workforce" and "Delivering excellent, equitable, and secure federal services and customer experience" by ensuring that critical information and IT systems are available to support NSF staff and awardees in their pursuit of NSF's mission. Maintaining reliable, secure operations of NSF's IT systems also supports the Foundation's ability to strengthen at speed and scale and to expand the agency's capacity and capabilities around functions where the use of IT is most critical.

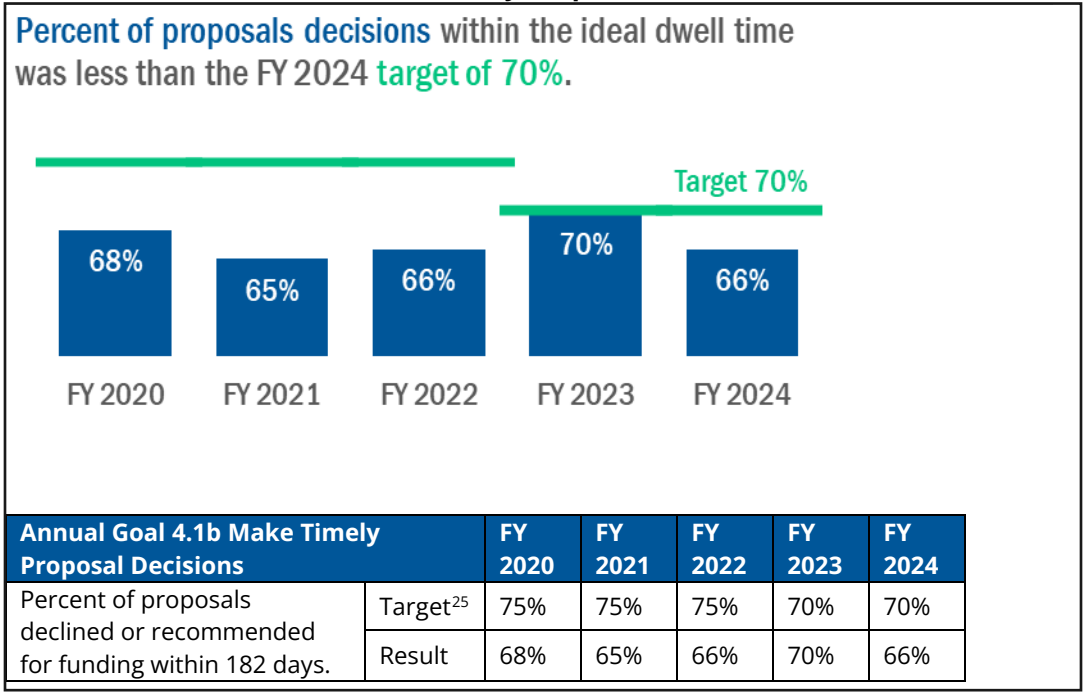
This goal measures NSF's success in keeping critical IT systems available. NSF's goal is to meet or exceed 99.6 percent availability of systems, aside from a set number of hours of planned downtime per year for maintenance and upgrades. Unexpected downtime due to a system issue or incident will lead to reductions in NSF's IT systems availability percentage.

Discussion of FY 2024 Result: NSF continued to exceed the fiscal year IT systems availability goal in FY24, achieving 99.9 percent as actual availability over the target of 99.6 percent within planned downtime of 375 hours. Note that the systems availability was exceeded despite a reduction in

planned downtime from 469 hours in FY23 and prior fiscal years. During FY 2024, NSF monitored IT systems availability daily, and worked to quickly identify, address, and remediate any incidents or issues to restore user access to IT systems and functions.

Annual Goal 4.1b: Make Timely Proposal Decisions: Time to decision or "dwell time" represents the amount of time that passes between receipt of a proposal and notification to the proposer about the funding decision. This indicator tracks the percent of applicants informed whether their proposals have been declined or recommended for funding within 182 days, approximately six months, of the proposal deadline, target date, or receipt date. NSF monitors this indicator to gauge the balance between timeliness and review quality. A review period that is too long inhibits the progress of research as it delays the funding process. A review period that is too short may inhibit review quality. NSF monitors this indicator to gauge the balance between timeliness and review quality.

Exhibit 4.1b. Annual Goal: Make Timely Proposal Decisions



Annual Goal 4.1b Make Timely Proposal Decisions		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Percent of proposals declined or recommended for funding within 182 days.	Target[25]	75%	75%	75%	70%	70%
	Result	68%	65%	66%	70%	66%

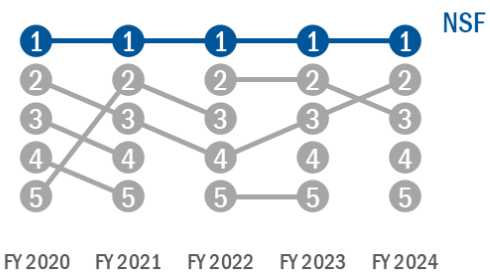
Discussion of FY 2024 Result and Explanation of Missed Goal: Earlier in FY 2024, NSF was on track to achieve a 6 month time to decision for 70 percent of its awards, however, this changed at the end of the fiscal year. NSF is examining why this may have occurred, but notes that it finalized its FY 2024 Spend Plan in August 2024, and accommodations of a reduction in funding compared to FY 2023 may have delayed decision making on which proposals to move forward. NSF will continue to monitor this metric without setting a specific target in outyears.

[25] In FY 2025, reporting for this measure changed from being a targeted goal to an indicator.

Other Information and Context related to Strategic Objective 4.1

Internal customer satisfaction with IT services: NSF values feedback from its customers to assess whether the IT services and systems provided meet their needs. GSA's Customer Satisfaction Survey of federal employees is an annual assessment of core federal support functions and measures employee perceptions of how well an agency is performing these functions. Specifically, it assesses responses to the question, "I am satisfied with the quality of support and solutions I received for information technology function services." In the FY 2024 survey, NSF scored 5.97 out of 7.0, which corresponded to a rank of 1st among 23 CFO Act agencies in customer satisfaction with the agency's IT function. Responses of 5.0 and greater are considered "positive" responses, so the target of an average at or above 5.0 represents aims for an average positive response from the NSF customers being surveyed. Starting in FY 2025, this indicator will become a goal with the target "Meet or exceed an average score of 5.0 out of 7.0 in overall internal (NSF staff) customer satisfaction with IT functions on the 2026 GSA Mission Support Customer Satisfaction Survey of Federal employees."

Exhibit 4.1c. Internal customer satisfaction with IT services



Annual Goal 4.1c: Customer Satisfaction with IT Services		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
NSF Benchmarking Score for IT Functions among CFO Act Agencies	Target					
	Results	6.03	6.12	6.09	5.95	5.97
	Contextual Indicator (ranking)	1st	1st	1st	1st	1st

Implement NSF's Data Strategy: In order for NSF to take advantage of its data assets, the agency will need to capitalize on emerging data analytics capabilities and expand its capacity for analysis and knowledge management. NSF's Data Strategy outlines the paradigm and activities needed to achieve the vision of an agency where everyone is empowered to leverage data and analytics to support NSF's mission. The Data Strategy was finalized and approved in FY 2023, and NSF is tracking progress against implementation. Specifically, NSF will measure the percentage of activities for implementing the Data Strategy that were completed, or on track to be completed, within established timeframes, which will provide a high-level view of implementation progress.

Exhibit 4.1d. Data Strategy Implementation

Data Strategy Implementation	FY 2023 Result	FY 2024 Result
Percentage of Data Strategy implementation activities completed, or on track to be completed, within established timeframe	Eight of 11 milestones are demonstrating progress. Three have not started activity.	Nine of 11 milestones are demonstrating progress. Two have not started activity.

Budget themes: A principal mechanism for cross-cutting activities at NSF is the use of NSF-wide investments. For FY 2023 and FY 2024, NSF monitored the extent to which NSF was able to meet its annual funding targets for key NSF-wide investments. The percentage of the annual targeted funding that is obligated by the end of the year is an indication of NSF's effectiveness in moving through the program investment process and ensuring that key investments are implemented and on track. NSF identified the following themes in FY 2023 related to key areas of interest for NSF and the Administration and tracked annual obligations against these key areas. NSF's FY 2026 Budget Request will contain more information on NSF's budget themes.

Exhibit 4.1e. Tracking budget themes

Tracking budget themes	FY 2024 obligations (in millions)
Build a Resilient Planet*	$1,113
Create Opportunities Everywhere	$1,644
Advance Emerging Industries *	$2,095
Strengthen Research Infrastructure	$2,206
Discovery Engine	$1,853

*These themes are collections of non-add lines, which may be double-counted. The reported amounts are calculated based on a historical pattern of 80% of total obligations being discrete and not overlapping.

Strategic Objective 4.2: Invest in people. Attract, empower and retain a talented and diverse NSF workforce.

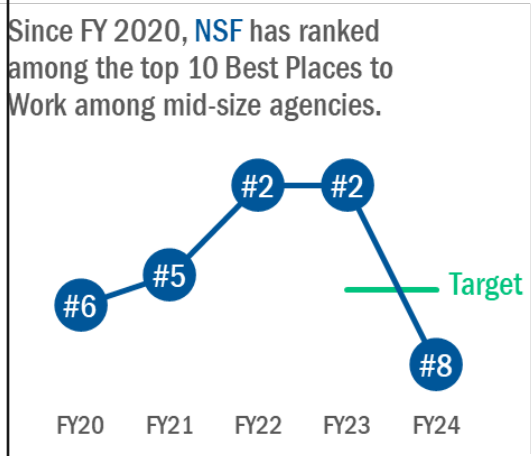
Annual Goal 4.2a: Employee engagement and HR internal customer satisfaction

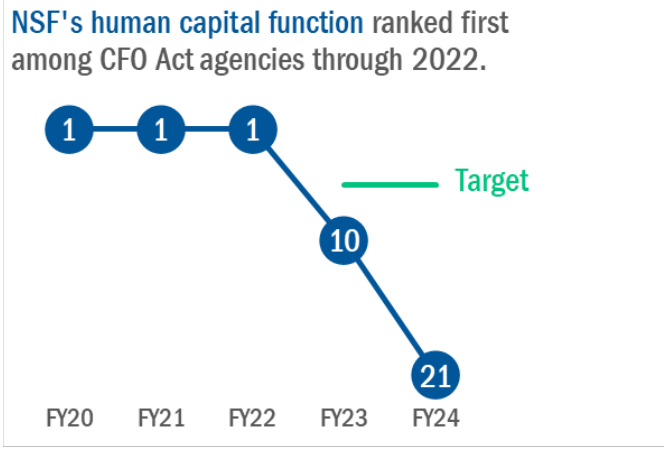
Goal Statements 4.2a:

- 4.2a(1): Rank as a Best Place to Work (BPTW) (top 5 in mid-size agency category) in the annual Best Places to Work rankings published by the Partnership for Public Service.
- 4.2a(2): Meet or exceed an average score of 5.0 out of 7.0 in overall internal (NSF staff) customer satisfaction with Human Capital Functions on the 2026 GSA Mission Support Customer Satisfaction Survey of Federal employees.

About this Goal: NSF's 2022-2026 Human Capital Operating Plan outlines the human capital initiatives and actions that will be undertaken to score highly on two key surveys of employee engagement and internal customer satisfaction. The first survey is the Best Places to Work rankings published by the Partnership for Public Service, which are based on the Employee Engagement and Global Satisfaction indices of the annual Federal Employee Viewpoint Survey. The second survey is the annual Customer Satisfaction Survey conducted by GSA of federal employees, which assesses employee perceptions of core federal support functions.

Exhibit 4.2a. Annual Goal: Employee engagement and HR internal customer satisfaction





Annual Goal 4.2a: Implement the Human Capital Operating Plan		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
(1) NSF Score in Best Places to Work (BPTW) Among Mid-Size Agencies	Target				Rank Top 5 BPTW	Rank Top 5 BPTW
	Result (ranking)	6th	5th	2nd	2nd	8th
	Score (contextual indicator)				82.8	76.3
(2) Customer Satisfaction with NSF's Human Capital Function	Target				Rank in Top 5	Rank in Top 5
	Result (score)	5.47	5.75	5.57	4.81	4.14
	Ranking (contextual indicator after FY 2024)	1st	1st	1st	10th	21st

Discussion of FY 2024 Result:

- 4.2a1: In FY 2024, NSF ranked 8th among mid-size agencies on the Best Places to Work rankings; below the target of 5th.
- 4.2a2: Customer Satisfaction with NSF's Human Capital Function. NSF achieved a score of 4.15, below the target of 5.0 or greater. In FY 2024, NSF moved from a rank-based measure to use of the numerical score from the survey that underlies the ranking. The numerical score from the GSA Customer Satisfaction Survey is expressed on a 7-point scale where scores of 5.0 and above indicate agreement with the statement "I am satisfied with the quality of support and solutions I received for human capital function services."

Explanation of Missed Goal:

- 4.2a1: In FY 2024 NSF's Best Place to Work ranking, decreased from 2nd to 8th among mid-size agencies. NSF undertook several organizational health and employee engagement efforts in FY 2024 to better understand the causes for the decrease and identify ways to improve.

- 4.2a2: The FY 2024 decrease in NSF's satisfaction with the internal Human Capital Function continued trends from FY 2023. Scores for three sub-elements of the human capital function were low: 1) Time and Attendance Management, 2) Human Capital as a Strategic Partner, and 3) Recruitment and Hiring. Several operational and policy changes affected these areas in FY 2023, when the same sub-elements were scored low.

Annual Goal 4.2b: Foster a Culture of Inclusion

Goal Statement: Cultivate a workplace environment that proactively supports, engages, and recognizes all members of the workforce.

About this Goal: Fostering inclusive work environments and realizing the full potential of the workforce requires the implementation of thoughtful strategies focused on creating meaningful, sustainable, and measurable change. From FYs 2022 through 2024 NSF's inclusion goal focused on activities available to staff, particularly Employee Resource Groups (ERGs). ERGs are groups of employees who come together based on shared interests, characteristics, or life experiences, and work to achieve a sense of belonging at the agency. ERGs are recognized as an important tool for fostering staff engagement, and NSF values their insight and perspective as members of ERGs. NSF sought to increase participation in ERGs and other activities in 2022 and aimed to establish ERGs covering a broader range of interests and identities in 2023. In FY 2024, NSF is surveying ERG members to gather feedback on ERGs' effectiveness. This proactive approach will enable NSF to better understand the benefits and outcomes of ERG participation, and to better serve all ERG members and NSF staff in general.

Exhibit 4.2c. Annual Goal: Foster a Culture of Inclusion

Annual Goal 4.2c: Foster a Culture of Inclusion		FY 2022	FY 2023	FY 2024
Cultivate a workplace environment that proactively supports, engages, and recognizes all members of the workforce.	Target	Increase participation in DEIA activities by 10% over FY 2021.	Establish 3 new Employee Resource Groups (ERGs) above FY22 baseline of 3; total = 6 or more ERGs.	Conduct ERG efficacy survey of ERG members.
	Result	28% increase	3 new ERGs established in FY 2023 for a total of 6 ERGs.	Not conducted

Discussion of FY 2024 Result and Explanation of Missed Target: While the efficacy survey activity was deprioritized in FY 2024, other indications suggest that NSF's ERGs continued to be positive forces for employee engagement in 2024. The count of ERGs remained at 6, and membership continued to increase throughout 2024.

Other Information and Context related to Strategic Objective 4.2

To align with administration priorities and current research, OPM developed the DEIA Index for the 2022 OPM FEVS. This measure was specifically designed to align with Executive Order 14035 which features four distinct factors: diversity, equity, inclusion, and accessibility, included as subindices in the survey. In FY 2022, NSF's score on this index was 81.7 percent, second among medium-size agencies. In FY 2023 NSF's score was 80.5 percent, third among medium-size agencies.

FY 2024 Strategic Objective Progress Update

In FY 2024, NSF conducted the third set of annual assessments of the eight Strategic Objectives in the FY 2022-2026 Strategic Plan, in keeping with requirements established in the GPRA Modernization Act of 2010 and further detailed in Circular A-11. Agencies must conduct a relative assessment and identify at least one objective in each of two categories: making Noteworthy Progress or being a Focus Area for Improvement.

Table of FY 2024 Strategic Objective Rankings

2022-2026 Strategic Goals	2022-2026 Strategic Objectives	Agency Ranking
Empower: Empower STEM talent to fully participate in science and engineering.	1.1 Ensure accessibility and inclusivity. Increase involvement of communities underrepresented in STEM and enhance capacity throughout the nation.	*Not ranked in FY 2024*
	1.2 Unleash STEM talent for America. Grow a diverse STEM workforce to advance the progress of science and technology.	*Not ranked in FY 2024*
Discover: Create new knowledge about our universe, our world, and ourselves.	2.1 Advance the frontiers of research. Accelerate discovery through strategic investments in ideas, people, and infrastructure.	*Not ranked in FY 2024*
	2.2 Enhance research capability. Advance the state of the art in research practice.	Noteworthy Progress
Impact: Benefit society by translating knowledge into solutions.	3.1 Deliver benefits from research. Advance research and accelerate innovation that addresses societal challenges.	*Not ranked in FY 2024*
	3.2 Lead globally. Cultivate a global science and engineering community based on shared values and strategic cooperation.	*Not ranked in FY 2024*
Excel: Excel at NSF operations and management.	4.1 Strengthen at speed and scale. Pursue innovative strategies to strengthen and expand the agency's capacity and capabilities.	*Not ranked in FY 2024*
	4.2 Invest in people. Attract, empower, and retain a talented and diverse NSF workforce.	Focus Area for Improvement

Process Overview

This report provides a summary of the FY 2024 Strategic Review Process conducted by NSF in response to the requirement of the GPRA Modernization Act 2010 Section 1116(f). OMB Circular A-11 (260.2) specifies that: *"Annually, agency leaders should review progress on each of the agency's Strategic Objectives established by the agency Strategic Plans and updated annually in the Annual Performance Plan. These reviews should inform strategic decision-making, budget formulation, and near-term agency actions, as well as preparation of the Annual Performance Plan and Annual Performance Report."* The process described below was developed utilizing the guidance in sections 260.8-260.25 of OMB Circular A-11.

Two Components: Topic Reviews and Dashboard Development

NSF's Strategic Review Process uses the results of existing assessments, evaluations, and reports as well as other sources of evidence. Internal dashboards for each of the Strategic Objectives in the NSF Strategic Plan are updated. These Objectives are crosscutting and do not mirror NSF's organizational structure, and the major strategic issues often facing NSF seldom fit within a single Strategic Objective, so NSF also scans the environment for topics and conducts crosscutting topical reviews as necessary. These are performed as a cross-agency activity, without concentrating on single organizational units or individual programs.

Both elements of the process draw upon comprehensive assessment processes that are already in use at NSF. For example, the annual Merit Review Report to the National Science Board describes outputs annually. The Committee of Visitors process, in which external experts assess NSF programmatic activities approximately every four years, is also comprehensive. Instead of duplicating these efforts, the NSF Topical Strategic Review complements them by making use of the information they generate when appropriate (e.g., reviewing their recommendations or using their data in a topic review, and using them as sources of evidence for a dashboard).

NSF performed one topical review in FY 2024, which focused on preparation for the development of the FY 2026-2030 Strategic Plan. Three working groups focused on developing principles and processes, engagement plans, and measurement strategies respectively and presented NSF leadership with a set of guiding principles and recommendations. These recommendations have been put into practice by the team now working on Strategic Plan formulation.

Management Challenges Progress Report

In October 2023, the OIG identified eight areas representing challenges for NSF in FY 2024:

1. Overseeing and Managing Risks of Sexual Assault/Harassment in Antarctica
2. Addressing Sexual Harassment in the Scientific Enterprise
3. Increasing Diversity in Science & Engineering Education and Employment
4. Overseeing the United States Antarctic Program (USAP)
5. Overseeing NSF's Funding Portfolio in a Changing Environment
6. Managing Human Capital
7. Mitigating Threats to Research Security

8. Mitigating Threats Posed by the Risk of Cyberattacks[26]

Management's report on the significant activities undertaken in FY 2024 to address these challenges is included in Appendix 2B: Management Challenges of the FY 2024 Agency Financial Report (AFR). The report also discusses activities planned for FY 2024 and beyond. [27]

Other Information

NSF Verification and Validation Process

NSF ensures the completeness and reliability of performance information through a verification and validation process that assesses each measure for completeness, consistency, accuracy, timeliness, and validity. An independent, external review team assesses a subset of measures each year. Measures not being externally reviewed in a given year are reviewed by NSF staff against the same criteria to ensure their completeness and reliability. NSF has structured this mix of internal and external reviews to ensure that measures undergo the independent, external review on a regular basis.

For other information that is presented in this Annual Performance Report, the underlying source of the information is noted in the discussion of each measure. Several measures are drawn from established publications (such as reports from the NCSES, that have undergone rigorous review prior to publication. For indicators that are developed specifically for the Annual Performance Report, NSF employs a verification and validation process based on the process described above to ensure the completeness and reliability of the information presented.

Committee of Visitors Reviews

NSF relies on the judgment of external experts to maintain high standards of program management, to provide advice for continuous improvement of NSF performance, and to ensure openness to the research and education community served by the Foundation. Committee of Visitor (COV) reviews provide NSF with external expert judgments in two areas: (1) assessments of the quality and integrity of program operations; and (2) program-level technical and managerial matters pertaining to proposal decisions.

COV reviews are conducted at regular intervals of approximately four years for programs and offices that recommend or award grants, cooperative agreements, and/or contracts and whose main focus is the conduct or support of NSF research and education in science and engineering. Lists of recent COVs are available at: https://www.nsf.gov/od/oia/activities/cov/.

Alignment of Human Capital Efforts with Organizational Performance

To drive individual and organizational performance, NSF requires that the performance plans of all employees, executives, and the general workforce contain individual goals aligned with the agency's mission and strategic goals. NSF provides training and makes tools and templates available for all

[26] Management Challenges for the National Science Foundation in Fiscal Year 2024 is available at https://oig.nsf.gov/sites/default/files/reports/2023-11/Management-Challenges-FY-2024-508-compliant-AFR-and-web-post.pdf

[27] NSF's FY 2024 Annual Financial Report is available at https://new.nsf.gov/about/budget#financial-reporting-cd6

supervisors and employees on linking performance plans to agency mission, as well as providing assistance and training on the policies, processes, requirements, and timeframes for the development of performance plans and appraisals.

NSF also directly aligns its strategic human capital and accountability efforts to the agency goals identified in the NSF Strategic Plan. The Annual Performance Plan for FY 2024 incorporates human capital goals established in the agency's Human Capital Operating Plan, which is updated annually. The performance goals in the plan cascade from NSF's 2022-2026 Strategic Plan; most notably, Strategic Goal 4: Excel and Strategic Objective 4.2: Invest in people – attract, empower, and retain a talented and diverse NSF workforce. The agency continues to use its HRStat34 program to report on and articulate the nexus between NSF's strategic goals and objectives, including annual goals, and human capital initiatives at the agency. Senior leaders are briefed quarterly regarding the status of annual performance goals and the human capital initiatives aligned to those goals.

Lower-Priority Program Activities

The President's Budget identifies the lower-priority program activities, as required under the GPRA Modernization Act, 31 U.S.C. 1115(b)(10). The public can access the volume at: www.whitehouse.gov/omb/budget.

Use of Non-Federal Parties

No non-federal parties were involved in preparation of this Annual Performance Report.

Classified Appendices Not Available to the Public

None