Lessons Learned from Implementation of Tailored Approach to Project Management

EFCOG PMWG
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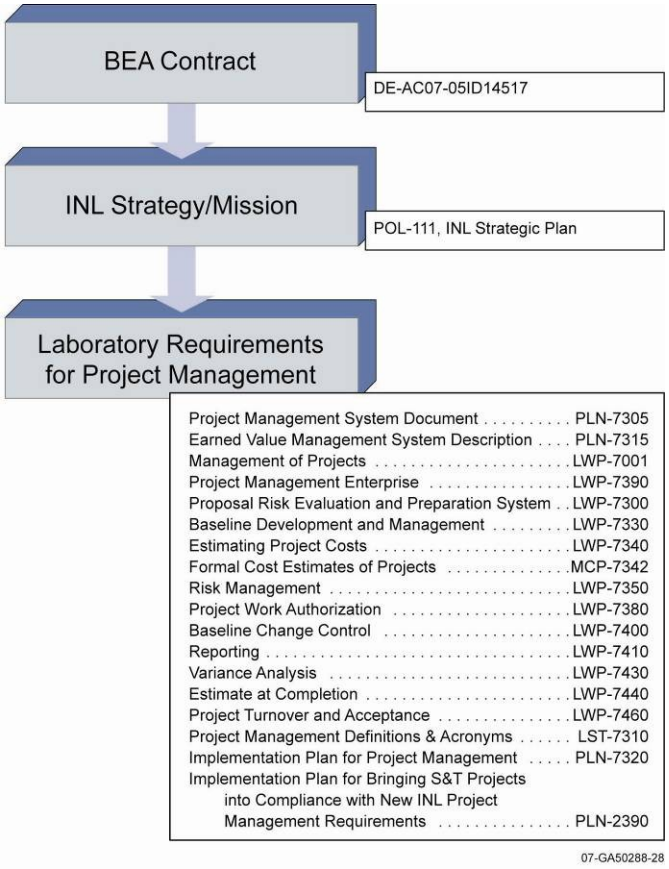
Project Management Requirements Flow Down



Idaho National Laboratory

POLICIES AND STANDARDS OF PERFORMANCE

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Policy 13. – Product Delivery

Policy Owner – Deputy Lab Director for Science and Technology
Applicability – Program Managers, Principal Investigators, and Project Managers

P13	**Research, Development and Demonstration outcomes consistently meet or exceed customer expectations for cost, schedule, and performance.**

Standards of Performance

- P13 S1 • *INL programs provide customers with mission capability.*
- P13 S2 • Project Managers and/or Principal Investigators systematically evaluate, quantify and effectively manage project risk throughout the project life cycle.
- P13 S3 • Project Managers and/or Principal Investigators treat every research and development and demonstration activity as a project with specific cost, schedules, and deliverables.
- P13 S4 • Projects are led by qualified Project Managers, who are held accountable for delivering project outcomes on time, within budget, and as promised.
- P13 S5 • *INL will support a "Build-Test-Build" approach to technology development.*
- P13 S7 • Project Managers and /or Principal Investigators promote and lead efforts to make innovation and creativity integral to project strategies and deliverables.

Contract Requirements

I. Project Management System

The Project Management System document must describe the policies, procedures, and tools that assure projects are completed on time and within budget. The document will address how this will be applied to all work scope, using a graded approach based upon the nature, complexity, risk, size, and sensitivity of the work being performed.

Attributes of this system shall include:

- Definition and organization of the work scope
- Planning
- Scheduling
- Cost estimating
- Work authorization
- performance assessment
- Change management
- Reporting
- Closeout

Contract Requirements - continued

a. INL Project Management Control System:

The system must describe all elements of the Contractor's Project Management Control System **(formal processes and controls) that will support successful completion of all contract work scope (e.g., R&D, site services, infrastructure, indirect funded activities, etc.).** The system must be disciplined and result in accurate work scope definition, organization, planning, estimating, budgeting, scheduling, authorizing, assessment, reporting, change management, record keeping, and project closeout.

Contract Requirements - continued

II. INL Baseline Deliverable

The Contractor must develop, maintain and control baselines as described in the Contractor's project management system document. The INL Baseline must contain complete scope, schedule, and cost information (including contingency)

Project Management Enterprise

Project Management at the INL has transformed into a management system that delivers processes, procedures, tools, systems, and training

- **Enables project work scope completion (PMSD)**
- **Brings lab-wide consistency to Project Management**
- **Uses a management system approach (SIMS)**
- **Is applicable to all work meeting the definition of a project**
- **Facilitates early identification of project risk (PREPS)**
- **Incorporates Earned Value Management System (EVMS)**
- **Captures institutional project information and approval of proposed projects (PREPS)**

Executive Council Endorsement

Executive Council Endorsement of our Earned Value Management System

Our expectation is that Project Managers and/or Principal Investigators will manage ALL project work throughout the life cycle using the core principles of Earned Value Management. Earned Value Management is not just a reporting requirement, it is just good project management and is the way we conduct business. Earned Value Management starts at project initiation and continues through the life of a project. Leading by example using Earned Value Management Principles, as a core of how we do business, we will consistently meet or exceed customer expectations on our performance against the established scope, schedule and budget.

J. Grossenbacher — Date 11/3/06

J. Alvarez — Date 11/3/06

D. Hill — Date 11/3/06

A. Clark — Date 11/3/06

Project Management Enterprise

Value Propositions:

To program Managers, Project Managers, Direct Managers, and Principal Investigators

- Provide project management processes and tools which are used and useful
- Remove manual steps by implementing a guided web-based system to plan and manage projects
- Deliver timely and tailored tools and processes appropriate to the project
- Provide easy access to accurate, timely and understandable project status
- Provide usable, and timely performance data to enable monitoring, oversight, and effective corrective action
- Proven baseline and estimating processes that match cost accounting and reporting processes

Tailored Approach to Project Control

01/30/07

Tailored Approach to Project Controls

Project Control	Control Minimum/Low Risk	Medium Risk	High Risk
Technical Baseline & Work Scope Definition	• Project Execution Plan • Work Scope and Deliverables (documented in CA/WP and PEP) • Unique Project ID • WBS • Customer specified reporting elements	• Project Execution Plan detail consistent with complexity or risk of the project including risk management section	• Project Execution Plan detail consistent with complexity or risk of the project • Risk Management Plan • WBS dictionary
Project Team Roles & Responsibilities	• Project Manager identified • Project participants (including subcontractors) identified • Control account manager identified • Work package manager identified • Responsibility identified at the task level • R2A2s	• Formal organization chart with all organizational participants identified	• Formal organizational breakdown structure (including major subcontractors) • Project Manager assigned • Responsibility Assignment Matrix • Critical personnel identified with responsibilities
Cost Estimating	• Cost estimate detail & summary sheets and recapitulation sheets • Life cycle estimates • Informal estimates for < $5M TPC or < $5M approved annual funding for R&D • Informal estimates for ≥ $5M TPC INL Cost Estimating review required • Formal estimates required for DOE O 413.3A projects	• Formal estimates required for ≥ $5M TPC • Informal estimates for < $5M TPC INL Cost Estimating review required	• Formal estimates required • Project Team review (Jury)
Schedule	• Level III resource loaded schedule • Level IV and V resource loaded schedules when work is performed in a nuclear or radiological facility using RadCon, craft, or operations personnel • Establish project interim milestones • Identify & obtain resource commitments (facility, equipment & personnel) • Identify and integrate relationships with other projects using the Level III schedules • Identify and resolve conflicts with other projects • Earned value techniques: EV worksheet	• Level IV key resources loaded schedule • Align EV worksheet to Level IV activities • Identify and integrate relationships with other projects using the Level IV schedules	• Level IV key resources loaded schedule • Align EV worksheet to Level IV activities • Identify and integrate relationships with other projects using the Level IV schedules Integrated schedules • Schedule risk contingencies identified • Project resources plan
Cost	• Time phased budget • At least one control account and work package • Control accounts and work packages reconcile with cost estimates	• One control account for each discrete scope of work	• One control account for each discrete scope of work
Performance Analysis	• Monthly status report	• Monthly status report for each control account	• Monthly status report for each control account • Risk register • Independent project reviews

This table defines the minimum requirements (if not clearly specified under DOE O 413.3A) applicable to all projects and establishes controls to be applied over and above the minimums based on risk.

Training Conducted

- Project Manager**: 2-day classroom course to train in-depth on EVMS and implementation at the Laboratory, tailored to INL specific work**
- Control Account Manager**: 8-hour classroom training course on EVMS and implementation at the Laboratory, tailored to INL specific work**
- Executive Level Training**: 2-hour classroom course to train on the basics of the Earned Value**

Course Title	Actual Number Trained
Project Manager (PM)	124
Control Account Manager (CAM)	199
Executive Level Training	134
Total:	457

How Are We Doing?

Assessments

- PREPS (DOE ID) 07
  - Recognized system capabilities – noted that not all INL work conducted within system
- EVMS (PMA) 07
  - 2 projects well done – 2 projects failed
- PMSD Implementation (DOE ID) 07
  - Sound documentation – inconsistent application
- PMSD Implementation (Burns & Roe) 07
  - PMSD "impressive" – suggested some industry best practice improvements
- PM SIMS 08
  - System in place & automated – not user friendly
- R&D PM/WM (Ken Brogg) 08
  - System comparable to industry norms – onerous for R&D use
- PM Competencies (NE / Longenecker) 08
  - Adequate process definition – Client management needed
- PMSD Implementation (DOE ID) 08
  - TBD Aug 08

How Are We Doing?

Results

- Strengths:
  - Good process documentation
  - PREPS tool
  - PMSD approach & processes
- Opportunities:
  - Middle management support
  - Inconsistent application
  - Learning curve
  - Client management
  - PM system tailoring required

Project Management Enterprise Phase II Enhancement Objectives

- Revise the Project Management System Document to include *all work*
- Focus on clarification, simplification, consolidation, and integration with other management systems
  - Lab-wide approach
  - Tailored Approach to Project Controls applied to all work
  - Add additional detail as necessary
- Value-added approach while meeting requirements
  - Focus on end-users
  - Take work out of the system
  - Automation