

## PEP Development Workshop (especially for SBE, EHR, CISE)

Friday July 15, 2022

### INTRODUCTION (20 min)

Housekeeping and Logistics (slide #2)

- Greetings (Slide #1)

*Slide #2*

- Recording and Materials
- Speaker Introductions
- Questions
- Flow and Breaks
- Workshop Objectives and Agenda
- [Mid-scale Research Infrastructure-1 \(Mid-scale RI-1\) | Beta site for NSF - National Science Foundation](#) Mid-scale Research Infrastructure (slides #3 and #4)

Setting the Stage (slides #3 and #4)

### BROADER CONTEXT & INVENTORY OF RELEVANT GUIDANCE DOCUMENTS (30 min)

NSF Organization, Stakeholders and Guidance (slides #5, #6)

National Science Foundation

- STRUCTURE, SELECTED KEY STAKEHOLDERS and ASSISTANCE, Programs, BFA (Large Facilities and DGA/CSB) (slide #5)
- PRECEDENCE and INVENTORY, NSF RIG, Section 1.2 (slide #6)

NSF Proposal & Award Policies and Procedures Guide (PAPPG), walkthrough (no slides)

[nsf22001 Proposal & Award Policies & Procedures Guide \(PAPPG\) | NSF - National Science Foundation](#)

- INTRODUCTION, SECTION

NSF Research Infrastructure Guide (RIG) (no slides)

[nsf21107 Research Infrastructure Guide \(RIG\) \(December 2021\) | NSF - National Science Foundation](#)

- INTRODUCTION, *Section 1*
- LEXICON, *Section 9*
- GUIDANCE FOR MID-SCALE RESEARCH INFRASTRUCTURE PROJECTS, *Section 5*
- FACILITY LIFE CYCLE MANAGEMENT PLANS FOR MAJOR FACILITIES, *Section 3, Project Execution Plan*
- KEY MANAGEMENT PRINCIPLES AND REQUIREMENTS FOR MAJOR FACILITIES, *Sections 4.1, 4.2 and 4.3 and 4.*

**Break – 10 min.**

## PROJECT MANAGEMENT BASICS (50 min)

Triple constraint, Mindset (slides #7, #8)

- BUDGET, SCOPE, AND SCHEDULE
- MERIT REVIEW AND MINDSET

Lexicon and Example (slides #9-#16)

- SELECTED KEY TERMS (Florence):  
Project Execution Plan (PEP), Work Breakdown Structure (WBS), WBS Dictionary, Schedule, Budget, Total Project Cost (TPC), Basis of Estimate (BOE), , Construction/Implementation, Contingency, Allowability, Cost Reasonableness)

Project Execution Plan Template (no slides)

[PEP Template, Jul 2022, 1.2](#)

- INTENT & DESIGN
- REQUIREMENTS for Mid-scale RI

**Break – 10 min**

## PROJECT EXECUTION PLAN TEMPLATE (50 min)

- *Project Execution Plan Template  
Minimum Components for Mid-scale RI*
- *Introduction*
- *Organization*
- *Construction Project Definition*
- *Configuration Control*
- *Acquisition*
- *Project Management Controls  
(Performance Measurement and  
Management*
- *Cyber-Infrastructure*
- *Commissioning, including Concept of  
Operations*

[Research Infrastructure Guide \(RIG\) - December 2021 \(NSF 21-107\)](#), Table 3.4.1-1

*PEP Table 3.4.1-1, Component 1*

*PEP Table 3.4.1-1 Component 2*

*PEP Table 3.4.1-1 Component 4*

*PEP Table 3.4.1-1 Component 8*

*PEP Table 3.4.1-1 Component 9*

*PEP Table 3.4.1-1 Component 10*

*PEP Table 3.4.1-1 Component 12*

*PEP Table 3.4.1-1 Component 13*

Project Execution Plan Template Other  
Potential Components (no slides)

- TAILORING AND SCALING, scope and complexity
- ALIGNMENT with GAO Best Practices

### Getting Assistance with Project Management

- NSF Awards Database
- NSF Community of Interest
- NSF Knowledge Gateway
- University Facilities Groups
- Internet searches
- Professional Organizations

[NSF - Mid-scale Research Infrastructure-1 Active Awards](#)  
[| NSF - National Science Foundation](#)

[COI Portal - NSF Research Infrastructure Outreach,](#)  
Research Infrastructure  
[Knowledge Gateway](#)  
[\(researchinfrastructureoutreach.com\)](#)

Search key words “University Facilities Management”

Search key words “scientific research infrastructure project”

Project Management Institute

### Question & Answer

Wrap-Up (slide #17)

Day Timing and Focus

Optional Homework for Day 2

(Potential) Future Mid-scale R|1 Program Webcast

**RECAP SESSION 1 and QUESTIONS (50 min)**

*Project Execution Plan, Lexicon and PEP Template*

*Question & Answer*

[Research Infrastructure Guide \(RIG\) - December 2021 \(NSF 21-107\)](#), Table 3.4.1-1

- THEMES
- QUESTIONS

**ADVANCED TOPICS**

Risks and Opportunities

Contingency (Budget, Schedule, and Scope)

Cost Uncertainties (Allowances)

Earned Value Management (EVM)

GAO Best Practices

Tailoring and Scaling

Wrap-Up