



U.S. National Science Foundation

RESEARCH INFRASTRUCTURE WORKSHOP (RIW)

Discussion Panel on Project Reporting

Moderator:

Rich Kaczmarek, RIO Advisor, NSF

Panelists:

Demian Bailey, PM, RCRV, OSU
Ernest Fontes, Tech. Dir., HMF, CLASSE
Dave Lunger, Director of PM, NHMFL
Paul Matthias, Sr. PM, OOI, WHOI
David Winkel, PM, CXFEL, ASU

Presented at RIW 2024,
March 28th, 2024

Mid-scale RI Image Credit:
Ohio State University, Cornell
University, Georgia Tech Research
Corporation, Florida State University,
Woods Hole Oceanographic
Institution, The University of Kentucky
Research Foundation, Arizona State
University, NSF I-Corps Northeast
Hub, the University of Arkansas,
Georgia Institute of Technology, the
University of Michigan, University of
California-San Diego, and the
University of Tennessee, Knoxville



Agenda

The panel will share and discuss **good practices on project reporting**, including Risk Management, Change Control, Reporting Use of Contingency.

Refreshment Break

- ROE and expectations from the Audience 3:40 P.M. (5 min)
- Intro & presentation of projects' **good practices** 3:45 (25 min / 5 min ea)
- Preformed questions and discussions 4:10 (15 min)
- Questions from the audience 4:25 P.M. (5 min)

Coffee Break



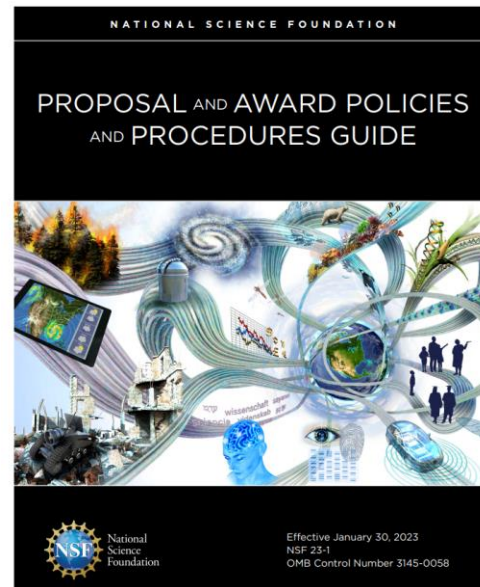
Reporting Requirements

- Specific Terms and Conditions (T&Cs) of the award
- Specific solicitation
- Proposal and Award Policies and Procedures Guide (PAPPG) based on 2 CFR 200 (UG)
- Research Infrastructure Guide (RIG) (technical in nature)

RIG 4.6.2 Recipient Performance Reports

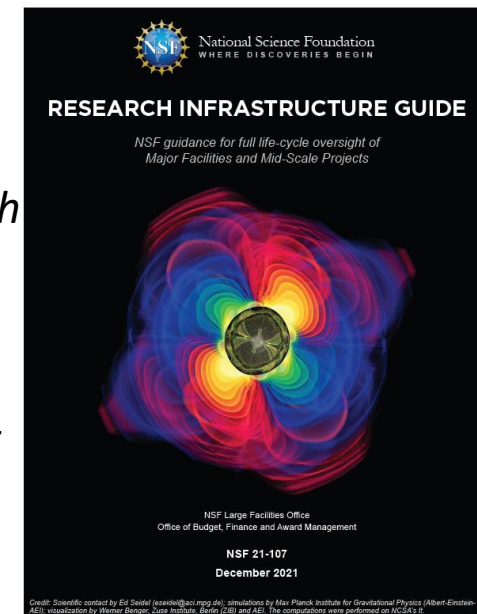
Reporting requirements **vary by facility life-cycle stage** (Design, Construction, Operation, and Divestment) and are specified in the award's T&Cs.

Performance reports are **generally provided monthly** and no less than quarterly, with a more comprehensive Annual Reports provided on a specific date.



Reports generally include:

- *Summary of project status*
- *Integrated Project Schedule*
- *Financial Projections*
- *Earned Value data and graph*
- *Discussion of variance*
- *Corrective actions*
- *Use of budget contingency*
- *Risk management / Register*
- *Current photos*
- *Other project specific info*



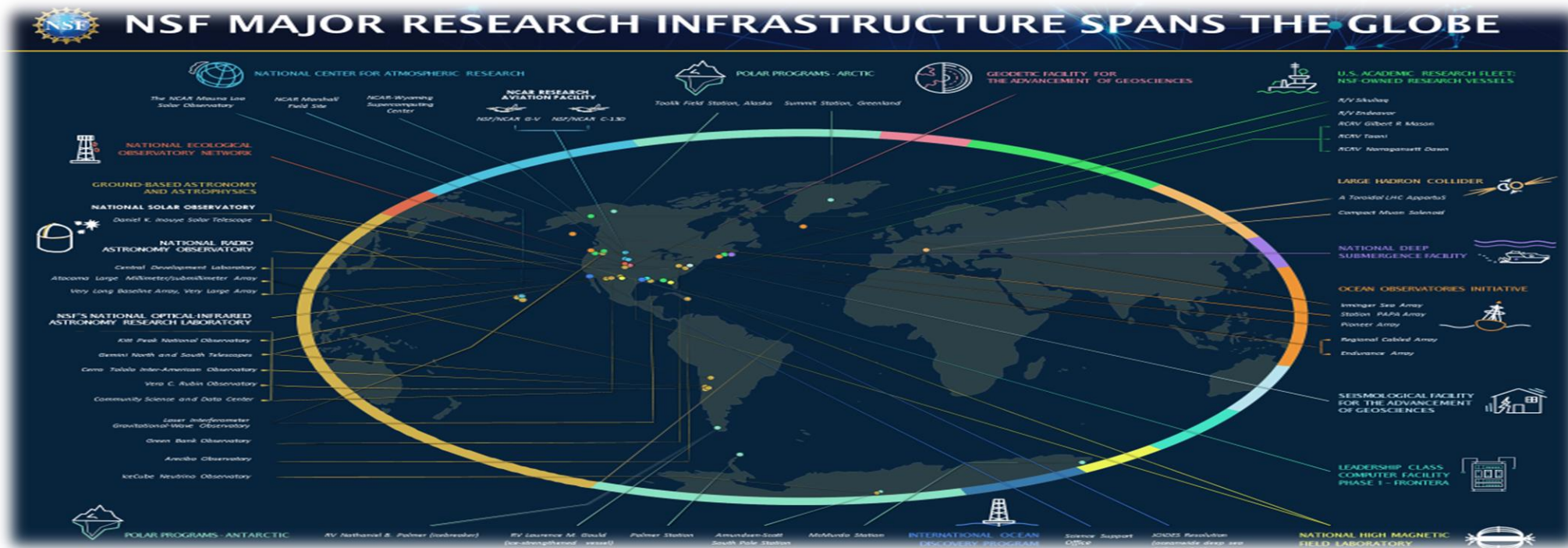
Financial versus **Technical** reports.



Brief Project Presentations

- RCRV, Regional Class Research Vessels
- HMF, High Magnetic Field X-ray Beamline
- 40T, Superconducting Magnet Design
- CXFEL, Compact X-ray Free Electron Laser
- OOI, Ocean Observatories Initiative

- Major Facility **Construction** MREFC > \$100M
- Mid-scale RI-2 **Implement** MREFC > \$20M < \$100M
- Mid-scale RI-1 **Design** R&RA > \$4M < \$20M
- Mid-scale RI-1 **Design/RI-2 Implement** MREFC > \$20M < \$100M
- Major Facility **Operations** MREFC > \$100M





RCRV

RCRV

- 5 min



Reporting is people!





HMF

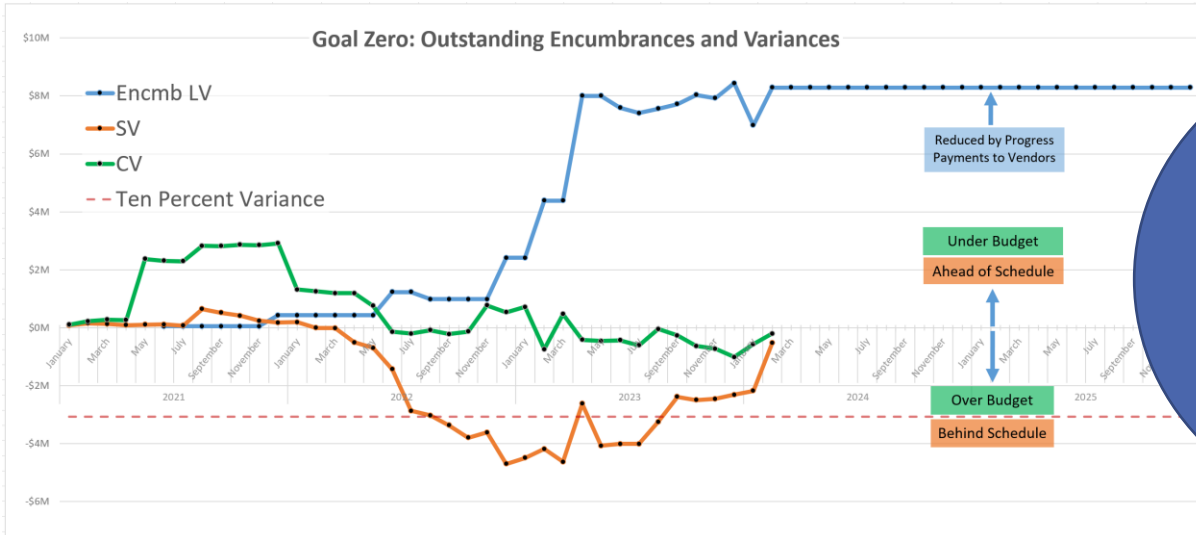
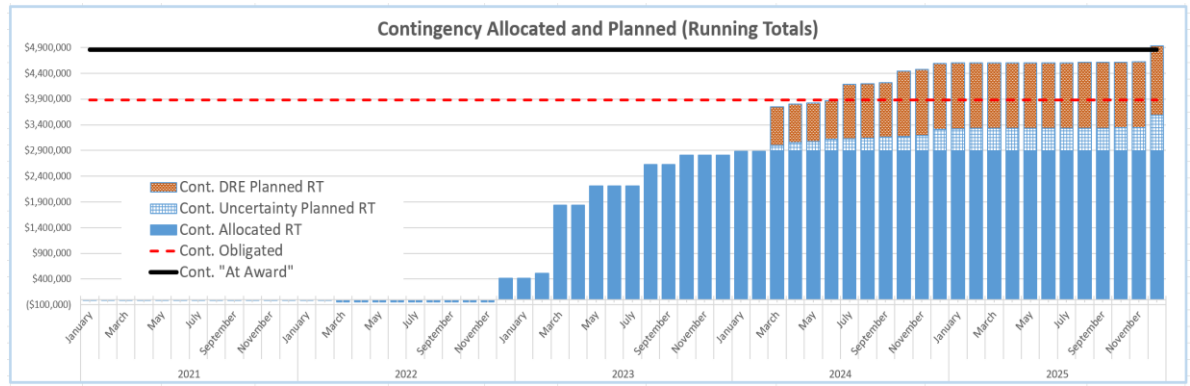
HMF

- 5 min



HMF X-ray Beamline Construction Project

- Ernie Fontes (PM) / Cornell University
- Mid-scale RI-2: A first-of-its-kind X-ray facility for new science at the high magnetic field frontier (HMF)
- Total Project Cost: **\$32,694,899**
- Award Duration: **5-years 2021-2025**



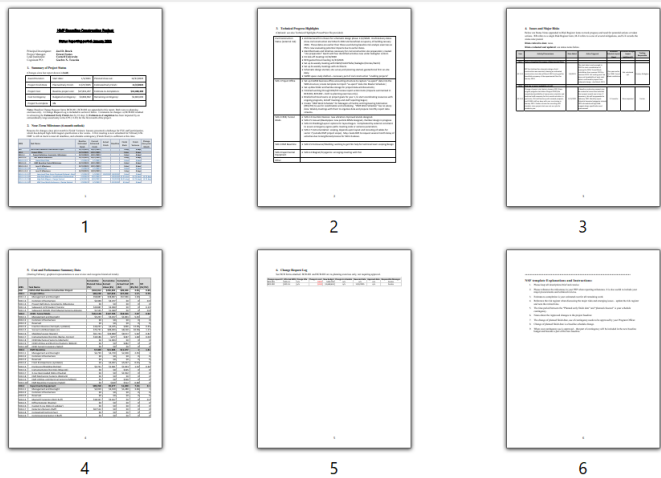
RE_DRE Risk_ID	Name	Report Date	1/1/2021	3/21/2022	1/20/2023	2/28/2023	3/28/2023	5/10/2023	8/15/2023	10/25/2023	1/31/2024	2/29/2024
1	Official Occupancy of Experimental Floor		\$26,000	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000	\$0	\$0	\$0	\$0
1	Occupancy of Experimental Floor		\$295,000	\$295,000	\$295,000	\$295,000	\$295,000	\$295,000	\$0	\$0	\$0	\$0
	Construction of Long-lead Items.		\$320,000	\$320,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Work on Cave/Hutch.		\$112,000	\$112,000	\$112,000	\$112,000	\$112,000	\$112,000	\$112,000	\$112,000	\$112,000	\$112,000
	Work on Cave/Hutch.		\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$103,000
	Work on Cave/Hutch.		\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000	\$44,000
	Work for CESR Tunnel modifications.		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Work not meeting KPPs		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$460,000	\$460,000	\$460,000	\$460,000	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Construction of HMF beamline.		\$69,099	\$69,099	\$69,099	\$69,099	\$69,099	\$69,099	\$69,099	\$69,099	\$193,000	\$193,000
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$128,419	\$128,419	\$1,239,419	\$1,239,419	\$0	\$0	\$0	\$0	\$0	\$0
			\$57,539	\$57,539	\$57,539	\$57,539	\$57,539	\$57,539	\$57,539	\$57,539	\$57,539	\$57,539
			\$28,294	\$28,294	\$28,294	\$28,294	\$28,294	\$28,294	\$28,294	\$28,294	\$28,294	\$28,294
			\$32,403	\$32,403	\$32,403	\$32,403	\$32,403	\$32,403	\$32,403	\$32,403	\$32,403	\$32,403
			(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)	(\$23,546)
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			\$500,000	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grand Total			\$2,450,699	\$3,410,699	\$2,643,208	\$2,443,208	\$1,203,789	\$743,789	\$422,789	\$930,553	\$1,438,099	\$1,438,099

My lesson learned: curious people want to see both status and trends

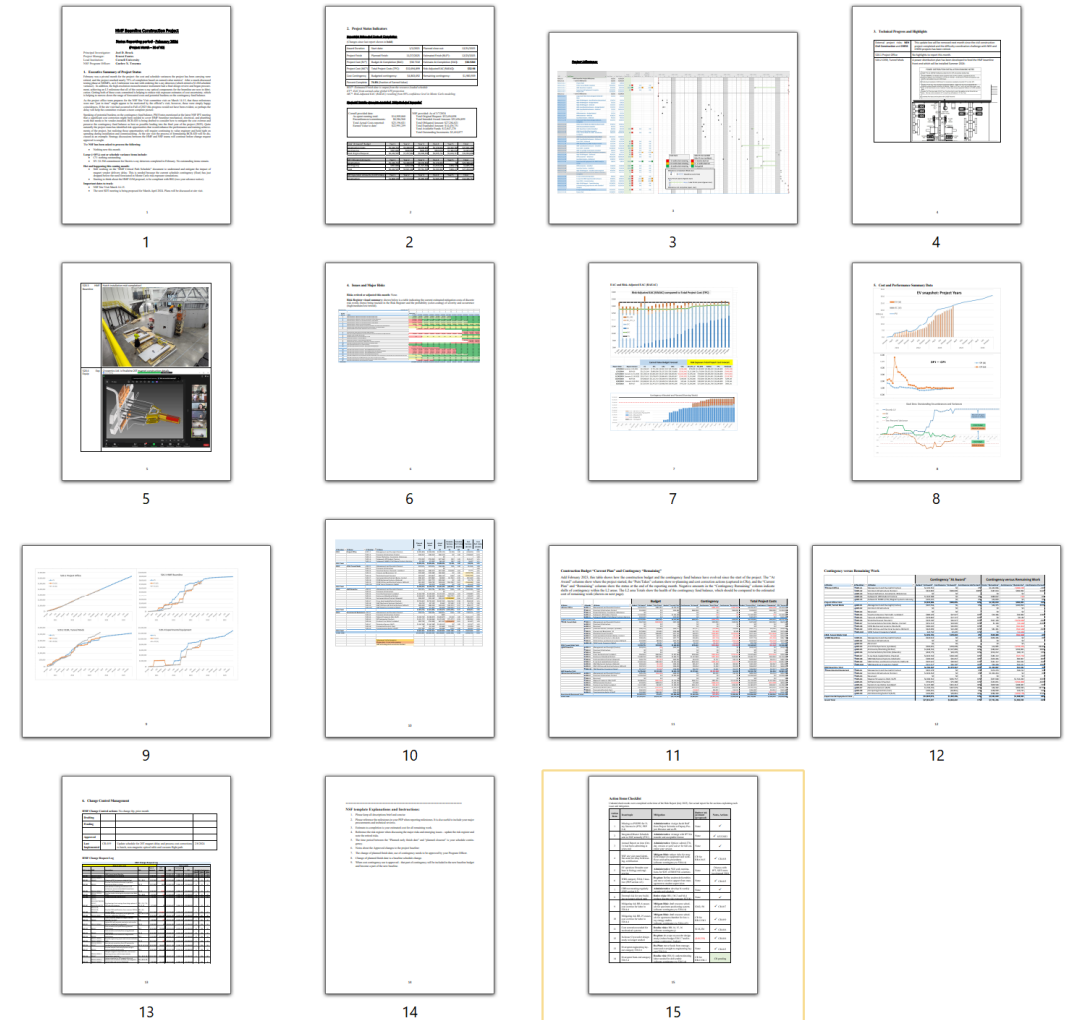


HMF X-ray Beamline Construction Project

1st monthly report



38th monthly report



After 50 meetings between HMF and NSF project teams





HMF X-ray Beamline Construction Project

Reporting is an opportunity for PM to tell “arc of story” of the project*



* **“Over-communicating” has benefits!**

- shows NSF how PM team is dealing with impulses
- shows PIs/co-PIs what’s transpired
- communicates confidence in PM team
- gives PM a history to look back on and be proud!

- **Project milestones** – completed/not, early/late, schedule contingency
- **Technical progress** – use pictures with captions
- **Risk Register** – visual display of trends in probabilities (burn down), cost impacts, any new or retired discrete risk events
- **EV snapshots** – standard S-curves are OK, but focusing on...
- **Variance plots** – show history of over/under budget, ahead/behind schedule, traces show how PM has “fought back” to keep on track
- **Encumbrances** – show commitments to vendors and delay in progress payments
- **Risk Exposure** – evaluate potential impacts of continued spending trends and forecast potential impacts of “random events” using Monte Carlo simulations
- **Budget Contingency** – show allocations to date, when they occurred, and forecast potential need for remaining funds
- **RAEAC** – very important to forecast “Risk Adjusted Estimate At Completion” to understand how project approaches TPC
- **Focus on completion** – (later in project) compare remaining work to remaining funds and calculate TCPI – To Completion Performance Index



40T SC User Magnet Design Project

40T

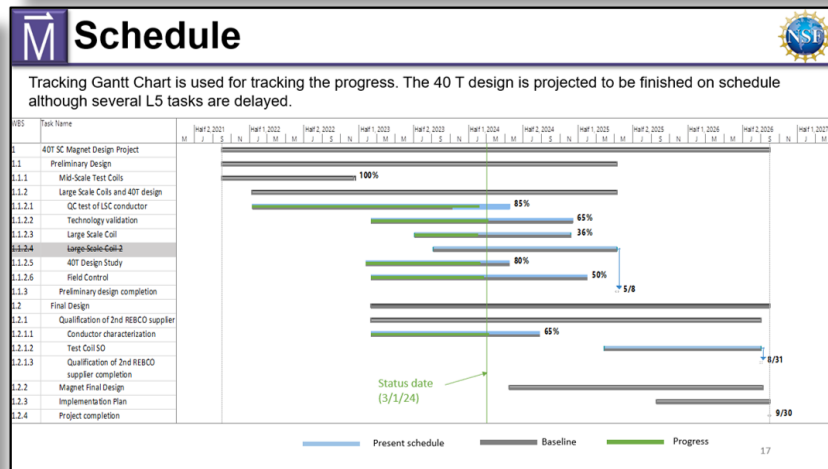
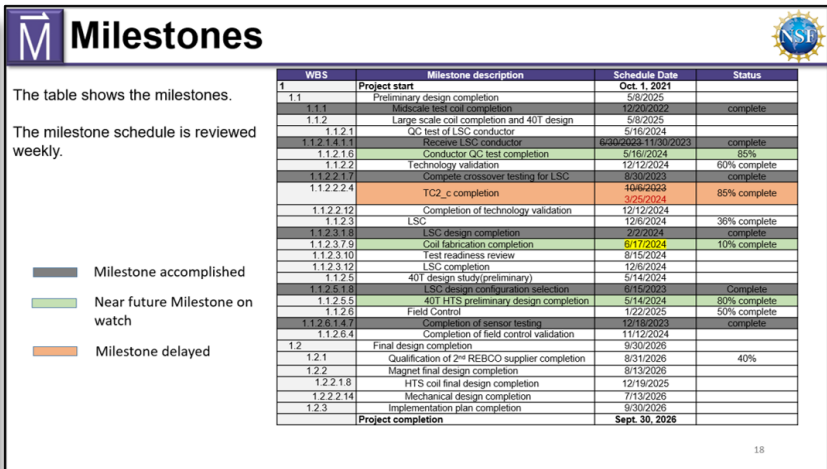
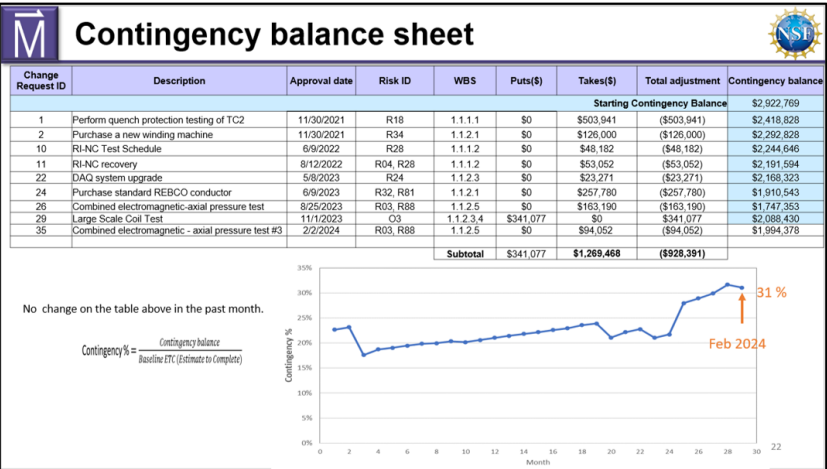
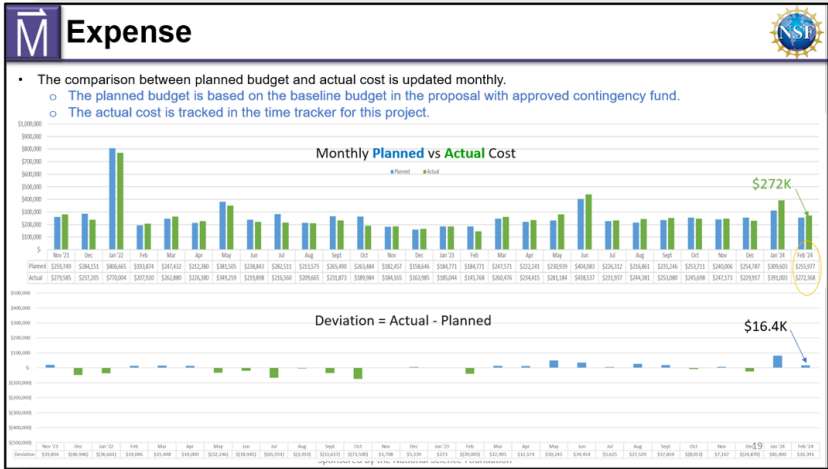
- 5 min



40T SC User Magnet Design Project

- **Dave Lunger Ph.D., PMP**– MagLab Director of Project Management
- **MSRI-1: Design a 40 T all-superconducting (SC) magnet for condensed matter physics and materials research experiments that will be incorporated into the MagLab’s DC Field facility and be available to the more than 650 annual DC magnet users for condensed matter physics experiments.**
- **Total Project Cost: \$15.8M**
- **Award Duration: 5-years 2021-2026**

My lesson learned: EVM works well when with higher technology readiness levels





40T SC User Magnet Design Project

- TPC = \$15.8M ; Initial baseline proposal \$12.9M; Contingency budget\$2.9M
 - 100% of our contingency budget was contained within contingency plans found in our risk register in the PEP
 - Contingency budget developed through decomposition, bottom up planning, and MagLab Risk Management Process
 - Budget tied directly to contingency plans that were developed in the planning phase
 - This was approved with the grant
- On a normal project the contingency budget would be released to the PM and the PM would use it in accordance with the plan
- NSF rules mandate we need approval to use any contingency funds

Project Execution Plan
for the M1:DP Proposal for
Preliminary & Final Design of the 40 T
All-Superconducting Magnet Project
(40 T SC Magnet Project)

at
The National High Magnetic Field Laboratory,
Florida State University

Division of Materials Research
Directorate for Mathematical & Physical Sciences
National Science Foundation

Feb 20, 2024
Revision 7.2

My lesson learned: The process should expedite the activity

WBS	WBS name	Risk ID	Contingency plan	Budget	Approved budget	Request plan to the NSF
1.1.1.1	Test Coil 2	R18	Perform quench protection testing of TC-2	\$ 503,941	\$ 503,941	Approved
		R04	Rewind pancakes and rebuild RI subscale magnet.	\$ 19,713	\$ 19,713	Approved
1.1.1.2	RI subscale magnet	R28	Additional personnel will be added to the tasks to ensure the tasks are on schedule	\$ 81,521	\$ 81,521	Approved
		R03	Perform additional pressure tests.	\$ 257,242		Approved
1.1.1.3	Components validation	R19	Perform strain validation testing with optical sensors	\$ 152,471		Risk reduced
		R30	Additional personnel and liquid helium will be added to the tasks to perform the additional tests	\$ 74,187		2024
1.1.2.1	REBCO conductor procurement and QC testing	R98	Request SuperPower to supply samples of production tapes periodically after the purchased tapes are delivered; perform QC tests on the samples and feedback the test results to the vendor.	\$ 239,160		2024
		R32	A contingency of 3 km conductor will be purchased.	\$ 257,780		Approved
		R33	A contingency of \$20/meter for purchasing of REBCO.	\$ 204,069		Risk mitigated.
		R34	Purchase a new winding machine	\$ 126,000	\$ 126,000	Approved
1.1.2.3	Large scale coil	R24	A contingency of 25% of hardware cost and components cost is considered.	\$ 91,145	\$ 23,271 approved for DAQ	2024
		R26	Additional personnel will be added to the tasks to ensure the tasks are on schedule	\$ 107,615		2024
		R92	DAQ	\$ 20,000		2024

Change Request No.	Description	Originator	Date proposed to PM	PM/EO Approval /denial Date	Budget change	Scope change	Schedule change	Contingency budget adjustment	WBS	Risk ID	NSF approval date	Status
032	Resolve Discrepancy Between Coil Ic and Short Sample Ic: update to CR017	Bowque	01/04/24	2/12/2024	\$127,207	/	IC2, c from 09/01/23 to 03/25/24	/	1.1.2.2.2	H50, H53, H64	Pending approval	
033	Improved crossover design for 2-in-hand winding update to CR018	Manstall	11/28/23	2/12/2024	\$90,228	/	Select crossover design from 08/01/23 to 02/25/24	/	1.1.2.2.1	H08, H21, H52, H65, H67	/	Approved
034	Additional REBCO testing	Abrahamov	1/09/23		\$259,160	Addition of 50 SuperPower REBCO tapes	Conductor QC test milestones	\$259,160	1.1.2.1	H58	Pending approval	
035	Combined electromagnetic - axial pressure test #3	Dixon	02/02/24		\$94,052	Add additional coil test	/	\$94,052	1.1.2.5.5	H03, H88	/	Approved
036	Quench Heater Design Limit 1 test	Manstall	02/13/24	2/14/2024	\$2,008	Identify quench heater damage (breakfast)	No milestone change	/	1.1.2.3.2.8	H70	/	Approved

2 Changes Requests (above \$100k threshold) are pending NSF approval.

Risk Management

Currently risks of high priority are:

- REBCO conductor delivery schedule (R55)
 - Frequent communications with SuperPower.
 - Qualify a 2nd vendor
- REBCO does not meet the specification (R01, R03, R66, R67)
 - Continue to perform QC test of REBCO conductor.
 - Continue to test and collect the peel strength data.
- Fatigue life of joints (R00, R52, R58, R87)
 - Fatigue test of improved joint testing is on going.
 - CR018 has been approved.
- The test coils have lower I_c than the anticipated I_c from the short sample test results (R64)
 - CR017 is to address this risk.
- 40T design study schedule due to personnel leaving (R83)
 - A new postdoc is interviewed and in the process of hiring (Seems there is a problem on his visa application).
 - To provide the offer to another postdoc(graduate in Aug.)
- The combination of high axial pressure and large rotation angle may cause HTS coil failure (R03, R88)
 - Modules of EM load with axial pressure will be tested to set design criteria
- Field strength measurement sensor for field control (R74, R75, R76)
 - Sensors are being tested in-house.

Impact/Severity	Return	Probability				
		Very Low	Low	Medium	High	Very High
Very High	09					
High	67	07, 57, 58, 88	03, 04, 74, 75, 86			
Medium		03, 83	06, 02			
Low	56					
Very Low						



40T SC User Magnet Design Project

- Project Thresholds
 - Used to define the limit of an acceptable cost or expenditure in project management
 - It may be used to indicate the maximum amount of time in which an action or process may take place. It may refer to the minimum level of quality allowed for any product or work completed
 - Define Trigger Points: Set specific values for key project metrics (e.g., cost variance, schedule delay, resource utilization) that, when exceeded, trigger alerts or notifications
 - Proactive Monitoring: Help identify potential problems early on, allowing for proactive intervention and corrective action
 - Customization: Can be set for various aspects of the project, including cost, schedule, resources, risks, and issues
 - Trigger Actions: Can be configured to send notifications, generate reports, or even escalate issues to specific individuals or groups

- Originally agreed on setting limit at $\geq \$250K$ subsequently lowered to $\geq \$100K$

My lesson learned: Rules change so you must be flexible

Previous version:

Cost	Schedule Slip	Approval
Cost < \$5k	Slip < 2 weeks	Task Leader
$\$5k \leq \text{Cost} < \$50k$	$2 \text{ weeks} \leq \text{Slip} < 1 \text{ month}$	Project Manager
$\$50k \leq \text{Cost} < \$250k$	$1 \text{ month} \leq \text{Slip}$	Executive Steering Group
Cost $\geq \$250k$		NSF

New version:

Cost	Schedule Slip	Approval
Cost < \$5k	Slip < 2 weeks	Task Leader
$\$5k \leq \text{Cost} < \$50k$	$2 \text{ weeks} \leq \text{Slip} < 1 \text{ month}$	Project Manager
$\$50k \leq \text{Cost} < \$100k$	$1 \text{ month} \leq \text{Slip}$	Executive Steering Group
Cost $\geq \$100k$		NSF



CXFEL

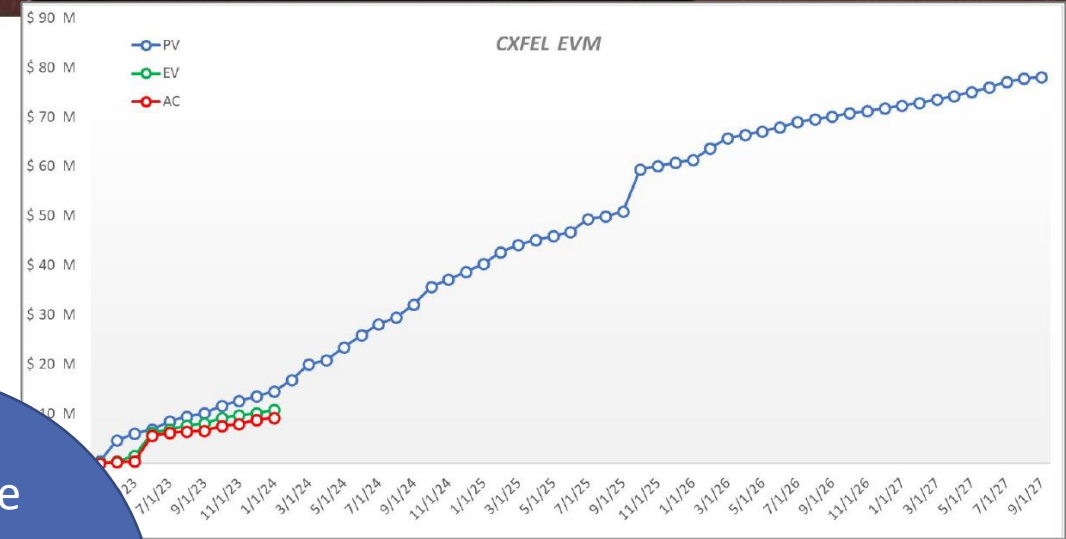
CXFEL

- 5 min

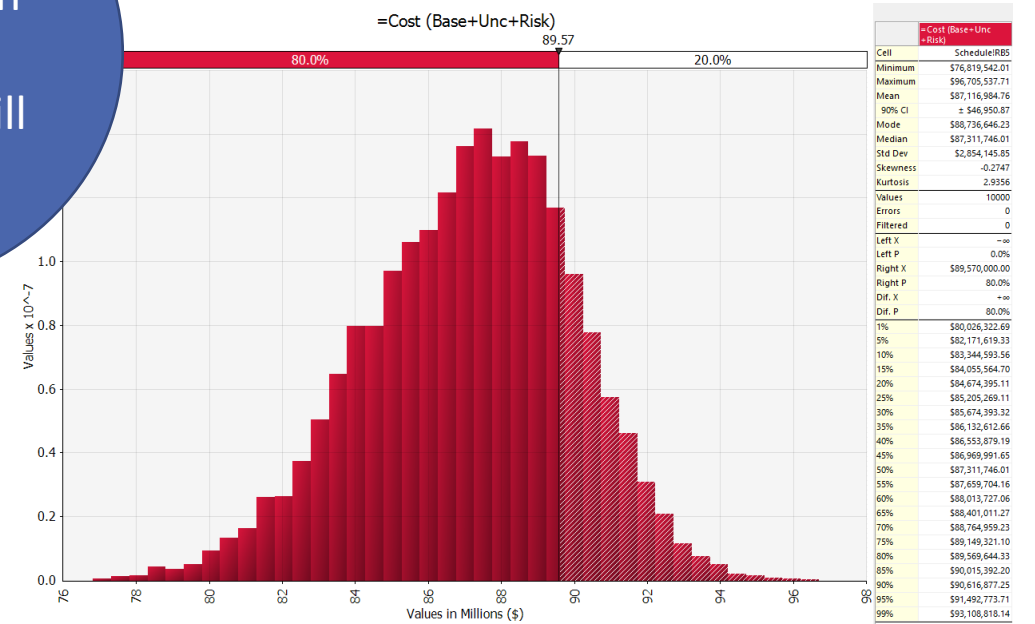
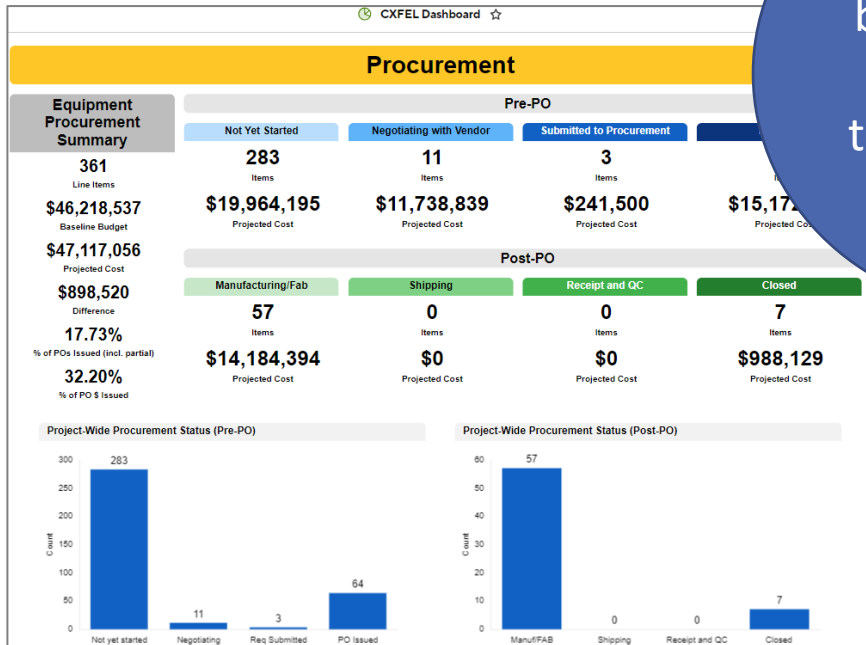


CXFEL Midscale RI2 Implementation Project

- David Winkel (PM) / Arizona State University
- Mid-scale RI-2: Compact X-ray Free Electron Laser (CXFEL)
 - A novel instrument to produce sub-femtosecond coherent X-rays at reduced electron beam energy and much lower cost than today's large \$billion-scale XFELs
- Total Project Cost: **\$90,800,000**
- Award Duration: **5 years**



My lesson learned: the better you plan your project, the easier it will be during execution.





CXFEL Midscale RI2 Implementation Project

Detailed Risk Register informs quantitative risk analysis



The screenshot displays the @RISK simulation interface. The main window shows a histogram titled "=Cost (Base+Unc+Risk)" with a mean value of 89.60. The distribution is skewed to the right, with 62.2% of the values below the mean and 37.8% above. A statistics grid on the right provides the following data:

Statistic	Value
Minimum	\$81,156,826.26
Maximum	\$93,907,773.04
Mean	\$87,820,643.49
90% CI	± \$531,467.72
Mode	\$90,202,601.89
Median	\$88,250,410.14
Std Dev	\$3,033,732.57
Skewness	-0.2799
Kurtosis	2.0855
Values	90
Errors	0
Filtered	0
Left X	-∞
Left P	0.0%
Right X	\$89,600,000.00
Right P	62.2%

The background shows a risk register table with columns for activity, duration, and cost. A smaller simulation window in the foreground shows a progress bar at 46% and simulation details:

- Iteration: 91 of 200
- Simulation: 1 of 1
- Runtime: 00:01:22 of 00:07:11
- Iters Per Sec: 0.31



CXFEL Midscale R12 Implementation Project

CXFEL Change Request Form v1.2

Change Request #	CR#	Date
Change Request Title		
Impacted WBS elements		
Associated Risk ID #s		
Originator Name	Originator Signature (Or attached email approval)	
Other Personnel		

Summary Change Description and Justification
(Include potential alternatives as appropriate)

Give a summary description of the change with its nature of the change with respect to performance; justification of the change; Register opportunity or risk mitigation adjustments to contingency.

NSF Approval Required?

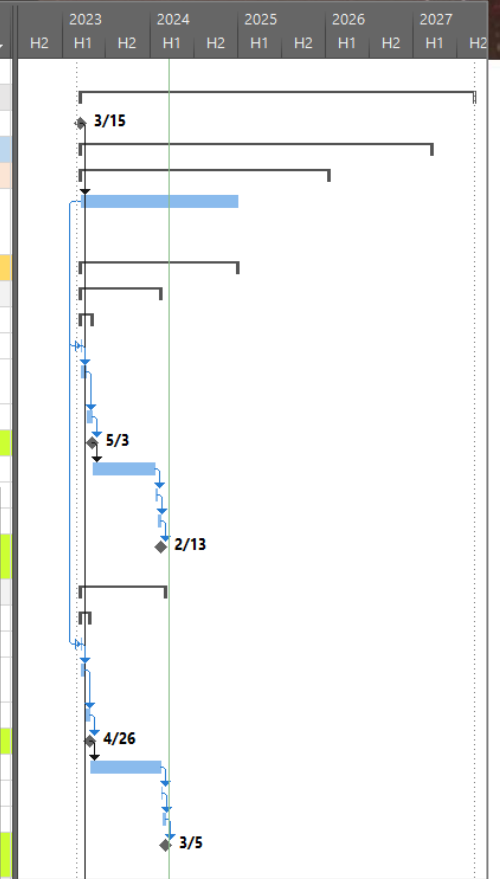
See PEP for NSF approval

Scope or Technical Impact

Give a description of requested change including any resulting impacts, justification and cite any previous recommendations.

ID	Task Name	Duration	Start	Finish	2023 H2	2024 H1	2024 H2	2025 H1	2025 H2	2026 H1	2026 H2	2027 H1	2027 H2
1	1												
2	1.0 CXFEL Project	1132 days	3/15/23	9/13/27									
3	Project start date	0 days	3/15/23	3/15/23									
4	1.1 Accelerators	1010 days	3/15/23	3/22/27									
5	1.1.1 Photoinjector	713.5 days	3/15/23	1/15/26									
6	Review of photoinjector subsystem specifications for use in vendor procurement; training; protocol development; build planning	454 days	3/15/23	1/2/25									
7	Procurement and QC Receiving	454 days	3/15/23	1/2/25									
8	Photoinjector cavity	231 days	3/15/23	2/13/24									
9	Purchase Order	36 days	3/15/23	5/3/23									
10	Provide specs/reqs to vendor	1 day	3/15/23	3/15/23									
11	Negotiate with vendor to final vendor proposal	20 days	3/16/23	4/12/23									
12	Generate and submit PO	15 days	4/13/23	5/3/23									
13	PO Complete	0 days	5/3/23	5/3/23									
14	Manuf/Fab and FAT	180 days	5/4/23	1/23/24									

	A	B	DESCRIPTION	J	K	L	M	N	O
	LEVEL	WBS ID		May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
6	0	001	CXFEL Construction	\$ 1,429,950	\$ 6,200,000	\$ 6,846,327	\$ 7,707,933	\$ 8,130,940	\$ 9,208,081
7	1	1.01	Accelerators	\$ 801,930	\$ 1,400,000	\$ 1,526,936	\$ 1,843,427	\$ 1,879,872	\$ 1,926,561
8	2	001.01.01	Photoinjector	\$ 10,254	\$ -	\$ 50,447.97	\$ 74,593	\$ 76,175	\$ 78,189
9	2	001.01.02	Electron Diffraction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	2	001.01.03	Linac	\$ 122,580	\$ 1,000,000	\$ 165,724	\$ 170,210	\$ 176,190	\$ 181,174
11	2	001.01.04	EEX Line	\$ 25,979	\$ 1,000,000	\$ 61,832	\$ 77,057	\$ 78,843	\$ 80,986
12	2	001.01.05	ICS-IP	\$ 3,362	\$ 4,763	\$ 6,304	\$ 8,406	\$ 10,647	\$ 13,729
13	2	001.01.06	Beam Transport	\$ 2,693	\$ 3,847	\$ 5,001	\$ 6,540	\$ 8,464	\$ 11,157
14	2	001.01.07	RF	\$ 380,000	\$ 849,963	\$ 851,045	\$ 1,102,099	\$ 1,113,395	\$ 1,134,901
15	2	001.01.08	Magnets	\$ 3,387	\$ 4,798	\$ 5,645	\$ 7,338	\$ 9,314	\$ 10,725
16	2	001.01.09	UHV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	2	001.01.10	Diagnostics	\$ 12,611	\$ 295,128	\$ 299,494	\$ 304,829	\$ 310,649	\$ 317,440
18	2	001.01.11	Timing Systems	\$ 4,149	\$ 6,077	\$ 8,693	\$ 13,600	\$ 17,438	\$ 19,504
19	2	001.01.12	Interface Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	2	001.01.13	Accelerator Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	2	001.01.14	Accelerator Management	\$ 17,223	\$ 45,385	\$ 72,749	\$ 78,756	\$ 78,756	\$ 78,756
22	1	1.02	Lasers	\$ 62,043	\$ 3,827,889	\$ 3,848,854	\$ 3,868,104	\$ 3,890,704	\$ 3,956,541
23	2	001.02.01	Cathode Laser	\$ 3,639	\$ 5,038	\$ 6,717.49	\$ 8,957	\$ 11,756	\$ 15,674
24	2	001.02.02	ICS Laser	\$ 3,524	\$ 3,752,014	\$ 3,753,319	\$ 3,755,146	\$ 3,758,409	\$ 3,761,672
25	2	001.02.03	Experimental Lasers	\$ 6,033	\$ 6,033	\$ 7,239	\$ 9,049	\$ 10,859	\$ 12,066
26	2	001.02.04	Beam Transport and ICS Fo	\$ 4,346	\$ 9,271	\$ 9,271	\$ 11,589	\$ 13,907	\$ 16,225
27	2	001.02.05	Diagnostics	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	2	001.02.06	Timing Systems	\$ 8,461	\$ 9,401	\$ 10,027	\$ 11,281	\$ 15,041	\$ 33,842
29	2	001.02.07	Interface Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
30	2	001.02.08	Laser Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	2	001.02.09	Lasers Management	\$ 36,041	\$ 46,133	\$ 62,279	\$ 72,082	\$ 80,732	\$ 117,062
32	1	1.03	Science Endstations	\$ 166,043	\$ 380,566	\$ 593,593	\$ 863,557	\$ 1,005,013	\$ 1,733,007





001

001

- 5 min

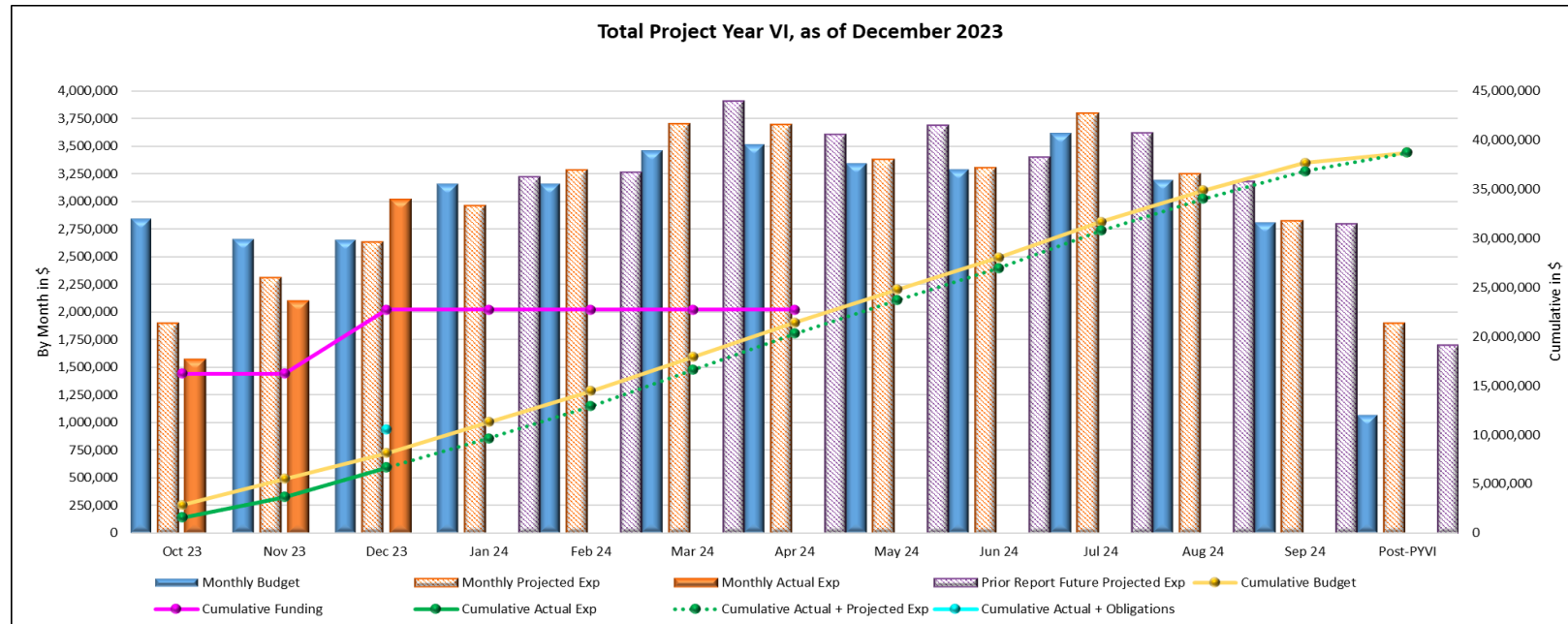


Ocean Observatories Initiative (OOI) O&M

- Paul Matthias, Sr. Program Manager, Woods Hole Oceanographic Institution
- NSF Major Facility: Five multidisciplinary deep ocean uncrewed observatories that include deployment, recovery, and refurbishment operations and a robust cyberinfrastructure. Managed by a PMO with three partner organizations.
- Current Phase Project Cost: \$220,000,000
- Award Duration: 5-years 2023-2028. Intended 30-year life.

- Weekly Reports and Standing Meetings
- Quarterly Reports
- Annual Reports
- Ad Hoc Calls and Reports

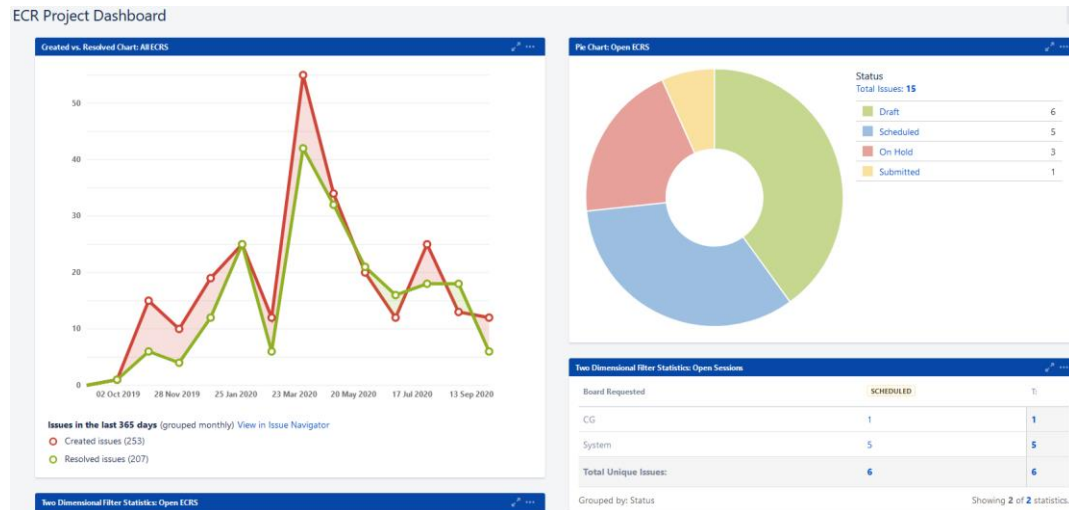
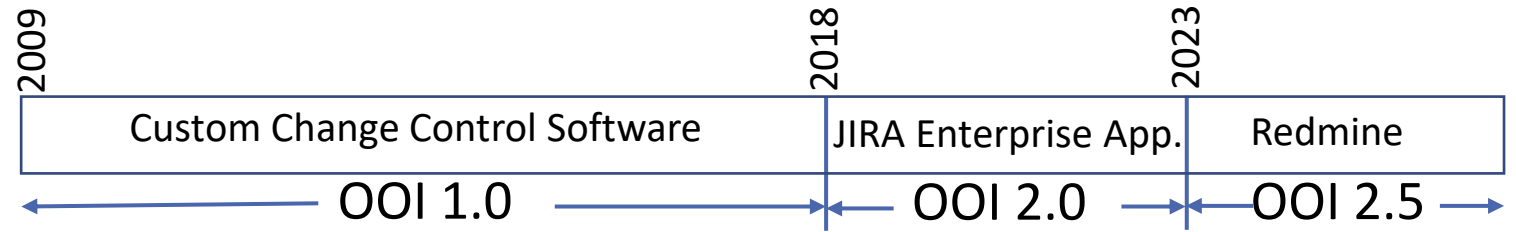
Lesson learned:
frequent and
transparent
communication is
essential.





OOI Change Tools

- Changes to Budget, schedule and the Technical Data Package are maintained and communicated to all stakeholders.
- 3 Levels of Change Control Board, including NSF.
- OOI developed an enterprise application for this (currently Jira, transitioning to Redmine).



	Weight	Option 1	Option 2	Option 3	Option 4
		SAF	Redmine	Atlassian - JIRA	Excel / Alfresco
Lead Time to implement	10%	0	2	8	10
Cost to implement	10%	0	2	5	10
Administrative Functions	15%	15	48	50	20
Multiple levels of access		0	10	10	5
Ability to create user groups		0	8	10	0
Ability to edit fields (status, author, etc.)		5	10	10	10
Ability to post attachments		10	10	10	0
Ability to assign permissions		0	10	10	
Risk Management Board	20%	10	20	28	
Ability to manage membership for different Boards		0	10	10	
Ability to schedule Board meetings / reviews		5	5	5	
Ability to capture attendance, votes, liens		5	5	5	
ECR Functions	20%	31	70		
Auto numbering of Issues / Tickets		10	10	10	
Multiple workflow state options		0	10	10	
Ability for people besides author to view/edit ticket (should)		3	10	10	
Ability to add additional watchers		3	10	10	
Ability for comments to be added		5	10	10	1
Ability to have pre-defined workflows		2	10	10	0
Ability to print		8	10	10	10

Analysis of Alternatives Tool

Sub-Set of Analysis of Alternatives Decision Matrix



Panel Discussions

- 5 min

Panel Discussions



Panel Discussions (15 min)

Each panelist to try to address one of the following or any other chosen topic related to reporting.

1. Reporting requirements and guidance, industry standards, and institutional practices followed by my project/award management team members include...
2. I see effectiveness, efficiency, and alignment of internal institutional reporting with NSF requirements, including redundancy, as a fulfillment of existing practical project needs or just as a required 'exercise'.
3. I assess value of reporting in terms of... e.g., burden versus return on investment, value of discovery of trends and supporting timely decisions, obtaining additional support, or simply documenting and recording.



Questions from and Answers for the Audience (5 min)

- 5 min

Q&A



References

1. RIG: [Section 4.6.2, Recipient Performance Reports](#), RIG [Section 4.2.5.8 Reporting Requirements](#) (in risk planning for construction stage), Section [6.2.11.6 Documentation and Reporting of Contingency Use](#), or if applicable [Section 2.5.1 Operations Management and Oversight](#).
2. PEP: your respective award/project specific reporting sections as described in the respective PEP (refer to PEP Section in the RIG 3.4.2.14 Review and Reporting).

[PAPPG Chapter VII:](#)

D. <u>Technical Reporting Requirements</u>	VII-7	1.
• Annual Project Reports	VII-8	2.
• Final Annual Project Report	VII-8	3.
• Project Outcomes Report for the General Public.....	VII-9	4.
• Compliance with Technical Reporting Requirements	VII-10	5.
• Award Closeout	VII-10	E.
• Record Retention and Audit	VII-10	

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E. <u>Award Financial Reporting Requirements</u> and Final Disbursement	VIII-7
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