**National Science Foundation**

**2015 Large Facilities Workshop**

*San Juan, Puerto Rico*

*Tuesday, May 12 – Thursday, May 14, 2015*

**Agenda**

## Monday, May 11

**6:00 – 7:30 PM Registration**

*(After 7:30 PM, packet pickup at Hotel Front Desk)*

## Tuesday, May 12

**7:30 AM Registration**

**8:30 – 8:45 AM** Welcome, Acknowledgements & Introductions

**8:45 – 9:30 AM** Large Facilities Office Overview  
**Mr. Matthew Hawkins, Acting Head, LFO**

**9:30 – 9:45 AM** Workshop Logistics

**9:45 – 10:00 AM** Break

**10:00 – 11:00 AM** Opening Plenary

**Dr. Joaquin Ruiz**, Director, Biosphere 2

Dean, College of Science and Executive Dean, Colleges of Letters, Arts and Science, The University of Arizona

**11:00 – 11:45 AM** Arecibo: Challenges, Lessons Learned & What to Look For

**Dr. John Kelly,** Director, Center for GeoSpace Studies, SRI

**Dr. Robert Kerr**, Director, Arecibo Observatory

**11:45 – 12:45 AM** Lunch

**1:00 – 5:00 PM** Arecibo Observatory Tour

**6:30 PM** Reception

## Wednesday, May 13

### 7:30 AM Registration Opens

### Action Learning Session\*

**9:00 – Noon** Introduction to Action Learning *facilitated by* **Dr.** [**Chuck Appleby**](http://www.applebyandassociates.com/bio/)**\***

* Overview of Action Learning Framework
* Organization into small groups
* Identification of one focal problem by each small groups (related to three focus areas above, defined specifically by each group)

**Noon – 1:00 PM** Lunch

**1:00 – 4:30 PM** Action Learning, practical application

* Groups to prototype one potential solution for their focal problem
* Sharing of prototype solutions with large group
* Identification of prototypes worth scaling up, and steps to do so

**4:30 PM Adjourn**

**Description**: Action Learning provides innovative methods for addressing “wicked” problems - those that involve complex interdependencies and resist resolution by morphing and intersecting with our own inadequate resources. During this session, participants will work in small groups to first identify the address one specific wicked problem, carefully selected and related to one of the following focal areas:

* **Community Input:** How do the facility managing organizations view and use the output of the reports of decadal committees and other advisory committees.
* **Cyberinfrastructure**: Data management, software, computing, networking, cybersecurity, and people.
* **Bureaucratic overload:** The limited administrative capacity to deal with increasing demands driven by complexities in the workplace such as new regulatory requirements, and changing procedures and frameworks.

[For additional details on these focal areas, click here.](#_2015_Large_Facilities)

**Session Goals:**

1. Stimulate facilities to gain deeper understanding of pressing issues and the ability to clearly articulate those issues.
2. Develop “prototype” solutions related to problems identified during the session.
3. Collect a list of proposed actions that will promote and support problem solving, to be undertaken by participants, the community, and by NSF.
4. Generate synergy between participants and raise consciousness of common problems faced by the broader community by providing a setting for making contacts, communicating with each other, and preparing the ground for collaborative efforts in problem solving that extend beyond the workshop timeframe.

\**This full-day session will be facilitated by* [*Chuck Appleby, Ph.D.,*](http://www.applebyandassociates.com/bio/) *a leadership and organization development*

*consultant with 30+ years of management, consulting, and coaching experience. Action Learning was born in*

*the Cavendish Physics Lab of Cambridge and leveraged by the Hasso-Plattner Institute at Stanford University*

*among other organizations. .*

**5:30 PM** Dinner/networking on your own.

## Thursday, May 14

**9:00 – 9:15 AM** Breakout Session Overview

**9:15 – 10:45 AM** Breakout Sessions, Round 1Concurrent Sessions

*Status of New Uniform Guidance*

*Best Practices for Managing Closeout*

*Broadening Participation of Facility Users*

**10:45 – 11:00 AM** Break

**11:00 – 12:30** Breakout Sessions, Round 2 Concurrent Sessions

*Contingency*

*Working with Multicultural Teams*

*Evaluating Facility Usage to Guide Efforts to Engage Users*

**12:30 – 1:30 PM** Lunch

**1:30 – 3:00 PM** Breakout Sessions, Round 3 Concurrent Sessions

*Contingency*

*Evaluating Facility Usage to Guide Efforts to Engage Users*

*Best Practices for Managing Closeout*

**3:00 – 3:15 PM** Break

**3:15 – 3:45 PM** Group Activity

**3:45 – 4:15 PM** LFO 2016 Workshop Recommendations

**4:15 – 4:30 PM** Closing & Evaluations

### Breakout Session Options (Participants choose 3 of 6)

1. **Contingency:** Contingency: This session will provide information on requirements for estimating and managing contingency as a component of risk management for NSF construction projects, and will give guidelines and examples of methods for meeting those requirements. Participants will be better prepared to create realistic and reasonable contingency estimates and management plans for their projects. Lead: *Dr. Carol Wilkinson, Facility Advisor, NSF/Large Facilities Office.*
2. **Uniform Guidance:**  In this session, participants will learn how uniform guidance aims at eliminating duplicative or almost duplicative language in order to clarify where policy is substantively different across types of entities, and where it is not. *Lead: Jean Feldman, Head, Policy Office, NSF and Jeff Leithead, Cooperative Supports Branch, NSF*
3. **Managing Closeout:** Project close-outs are an important activity, and occur throughout the life of a Facility. It has both project management and award administrative aspects. This breakout session will include a brief discussion on the closeout process used by DOE. Highlights and lessons learned on the use of the process will also be presented.” *Leads: Kurt Fisher, OPA/ DOE/BES.*
4. **Working with Multicultural Teams:**  This session will provide useful guidance on working with multicultural teams. Cultural differences in the domains of communications, decision-making, will be presented. Participants will discuss the application of these insights in their own teamwork and leadership. *Lead: Dr. Carylynn Larson, Organizational Psychologist, NSF.*
5. **Broadening Participation of Facility Users**: This session will provide ideas for broadening participation among facility users. Leads and participants will share strategies and successes. *Lead:* Dr. *Roxanne Hughes, Director of the Center for Integrating Research and Learning, National High Magnetic Field Laboratory.*
6. **Evaluating Facility Usage to Guide Efforts in Engaging Users:** This breakout session will share “stakeholder experiences with characterizing facility utilization to identify how they know who their users are and how they are using their facilities, to examine changes in use over time, and to define how lessons learned can be applied to facility management and planning. *Lead: Dr. Kristin Ludwig, Staff Scientist, DOI Strategic Sciences Group, United States Geological Survey.*

**Description of Action Learning Focal Areas**

## The goals of this Action Learning Session are to:

* Stimulate facilities to gain self-awareness of their pressing issues and the ability to clearly articulate those issues.
* Generate synergy between participants and raise consciousness of common problems faced by the broader community by providing a setting for making contacts, communicating with each other, and preparing the ground for collaborative efforts in problem solving that extend beyond the workshop timeframe.
* Collect a list of the most pressing CI-related  issues that need to be addressed in the near term, as identified by the participants, be it their own problems or those facing the broader community.
* Collect a list of proposed actions that will promote and support problem solving, to be undertaken by participants, the community, and by NSF.

## Small Working Groups

Participants will choose one of the three focal areas described below and will then be organized into small working groups within that focal area. Each small group will then work together to define a specific problem that they will address for the duration of the session.

Through the small group exchange individuals will:

* Consider the various factors and elements contributing to the strain
* Identify information that would facilitate an understanding of the ‘New Normal’ in regards to the broader landscape, and the potential impact on Institutions and Facilities.
* Discuss and share strategies for handling the high overhead costs and efficiency burdens that come from increased oversight and/or other contributing factors
* Share lessons from organizations that have already taken steps to implement these changes
* Generate ideas for Institution/Facility-led action such as internal reorganizations that could decrease bureaucratic burden

**Description of Focal Areas**

The three Focal Areas were selected because each is increasingly critical to the missions of NSF-funded facilities in delivering science data to researchers.

## Focal Area #1: Community Input

NSF relies on community based studies such as decadal committees, National Academy National Research Council studies, or advisory committees to define its strategic investment in large facilities. The question for this Action Design Learning is how facility managing organizations view and use reports resulting from such studies.  How do they (or do they?) re-focus their priorities for items such as new instrumentation, upgrades, or allocation of facility time based on priorities set by the science community?  Do they use their own advisory committees to help them in this process, or do they rely on their internal staff?  Are there types of community input or processes that are more or less helpful to the managing organizations? How can proper community prioritization be conducted for a facility that has capabilities of use to multiple, disparate scientific communities?

## Focal Area #2: Cyberinfrastructure

Cyberinfrastructure (CI) comprises data management, software, computing, networking, cybersecurity, and people.  Growth in data volume and complexity grow; increased demands for data-driven research, data sharing, citation, and interoperability; and fielding of distributed, continuous remote measurement facilities all increase the demand for CI. Creating, maintaining, refreshing, and scaling CI to support facility missions is challenging. Some challenges are unique to each facility while others may be broadly shared. As the demands for CI support are increasing, the ecosystem of available CI resources - through NSF investments as well as the growth of commercial services –is also expanding rapidly. There may be opportunities to pool limited resources and take advantage of efficiencies by creating combined CI that can support several user groups. There may be many opportunities for facilities to leverage such existing resources to rather recreate them *de novo*. Participants will work together to explore and prioritize CI issues and consider what steps should be taken – by the facilities, the community, and NSF – to address them.

## Focal Area #3: Bureaucratic overload, oversight and audit requirements

Although there has been discussion about OMB reducing administrative burdens, recipients have suggested that the new guidance has actually increased these burdens.  Related to this, the amount of data requested from, and the number of audits/reviews of Institutions and Facilities is viewed as burdensome.  The topic of bureaucracy, the collection of complex rules, and procedures for adherence will be explored as well as the impact leading to and game plans for mitigating the overload.