

National Science Foundation
Advisory Committee for Business and Operations
Spring 2016 Meeting

May 11-12, 2016
Room 1235

Wednesday, May 11, 2016

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

1:15 pm **Enterprise Risk Management**
In December 2014, the Office of Budget, Finance, and Award Management spoke to the Committee regarding its efforts to expand its risks management activities in the face of increased demands and more limited resources. The Committee suggested that enterprise-wide risk management would be advisable across all of NSF.

Enterprise Risk Management (ERM) will be implemented at NSF in the near future pursuant to a forthcoming revision to OMB Circular A-123. NSF staff will give a brief summary of the ERM outlook for the agency, a short explanation of risk management activities that have taken place at mission support levels within various NSF Directorates/Offices, e.g. BFA, and hear from BOAC members who have dealt with ERM implementation in their organizations. NSF is particularly interested in learning which organizations have Risk Officers and what they do, as well as where the organizations are on a maturity model. Most importantly, NSF wants to ensure OMB Circular A-123 efforts do not result in a compliance exercise.

In order to continue NSF's progress towards establishing an ERM framework, NSF is developing an implementation plan. As we start to draft this plan, we want to obtain the Committee's valuable feedback.

Committee Action/Feedback:

- How has ERM been helpful? What value has it brought for your organization and how do we ensure it does not become a compliance exercise?
- How should NSF decide who's in charge, do we need a Chief Risk Officer, and how should we implement A-123's requirement that the Chief Operating Officer lead?
- Should we leverage a maturity model to benchmark or guide our efforts?
- Where is the best place to start?

Presenters: Michael Wetklow, BFA; Rafael Cotto, BFA

Discussants: Chuck Grimes, Susan Sedwick and Doug Webster

2:15 pm **From Systems to Data and Beyond**
NSF is deeply committed to data-driven decision making. Making data available to inform decision-making requires engagement across an organization -- from the information technology shop to every office that supports an organization's mission. NSF has taken our first steps toward using data to improve our effectiveness and efficiency, and we're aware that most organizations are moving toward greater use of data to inform decision-making. We would like to learn from the experience of committee members about challenges and successes their organizations have experienced as they have moved toward a more mature organizational model for making quality data and business intelligence tools available to internal and external stakeholders. Two committee members will tee-up the conversation for us and then we'd like to broaden the conversation to the full committee.

Committee Action/Feedback:

We'd like to hear from committee members who can share challenges, words of caution, lessons-learned, and success stories of organizations that have begun to effectively utilize data to improve the organization's ability to pursue its mission.

Relevant questions for consideration:

- How are organizations managing "data governance" or "data ownership?"
- Who is leading the charge for utilizing data to inform policy, planning, and implementation of priorities?

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- Does your organization utilize data to evaluate or assess your organization's effectiveness?
- Does your organization ingest data from external sources?

Presenter: Amy Northcutt, OIRM

Discussants: Mike Holland and Theresa Pardo

3:00 pm

Break

3:15 pm

Prepare for Meeting with Dr. Córdova

4:00 pm

Recommendations of the National Academy of Public Administration (NAPA) Study of NSF's Use of Cooperative Agreements to Support Large Scale Investments in Science and Technology

The National Academy of Public Administration (NAPA) made recommendations to NSF on the oversight of large research facilities. NSF would like advice on the implementation of the broad oversight recommendations involving the Major Research Facilities and Equipment Construction (MREFC) Panel, a potential new Advisory Committee to serve as a sounding board for the NSF Office of the Director, and associated ideas that NSF would like to consider such as the addition of a Senior Official in the Office of the Director.

Committee Action/Feedback:

Committee review and discussion of the Draft Charge, Structure, Timeline, and Proposed Composition of a new BOAC Subcommittee would be helpful.

Presenter: Matt Hawkins, BFA; Fae Korsmo, Office of the Director

5:00 pm

Meeting with Dr. Córdova

5:45 pm

Adjourn

6:30 pm

Dinner

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Thursday, May 12, 2016

8:30 am **Modernization of Business Processes and Workforce Structures: A Discussion of Lessons Learned**

Following up on the BOAC's discussion at our last meeting about how advances in IT create opportunities to modernize business processes and, therefore, workforce structures, Jim Barbret will share lessons learned from Wayne State University's introduction of automated systems in its procurement and travel offices. His discussion will center on three dimensions of this kind of change: (1) working with the union as a partner, (2) redefining position descriptions, job qualifications, and performance expectations, and (3) re-envisioning organizational focus from one of merely performing data entry to one of delivering quality customer service.

Jim has found that having a high-level champion was crucial and that the process is really never complete. In fact, to help firmly establish a continuous improvement environment, Wayne State recently hired an Associate Vice President for Planning, Innovation and Assessment, who is charged with ensuring that university resources of all kinds are maximized.

Committee Action/Feedback:

A reminder of the relevant questions from the fall 2015 meeting:

- To what extent have your organizations experienced similar change in IT-enabled capabilities?
- How have you managed adaptation in the workforce in light of such change?
 - Updating the capabilities of the existing workforce
 - Modifying the skills and abilities you are looking for in hiring new employees
- What guidance do you have for NSF as we manage the current confluence of opportunities?

Presenter: Gerri Ratliff, OIRM

Discussant: Jim Barbret

9:15am **Benchmarking**

NSF has been participating in the government-wide benchmarking effort led by the President's Management Council (PMC) in five areas: Financial Management, Contracting, Information Technology, Real Property, and Human Capital. The benchmarking activities include measures of efficiency, operational quality, and customer service, to the extent they are available in each area. NSF will briefly explain its participation in this initiative.

NSF will ask members who have undertaken benchmarking efforts in their organizations to share their experiences. The goal is to maximize the value added for NSF from the PMC benchmarking effort.

Committee Action/Feedback:

- How has benchmarking been helpful? What value has it brought for your organization?
- How do you determine what is a good result and what is not?
- When your results indicate you are an outlier, how do you respond?
- How do you identify appropriate organizations to benchmark against?

Presenter: Judy Sunley, OIRM (PMC Benchmarking Goal Leader)

Discussants: Lee Cheatham and John Tao

10:15 am **Break**

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10:30 am **BFA/OIRM/OLPA Updates**
Presenters: Marty Rubenstein, BFA, Joanne Tornow, OIRM; Office of Legislative and Public Affairs

11:15 am **Summarize Recommendations/Loose Ends**

12:00 pm **Adjourn**

Fall 2015 Recommendations from the Business and Operations Advisory Committee

Title	Meeting Date	Recommendation	Date of Mtg	NSF Contact	Status	Explanation/ Outcome	Fiscal Year	Theme
Change Management	Fall 2015	Data use rules may become more important than system development	2015 Fall		Closed		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	Required job skills will shift from data entry to data analytics and troubleshooting	2015 Fall		Closed		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	Job descriptions need to be reviewed and rewritten to ensure the skills needed are included and outdated requirements (e.g. typing v. keyboarding tests) are deleted or updated	2015 Fall		Open		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	It is important to consider how research communities will change as a result of how IT, information access, and systems change over time	2015 Fall		Closed		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	Consider ways to foster employee willingness to adapt to new systems	2015 Fall		Open		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	Recognize that shadow systems exist and are being utilized as workarounds for current deficiencies. Conduct an inventory of shadow systems/workarounds to inform the needs for new systems and incorporate shadow system functionality	2015 Fall		Open		FY16	Change Management; Workforce Modernization
Change Management	Fall 2015	The need for standardized reports should be periodically assessed. Redundant and/or unnecessary reports should not be created	2015 Fall		Open		FY16	Change Management; Workforce Modernization
Document Management	Fall 2015	Create an employee culture and training environment conducive to appropriate record retention: <ul style="list-style-type: none"> • Provide training to identify official records • Help employees “unlearn” antiquated document retention practices • Temporary records should be destroyed at the earliest point allowed; convince employees that unnecessary physical or electronic records may even become a liability (FOIA, IG investigations, etc.) • Provide additional assistance for employees who tend to unnecessarily retain documents in new processes/systems in order to gain buy-in 	2015 Fall		Open		FY16	Change Management; Workforce Modernization
Document Management	Fall 2015	Recognize that digitization is not valuable if we don't have good archival practices to enable the ability to retrieve	2015 Fall		Closed		FY16	Document Management and Digitization
NAPA Recommendations	Fall 2015	Ensure NSF takes full advantage of the “substantial involvement” offered by the cooperative agreement instrument, e.g. more frequent project visits, LFO business assistance	2015 Fall		Closed		FY16	Document Management and Digitization
NAPA Recommendations	Fall 2015	Embrace an agency-wide process for risk management	2015 Fall		In Progress		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities
NAPA Recommendations	Fall 2015	Ensure long-term, experienced project staff within NSF who will oversee the entire project lifecycle	2015 Fall		Closed		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities
NAPA Recommendations	Fall 2015	Use Communities of Practice not just to share best practices, but to identify future threats, also noting the importance of greater communication between projects	2015 Fall		Closed		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities
NAPA Recommendations	Fall 2015	Create an NSF senior management culture that rewards projects and programs to bring risks forward	2015 Fall		Closed		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities
NAPA Recommendations	Fall 2015	Consider the potential value in creating an internal agency “senior official” position in O/D charged with reporting to the Director and COO on large facilities	2015 Fall		Open		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities

Title	Meeting Date	Recommendation	Date of Mtg	NSF Contact	Status	Explanation/ Outcome	Fiscal Year	Theme
Presidential Transitions	Fall 2015	<p>Preparing for the Presidential transition:</p> <ul style="list-style-type: none"> • NSF should consider what policy and management issues that will be critical regardless of who is elected. • Consider identifying the potential impact of campaign commitments. • Consider the Federal Employee Viewpoint Survey (FEVS) results when making transition plans. • Timing for addressing these would be best served post-conventions once the candidates are selected, utilizing scenarios and briefing books. • NSF should take advantage of the fact that transition team members will look for outside resources to gather information and do some advance planning in anticipation. • The transition is about building new relationships with Congress, appropriations committees, and the new administration. • Make sure NSF staff members are prepared to interact with the transition team. • Focus on OMB and OSTP changes; prepare by paying attention to the campaign rhetoric. • Make sure the OMB examiner knows what NSF wants and offer solutions to problems NSF wants addressed; send the examiner NSF's wish lists. • Post-conventions, start learning about both teams and determine who will be your liaison. • When developing briefing materials, remember less is more. • Scan the landscape for external counterparts who might be utilized by new administration and get their insights. • Focus on what's working well; what's at risk/vulnerabilities; and what problems and issues are going to hit the new administration; be open and honest especially about the risks. 	2015 Fall		Open		FY16	National Academy of Public Administration Study of Cooperative Agreements and Large Facilities
Large Facilities	Fall 2015	BOAC should establish a subcommittee constituted with representation from the operational and technical perspectives to advise the NSF on how to best manage large facilities throughout the funded life cycle	2015 Fall		In Progress		FY16	Large Facilities
Large Facilities	Fall 2015	Consider organization structure for large facility oversight and that NSF should consider hiring a full time person who has successful experience in managing high risk projects who would be in charge of large facility oversight	2015 Fall		Open		FY16	Large Facilities

Backgrounder: Spring 2016
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Enterprise Risk Management (ERM)

Presentation:

In December 2014, the Office of Budget, Finance, and Award Management spoke to the Committee regarding its efforts to expand its risks management activities in the face of increased demands and more limited resources. The Committee suggested that enterprise-wide risk management would be advisable across all of NSF.

Enterprise Risk Management (ERM) will be implemented at NSF in the near future pursuant to a forthcoming revision to OMB Circular A-123. NSF staff will give a brief summary of the ERM outlook for the agency, a short explanation of risk management activities that have taken place at mission support levels within various NSF Directorates/Offices, e.g. BFA, and hear from BOAC members who have dealt with ERM implementation in their organizations. NSF is particularly interested in learning which organizations have Risk Officers and what they do, as well as where the organizations are on a maturity model. Most importantly, NSF wants to ensure OMB Circular A-123 efforts do not result in a compliance exercise.

In order to continue NSF's progress towards establishing an ERM framework, NSF is developing an implementation plan. As we start to draft this plan, we want to obtain the Committee's valuable feedback.

Committee Action/Feedback

1. How has ERM been helpful? What value has it brought for your organization and how do we ensure it does not become a compliance exercise?
2. How should NSF decide who's in charge, do we need a Chief Risk Officer, and how should we implement A-123's requirement that the Chief Operating Officer lead?
3. Should we leverage a maturity model to benchmark or guide our efforts?
4. Where is the best place to start?

Contact Person(s):

NSF:

- Mike Wetklow (703) 292-4436; mwetklow@nsf.gov
- Rafael Cotto (703) 292-4304; rcotto@nsf.gov

Committee:

- Chuck Grimes (571) 455-5326; chuck.grimes@outlook.com
- Susan Sedwick (512) 983-4525; ssedwick@attain.com
- Doug Webster (202) 567-4214; dwebster@usaid.gov



Enterprise Risk Management

Mike Wetklow and Rafael Cotto
Advisory Committee for Business and
Operations
May 11, 2016



Overview

- Introduction
- Enterprise Risk Management (ERM) Defined
- Upcoming Office of Management and Budget (OMB) Requirements
- BFA ERM Pilot
- 7 Point Implementation Plan
- Risk Maturity Model



SO....WHICH ONE OF YOU WOULDN'T
MIND BUTTING HEADS WITH A FEW
PEOPLE TO GET A RISK MANAGEMENT
PLAN IN PLACE?



What is ERM?

Risk is the effect of uncertainty on objectives. Risk management is coordinated activity to direct and control challenges or threats to achieving an organization's goals and objectives. ERM is an effective agency-wide approach to addressing the full spectrum of the organization's significant risks by understanding the combined impact of risks as an interrelated portfolio, rather than addressing risks only within silos. ERM provides an enterprise -wide, strategically-aligned portfolio view of organizational challenges that, provides better insight about how to most effectively prioritize and manage risks to mission delivery. While agencies cannot mitigate all risks related to achieving strategic objectives and performance goals, they should identify, measure, and assess challenges related to mission delivery, to the extent possible.

Source: OMB Circular No. A-11



What is ERM?

Effective Risk Management:

- creates and protects value;
- is an integral part of all organizational processes;
- is part of decision -making;
- explicitly addresses uncertainty;
- is systematic, structured, and timely;
- is based on the best available information;
- is tailored and responsive to the evolving risk profile of the agency;
- takes human and cultural factors into account;
- is transparent and inclusive;
- is dynamic, iterative, and responsive to change; and
- facilitates continual improvement of the organization.

Source: OMB Circular No. A-11



Upcoming OMB A-123 “Management’s Responsibility for Internal Controls” Requirements

OMB A-123 Deliverable	Description
ERM Implementation Plans by September 15, 2016	First major milestone that we have to meet as an agency. It involves developing a plan for implementing ERM into NSF’s management practices, including a governance structure and the process that NSF expects to use to facilitate embedding the ERM into our agency’s decision making process.
Initial Risk Profile by January 20, 2017	To the extent feasible, agencies are encouraged to develop an initial (i.e., first draft) risk profile over the course of FY 2016, for presentation to the incoming Administration on January 20, 2017, recognizing that in some cases these initial profiles may lack some elements and may not be comprehensive, depending on agency capacity.
Complete Risk Profile by May 15, 2017	A full risk profile should be developed by May 15, 2017 to inform the development of the new Agency strategic plans and the FY 2019 Budget. A-123 also requires agencies to develop a maturity model approach to continuously build risk identification practices over time (i.e., OMB expects an ongoing process to manage new or emerging risks).

Note: Draft and Subject to Change



BFA ERM Pilot

- Successes:
 - Provided a quick snapshot of every division's priorities and focused work; figuring out common ground was helpful
 - Developed an initial set of strategic risks
 - Tied risks to objectives based on outcome of informed discussion.
 - Gained insight from BFA management on risk management
- Continuing Challenges:
 - Defining ERM scope and goals
 - Developing a common lexicon for ERM and risk management
 - Confirming universe of risks (i.e., risk register)
 - Confirming strategic risks (i.e., risk profile)
 - Embedding ERM into BFA's strategic decisions
 - Providing ERM updates and continuing education



7 Point Implementation Plan

1. **Support from the Top is a Necessity:** ERM initiatives must be enterprise wide and viewed by leadership as an important strategic effort. If done right, ERM will enhance decision making and enable NSF to better define and proactively respond to risk.
2. **Build ERM Using Incremental Steps:** Start small by breaking down ERM into more manageable parts and grow over time. For example: Implement ERM in one organization within the Agency that has cross-functional impact; use it as a model for the rest of the Agency.
3. **Focus initially on a Small Number of Top Risks:** First identify a small number of strategic risks that are important to NSF's leadership (e.g., risks to specific programs or facilities, the Merit Review Process or NSF's Relocation) and that we can manage and evolve from that starting point.

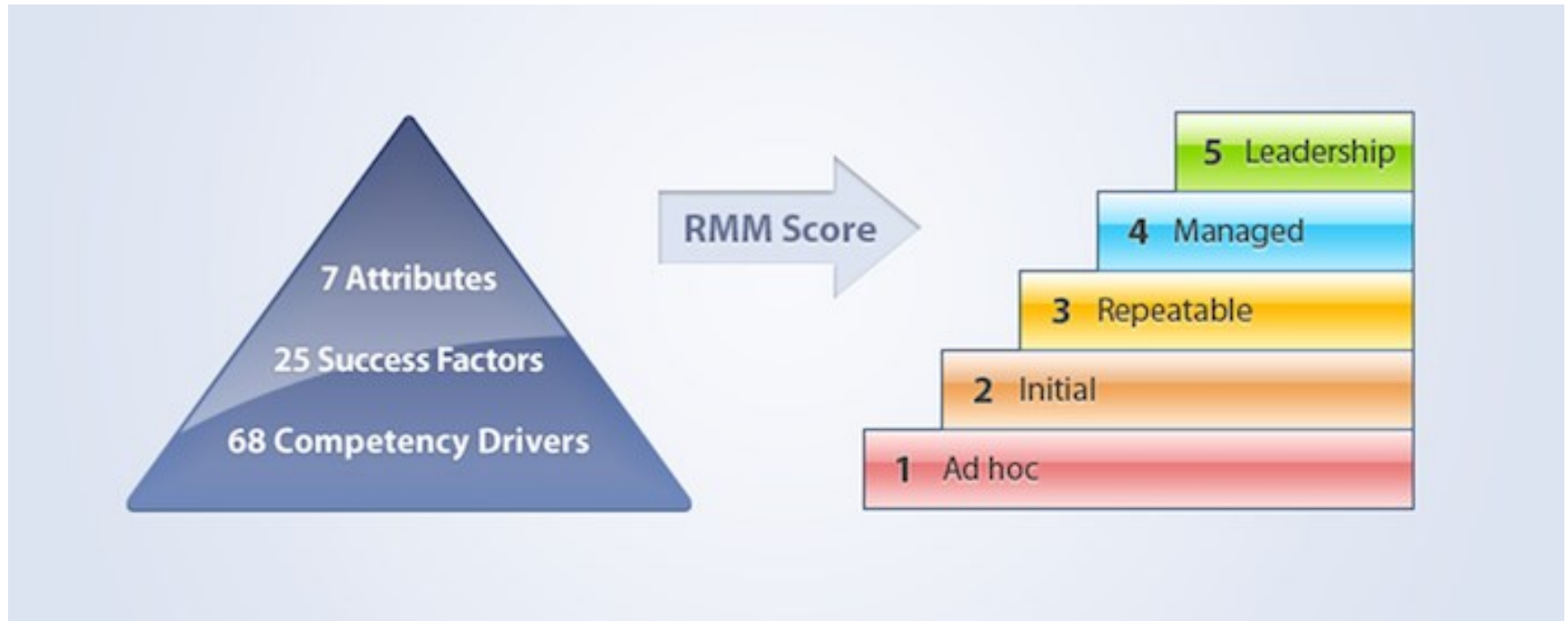


7 Point Implementation Plan (cont.)

- 4. Leverage Existing Resources:** Work with existing staff and management working groups with knowledge and capabilities relating to risks and risk management. If done right, ERM can reduce duplicity of compliance efforts.
- 5. Build on Existing Risk Management Activities:** Inventory NSF's risk management activities that are already in place, such as Polar Program and Office of Budget, Finance, and Award Management risk management activities. Use these activities to start and align them with the ERM process.
- 6. Embed ERM into the Decision Making Practices of the Organization:** Make sure ERM becomes a supporting tool for informing NSF's decisions and processes at all levels of the agency.
- 7. Provide Ongoing ERM Updates and Continuing Education for Leadership and Senior Management:** ERM is an evolving practice and it's important for leadership to receive updates on best practices.



Risk Management Society Risk Maturity Model



<https://www.rims.org/resources/ERM/Pages/RiskMaturityModel.aspx>



Backgrounder: Spring 2016
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Utilizing Data to Improve an Organization's Effectiveness

Presentation:

NSF is deeply committed to data-driven decision making. Making data available to inform decision-making requires engagement across an organization -- from the information technology shop to every office that supports an organization's mission. NSF has taken our first steps toward using data to improve our effectiveness and efficiency, and we're aware that most organizations are moving toward greater use of data to inform decision-making. We would like to learn from the experience of committee members about challenges and successes their organizations have experienced as they have moved toward a more mature organizational model for making quality data and business intelligence tools available to internal and external stakeholders. Two committee members will tee-up the conversation for us and then we'd like to broaden the conversation to the full committee.

Committee Action/Feedback

We'd like to hear from committee members who can share challenges, words of caution, lessons-learned, and success stories of organizations that have begun to effectively utilize data to improve the organization's ability to pursue its mission.

Relevant questions for consideration:

- How are organizations managing "data governance" or "data ownership?"
- Who is leading the charge for utilizing data to inform policy, planning, and implementation of priorities?
- Does your organization utilize data to evaluate or assess your organization's effectiveness?
- Does your organization ingest data from external sources?

All these questions and more are ripe for conversation, and we look forward to a robust exchange with the committee.

Contact Person: Amy Northcutt, 703-292-5068, anorthcu@nsf.gov

Backgrounder: Spring 2016
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Information on NSF Activities and Discussion of Draft Charge and Composition of a Proposed Subcommittee

Presentation:

The National Academy of Public Administration (NAPA) made recommendations to NSF on the oversight of large research facilities. NSF would like advice on the implementation of the broad oversight recommendations involving the Major Research Facilities and Equipment Construction (MREFC) Panel, a potential new Advisory Committee to serve as a sounding board for the NSF Office of the Director, and associated ideas that NSF would like to consider such as the addition of a Senior Official in the Office of the Director.

Committee Action/Feedback

Committee review and discussion of the Draft Charge, Structure, Timeline, and Proposed Composition of a new BOAC Subcommittee would be helpful.

Contact Person(s):

NSF:

Fae Korsmo (703) 292-8002; fkorsmo@nsf.gov
Matt Hawkins (703) 292-7407; mjhawkin@nsf.gov

Charge from the Business and Operations Advisory Committee to the Subcommittee on NAPA Implementation

The National Science Foundation (NSF) hereby initiates the formation and operation of an ad hoc Subcommittee of the NSF Business and Operations and Advisory Committee (the Committee) on NAPA Implementation (the Subcommittee). The purpose of the Subcommittee is to issue a report to the Committee with recommended ideas for NSF for implementing a subset of National Academy of Public Administration (the Academy) recommendations related to NSF-wide oversight of large-scale research facilities in the report [National Science Foundation: Use of Cooperative Agreements to Support Large Scale Investment in Research](#).

Context

The NSF Director and the National Science Board (NSB) requested that the National Academy of Public Administration review NSF's use of cooperative agreements (CAs) to support the development, construction, commissioning, and future operations of state-of-the-art, large-scale research facilities. Specifically, the Academy was asked to:

- Address how CAs are currently used at NSF, examining the effectiveness of NSF's current CA policy;
- Compare the CA mechanism with other federal funding mechanisms;
- Ascertain how comparator scientific agencies manage similarly large, complex research facilities projects; and
- Identify potential improvements to the NSF's processes that support large-scale research facilities.

NSF seeks to ensure effective implementation of a subset of the NAPA recommendations in a manner that provides the greatest benefit to the scientific community served by the NSF while ensuring exemplary stewardship of taxpayer resources. In order to ensure this effective implementation, NSF must be fully informed of the best oversight practices of other agencies and organizations that sponsor, oversee, or manage large-scale research facilities.

Charge to the Subcommittee

Because of the topical nature of the subject matter of the advice requested, the Committee hereby charges the Subcommittee to prepare a report for the Committee to advise NSF on the following areas, and to identify and advise the Committee, and ultimately NSF, on other important topics that the Subcommittee deems relevant. The Committee will then be prepared to provide advice to NSF to support the Foundation's goal to be comprehensively informed and equipped to implement the NAPA recommendations in an expert fashion. **Specifically the Subcommittee should provide options for appropriate agency-wide oversight** for the NSF Office of the Director (OD). In developing options, the Subcommittee should consider the following:

- Re-scope of the role, duties, and membership of the Major Research Equipment and Facilities Construction (MREFC) Panel to include status update reviews of projects in the development and construction phases focusing on cost, schedule, and performance. [Recommendation 6.2].
- Evaluate the potential value in extending the MREFC Panel's role to operating facilities, including divestment (i.e. full life-cycle).
- Evaluate the potential value in creating an internal agency "senior official" position in OD charged with reporting to the Director and Deputy Director/Chief Operating Officer on large facilities;

- Evaluate the potential value in creating a new Federal Advisory Committee Act (FACA) committee to provide the NSF Director with a sounding board for objective insight on large research projects. [Recommendation 6.4]

To carry out this charge, the Committee requests the Subcommittee meet with:

- NSF OD, Directorate, and Office leadership and staff;
- NSB Members, Office leadership and staff;
- NSF's Inspector General
- Representatives from other agencies with analogous facilities, to benefit from experience at those agencies.

The Subcommittee may collaborate with the Committee if the Subcommittee deems it necessary to do so.

Subcommittee Membership: The Committee's Designated Federal Officials (the Heads of the NSF Office of Information and Resource Management and Budget, Finance and Award Management) shall initiate a list of approximately 8 individuals for Subcommittee membership, including at least one Committee member who shall serve as the liaison to the Committee. Final membership shall be approved by NSF with collaboration and advice from the Committee.

Additional Background: *Attach material such as the NAPA implementation chart, any draft guidance, proposed options, etc.*

Activities of the Subcommittee: The Subcommittee is requested to provide a written report to the Committee recommending NSF actions on a priority basis established by NSF so that implementation can take place incrementally, if possible. The Committee requests an update on Subcommittee activities at 3 month intervals and a final report by April 1, 2017.

NSF will organize and convene at least one in-person meeting at NSF, comprised of the Subcommittee, NSF staff cognizant of the projects and issues concerning the Committee, and with the individuals mentioned above necessary to carry out this charge. Additional in-person meetings will be considered depending on need and budgetary resources.

NSF will provide logistical and travel support for invited non-local participants. Participants will be invited to submit written materials to the Subcommittee for reference in their report preparation.

The Subcommittee may organize additional meetings by conference call or other virtual technology as it deems necessary to do so.

The Subcommittee chair will submit its written report to the Committee and provide a verbal presentation at a duly organized Committee meeting subsequent to submittal to NSF. The report will be discussed and deliberated at the meeting, and the Committee will accept it and make it publicly available. The Committee may also provide feedback to NSF and any comments it has to offer on the report by way of a cover letter to NSF.

On or before the meeting where the Subcommittee's written report is discussed, the Committee's Designated Federal Officials may extend the Subcommittee's charge and activities as deemed necessary

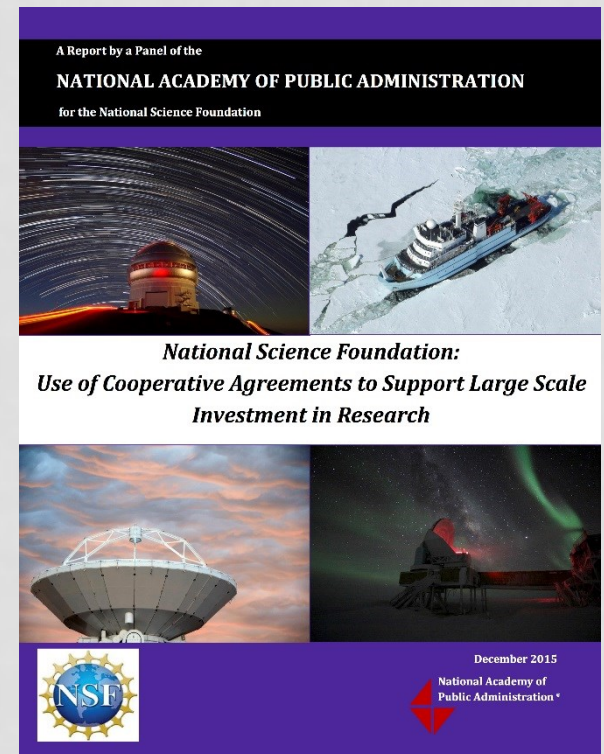
by NSF; otherwise, the Subcommittee will terminate upon completion of the activities set forth in the charge.

DRAFT

NAPA STUDY IMPLEMENTATION UPDATE

BOAC MEETING – MAY 2016

- Study commissioned by NSF in early 2015
- Evaluate NSF's use of Cooperative Agreements for Large Scale Research Infrastructure Investments
- Final Report received December 17, 2015
- Initial BOAC review in February 2016



Fae Korsmo, Office of the Director
Matt Hawkins, Head, Large Facilities Office

BUSINESS PRACTICES

COST ANALYSIS, COST ESTIMATING CONTINGENCY, AND MANAGEMENT FEE

- Exceptions to recommendations from pre-award cost analyses reviewed by the Large Facilities Office and forwarded to the Chief Financial Officer for final determination (3.1) - **COMPLETE**
- Retain control of a portion of contingency funds (4.1) - **COMPLETE**
- Clarify the Large Facilities Manual (LFM) requiring Recipients to follow the guidance in the GAO Cost Estimating and Schedule Assessment Guides when developing cost estimates (4.2) - **COMPLETE**
- Evaluate the impacts of eliminating management fee (4.3) – **UNDER CONSIDERATION/IN PROGRESS**

PROJECT MANAGEMENT KNOWLEDGE AND SKILLS

- Identify NSF project management skill requirements by role and develop/implement required project management training/workshops (6.7) – **IN PROGRESS**
- Require Recipient project managers be certified in project management and specify the minimum experience thresholds in the cooperative agreement (6.8) – **UNDER CONSIDERATION/IN PROGRESS**
- Formally establish “communities of practice” to share best practices and implement a “lessons learned” requirement for all MREFC projects (6.9) – **IN PROGRESS**

PLANNING, OVERSIGHT & ACCOUNTABILITY

ROLES AND RESPONSIBILITIES

- Establish and publish a joint NSF-NSB duties and responsibilities document(6.1) – **IN PROGRESS**
- (1) Authorize LFO to hire two additional FTEs; and (2) Revise MREFC Panel charter changing the LFO Head status to a full-voting member (6.5) – **COMPLETE**
- **Re-scope the MREFC Panel to include review of projects in the development and construction stages (6.2) – IN PROGRESS/BOAC Subcommittee**

PLANNING, OVERSIGHT & ACCOUNTABILITY

ROLES AND RESPONSIBILITIES

- Identify/codify project management and financial management expertise and explicitly add the requirements to the criteria for selection of external reviewers (6.3) – **IN PROGRESS**
- **Establish a FACA advisory committee for the Director to use as a sounding board for objective insight on large research projects (6.4) – IN PROGRESS/BOAC Subcommittee**
- Evaluate development/uses the NSF Facility Plan and how it aligns with the agency's strategic planning processes (6.6) – **IN PROGRESS**

NEXT STEPS

BOAC Subcommittee on NAPA Implementation

Holistic evaluation of NSF large facility oversight structure

- Formally establish BOAC Subcommittee
- NAPA Recommendations 6.2 (MREFC Panel) & 6.4 (FACA Panel)
- MREFC Panel to cover full life-cycle (5 Stages)?
- Possible addition of new Senior Official in OD?
- NSF to provide supporting information & priorities for evaluation
- Final report in May 2017

Backgrounder: Spring 2016
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Modernization of Business Processes and Workforce Structures: A Discussion of Lessons Learned

Presentation:

Following up on the BOAC's discussion at our last meeting about how advances in IT create opportunities to modernize business processes and, therefore, workforce structures, Jim Barbret will share lessons learned from Wayne State University's introduction of automated systems in its procurement and travel offices. His discussion will center on three dimensions of this kind of change: (1) working with the union as a partner, (2) redefining position descriptions, job qualifications, and performance expectations, and (3) re-envisioning organizational focus from one of merely performing data entry to one of delivering quality customer service.

Jim has found that having a high-level champion was crucial and that the process is really never complete. In fact, to help firmly establish a continuous improvement environment, Wayne State recently hired an Associate Vice President for Planning, Innovation and Assessment, who is charged with ensuring that university resources of all kinds are maximized.

Committee Action/Feedback

A reminder of the relevant questions from the fall 2015 meeting:

- To what extent have your organizations experienced similar change in IT-enabled capabilities?
- How have you managed adaptation in the workforce in light of such change?
 - Updating the capabilities of the existing workforce
 - Modifying the skills and abilities you are looking for in hiring new employees
- What guidance do you have for NSF as we manage the current confluence of opportunities?

Contact Person:

NSF:
Gerri Ratliff
Deputy Division Director, Human Resource Management
703-292-8315, glratlif@nsf.gov

Committee:
Jim Barbret
Associate Vice President for Finance, Wayne State University
313-577-3672, james.d.barbret@wayne.edu

**Re-Envisioning
Procurement and Payables Staff**

Wayne State University

Agenda

1. **Overview of Previous and New Environment**
2. **The Necessary/Required Change in Staff Models**
3. **Pre – Implementation Activities**
4. **Post – Implementation Activities**
5. **Lessons Learned – What would we do differently?**

Overview of Pre and Post Environment

The Old Way

- ERP System of WSU (Banner) driving procurement and payables
- Completely paper driven travel reimbursement system
- Although electronic/automated processes in place, many inefficiencies and manual support processes

The New Way

- E-Procurement utilizing SciQuest application for procurement and payables
- On-line Travel application utilizing Concur T&E application
- Shift workfocus from “control” to customer service

Driver for change

- Modernize processes
- Gain efficiencies and compliance
- Budget (?)

Change Management – The Humans

Modernizing Processes

- Utilize the “power” of the Internet
- Utilize proven functionality to gain efficiency
- Utilize proven functionality to gain acceptance
- Shift from a control focus to a customer focus

Modernizing processes means modernizing the workforce

So, where did we start ????

Pre-Implementation Activities

Campus Wide Activities

- Typical implementation tasks such as ongoing info sessions, training, etc.
- Our focus today is on workforce issues

Workforce Activities

- WSU is a “represented campus” at many levels
- Our change would effect staff in three different unions
- So, we started there, 3-4 months before implementation
- Met with Labor reps repeatedly to discuss the changes/shifts in worker roles
- Re-enforced many times it was not a staff reduction objective
- A focus on “quality” work, not “quantity” work
- A focus on customer service, not control
- Worked to re-write existing and create new job descriptions
- Example – we never had “Travel Specialist”, one who dealt with travel/credit cards
- Completed basic process re-engineering documentation, i.e., “As-is,” “To-be” process flows

Pre-Implementation Activities

Workforce Training - Internal

- System, application training – a given
- Shift from up front activities (data entry) to troubleshooting
- Working with departments to resolve problems, previously the domain of supervisors
- Soft skills, tone of discussions, e-mail and phone etiquette
- Some did not make the transition
- Handled through re-assignment and attrition

Workforce Training – External

- System, application training – a given
- Shift to accountability at the unit level
- Was underestimated (see lessons learned)

Post-Implementation Activities

Workforce Evaluations

- More collaborative across Procurement/Payables
- Campus-wide surveys to determine levels of service and problem areas
- Unit wide metrics/KPI's to maintain overall service levels
- Focus on success of unit

Organizational Issues

- Significant re-organization in 2015
- Brought Procurement and Payable under single leadership
- Broke age-old principle of division of labor within units – application security drives separation of units
- Cross training, cross functions increased morale, opportunity, teamwork

Lessons Learned

Customers

- We were so focused on own staff, did not address impact to customers
- We knew their role would change, was very open about it
- However, the accountability issue really struck a nerve

Internal Staff

- Involve them much earlier in the overall configuration of the system
- Would have received greater buy-in
- Was done during significant budget reductions and regardless of how often it was said, perceived as a budget/job cutting measure
- Only two jobs were eliminated due to implementation, both through retirements Unit wide metrics/KPI's to maintain overall service levels
- Focus on success of unit

Backgrounder: Spring 2016
NSF Advisory Committee for Business and Operations

Nature of Agenda Item: Benchmarking

Presentation:

NSF has been participating in the government-wide benchmarking effort led by the President's Management Council (PMC) in five areas: Financial Management, Contracting, Information Technology, Real Property, and Human Capital. The benchmarking activities include measures of efficiency, operational quality, and customer service, to the extent they are available in each area. NSF will briefly explain its participation in this initiative.

NSF will ask members who have undertaken benchmarking efforts in their organizations to share their experiences. The goal is to maximize the value added for NSF from the PMC benchmarking effort.

Committee Action/Feedback

Questions for the Committee include:

1. How has benchmarking been helpful? What value has it brought for your organization?
2. How do you determine what is a good result and what is not?
3. When your results indicate you are an outlier, how do you respond?
4. How do you identify appropriate organizations to benchmark against?

Contact Person:

Jeff Rich

Senior Advisor, Office of Information and Resource Management

703-292-4227, jrich@nsf.gov



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OFFICE OF INFORMATION & RESOURCE MANAGEMENT

Benchmarking

Business & Operations Advisory Committee

May 2016

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Human Resource Management
Information Systems
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President's Management Agenda

Benchmarking for Efficiency & Effectiveness

Five areas for benchmarking across government mission support functions

- Financial Management
- Acquisition
- Human Capital
- Information Technology
- Real Property

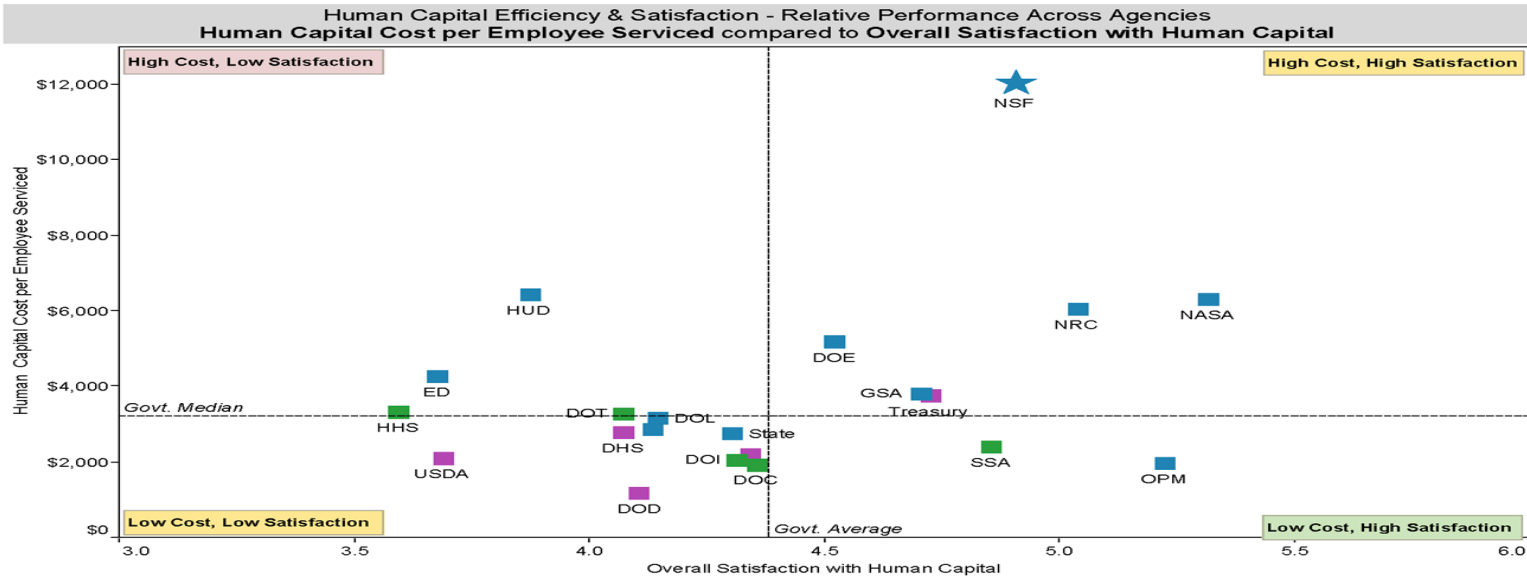
To benchmark: cost of service, quality of service, customer satisfaction

So agencies can learn from one another



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RESPONSE KEY
 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
 If your agency is not shown, the data was either not reported or is under review by your agency.

Peer Group - Headcount (Federal Employees)
 ■ Employees (0-25K)
 ■ Employees (25-100K)
 ■ Employees (>100K)

Definitions: Human Capital Cost per Employee Serviced: Total Cost of Human Capital to the Agency includes agency inputs for HR Salaries/Benefits/Overhead/G&A, HRIT, Outsourcing, and Shared Service Center Fees for the Human Capital functions. Number of Employees Serviced is the number of employees receiving a W-2 as of January 31, 2015 for fiscal year 2014. A benefits multiplier of 32.85% was applied to several agencies that did not provide their own. Data comes from Agencies' submissions in OMB MAX.
Customer Satisfaction Survey (CSS): In February 2015, GSA surveyed all GS-13 to GS-15 supervisors and SES at 23 of 24 CFO Act agencies (USAID did not participate). Collectively, the 22,000+ survey responses provide a detailed picture of customer satisfaction for 18 service areas within Contracting, Financial Management, Human Capital and IT Management at each agency.

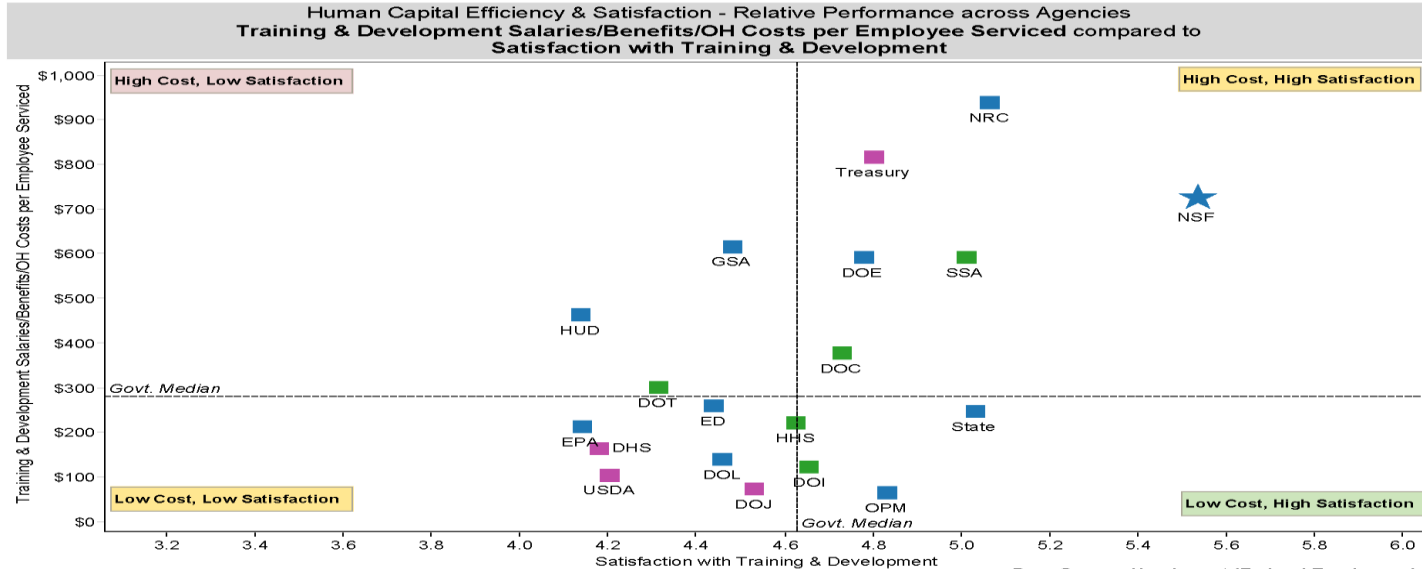
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RESPONSE KEY
 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree

Peer Group - Headcount (Federal Employees)
 ■ Employees (0-25K)
 ■ Employees (25-100K)
 ■ Employees (>100K)

Definitions: Training & Development Salaries/Benefits/OH Costs per Employee Serviced: Training and Development Salaries, Benefits and OH Costs are as defined in HR Development in the HR BRM. Note that this definition includes all training and development activities in an organization, but for reporting purposes, mission specific training delivered outside the HR organization, such as law enforcement academies should not be included. Number of Employees Serviced is the number of employees receiving a W-2 as of January 31, 2015 for fiscal year 2014.

Customer Satisfaction Survey (CSS): In February 2015, GSA surveyed all GS-13 to GS-15 supervisors and SES at 23 of 24 CFO Act agencies (USAID did not participate). Collectively, the 22,000+ survey responses provide a detailed picture of customer satisfaction for 18 service areas within Contracting, Financial Management, Human Capital and IT Management at each agency.

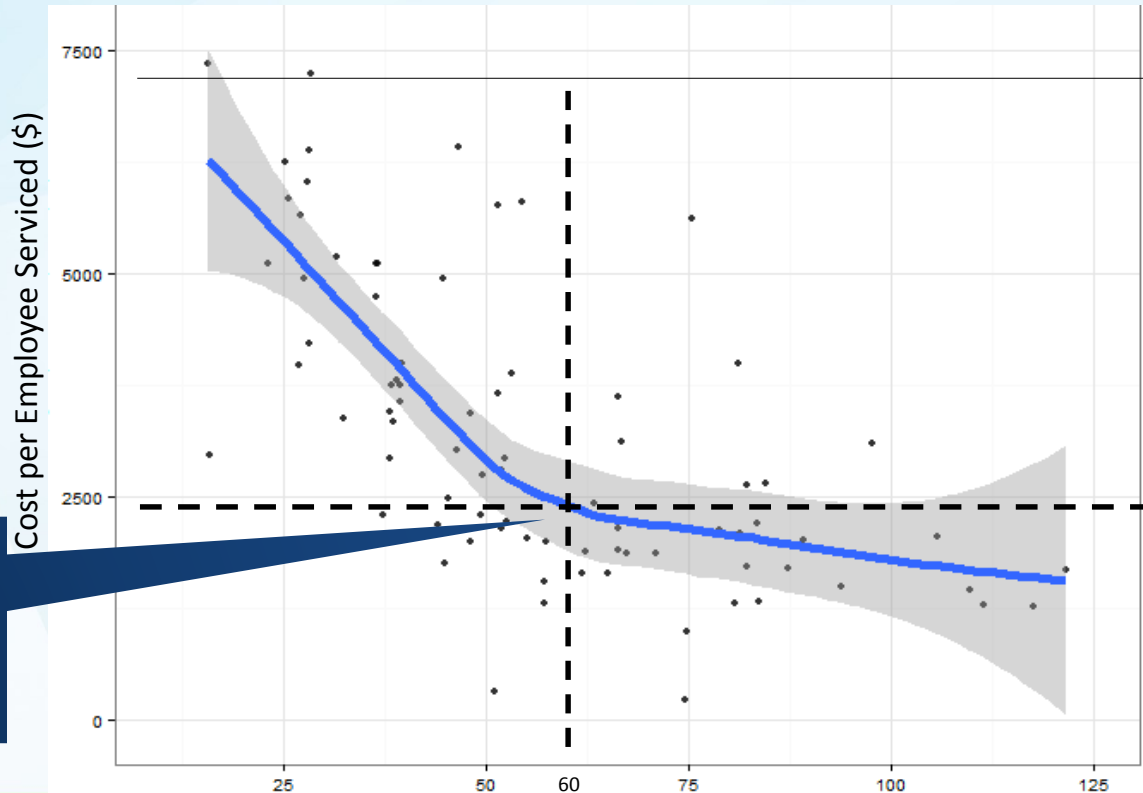
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There Are Limits to Cost-Cutting

Average Human Capital Cost per Employee vs. Servicing Ratio for Components at CFO Act Agencies, FY2014



Diminishing returns set in at a servicing ratio of roughly sixty

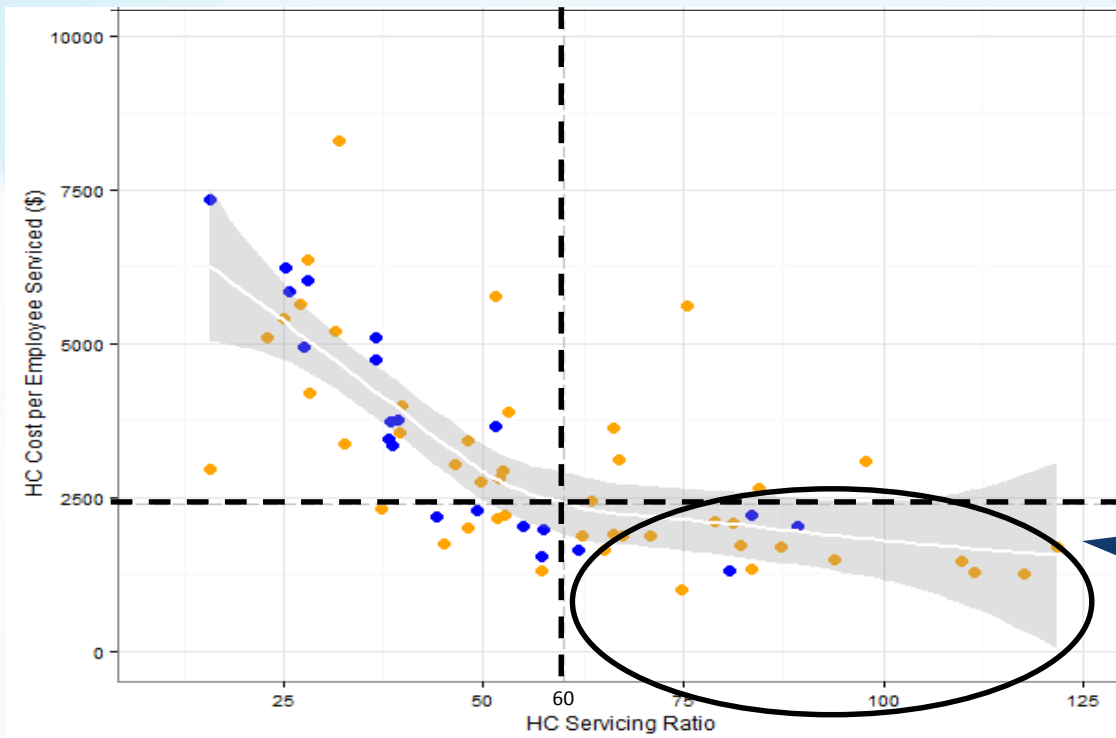
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Where Cost Reduction Begins to Jeopardize Service

Average Human Capital Cost per Employee vs. Servicing Ratio for Components at CFO Act Agencies, FY2014



Agency components with a servicing ratio > 60 rarely achieve high satisfaction.

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Questions for the Committee

- How has benchmarking been helpful? What value has it brought for your organization?
- How do you determine what is a good result and what is not?
- When your results indicate you are an outlier, how do you respond?
- How do you identify appropriate organizations to benchmark against?

Benchmarking

NSF B&O Advisory Committee

May 11, 2016

John C. Tao, Discussant

My Experience

E,H&S Assurance/ Auditing

Intellectual Asset Management and
Technology Licensing

Corporate Venturing

Why

Improvement Opportunity

Higher Efficiency

Lower cost/ Better Productivity

Better Alignment

Quick way to come up to speed

Learn from the best, including competitor

Gauge success and pinpoint shortcomings

Avoid “mistakes” from others

It's "Free!"

Who

Peers

Competitors

Customers

Suppliers

What

Process, Process, Process

Strategy, Criteria for Decision Making

Organization (Include Executive sponsorship, Governance)

Personnel (Degree, Skills, Experience, Personality)

Budget (Headcount, Subcontracts, Training, Capital,
Software licenses)

Performance Metrics

How

Identify who to benchmark and the team attending

Schedule/ Logistics

Prepare and send questions

Team of 2-3, with lead, scribe and functional expert

Clarify any answers right after visit

Consolidate/Summarize results

Prioritize Action items/Follow ups

Send Thanks and summary report for all