

LIFE
CYCLE
ASSET
MANAGEMENT

Good Practice Guide
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Program/Project Relationships

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1. INTRODUCTION

This Guide lists the general project management functions that Headquarters program managers and Field project managers may be assigned during the conceptualizing, design, and execution of a project. This Guide also covers responsibilities for the Heads of Field Elements and summarizes the disciplines that should be considered when selecting a project team. These lists can be used to ensure that each of the functions in a project have been assigned to a particular person, and that the project team encompasses all appropriate disciplines.

By using this Guide, a new project manager can ensure the smooth transition and coordination of effort between Headquarters program managers and Field project management personnel, anticipate and track transition points between project phases, and clarify roles and relationships so that project participants clearly understand what they are to do. The project manager can also use this Guide as the basis for preparing a Memorandum of Understanding (MOU) or Project Charter among the parties associated with a project. Model MOUs and Project Charters are provided in this Guide as "Best in Class" examples, which can be adapted to specific projects.

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2. PRINCIPLES AND PROCESSES

Graded Approach

The tables in this Guide list project management functions typical of very large, complex projects. The lists are independent of project type (i.e., restoration, construction, research and development, etc.); most of these functions should be considered for inclusion in any major project and scaled down for smaller, less complex projects. Although the functions listed are typically performed during the various phases of a project, these lists are not all-inclusive and should not be used for audit purposes. Instead, they serve as a checklist to ensure that project management functions are adequately considered by means of a comprehensive, disciplined decision-making process tailored to suit the project. More detailed explanations of these functions can be found in the other Project Management Good Practice Guides. The tables may be modified or reorganized to assign responsibilities to different parties within the project hierarchy as deemed appropriate by the project manager or program manager.

Project Charter

To ensure that all parties understand their responsibilities and can commit resources to ensure the success of the project, the project management team should develop an MOU or Project Charter as part of the project baselining documentation using information in each of the tables included in this Guide. Much of this buy-in and negotiation should occur early in the conceptual/design phase of a project. Early recognition and acceptance by all primary project participants will go a long way toward achieving project goals and preventing confusion midstream as the project evolves and baseline commitments tighten.

Headquarters Oversight

Leading U.S. and foreign companies have recently increased their efficiency by limiting headquarters oversight of their business units in the field. By delegating many authorities and responsibilities to individuals who actually perform the work, they have been able to improve overall efficiency and save money. Accordingly, DOE Headquarters oversight should be streamlined and delegated to the maximum extent practicable. The Field project management team should bear in mind, however, that the Headquarters Program Office is the ultimate customer and advocate for all authorized projects. There is a clear "give and take" to negotiating roles and responsibilities for an individual project or class of projects. Each situation is slightly unique and should be examined closely and as early as possible in the project development. It is encouraged that negotiation of a Project Charter or MOU

should be negotiated in a spirit of partnership, focusing primarily on determining the most efficient way of managing the project while satisfying Program Office needs.

2.1 Headquarters Program Manager Functions

The functions listed below are typically performed by the Headquarters program manager and/or Field program manager depending on how these responsibilities are delegated for each site or individual project. This list captures the major project management functions generally vested in the program manager. The intent is not to limit the areas in which the program manager acts but to provide a checklist for ensuring that all areas of management are addressed.

Program Manager Functions

- Establish programmatic planning, strategy, and requirements.
- Evaluate integration of projects with the program's mission, strategic planning, priorities, and budgets.
- Ensure program objectives, as identified through a systematic analysis of the project's life cycle functions and requirements, are accomplished cost-effectively.
- Verify that program performance objectives are met and executed through the Field Element.
- Formulate budgets.
- Participate in reviews of the project management system or elements thereof to ensure compliance with program requirements.
- Serve as principal interface with Congressional staff, other agencies, and Department Headquarters on project issues, and communicate status of issues to project managers.
- Notify Congress when changes to project baselines are expected to exceed Congressional thresholds.
- Coordinate project needs with other Headquarters Elements.

- Define and communicate program requirements and project objectives to the project manager.
- Confirm program need, requirements, and budget availability as a condition to any project Critical Decision.
- Participate in the design review process to ensure programmatic requirements are satisfied.
- Conduct reviews of Field Element performance, including design, scope, and cost peer reviews.
- Participate in project execution planning, development, and review of planning documentation.
- Ensure environmental, safety, and health planning and documentation meet programmatic requirements.
- Validate project baseline for continued program needs.
- Conduct periodic on-site review and assessment of project status throughout project development and execution.
- Review and analyze project reports.
- Assume responsibility for implementation of the DOE nuclear safety aspects of the environment, safety, and health program and its directives.
- Ensure compliance with applicable statutory requirements affecting Federal facilities and operations. When possible, consistent with the DOE mission, and supported by appropriate cost-benefit analysis, reduce identified environment, safety, and health risks even if not mandated by specific requirements.
- Require line management to be responsible for effective environment, safety, and health performance in their programs.
- Provide program and project direction consistent with environment, safety and health DOE Orders and DOE policy guidance requirements relating to environment, safety, and health.

- Ensure that appropriate environment, safety, and health requirements, as identified in DOE Orders, are included in long-range program plans and objectives, and in proposals for design, construction, operation, modification, and decommissioning of DOE facilities to ensure safe operation of these facilities.
- Provide program and project direction for quality assurance activities under project management's direction.
- Review and approve quality assurance programs under project management's direction and changes to those programs.
- Evaluate the adequacy and implementation of quality assurance programs.
- Participate as customers in the Headquarters functional organization development, maintenance, and continuous improvement of the business management systems and processes and performance objectives.
- Utilize the output of the systems and processes developed by the business functional organizations who are responsible for their areas and implemented by the Field organizations to achieve program objectives.
- Lead in establishing and clearly stating expected program performance objectives and criteria for the Field Element.
- Lead oversight of Field Elements to ensure that performance criteria and measures are in place to effectively achieve program and project objectives.

2.2 Project Manager Functions

The functions listed below are typically performed by the Field project manager. The responsibilities may be assigned for each project using a Project Charter or by class of projects based on a general MOU with the Headquarters Program Office. Either way, this table captures the major project management functions generally vested in the project manager. The intent is not to limit the areas in which the project manager acts but to provide a checklist for ensuring that all areas of management are addressed.

Project Manager Functions

- Serve as the primary point of contact for communicating within the Department on project issues.
- Communicate status and planning information to program managers and other participants and stakeholders.
- Inform program managers and other project decision makers of scope, cost, and schedule status as the project progresses.
- Ensure technical objectives are accomplished.
- Review designs for compliance with program and project technical objectives and applicable codes and standards.
- Establish and control work scope.
- Identify each project individually for funds planning, prioritization, and tracking.
- Develop planning documents that describe the project baselines, such that fiscal budgets can be prepared by program managers to support the project to ensure establishment of an adequate design basis.
- Keep the commitment and expenditure of funds from exceeding authorized limits.
- Develop and maintain budget and schedule forecasts.
- Develop annual budget requests for projects and coordinate development with program managers.
- Manage project contingencies.
- Prepare and update Project Execution Plans using a graded approach to match management risks to the plan elements.
- Review and endorse project documents for consistency with the Project Execution Plans prior to transmitting the documents outside the project management team.
- Manage project resources in accordance with the Project Execution Plans.

- Monitor baseline execution according to Project Execution Plans.
- Identify risks that could impact baseline elements and take appropriate action to avoid or minimize those impacts.
- Use systems engineering principles to ensure that specific requirements are planned, executed, and verified for results through an interactive approach.
- Integrate the configuration management and baseline change control processes into the project management system.
- Implement configuration management principles.
- Perform value engineering studies as early in the design process as feasible and implement study recommendations consistent with value engineering guidance.
- Comply with environmental requirements through each phase of a project (e.g., NEPA, permitting, etc.).
- Incorporate life cycle pollution prevention and waste minimization principles into the project planning and execution.
- Incorporate activities and design features into projects that encourage procurement of recycled materials.
- Implement an effective safety and quality assurance program including required safety documentation (e.g., safety analysis reports, construction health and safety program, etc.).
- Comply with safeguards and security requirements through each phase of a project.
- Implement project controls to maintain project baseline and manage approved changes to the baseline.
- Develop project performance measurements to assess physical progress, providing clear definitions of measurements for the physical or technical parameters of the project.
- Analyze project performance and take corrective action as required.

- Assess contractor performance, accept interim deliverables and completed work, monitor designated contract tasks, and function as the contracting officer's representative when assigned.
- Prepare and submit project reports.
- Conduct project reviews and independent reviews during conceptual and execution phases to address constructability, maintainability, and operability.
- Identify project management requirements that the contractor's system must meet.
- Manage all documentation generated or used during a project, from concept through final acceptance, so that the project status or historical information is readily available at any time during a project.
- Ensure transition to operations for successful start-up of the project.
- Ensure the preparation and transfer of project technical documentation to support operations and maintenance.
- Ensure timely closeout of completed projects.

2.3 Heads of Field Element Function

The functions listed below are typically performed either in their entirety or partially by the Head of the Field Element. This list captures the major project management functions generally vested in the Head of the Field Element. The intent is not to limit the areas in which the Head of the Field Element acts but to provide a checklist for ensuring that all areas of management are addressed.

Heads of Field Element Functions

- Establish and implement a single, effective project management system.
- Appoint Departmental Project Managers in accordance with Departmental Qualification Standards. For Strategic Systems, appoint Project Managers after concurrence by Secretarial Officers with program responsibilities.
- Make, or delegate the Project Manager to make, the project decisions described in the Project Execution Plan.

- Provide line management authority to proceed with project elements as required and justified by the Project Manager.
- Provide project managers with the support and staff resources necessary to accomplish their missions.
- Provide project managers with necessary training and developmental opportunities.
- Establish a value engineering program to optimize design, reduce nonessential costs, and improve productivity.
- Perform project validations, as delegated by program managers.
- Select contractors, approve subcontractors, and execute and administer contracts within delegated authority.
- Provide the capability to assess project performance.
- Ensure compliance with the recurring, general provisions of the Authorization Acts.
- Provide site-specific direction and procedures to guide project management activities under their authority.
- Participate as customers in the development, maintenance, and continuous improvement of the business management systems and processes and performance objectives.
- Meet the performance objectives and expectations developed with Headquarters.
- Support the Program Offices in development of performance criteria for program performance objectives and lead in implementing program criteria.
- Lead in negotiating the performance criteria and measures with the contractor to meet the defined performance objectives.
- Lead in evaluating the performance of the contractor against the performance measures in the contract.

- Remain accountable to the program offices and the landlord program office for contractor performance.
- Ensure that all nuclear operations under your jurisdiction are carried out consistent with sound environmental, safety, and health practices and in accordance with DOE Orders containing environmental, safety and health requirements.
- Execute programs and policies that use appropriate environmental, safety, and health program elements for siting, design, construction, operation, maintenance, modification, deactivation, and decontamination and decommissioning of DOE nuclear facilities and activities.
- Ensure that all operations under your jurisdiction comply with applicable environmental protection laws, regulations, and directives.
- Ensure that all operations and activities under your management or control are carried out in strict accordance with the provisions of the DOE National Environmental Policy Act (NEPA) Compliance Program.
- Approve the startup or restart of nuclear facilities requiring Readiness Assessments.
- Develop and implement a quality assurance program governing the internal activities of the Field Offices and receive approval from landlord program office.

2.4 Project Teams

The project manager is ultimately accountable for the successful completion of the project. "Successful" completion, however, depends considerably on the timely selection of an appropriate team. The project manager may not be responsible for each technical decision but will be responsible for choosing the most competent team available and maximizing the use of Field matrix functional support. The project manager must determine early in the project life cycle what specialized skills the team will require.

The project team is not a static entity. On the contrary, additional team members, both permanent and temporary, may be recruited to join the core project team as specialized skills become necessary. However, to maintain continuity, the core project team should remain intact for as long as possible through the life of the project. Communication among the team members and matrix support is crucial so that each individual can step in and begin almost immediately to perform his/her respective functions.

Larger, more complex projects will often require a standing project team or dedicated support from a Field Element. In contrast, smaller projects are typically comprised of one or several individuals who must rely heavily on Field matrix functional support. Use of the project team must be factored into the planning approach to maximize the team's effectiveness and minimize unnecessary project overhead expenditures. The following is a suggested list of disciplines and areas that should be considered for inclusion in the core project team or matrix functional support.

- Financial/Accounting
- Systems Engineering
- Project Management/Controls
- Construction
- Procurement/Contracting
- Environmental Regulators
- Configuration Management
- Health and Safety
- Power/Utilities
- Maintenance
- Quality Assurance/Control
- Public/Community/Stakeholder Involvement
- Specialized Engineering Disciplines
- Legal Issues
- Waste Handling/Minimization
- Pollution Prevention; and

- Other Disciplines as Required.

When the project manager recognizes core disciplines and specialized needs and integrates those requirements into the planning process early, he/she greatly increases the likelihood of project success.

2.5 Project Management Life Cycle Model - Roles and Responsibilities Contour

[Flowchart and software application will be added]

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3. MEASURING RESULTS

Performance standards (by phase) for all project management activities are being developed by the Office of Field Management Project Planning and Control Functional Team. Draft performance standards have been prepared and are being circulated among Headquarters, Field, and contractor points-of-contact for review/comment. Performance objectives [DOE O 430.1, LIFE-CYCLE ASSET MANAGEMENT (LCAM) requirements] criteria, measures, and expectations are intended to be consistent with performance criteria currently used by some Field Elements, and with Joint Program Office Direction on Project Management and LCAM.

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4. SUGGESTED READING

Suggested reading includes the library of Good Practice Guides and the Project Management Functional Area Qualification Standard.

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5. DEFINITIONS

For a complete listing of the definitions for major terms used in this Guide, see the consolidated Project Management Good Practice Guides Glossary.

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6. ASSISTANCE

Questions concerning this Guide may be referred to the Office of Field Management, Office of Project and Fixed Assets Management (FM-20) in Washington, D.C. on (202) 586-4041.

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7. RELATED TRAINING

Training on topics covered by this Guide can be found through the DOE Project Management Training Curriculum developed jointly by the Office of Field Management, the Office of Human Resources and Administration, and the Office of Environmental Management for the Professional Skills Training Program. Questions concerning this program and course availability may be referred to the Office of Professional and Technical Training in Washington, D.C. on (202) 426-1329.

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8. EXAMPLES

["Best-in-Class" examples of Model MOUs or Project Charters to be collected from the Field and/or Headquarters Program Offices]