

National Science Foundation
Advisory Committee for Business and Operations
Spring 2019 Meeting (Virtual) Minutes

Attendance:

Tilak Agerwala	IBM Corporation
Benjamin Brown	Program Manager, Department of Energy
Lee Cheatham	Director, Office of Technology Deployment and Outreach, Pacific Northwest National Laboratory
Robert Dixon	Interim Chair of the Department of Industrial and Systems Engineering, North Carolina Agricultural and Technical State University
Adam Goldberg	Director and Executive Architect, Department of Treasury
Charles Grimes (co-chair)	Retired, COO, U.S. Office of Personnel Management
Michael Holland	Vice Chancellor for Science Policy and Research Strategies, University of Pittsburgh
Ned Holland	Retired, Assistant Secretary for Administration, U.S. Department of Health and Human Services
Jan Jones	Retired, Federal Senior Executive, United States Capitol Police
John Kamensky	Senior Fellow, IBM Center for the Business of Government
Alicia Knoedler	Associate VP for Research, Director of the Center for Research Program Development and Enrichment, University of Oklahoma
Rachel Levinson	Executive Director, National Research Initiatives, Arizona State University
Joe Mitchell	Director of Strategic Initiatives, National Academy of Public Administration
Kim Moreland	Associate Vice Chancellor, Director, University of Wisconsin - Madison
John Palguta	Retired, Vice President for Policy, Partnership for Public Service
Theresa Pardo	Director, Center for Technology in Government, University of Albany - State University of New York
Susan Sedwick (co-chair)	Senior Consultant, Attain, LLC
Pamela Webb	Associate Vice President for Research, University of Minnesota
Doug Webster	Retired, Chief Financial Officer, US Department of Education

Welcome/Introductions/Recap

Co-Chair Chuck Grimes called the virtual meeting to order and thanked everyone for participating. All members were in attendance. Chuck welcomed Dr. Tilak Agerwala who joins as an IBM Corporation emeritus with 35 years of experience there and asked him to briefly introduce himself.

Chuck reminded everyone of some virtual meeting etiquette rules and shared that the Director would not be able to attend the meeting but key points will be gathered at the end of the meeting to prepare a high-level summary. He asked members to forward to Chuck and Susan any key points as well as Committee recommendations so that we may include them in the final meeting summary. He thanked the NSF BOAC support staff for their usual great work in pulling together the logistical aspects of the meeting and welcomed back Charisse Carney-Nunes who completed her detail with the Directorate of Education and

Human Resources. Finally, Chuck pointed out the list of recommendations and status report from the Fall 2018 meeting included in the meeting packet.

BFA/OIRM Updates

Presenters: Teresa Grancorvitz, BFA; Wonzie Gardner, OIRM

Teresa began by providing the yearly update on conflicts of interest and an overview of the Federal Advisory Committee Act (FACA). She announced staff changes in BFA, recognized staff members who have received awards and recognitions and provided updates on activities in BFA. NSF was deemed compliant with the Program Management and Improvement Accountability Act.

Wonzie Gardner announced staff changes in OIRM. Wonzie lauded colleagues in BFA and OIRM for their cooperative efforts to minimize the impact of the government shutdown.

Cost Surveillance of Major Facilities – Implementing the Subcommittee Report Recommendations

Presenter: Kevin Porter, Large Facilities Office, BFA

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.

Kevin provided a status update on the recommendations from the subcommittee, all of which were accepted by NSF.

Discussant: Kim Moreland

Kim remarked that she was very happy to see that all recommendations had been accepted by NSF and pleased with the progress in implementing those recommendations. Everyone involved in improving oversight, policies and procedures related to Large Facilities Cost Surveillance has done their jobs and she believes there are no further concerns from a subcommittee perspective.

Discussion: A question was asked about whether NSF would consider consolidating the SOGs into a single manual. Kevin said that is a consideration but will be down the road for those that are administratively or financially connected. Another member asked how the lessons learned could contribute to quality improvement processes. Kevin stated that a knowledge management system is used to share those best practices and to gather input from the award recipients to address quality improvement. Another question was asked about whether the management reserve funds could be redirected. Jim Ulvestad, Chief Officer for Research Facilities, responded that there were no actual dollars committed to the project, but the allocation is more related to the amount of risk that NSF is willing to assume for a large facility project. Given that explanation, a question was asked about why the funds were not dedicated and allocated to the project. Jim responded that this term of management reserve does not have a uniform definition across NSF or government. In the case of NSF, NSF cannot ask Congress to appropriate management reserve funds and thus is perhaps not a good fit for NSF but it is an embedded practice.

Government Shutdown Lessons Learned

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

After experiencing the longest lapse in appropriations (government shutdown) in US history, NSF 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.

Time of year matters. This particular timing caused a lot of confusion and complexity since so many staff were already off or on travel and didn't understand whether they needed to come in and set their out of office messages. At the same time, timing was also fortuitous because there were not a lot of panel reviews scheduled for the first two weeks of January. The duration was unprecedented and no one really anticipated the length, which required adjustments in communicating with staff, dealing with two missed pay periods, and the need for a second furlough. One challenge was how to notify staff when staff were not supposed to be reading emails. OPM tried to minimize impact. Staff retiring during the shutdown could have been negatively impacted but OPM did a good job of providing some flexibility. NSF continued to accept proposals. Rotators were deemed exempt and were therefore paid. Staff were negatively impacted by the lapse in payroll. Janis noted changes in lapse planning that are under consideration. There is a need to update the NSF contingency staffing plan, e.g. differences in plans for partial and full shutdowns, how to deal with people on leave, travel, or transitioning out of NSF through retirement or job changes. NSF has developed FAQs and is looking at how to improve communications in advance of and during any future lapse. NSF supervisors made efforts to pay attention to the human element through acceptable means. One big issue that arose was awards that were expiring during the lapse. There needs to be more advance planning to communicate with awardees in those situations that may be impacted by lapses to minimize impact on the research and the mission of NSF. NSF will also be working to formulate better reopening procedures to maximize recovery in terms of payroll for staff, paying of invoices and restoring drawdowns. This represents the viewpoint from inside NSF but the external perspective is critical.

Committee Action/Feedback Sought:

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

Discussants: Adam Goldberg and Pamela Webb

Pamela congratulated NSF on the extraordinary job they did. She provided an overview of the analysis of the impact of the shutdown on her institution. At the University of Minnesota (UM), approximately 1,300 projects were impacted, along with two buildings. She provided an overview of how her institution prepared in advance - estimated cash flow needs based on historical data and arranged for short term cash flow, invoiced all allowable expenses up to the date of the shutdown, and submitted proposals and prior approval requests to the extent possible. UM tried as much as possible to identify bridge funding so layoffs and furloughs were minimized. At the start of the shutdown, UM issued a memo to the campus, launched a shutdown website, provided deans a list of the affected projects, compiled all agency memos (not all were easily discoverable) and then handled one-off situations. During the shutdown, startup communications were updated. An unexpected challenge was how to identify and manage issues with fellowships that were awarded to individuals, and UM reached out to those individual fellows. This took a collaborative effort. UM started a national dialogue among universities on how to handle shutdowns especially with how to handle subawards between institutions. There was surprising interest from legislators, both federal and state, but they used this to their advantage by conducting briefings. Factors that mitigated the impact of the shutdown:

- Timing: First two weeks of the shutdown were during the holiday break. UM determined that if the shutdown had occurred in the summer, the impact would have been much worse.
- NSF guidance was a model of clarity and completeness. Other agencies should use the NSF process as a model.
- Help desks and proposal systems remained operational which was very helpful in lessening the impact on institutions. Awards from NSF started flowing again very quickly.

There is an enormous amount of work on the university side that is exceptional and expensive. Here are recommendations for future shutdowns:

1. Other agencies should adapt NSF's guidance template.
2. Consistency is needed in published and oral guidance.
3. Planning for the lack of access to federal buildings on campus for staff who were not subject to the shutdown was a critical oversight.
4. Help institutions identify individual fellowships.
5. Consider continuing to support proper drawdowns. NASA and USAID were able to do so.
6. Having a single email was useful but the guidance on who could use that email was not clear.

Adam was able to glean some information via LinkedIn which was helpful. He also commended NSF for their planning, implementation, and communication. It is not necessarily a bad thing that dealing with this is difficult: if it was easy, it might also be easier to shut down the government more often. His perspective was a little different since only 15 percent of Treasury's staff were furloughed. Returning staff must be given time to ramp back up roughly equivalent to the lapse time (35 days shutdown and about 30 days to ramp back up).

Discussion: Multiple members lauded NSF for the way it handled the shutdown. Calculating the impact is critical and should be communicated to Congress. A question arose about what NSF might be gathering from award recipients and to share that information openly. Lessons learned is a critical learning experience that must be shared. To the question on how the NSF and Pamela's institution were going to deal with providing financial assistance, Pamela said her institution read the fellowship awards and determined that fellows were not allowed to take another job and felt providing financial assistance might disqualify fellows. UM was planning on issuing loans but the shutdown ended before that happened. Another institution found that faculty mentors were making personal loans. NSF identified those fellows that would be impacted. December stipends were already drawn down but could not draw down January stipends until the shutdown ended. NSF leadership made a huge effort to address the human element by personally welcoming returning staff back. Rotators who were on IPAs were exempt from the shutdown and were available to answer questions but only to the extent that was part of their job duties and they channeled information to those who were managing communication and compiling FAQs. One member remarked that the general public does not understand the true impact of the government shutdown and that government may be losing the PR battle because the perception that non-essential personnel really aren't even needed. It is important to convey that the impact is not just on federal employees. It was suggested that NSF not focus solely on the organizational level of the individuals involved, but rather (1) the importance of their role to achievement of strategic objectives of NSF, and (2) evaluated in terms of the gap between current capabilities and needed capabilities. One member asked that specific metrics on the impact be included in the meeting minutes.

Three things were offered for consideration.

- Open honest and ongoing communication is key. You might not know the answer but do your best to find out.
- Organizations have some discretion on who is exempt and non-exempt, and that might change with a shutdown of this length where the status may change and you would need to bring back non-exempt employees back as exempt.
- Compile a list of lessons learned and the cost of the shutdown and share those with policy makers.

The following was submitted after the meeting by Dr. Robert Dixon who was unable to relate these during the virtual meeting.

Potential shutdowns should not be treated as random small probability events. They should now be included in planning. It was recommended that a cost for the disruption of activities and functions caused by the shutdown should be determined for the NSF. The costs associated with other shutdowns (approximations may be used when properly explained) when combined with the time durations of the shutdowns and the times to recover should yield data that can be used to justify contingency budget planning. I recommend that future budgets have a contingency fund to address a

shutdown aimed at accelerating recovery and minimizing damage to the mission of the NSF. This element in planning may aid the Congress in better understanding the diverse ramifications of a shutdown. Some experiments and/or projects that have the potential for significant advances in science and engineering should be protected from the disruption of a government shutdown. Perhaps risk management should be involved in the analysis and work to ensure that large investments are not jeopardized by fluctuations associated with government shutdowns.

I also recommend that the NSF prepare a statement on the difficult-to-quantify loss in human effort associated with the shutdown. These losses include delays in:

- * Carrying out projects and experiments*
- * Actions taken on grant proposals*
- * Work that changed careers*

The NSF has a mission which requires that it lead in the development of strategies to minimize the potential damage from any future shutdown.

Workforce Strategy Approaches at NSF

Presenter: Allison Radford, OIRM

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.

Acting director and deputy assignments present special challenges to workforce planning and require adjustments midstream.

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.)?

Allison noted that workforce strategies at NSF tend to be used interchangeably with workforce planning, and there is a CFR requirement for workforce planning. Workforce planning requirements are also in the President's Management Agenda, encouraging adapting the workforce to changing work. One question that arises is the optimal balance of federal employees and rotators - GAO has done several reviews and the OIG has looked into this issue. Another question is the balance among IPA executive workforce planning, optimal workforce structure, and long-term workforce strategy. In looking at strategy for leadership continuity, without disrupting operations, NSF focused on strategically connecting and

designing an abbreviated plan, making it adjustable and flexible. NSF realizes the need for a strategic approach, and we worked with the research directorates to make evidence-based human resource decisions.

Originally, NSF wanted to look 3 years out, but concluded we really needed to consider research drivers and what is needed now, while being able to adjust and adapt.

NSF wanted to conduct a needs assessment to understand the competencies needed before true workforce planning could take place, and this was a challenge.

NSF spent time with executives discussing how it aligns today and tomorrow, and what actions should this office take to move in the right direction. NSF developed a Work Breakdown Structure (WBS) to determine what would be required. Instead of focusing on the next 3-5 years, we pulled back and focused on short term needs, such as organizational health and what leadership could do now. NSF blended strategic commitments and division requirements, and eventually rolled it up into a Division Plan.

Discussions with senior management resulted in a deliverable with IT planning, skills assessment, and proficiency requirements. This deliverable will set the tone for next year, and it will continue to mature.

Discussants: Chuck Grimes and Doug Webster

Tilak congratulated Allison for the great job considering the constraints they had to work with. However, a two-year timeframe may not necessarily be strategic. You start with strategic plans and ideally, the operationalization of those plans needs to be top down driven. The most critical positions are those that can achieve the strategy, but there are a few gaps on where they need to be. Cultural organization change management is important - is there such change management at NSF?

Chuck noted that a strategic vision must show where you want to go, and there must be executive interest in that vision. There must be executive leadership in executing the strategic vision - otherwise you might not get the results intended, and this would be the case with any agency. Some executives might not see the value of strategy, probably some training in that area may help. With regard to multi-sector workforce challenges, the right mix depends on mission needs and available funding, and all agencies have challenges in this area. The world is changing, and the right mix of the Federal and Rotator workforce will continue be a function of mission needs and available funding.

Rachel noted that all the questions are difficult and challenging, and rotators are unique to NSF and challenging. The mission is supported by having the right balance, and what the balance might is to try to be flexible - experience in other agencies has shown that contractors in some cases are very knowledgeable.

John Palguta noted that what your workforce needs is dependent on a bunch of variables, budget, and here-is-what-we-need-in-this scenario, but there may be other scenarios needing flexible practicable approaches. You need to be flexible and take the long view of your workforce needs seriously and look at how things are unfolding over time because the accuracy of your answer will be tested over time. Give the leaders some help - the current workforce can be addressed centrally, it doesn't have to be every leader developing all the information they need separately. You need to figure out which positions are mission-critical, while treating all employees as critical to the organization.

John Kamensky agreed with the need for taking a long view. The Social Security Administration looked at their baby boomers and knew they needed to do something. They moved from having 1,300 employees off-site to managing more on-line. You need to ask yourself what skills are needed for where you want to go over the next 10 or 15 years, move all support functions to shared services, and as you evolve you may want to focus on bigger ideas as well.

Tilak applauded NSF again for taking a systematic approach to the problem, but it isn't clear that top down leadership is practiced across the board. It should be, and at all levels - develop a plan for every employee in the organization and have an engaged workforce that is going to drive the future. Everyone needs to be involved to drive the strategic view. Positions need to be very clearly defined, directorates need to have a strategic workforce plan, and each leader is responsible for identifying their replacement, inside NSF or outside of NSF. The 3 to 5-year outlook should be part of the plan.

Doug noted that everyone in the organization has a role or they shouldn't be on the rolls. Everyone in the organization needs to be engaged in the strategic plan. Some parts of the organization will have major changes they need to take, and others may not.

Theresa Pardo posited that change in the nature of the work is part of this process. Taking into consideration some of the new technology, new opportunities to adopt technologies, the changing nature of work and the way work gets done are critical to the strategic planning process. It takes a good amount of time to create an understanding of these, but it is relatively easy to adopt technologies and look for opportunities where new strategies are going to be required. What strategies do you have to make sure the people are being asked the right questions and how are you going to be able to help them figure out the new kind of work?

Business Wrap up.

Summary comments were made including a reference to "The Government Industrial Workplace", by Paul Light, which might be useful.

Chuck thanked everyone for their participation and adjourned the meeting.