Expand Public and Private Partnerships

Goal Leaders:
Ken Calvert, Division Director, Division of Computer and Network Systems, Directorate for Computer & Information Science & Engineering

James Deshler, Deputy Division Director, Division of Biological Infrastructure, Directorate for Biological Sciences

Deputy Goal Leaders:
Tara Bracken, Science Writer, Directorate for Biological Sciences

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Overview

Goal Statement

o   Expand public and private partnerships to enhance the impact of NSF's investments and contribute to American economic competitiveness and security. By September 30, 2019, NSF's number of partnerships and/or award actions with other federal agencies, private industry, and foundations/philanthropies will grow by 5 percent, relative to the FY 2017 baseline, to make available infrastructure, expertise, and financial resources to the US scientific and engineering research and education enterprise.
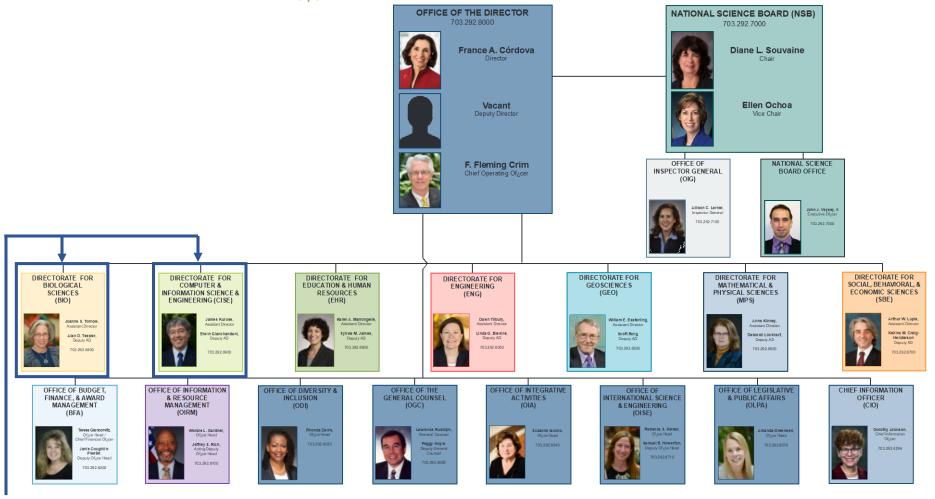
Challenge/Opportunity

o   Private industry, foundations, and non-profits, together with other federal agencies and international funding organizations, bring additional expertise, resources, and capacity to NSF-funded research. This, in turn, accelerates discovery and translation of research to products and services, and enhances preparation of the future workforce to benefit society and grow the American economy.

o   Partnerships require significant time and intellectual capital, as well as strategic foresight, in their development. NSF will improve efficiencies in developing, implementing, and managing partnerships to ultimately grow the number and scope of partnerships and maximize the scientific, economic, and societal impacts of its investments.

Leadership

National Science Foundation organizational chart

APG Co-Leads:

Ken Calvert: Division Director, Directorate for Computer & Information Science & Engineering

Jim Deshler: Deputy Division Director, Directorate for Biological Sciences

APG Deputy Co-Leads:

Tara Bracken: Science Writer, Directorate for Biological Sciences

Meghan Houghton: Senior Advisor, Directorate for Computer & Information Science & Engineering [3]

Goal Structure & Strategies

NSF will pursue the APG by implementing a strategic vision for future partnerships that builds upon existing and emerging experience. NSF will enhance and expand its investments along three axes:

- o Research and innovation;
- o Research infrastructure; and
- o Workforce development.

Toward each axis, NSF will pursue a multipronged strategy aligned with its mission. The elements of this process include:

- o Strategically identify opportunities with potential partners (e.g., workshops, meetings, other outreach).
- o Work externally as well as internally to efficiently formalize partnerships (e.g., formulate and sign MOUs, streamline MOU processes internally).
- o Implement partnerships (e.g., issue new or updated funding opportunities, make awards, execute agreements).

Summary of Progress – FY 2018

FY 2018 Q1

- o Directorate leadership was determined.
- o Logic model of strategies to achieve the goal was drafted.
- o Process for establishing a baseline for NSF's partnerships in FY 2017 was initiated.
- o Multiple Advisory Committees discussed the role of partnerships in NSF's investments (without reference to APG).

FY 2018 Q2

- o Partnerships inventory instrument was issued agency-wide.
- o NSF Senior Management team was briefed on APG activities and Action Plan.
- o Goal Statement was published.
- o Request for nominees to APG Implementation Team was issued.
- o Additional Advisory Committees discussed the role of partnerships in NSF's investments and the strategy for expanding partnerships.

FY 2018 Q3

- o APG Implementation Team was staffed.
- o The APG Implementation Team met multiple times to discuss reporting requirements and to refine, integrate and standardize the data collected via the inventory instrument.
- o The APG Implementation Team performed a Strengths, Weakness, Opportunities, and Threats (SWOT) analysis regarding partnerships within each directorate.
- o Kickoff of Renewing NSF Strategic Reviews, including Partnerships Strategic Review

Summary of Progress – FY 2018 and FY 2019

FY 2018 Q4

- The agency-wide inventory for FY 2017 was finalized.
- The agency-wide inventory was considered by the Renewing NSF Partnerships Goal Team in the development of the goal team's Vision.
- The APG Implementation Team provided input on initial directions for the Renewing NSF agency reform activities.
- Execution of Partnerships Strategic Review.
- The agency-wide inventory was re-issued for FY 2018 data collection.

FY 2019 Q1 and Q2

- The agency-wide inventory for FY 2018 was finalized.
- The APG Implementation Team is developing two tools to improve partnership formation and formalization across the agency.
- New and continuing partnerships are being pursued across the agency.

FY 2019 Q3

- Preparations underway for FY 2019 inventory and FY 2020-2021 goal activities.
- Two tools, an MOU Builder and a set of Guiding Questions, are being tested internally.

Key Milestones

Milestone Summary					
Key Milestone	**Milestone Activity**	**Milestone Status**	**Change from last quarter**	**Owner**	**Comments**
Stage 0: Partnerships Baseline Inventory and APG Implementation Team	Start: Q1, FY 2018; End: Q4, FY 2018	Completed	n/a	APG Leads and Deputies	• Inventory instrument issued agency-wide. • APG Implementation Team Leads and Deputies confirmed. • APG Implementation Team staffed. • Inventory responses received, integrated and finalized.
Stage 1: Identify Partnership Opportunities.	FY 2018 & FY 2019	On-Track	n/a	APG Implementation Team + Agency	• Ongoing discussions externally with potential partners and internally regarding strategy.
Stage 2: Formalize Partnerships.	FY 2018 & FY 2019	On-Track	n/a	APG Implementation Team + Agency	• Ongoing discussions internally regarding optimizing processes.
Stage 3: Implement Partnerships.	FY 2018 & FY 2019	On-Track	n/a	APG Implementation Team + Agency	• Ongoing discussions to implement new partnerships previously in process.

Key Indicators

PARTNERSHIP ACTIVITIES	2017	2018	2019
Interagency	47	56	
Private	7	8	
Nonprofit/ Foundation	3	4	
TOTAL	57	68	

Note: For FY 2017 and FY 2018, seven of the interagency partnership activities also involved one or more international partners.

Data Accuracy and Reliability

An NSF-wide Implementation Team determined data sources (NSF administrative databases) and designed a data collection methodology that would be uniform across all units in FYs 2017 (baseline year), 2018, and 2019. An inventory instrument was developed and implemented to collect reliable information on the number and types of partnerships and/or award actions in use at NSF.

For the purposes of this baseline assessment, a **partnership activity** was defined as *a formal agreement between NSF and at least one external, domestic stakeholder and for which there was investment , other quantifiable contribution, or new commitment formalized in the fiscal year.* "Formal agreements" include, but are not limited to, Interagency Agreements (IAA) and Memoranda of Understanding (MOU).

A **partner** was defined as *the external stakeholder with whom NSF engages in a partnership activity*. Partnership activities were categorized as interagency, private (including industry), and/or nonprofit/foundation, depending on the nature of the partners.

Note that the following were not considered partnership activities for the purposes of this assessment: contracts, partnerships in which there is not at least one domestic participant, and activities through which NSF facilitates the formation of – but does not directly participate in – partnerships between external stakeholders or NSF-funded entities (beyond merely providing grant funding to said entities).

Contributing Programs: List of U.S. Government partners

Air Force Research Laboratory (AFRL)
- Air Force Office of Scientific Research (AFOSR)

Bureau of Labor Statistics (BLS)

Census Bureau

Center for Disease Control and Prevention (CDC):
- National Center for Health Statistics (NCHS)
- OCD

Department of Defense (DOD):
- Defense Advanced Research Projects Agency (DARPA)
- National Geospatial Intelligence Agency (NGA)

Department of Education

Department of Energy (DOE)
- Office of Environmental Management (EM)

Department of Health and Human Services:
- Office of the Assistant Secretary for Planning and Evaluation (ASPE)
- Substance Abuse and Mental Health Services (SAMHSA)

Department of Homeland Security (DHS)
- Science and Technology (S&T)

Department of Justice (DOJ):
- Bureau of Justice Statistics (BJS)
- National Institute of Justice (NIJ)

Department of Transportation (DOT)
- Federal Highway Administration (FHWA)

Environmental Protection Agency (EPA)

Federal Bureau of Investigation (FBI)

Federal Emergency Management Agency (FEMA)

Federal Statistical System of the United States

Food and Drug Administration (FDA)

International Space Station via partnership with Center for the Advancement of Science in Space (CASIS)

National Aeronautics and Space Administration (NASA)

National Endowment for the Humanities

National Institutes of Health (NIH):
- John E. Fogarty International Center (FIC)
- National Cancer Institute (NCI)
- National Institute of Allergy and Infectious Diseases (NIAID)
- National Institute of General Medical Sciences (NIGMS)
- National Library of Medicine (NLM)

National Institute of Standards and Technology (NIST)

National Oceanic and Atmospheric Administration (NOAA)

National Security Agency (NSA)

National Weather Center (NWC)

Office of Naval Research (ONR)

Office of Personnel Management (OPM)

Smithsonian Institution
- Smithsonian Astrophysical Observatory

Social Security Administration (SSA)

United States Army
- US Army Corps of Engineers (USACE)

United States Citizenship and Immigration Services (USCIS)
- Office of Policy & Strategy

United States Department of Agriculture (USDA)
- National Institute of Food and Agriculture (NIFA)

United States Department of the Treasury (USDT)
- Office of Financial Research (OFR)

United States Geological Survey (USGS)

United States Naval Observatory

Veterans Affairs (VA)

Contributing Programs: List of non-governmental partners

Industry:

Amazon

Boeing Co.

Google

IBM

Intel

Microsoft

Semiconductor Research Corporation (SRC)

VMware

Foundation/Nonprofit:

Bill & Melinda Gates Foundation (BMGF)

Breakthrough Foundation

Simons Foundation

Stand Up to Cancer (SU2C)

International:

Canadian Institutes of Health Research (CIHR)

European Organization for Nuclear Research (CERN)

Federal Ministry of Education and Research, Germany (BMBF)

Fonds de Recherche du Québec (FRQ)

French National Research Agency (ANR)

German Research Fund (DFG)

Lebedev Physical Institute

Max Planck Institute

Ministry of Science and Technology, China

National Institute of Information and Communications Technology, Japan

Shanghai Astronomical Observatory

United Kingdom Biotechnology and Biological Sciences Research Council (BBSRC) - United Kingdom Research and Innovation

United States-Israel Binational Science Foundation (BSF)

Additional Information, cont.

Other Contributing Programs

Program Activities:

- o   Directorates for Biological Sciences; Computer and Information Science and Engineering; Education and Human Resources; Engineering; Geological Sciences; Mathematics and Physical Sciences; and Social, Behavioral and Economic Sciences.

Regulations:

- o   N/A

Tax Expenditures:

- o   N/A

Policies:

- o   Opportunities to streamline the MOU process will be investigated as part of this APG.
- o   Best practices for engagement with external stakeholders, including rules of engagement, will be defined and refined.

Other Federal Activities:

- o   Agency partners will be listed here after independent verification and validation in FY 2019.

Stakeholder / Congressional Consultations

Discussions about the role of partnerships at NSF are ongoing with multiple Advisory Committees in FY 2018 and FY 2019.