NSF Advisory Committee for Business and Operations
Spring 2019 Meeting (Virtual)
June 4, 2019

Table of Contents

National Science Foundation
Advisory Committee for Business and Operations
Spring 2019 Meeting (Virtual)
Room E 3410

Tuesday, June 4, 2019

1:00 pm **Welcome/Introductions/Recap**
Co-Chairs: Chuck Grimes and Susan Sedwick

1:15 pm **BFA/OIRM Updates**
Includes yearly update on conflicts of interest.

Presenters: Teresa Grancorvitz, BFA; Wonzie Gardner, OIRM

1:30 pm **Cost Surveillance of Major Facilities – Implementing the Subcommittee Report Recommendations**

Presenter: Kevin Porter, Large Facilities Office, BFA

Discussant: Kim Moreland

The Cost Surveillance Subcommittee Report from December 2018 found that NSF policies and procedures are sufficient but also provided valuable recommendations for further improvement. NSF concurs with all Subcommittee recommendations and recognizes the importance of high-quality estimating and oversight in successfully supporting the science mission. NSF is actively implementing and tracking resolution of all recommendations. Internal Standard Operating Guidance is being updated or created and the externally-facing *Major Facilities Guide* has been updated to further strengthen estimates and oversight. NSF is in discussions with the National Science Board on the agency's handling of the potential cost impacts of "unknown-unknowns" in relation to the No Cost Overrun Policy.

2:30 pm **Government Shutdown Lessons Learned**

Presenters: Janis Coughlin-Piester, BFA; Javier Inclán, OIRM

Discussants: Adam Goldberg and Pamela Webb

After experiencing the longest lapse in appropriations (government shutdown) in US history, staff are working to revise required lapse contingency plans and processes prior to the end of this fiscal year. The effort seeks to accommodate updated legal interpretations from the Office of Management and Budget and the Office of Legal Counsel from the last lapse, the evolving nature of challenges faced as the duration of a lapse continues, and the application of lessons learned to both lapse planning and standard operations where applicable. Given the uncertainty and wide variance of lapse scenarios, NSF is applying an enterprise risk management lens to strike a balance in preparing for another possible lapse while not detracting from core operations and mission support.

Committee Action/Feedback:
- What were your observations and experiences as external stakeholders of NSF during the lapse?
- How did your organizations handle the uncertainly of the time?

3:30 pm **Break**

3:45 pm **Workforce Strategy Approaches at NSF**

Presenters: William Malyszka, OIRM; Allison Radford, OIRM

Discussants: Chuck Grimes and Doug Webster

Committee Action/Feedback:
Strategic workforce Planning is grounded in 5 CFR 250, a focus of the President's Management Agenda in "Developing a Workforce for the 21st Century" to align the workforce to mission requirements and emerging needs, and the "Renewing NSF" agency-wide effort to adapt the workforce to the work. NSF has taken a tailored approach to strategic workforce planning and human capital management to suit the

various Directorates' and Offices' needs based on readiness, resources and maturity levels. The strategic workforce planning team has been engaging organizations across the Foundation to:

- Conduct workforce planning executive leadership interviews to define talent management requirements;
- Facilitate executive working sessions to define business needs and opportunities to aid in determining work demand as a step towards full-lifecycle strategic workforce planning;
- Scale a workforce planning approach to meet specific oversight requirements; and,
- Develop and institutionalize more formalized methods for staffing planning, as a segue to strategic workforce planning.

Committee Action/Feedback:
- Describe practical approaches to influencing leaders to articulate beyond the operational 0-2-year, uncertain budget constraint approach to staffing to meet mission needs to more of an unconstrained, strategic 3-5-year outlook?
- Strategic workforce planning should not be focused on all positions in the Foundation, only those that are the most critical to the mission. How have other organizations been able to "segment" those positions without risking morale of employees in other positions?
- A goal is to develop an agency-wide workforce strategy to balance the use of Federal and Rotator workforce. What are the essential components to consider in determining the right mix of any type of multi-sector workforce (e.g., Feds, contractors, rotators, military, etc.)?

4:45pm   **Committee Business/Wrap Up/Virtual Hot Wash**

5:00 pm   **Adjourn**

Dr. Tilak Agerwala
IBM Emeritus and
IBM Vice President (Retired)

Tilak Agerwala's career has focused on developing advanced research programs and game-changing strategic initiatives and on bringing innovative computing technologies to market. With the rapid "digitalization" of our world and the transformative impact this is having, Tilak is interested in applying big data, modeling, simulation, analytics, and augmented intelligence technologies to world class science and engineering, education, and leadership development. He is an IBM Emeritus, Adjunct Associate Professor, Pace University, New York, Adjunct Professor, National Institute for Advanced Studies, Bangalore, and Member, TKMA Consulting.

In his IBM career, spanning 35 years, Tilak held executive positions in research, strategy, advanced development, marketing, and business development. He was part of and led teams that developed and delivered leadership cyberinfrastructure technologies and supercomputers to industry, academia, and the national labs. As vice president, Systems, (2002 to 2013), he was responsible for IBM's research and advanced technology activities worldwide in future systems hardware and software technologies, including the BlueGene supercomputer. As vice president of Data Centric Systems (2013-2014) his team established a new paradigm for scalable systems leading to the delivery of the powerful supercomputer, Summit, to Oakridge National Lab.

Tilak is a member of the NSF Advisory Committees on Engineering, Advanced Cyber Infrastructure, and Business and Operations. He is a Life Fellow of the IEEE and a recipient of the W. Wallace McDowell Award from the IEEE Computer Society. He has given well over a hundred invited presentations, keynotes, and distinguished lectures at conferences, universities and national laboratories worldwide.

Tilak has a Bachelor of Technology degree in electrical engineering from the Indian Institute of Technology, Kanpur, India and a Ph.D. in electrical engineering from The Johns Hopkins University. From 1975 to 1978, he was an assistant professor of Electrical Engineering at The University of Texas, Austin.

Dr. Benjamin L. Brown
Acting Facilities Division Director and ESnet Program Manager
U.S. Department of Energy, Office of Science

Dr. Benjamin L. Brown is the Acting Facilities Division Director in the Office of Advanced Scientific Computing Research and the program manager for ESnet, DOE's high-performance network user facility that provides tens of thousands of researchers—both in and outside DOE—with the ability to efficiently transmit extreme scale research data flows and to access unique Department of Energy research infrastructure. Ben is also the program manager for the Department's Project Leadership Institute, a leadership development program in project management. Ben has extensive knowledge and expertise in policy development and analysis related to large scale scientific research infrastructure and project management. A common focus in each of these roles is the strategic advancement of science and the DOE mission through cross-institutional knowledge-sharing, strategic planning, and partnership development.

Immediately prior to joining the Office of Science in 2008, Ben worked on energy and climate policy in the U.S. Senate as an American Association for the Advancement of Science (AAAS) Congressional Fellow. Ben is a physicist with experience working in U.S. government laboratories and academic institutions in both the U.S. and U.K; his research focused on optical control of quantum systems and quantum information science. He received his Ph.D. in optics from the University of Rochester and his bachelor's degree in physics from Harvard University.

Dr. Lee Cheatham
Director, Office of Technology Deployment and Outreach
Pacific Northwest National Laboratory

Lee Cheatham has focused his career on leadership in research management and operations, especially in the translation of that research into high-impact commercial products. Lee currently leads the Office of Technology Deployment and Outreach (TDO) at Pacific Northwest National Laboratory (PNNL), a Department of Energy national laboratory focused on making fundamental scientific discoveries and using its foundational capabilities to address key challenges in energy resiliency and national security. TDO's mission is to engage the Laboratory with industry, federal agencies, and state/regional organizations in developing and licensing PNNL's technology as a basis

for commercial products and to realize the greater impact of science and technology for economic growth.

Previously Lee served as Director of Strategic Partnerships at Brookhaven National Laboratory, and as Chief Operating Officer and General Manager of Commercialization for The Biodesign Institute at Arizona State University. For twelve years prior to Biodesign, Lee led the Washington Technology Center (WTC), an organization chartered by the State of Washington to accelerate growth and expand economic impact of small and medium-sized businesses. WTC funded these companies' collaborations with university researchers and provided programs to ease their access to growth capital.

Lee has private-sector experience as Vice President of Worldwide Product Engineering for a market-leading library software company and founder of a real estate technology and services company. He has served in scientific, engineering, and development positions, as well research program management roles, for energy systems modeling, large-scale environmental and military information systems, and medical device development programs. Lee received his Ph.D. from Carnegie-Mellon University, MS from Washington State University, and BS from Oregon State University, all in electrical engineering.

Dr. Robert M. Dixon
Interim Chair of the Department of Industrial and Systems Engineering
North Carolina Agricultural and Technical State University

Robert M. Dixon is a consultant with the Registry for College and University Presidents, which is based in Peabody, MA. As a consultant with this organization, he takes on interim leadership assignments at universities that need senior level management while in transition. Among his assignments, he has served as Interim Provost and Vice President for Academic Affairs at Cheyney University and as Vice President for Academic Affairs at the University of Maine at Fort Kent. He is currently serving as Interim Chair of the Department of Industrial and Systems Engineering at North Carolina A & T State University. During the last decade he has developed research interests in Number Theory. His career has involved dual paths of work in teaching and research, and in administrative leadership positions.

He received the baccalaureate degree in mathematics and physics with high honors from Morehouse College; the Master of Science degree in nuclear physics from Rutgers University; and the doctorate in theoretical nuclear physics from the University of Maryland. Dr. Dixon formerly served as the Dean of the School of Science at Hampton University. Prior to his work at Hampton he was Provost and Vice President for Academic Affairs at Grambling State University. During a period of sixteen years he was Chair of the Department of Physics at Morehouse College, a period that was characterized by considerable success in the production of graduates in the dual-degree engineering program with the Georgia Institute of Technology, in the production of graduates in physics and mathematics, and the acquisition of funded grants from foundations and federal

agencies. In this period, he received funding from the Air Force Office of Scientific Research, the Army Research Office, the Office of Naval Research, the AMOCO Foundation, the General Electric Fund, the William Penn Foundation, and the Sherman Fairchild Foundation. His background includes appointments at Morgan State University, Southern Polytechnic University, and Bishop College. Notably, Dr. Dixon is the founding chair of the M. S. degree program in physics at Atlanta University (now Clark Atlanta University). Upon graduation from Morehouse College, he began a long relationship with the Woodrow Wilson National Fellowship Foundation. He received a Woodrow Wilson Fellowship to attend Rutgers University. His first academic appointment was as a Woodrow Wilson Teaching Intern at Hampton Institute (now Hampton University). During his career he has contributed as a consultant to several programs sponsored by the Foundation. After some years in academe he served as a Director with an engineering firm. He developed and managed research projects supported by contract with the Department of Energy on nuclear waste disposal.

Throughout his career he has remained active in teaching and research. He has taught at the undergraduate and graduate levels. He has taught and mentored many students who have obtained the doctorate in physics or engineering. More than fifty of his former students have obtained advanced degrees in engineering, mathematics, or physics. He has maintained an active interest in research in applied mathematics. He is the author of several books and laboratory manuals in physics and articles on many-body scattering theory. He has served as a consultant to many public-school systems and universities on a wide variety of topics, such as diversity, improving the teaching and learning of science and mathematics, the preparation of mathematics teachers, expanding opportunities and increasing diversity in engineering, and improving retention. He is a member of the American Physical Society, the American Association of Physics Teachers, the American Association for the Advancement of Science, and the Mathematical Association of America.

Mr. Adam Goldberg
Director and Executive Architect
Department of the Treasury, Office of Financial Innovation and Transformation

Adam Goldberg is the Executive Architect at the Office of Financial Innovation and Transformation (FIT) at the Treasury Department's Bureau of the Fiscal Service. Within FIT, Adam supports financial management transformation initiatives that lead to government-wide efficiencies. He also serves as a Treasury Advisor to the Minister of Economy and Finance in the Republic of Guinea where he supports the Minister's efforts to improve cash management. Adam joined Treasury after spending six years at the Office of Management and Budget (OMB) as the Chief of the Financial Analysis and Systems Branch where he was responsible for policy development and oversight to implement financial systems, reduce improper payments, and right-size real property. Prior to OMB, he held senior leadership positions at Unisys and Andersen supporting financial management and system improvement efforts at Federal agencies. Adam began his career at the Defense

Logistics Agency. Adam holds a BA in Political Science and History from the University of Rochester and an MPA from the Maxwell School of Citizenship and Public Affairs at Syracuse University.

Mr. Charles D. Grimes III
Consultant

Charles (Chuck) Grimes is an independent consultant on HR policy and administration. He has worked with MTCI, a human capital management, training support and delivery, and program management firm; *The Public Manager*, a quarterly journal for public sector learning professionals; and the Departments of Justice, Defense, and Homeland Security. Chuck is active in the Partnership for Public Service's Strategic Advisors to Government Executives (SAGE) program in the COO and CHCO communities.

Chuck recently retired from Federal service, having served as the Chief Operating Officer for the U.S. Office of Personnel Management (OPM). In that role, he was responsible for managing OPM's human, financial, and other resources to achieve intended program results efficiently, economically, and effectively.

Previously, Mr. Grimes served as the Deputy Associate Director, Employee Services, and Acting Associate Director, Employee Services and Chief Human Capital Officer at OPM. In those roles, he managed governmentwide staffing, compensation, employee and labor relations, employee development, and executive resources policies; agency outreach and veterans support; and OPM's internal human resources operation. He also headed the Performance and Pay Systems center at OPM.

Prior to joining OPM, Mr. Grimes served as the Assistant Director, Compensation Policy, in the Internal Revenue Service's Strategic Human Resources Division. He spent most of his career in the Department of Defense (DOD), where he last served as the Director, Wage and Salary Division, in DOD's Civilian Personnel Management Service. Mr. Grimes received his B.A. in Biology from the University of Virginia and an M.A. in Management and Supervision from Central Michigan University.

Dr. Michael Holland

Vice Chancellor for Science Policy and Research Strategies
University of Pittsburgh

Mike's responsibilities as Vice Chancellor for Science Policy and Research Strategies include the development and implementation of University of Pittsburgh research policies and strategies to support cross-disciplinary research. This collaboration will include the sciences, medicine, engineering, information technology, humanities and creative arts, social sciences and innovation. The objectives include: the creation of major research initiatives; maintain and increase University research funding; and shape Pitt's response to changing research opportunities in support of its strengths and long-term goals.

Prior to coming to Pitt, Mike was the Executive Director at New York University's Center for Urban Science + Progress. CUSP is a graduate-level program in urban informatics that was announced in April 2012 as part of the Applied Sciences NYC initiative, the first class of 23 Master's students started in September 2013. In helping to design and build this new center, Mike oversaw day-to-day operations, including budget and financial planning, human resources, external relations, development, space planning and design, and strategic planning.

Mike was the Senior Advisor and Staff Director in the Office of the Under Secretary for Science at the Department of Energy. He helped design and execute the first ever Quadrennial Technology Review, which provides context and a framework for DOE's energy programs. He also staffed the Under Secretary on Department-wide executive boards, such as the Operations Management Council (DOE management issues), the Deputy Secretary's Resources Board (agency-wide budget formulation), and the Loan Guarantee Program's Credit Review Board (CRB), where he reviewed more than 25 loan guarantee applications for project readiness and technical eligibility.

At the Office of Management & Budget from 1999-2002 and 2007-2009, Mike was the program examiner for the Department of Energy's Office of Science, the Advanced Research Projects Agency-Energy (ARPA-E), Cerro Grande Fire Activity emergency funding, and DOE contractor pension liabilities. He has reviewed major scientific facilities, such as Brookhaven's National Synchrotron Light Source-II and SLAC's Linac Coherent Light Source, for inclusion in the President's budget. With Dave Trinkle, he developed the R&D Investment Criteria for basic research that were later incorporated into the Program Assessment & Rating Tool (PART).

Mike has also served as a senior policy advisor in the Office of Science & Technology Policy and on the staff of the House Science Committee, where his (minor) impact on the U.S. Code was the H-Prize Act of 2006 (enacted as Section 654 of P.L. 110-140). Mike has a Ph.D. in analytical chemistry from the University of North Carolina at Chapel Hill. His undergraduate degrees are in electrical engineering and chemistry from North Carolina State University.

Mr. E.J. ("Ned") Holland, Jr.
Retired Assistant Secretary for Administration

U.S. Department of Health and Human Services

With extensive, senior-level leadership experience in the public and private sectors, on multiple Boards of Directors, and in Fortune 500 environments, E.J. ("Ned") Holland, Jr. brings a depth and breadth of expertise across many functional areas and organizational levels. His comprehensive background in human capital management, executive compensation, change management, and organizational design, gives him a broad view of business, the ability to identify organizational issues, and insight into structure solutions and frameworks for executing tactical action plans.

In his most recent role as Assistant Secretary for Administration with the United States Department of Health and Human Services, Ned led and managed more than 3,500 Federal employees and contractors with multiple separate operating budgets totaling $1.4 billion. His responsibilities spanned Human Resources, Diversity Management, Equal Employment Opportunity, Facilities Management & Policy, IT, Business Transformation, Security (including Cybersecurity), and the HHS Program Support Center (the largest federal shared services organization). In this role, he executed the President's mandate to freeze and reduce the federal government's real estate footprint. Working with GSA he led the effort to consolidate the headquarters of 6 HHS operating divisions and 4 staff divisions into two locations, saving approximately $200M in rent and operating costs over the lease period and terminating 10 commercial leases. He also restructured the HHS Division of Administration; reduced executive headcount 30% by eliminating positions and transferring executives; reduced the number of his SES (Vice President) direct reports from 8 to 4, and made concomitant staff level changes, saving nearly $100 million

Prior to joining Health and Human Services, Ned was the Senior Vice President of Human Resources and Communications for Embarq Corporation, a $6 billion spin-off from Sprint Corporation and the then largest independent local telecommunications provider in the country. Ned was a primary leader in designing the structure and culture of Embarq from concept through launch. He served as primary management support to the Compensation Committee of the Board of Directors and played a key role in recruiting and compensation for the Embarq's executive leadership team.

From 1999 to 2006, Ned was Vice President of Compensation, Benefits, and Labor & Employee Relations for Sprint Corporation, where he served as Secretary to the Board's Compensation Committee. During his tenure with Sprint, he took their health care plan to market, restructured how health care was purchased, decreased the number of third-party HMOs from more than 75 to less than 10, produced immediate and short-term operating savings and reduced accrued balance sheet liability by approximately $300M.

Prior to Sprint, Ned served as Chief Administrative Officer and Corporate Secretary for Payless Cashways and was Managing Partner and Co-Chairman of the Health Care Practice at Kansas City law firm, Spencer Fane Britt & Browne.

In addition to his business career, Ned has served with numerous economic developments, community, and health care-related organizations. He helped to establish the Kansas Health Policy Authority, an independent authority Board charged with forming health care policy and administering $2.5 billion in health care purchasing for the State of Kansas. In that role, he served as Chair of the Finance and Audit Committee and Chaired the Search Committee for the Authority's first Chief Executive Officer. He was Secretary, President, and Chairman of the Board of Truman Medical Center, the Kansas City Missouri public hospital system. In addition, he was Chairman of

the Kansas City Area Hospital Association, and Board Member of Joint Commission Resources, the educational and consulting arm of the Joint Commission (formerly JCAHO).

Currently, Ned is retired and serves on three other boards. He holds a Juris Doctorate from Boston College Law School in Brighton, Massachusetts and graduated from Rockhurst College in Kansas City, Missouri with a Bachelor of Arts in Philosophy.

Ms. Jan E. Jones
Federal Senior Executive (Retired)

Ms. Jones is a 38-year veteran of the federal government, having held key leadership roles in the development and implementation of innovative administrative management systems, methodologies, and solutions for complex and rapidly changing organizations, mobilizing key resources in support of meeting mission goals through the effective integration of cross-cutting management initiatives within the agency's overall management plan and operational programs. Her career includes assignments in both line and staff positions within the executive and legislative branches of government spanning diverse operating environments such as research and development (R&D), facilities management, and law enforcement. Due to her diverse background and experience, she is frequently called on to advise top agency management—as well as to congressional entities and staff—in the identification, development, and execution of strategic and transformational efforts to effectively shape and achieve both operational and administrative goals and objectives of the subject organization.

Ms. Jones possesses specialized skills and experience in the areas of policy administration, communications, change management, strategic planning and program evaluation, force development, internal control systems, business process engineering, automated business systems acquisition, implementation, and management, corporate records management, law enforcement accreditation, human capital management and organizational design, civilian employee development and law enforcement career development.

Some of her notable career achievements include the development and management of an innovative, comprehensive, and integrated system of agency program planning, evaluation, and budget activities; the restructure and implementation of a new agency policy, directives, and internal communications system; the design and implementation of an updated, NARA-compliant agency-wide records management system; the attainment of successive Commission on the Accreditation of Law Enforcement Agencies (CALEA) accreditation awards (with honors); design of a progressive leadership development program for the supervisor-through-executive ranks; establishment of a new agency human capital office and leading the implementation of modernized HR practices, programs, and services; implementation of groundbreaking statutory requirements involving new pay and leave entitlements and programs; consultant to congressional committees on federal HR and HRIS; presenter at numerous national federal and private-sector conferences; management of acquisitions of major, multi-million dollar business systems and modernization initiatives; leading seven different migrations of separate agency personnel/payroll/finance

functions and systems into a single, integrated management system, on-time and within budget; and the development and conduct of a national HRIS training program.

Ms. Jones' professional work history consists of the United Stated Capitol Police from 1995 – 2013, where she served as Director, Office of Policy and Management Systems, the Director, Office of Human Resources, and the Associate Director, Office of Information Systems. The Architect of the Capitol from 1991 – 1995 where she served as a special assistant to the Chief Administrative Officer, and a Branch Chief in the Human Resources Division. The U.S. Department of Commerce, Office of the Secretary, from 1985 – 1991, and the U.S. Department of Commerce, Boulder Laboratories, from 1976 – 1985 where she served in various functions as a Personnel Management Specialist.

Ms. Jones is the recipient of numerous awards and recognition throughout her federal career, to include the DoC's Assistant Secretary for Administration's award for Outstanding Administrative Management, the DoC Silver Medal award, and numerous sustained superior performance and special act or service awards. While at the USCP, she was the recipient of the Chief's award for Outstanding Administrative Management, a Meritorious Service Award, the USCP Distinguished Service Award, and an official recognition of appreciation for services rendered to the U.S. House of Representatives from the Chief Administrative Officer of the House.

Mr. John M. Kamensky
Senior Fellow
IBM Center for The Business of Government

Mr. Kamensky is a Senior Fellow with the IBM Center for The Business of Government in Washington, DC, which sponsors research on management challenges facing government leaders.

During 24 years of public service, he had a significant role in helping pioneer the U.S. federal government's performance and results orientation. He is passionate about creating a government that is results-oriented, performance-based, customer-focused, and collaborative in nature. Prior to 2001, Mr. Kamensky served for eight years as deputy director of Vice President Gore's National Partnership for Reinventing Government. Before that, he worked at the U.S. Government Accountability Office for 16 years where he played a key role in the development and passage of the Government Performance and Results Act of 1993.

During his time with the IBM Center, he has edited or co-authored eight books and writes and speaks extensively on leadership, performance management, collaborative governance, and government reform.

Mr. Kamensky is a fellow of the National Academy of Public Administration and a senior fellow with the Administrative Conference of the United States.

He received a Masters in Public Affairs from the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, and a Bachelors of Arts in Government at Angelo State University, in San Angelo, Texas.

Ms. Rachel Elizabeth Levinson
Executive Director, National Research Initiatives
Arizona State University

A twenty five-year veteran of science policy at the national level, Rachel Levinson is the Executive Director of National Research Initiatives for Arizona State University, operating in the university's Washington, D.C. office. She came to ASU in 2005 as the director of the Government and Industry Liaison Office for the Biodesign Institute at Arizona State University. Levinson heads an office responsible for developing policies and strategies that advance the University's research agenda.

Prior to coming to ASU, Levinson was with the Office of Science and Technology Policy in the Executive Office of the President of the United States, where she was the assistant director for life sciences, while on detail from the Office of the Director of the National Institutes of Health. In this capacity, she identified science and technology priorities, developed and advocated Administration objectives, and resolved policy issues in life sciences focusing on laboratory biosecurity, bioterrorism preparedness, biotechnology, biomedical research and technology development and transfer.

Levinson began her career as a biologist for the National Cancer Institute within the National Institutes of Health (NIH) and later moved into the policy arena. She advanced to positions at NIH including deputy director of the NIH Office of Recombinant DNA and senior policy advisor in the Office of Technology Transfer.

Levinson earned her B.S in Zoology from the University of Maryland at College Park, and her M.A in Science, Technology and Public Policy from George Washington University, School of Public and International Affairs.

Dr. Joseph P. Mitchell, III
Director of Strategic Initiatives
National Academy of Public Administration

Joe Mitchell is Director of Strategic Initiatives at the National Academy of Public Administration—an independent, nonpartisan, and nonprofit organization chartered by the U.S. Congress to improve government performance. In this role, Dr. Mitchell leads the organization's Grand Challenges in Public Administration program, which is identifying and developing ways to address the most challenging issues facing government today. He also advances cutting edge thought leadership and develops partnerships with other good government groups, American universities, and universities in other countries.

Over the course of his career, he has worked with a wide range of federal cabinet departments and agencies to develop higher-performing organizations, implement organizational change, and strengthen human capital and teams. Most recently, he was at the General Services Administration to stand up its new Office of Shared Solutions and Performance Improvement within the Office of Government-wide Policy. As an Associate Director of this new office, he built and led a team to manage multi-functional and cross-agency projects and initiatives in support of the President's Management Agenda. His team established governance and accountability mechanisms for federal Cross-Agency Priority Goals, revamped performance.gov to become more user-friendly and provide additional information to the public, upgraded and expanded the White House Leadership Development Program and CXO Fellows program, provided technical and management support to the federal executive management councils, and established a procurement vehicle that federal agencies can use to acquire commercial software-as-a-service capabilities for their payroll and work schedule/leave management.

Previously, Dr. Mitchell led and managed the National Academy of Public Administration's organizational studies program, overseeing all of its congressionally-directed and agency-requested reviews and consulting engagements. He has served as project director for studies of the Government Publishing Office, the U.S. Senate Sergeant at Arms, the U.S. Agency for International Development, the National Park Service's Natural Resource Stewardship and Science Directorate, and the Natural Resources Conservation Service at the U.S. Department of Agriculture.

He holds a Ph.D. from the Virginia Polytechnic Institute and State University, a Master of International Public Policy from the Johns Hopkins University School of Advanced International Studies, a Master of Public Administration from the University of North Carolina at Charlotte, and a B.A. in History from the University of North Carolina at Wilmington. He is a member of Phi Kappa Phi, the national academic honor society; Pi Alpha Alpha, the national honor society for public affairs and administration; and the American Society for Public Administration.

Ms. Kim Moreland
Associate Vice Chancellor, Director
University of Wisconsin - Madison

Kim Moreland is the Associate Vice Chancellor for Research and Sponsored Programs at the University of Wisconsin - Madison. She has an MBA from the University of Kansas.

Kim is on the Board of Directors of the Council on Governmental Relations and serves as chair of the Costing Policies Committee. She is also on the Board of the Federal Demonstration Partnership and serves as chair of the Finance Committee. She is a lecturer for Johns Hopkins University in the Master's degree program in Research Administration.

Kim has served as a member of the National Council of University Research Administrators (NCURA) national and international teaching faculty and the national peer review faculty. She is a recipient of NCURA's national Award for Distinguished Service in Research Administration and the Award for Outstanding Achievement in Research Administration. She is a former president of NCURA, and she currently chairs the NCURA Select Committee on Global Affairs.

Mr. John M. Palguta
Adjunct Professor
Georgetown University
Vice President for Policy (Retired)
Partnership for Public Service

John Palguta is an adjunct professor in Georgetown University's McCourt School of Public Policy, where he teaches a graduate seminar titled, "Effective People Management in Government." John is also a former Vice President for Policy at the Partnership for Public Service, a non-profit, non-partisan organization dedicated to meeting the workforce needs of government by inspiring a new generation to serve and transforming the government workplace. Prior to his retirement in February 2106, John had responsibility for a comprehensive program of review and analyses of the human resource management issues in the federal government. John was also instrumental in setting up the Partnership's *Best Places to Work* rankings initiative first issued in 2003 and had been involved until his retirement. He also managed the Partnership's *Federal Human Capital Collaborative*, a consortium of 33 federal departments and agencies of which the National Science Foundation is a member.

Prior to joining the Partnership in December 2001, John was a career member of the federal senior executive service and Director of Policy and Evaluation for the U.S. Merit Systems Protection Board (MSPB), the culmination of a federal career spanning almost 34 years devoted to federal human resources management and public policy issues. He is a recipient of the MSPB's Theodore Roosevelt Award, the agency's highest honor. John previously held positions in the U.S. Office of Personnel Management and the U.S. Civil Service Commission.

John received a B.A. degree in Sociology from California State University at Northridge and a Master of Public Administration degree from the University of Southern California. He is a Fellow of the National Academy of Public Administration; a former Vice President for the Coalition for Effective Change; a past President of the Federal Section of the International Public Management Association for Human Resources (IPMA-HR); and an adjunct professor at Georgetown University's McCourt School of Public Policy. He received the 2006 Warner W. Stockberger award which is the highest honor presented annually by IPMA-HR to recognize an individual who has made outstanding contributions in the field of public sector HR management.

Dr. Theresa A. Pardo
Director, Center for Technology in Government
University at Albany

Theresa A. Pardo, Ph.D., serves as Director of the research institute CTG UAlbany. She is also a full research professor in Public Administration and Policy at Rockefeller College of Public Affairs and Policy. Under her leadership, CTG UAlbany works closely with multi-sector and multi-disciplinary teams from the U.S. and around the world to carry out applied research and problem solving projects focused on the intersections of policy, management, and technology in the governmental context. The institute has broken ground in information and knowledge sharing, smart cities, open government and open data, e-government, social media policy, and mobile technologies and human services delivery.

Dr. Pardo serves as OpenNY Adviser to New York State's Governor Andrew Cuomo and is Chair of the U.S. Environmental Protection Agency's National Advisory Committee. She serves as a member of the User Working Group of the NASA Socioeconomic Data and Applications Center (SEDAC), the Business and Operations Advisory Committee of the U.S. National Science Foundation and the Steering Committee of the U.S. National Science Foundation funded North East Big Data Innovation Hub. Dr. Pardo is founder of the Global Smart Cities Smart Government Research Practice Consortium and has served on numerous UN Expert Groups on a range of digital government and sustainable development related issues.

Dr. Pardo is an International Advisor to the E-Government Committee for the China Information Association and served as the first female Chair of Oman's Excellence in E-Government Award Jury. She is also a member of the U.S. Government Accountability Office Executive Council on Information, Management, and Technology and the Series Steering Committee for the International Conference on Theory and Practice of Electronic Governance (ICEGOV), a UNU initiative. Dr. Pardo is a Past-President of the Digital Government Society and a member of the Board of Champions for the New York State Science, Technology, Engineering, Arts, and Math (STEAM) Girls Collaborative.

Dr. Pardo serves on a number of editorial boards for top journals in the fields of digital government and public administration including Government Information Quarterly and Public Management

Review. She is co-developer of the top ranked academic program in Government Information Strategy and Management offered by the University at Albany, has published over 200 articles, research reports, practice guides, book chapters and case studies and is ranked among the top five scholars in her field in terms of productivity and citations to her published work.

In 2018 Dr. Pardo was named as one of the Top 100 Influencers in Digital Government globally. She is also a recipient of Government Technology Magazine's Top 25 Doers, Drivers, and Dreamers Award which recognizes individuals throughout the U.S. who exemplify transformative use of technology that's improving the way government does business and serves its citizens. Dr Pardo is a recipient of the University at Albany's Distinguished Alumni Award, the University at Albany's Excellence in Teaching Award, and the Rockefeller College Distinguished Service Award.

Pardo holds a Ph.D. in Information Science from the University at Albany, SUNY.

Dr. Susan Wyatt (Sedwick) Linehan
Senior Consulting Associate
Attain, LLC

Dr. Susan Wyatt (Sedwick) Linehan is a senior consulting associate for Attain, LLC with over 24 years of experience in research administration. She retired in 2015 as an associate vice president for research and director of the Office of Sponsored Projects at The University of Texas at Austin, where she was responsible for both pre- and post-award financial administration units with oversight of over $630 million in annual sponsored projects expenditures. Prior to her tenure at UT Austin, she served in a similar capacity at the University of Oklahoma, Norman, where she also had responsibility for research compliance. She received her Ph.D. in Higher Education Administration from Texas A&M University and is a Certified Research Administrator (CRA). Her previous academic appointments include serving as a clinical professor in the Department of Educational Administration for the Higher Education Administration Program at The University of Texas at Austin and as an adjunct professor for Johns Hopkins University, Rush University in Chicago and The University of Oklahoma, Norman. Dr. Sedwick is a frequent speaker on the topic of research data security, export controls as they apply to universities, human capital development, and strategic planning. She authored the chapter on export controls included in the NCURA/AIS publication, *Sponsored Research Administration: A Guide to Effective Strategies and Recommended Practices.*

Dr. Sedwick served as chair of Phase V of the Federal Demonstration Partnership (FDP), as a member of the initial strategic planning committee and as co-chair of the Membership Committee. She was active in the Council on Governmental Relations (COGR) having served on the Board of Directors, Research Compliance and Administration and Contracts and Intellectual Property Committees, Uniform Guidance working group, nominating committee and chair of the export controls working group. She was a co-chair for the annual international meeting of the Society for Research Administrators International (SRAI) held in Vancouver, British Columbia, Canada in

October 2017, is a member of the SRAI Board of Directors, Speakers Bureau, and received SRA International Distinguished Faculty Designation in 2017. She received the National Council of University Research Administrators (NCURA) Distinguished Service award in 2012 and the NCURA Region V Distinguished Service Award in 2014. She has served that organization as an at-large representative to the national Board of Directors, as chair of the Professional Development Committee, as a member of the Nominating and Leadership Development Committee and as a contributing editor for NCURA Magazine.

She is a graduate of Leadership Texas, a past trustee for the Texas A&M University-Kingsville Foundation, and founding president of the FDP Foundation. She is co-chair of the National Science Foundation Business and Operations Advisory Committee. She was recognized as the 2012-2013 distinguished alumnae by the Texas A&M University-Kingsville Dick and Mary Lewis Kleberg College of Agriculture, Natural Resources and Human Sciences Hall of Honor.

Ms. Pamela A. Webb
Associate Vice President for Research
University of Minnesota

Pamela A. Webb is the Associate Vice President for Research at the University of Minnesota. In this capacity, she is responsible for pre-award and post-award non-financial services supporting about $790M in research awards annually, as well as negotiation of F&A rates, effort reporting, and research policy and education. Prior to her appointment at the University of Minnesota in 2007, Pamela led pre-award and post-award administration in the Office of Sponsored Research at Stanford University. Pamela has been involved in research administration for 35 years, including 12 years at the University of California-Los Angeles as well as UC Santa Barbara, Northwestern University, and Stanford.

Pamela has served as a national officer of her professional association (the National Council of University Research Administrators, NCURA) and served two terms on NCURA's Board of Directors. In 2009, she received NCURA's *Distinguished Service* award, and in August 2016, she received NCURA's highest honor, the *Outstanding Achievement in Research Administration Award*.
She currently serves on the Council of Governmental Relations Board of Directors, and chairs their Research Compliance and Administration Committee. She has co-chaired a national conference on Electronic Research Administration; serves as a reviewer for NCURA's Peer Review program; and as faculty for their national Leadership Workshop. Pamela previously served on the Federal Demonstration Partnership Executive Committee and currently co-chairs their Expanded Clearinghouse initiative (an institutional profile system designed to expedite subaward risk assessment and monitoring.) Pamela is a frequent presenter at the national and regional level, specializing in subawards, policy development and deployment, as well as helping research administrators learn the complex regulatory environment.

Dr. Douglas W. Webster
Retired, Chief Financial Officer
U.S. Department of Education

Doug Webster has over 20 years of experience focused on federal financial management, risk management, strategic planning, cost management, and process improvement. He began his professional career by serving 21 years in acquisition management and flight operations as a US Air Force officer. He then entered management consulting and has provided nearly 20 years of advice and support to over two dozen federal and state agencies. In 2004, he served with the DoD Coalition Provisional Authority as the Principal Finance Advisor to the Iraq Ministry of Transportation, thereby serving as the de facto CFO of a ministry of nearly 40,000 employees. In 2007, Doug was appointed as the Chief Financial Officer of the US Department of Labor. He subsequently entered the Senior Executive Service and served as the Deputy Director of the DoD Business Transformation Agency. Most recently, he was appointed in 2017 as the CFO of the US Department of Education.

Doug co-founded the Federal ERM Steering Group in 2008, which led to the annual Federal ERM Summits from that year since. In 2011 he led the founding of the Association for Federal Enterprise Risk Management (AFERM) and then served two terms as the association's first president. In 2012 he was elected a Fellow of the National Academy for Public Administration. In 2014 he joined the George Washington University Center for Excellence in Public Leadership as a Senior Fellow, where teaches courses in the Enterprise Risk Management certificate program. He also serves on the board of directors of the Pentagon Federal Credit Union, a $17B financial services organization with over 1,200,000 members, and chairs the board risk management committee. He additional serves on the board of the PenFed Foundation, a charitable organization dedicated to helping our nation's veterans, wounded warriors, and their families.

Doug has a BS in Engineering, a MS in Systems Management, and a Doctorate in Business Administration. He is a co-author of the books *Activity Based Costing and Performance* (AMS, 1994), *Chasing Change: Building Organizational Capacity in a Turbulent Environment* (Wiley and Sons, 2009), and *Managing Risk and Performance: A Guide for Government Decision Makers* (Wiley and Sons, Feb. 2014). He is also co-author of *Improving Government Decision Making through Enterprise Risk Management* (IBM Center for the Business of Government, 2015).

Committee on Equal Opportunities in Science and Engineering (CEOSE) Liaison to the NSF Advisory Committee on Business and Operations:

Dr. Alicia J. Knoedler
Director of Team Innovation
Exaptive, Inc.

Dr. Alicia J. Knoedler is Director of Team Innovation at Exaptive, Inc. Exaptive is an innovation and software solutions startup company based in Oklahoma City, Oklahoma with a platform (Cognitive City) to bring together people, data, and analysis tools to form collaborative communities and encourage boundary crossing behavior in an actively-supported environment. Dr. Knoedler designs and implements the composition and engagement of teams within Exaptive's Cognitive Cities. She also identifies and characterizes unique roles within research teams to determine how role contributions can be measured and attributed within virtual teams.

Prior to joining Exaptive, Dr. Knoedler was the Executive Associate Vice President for Research and Executive Director of the Center for Research Program Development and Enrichment at the University of Oklahoma. Within these roles, she worked with university leaders, faculty, students, and other investigators to significantly enhance the research enterprise, focusing on changing the research culture as well as assisting investigators in their efforts to develop more competitive research programs and proposals for external funding. Dr. Knoedler is a member of the NSF Business and Operations Advisory Committee as a liaison from the NSF Committee on Equal Opportunities in Science and Engineering (CEOSE), drawing a connection between the Foundation's commitment to broadening participation and the commitment to broadening participation from external audiences across the nation.

Dr. Knoedler holds a B.A. in psychology from Trinity University (San Antonio), and an M.S. and Ph.D. in cognitive psychology from Purdue University. Her research expertise focused on various memory processes and optimal conditions for remembering. She taught quantitative research methodology, statistics, and grant writing for many years at Purdue University, San Jose State University, University of California Santa Cruz, Indiana University, University of Notre Dame, and Penn State University and had an appointment as Adjunct Associate Professor in the Department of Psychology at OU. Dr. Knoedler has over 19 years of experience in developing grant proposals for a variety of funding sources, including federal sources, private foundations, and corporations and is a Certified Research Administrator (CRA). From 2014-2018, Dr. Knoedler was is the Co-PI of Oklahoma's NSF EPSCoR Research Infrastructure Improvement Track 1 award, which focuses on the socio-ecological approaches to studying climate variability in Oklahoma.

In service and leadership to research development and the national research enterprise, Dr. Knoedler is a founding member, former member of the Board of Directors, and has been president (2013-2014) and immediate past-president (2014-2015) of the National Organization of Research Development Professionals (NORDP). She is also a member of APLU's Council on Research, through which she develops and offers training, professional development, and leadership opportunities for senior research leaders across the nation.

Fall 2018 Recommendations from the Business and Operations Advisory Committee

Title	Meeting Date	Recommendation	NSF Contact(s)	Status	Explanation/Outcome	Theme
Results from the 2018 Federal Employee Viewpoint Survey (FEVS)	Fall 2018	NSF lauded for moving to #8 ranking in FEVS but was challenged to move to top 5 next year. NSF urged to use FEVS data to drive questions to accomplish progress in employee engagement. Given workload pain points, NSF should look for insight from highest scoring directorates. NSF should focus on doing things differently with less, not doing more for less. Need for transparency stressed; NSF should focus on "engaged" rather than "happy" employees with the former being more productive and having less turnover. STEM and non-STEM rotators should feel equally engaged. Leadership changes often impact scores, therefore, imperative that NSF invest in leadership training. NSF is clearly doing things right but important to focus on sustainability and continuous improvement rather than individual campaigns. The committee recommended that NSF assess how well the creative ideas (e.g., new elevators, shared printing environment) are working and how those are impacting efficiency.	Gardner, W., Malyszka, B.	In progress	HRM actively engaged with directorates/offices to assess 2018 FEVS results and adjust employee engagement plans to address emerging needs.

As HRM nears the completion of the first cohort to participate in NSF's Leadership Development Program, we are assessing results and new curriculum needs including "leading people" and "leading change". HRM is also planning to update the Federal Supervision course offering to more directly tackle engagement and people management.

After the shutdown, HRM launched a series of tips through our Employee Engagement Program addressing workload and things that employees and supervisors can do to not only address workload as an identified engagement focus area, but also account for unique challenges presented by the need to resume operations after a 35 day shutdown. HRM also plans to conduct a promising practices line of inquiry with high scoring units and provide targeted support to work units with identified engagement needs. | Advice on the results of the 2018 FEVS |
| Facilities Subcommittees Updates | Fall 2018 | Large Facilities Cost Surveillance Subcommittee determined adequate current policies to assure proper cost surveillance and recommended: 1. Consolidate manuals, standard operating guidance, policies and procedures into a unified document by topics to remove confusion and inconsistencies. 2. Review cost estimating areas: a. Improve hierarchy of preference to estimate methodology. b. Strengthen documentation by NSF evaluators around the Cost Proposal Review Document (CPRD). c. Provide reasons for CPRD approval or changes. 3. Develop Independent Cost Estimates and Schedule Estimates early in process to inform trade-offs and scope reduction. 4. Improve traceability and accountability (from proposal through end product) of non-negotiable science and technical requirements. Understand project's baseline. 5. Anticipate "unknown-unknowns". 6. Establish core competencies of recipient staff given project's magnitude/complexity. Large Facilities NAPA Implementation update (NSF response) noted NSF efforts are appropriate and thorough with the exception of the implementation tasks underway. | Hawkins, M., Ulvestad, J. | In progress | The Cost Surveillance Subcommittee Report from December 2018 found that NSF policies and procedures are sufficient but also provided valuable recommendations for further improvement. NSF concurs with all Subcommittee recommendations and recognizes the importance of high-quality estimating and oversight in successfully supporting the science mission. NSF is actively implementing and tracking resolution of all recommendations. Internal Standard Operating Guidance is being updated or created and the externally-facing Major Facilities Guide has been updated to further strengthen estimates and oversight. NSF is in discussions with the National Science Board on the agency's handling of the potential cost impacts of "unknown-unknowns" in relation to the No Cost Overrun Policy. | Advice on updates by Facilities Subcommittees |

Fall 2018 Recommendations from the Business and Operations Advisory Committee

Title	Meeting Date	Recommendation	NSF Contact(s)	Status	Explanation/Outcome	Theme
Renewing NSF: Update on the Status of the Renewing NSF Effort	Fall 2018	NSF sought advice and perspective to identify: key ingredients to successfully manage the initiative; mechanisms to cultivate and manage relationships given overlapping resource requirements and interdependency of bold steps; and mechanisms for internal communication and employee engagement. Outstanding employee engagement but allow time, be seen as career development, and part of individual's job. 4 goals are interdependent; need joint ownership of accountability and engagement beyond NSF (OMB, Congress, other agencies, universities, private sector, other countries). For broader participation and new perspectives, committee members with change fatigue should rotate off but be engaged via an alumni list. To determine efforts' success: ensure leadership is driver; establish clear vision and integrate goals; design org structure to enable vision; create urgency and timeline and show progress; dedicate strong team to manage process; engage employees; sustain effort and nurture culture, reward risk, and measure progress. Salesforce software recommended as useful tool for data sharing/repository.	Gianchandani, E., Tornow, J.	In progress	NSF has responded to the advice provided by BOAC through the following means: 1) A focused period of agency engagement in November-December 2018. This engagement included a Renewing NSF Town Hall led by the COO and Renewing NSF co-chairs. An internal Renewing NSF website was created highlighting the progress and the Bold Steps identified by the Goal Teams and providing an online feedback portal. A series of videos featuring Goal Team co-chairs and members was created, allowing members to share their experience and excitement. An email alias was created to field questions from the Agency. Lastly, a "Pollination Wall" was created for staff to learn more about the Bold Steps and Vision for each Goal Team and to collect feedback in response to three questions. Office Hours were held at the Pollination Wall to ensure the interaction was meaningful and productive. Feedback was collected, analyzed, and shared with the Goal Teams. 2) Toward broadening the participation of staff in the immediate Renewing NSF activities, a volunteer list was circulated to the Goal Teams; and the Goal Team members were given an opportunity to resign if desired. All Goal Team members have chosen to stayed on, with the exception of staff who have left the Agency. One Goal Team co-lead requested to transition off and a new staff member will be taking their place. Additionally, a detail opportunity for the Project Manager position was posted and the selection process is underway. 3) In terms of concrete progress, agency leadership has declared this year as the "Go Year" for implementation. The development of Action Plans is underway for implementing 1-2 identified Bold Steps per Goal Team. There will be another opportunity for rotation and for new members to participate in the implementation.	Advice on the update/status of the Renewing NSF effort

Fall 2018 Recommendations from the Business and Operations Advisory Committee

Title	Meeting Date	Recommendation	NSF Contact(s)	Status	Explanation/Outcome	Theme
Renewing NSF – Partnership Pillar	Fall 2018	NSF sought advice and perspective: (1) What elements of a partnership program would be best suited for centralized management? (2) What metrics should be most important for consideration? (3) What mechanisms would help strengthen the culture of partnerships? Partnerships requires forethought and strategy. Set priorities and examine process for partnerships. Centralized principles required for partnerships with each set requiring their own metrics. Speed of partnerships should be reviewed, measured and understood; "go slow" mentality can be prohibitive. Define "partnerships", to include private sector relationships. Use standard agreements and templates to streamline process, determine allowability via controls, and provide additional transparency. Intel and Boeing relationships and multiple programs (i.e. I-Corps) are models. Survey to identify positive parts of partnerships and barriers. Clarify/disseminate partnership paths with the community. Centralize efforts; identify, clarify, collect, and analyze appropriate metrics to assess success.	Calvert, K., Johnson, B.	In progress	Consistent with the aforementioned Renewing NSF progress, in the past several months, the Partnerships Goal Team received feedback from the agency, prioritized two Bold Steps for moving forward, and began developing Action Plans for their implementation. The two Bold Steps prioritized were 1) Build a partnerships toolbox, including guidelines, best practices, examples, templates and dissemination strategies; and 2) Explore options for appropriate centralization of partnerships, including for tracking and measuring progress and outcomes. These two Bold Steps align well with BOAC's recommendations. Coordinated with the Renewing NSF Partnerships Goal Team, a pre-existing Partnerships Agency Priority Goal team has been leveraged to make progress on the partnerships toolbox. That team is creating standard agreements and templates to streamline process, determine allowability via controls, and provide additional transparency to staff creating new partnerships. One additional Bold Step has seen progress through the Partnerships Agency Priority Goal -- Conduct a landscape study to explore "out of the box" partnerships -- which also aligns with BOAC's suggestions to survey positive and negative dimensions of partnerships.	Advice on the update/status of the Renewing NSF effort - Partnerships Pillar
Renewing NSF – Partnership Pillar - (Continued)		Address internal NSF cultural barriers and concerns for clarity. Understand different types of partnerships (i.e., collaborative, contractual). Building partnerships takes effort and structure. It involve money; important to formalize agreement and identify type. Determine how to coordinate the "asks." Look at companies licensing NSF discoveries as potential partners and coordinate "asks" across pillars. This is a challenge for NSF; a central contact to coordinate "asks" is needed. NSF needs to foster partnerships in 4 areas; entrepreneurship cannot be overlooked. Consider metrics (Industry-University Cooperative Resource Centers), particularly with industry partnerships: look at number, frequency renewed or expanded, invention disclosure reports (what became of seed funding), increase in research expenditures (additional funds received elsewhere), and the negatives (who passed). The Unified Shared Services Management Group at GSA could assist NSF with a survey. "Health Check" metric by USAID colleagues also helpful. Metrics should measure beyond dollars (e.g., student placement).		In progress (see above)		

Fall 2018 Recommendations from the Business and Operations Advisory Committee

Title	Meeting Date	Recommendation	NSF Contact(s)	Status	Explanation/Outcome	Theme
CFO Office of the Future	Fall 2018	NSF sought advice and perspective on financial management modernization priorities and tools for a modern federal CFO office that supports mission delivery and reform efforts. As part of the panel's presentation, NSF's "Career Compass" initiative was discussed as a win-win in reskilling/retraining the workforce in digital skills to adapt to ABCD: artificial intelligence, blockchain, cybersecurity, and data analytics. The government lags behind the private sector in this area. Data management as a profession is needed, but not done well or consistently. The State of New York's data inventory project was considered exemplary. NSF urged use of automation, technology, and artificial intelligence solutions developed by other agencies for repetitive tasks.	Aronson, D., Grancorvitz, T., Wetklow, M.	In progress	On August 8, 2019, NSF is planning a joint CFO Council and Council of Inspectors Generals forum to focus on the impact of emerging technology on the workforce within the CFO and IG Community. In addition, NSF in partnership with the Department of Commerce, and the Office of Personnel Management is leading the development of a CFO Council Strategic Workforce Planning Playbook. In November we launched the NSF Career Compass Challenge and were delighted to receive (in February) 60 responses to Part 1 (which was a request for ideas). We awarded 5 ideas $5K each in March then in April kicked off Part 2 of the Challenge (which is a request for working prototypes of solutions).	Advice on financial management modernization priorities and tools.

CFO Update
[B&O Advisory Committee](#) **Meeting Spring 2019**
(May 17, 2019)

Topics:
- ➤ BFA Senior Staff Changes
- ➤ BFA Staff Awards
- ➤ FY 2019 Financial Statement Audit
- ➤ Improper Payments Elimination and Recovery Act of 2010 Audit
- ➤ Digital Accountability and Transparency Act
- ➤ Government Accountability Office Review of NSF Major Projects
- ➤ Evaluation of NSF's Enhanced Cost Surveillance Policies and Procedures via a Subcommittee of BOAC
- ➤ President's Management Agenda
- ➤ Program Management Improvement Accountability Act
- ➤ Enterprise Risk Management
- ➤ Shared Services
- ➤ Robotic Process Automation
- ➤ Smart Pay 3 Initiative
- ➤ iTRAK Recompete
- ➤ Certificate of Excellence in Accountability Reporting Award
- ➤ Performance
- ➤ FY 2019 Appropriations
- ➤ FY 2020 President's Budget
- ➤ FY 2020 Appropriations

➤ **BFA Senior Staff Changes**
- *Division of Acquisition and Cooperative Support (DACS)* - Patrick Breen was appointed as Division Director for DACS in December 2018. He has extensive expertise in managing, overseeing, and providing advice to senior leadership on acquisition, financial assistance, charge card programs, and space leasing programs. Patrick succeeded Jeff Lupis who retired in January 2019.
- *Division of Financial Management (DFM)* – Mr. Michael Howe is Acting Branch Chief, Cash Management Branch, taking over after the previous Branch Chief, John Sholhead, left NSF.

➤ **BFA Staff Awards**
Below is a summary of the many BFA staff who have recently received awards. Citations are attached in the Appendix.
- *Gears of Government Awards* - Congratulations to Gisele Holden and Alex Wynnyk for receiving *2018 Gears of Government* awards.
- *2019 NSF Director's Awards* **–** Congratulations to the following BFA staff members who won a 2019 Director's Award: Christopher Andall, Keith Boyea, Kathleen Carpenter, Patrice Cousins, Nicole Cyrus, Jean Feldman, Jamie French, Zaneta Hargrove, Pamela Hawkins, Robert Hengst, Gisele Holden, Samantha Hunter, Jeremy Leffler, Elida Lynch, Jason Madigan, Rebecca Magowan, Denise Martin, JP McMullen, Anna-Lee Misiano, Margaret Moon, Cindy Paolillo, Willie Mae Powell, Aprile Roberson, Denise Robinson, Rebecca Yasky, Sarah Yatchoua.

➢ **FY 2019 Financial Statement Audit**
In April 2019, the Office of Inspector General (OIG) and its contractor, Kearney & Company, held an entrance conference to commence the audit of NSF's FY 2019 financial statements. During the upcoming weeks, NSF staff will work with the auditors to develop a schedule for meeting the audit and year-end reporting requirements.

As part of the FY 2019 Financial Statement audit and Federal Information Security Act review, Kearney and the OIG traveled to McMurdo and South Pole Stations in November 2018. DFM is coordinating the initial document request between the auditors, BFA, OIRM, and the Office of Polar Programs. The auditors are expected to provide observations in spring 2019.

➢ **Improper Payments Elimination and Recovery Act of 2010 (IPERA) Audit**
In May 2019 Kearney completed a performance audit of NSF's compliance with IPERA, as amended, for FY 2018. The report determined NSF's compliance with IPERA.

➢ **Digital Accountability and Transparency Act (DATA Act)**
NSF completed and issued its financial assistance data quality plan during the first quarter of FY 2019. This plan provides a foundation on which the agency and OIG will be able to verify and validate the completeness, timeliness, quality, and accuracy of NSF data. NSF is continuing to support cross-governmental efforts to develop government-wide DATA Act guidance via a data quality playbook. The OIG plans to review NSF-certified FY 2019 first quarter data. The OIG held its entrance conference for the review with NSF in April 2019. Also, GAO initiated its cross-governmental DATA Act data quality review, which will evaluate agencies' certified FY 2018 fourth quarter data. NSF is in the process of providing information requested by GAO.

➢ **Government Accountability Office (GAO) Review of NSF Major Projects**
In March 2019, GAO issued its final report: *National Science Foundation: Cost and Schedule Performance of Large Facilities Construction Projects and Opportunities to Improve Project Management* in compliance with Congressional direction (Senate Report 114-239 and House Report 114-605) that requires GAO to annually report on major research equipment and facilities construction at NSF.

The GAO recommendations for NSF are as follows: 1) assess the agency's large facilities oversight workforce to identify any project management competency gaps, develop a plan to address them and time frames for doing so, and monitor progress in closing them; 2) establish criteria for the project management expertise of large facilities project recipients and incorporate the criteria in project requirements and external panel reviews; 3) ensure, through a requirement or other means, that large facilities project recipients provide information to NSF on lessons learned or best practices; and 4) ensure that the Large Synoptic Survey Telescope project's schedule meets the well-constructed and credible characteristics of a reliable schedule, as defined in GAO's schedule guide.

A corrective action plan is under development.

- ➢ **Evaluation of NSF's Enhanced Cost Surveillance Policies and Procedures via a Subcommittee of BOAC**
  The subcommittee submitted its final report to BOAC and presented its findings at the December 2018 BOAC Meeting. BOAC voted to accept the report, and NSF is currently evaluating, and, in some cases already implementing, the subcommittee's recommendations. An update will be provided by the Large Facilities Office at this meeting.

  Background: This BOAC subcommittee was formed to independently evaluate the effectiveness of NSF's current cost surveillance policies and procedures in providing sound oversight of all NSF major facility construction and operations awards.

- ➢ **President's Management Agenda (PMA)**
  NSF continues to support the PMA through its participation and leadership on Cross Agency Priority (CAP) goals. NSF is one of the agency executive sponsors on the PMA CAP Goal #8, Results Oriented Accountability for Grants, and is supporting the effort through each of its four work lanes: Process and Data Standards, Shared Services and Infrastructure, Managing Risk, and Performance Based Awards. Recent milestones include the Federal Audit Clearing House demonstration days and posting 417 financial assistance data standards for public comment.

- ➢ **Program Management Improvement Accountability Act (PMIAA)**
  In December 2016, the Program Management Improvement Accountability Act (PMIAA) was signed into law. PMIAA aims to improve program and project management practices within the Federal Government. PMIAA requires that agencies conduct annual portfolio reviews to ensure major programs are being managed effectively, and that OMB conduct reviews of areas identified by GAO as "high risk." OMB's current portfolio focus is on major acquisitions, and NSF currently has no "high risk" portfolios.

  To date, NSF has submitted its PMIAA Implementation Plan (November 2018), and NSF has engaged with OMB in providing Earned Value Management metrics for its major facilities projects in support of a federal project status dashboard pilot. Next steps for NSF will include a Human Capital Development/Workforce Planning effort that will help identify and address any competency gaps for NSF staff engaged in major acquisition and major facilities oversight. This effort aligns well with GAO's report recommendations from its review of major facilities oversight (see related *GAO Review of NSF Major Projects* item above).

  NSF's efforts undertaken in strengthening oversight processes since receipt of the 2015 NAPA report, *Use of Cooperative Agreements to Support Large Scale Investment in Research*, have left the agency well-positioned for PMIAA Implementation.

- ➢ **Enterprise Risk Management (ERM)**
  NSF's ERM efforts are currently focused on implementing its Data Quality Plan, as required by OMB Circular No. A-123, Appendix A, *Management of Reporting and Data Integrity Risk* (see related *DATA Act* item above); developing a data analytic and assurance program; updating risks related to OIG Management Challenges areas; and, most significantly, leveraging risk management activities from

the 2019 lapse in appropriations for OMB's ERM reporting requirements. We look forward to providing BOAC with more information during future Board meetings.

➢ **Shared Services**
In April 2019, NSF and Treasury completed a pre-engagement project for exploring shared services. The scope of the project includes financial management, acquisition, and travel systems and services (the scope does not include grant mission systems). The objectives of the project are to: 1) identify critical gaps and preliminary solutions for gap closures; 2) foster open-minded and outside-the-box thinking for gap solutioning; and 3) develop a preliminary target state environment and migration strategy. OMB has also recently released a new shared service Memo 19-16, *Centralized Mission Support Capabilities for the Federal Government*, and BFA will provide BOAC with more information on next steps at future meetings.

➢ **Robotic Process Automation (RPA)**
The Division of Financial Management (DFM) is using RPA to automate routine and repetitive processes performed by DFM staff. Through the use of RPA, staff can focus on high-value/high-return activities resulting in enhanced operational efficiency and productivity. In partnership with NSF's Division of Information System and the Department of Treasury, DFM has piloted several automations: Invoice Aging Reporting and two automations for Intra-Governmental Payment and Collection analysis and review. DFM will continue to explore RPA technology to automate other manual activities performed within the division as part of two *Renewing NSF* priorities: *Making information technology work for all* and *Adapting the workforce and the work.*

➢ **Smart Pay 3 Initiative**
On November 30, 2018, the Citibank travel and purchase card programs were implemented agency-wide. In addition to successful system integration testing and on-time implementation and issuance of purchase cards and travel cards, the updated *NSF Government Travel Charge Card Guide* was issued; and the online travel card training was updated through LearnNSF. DFM made the first Citibank test purchase card payment in late November, and all subsequent payments have been successful.

➢ **iTRAK Recompete**
The new contract for NSF's financial system, iTRAK, was awarded to Accenture Federal Services on March 25, 2019. The award is for a base-year plus 6 option-years, annual price of approximately $7 million; and the total overall price, inclusive of all option periods, is almost $50 million. The awarded amount is approximately 10 percent below our government estimate, and the total price is approximately $6 million less than was paid for iTRAK over the past 6.5 years. NSF believes it was able to achieve these price reductions through competition and the use of the GSA's new Alliant 2 government-wide acquisition contracts.

➢ **Certificate of Excellence in Accountability Reporting (CEAR) Award**
In April, NSF was awarded the Association of Government Accountant's (AGA) prestigious Certificate of Excellence in Accountability Reporting for NSF's *FY 2018 Agency Financial Report (AFR)*. The Certificate of Excellence recognizes outstanding accountability reporting and is the highest form of recognition in federal government management reporting. In addition to commending the AFR's

visual appeal and well organized and easily understood explanations of financial and performance matters, AGA also noted that the report presentation facilitated full disclosure, transparency, and accountability. As part of its review of the AFR, AGA has provided recommendations to further enhance future AFRs.

> **Performance**
> *Publication of Performance Information in the FY 2020 Budget Request to Congress*
> NSF's *FY 2018 Annual Performance Report* and *FY 2020 Annual Performance Plan* were published in March with the *FY 2020 Budget Request*. NSF achieved or partially achieved six of its seven performance goals in FY 2018. The report also includes NSF's FY 2018 Management Challenges progress report and the FY 2018 Strategic Objective progress update.
>
> *Priority Goals*
> The FY 2018 - 2019 Priority Goal, "Expand public and private partnerships," is on track to achieve its target to increase formal partnerships with external U.S. entities by 5 percent over the FY 2017 baseline. NSF is selecting topics to propose to OMB in May for its next round of Priority Goals. The next round of Priority Goals will begin implementation in FY 2020, with results delivered in FY 2021.
>
> *FY 2018 Strategic Reviews*
> In the summer of 2018, the Strategic Review process supported the visioning and planning of *Renewing NSF*, NSF's agency reform plan under OMB Memo M-17-22, and Learning Agendas, a required component of Strategic Plans under the Foundations for Evidence-Based Policymaking Act of 2018, passed in December 2018. The progress update described the work done since summer 2018 to implement these activities within the Foundation.
>
> *FY 2019 Strategic Reviews*
> The funding lapse did not affect the OMB deadlines for the FY 2019 Strategic Review. Agencies are expected to submit the results of this process in May and to discuss results with OMB in June. To adjust to this timeline, NSF is conducting Strategic Reviews of two areas in FY 2019, instead of one review for each of the six Strategic Objectives in the Strategic Plan.
>
> *Performance Integration with Other Processes*
> The Performance team works with the agency teams responsible for the implementation of ERM, PMIAA, and the Foundations for Evidence-Based Policymaking Act of 2018. Guidance for these activities all require coordination with the performance function. ERM is institutionally housed within BFA, Evaluation is institutionally housed within OIA, and PMIAA is housed within both OIA and BFA. The Performance team works with each of the three implementation teams to ensure that guidance is followed without undue burden on staff. For example, in FY 2019, a risk-based approach was used to select the subset of Strategic Review topics, given the shortened timeframe; and one review will cover the same topic as our pilot PMIAA implementation.

- ➤ **FY 2019 Appropriations**
  - The full year appropriation bill supporting NSF was passed on February 14, 2019.
  - In FY 2019, NSF received a funding level that exceeded $8 billion for the first time.
  - The total of $8.075 billion is an increase of +$603 million compared to the FY 2019 Request and +$308 million above the FY 2018 Current Plan level.
  - NSF's FY 2019 Current Plan, which provides allocations below the account level was submitted on April 1st and is currently under consideration by the appropriations committees.
  - Account level details are below:

FY 2018 and FY 2019 NSF Account Summary Table
(dollars in millions)

Account	FY 2018 Current Plan	FY 2019 Request	FY2019 Enacted
RRA	$6,334.48	$6,150.68	$6,520.00
EHR	902.00	873.37	910.00
MREFC	182.80	94.65	295.74
AOAM	328.51	333.63	329.54
NSB	4.37	4.32	4.37
OIG	15.20	15.35	15.35
Total	**$7,767.36**	**$7,472.00**	**$8,075.00**

- ➤ **FY 2020 President's Budget Request**
  - NSF total for FY 2020 is $7.066 billion
    - -$406 million or -5 percent below FY 2019 Request
    - -$1.009 billion or -12 percent below the FY 2019 Enacted
    - -$752.45 million or -10 percent below FY 2018 Actual
  - The Director testified on the FY 2020 Request both in front of the House Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies on March 26th and the House Science Space and Technology Committee on May 8th.

  - Budget Request highlights:
    - Continues NSF's commitment to basic research that contributes to human knowledge and provides the scientific understanding necessary to spur innovation across all fields of science and engineering (S&E).
    - In FY 2020, NSF expects that 93 percent of the annual budget will be used to fund research and education grants and research infrastructure in the science and education communities.
    - In FY 2020, NSF expects to invest $4.92 billion dollars, or 66 percent of NSF's total budget, in basic research.
    - Supports approximately 8,000 new research grants.
    - Funds NSF investments in the S&E foundations for quantum information science ($106 million).
    - Continues to support its 10 Big Ideas, research agendas that identify areas at the frontiers of S&E which promise to be among the most transformative in the coming decade. Nearly $300 million will be invested across the agency to support the development of the foundational science and technology that will be necessary to propel the Big Ideas forward.

- o In FY 2020, the Convergence Accelerator will focus on topics shared by two of the 10 Big Ideas. One Accelerator track will focus on *Harnessing the Data Revolution for 21st-Century Science and Engineering*, and a second will focus on the *Future of Work at the Human-Technology Frontier*. Each will be funded at $30.0 million, plus each will seek to leverage $20.0 million in external partnerships.
- o Invests in transformative research in artificial intelligence ($492 million).
- o Provides funds to enhance understanding and application of microelectronics and semiconductors ($68 million).
- o Provides the first year of funding for the construction of the High Luminosity – Large Hadron Collider Upgrade ($33 million/year for 5 years).
- o Provides ongoing support for the Antarctic Infrastructure Modernization for Science construction project to modernize major facilities at McMurdo Station ($98 million), and funding for the Large Synoptic Survey Telescope major research facility construction project ($46 million).
- o Supports investments in students and a future-focused workforce by funding CyberCorps®: Scholarship for Service ($55 million) and Advanced Technological Education ($75 million) and other education and workforce programs.

FY 2020 NSF Account Summary Table
(dollars in millions)

Account	FY 2020 Budget	Request +/- FY 2019 Request	Request +/- FY 2019 Enacted	Request +/- FY 2018 Actual
RRA	$5,662.96	-$487.72	-$857.04	-$717.42
EHR	823.47	-49.90	-86.53	-80.40
MREFC	223.23	128.58	-72.51	36.93
AOAM	336.89	3.26	7.35	8.38
NSB	4.1	-0.22	-0.27	-0.20
OIG	15.35	0.00	0.00	0.26
Total	**$7,066.00**	**-$406.00**	**-$1,009.00**	**-$752.45**

- ➢ **FY 2020 Appropriations**
  - The House Appropriations Subcommittee on Commerce, Justice, Science approved its FY 2020 bill on May 17th. The legislation funds NSF at $8.64 billion, $561.14 million above the FY 2019 Enacted level. Next, the bill heads to the full Committee for markup.
  - The Senate has not taken similar steps. A decision is still pending on what level will be used for an overall funding target for FY 2020. Options include flat with the FY 2019 Enacted Level or in line with current law discretionary caps.

BFA Staff Awards

Gears of Government Awards

The Gears of Government Awards recognize and honor outstanding individuals who have made significant contributions across the Federal workforce. These individuals and teams have served as key drivers for results and made meaningful contributions to progress on Cross-Agency Priority Goals, Agency Priority Goals, or other efforts that have advanced the President's Management Agenda.

Individual Award

- *Gisele Holden*
    - Led the implementation of robotic processing automation and service provider reporting to allow employees to spend more time on achieving mission outcomes.

Team Award

- *BFA recipient: Alexander Wynnyk*. HHS, NASA, Ed recipients: Yolanda Jones, Lakisa Carter, Carolyn Beins, Christos Motsiopoulos, Chuck Laster and Richard Brundage.
    - Modernized and digitized grants management across government. The team's efforts allow grant recipients to spend more time and effort on driving results in areas such as public health, science, infrastructure, and economic development.

2019 NSF Director's Award of Excellence

The Director's Awards of Excellence are given for demonstrating outstanding accomplishments. Each year, the NSF Director looks forward to honoring NSF staff who have excelled at their jobs and made special contributions to the Foundation and the community.

Meritorious

- *Denise Robinson*
    - For exceptional proactive leadership supporting the Engineering Education and Centers (EEC) division, as well as the wider engineering community, with comprehensive knowledge, expert insight, and timely guidance for complex and transformative engineering projects.

Superior Accomplishment (Individual)

- *Christopher Andall*
  - For high quality work on the review and timely completion of oversight activities, thereby protecting NSF's reputation; reducing risk of fraud, waste, and abuse; and building trust with oversight communities.

- *Rebecca Yasky*
  - For excellence, collaboration and integrity in successfully implementing NSF's Knowledge Management and Earned Value Management Verification, Acceptance and Surveillance Programs in support of major facilities oversight.

Superior Accomplishment (Group)

- *BFA recipients: Robert Hengst, Anna-Lee Misiano*. Other NSF recipients: Steven Ellis, Montona Futrell-Griggs, Roland Roberts, James Deshler, Benjamin Klein, Benjamin, Caroline Blanco.
  - For exceptional skill and leadership in the completion of NEON's construction and transition to operations of a path-breaking, large-scale ecological science project.
- *BFA recipients: Keith Boyea, Kathleen Carpenter, Patrice Cousins, Nicole Cyrus, Zaneta Hargrove, Gisele Holden, Elida Lynch, Rebecca Magowan, JP McMullen, Margaret Moon, Cindy Paolillo, Sarah Yatchoua.* Other NSF recipients: Anju Anand, Elanchezhian Sivagnanam, Teresa Guillot.
  - For excellence in innovation through Robotic Processing Automation that advances the agency goals in creative tools and practices for an evolving workplace and solidifies NSF's leadership at the nexus of workforce and technology solutions.

Equal Opportunity or Diversity (Group)

- *BFA recipients: Jamie French, Pamela Hawkins, Jason Madigan, Denise Martin, Willie Mae Powell, Aprile Roberson*. Other NSF recipients: Sharon Alston, Ryan Bael, Eric Bell, Kimberly Bryant, Sabrina Caraway, Velma Lawson, Donna O'Malley, Gloria Yancey.
  - For excellence in the implementation of the New Inclusion Quotient program which cultivates behaviors around the five habits of inclusion—fair, open, cooperative, supportive, and empowering.

- *BFA recipients: Jean Feldman, Samantha Hunter, Jeremy Leffler.* Other NSF recipients: Bernice Anderson, Zita Barnett, Sarah Bates, Scott Bohnhoff, Lisa Clough, Robert Cosgrove, Rhonda Davis, Erin Dawson, Richard Dickinson, Kelly Dubose, Sarah Edwards, Anne Emig, Jeremy Epstein, Sonia Esperanca, Kelly Falkner, Rebecca Ferrell, Peggy Hoyle, Jolaina Jeff-Cartier, (Michael) Brandon Jones, Patricia Knezek, Anne Kornahrens, Robert Moller, Karen Pearce, Suzanne Plimpton, Leslie Rissler, Elizabeth Rom, Sandra Scholar, Deanne Sobczak, Alan Tessier.
  - For excellence in pioneering unprecedented strategies and publishing promising practices that further bolster the Director's commitment to ensuring science and scientists funded by NSF is conducted in a safe research environment free of harassment.

OIRM Update
for the B&O Advisory Committee Meeting (Spring 2019)

OIRM Senior Staff Changes

- There have been several changes to OIRM Senior Staff since we last saw you in December.
    - I (Wonzie Gardner) have been appointed Head of OIRM after serving as Acting Head for several months.
    - Javier Inclán has been named Deputy Head of OIRM effective August 4, 2019. Javier will continue as Acting Division Director in the Division of Human Resources Management (HRM) until a permanent Division Director is named. Jeff Rich is serving as Acting Deputy Head until that time. Linnea Avallone has moved ot the Office of International Affairs (OIA) after completing her detail as Acting Deputy Head.
    - In the Division of Information Services (DIS), Teresa Guillot has been named Deputy Division Director.
    - In the Division of Administrative Services (DAS), Hilary Haight is serving as Acting Deputy Division Director.
    - In HRM, Bill Malyszka is serving as Acting Deputy Division Director of HRM.

OIRM Staff Awards

- Congratulations to OIRM staff who recently received Director's Awards! Citations are attached in the Appendix.
    - Anju Anand, Scott Bohnoff, Kelly DuBose, Teresa Guillot, Dawn Patterson, Elanchezhian Sivagnanam, Ann Smith

Shutdown

- Coordinated with BFA on all aspects of the government shutdown, before, during and after the shutdown.
    - Special recognition to Javier Inclán (OIRM), Janis Coughlin- Piester (BFA) and Linnea Avallone (formerly OIRM, now OIA) for their leadership roles.
- Delivered proactive communications to employees including messages of status on NSF.gov, FAQs, manning a shared inbox to field real-time questions and providing pointers to other resources.
- Assisted in bringing panels back on-line after the shutdown in a prioritized manner.
- Interior Business Center, our payroll provider, processed retroactive payroll actions to get people paid as smoothly as possible with few issues encountered.

Cafeteria

- In March, NSF awarded a contract for cafeteria and light refreshment services to a new vendor, Corporate Chefs, Inc. after coming to a mutual agreement with the previous vendor to terminate their contract. Corporate Chefs initiated cafeteria services on May 6 and began delivering light refreshment orders on May 20. Staff feedback regarding food quality and prices has been very positive.

Visitor Experience Improvements

- DAS has made a number of improvements to the experience of guests arriving in the Visitor Center. The team monitors the number of expected visitors and opens up a supplemental screening station during periods of high visitor volume. They also worked with DIS to integrate data from the Conference Room Scheduler into the Enterprise Data Warehouse to identify unregistered visitors to reduce delays associated with processing them. Additional furniture and signage has been installed to improve traffic flow and convenience. The team expanded the information sent to visitors prior to their visits to set realistic expectations and conducted an awareness campaign among NSF staff registering guests to bring the percentage of visitors who receive this email up from less than 25% to nearly 60%. The team implemented a feedback program using comment cards to address visitor concerns in real time. The team also developed a procedure to enable Federal employees from other agencies who frequently visit NSF to access the building using their Federal ID cards rather than going through the Visitor Center.

Transfer of Personnel Security and Suitability from HRM to DAS

- The Personnel Security and Suitability (PSS) office was transferred from HRM to DAS. PSS is responsible for the determination of suitability and security clearance eligibility of individuals for entry and retention in sensitive and non-sensitive positions within NSF, as well as the overall development and administration of NSF Personnel Security Programs and directives. This realignment allows for streamlined program oversight and increased efficiencies throughout the process.

FEVS 2019

- The Federal Employee Viewpoint Survey for 2019 launches the week of May 20th. While the Office of Personnel Management had planned to alter the survey design this year based on findings from last year's pilot, the deferred to keep the instrument the same this year to get pre and post-shutdown measures and indicators of the impact of that event. They are also adding a small number shutdown-specific items will also be included.

IT News

- NSF remains focused on preserving secure, reliable day-to-day operations for our IT systems and services, supporting the agency and its customers by providing systems and electronic tools that facilitate NSF's grants management processes and that enable agency business to be conducted effectively anytime and anywhere.
- NSF continues modernizing IT services to improve the external research community's interactions with NSF while providing the agency workforce with new tools and capabilities that facilitate their work in support of the agency mission.
  - o In February 2019, NSF implemented changes in FastLane and Research.gov to support policy updates in the *Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 19-1) and to run new automated proposal compliance checks. Following the PAPPG changes, proposal preparation and submission is incorporated in Research.gov as an alternative to the NSF FastLane System for proposal preparation, submission, and proposal file updates.
  - o NSF continues to expand services in MyNSF and introduce new functionality to the agency. Currently, MyNSF allows staff to create and manage Panels, Advisory Committees, COVs, Site Visits, Sub-committee meetings, and Ad Hoc proposal reviews, as well as view summary information for pending and approved awards. The new MyNSF check and track functionality, introduced in late 2018, allows Program staff to check and track the availability of potential meeting participants. In April 2019, MyNSF added the ability to process post award funded actions (e.g., supplements, increments, etc..) and decommissioned the corresponding functions from legacy Awards.
  - o NSF's Enterprise Reporting (ER) service regularly introduces new data sources, dashboards, and reporting capabilities. In February 2019, a new Assigned Reviewer Conflict of Interest (COI) dashboard was introduced to help NSF staff identify potential conflicts for future meetings/panels. It enhances the previous Reviewer COI Report by performing additional COI checks on several types of proposal documents.
- NSF is moving to cloud technologies to improve agility and redundancy of services. A significant area of focus in FY19 has been supporting the development and implementation of the new NSF.gov website as it is modernized and moved to a cloud environment.
- NSF continues to evaluate and adopt emerging technologies. During FY19, NSF expanded the use of Robotics Process Automation (RPA), bringing three "bots" into production to automate routine tasks.
- NSF regularly receives external recognition for its strong IT programs. In February 2019, NSF was a recipient of an award for Best Overall (one of 4 agencies in this category) at the second annual FITARA Awards & Forum. GAO and Congress collaborated to create the FITARA scorecard to measure how well agencies are meeting the goals of the Federal IT Acquisitions Reform Act (FITARA). In November 2015 NSF got a "D" and by May of 2018 we received a B+ and have maintained that grade. B+ is the highest grade across all agencies.

APPENDIX

2019 NSF Director's Award of Excellence
The Director's Awards of Excellence are given for demonstrating outstanding accomplishments. Each year, the NSF Director looks forward to honoring NSF staff who have excelled at their jobs and made special contributions to the Foundation and the community.

Superior Accomplishment (Individual)

- Dawn Patterson
    - For unwavering support to the Senior Executive Service by improving the processes and serving the members using data-driven decisions and working collegially with the group to ensure NSF is meeting objectives.
- Ann Smith
    - For outstanding leadership and expertise in developing and executing NSF's plan to meet Federal Information Technology Acquisition Reform Act (FITARA) requirements, demonstrating NSF's progress in IT modernization.

Superior Accomplishment (Group)

- Anju Anand, Teresa Guillot, Elanchezhian Sivagnanam (part of larger NSF group)
    - For excellence in innovation through Robotic Processing Automation that advances the agency goals in creative tools and practices for an evolving workplace and solidifies NSF's leadership at the nexus of workforce and technology solutions.
- Scott Bohnoff, Kelly DuBose (part of larger NSF group)
    - For excellence in pioneering unprecedented strategies and publishing promising practices that further bolster the Director's commitment to ensuring science and scientists funded by NSF is conducted in a safe research environment free of harassment.

Backgrounder: Spring 2019
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Cost Surveillance of Major Facilities – Implementing the Subcommittee Report Recommendations

Presentation:

The Cost Surveillance Subcommittee Report from December 2018 found that NSF policies and procedures are sufficient but also provided valuable recommendations for further improvement. NSF concurs with all Subcommittee recommendations and recognizes the importance of high-quality estimating and oversight in successfully supporting the science mission. NSF is actively implementing and tracking resolution of all recommendations. Internal Standard Operating Guidance is being updated or created and the externally-facing *Major Facilities Guide* has been updated to further strengthen estimates and oversight. NSF is in discussions with the National Science Board on the agency's handling of the potential cost impacts of "unknown-unknowns" in relation to the No Cost Overrun Policy.

Committee Action/Feedback

None. Status Update.

Contact Person(s):

Matt Hawkins, 703-292-7407, mhawkins@nsf.gov;
Kevin Porter, 703-292-7484, kporter@nsf.gov

Cost Surveillance Policy and Procedures for Major Facilities – Implementing BOAC Subcommittee Report Recommendations

Kevin Porter, Facilities Advisor, BFA-LFO

Certified Estimating Professional, AACE International
Professional Engineer, Virginia
Federal Acquisition Certification, Program/Project Management

ACQUISITION & COOPERATIVE SUPPORT | BUDGET | FINANCIAL MANAGEMENT
GRANTS & AGREEMENTS | INSTITUTION & AWARD SUPPORT | **LARGE FACILITIES**

1

NSF concurs with all Recommendations

- Evaluate consolidation of SOGs into single internal manual: **2021-2022**

- Re-order methodology preferences: **COMPLETE**

- Encourage qualified/certified analysts & estimators:
  - → Panelists; **COMPLETE**
  - → LFO SME; **COMPLETE**
  - → NSF IPT; **2020 (PMIAA Implementation)**
  - → Recipients; **2020 MFG updated ("Key Personnel")**

- Improve documentation: **In Progress**

ACQUISITION & COOPERATIVE SUPPORT | BUDGET | FINANCIAL MANAGEMENT
GRANTS & AGREEMENTS | INSTITUTION & AWARD SUPPORT | **LARGE FACILITIES**

2

Independent Cost Estimates & Analyses

- ICE as early as possible; **COMPLETE**
- ICE to foster discussion on risks; **COMPLETE**
- Independent Schedule Estimate; **COMPLETE**
- Non-negotiable Sci/Tech Performance Requirements; **In Progress**
  - Emphasis on AIMS
  - Part of NSB discussion (Next Slide)

ACQUISITION & COOPERATIVE SUPPORT | BUDGET | FINANCIAL MANAGEMENT
GRANTS & AGREEMENTS | INSTITUTION & AWARD SUPPORT | **LARGE FACILITIES**

3

Consider "Unknown Unknowns" in the TPC

- Finalizing Management Reserve SOG, <$10M
  - Board authorized threshold for supplement
- Discussed with NSB for the AIMS Project
- Continued NSB discussions in relation to the No Cost Overrun Policy:
  - Potential impacts on science

ACQUISITION & COOPERATIVE SUPPORT | BUDGET | FINANCIAL MANAGEMENT
GRANTS & AGREEMENTS | INSTITUTION & AWARD SUPPORT | **LARGE FACILITIES**

4

Proposed Reponses/Action Plan for BOAC Cost Surveillance Policy and Procedures Subcommittee Report

5/24/2019

Level of Recommendations	Focus area and Comments	Recommendation by the Subcommittee	Background Information	Proposed response Action	Target Date
Only overarching recommendation	**Overall processes:** The processes do a good job documenting what is required and are considered sufficient. [Page 16, Sec. *V Summary*]	Consider consolidating SOGs, manuals, and other policies and procedures, as appropriate, into a single document or series of focused documents addressing cost analysis or at a minimum, the four areas of the review [Page 16, Sec. *VI Considerations for Improvemen* t]	Most of the guidance documents were formally developed in the past 3 years, following receipt of the NAPA report as well as GAO and OIG audit reports. NSF is still in the process of formalizing and standardizing internal procedures for various areas of facilities oversight.	**CONCUR:** LFO, DACS/CSB, and DIAS/CAP, working through the Major Facilities Working Group review process, are still developing the critical set of Standard Operating Guidance (SOGs) documents to cover various areas of facility oversight. DACS/CSB SOG for *Standardized Cost Analysis Guidance* and SOG for *Review and Approval Matrix* were updated September 2018 and March 2019. The CAP SOG for *Pre-award Reviews* was updated September 2018. The LFO SOG for *Selection of Independent Cost Estimate Reviews* was finalized in May 2019. DACS/CSB is evaluating consolidating their SOGs. NSF will evaluate the benefits of consolidating all into a single internal manual similar to the PAM to enhance the cohesion and clarity when the majority of the guidance documents are further refined.	2021 - 2022
Considerations for further improvement	**Cost Estimating (CE):** Requirements are clearly documented in LFM and SOG, but they were not followed consistently [Page 16, *Sec. V Summary*]	**CE Recommendation 1:** The methodology used for estimating purposes should be listed in this order of preference: 1) Actual/historical data for the system/subsystems being estimated; 2) Analogous data with adjustments to reflect the technical and complexity differences; 3) Parametric data should be used for higher level WBS - modified to reflect the technical, size, weight, quantity and/or schedule of the system being estimated; 4) Expert opinion - used only if a secondary methodology is used to substantiate the expert opinion provided by the recipient or evaluator. [Page 17-18, Cost estimating & Sec. V Summary]	Due to the pioneering nature of many major facility construction projects as well as their initial operations, actual/historical data will likely not exist.	**CONCUR:** Added a statement to MFG Section 4.2.2.3 on GAO best practice #6 Obtain data that: "The best estimating method should be chosen for each WBS element. The following cost estimating methodologies should be used, in order of preference, if the data exists: (1) Actual/historical data for the systems or operations being estimated; (2) Detailed engineering build-up; (3) Parametric data with adjustments to reflect differences (e.g., technical, size, weight, quantity, location, schedule); (4) Analogous data with adjustments to reflect differences; (5) Expert opinion, only if a secondary methodology is used to substantiate." MFG 4.2.2.3 currently states that an explanation for choosing a particular estimating method should be documented in the CEP and Cost Book.	COMPLETE
		CE Recommendation 2: The use of cost analysts/estimators who are certified by qualified organizations should be encouraged. This applies to those who perform Independent Cost Estimates/Analysis. [Page 18, Sec V Cost Estimating]	Due to their pioneering nature, major facility projects are often highly specialized. While the professional cost estimators could provide valuable assistance on the estimating methodology, the objective evaluation of the cost estimate usually requires truly in-depth technical knowledge that only technical experts could possess. NSF is strengthening the review panel's evaluation with regard to cost estimating, with input from both the technical experts and professional cost estimators to ensure the most reliable assessment. This teamed approach have been clearly reflected in the *Major Facilities Oversight Review* SOG	**CONCUR:** 1) As part of PMIAA implementation, NSF will evaluate the cost estimating qualification/certifications of the NSF team; 2) SOG for *Minimum Core Competencies for Oversight of Major Facilities* requires one (1) LFO SME to have cost estimating certification; 3) The qualifications and requirements for members of the expert panel are included in the *Major Facilities Oversight Reviews* SOG; 4) Core Competencies for Recipients are being developed for a new section in the MFG ("Key Personnel").	2020

Proposed Reponses/Action Plan for BOAC Cost Surveillance Policy and Procedures Subcommittee Report

5/24/2019

Level of Recommendations	Focus area and Comments	Recommendation by the Subcommittee	Background Information	Proposed response Action	Target Date
		CE Recommendation 3: Improve cost estimate documentation. Both the Recipients and evaluators should clearly document the estimate approach, quantitative justification and support. [Pages 17 & 18, Sec V Cost estimating]	Section 4.2 of the MFG (formerly the LFM) and the DACS/CSB *Standardized Cost Analysis Guidance* SOG (which includes the Cost Proposal Review Document) are relatively new and still being socialized with the community and NSF, respectively. Commonality of approach and documentation are still a work in progress.	**CONCUR**: 1) MFG 4.2.2.3 currently states that an explanation for choosing a particular estimating method should be documented in the CEP and Cost Book; 2) Similar language has been included in the *Major Facilities Oversight Review* SOG to strengthen panel review documentation requirements; 3) CSB's *Standardized Cost Analysis Guidance* SOG is being revised to clarify documentation requirements.	December 2019
	Independent Cost Estimates/Analysis (ICE/ICA): The ICAs are useful in the initial phases as an Agency begins to strengthen its oversight and project management processes and learn how to do the programmatic oversight. By design the ICA is focused on process, not content, and the issues at this point in NSF's oversight processes should migrate to content. [Page 18, Sec. V: *Independent Cost Estimates/Analysis*]	**ICE/ICA Recommendation 1:** Over time, the NSF should migrate to ICE products even if higher-level in nature and early in the project lifecycle... By Design, an ICA is focused on process, not content, and the issues at this point in NSF's oversight processes should migrate to content. An ICE should be conducted as early as possible in the project lifecycle of the project to inform possible trades and descopes. The BOAC subcommittee expected to see an ICE product, even if preliminary, for the AIMS project. [Page 19]	In order to conduct an ICE on a construction project design drawings and specifications need to be relatively mature. Some projects are mature enough during the Preliminary Design Stage while others are not fully refined until the Final Design Phase. Under AICA, NSF has the flexibility to scope and time the ICE as long as it is completed prior to award. Although ICEs have been historically used by NSF, the requirement is new. An ICE has been performed for the AIMS project as part of the Final Design Review process.	**CONCUR:** An ICE will be conducted at the earliest possible time based on (in part) the maturity of the drawings and specifications as determined by the Core IPT. This expectation has been clarified in the *Independent Cost Estimate Review* SOG. <u>Note</u>: An ICA will be used for operations award (in conjunction with expert panels) to ensure programs/facilities follow the correct process since operations awards are activity-based rather than deliverables-based.	COMPLETE
		ICE/ICA Recommendation 2: The ICE product should also be used to foster discussions about risks between the independent agent and the Project. [Page 19]	The ICE for AIMS included its own risk analysis and the project team used it to reconcile with the Project's risk analysis. NSF also uses expert panels to assess the Project's risk analysis which is also considered "independent".	**CONCUR:** 1) Language has been added to the *Independent Cost Estimate Review* SOG on this expectation for the ICE scope of work; 2) *Major Facilities Oversight Review* SOG includes language requiring the review panel to evaluate the Project's risk analysis at each stage-gate review.	COMPLETE
Consideration for further improvement		**ICE/ICA Recommendation 3:** An independent schedule estimate (ISE) should be performed in concert with the ICE for enhanced confidence. The NSF should consider budgeting to an independent probabilistic schedule analysis**.** [Page 19]	For a civil construction project (like AIMS) an ISE is relatively straight forward. An ISE was conducted for the AIMS project by the ICE contractor. Other projects are often highly specialized and unique in nature, such as LHC High Luminosity Up-grades. While the professional schedule analyst could provide valuable assistance in the methodology used for probabilistic schedule analysis, the objective evaluation of the schedule estimate input usually requires truly in-depth technical knowledge and experience that only technical experts possess. NSF's major facilities stage-gate review process requires the expert panel to independently evaluate the schedule estimate.	**CONCUR:** In the *Major Facilities Oversight Review* SOG, NSF has clarified requirements on the assessment of cost and schedule estimate by the independent review panel. The Core IPT will assess whether or not the contractor should also perform an ISE and probalistic cost schedule risk analysis in conjunction with the ICE based on the technical nature of the project.	COMPLETE

Proposed Reponses/Action Plan for BOAC Cost Surveillance Policy and Procedures Subcommittee Report

5/24/2019

Level of Recommendations	Focus area and Comments	Recommendation by the Subcommittee	Background Information	Proposed response Action	Target Date
		ICE/ICA Recommendation 4: Threshold or Non-negotiable science and or technical performance requirements should be tracible. There should be more clearly defined criteria around scoping/de-scoping decisions. Threshold or Non-negotiable requirements are the level of requirements below which the project isn't worth doing. [Page 19]	Thresholds on non-negotiable science and technical performance requirements for science projects are dictated by the needs of the scientific research program that the facility/project will support. Due to the "No Cost Overrun" policy, there is strong reliance on scoping/descoping to meet the Total Project Cost authorized by the Board when there is cost increase cannot be covered by contingency. Determining whether or not the project is worth continuing is often a strategic decision by the agency. To ensure that the project will ultimately meet the science mission needs, the impact of descoping on the threshold science performance needs to be carefully evaluated by the scientific & technical experts as well as NSF Leadership.	**CONCUR:** NSF has reviewed MFG Section 3.4.1 as well as the *Major Facilities Oversight Review* SOG to ensure clarify of requirements for the following PEP components: PEP sections 1.2 (Scientific Requirements), 4.1 (Project Definition) and 4.4 (Scope Management Plan). Language in the SOG to also requires that scoping/descoping criteria and the impact of descoping decisions on the threshold requirements is evaluated.	COMPLETE
Considerations for further improvement	**Internal Management Plans and Earned Value Management (IMP/EV):** The Earned Value Management process has been accomplished effectively. Analysis has been completed and data is being used. [Page 20]	**IMP/EV Recommendation 1:** Continue the appropriate implementation, verification and utilization of EVMS.		**CONCUR**	COMPLETE
		IMP/EV Recommendation 2: Update the IMP on a regular basis	NSF recognizes that IMP's are often the last document to be completed and are not always reviewed and up-dated after construction begins. A draft IMP SOG is ready for MFWG review and includes the verbiage: *"The IMP is updated during the Preliminary Design Phase, the Final Design phase, and at the start of the Construction, Operations, and Divestment stages. The IMP is a living document and should be reviewed annually, at a minimum, and revised as necessary."*	**CONCUR:** The Facilities Readiness Panel standard operating procedure includes a focus on IMP being current and complete. The draft IMP SOG will include a requirement that the Programs review the IMP annually and update as necessary.	September 2019
Considerations for further improvement	**Incurred Cost Audits, Indirect Costs and Budget Contingency**	NSF initiate a dialogue with the recipient community in preparation for the establishment of a set of core competency recommendations for recipient staff who support the administrative and management aspects of large facilities projects. [Page 20]	This is well underway as a result of the NAPA report, but has been considered a lower priority. The Large Facilities Workshops have been an excellent platform to facilitate various dialogue with the Recipient community for discussing minimum core competencies. Only final implementation and codification is required. NSF intends to take a similar team approach to Recipient Core Competencies as it does for NSF staff.	**CONCUR:** This will be codified as part of an interim up-date to the MFG by adding a new section "Key Personnel". A session on this topic was included as part of the Large Facilities Workshop in May 2019 to further the dialog with the community on this emerging requirement.	January 2020
	NSF's "No Cost Overrun policy": This "No Cost Overrun policy" is misleading. This policy requires that the Total Project Cost (TPC) estimate developed at the Preliminary Design Stage has adequate contingency to cover all foreseeable risks, and that any cost increases not	**Issue 1:** Descoping well into the implementation phases of a project has been studied and typically doesn't yield the cost savings forecasted. [Page 19]	This observation aligns with NSF's experience.	**CONCUR:** NSF is considering mechanisms to address unforeseen events/risks that are not manageable by the Recipient ("unknown-unknowns") based on the NEON experience, including the authorization and use of management reserve. A SOG on the use of management reserve totaling less than $10M is nearing completion. Discussion are on-going with the National Science Board regarding the potential cost impacts of "unknown-unknowns" in relation to the No Cost Overrun Policy.	November 2019
		Issue 2: Estimating only known risks will lead to underestimating the costs**.** This discovery is understood in project management and cost estimating communities and such risks are known as "unknown-unknowns." [Page 19]	This observation aligns with NSF's experience on DKIST and NEON.		

Proposed Reponses/Action Plan for BOAC Cost Surveillance Policy and Procedures Subcommittee Report

5/24/2019

Level of Recommendations	Focus area and Comments	Recommendation by the Subcommittee	Background Information	Proposed response Action	Target Date
Special Comments on NSF's "No Cost Overrun policy"	any cost increases not covered by contingency be accommodated by reductions in scope. [Page 19]	**Issue 3:** If the overall objective is to have Major Facilities projects which are cost-capped, then a specific process for trading off between science/technical requirements, and programmatic performance should be codified. [Page 19]	NSF's implementation of the NCOP has been clarified in the version of the MFG now out for public comment. NSF believes that it's "No Cost Overrun Policy" is a valuable oversight tool for NSF in instilling diligence in estimates produced by the Recipient and the analysis conducted by NSF. However, it is not a hard "cost-cap" as the project can be re-baselined as described in Section 4.2.5.2 of the MFG. Trade-offs are always considered as part of the Scope Management Plan. Significant de-scoping (beyond the Scope Management Plan) constitutes a re-baseling which must be presented to the Board for consideration.		
		Additional references from NASA: Currently, there are no additional Unallocated Future Expenses (UFE) held at the NSF Headquarters level for portfolio management across Major Facilities projects. Managing at portfolio level and maintaining UFE has improved programmatic performance for a large set of complex NASA science missions. [Page 20]	Noted.		

Backgrounder: Spring 2019
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Government Shutdown Lessons Learned

Presentation:

After experiencing the longest lapse in appropriations (government shutdown) in US history, staff are working to revise required lapse contingency plans and processes prior to the end of this fiscal year. The effort seeks to accommodate updated legal interpretations from the Office of Management and Budget and the Office of Legal Counsel from the last lapse, the evolving nature of challenges faced as the duration of a lapse continues, and the application of lessons learned to both lapse planning and standard operations where applicable. Given the uncertainty and wide variance of lapse scenarios, NSF is applying an enterprise risk management lens to strike a balance in preparing for another possible lapse while not detracting from core operations and mission support.

Committee Action/Feedback

NSF looks to gather feedback from the Committee members on their experiences during the shutdown as NSF stakeholders.

- What were your observations and experiences as external stakeholders of NSF during the lapse?
- How did your organizations handle the uncertainly of the time?

Contact Persons:

Janis Coughlin-Piester, BFA, 703-292-7853, jacoughl@nsf.gov
Javier Inclán, OIRM, 703-292-4561; jinclan@nsf.gov

Government Shutdown Lessons Learned

Janis Coughlin-Piester, BFA
Javier Inclán, OIRM
June 4, 2019

Agenda

- Set the Stage - 2019 Shutdown Experience

- Lessons Learned and Risk Management Framework

- Changes to Operations and Planning

- Discussion – Expanding our Perspective

2019 Lapse Experience

- Time of Year

- Duration – 35 days

- Partial vs. Full Government Shutdown

- Changes from Past Shutdowns

Lesson Learned – Key Themes

- Every lapse is different

- High degree of variability between events

- Continue to compile lessons learned

- Risk management framework:
  - Identify risks and opportunities,
  - Weigh risk tolerance for each, and
  - Plan appropriate mitigations

- Changes to lapse planning

Changes to Lapse Planning

- Update contingency staffing plan

- Communications

- Personnel actions

- Facilities oversight

- Prompt payment of invoices

- Enhanced reopening considerations

Questions for the Committee

- What were your observations and experiences as external stakeholders of NSF during the lapse?

- How did your organizations handle the uncertainly of the time?

Backgrounder: Spring 2019
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Workforce Strategy Approaches at NSF

Presentation:

Strategic workforce Planning is grounded in 5 CFR 250, a focus of the President's Management Agenda in "Developing a Workforce for the 21st Century" to align the workforce to mission requirements and emerging needs, and the "Renewing NSF" agency-wide effort to adapt the workforce to the work. NSF has taken a tailored approach to strategic workforce planning and human capital management to suit the various Directorates' and Offices' needs based on readiness, resources and maturity levels. The strategic workforce planning team has been engaging organizations across the Foundation to:

- Conduct workforce planning executive leadership interviews to define talent management requirements;
- Facilitate executive working sessions to define business needs and opportunities to aid in determining work demand as a step towards full-lifecycle strategic workforce planning;
- Scale a workforce planning approach to meet specific oversight requirements; and,
- Develop and institutionalize more formalized methods for staffing planning, as a segue to strategic workforce planning.

Committee Action/Feedback

- Describe practical approaches to influencing leaders to articulate beyond the operational 0-2-year, uncertain budget constraint approach to staffing to meet mission needs to more of an unconstrained, strategic 3-5-year outlook?
- Strategic workforce planning should not be focused on all positions in the Foundation, only those that are the most critical to the mission. How have other organizations been able to "segment" those positions without risking morale of employees in other positions?
- A goal is to develop an agency-wide workforce strategy to balance the use of Federal and Rotator workforce. What are the essential components to consider in determining the right mix of any type of multi-sector workforce (e.g., Feds, contractors, rotators, military, etc.)?

Contact Persons: Allison Radford, 703.292.7423, aradford@nsf.gov; Bill Malyszka, 703.292.7142, wmalyszk@nsf.gov

Workforce Strategy Approaches

Strategic Human Capital Planning Branch

June 4, 2019

Workforce Strategy Drivers

- Strategic workforce planning is grounded in 5 CFR 250

- President's Management Agenda: *Developing a Workforce for the 21st Century* to align the workforce to mission requirements and emerging needs

- Renewing NSF: Agency-wide effort to adapt the workforce to the work

- Oversight Entities

- Solid management practices

We are Flexible in Our Approaches to Workforce Strategy

- Conducted workforce planning executive leadership interviews to define talent management requirements;

- Facilitated executive working sessions to define business needs and opportunities to aid in determining work demand as a step towards full-lifecycle strategic workforce planning;

- Scaled a workforce planning approach to meet specific oversight requirements; and,

- Developed and institutionalized more formalized methods for staffing planning, as a step towards strategic workforce planning.

Workforce Planning Executive Leadership Interviews

1. What are the internal and external drivers impacting the work?

What drivers are expected to impact the <Position> work over the next two to three years? Example drivers include:	How will these drivers impact <Position> work and workload? How will the way the <Position> work is being done today need to change to meet changing demands?	How do these drivers impact the availability of <Position> talent in your Directorate?	What strategies do you have in place, or are considering, to address changes in anticipated work demands?
Shift in NSF Priorities, Programs, Policies			
Mission or Scientific Discipline Changes			
Technological Advancements			
New organizational initiatives that on the horizon or will become obsolete, that will require a shift in the scope of <Position> work			
Customer Demand			
Economic, Social, and / or Political Conditions (e.g., workforce reform, hiring freeze)			
Congressional Budget, Legislation (including pending legislation)			
Talent Availability			

Workforce Planning Executive Leadership Interviews (Continued)

2. In what areas do you anticipate a need for new or additional competencies? Where are the competency gaps not only today, but anticipated over the next two to three years?

3. Describe how <Positions> can gain the required proficiency in these competencies, including specific training, education and assignments (e.g., mentoring programs, intra/inter-agency rotational opportunities, training opportunities)?

4. Describe succession planning efforts to ensure there is a qualified pool of talent to fill <Position> positions? How can we develop our people to be competitive in applying for those roles in the future?

5. Describe any issues or challenges that you anticipate with filling <Position> positions, and describe your key strategies for filling position openings.
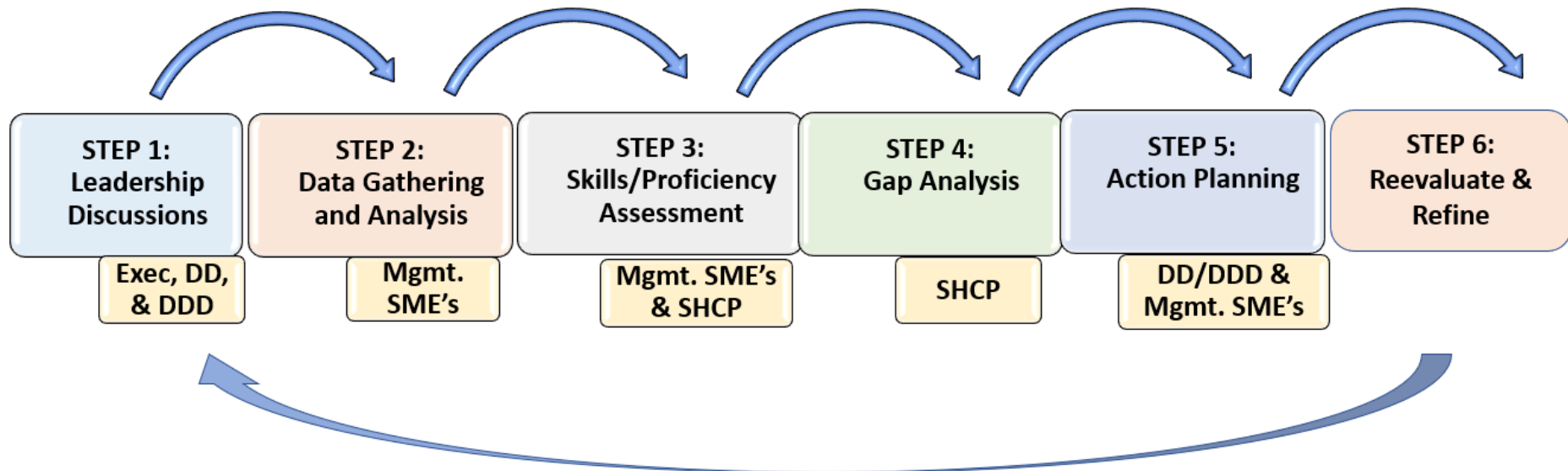
Facilitated Executive Working Sessions - Objectives

- Day 1:

  - Define the strategic and operational anchors that will define workforce requirements for the next five years.

  - Identify the biggest emerging changes that can deliver greater efficiency and enhance Directorate / Office ABC or NSF business capabilities.

  - Identify the biggest workforce changes or vulnerabilities Directorate / Office ABC will confronts today or will face in the next few years.

- Day 2:

  - Develop an Action Plan

Scaled a Workforce Planning Approach to Meet Specific Oversight Requirements

- This effort was in support of a GAO IT Workforce Planning CAP Response and to meet FITARA requirements.
- The process was modified to meet requirements and provide leadership with meaningful tools to enable human capital decisions over the next three years.

STEP 1: Leadership Discussions	STEP 2: Data Gathering and Analysis	STEP 3: Skills/Proficiency Assessment	STEP 4: Gap Analysis	STEP 5: Action Planning	STEP 6: Reevaluate & Refine
Exec, DD, & DDD	Mgmt. SME's	Mgmt. SME's & SHCP	SHCP	DD/DDD & Mgmt. SME's	

This annual process is refreshed at least once a year*

Staffing Planning, as a Step Towards Strategic Workforce Planning

- NSF developed an in-house tool to enable a consistent approach to track all positions within and across Directorates and Offices to project 0-2 years of FTE utilization to aid in planning workforce supply and demand

- The tools provides summary tables and is designed to promote partnerships and discussions between HRM and the Directorates and Offices

8

Staffing Planning, as a Step Towards Strategic Workforce Planning

With multiple preceding tabs of human capital data informing the current and future state of FTE supply and demand, Directorate / Office Leadership and HRM are primed for meaningful discussions for how work demands will be changing and how that will impact workforce capability and capacity. This page provides and opportunity to document actionable next steps to mitigate changes that will be needed to plan for the workforce needed over the next two years.

WORKFORCE NEEDS

ANTICIPATED CHANGES IN WORK REQUIREMENTS (0-2 years out only - beyond that timeframe requires strategic workforce planning)											
Driver(s) Impacting the Work	Impact on Workforce Requirements	Position(s) Affected	Division Affected	Hard-to-Fill Position?	FTE Changes / Impact	Competency or Skill Impacted	Competency or Skill Emerging or Obsolete	Action(s) Required (Make, Borrow, Buy, Automate)	Action Owner	Timeline	Comments

Committee Action/Feedback

- Describe practical approaches to influencing leaders to articulate beyond the operational 0-2-year, uncertain budget constraint approach to staffing to meet mission needs to more of an unconstrained, strategic 3-5-year outlook?

- Strategic workforce planning should not be focused on all positions in the Foundation, only those that are the most critical to the mission. How have other organizations been able to "segment" those positions without risking morale of employees in other positions?

- A goal is to develop an agency-wide workforce strategy to balance the use of Federal and Rotator workforce. What are the essential components to consider in determining the right mix of any type of multi-sector workforce (e.g., Feds, contractors, rotators, military, etc.)?