

3.2

Project Phases and Organization

LEARNING OBJECTIVES

1. Identify the various functions represented on a project.
2. Analyze and evaluate the influence of organizational structure on project functions.
3. Design a project organizational chart for various project complexity profiles.

There is no single organizational approach to projects. Each project is organized to accomplish the work effectively and efficiently. Several factors influence the organizational approach to execute a project. The complexity profile of a project, the culture of the parent organization, the preferences of the project manager, the knowledge and skills of the team, and whether the project management office is in-house or outsourced are some factors that influence the project's organization.



Image by nicholasjon

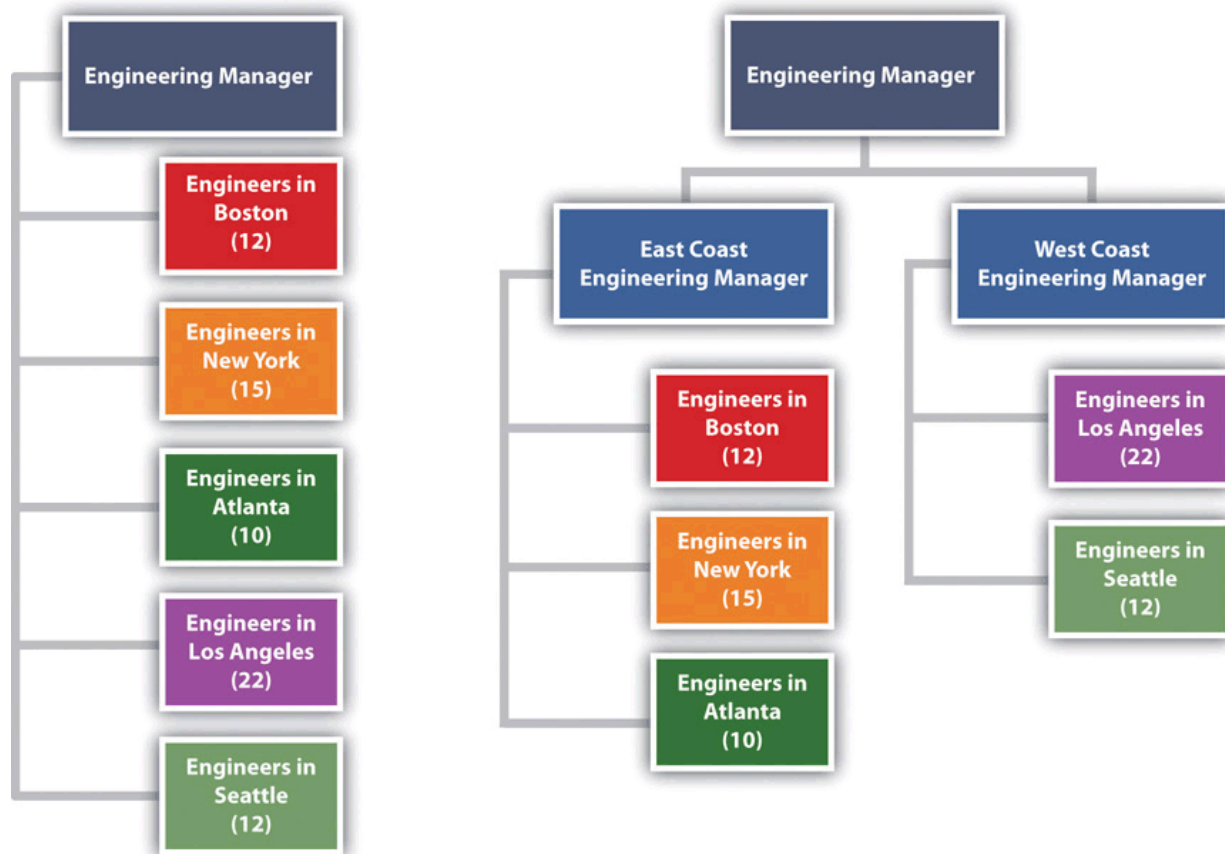
In developing the project organizational structure, the project manager considers the span of control

for each manager. The span of control represents the number of people reporting to a manager. For example, the project manager does not want all of the artists on a project reporting to the art director and assigns lead artists to report to the art director with groups of artists who work on particular aspects of the design reporting to their group's lead artists.

The art director can organize the art department reporting structure so that the various lead artists would report to him or her. For example, the lead artists for various aspects of an instructional design project would report to the art director. On a larger, more complex project, the art director may establish area team leaders and have the art leads for each area report to an area art lead. If the project is geographically dispersed, with areas of the art department in different cities working on the project, then structuring the art function by area provides better coordination and control (see Figure 3.1).

Figure 3.1

Decreasing Span of Control by Increasing Levels of Reporting



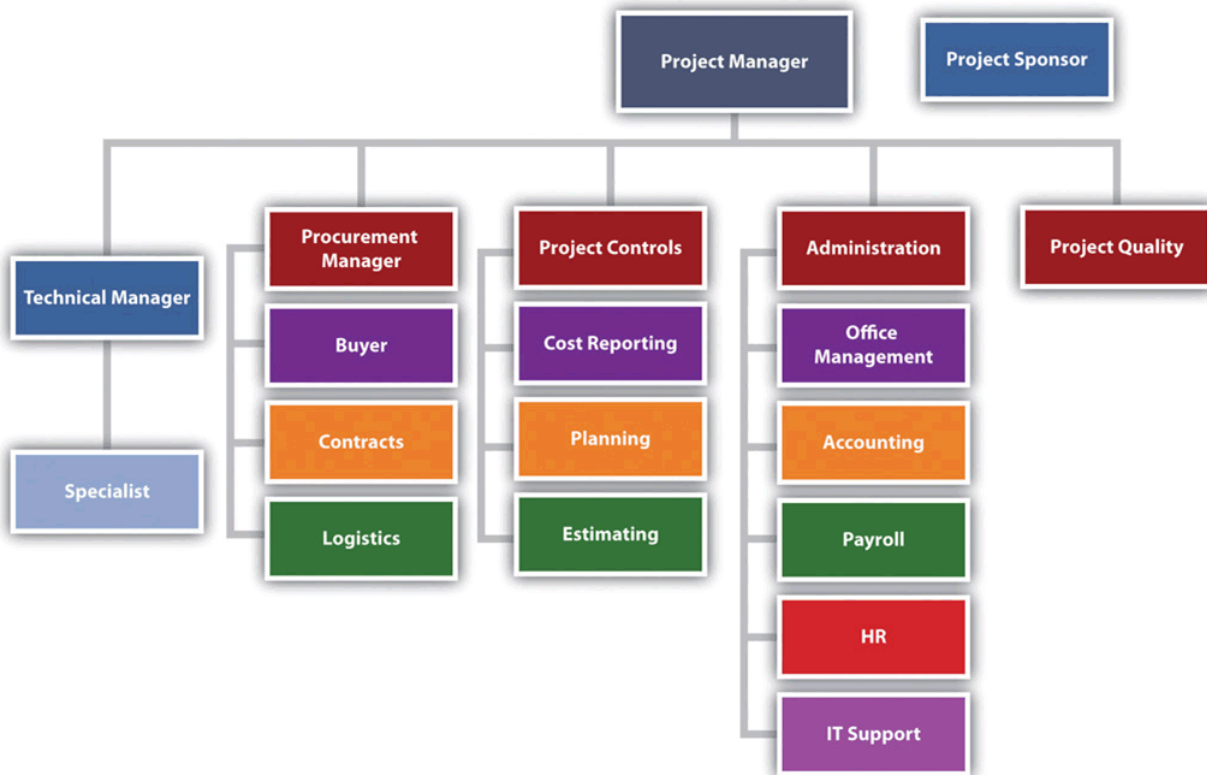
The organization on the left has seventy-one artists reporting to the same person. The organization on the right creates two additional positions and reduces the span of control to thirty-seven and thirty-four, respectively.

Most projects have similar functions that are important to successfully managing the project. Included among these are the following:

- Sponsor
- Project manager
- Controls
- Procurement
- Technical management
- Quality
- Administration

Figure 3.2

Typical Project Organization



On smaller projects, more than one function can be managed by one person. On larger projects, large teams may be needed to accomplish the work within the function.

Project Sponsor

The project sponsor is outside the day-to-day operations of the project and has the organizational authority to provide resources and overcome barriers for the project. The project sponsor is typically a leader in the parent organization with an interest in the outcome of the project. As a leader in the parent organization, the project sponsor can provide input into the project scope and other documents that define project success. The guidance and support from the project sponsor enhances the ability of the project to successfully meet the parent organization's objectives.

Southern Training Center Organization

A training organization in South Carolina assigned a project sponsor to every project. For smaller projects, the regional manager fulfilled the role of project sponsor. On larger, more complex projects, the operations manager was the project sponsor. The vice president was the project sponsor of the three or four most complex projects, and the president was the project sponsor only on projects with a high degree of political risk. This approach to assigning project sponsors assured that each project had an organizational advocate that could address barriers and provide direction and resources. The project sponsor, in this organization, developed a relationship with a senior representative of the client organization, reviewed monthly reports, and conducted thorough quarterly reviews.

Project Manager

Project managers often have the breadth of responsibility associated with corporate chief executive officers (CEOs). The project manager facilitates the start-up of a project and develops the staff, resources, and work processes to accomplish the work of the project. He or she manages the project effectively and efficiently and oversees the closeout phase. Some projects are larger than major divisions of some organizations, with the project manager responsible for a larger budget and managing more risk than most of the organizational leaders. A mining company that builds a new mine in South Africa, an automobile manufacturer that creates a new truck design, and a pharmaceutical company that moves a new drug from testing to production are examples of projects that may consume more resources in a given year than any of the organization's operating divisions.

The function of the project manager can vary depending on the complexity profile and the organizational structure. Defining and managing client expectations and start-up activities, developing the scope, and managing change are functions of the project manager. On some projects, the project manager may provide direction to the technical team on the project. On other projects, the technical leadership might come from the technical division of the parent organization.

Although the functional responsibilities of the project manager may vary, the primary role is consistent on every project. The primary role of the project manager is to lead, to provide a vision of success, to connect everyone involved in the project to that vision, and to provide the means and methods to achieve success. The project manager creates a goal-directed and time-focused project culture. The project manager provides leadership.

Project Control

In general, project controls is both the planning function and the function that tracks progress against the plan. Project control provides critical information to all the other functions of the project and works closely with the project manager to evaluate the cost and scheduling impact of various options during the life of a project.

Sometimes accounting functions such as payroll, budgeting, and cash management are included within project controls. On larger projects, accounting functions are typically separate because the accounting culture tracks expenses to the nearest penny, and cost estimating and tracking by project controls can often be off by hundreds and sometimes thousands of dollars. The lack of definitive information necessitates the development of cost estimates within ranges that are often inconsistent with accounting practices. Separating these two functions allows each to operate within their own

accuracy comfort zone. The following are typical activities included within the project controls function:

- Estimating
- Tracking costs
- Analyzing trends and making projections
- Planning and scheduling
- Managing change
- Tracking progress against schedule

The project controls team gathers this information from all the functions on the project and develops reports that enable each functional manager to understand the project plan and progress against the plan at both the project level and the functional level. On large complex projects, some project managers will assign project controls professionals to work within the major functions as well as the project management office. This approach allows each function to plan and track the function's work in more detail. The project controls manager then coordinates activities across functions.

Project Procurement

The approach to purchasing the supplies and equipment needed by the project is related to the complexity profile of the project and is, therefore, elaborated on in this chapter; however, the procurement process is discussed in more detail in Chapter 9. A small project with a low complexity level may be able to use the procurement services of the parent organization. In an organization where project resources reside in various departments, the departments may provide the supplies and equipment each team member of the project may need.

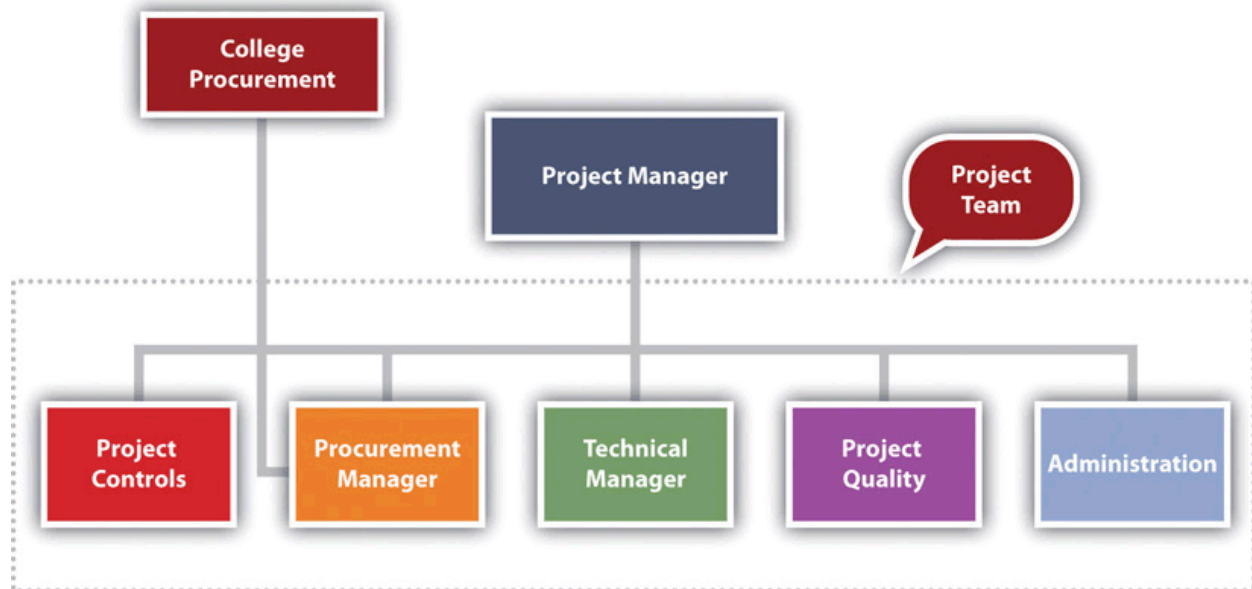
Southern College Procurement Organization

A college in South Carolina chartered a number of projects to increase the energy efficiency of the college. The project team included members from various college departments. Each department paid for the time, travel expenses, and supplies needed by the team member from their department. Each team member continued to use the computers and administrative support in their department for project work. The costs for this support was not included in the project budget nor tracked as a project expense. Equipment purchased by the project that was installed to reduce the energy consumption of the college was purchased through the college procurement department and charged to the project.

More complex projects with greater procurement activity may have a procurement person assigned to the project. This same South Carolina college retrofitted a warehouse to create a new training center for industry. A procurement person was assigned to the project to manage the contract with the construction firm remodeling the space, the purchase and installation of the new training equipment, and the purchase of the supplies needed by the project team. All the procurement activity was charged to the project. The procurement person reported to the project manager for better communication on what the project needed and participated as a member of the project team to understand and provide input into the costs and scheduling decisions. She also reported to the college procurement manager for developing and implementing project procurement processes that met college procurement policies and procedures.

Figure 3.3

Figure 3.3 The Procurement Manager is Part of the Project Team



On larger, more complex projects, the procurement team has several responsibilities. The team is responsible for procuring the supplies and equipment (such as office supplies and computers) needed for the project team and the supplies and equipment (such as the training equipment) needed to execute the project. On an instructional filming project, the procurement team would rent set fixtures, office supplies, and computers for the project team to outfit a film crew on location. The procurement team would also purchase or acquire costumes, make-up artists, catering services, camera operators, and other materials needed for filming.

Procurement for Distance Learning Project in South America

On the large distance learning project in South America, during the initiation phase of the project, the procurement department arranged for office space and supplies for the design teams in Canada, Chile, and Argentina and offices at the site in Argentina. As the design progressed, the procurement team managed bids for the computer equipment and bids for the preparation of the campus site. The procurement team managed the logistics associated with transporting equipment from Europe, North America, and Asia to the job site in rural Argentina. After the completion of the project, the procurement team managed the disposal of project property.

On large, complex projects, the procurement team manages at least three types of relationships with companies doing business with the project.

Commodity Procurement

The largest number of purchased items for most projects is commodity items. Commodities are items that can be bought off the shelf with no special modification for the project. These items are typically bid and the lowest prices that can meet the schedule of the project will win the contract. The procurement team assures the company that wins the bid can perform to the contract specifications and then monitors the progress of the company in meeting the projects requirements. Software for the project and the computers or other technology leased to the project are examples of commodities.

The key to success in managing commodity suppliers is the process for developing the bids and evaluating and awarding the contracts.

Procurement from Vendors

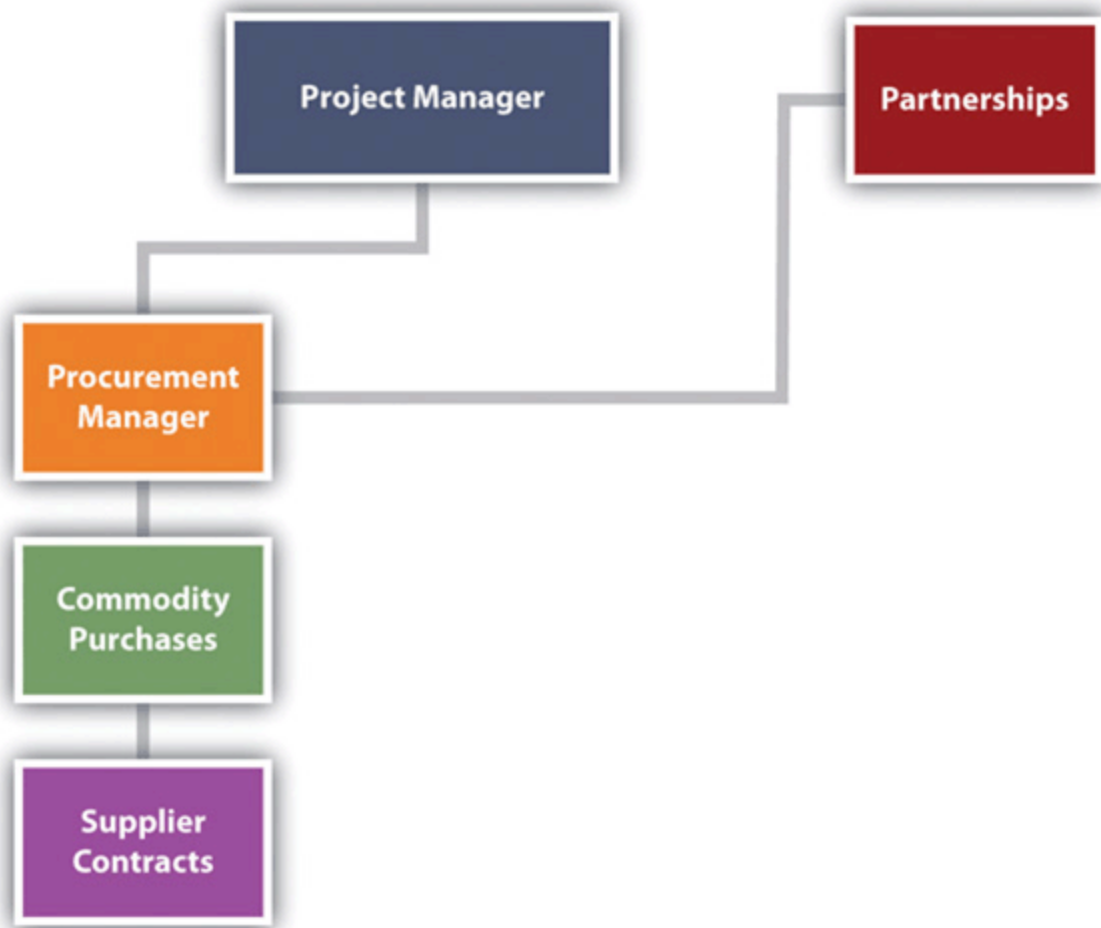
The second type of relationship is the vendor relationship. The terms supplier and vendor are often used interchangeably. In this text, suppliers provide commodities, and vendors provide custom services or goods. Suppliers bid on specialized equipment for the project. Programmers will specify the performance requirements of the equipment, and suppliers that have equipment that meets the requirements will bid on the project. The programming team will assist in the evaluation of the bids to assure compliance with specifications. The lowest bid may not win the contract. Sometimes the long-term maintenance costs and reliability of the equipment may indicate a high price for the equipment. The key to success is the development of clear performance specifications, good communication with potential bidders to allow bidders to develop innovative concepts for meeting the performance requirements, and a bidding process that focuses on the goals of the project.

Partnerships

The third type of project procurement relationship is the partnership. Sometimes the partnership is legally defined as a partnership, and sometimes the success of each partner is so closely tied together that the relationship operates as a partnership. On the South American project, the project team partnered with an Argentinean instructional design company to access the local education practices and relationship with local software vendors. This was a legal partnership with shared profits. The partner also designed and procured some programmed instructional materials on which the success of the project and the company designing the overall project depended. With this type of relationship, a senior manager on the project is assigned to coordinate activities with the partner, and processes are put in place to develop shared goals, align work processes, and manage change.

Figure 3.4

Procurement Manager Relationships



Technical Management

The technical management on the project is the management of the technology inherent in the project—not the technology used by the team to manage the project. The technical complexity on a project can vary significantly. The technological challenges required to build a submarine navigation training system are significantly different from those required to build an instructional unit for first grade math. The technological complexity of the project will influence the organizational approach to the project. The technological complexity for a project reflects two aspects: the newness of the technology and the team’s familiarity with the technology. The newness refers to the degree to which the technology has been accepted in the industry. The more accepted the technology is in the industry usually means that more knowledge and experience will be available to the team. Familiarity refers to the experience the project team has with the technology. The less familiarity the team has with the technology, the more energy and resources the team will expend on managing the technological aspect of the project. For projects with high levels of project technology, a specialist may be hired to advise the technology manager.

Project Quality

Project quality is often part of the technical manager’s responsibility. On large projects or projects

with a high degree of technical complexity, the quality is sometimes a separate function. The project quality manager focuses on the quality of the project work processes and not the quality of the client's product. For example, if the project is to design and construct training for insurance agents, the quality manager focuses on the project work processes and meeting the technical specification of the instructional materials created by the project team. The project quality manager is not responsible for the quality of the instructional materials that the team produces. If the design team's computers, and other support equipment and materials function to the defined project specifications, the quality of the instructional designer team's output is the responsibility of the company's quality department, and it may take several months for the company to refine the work processes to meet the design specifications of the instructional materials.

On an instructional design project, the quality manager may test the programmers to assure the programmers have the skills and that the code meets project specifications. On a training project, the quality manager may review the training curriculum and the qualification of the instructors to assure the training provides the knowledge and skills specified by the client. On a drug development project, the quality manager may develop processes to assure the water and other raw material meet specifications and every process in the development process is properly documented.

Project Administration

The administrative function provides project specific support such as the following:

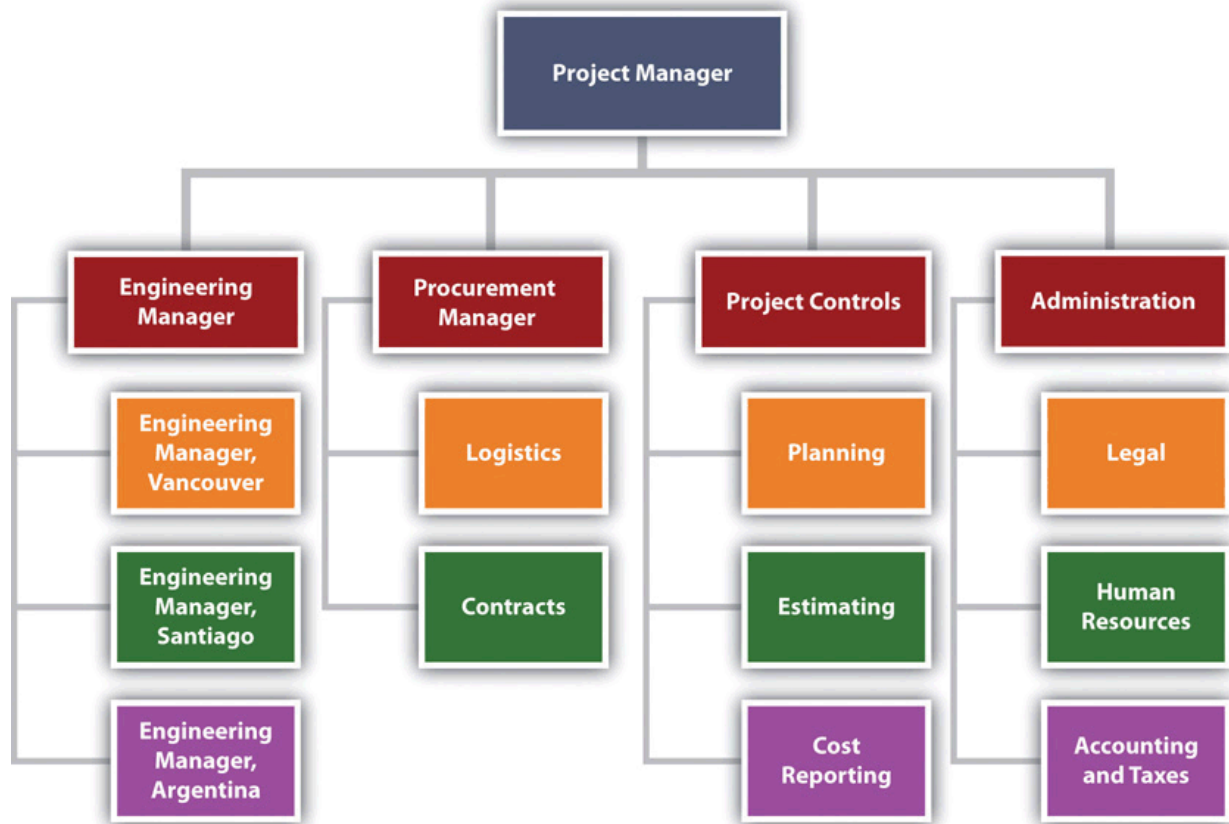
- Accounting services
- Legal services
- Property management
- Human resources (HR) management
- Other support functions found in most organizations

In most organizations, support for these functions is provided by the parent organization. For example, people assigned to the project will get human resources (HR) support from the HR department of the parent organization. Salary, benefits, and HR policies for employees assigned to the project will be supported out of the HR department. The parent organization will provide accounting functions such as determining the cost of cash, taxes, year-end project reports, and property disposal at the end of the project.

The project manager on smaller, less complex projects will have sufficient knowledge about these issues to coordinate with the parent organization's functional leaders. On more complex projects, the project may have an administrative manager responsible for coordinating the administrative functions of the projects. On larger, more complex projects, an administrative function may be established as part of the project team, with many of the functions assigning a resource to the project. In all cases, the administrative function on a project is closely related to the legal and organizational responsibilities of the parent organization and close coordination is important.

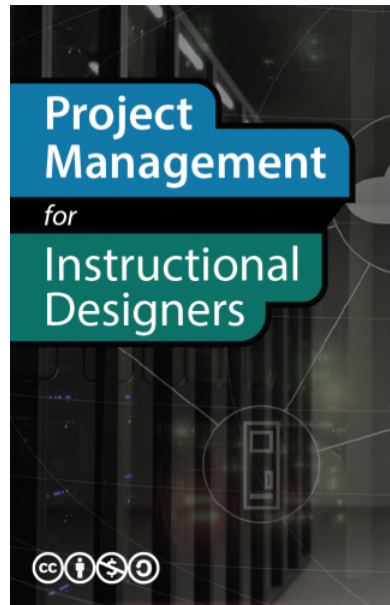
Figure 3.5

Organization for Major International Project



KEY TAKEAWAYS

- Key job functions on a project include the sponsor, project manager, controls, procurement, technical, quality, and administration.
- The project sponsor has the organizational authority to provide guidance and resources and can overcome barriers for the project.
- The project manager is the project leader with broad responsibilities for all phases of the project and for meeting project goals and client expectations.
- The project controls manager is responsible for controlling the project processes, including cost estimating and tracking, developing schedules, tracking progress against schedules, managing changes to the schedule or budget, and analyzing trends.
- The procurement manager is responsible for obtaining the services and materials needed to complete the project. This is accomplished by purchasing commodities, managing contractors who provide services and products, and working with partners.
- The technical manager deals with the issues related to the technology of the project.
- The quality manager monitors the project's processes—not the quality of the product of the project—and takes steps to assure they are done correctly and meet specifications.
- Project administration manages accounting, legal, property, and human resources.



Wiley, D. et al. (2018). Project Management for Instructional Designers. EdTech Books.
<https://edtechbooks.org/pm4id>



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