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The Project Management Office (PMO)

Many projects and programs are large or complex enough that their performance can significantly affect the overall financial performance and business operations of the organizations involved. An established, well-understood project management structure will improve project results by enabling the project team to focus their efforts on the work, rather than on the mechanics of getting things done. The Project Management Office (PMO) enables this to happen.

The purpose of this White Paper is to develop an understanding among all SABRE organizations and their respective customers of why a PMO exists, what functions it performs, and what roles individuals play when assigned to the PMO. Essentially, a PMO is created to provide an operations framework that enables the project management to effectively plan and control project work. A PMO provides the following:

- An established but flexible *structure* in which to operate
- Project-dedicated team members and functional organization *personnel* to provide the necessary level of service
- A central *communications* facility that provides PMO members, and those with whom they interact (contributing functional organizations; suppliers, vendors, and subcontractors; senior management), easy access to all project information, including project plans and management decisions

It is important to note that PMOs, particularly those supporting large projects, require both funding and management support to obtain the appropriate staffing, facilities, and equipment, as well as the needed authorizations for miscellaneous administrative expenses.

Purpose of the PMO

A PMO is established during the project concept or precontract phases and is operated during the postcontract and implementation phases of a project. A PMO is not established to audit or control the project manager. Rather, a PMO has two primary purposes: supporting the Project Manager and the Project Team and providing effective project management services.

Serving the Project Manager and the Project Team

A PMO should be established when the level of project management services required for a given project exceeds the project manager's span of control. That is to say, when the work can no longer be done by one individual but requires subordinate management or administrative assistance.

Some of the factors that should be considered when deciding if a PMO is to be established to support SABRE projects are included in the following list:

- Complexities of the technologies involved
- Geographic spread of the project
- Length of the project schedule
- Magnitude of the project and its expenses
- Special services required by the customer
- Financial exposure from the project

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These factors must be considered in determining the size of the PMO, the scope of influence that the PMO will have during a project, and the extent to which a formal PMO is established and funded.

Providing Effective Project Management Services

Each PMO is unique to the project or projects it supports. The PMO must be flexible and organized to effectively serve the project manager involved. Although the concept of a PMO remains constant, no two PMOs are identical. Factors that require flexibility in the organizational structure of each PMO include the following:

- Uniqueness of each project in terms of purpose, organizational relationships, and the project charter
- Each customer's special requirements
- The mix of organizations, both internal and external to the company, required to complete the project
- The unique skill sets, leadership tendencies, and general characteristics of the PMO members and the project team members
- Project size and PMO size
- Whether a PMO supports one or several projects
- The presence, and degree of involvement, or absence of a central project planning office

A project manager for one small project may be able to perform all tasks without assistance, or with the help of an administrative assistant. However, for a medium or large project, or for multiple small projects, the project manager's span of control and management capacity is quickly exceeded by basic job responsibilities. Hence, to remain in control and be proactive, the support of a PMO is needed to accomplish all of the required functions.

Organization of the PMO

The PMO is organized to help accomplish the project objectives and to facilitate the working relationships of the project participants. The PMO organization can generally be considered in terms of the participation of its three primary component groups:

- Stakeholders
- PMO staff
- Functional organization
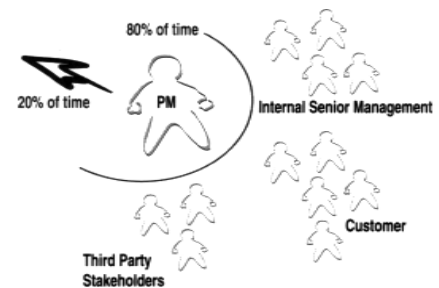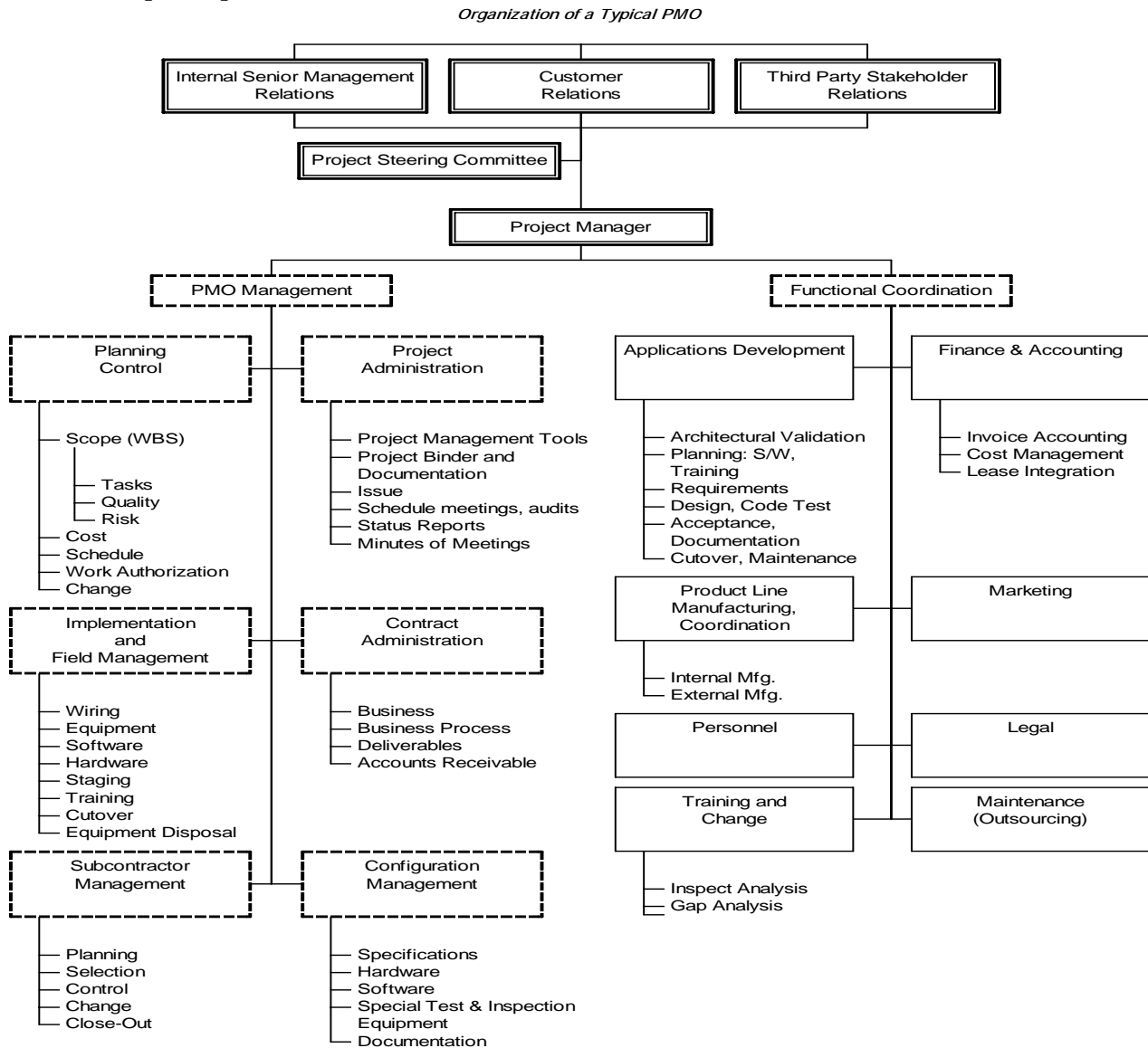

Stakeholder Participation

In organizing the PMO, the responsibilities and involvement of the project stakeholders should be considered. The project manager must personally establish and maintain favorable relationships with three groups of stakeholders internal senior management, the customer, and third party stakeholders and with the project steering committee. Each group has distinct influences on project success. In medium to large-sized SABRE projects, this has been found to consume up to 80% of the project manager's time, leaving little time or energy for all other aspects of project management.

Stakeholder participants should be individually identified and their relationship to the PMO specified. Typically, the stakeholders include the following:
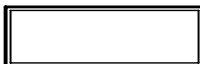
- Internal senior management
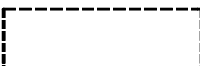- Customers
- Third party stakeholders

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The following diagram, Organization of a Typical PMO, depicts the interrelationships among the various participants.

Organization of a Typical PMO

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┌─────────────────────┐   ┌─────────────────┐   ┌──────────────────────────┐
│ Internal Senior     │   │ Customer        │   │ Third Party Stakeholder  │
│ Management Relations│   │ Relations       │   │ Relations                │
└─────────────────────┘   └─────────────────┘   └──────────────────────────┘

          ┌──────────────────────────┐
          │ Project Steering Committee│
          └──────────────────────────┘

                  ┌─────────────────┐
                  │ Project Manager │
                  └─────────────────┘
```

PMO Management

Planning Control
- Scope (WBS)
  - Tasks
  - Quality
  - Risk
- Cost
- Schedule
- Work Authorization
- Change

Project Administration
- Project Management Tools
- Project Binder and Documentation
- Issue
- Schedule meetings, audits
- Status Reports
- Minutes of Meetings

Implementation and Field Management
- Wiring
- Equipment
- Software
- Hardware
- Staging
- Training
- Cutover
- Equipment Disposal

Contract Administration
- Business
- Business Process
- Deliverables
- Accounts Receivable

Subcontractor Management
- Planning
- Selection
- Control
- Change
- Close-Out

Configuration Management
- Specifications
- Hardware
- Software
- Special Test & Inspection Equipment
- Documentation

Functional Coordination

Applications Development
- Architectural Validation
- Planning: S/W, Training
- Requirements
- Design, Code Test
- Acceptance, Documentation
- Cutover, Maintenance

Finance & Accounting
- Invoice Accounting
- Cost Management
- Lease Integration

Product Line Manufacturing, Coordination
- Internal Mfg.
- External Mfg.

Marketing

Personnel

Legal

Training and Change
- Inspect Analysis
- Gap Analysis

Maintenance (Outsourcing)

Legend:

☐ Project Manager must personally manage

⌐ ⌐ (dashed box) Project Manager may delegate responsibility within the PMO, depending on project size and complexity

☐ (plain box) Project Manager may delegate to functional team members not normally included in the PMO. Special conditions may occur that would make it advisable to include these functions in the PMO.

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Internal Senior Management

Senior managers who are stakeholders in a given project are inherently involved in the activities of the PMO. The project manager builds relationships with these individuals and relies on their involvement for such things as

■ Project funding
■ Approval to proceed with the project
■ Resource assignments and commitments
■ Strategic business decisions at critical project milestones

The cadre of senior managers associated with a PMO can include corporate level managers, business unit managers, and functional managers.

Although it often includes the project manager's peers as members, the Project Steering Committee is considered an element of senior management. The roles and involvement of senior managers are identified and documented throughout the project life cycle and are prominent in such areas as the project charter, resource letters of commitment, and funding authorizations and approvals.
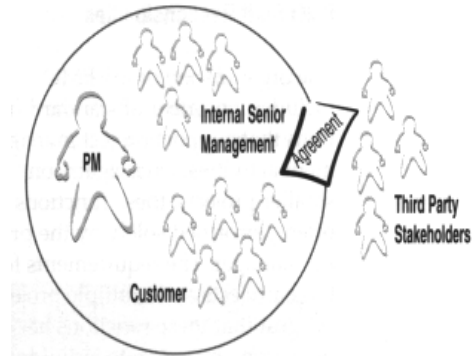
Customers

Customers, either internal or external play a vital role in the PMO sometimes its structure is approved by the customer, and the PMO may even be set up at the customer's site.

Customer participation in the PMO may include executives and senior managers; the project manager and project team members; and end users. These participants are often involved in various aspects of project management, and they are certainly an integral part of the project manager's day-to-day working relationships.

Third Party Stakeholders

Stakeholders outside of the project organization are generally considered to be third party. Such stakeholders have a distinct interest in the successful outcome of the project, but that interest usually is established through some external business agreement or other contractual relationship. Examples of third party stakeholders include

■ Suppliers, vendors, and subcontractors
■ Partners in strategic alliances
■ Managers of other projects

The project manager's relationship with third party stakeholders is normally one of oversight and interaction relating to the current project. However in some cases, third party stakeholders may lend business knowledge or technical expertise to the project.

PMO Staff Responsibilities

The organization of the PMO includes a number of standard functions that support project management activities. Again, on smaller projects, these functions are often performed solely by the project manager. The requirements for large projects and multiple projects suggest that these functions be performed by separate individuals, or groups of individuals for the largest of projects. PMO management functions include

- Planning and control
- Project administration
- Implementation and field management
- Contract administration
- Subcontractor management
- Configuration management

The project manager may subdivide these functions or add new ones as necessary.

Functional Organization Responsibilities

Corporate and business organization participation is needed to support nearly all projects. They provide functional support through performance of technical and administrative activities. The extent of functional involvement, as well as the level of dedicated PMO support, is usually determined by the size and complexity of the project. The PMO will establish links with functional support sources to ensure project support requirements are satisfied. Occasionally, for larger projects, an important function may be assigned to a PMO. When this happens, full- or part-time functional specialists become dedicated members of the PMO.

Functional support to each project is achieved through coordination or actual assignment of individuals to perform the following functions:

- Applications development
- Finance and accounting
- Product line manufacturing coordination
- Personnel
- Marketing
- Legal
- Training and change management
- Maintenance (including outsourcing)

The project manager arranges for this support by means of formal and informal requests to corporate and business organizations. Again, the project manager may subdivide these functions or add new ones as necessary.

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Requirements for a PMO

A PMO may be established to support one medium or large project that is reasonably complex. When that project demonstrates some success, other project managers may wish to leverage the organization already established for that project to service their own. Similarly, an initially small project that has grown beyond the span of control of the project manager may be a candidate for either seeking affiliation with an established PMO or creating its own organization. The prominent considerations in establishing a PMO are size, funding, and support of multiple projects.

PMO Size

The size of the PMO is determined by the project requirement to ensure that each functional responsibility is covered by someone at all times. A responsibility matrix is often used to manage this requirement. For a small project, the project manager and a project administrator would probably be responsible for all PMO activities. Given the variety of project sizes, scopes, and complexities and the combinations of multiple small projects, multiple large projects, or mixed large and small projects, all operating on nonconcurrent life cycles, the assignment of additional staff frequently will be needed for effective project support.

The number of dedicated PMO staff members should be commensurate with project size. A PMO with four members plus the project manager might be considered small for some SABRE projects. A medium-sized PMO may have one dedicated member for each major function, for a total of ten to twelve members. As project size and number of projects ease, the PMO could conceivably grow to twenty or more members, constituting a large PMO.

PMO Size	Recommended number of members
Small	4 to 8
Medium	9 to 15
Large	more than 15

A single PMO should not exceed 20 people, except in special situations in which one huge program with multiple projects is supported by one PMO. A PMO larger than that can easily become bureaucratic and lose the economy and flexibility needed to effectively manage projects. When PMO members start attending staff meetings to discuss priorities and workload rather than spending all their time supporting the project team, that may be the time to divide the PMO into leaner, more efficient organizations.
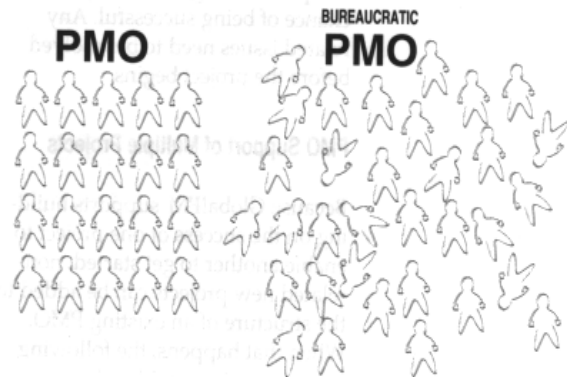
PMO Funding

A PMO will incur significant cost, that cost must be compared to the value it provides to each supported project. Project management deliverables need to be managed in the same manner as the project's technical deliverables. The project management deliverables are provided by the PMO.

Based on value expected, in conjunction with the PMO staffing plan and other itemized expense estimates, the sponsor organization and the customer need to commit to funding for the PMO. It should be made clear at the beginning of the contract that a project without adequate management has no chance of being successful. Any related issues need to be resolved before the project begins.

PMO Support of Multiple Projects

Because all project management methodology supports building on the success of one project to enable another to get started, nonrelated new projects can be added to the structure of an existing PMO. When that happens, the following issues must be considered:

- The functional and staffing requirements of the new project must be compared to those of the original project. Staffing requirements vary for each function throughout the life cycle of a project. So this analysis must include current requirements as well as future requirements for both projects. This helps to determine whether the existing PMO staff can handle the new project without adding staff.
- The management and control responsibilities of the PMO must be reestablished. The dynamics of the changing workloads of multiple projects, each operating in a different phase of the project life cycle, may result in the need for a dedicated PMO manager, who reports to several project managers.
- The cost of the PMO must be apportioned fairly among the projects using the PMO. For single-project PMOs, cost is simply the number of people multiplied by their full-time hours. For multiple projects, a determination must be made to have each person charge their time to specific projects or to apportion the total cost based on other project parameter (for example, total gross revenue, monthly billing, or number of project participants). Apportionment should be based on an hourly tracking system whenever possible, because this method will yield the fairest and most accurate allocation of costs.

Assignment of PMO Staff

A basic PMO management principle is to keep the number of dedicated staff members assigned to the project office to a minimum, with maximum use of functional contributors from the existing departments. This curtails organizational disruption and project payroll costs. More importantly, it emphasizes the responsibility of each functional department for their portion of the project. In addition, thirdly, it minimizes the project manager's supervisory duties, maximizing the ability to focus on the project itself.

Project needs determine whom (what functions) should be assigned to the PMO. Generally, this will be limited to those having most or all of the following characteristics:

- Management responsibilities for some part of the project
- Full-time project involvement for at least six months
- Duties that require frequent, close contact with the project manager or other PMO staff
- Tasks that cannot otherwise be controlled effectively because of the organizational or geographic environment

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Each PMO member is responsible for carrying out a portion of the project management task, as outlined by the project manager. However, the project manager retains full accountability for the entire project management task. PMO members are also responsible for keeping the project manager informed of all significant events and for providing timely reports.
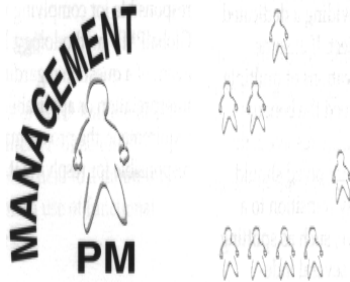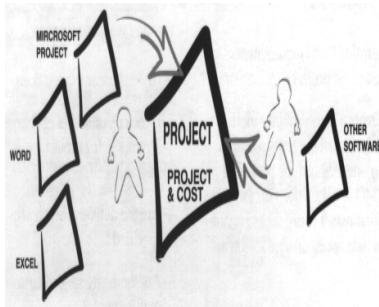
Management of the PMO

The variation of project requirements, sizes, and stages of completion, combined with the different functional organizations of the assigned staff, suggests the necessity to consider early the following practices and procedures when establishing a PMO.

General Management

A PMO is established to support the project manager and project team, and to enable the accomplishment of all project management tasks. Project managers are encouraged to benefit from economies of scale by having one PMO service multiple projects. Given the right mix of projects, varying project life cycles in a PMO will help to ride over peaks and lulls in the workload.

However, the project manager is not expected to incur unreasonable complication from such economy. Projects should fund PMOs based on the cost of providing a dedicated PMO to each project. If at some point, the complications of multiple project PMOs exceed the benefits and cannot be readily resolved, the project managers involved should plan for an orderly transition to a simpler alternative, such as splitting a large PMO into several independent PMOs.

Personnel Management

The PMO is designed to provide project assistance, not to become a burden to any project. The functional organizations that PMO staff members come from will retain responsibility for providing the primary administrative support, such as training and other benefits, for the individuals. The PMO should accommodate training and vacation scheduling, and furnish personal performance assessment reports to the functional managers.

Prioritization of PMO Work

Prioritization of the work must be kept simple. In multiple-project PMOs, the workload of individuals should be based on updated staffing plans that account for variations in workload throughout the life cycles of all projects involved. When special demands occur, the team must be committed to fulfilling all project responsibilities in a timely fashion.

Methodology Compliance

Each member of the PMO is responsible for complying with the adopted project methodology. In case of a question regarding interpretation or applicability of a requirement, the project manager is responsible for resolving it.

Project Management Software Selection

Typically, project teams use Microsoft Project, Word, and Excel. However, other software products may be used, for example, if a customer requires reports from other products. The cost that the PMO incurs whenever a specialized tool is required may need to include an amount for training the PMO member who will be using it. The use of the same or compatible software must be considered when serving multiple projects from one PMO.

Use of PMO Staff

The number of PMO staff members reporting directly to the PMO organization is held to a minimum, with maximum use of functional contributors.

Establishment of the PMO

After the need for a PMO is identified, it can be established by following these steps:
- Defining PMO structure and assigning staff
- Obtaining stakeholder buy-in and functional organization support
- Identifying information technology needs
- Arranging for PMO facilities
- Operating the PMO

Defining the PMO Structure and Assigning Staff

The structure used and staffing deployed on a PMO is dependent on size, complexity, and duration of the project or projects supported. Another essential consideration is the authorization and availability of funding needed to operate the PMO.

The steps for defining the PMO structure and assigning staff are slightly different for single-project and multiple-project PMOs, as shown in the following summary.

Single-Project PMO

- Determine PMO requirements based upon project requirements
  - Create a responsibility matrix showing all the tasks required on one axis and the proposed PMO staff positions on the other axis. Ensure that only one person is responsible for each task.
  - Considering the project life cycle and the task assignments, evaluate the workload of each associate throughout the project life.
- Verify that each proposed PMO member meets the criteria for assignment to the PMO based on workload and nature of the work
  - Management responsibilities for some part of the project
  - Full-time project involvement for a period of at least 6 months
  - Duties that require frequent, close contact with the project manager or other PMO staff
  - Tasks that cannot otherwise be controlled effectively because of the organizational or geographic environment
- Verify that the workload for each PMO member does not exceed a reasonable expectation for one person, or assign more resources
- Identify all functions needed in the project team (residing with the functional organization)
- Determine funding sources and payment authorization procedures (for both project and PMO costs)
- Determine the method for tracking resource charges
- Verify customer expectations
  - Is the customer being charged separately for project management?
  - Are the deliverables clearly specified?
  - Is there any special customer requirements?

Multiple-Project PMO

- Evaluate compatibility of project and PMO requirements with other projects
- Verify compatibility of requirements, organizations, and project managers to be serviced by one PMO
- Evaluate workload, using a composite of the responsibility matrix and life cycle workload analysis for each member
- Identify a dedicated PMO manager acceptable to each project manager. Alternatives include:
  - A dedicated PMO manager, but not one of the project managers being served by the PMO
  - The project administrator or other PMO member assumes the overall management responsibilities
  - One of the involved project managers manages the PMO
- Determine how the charges to the PMO will be apportioned between the projects, based on internal accounting and time reporting systems and the workload analysis

Obtaining Stakeholder Buy-in and Functional Organization Support

After the PMO is established, the project manager is responsible for obtaining buy-in and support needed to continue PMO operations. This includes the following activities:

■ Solicit, negotiate with, and obtain necessary commitments from functional organizations to furnish full-time PMO members for the duration of the project
■ Show value of PMO to stakeholders and organizations contributing resources
■ Develop internal sponsors to ensure that the value of the PMO is understood and that it will be funded continuously

Identifying Information Technology Needs

Based on current or anticipated project support requirements, identify, install, or otherwise provide necessary information technology tools and equipment. Following are the items to consider, individually or in networked combinations:

■ Computers
■ Printers
■ Facsimile
■ Telephones
■ Data lines
■ Software (project management tools, word processing, spreadsheets)
■ Electronic mail

Arranging for PMO Facilities

An effective PMO ideally will have separate facilities, including office space, meeting rooms, and support facilities.

Operating the PMO

The project manager and assigned members perform a number of activities that enable PMO operations to effectively achieve the desired goals of support and service:

■ Supply the project manager with timely and meaningful information
■ Allow no surprises
■ Furnish meaningful status reports and all required deliverables to customer
■ Demonstrate value added to customer, project sponsor, and project manager
■ Remain lean and mean
■ Minimize the number of direct reports to the PMO
■ Maximize control by having associates assigned temporarily from the contributing functional organizations
■ Keep focused on project management work
■ Be able to serve multiple projects
■ Maintain project manager support level of single-project PMO
■ Prioritize work seamlessly, so that each project manager feels like he or she is the only one being supported by the PMO
■ Forecast aggregate workload from individual projects having unrelated scopes, schedules, and life cycles