



Managed by Fermi Research Alliance, LLC for the U.S. Department of Energy Office of Science

Laboratory Role and Project Support

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DOE CD-2/3b followup Review

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Overview

- Landscape for Particle Physics has changed since last review
 - Effective Project management more imperative than ever
- Decadal effort in HEP through Snowmass and P5 process
 - Process brought clarity to direction for US Particle Physics
 - Fermilab following DOE and P5 roadmap
- Lab director renewed focus on Projects
 - Chief Project Officer position created
 - Lab Technical Resource Coordinator position created
 - Dedicated Muon Departments
 - Project Support Services (OPSS) strengthened (PC Manager)
- Completing Projects successfully

Fermilab is committed to excellence in project management
so we can deliver the science

Executing the Strategy

- The Chief Project Officer is accountable for the successful execution of our project portfolio in concert with successful operation of the scientific program
- Projects/Programs are located within Divisions
 - PIP-II: Accelerator Division
 - LARP, LCLS-II: Technical Division
 - CMS upgrades, Mu2e, Muon g-2, Cosmic Frontier: PPD
 - All neutrino projects: Neutrino Division
- To succeed on this slate of big projects requires
 - Increased focus on resource management
 - Dedicated person with authority to span Divisions/Sections
 - Outstanding project management systems
 - Processes, Tools and People

Management engagement with Projects

- Lab has a critical role in project management and construction
 - Work closely with DOE Program Managers and FSO PD's
 - DOE attend most lab oversight/management meetings
- Oversight/engagement through
 - Project Management Group (PMG)
 - Monthly for each project
 - Performance Oversight Group (POG)
 - Monthly for all projects together
 - Cost and schedule (EV) performance reviewed at both
- CPO, OPSS, IPPM, focused on project success
 - Lab-wide Technical resource coordinator – Karen Kephart
 - Re-thinking approaches and tools

PM Tools – EVMS

- Mu2e and CMS Phase I upgrades were projects examined in annual EVMS surveillance
- From the Final Report
 - Three Control Account Managers (CAMs) were selected by the Surveillance Team for interviews. All three CAMs were very knowledgeable about the EVMS System and how it was being implemented by them on the Mu2e Project.
- The Surveillance Team reached some general conclusions concerning the FRA EVMS implementation:
 - The FRA EVMS continues to meet the requirements and intent of ANSI/EIA-748 Standard.
 - There is a Lab-wide emphasis on project performance, in general, and EVMS in particular.

PM Tools - Design Reviews

- The projects we do are inherently difficult, and with that difficulty comes risk. We must manage the risk so we can deliver the equipment to do the science. One of the tools to manage the risk is extensive technical review.
- Lab developing Design Review templates for projects that is integrated with Engineering Manual review process
- Mu2e design review plan will continue to adhere to Engineering Manual standards
 - Will describe approach and changes since last review in next talk
- Engineering manual here:
http://www.fnal.gov/directorate/documents/FNAL_Engineering_Manual.pdf
- Links to appendices with examples

Other Project Improvements

- Additional focus on ways to improve project performance
 - Project Management Improvement Initiative
 - Project Management Planning Board
 - Forum for issues, initiatives
 - Training
 - PMP training for 25
 - EVMS training for all CAM's and up
 - Planning for CD phased (ongoing) training
 - HCM platform adopted July 2014
 - longer term for resource planning
 - BPS system selection underway
 - Integrate strategic, resource, and budget planning
 - Major input from projects on requirements
- People – looking lab wide to coordinate across divisions

Laboratory Organized to support Muon Program

- Mu2e, Muon g-2, Muon Campus AIP's and GPP's

Muon Departments created in AD and PPD

**MUON
DEPARTMENT**

G ANNALA, HEAD
S WERKEMA, DEPUTY

(N SELLS, ADMIN SUP-
PORT)

J BUDLONG
M CONVERY
B DRENDEL
P. KASPER
A LEVELING
J MORGAN
V NAGASLAEV
A SONDGEROTH
D STILL
D VANDER MEULEN

MUONS
B. Casey, Head
D. Glenzinski, Deputy Head

ADMIN. SUPPORT
(B. Hehner)
(C. Kennedy)

**Mu2e PROJECT
OFFICE**
(R. Ray, PM)
H. Brown
M. Gardner
(D. Knapp)
(F. Leavell, DO)
(D. Leeb, DO)

Mu2e GROUP
(D. Glenzinski, Ldr)
R. Bernstein
R. Culbertson
A. Gaponenko, WF
C. Group, JA
(K. Knoepfel, SC)
(R. Kutchke, SC)
(E. James)
A. Mukherjee
P. Murat
(R. Ray)
V. Rusu
(K. Vellidis, G)
R. Wagner
J. Whitmore

**MUON g-2
PROJECT OFFICE**
(C. Polly, PM)
C. Y. Yoshikawa
(C. Vendetta)

MUON (g-2) GROUP
(B. Casey, Ldr)
B. Kiburg, LF
(A. Lyon, SC)
W. Merritt
H. Nguyen
(C. Polly)
M. Rominsky, RA
(E. Ramberg)
(M. A. Soha)
T. Walton, RA

Fermilab's Project Status

- NOvA and MicroBooNE
 - NOvA – Completed on budget and on schedule.
 - MicroBooNE – Completed on budget and on schedule
 - 3rd and 4th projects after MINERvA and DES delivered on budget and on schedule
- LCLS-II – BES accelerator project, pre-CD-2
- PIP-II (accelerator replacement) not yet at CD-0
- LBNF – (Neutrino's), international project
 - Intense focus (and Progress) on redefining LBNE
- SLI Utility Upgrade – Baseline review this week
- CMS Phase One upgrade (LHC) has CD-2/3

These, along with Mu2e and g-2 are a well phased,
but full suite of projects

In Closing

- Labs future depends greatly upon performance in project management.
 - Last four projects delivered on time and budget
 - Must continue improvements to succeed on larger scale
- Lab committed to continue to build an integrated system that supports our Projects and Project Managers.
 - We have learned from our experience and have taken advice from the review committees seriously.
 - Improvement initiatives take time, patience and persistence.
- Projects and lab management recognize the importance of a strong suite of integrated management tools.

Thanks for being here and taking the time to help. We welcome your questions, and recommendations