chapter

3

Organizational Capability: Structure, Culture, and Roles

After completing this chapter, each student should be able to:

- Describe the duties, motivations, and challenges of each of the executive, managerial, and team roles in projects.
- Delineate the attributes one should consider in selecting a person for each of the executive, managerial, and team roles in projects.
- Compare and contrast the advantages and disadvantages of the functional, project, strong matrix, balanced matrix, and weak matrix methods of organization and describe how each operates.
- Given a description of types of projects an organization has, determine and justify the type of organization that is appropriate.
- Describe different project life cycle models and tell when each is appropriate.
- List and describe organizational culture elements that are helpful in planning and managing projects.
- List and describe how to overcome organizational culture elements that hinder successful projects.
- When planning a real project with your team, relate the culture characteristics of your sponsoring organization and how you factor them into your project planning.

As a project is started, several organizational capability questions involving people need to be answered. What impact does the manner in which the firm is organized have on the upcoming project? How does the manner in which people relate to each other and set expectations in the firm impact a project? Who will be involved in the project, and what specifically will each person do? What authority does each have to make decisions? How will they work together? These questions will be addressed in this chapter first by discussing the way the firm is structured and the impact that structure has on projects. This chapter also considers the organization's culture and how it impact projects. Related to both the organization's structure and culture is the project life cycle methodology that is used to plan and manage projects. Most companies that perform a large number of projects eventually choose or develop a standard approach called a "project life cycle" to understand their projects better. Finally, we will turn our attention to typical roles that executives, managers, and associates play in projects. Typically, several roles need to be filled on projects. Many organizations (particularly small organizations) have one person fill more than one role. Large organizations, on the other hand, sometimes have more than one person fill a given role. We discuss each role in turn, starting with those handled by executives.

3.1 Types of Organizational Structures

Contemporary companies choose among various methods for establishing their organizational structure. Organizational structure can be considered to include work assignments, reporting relationships, and decision-making responsibility. Each method of structuring organizations has strengths and weaknesses. In this section, we will investigate various organizational methods and the impact of each on managing projects. The advantages and disadvantages of each organizational form are discussed in the following sections and then summarized in Exhibit 3.5.

Functional

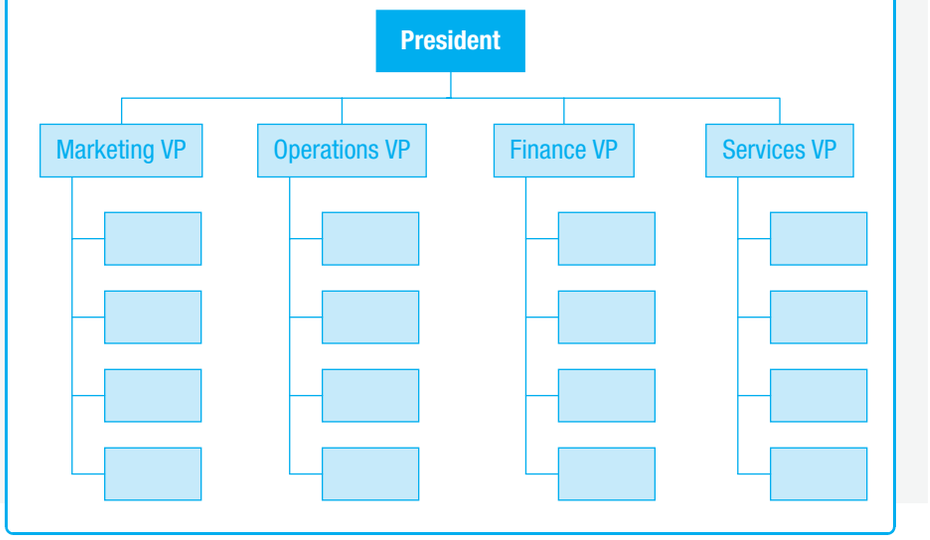
A **functional organization** is "a hierarchical organization where each employee has one clear superior, staff are grouped by areas of specialization, and managed by a person with expertise in that area."[1] This is the traditional approach when there are clear lines of authority according to type of work. For example, all accountants might report to a head of accounting, all marketers report to a head of marketing, etc. An organizational chart for a functional organization is shown in Exhibit 3.1. Note that everyone in the organization reports up through one and only one supervisor. That supervisor is the head of a discipline or function (such as marketing).

The functional manager generally controls the project budget, makes most project decisions, and is the primary person who coordinates project communications outside of the functional areas by contacting his or her peer functional managers.

Advantages

One advantage of the functional form of organization is called "unity of command"—all workers understand clearly what they need to do because only one "boss" is giving them instructions. Another advantage is that since all workers in a discipline report to the same supervisor, they can learn readily from each other and keep their technical skills sharp. A third advantage is

Exhibit 3.1 Functional Organization



that workers know when they finish work on a project they will still have a job since they will continue to report to the same functional manager. For small projects that require most of the work from one department, the functional organization often works well both because of the advantages already stated and the functional manager can share resources among various small projects and centrally control the work.

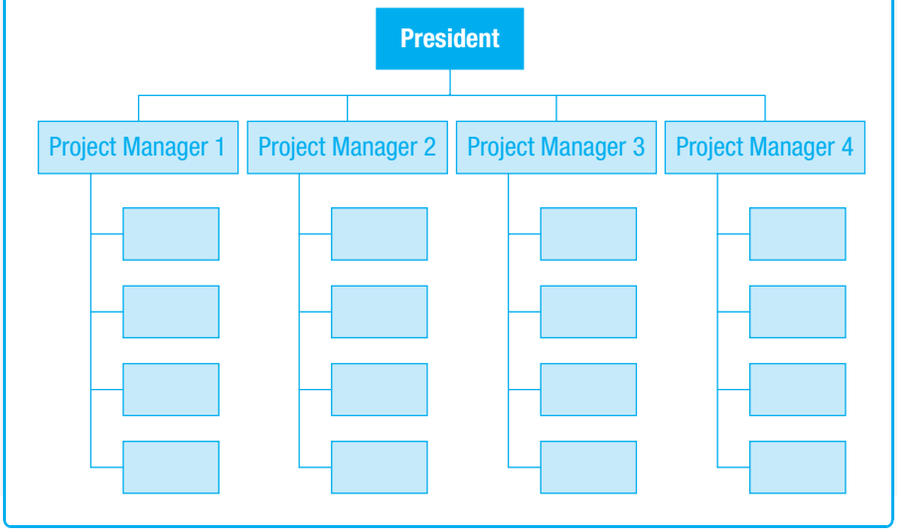
Disadvantages

However, the functional form of organization can make for slow communications when multiple functions need to have input. It also can be challenging from a technical standpoint if input is required from multiple disciplines. The functional manager is probably quite good within his or her domain, but may have less understanding of other disciplines. In small organizations where most people have been forced to understand multiple areas, this may be less of an issue. Coordination between departments is frequently conducted at the manager level as the functional managers have a great deal of decision-making authority. This often means communication needs to first travel up from worker to manager, then across from one functional manager to another manager, then down from manager to worker. These long communication channels often make for slow decision-making and slow response to change. For these reasons, some organizations choose other forms of organization.

Projectized

The exact opposite form of organization is the **projectized organization**, which is defined as "any organizational structure in which the project manager has full authority to assign projects, apply resources, and direct work of persons assigned to the project."[2] In this organizational form, there are no formal departments, or if there are, they are minor and exist primarily to serve the projects. Most people in the organization are assigned to a project and report upward through the project manager as can be seen in Exhibit 3.2. While the structure of the two organizational charts appears similar, the reporting manager is a project manager instead of a functional manager. The project manager has extensive authority for budgets, personnel, and other decision making in this organizational structure.

Exhibit **3.2** **Projectized Organization**



Advantages

The advantages of the projectized organizational form are very different than the advantages of the functional form. Because people from different functions now report to the same project manager, traditional department barriers are reduced. Since the project manager is responsible for communications, response times and decision making tend to be swift. All workers understand clearly what they need to do because only one "boss"—the project manager—is giving them instructions.

Projectized organizational structures often utilize the technique of **co-location**, which is "an organizational placement strategy where the project team members are physically located close to one another to improve communication, working relationships, and productivity."[3] This co-location often results in enhanced project team identity, strong customer focus, and effective integration of effort on the project.

Disadvantages

However, this organizational form also has disadvantages. Team members are often assigned to just one project, even if the project only needs part of their time. This can be costly. Since the project manager is in charge and the team may be physically located on-site rather than with the rest of the organization, some projects tend to develop their own work methods and disregard those of the parent organization. While some of the new methods may be quite useful, project teams not watched closely can fail to practice important organizational norms and sometimes do not pass the lessons they learn on to other project teams. Team members who are co-located, while learning more about the broader project issues, often do not keep up their discipline-specific competence as well. Team members sometimes worry about what they will do when the project is completed.

Matrix

Each of the extreme strategies already described (extreme in the sense that either the functional manager or the project manager has a great deal of authority) has great advantages, yet significant weaknesses. In an attempt to capture many of the advantages of both, and to hopefully not have too many of the weaknesses of either, many organizations use an

intermediate organizational strategy in which both the project manager and the functional manager have some authority and share other authority.

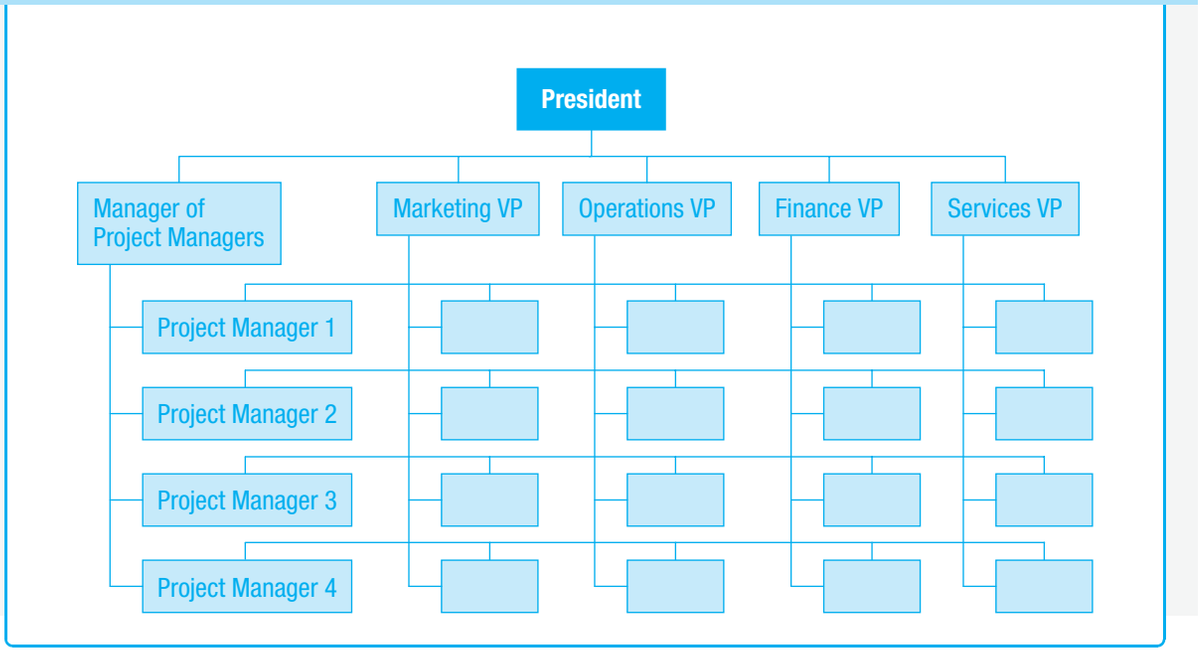
This intermediate strategy is the **matrix organization**, which is "any organizational structure in which the project manager shares responsibility with the functional managers for assigning priorities and directing work of persons assigned to the project."[4] A matrix organization is shown in Exhibit 3.3. Note that project team members report to both functional and project managers. This is a clear violation of the unity of command principle; however, it is necessary to enjoy the benefits of a matrix organization. In short, the hoped-for benefit of a matrix structure is a combination of the task focus of the projectized organizational structure with the technical capability of the functional structure.

Advantages

Matrix organizations have many advantages, which is why an increasing number of companies are using some variation of them today. One advantage is that since both project and functional managers are involved, there is good visibility into who is working where, and resources can be shared between departments and projects. This reduces possible duplication—a major advantage in this age of lean thinking in business. Since both types of managers are involved, cooperation between departments can be quite good. There is more input, so decisions tend to be high-quality and are better accepted. This is a major issue since enthusiastic support for controversial decisions often helps a project team work through challenges. Since people still report to their functional manager, they are able to develop and retain discipline-specific knowledge. Since the various disciplines report to the same project manager, effective integration is still possible. Because people report to both the project manager who is responsible for capturing lessons learned, and to the functional manager who is responsible for how the work in a function is performed, lessons learned can be shared effectively between projects.

Yet another advantage of the matrix form is its flexibility. The amount of decision-making authority can be shared equally in whatever manner is desired. When the functional

Exhibit **3.3** **Matrix Organization**



managers have relatively more power, it is almost like a functional organization. This is how many organizations start evolving—by giving project managers a bit more decision-making authority. This is called a "weak matrix" since the project managers have less authority than functional managers. The next step in the progression is a balanced matrix in which project managers and functional managers have about equal power. Finally, a strong matrix is one where the project managers have more power than functional managers. This is more similar to a projectized organizational form. The progression of forms is shown in Exhibit 3.4.

Disadvantages

The matrix organizational form has drawbacks as well. Some people claim that having two bosses (both a functional manager and a project manager) is a disadvantage. This problem certainly needs to be managed since the two managers may each try to do what they think is best for their project or department and may give conflicting advice. However, this is common territory for most people. Most students take multiple classes per term. Most companies have multiple customers. Having to balance competing demands can be difficult, but it is very normal for most people. Since more people are providing the necessary input, there are more sources of conflict, more meetings, and more challenges to control. Decisions may not get made as fast.

Firms need to consider which organizational structure is best for them in the sense that they can capitalize on its advantages and mitigate its disadvantages. These decisions can change over time. Exhibit 3.5 summarizes a comparison of organizational structures.

Closely related to the organizational structure is another organizational decision that needs to be made—that of organizational culture. Project managers are not often part of the executive group that decides on organizational structure or organizational culture, but they certainly need to understand how these decisions impact reporting relationships, decision-making methods, and commitment for their projects.

Project Management Office

Note that in a matrix organization a new role is inserted in the organizational chart—that of manager of project managers. Sometimes this person leads an office called the "project management office (PMO)." In some organizations, an additional manager will be in the reporting chain between the project managers and the person in charge (shown as the president). In other matrix organizations, the project managers will report directly to the person in charge. For simplicity, this chart shows each function with four workers and each project with four team members. In actuality, some functions may have more workers than others and some projects may have more team members than others. In fact, some people may only report to a functional manager since they are not currently assigned to a project and others may report to more than one project manager since they are assigned on a part-time basis to multiple projects. Those people will have more than two supervisors.

While both project managers and functional managers have certain authority in any matrix organization, the extent of this authority can vary substantially. Often, the project manager

Exhibit **3.4** **Progression of Organizational Forms**

Organizational Form	Functional	Weak Matrix	Balanced Matrix	Strong Matrix	Projectized
Who has power?	FM almost all	FM more	Equally shared	PM more	PM almost all

Exhibit 3.5 Organizational Structure Comparison

	Functional	Matrix	Projectized
Who makes most project decisions?	Functional manager	Shared	Project manager
Advantages	• Good discipline-specific knowledge • Easy for central control • Effective for shared resources • "One boss" • Clear career path for professionals	• Flexible • Easy to share resources • Good cooperation between departments • More input for decisions • Wide acceptance of decisions • Good discipline-specific knowledge • Effective integration on project • Increased knowledge transfer between projects	• Break down department barriers • Shorter response time • Quicker decisions • "One boss" • Enhanced project team identity • Customer focus • Effective integration on project
Disadvantages	• Slow communication between departments • Slow response to change • Slow decision making	• "Two bosses" • Many sources of conflict • More meetings • Slow reaction time • Hard to monitor and control	• Duplication of resources • Rules not always respected • Potential lessons learned can be lost • Discipline-specific knowledge can slip • Less career continuity for project team members

Source: Adapted from Richard L. Daft and Dorothy Marcic, *Understanding Management,* 5th ed. (Mason, OH: Thomson South-Western, 2006): 269; *PMBOK® Guide,* 28; and Erik W. Larson and David H. Gobeli, "Matrix Management: Contradiction and Insight," *California Management Review* (Summer 1987): 129–131.

has authority to determine what work needs to be accomplished and by when. The functional manager often retains authority to determine how the work is accomplished. Sometimes, the two managers will negotiate to determine which workers will be assigned to the project. While both hopefully want the best for the overall organization, each has specific responsibilities. For example, the functional manager with several workers reporting to her wants each employee to have enough work but not be overloaded. She also wants all workers to grow in expertise. The project manager, on the other hand, wants the best workers for the project so she can be more assured of delivering good results. In a case like this, when they negotiate, the project manager may want the best resource (who is already busy) and the functional manager may offer the least experienced resource (who is available).

One other source of potential conflict between the project and functional managers deals with performance reviews. Often, the functional manager is tasked with writing performance reviews, yet some workers may spend a great deal of their time on projects. If the project managers are not allowed to provide input into the performance reviews, some project team members will work harder to please their functional managers and the projects can suffer. One project manager offers ideas regarding performance reviews in Exhibit 3.6.

3.2 Organizational Culture and Its Impact on Projects

Just as project managers need to understand the structure of the parent organization, they also need to understand the culture of the parent organization if they are to communicate effectively. Organizational culture is comprised of the formal and informal practices and the values that are shared among members of the organization and are taught to new members. "Values are deep seated, personal standards that influence our moral judgments, responses to others, and commitment to personal and organizational goals."[5] Through shared values, organizational cultures can informally:

- motivate the ethical actions and communications of managers and subordinates;
- determine how people are treated, controlled, and rewarded;
- establish how cooperation, competition, conflict, and decision making are handled; and
- encourage personal commitment to the organization and justification for its behavior.[6]

Once a project manager understands the culture of the parent organization, he can determine how to best develop the culture within his project. Many projects are completed cooperatively between two or more parent organizations, or one organization (a contractor) will perform the project for the other organization (a client). Whenever more than one parent organization is involved, the project manager needs to understand the culture of each well enough to facilitate effective project communications and decision making.

Culture of the Parent Organization

When a project manager studies the culture of the parent organization, she needs to ask the following questions:

- What is the orientation of the corporate culture in general?
- What are the ascribed values?

Exhibit 3.6 360-Degree Performance Reviews

In some organizations, the functional manager performs a 360 degree evaluation. This appraisal style requires that the functional manager seek feedback from a representative sample of the staff that have worked with that project team member to provide feedback on a 360 degree form. Being appraised by your peers or team members on a given project is considered best practice because they've observed the individual in action "in the trenches." Many large organizations use this appraisal technique since in large and/or complex organizations some staff rarely see their direct supervisor or manager depending upon their function in that organization.

Source: Written by Naomi J. Kinney, CPLP—Principle Consultant, MultiLingual Learning Services.

- How is the organization viewed by others in terms of living the values?
- How does the organization like to communicate internally and externally?
- How well does the organization support project management specifically?

Types of Power

One framework that is helpful in understanding a corporate culture distinguishes the following four types of power according to what is the most powerful motivator:

1. power culture,
2. role culture,
3. task culture, and
4. person culture.

Power cultures exist when the supervisor exerts a great deal of economic and political power and everyone tries to please the boss. Those in formal authority control competition, conflict resolution, and communication.

Role cultures motivate everyone to understand and closely follow their appointed roles. Reliable workers follow formal designations of responsibility with utmost respect for regulations and laws.

In task cultures, it is more important to get the job done than to worry about who does the work or who gets credit. Skill-based assignments, self-motivated workers, and more deference paid to knowledge than to formal authority are hallmarks of task cultures.

In personal cultures, people show genuine interest in the needs of workers, consider worker development as critical to the organization's success, and display an attitude that collaboration is satisfying and stimulating.[7]

Many organizations will have one dominant culture, modified by at least one of the other types. An astute person will look not only for what people say when trying to understand the culture, but also actions, decisions, symbols, and stories that guide behavior.

A variety of organizational culture characteristics make project success more likely. These characteristics include support for cross-functional teams, stakeholder involvement, integrity, innovation, open communication, continuous improvement, respect for individuals, project management competencies, and a common project management language.[8]

Midland Insurance Company

Midland Insurance Company espouses its values by giving every employee the "One Pager" that lists the organization's mission, strategic imperatives, and core values. The CEO, John Hayden, will often pull his "One Pager" out at meetings and expects everyone else to do likewise. In talk, and in action, Midland tries to live out the core values that comprise its organizational culture. Exhibit 3.7 shows Midland's culture.

Hixson Architecture and Engineering

A second example of organizational values comes from Hixson Architecture and Engineering. The firm's values guide its employees' practice as can be seen in Exhibit 3.8.

Culture of the Project

While some of the project's culture is dictated by that of the parent organization, effective sponsors and project managers can do many things to promote a good, working culture within the project. Many times, participants on a project have not worked together previously and may even come from parts of the organization (or outside organizations) that have historically been rivals. The sponsor and project manager need to understand

Exhibit 3.7 Midland Insurance Company Values

- Integrity
- Win/Win
- Team
- Humility
- Strong Work Ethic
- Creativity
- Propriety
- Sharing/Caring
- Personal Growth

Source: Martin J. Novakov, American Modern Insurance Group.

Exhibit 3.8 Hixson Architecture and Engineering Values

Welcome to Hixson

Insight, advocacy and Intelligent Project Execution

Well-designed, cost-effective projects that meet your needs today and prepare you for the changing environment of tomorrow don't just happen by chance. At Hixson, our **insight** will demonstrate our knowledge and experience to help you consider all the issues. Through our **advocacy**, you will have the confidence that we are working - unbiased - on your behalf. In addition, the practical ways we stay with projects to effective conslusions are at the heart of everything we do. That's **intelligent project execution**.

Standing firmly behind each of these goals are Hixson's values: to be the employer of choice for our associates, build impenetrable client loyalty and creatively contribute to our communities. These are the principles that guide our actions and enable our employees, our clients and the communities where we work and live to benefit from our involvement.

Put your projects on the right path... right from the beginning. Discover Hixson today!

Source: Hixson Architecture Engineering Interiors.

organizational politics and work to develop cooperation both within the core project team and among the various groups of project stakeholders.

When the project sponsor and manager are determining how to create the project culture, ethics should be an important consideration. One aspect of an ethical project culture is to determine how people should act. Project sponsors and managers learn that they need to act in the best interests of three constituencies: the project itself—attempting to deliver what is promised; the project team—encouraging and developing all team members; and the other project stakeholders—satisfying their needs and wants. Ethical project managers make decisions so that one of the three constituencies does not suffer

unfairly when satisfying the other two. One list of behaviors adapted from the *PMI Code of Ethics and Professional Conduct* tells project managers to exhibit the following:

- Responsibility—take ownership for decisions.
- Respect—show high regard for ourselves, others, and resources.
- Fairness—make decisions and act impartially.
- Honesty—understand the truth and act in a truthful manner.[9]

The other aspect of an ethical culture is how people actually act. Every project has difficult periods and the measure of project ethics is how people act at those times. The project manager needs to show courage both in personally making the right decisions and in creating an atmosphere in which others are encouraged to make the right decisions. An ethical project culture in which people know how to act and have the courage to do so yields better ideas; when a spirit of mutual trust prevails, everyone participates with their ideas and effective partnering relationships within and beyond the project team.

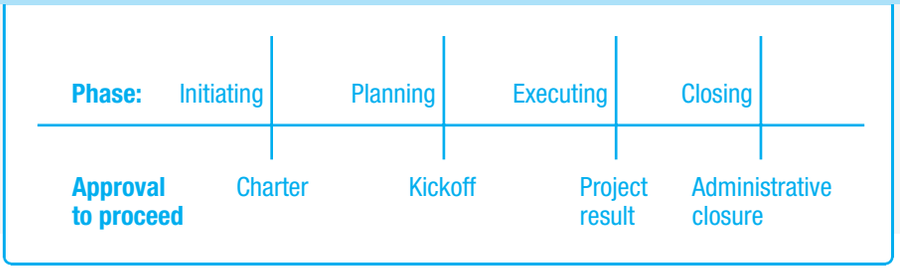
3.3 Project Life Cycles

All projects go through a predictable pattern of activity or project life cycle. Project planning teams use project life cycle models because various types of projects have differing demands. A research and development project may require a certain test to be performed before management approves the expenditure of large amounts of cash while the manager of a quality improvement project may need to document how the work is currently performed before it makes sense to experiment with a new method. The major types of project life cycle models, while differing in details, have some things in common.

1. They all have definite starting and ending points.
2. They involve a series of phases that need to be completed and approved before proceeding to the next phase.
3. The phases generally include at least one initiating, one planning, one closing, and one or more executing phases.
4. The various life cycle models are all frequently adapted by the company where they are used to better fit with the organizational culture and language.

We will now look at several generic models that represent the variety used in improvement, research, construction, and information systems projects. In the remainder of the book, we will deal with a generic model that includes initiating, planning, executing, and closing as shown in Exhibit 3.9.

Exhibit **3.9** **Generic Project Life Cycle Model**



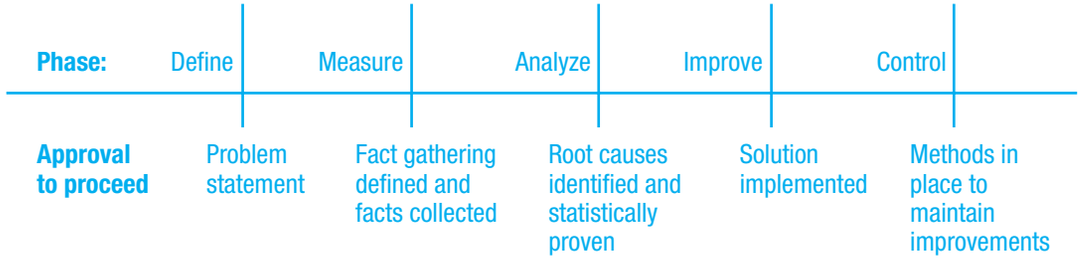
Define-Measure-Analyze-Improve-Control (DMAIC) Model

Many firms use projects to plan and manage quality and productivity improvement efforts. Various models are used for these improvement efforts. While these models appear to be somewhat different, they all strive to use facts to make logical decisions and to ensure that the results are as desired. The Six Sigma approach to quality improvement (a popular current approach explained in Chapter 11) uses the DMAIC model. A simple version of this model is shown in Exhibit 3.10.

Research and Development (R&D) Project Life Cycle Model

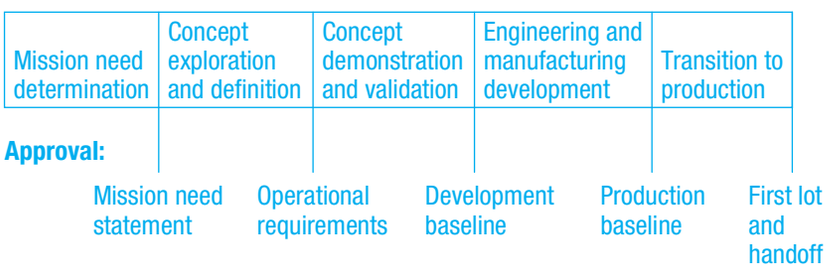
Many organizations use project management techniques to organize, plan, and manage research and development efforts. These can vary in length from as much as a decade for taking a new pharmaceutical from idea to successful market introduction to as little as a few weeks to reformat an existing food product and deliver it to a client. Some R&D project models are complex and have many phases because of huge risks and demanding oversight, yet some are much simpler. One simple R&D model adapted from defense development projects is shown in Exhibit 3.11.

Exhibit 3.10 DMAIC Model



Source: Adapted from James R. Evans, and William M. Lindsay, *An Introduction to Six Sigma & Process Improvement,* Thomson South-Western, Mason, OH (2005): 488–491.

Exhibit 3.11 R&D Project Life Cycle Model



Source: Adapted from A.J. DiMascio, *The Project Cycle, (a chapter in) Military Project Management Handbook,* David I. Cleland, James M. Gallagher, and Ronald S. Whitehead, eds., New York: McGraw-Hill, Inc. (1993): 10.17–10.32.

Construction Project Life Cycle Model

Just as in other project applications, since construction projects differ greatly in size and complexity, a variation of project life cycle models are in use. A generic construction project life cycle model is shown in Exhibit 3.12.

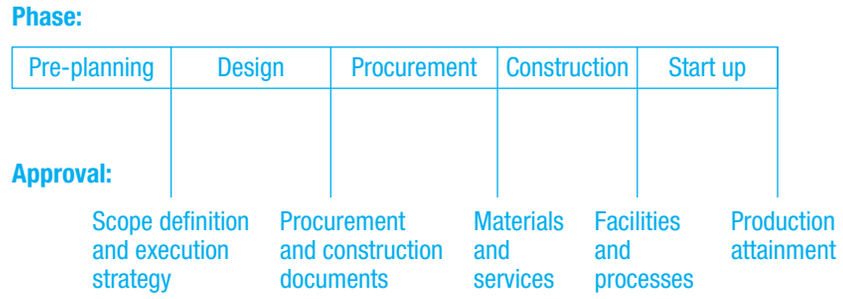
Information Systems (IS) Project Life Cycle Model

Many life cycle models are applied to information systems projects. Some variations may exist because:

- time pressures encourage rapid development,
- multiple versions of hardware and software may cause some features to be postponed, and
- some systems may be much more complex than others.

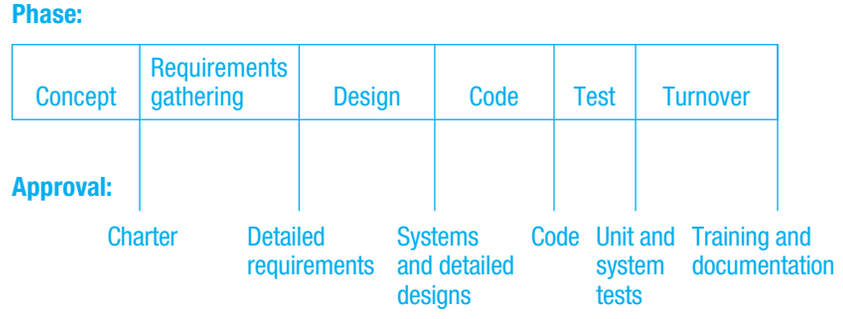
Nevertheless, most IS project life cycle models have some features in common. They all include requirements gathering and testing. Often, the testing overlaps with writing code. A generic IS project life cycle model is shown in Exhibit 3.13.

Exhibit 3.12 Construction Project Life Cycle Model



Source: Adapted from James D. Stevens, Timothy J. Kloppenborg, and Charles R. Glagola, *Quality Performance Measurements of the EPC Process: The Blueprint,* Construction Industry Institute, Austin, Texas (1994): 16.

Exhibit 3.13 Information Systems Project Life Cycle Model



Source: Adapted from Robert K. Wysocki, *Effective Software Project Management,* Wiley Publishing Inc., Indianapolis, IN (2006): 38–52.

3.4 Project Executive Roles

Projects do not exist in a vacuum. They exist in organizations where they require resources and executive attention. Projects are the primary method that organizations use to reach their strategic goals. As such, a variety of players need to be involved at the executive, managerial, and associate levels as shown in Exhibit 3.14. Especially in small organizations, one person may perform more than one role. For example, a sponsor may perform some or all of the activities normally expected from the customer. The three project executive roles are the steering team (ST), the sponsor, and the chief projects officer (CPO).

Steering Team

In small to medium-sized organizations, the steering team (sometimes known as the executive team, management team, leadership team, operating team, or other titles) will often consist of the top person in the organization and his or her direct reports. They should collectively represent all of the major functions of the organization. In larger organizations, there may be steering teams at more than one level. When that occurs, the steering teams at lower levels are directed and constrained by decisions the top-level steering team makes. Some organizations will divide the duties of the steering team by creating project review committees and delegating tasks to them. In any event, the duties of the steering team revolve around the following five activities:

- Overall priority setting
- Project selection and prioritization
- Sponsor selection
- General guidance
- Encouragement

The steering team will generally set overall organizational priorities with the CEO. This is a normal part of strategic planning as described in Chapter 2. Once the overall organizational goals have been set, the steering team will agree on the criteria for selecting projects and then select the projects the organization plans to execute during the year. Once the overall project list is complete, they will determine the relative priorities of the projects to determine which will start first.

Simultaneously, the steering team should help the CEO decide who will sponsor potential upcoming projects. In turn, the steering team will often help the sponsor select the project leader. In some cases, the steering team even gets involved in deciding which critical team members will be on the project. This is especially true if very few people in the organization have highly demanded skills. The steering team can decide which project these people will work on as part of the prioritizing effort.

Exhibit **3.14** **Project Executive, Managerial, and Associate Roles**

Executive Level	Managerial Level	Associate Level
Steering team (ST)	Functional manager (FM)	Core team member
Sponsor	Project manager (PM)	Subject matter expert (SME)
Chief projects officer (CPO)	Facilitator	
	Customer	

Guidance from the steering team includes feedback during formal reviews as well as informal suggestions at other times. Since steering teams understand how important project success is in achieving organizational objectives, they will normally demand to have formal project reviews. These can occur either at set calendar times or at a project **milestone**, which is "a significant point or event in the project."[10] At these formal reviews, the steering team can tell the project team to continue as is, to redirect their efforts in a specific manner, or to stop the project altogether.

In terms of informal suggestions, it is very empowering to project participants if the steering team members ask how the project is going and offer encouragement when they run into each other in the normal course of work. It shows project participants that their work is important and has high visibility in the organization.

Sponsor

PMI defines a sponsor as "the person or group that provides financial resources, in cash or in kind, for the project."[11] In this sense, the sponsor is normally an individual who has a major stake in the project outcome. Sponsors often perform a variety of different tasks that help a project, both in public and behind the scenes. Sponsors conduct both offensive strategies that position the project well and defensive strategies that head off potential difficulties. These are shown in Exhibit 3.15. The sponsor for major projects is often a member of the steering team. On smaller projects, the sponsor may hold a lower position in the organization.

As a member of the steering team, the sponsor should understand the corporate strategy and be prepared to help with project selection and prioritization. Sponsors should pick the project manager and core team (sometimes with help from the project manager and/or others). Sponsors should mentor the project manager to ensure that person understands his role and has the skills, information, and desire to successfully manage the project.

In the next chapter, we will discuss chartering. Sponsors ideally take a very active role in chartering the project by creating a first draft of the business case and scope overview statements for the project. If a sponsor does not take time for this, the project manager needs to ask questions to elicit this business case and scope overview information. Then, the sponsor should insist that a milestone schedule, preliminary budget, risk identification, assessment criteria, communication plan, and lessons learned be developed by the project

Exhibit 3.15 Sponsor Strategies for Guiding Projects

Offensive Strategies	Defensive Strategies
Selecting, prioritizing, and resourcing project	Understanding reasons for project failure
Understanding project success criteria	Determining and/or facilitating tradeoff decisions
Defining roles	Establishing assessment criteria
Defining business case	Insisting on risk identification and analysis
Writing scope overview	Insisting on meeting management
Insisting on milestone schedule development	Insisting a communications plan is developed
Insisting on preliminary budget development	Insisting lessons learned are developed and used
Establishing project culture	Personally committing and insisting on others' commitment

manager and team. The sponsor will then either personally approve the charter or take the charter to the steering team for approval.

As the project progresses, the sponsor will help behind the scenes by obtaining resources, removing roadblocks, making high-level decisions, and interfacing between the project core team and the executive team. Sponsors often share their vision for the project with various stakeholders. When providing staff, sponsors ensure they are adequate in number and skill. This may include training. It may also include negotiating for staff. Sponsors often let their project managers arrange this training and negotiate for resources. However, the sponsor needs to make sure that both are satisfactorily completed.

Once again, sponsors with experienced project managers may merely need to ensure their project managers have the means in place to monitor and control their projects. Large projects with many stakeholders should have formal kickoff meetings. The sponsor's presence demonstrates corporate commitment. Sponsors represent the customer to the project team. The sponsor must ensure that several important customer-related tasks are performed as follows:

- All customers (stakeholders) have been identified.
- Their desires have been uncovered and prioritized.
- The project delivers what the customers need.
- The customers accept the project deliverables.

Again, the project manager should do much of this, but the sponsor is also responsible for its completion. While sponsors represent their projects, they also represent the larger organization. As such, they often should be one of the first persons to determine the need to stop a project that is no longer needed or is not performing adequately.

Chief Projects Officer/Project Management Office

Organizations need to have one person who "owns" their project management system and is responsible for all the people who work on projects. While different companies use different titles for this position (such as project director or manager of project managers), we will use the title chief projects officer (CPO). Just as companies' size and complexity vary greatly, so does the role of chief projects officer (CPO). Large companies frequently have a project management office (PMO). The PMO performs the CPO role. At small companies, the CPO role may be performed very informally by the CEO who also juggles many other time demands. Companies in the medium-size range may find it useful to appoint an executive who already has other responsibilities as the CPO. Executives who perform this role include human resources director, chief finance officer, VP of Marketing, and president of North American Operations. Ensuring projects are planned and managed well is so central to the success of most companies that a highly capable individual is normally assigned this responsibility.

So, what are the responsibilities of the chief projects officer? They include ensuring that the company's steering team:

- identifies potential projects during strategic planning;
- selects a manageable set of projects to be implemented;
- prioritizes effectively within that set;
- ensures enough resources (people, money, and other resources) are available to perform the projects;
- selects appropriate project sponsors and teams;
- charters the project teams;

- monitors and controls the implementation of the projects;
- rewards the participants; and
- enjoys the results of successful projects!

If that is not enough, the CPO also ensures that each individual serving on a project:

- receives the training he or she needs;
- captures lessons learned from completed projects;
- uses lessons learned from previous projects on new projects; and
- uses templates and standards when appropriate.

3.5 Project Management Roles

The manager-level roles in projects include the functional manager, project manager, facilitator, and customer.

Functional Manager

Functional managers are often department heads. Projects come and go, but departments generally remain. Functional managers will have a large role in deciding how the project work in their functional area is done. Functional managers and project managers may negotiate who will be assigned to work on the project.

Generally, top management in an organization needs to decide how the relative decision-making power in the organization is divided between project managers and functional managers. Organizations that are new to formalized project management often start with functional managers having more power. Often, this changes over time until project managers for big projects have relatively more power.

Project Manager

The project manager is the focal point of the project. He or she will spend a large amount of time communicating with everyone who is interested in the project. The project manager will lead the planning, execution, and closing of the project. This person ideally should be a flexible, facilitating type leader. Since project managers are responsible for the project schedule, they will have a large role in deciding when project activities need to be accomplished. Project managers are trusted with delivering project results needed by their parent organizations. As such, project managers need to be worthy of that trust by possessing both integrity and necessary skills. "Skills and knowledge can be acquired through learning and practice."[12]

Desired Behaviors

Exhibit 3.16 shows a few of the behaviors project managers can develop first in regard to integrity and then in regard to each of the nine project management knowledge areas needed to successfully plan and manage projects. This book describes some of the factual knowledge project managers need to acquire to become proficient. Project managers also need to acquire experimental knowledge by practicing these behaviors on projects. Not all project managers will become equally adept at each behavior, but an understanding of the behaviors exhibited by excellent project managers is a great way to start. Remaining chapters in this book will elaborate on these behaviors.

Collectively, all of these skills make for a great, well-rounded project manager.

Exhibit 3.16 Desired Project Manager Behaviors

Integrity:
A great project manager demonstrates integrity by making honest decisions, caring for and protecting people, defending core values, leading major change, believing in self and team, honoring trust, showing respect, establishing a project culture of honesty, and displaying total commitment to both project and people.

Communications:
An effective project manager displays good communications by listening well, communicating well orally, advocating the project vision, maintaining enthusiasm, focusing attention on key issues, establishing order in situations of ambiguity, working through conflict appropriately, seeking senior management support, and openly sharing information.

Human Resources:
A people-oriented project manager effectively handles human resource issues by leading in a facilitating manner when possible and forcefully when needed, using various forms of credibility, developing an effective project team, inspiring confidence, attracting and retaining workers for projects, creating a sense of urgency when needed, making decisions cooperatively when possible, and empowering team members.

Integration:
A great project manager is an effective integrator by leading the chartering process, coordinating assembly of a detailed and unified project plan, balancing the needs of all stakeholders, making sensible tradeoff decisions, monitoring earned value, keeping all efforts focused on the primary objectives, and clearly understanding how the project supports organizational goals.

Schedule:
A time-sensitive project manager is an effective scheduler by leading schedule development, understanding resource and logic limitations, understanding the project life cycle, focusing on achieving key milestones, and making schedule decisions while continuing to be aware of cost and scope issues.

Scope:
A perceptive project manager deftly handles project scope by obtaining a deep understanding of stakeholder wants and needs, determining true requirements, learning whether a proposed change is essential or merely useful, utilizing effective change control to stop unnecessary scope creep, demonstrating flexibility when change is needed, while continuing to be aware of cost and schedule issues.

Quality:
A quality-focused project manager achieves the right project quality by learning customer expectations and how they relate to organizational objectives, insisting project decisions are made based upon facts, utilizing lessons learned from previous projects, ensuring effective work processes are used, leading testing, changing what does not work, questioning work processes, and continually demonstrating quality to stakeholders.

Risk:
A secure project manager effectively deals with project risk by openly identifying risks and opportunities, honestly evaluating each, developing avoidance strategies when practical, cooperatively establishing mitigation strategies when necessary, courageously recommending actions up to and including project cancellation if necessary, monitoring all risks and opportunities, and ensuring risk learning is used in the organization.

(Continued)

Exhibit 3.16 Desired Project Manager Behaviors (Continued)

Procurement:
A supply-minded project manager effectively procures necessary project goods and services by fearlessly making honest decisions on whether to make or buy items, accurately documenting all requirements, identifying and fairly considering all potential sellers, selecting sellers based upon project and organizational needs, proactively managing contracts and relationships, and ensuring delivery of useful products and services.

Cost:
A cost-effective project manager maintains cost control by developing an accurate understanding of the project scope, learning various means of cost estimating and when each is appropriate, determining reliable cost estimates, assigning costs equitably to cost centers, controlling all project costs, calculating and honestly reporting cost variances in a timely manner, and making appropriate decisions while being aware of scope and schedule issues.

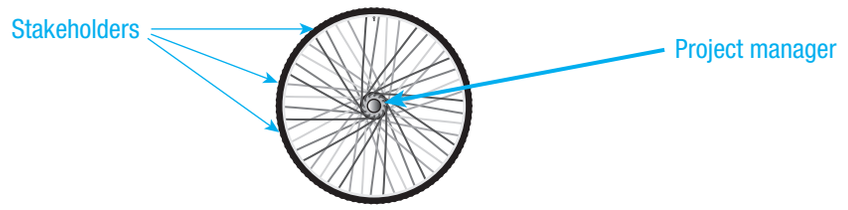
Communication Channels

Envision a bicycle wheel as shown in Exhibit 3.17. The project manager is like the hub, and the spokes are like the many communication channels the project manager needs to establish and use with project stakeholders. While there are many project manager requirements, some of the technical needs can probably be delegated, but every project manager needs integrity, leadership, and communications skills.

Challenges

Project managers deal with several challenges. One is that they often have more responsibility than authority. This means they need to persuade people to accomplish some tasks rather than order them to do so. Project managers can create interesting and challenging work assignments for their team members. Many people find this stimulating. Project managers can more effectively attract followers when they display high integrity and the ability to get the job done. This includes both technical ability and communications ability. Project managers primarily deal with "networks" of people both within and outside their parent company. An effective PM knows how to get to the source of the networks. A challenge for project managers is determining how networks function within certain organizational cultures. This is why organizational culture is so important. What are the

Exhibit 3.17 Project Manager Communication Channels



networks within the organization? How do people work, communicate, and problem solve beneath the function of their job titles?

Do not assign a rookie project sponsor and rookie project manager to the same project. While the sponsor normally mentors the project manager, when a sponsor is new, some of the mentoring may go the other way—just as a master sergeant may help a new lieutenant learn about leading troops.

Judgment Calls

Due to the very nature of projects—each one having a unique set of stakeholders, output, and project team—project managers cannot always follow a cookbook approach in how they manage. They must develop judgment. Exhibit 3.18 lists some judgment calls that project managers need to be prepared to make on a frequent basis.

Facilitator

Many situations in project management require facilitation because the situation is so complex and/or because the opinions are so varied. Sometimes, the workers on a project need to expand their thinking by considering the many possibilities (possible projects, approaches, risks, personnel, and other issues). Other times, the workers on the project need to focus their thinking by selecting from many options (a project, an approach, a contractor, or a mitigation strategy). Some project managers and sponsors can and do facilitate many of the meetings. However, the project manager may prefer to focus on the

Exhibit 3.18 Project Manager Judgment Calls

A few general questions that project managers need to ask themselves to develop judgment are as follows:

- When to change expectations vs. when to accept them
- When to lead vs. when to follow
- When to act vs. when to analyze
- When to promote order (control) vs. when to promote innovation (freedom)
- When to repeat vs. when to change
- When is project conflict constructive vs. when is it destructive
- When to focus on the big picture vs. when to focus on details
- When to take over vs. when to let the team perform
- When to demonstrate optimism vs. when to demonstrate pessimism
- When to lead vs. when to administer
- When to focus on technical vs. when to focus on behavioral
- When to concentrate on the short term vs. when to focus on the long term
- When to focus communications inside the project vs. when to focus them outside
- When to advocate for the project vs. when to accept termination
- When to focus on organizational goals, project goals, personal career goals, and team member career goals
- When to enhance, maintain, or accept changes in scope, quality, cost, and schedule

content of a meeting and enlist a facilitator to help focus on the process of the meeting. In these situations, an outside facilitator may be useful. Often, a disinterested sponsor or project manager (one who works on other projects, but not on this one) is used when a facilitator is needed. Sometimes, the chief projects officer or an outside consultant is used to facilitate.

Customer

While the specific demands of the customer role are spelled out here, understand that some or all of this role may be carried out by the sponsor—particularly for projects internal to a company. When a busy customer buys something, it may be tempting to just place an order and have it delivered. That process is fine for an off-the-shelf item or for a transactional service. Often, when it is a one-of-a-kind project, hands-off ordering does not work. The question then becomes: What does a customer need to do to ensure the desired results? Exhibit 3.19 shows a list of seven tasks a customer can do before and during a project to enhance the probability of success. The customer performs three of these tasks independently and the other four jointly with the project contractor. The three customer-only project tasks are prioritizing the project need, carefully selecting a good contractor, and killing the project if necessary. The four joint tasks are writing and signing the project charter, developing clear and detailed requirements, setting up and using project control systems, and conducting a great project kick-off meeting.

Independent Tasks

The first requirement is to prioritize each project. The knowledge that one particular project is the highest priority for a company should be communicated, and that project should be tackled by the "A Team." A related prioritization question is: Do we need this project so badly right now that we are willing to start it even without the skilled personnel, resources, or technology on hand that would improve the probability of successful completion? If so, ensure this particular project gets top billing. If not, consider delaying it. Some accrediting bodies now require customers to prioritize projects as shown in Exhibit 3.20.

The second customer task is to carefully select a competent and honest contractor to perform the project. All of the important joint tasks will be much easier with the right contractor, the probability of success will go up, and everyone's stress level will go down.

The third customer task is to determine whether to pull the plug on a troubled project. This could happen right at the start if the project appears to be impractical. It could happen during detailed planning when the requirements, schedule, budget, risks, or other aspects indicate trouble. More often, it occurs during project execution when the project progress does not live up to the plan. A customer needs to decide when to stop throwing good money after bad.

Exhibit 3.19 Customer Tasks on Projects

Independent Tasks	Joint Tasks with Contractor
1. Prioritize project.	1. Write and sign charter.
2. Select good contractor.	2. Develop clear requirements.
3. Kill project if needed.	3. Use control system.
	4. Conduct kickoff meeting

Exhibit 3.20 Joint Commission Requires Project Prioritization

In a hospital environment, the Joint Commission on Accreditation for Healthcare Organizations (JCAHO) requires that hospitals prioritize *improvement* projects from a quality standpoint, demonstrating gradual improvement in patient care. When JCAHO comes for their unannounced accreditation visits, they will ask how leadership prioritizes their improvement projects. It is usually done by an improvement coordinating committee of individuals or it could be an entire quality management department (in larger organizations). They will be looking at (and approving) ALL requests for hospital-wide improvement projects to see which project will give the hospital the "best bang for it's buck." From a quality lens, it is optimum to receive suggestions from the employee's themselves.

The coordinating committee (or quality department) will consider some of the following criteria when approving improvement projects:

1. Will it help the hospital remain fiscally/financially sound?
2. Will the project be an improvement for patients and families?
3. Will the project improve the level of customer service we're providing our patients, guests and visitors?
4. Will the project help mitigate a high-risk situation for the hospital?

Source: Written by Naomi J. Kinney, CPLP—Principle Consultant, MultiLingual Learning Services.

Joint Tasks with Contractor

The first joint task for customers to get involved in is creating and ratifying the project charter. The charter (as explained more fully in Chapter 4) is a broad agreement concerning the project goals, rationale, risks, timeline, budget, approach, and roles—even though all of the details have yet to be determined. The charter should help to identify projects that appear risky or otherwise impractical from the outset. These projects should either be scrapped, or a different approach should be used. If the project looks promising, both the contractor and the customer normally sign the charter and feel morally bound to its spirit.

Once the key players sign a charter, the contractor and customer need to develop the detailed requirements. One of the challenges many customer companies have is that different members have different expectations from the project. Somehow the conflicting desires of these multiple people in the customer's organization need to be combined into one set of requirements and provided to the people who will perform the project work. A senior customer representative and the project manager frequently work together to determine the requirements.

The customer and the contractor often work together to set up and use several project control systems. One of these is a communications plan (which will be explained in Chapter 5). Since the customer is often the recipient of communications, he needs to tell the contractor what he needs to know, when he needs to know it, and what format will be most convenient. This should include regular progress reports. Second is a change control system (also explained in Chapter 5). Most projects will have multiple changes. A method must be created to approve potential changes, document their impact, and ensure that they are carried out as agreed. Third is a risk management system (explained in Chapter 10). Customers should work with developers to brainstorm possible risks, consider how likely each risk is to occur, measure a risk's impact should it happen, and develop contingency

plans. The customer needs to ensure that effective communications, change management and risk management systems are used.

Customers must help plan and participate in a project kickoff meeting. This meeting should be widely attended, give everyone involved in the project a chance to ask questions, and be used to build excitement for the project.

Customers get what they pay for on projects, but only when actively involved in key activities. Customers have the sole responsibility of prioritizing their own needs, selecting a contractor to perform their project, and terminating a project that is not working. Customers share with their contractor responsibility for crafting and agreeing to a project charter, articulating requirements, developing and using project control systems, and conducting an informative and energetic project kickoff.

3.6 Project Team Roles

The team- or associate-level roles in projects are core team members and subject matter experts.

Core team members understand all aspects of the project and stay with the project through completion.

Core Team Members

Core team members are the small group of people who are on the project from start to finish and who jointly with the project manager make many decisions and carry out many project activities. If the project work expands for a period of time, the core team members may supervise the work of subject matter experts who are brought in on an as-needed basis. Ideally, the core team is as small as practical. It collectively represents and understands the entire range of project stakeholders and the technologies the project will use. It is generally neither necessary nor useful to have every single function represented on the core team since that would make communication and scheduling meetings more difficult. Also, if every function is represented directly, team members tend to fight for turf.

The most ideal type of core team member is one who is more concerned with completing the project (on time, with good quality, and on budget if possible) than with either personal glory or with only doing work in his or her own discipline. He or she will do what it takes to get the project done.

Subject Matter Experts

While core team members are typically assigned to the project from start to finish, many projects also have a specific and temporary need for additional help. The necessary help may be an expert who can help make a decision. It may be extra workers who are needed at a busy time during the life of the project. Some extra help may be needed for as little as one meeting; other extra help may be needed for weeks or months. These extra helpers are often called "subject matter experts (SMEs)" since they are usually needed for their specific expertise.

Subject matter experts are sometimes called "extended team members." They are brought in for meetings and for performing specific project activities when necessary. A project could have almost any number of SMEs depending on its size or complexity.

SMEs are not on the core team, but still are essential to the project. SMEs may be on a project for a long time and thus almost indistinguishable from core team members.

However, SMEs may spend only a little time on a particular project and, therefore, may not relate strongly to it. At times, it is a struggle to get them scheduled and committed. Typically, a project manager would have a newly assigned SME read the project charter and the minutes from the last couple of meetings before discussing the project with him. It is a balancing act to ensure that the SME understands what she needs to do and how important it is, without spending a great deal of time in the process.

Summary

Projects are accomplished either within an organization or between multiple organizations when different firms work together. Project managers are more effective if they understand the impact the organization has on the project. In contemporary society, different organizations choose different organizational structures because they feel there is an advantage in their unique circumstance. While many are still officially organized in a traditional, functional manner, an increasing number of organizations have at least informal matrix relationships. The days of having only one boss are gone for many workers—and especially for many project managers. Each form of organization has strengths and challenges with respect to projects.

Organizations also have a culture—the formal and informal manner in which people relate to each other and decisions are made. The hierarchical approach with the boss having supreme authority has long vanished in many places. Many organizations today use a more collaborative approach—some much more than others. Whatever the approach, project managers need to understand it and the impact it creates on their project. Project managers and sponsors need to create a culture in their project that is consistent with, or at least can work effectively with, that of the parent organization. Both organizational structure and culture can become more complicated if more than one organization is involved in the project and if they differ in these respects.

Projects follow a predictable pattern or project life cycle. Many industries have typical project life cycles, but they vary greatly. A project manager needs to at least understand what project life cycle model is used at her organization and often needs to select or modify the project life cycle to the specific demands of the project.

Multiple executive-, managerial-, and associate-level roles need to be performed in projects. The project manager is a central role and the subject of this book. Project managers need to understand the other roles and relate effectively to them.

Key Terms from the *PMBOK® Guide*

Functional organization 47
Projectized organization 48
Co-location 49
Matrix organization 50
Milestone 60

Chapter Review Questions

1. Describe project management responsibilities.
2. Indicate how project managers can ensure their project work is accomplished even though they may lack formal authority.
3. Review characteristics that should be considered when selecting team members.
4. Describe how a strong (project) matrix is different from a weak (functional) matrix.
5. List advantages and disadvantages of functional, projectized, and matrix forms of organization.
6. Describe the responsibilities of each of the following: sponsor, steering team, CPO, functional manager, project manager, facilitator, customer, core team member, and subject matter expert.

7. Work assignments, reporting relationships, and decision-making responsibility are all components of:

   a. organizational culture.
   b. organizational structure.
   c. co-location.

8. In a functional organizational structure, everyone in the organization has one supervisor, also known as chain of command.

   True
   False

9. Which organizational structure is often used for small projects that require most of their work from a single department?

10. Which organizational structure has no formal departments?

11. What is co-location, and why is it used?

12. In a matrix organizational structure, to whom do project team members report?

13. Name some possible consequences to a project if the project manager does not provide input into team member performance reviews.

14. List each of the four organizational culture types with respect to power and briefly describe what is the strongest motivator for each type.

15. For what five activities is the project steering team responsible?

16. What additional role may a steering team member sometimes play?

17. Who should select the project manager and the core team?

18. Who is responsible for ensuring that the steering team completes its tasks?

19. What types of control systems should a customer and contractor work together to set up and utilize?

Discussion Questions

1. List and defend three advantages and three disadvantages of the matrix form of organization.

2. Describe how organizational structures and cultures may change with project management experience.

3. Review the primary organizational culture characteristics and disclose why each is important in managing projects.

4. Describe multiple methods project leaders can employ in leading by example.

5. Define your project code of ethics.

6. Utilize qualities of effective project leaders to resolve ethical conflicts on projects.

7. List and describe at least four organizational culture characteristics that increase the likelihood of project success and tell why each is helpful.

8. List and briefly describe each of the project executive roles.

9. Describe a possible imbalance between a project manager's authority and responsibility and the impact it may have on a project.

10. Compare and contrast the two associate-level project roles.

11. Is it important to choose a member from every impacted function of a project for the core team? What is the impact of your decision?

Exercises

1. Given a scenario, select a preferred organizational structure and justify your selection.

2. Describe, with examples, how your project manager did or did not exhibit desirable project manager behaviors as described in Exhibit 3.16.

3. Briefly describe how the sponsor of your project is or is not displaying appropriate offensive and defensive strategies as described in Exhibit 3.15.

Example Project

For your example project, describe the organizational structure of the agency or company for which you are planning the project. Describe as many of the organizational culture attributes as you can. List, by name, as many of the project executive, management, and team roles as you can identify. Be sure to assign roles to yourselves. How do you anticipate that the organizational structure, culture, and role assignments help or hurt your ability to successfully plan this project? Describe the project life cycle model that is used in the organization—and if one is not currently used, describe the life cycle model you plan to use and tell why it is appropriate.

References

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (Newtown Square, PA: Project Management Institute, 2004).

Aldag, Ramon J. and Loren W. Kuzuhara, *Mastering Management Skills* (Mason, OH: Thomson South-Western, 2005).

Andersen, Erling S., "Understand Your Project's Character," *Project Management Journal* (December 2003): 4–11.

Baker, Bud, "Show Integrity," *PM Network* (March 2004): 22–24.

Bigelow, Deborah, "Does Your Organization Have a CPO?" *PM Network* (September 2003): 20.

Blomquist, Tomas and Ralph Muller, "Practices, Roles and Responsibilities of Middle Managers in Program and Portfolio Management," *Project Management Journal* (March 2006): 52–66.

Buckingham, Marcus and Donald O. Clifton, *Now, Discover Your Strengths* (New York: Free Press, 2001).

Burns, Lawton R., "Matrix Management in Hospitals: Testing Theories of Matrix Structure and Development," *Administrative Science Quarterly* (1989): 349–368.

Covey, Steven R., "Ethics of Total Integrity" in Laura Pincus Hartman, ed., *Perspectives in Business Ethics* (Chicago, Irwin McGraw-Hill, 1998): 105–109.

Crawford, Lynn, "Developing Organizational Project Management Capability: Theory and Practice," *Project Management Journal* (August 2006): 74–86.

Daft, Richard L. and Dorothy Marcic, *Understanding Management,* 5th. ed. (Mason, OH: Thomson South-Western, 2006).

DiMascio, A. J. *The Project Cycle, (a chapter in) Military Project Management Handbook.,* editors David I. Cleland, James M. Gallagher and Ronald S. Whitehead, New York: McGraw-Hill, Inc.

Evans, James R. and William M. Lindsay, *An Introduction to Six Sigma & Process Improvement,* Thomson South-Western, Mason, OH (2005): 488–491.

Foti, Ross, "The Price of Authority," *PM Network* (May 2004): 34–42.

Foti, Ross, "Thinking Free," *PM Network* (August 2004): 27–32.

Fretty, Peter, "Make a Move," *PM Network* (January 2006): 36–42.

Hauschildt, Jurgen, Gesche Keim, and John W. Medcof, "Realistic Criteria for Project Management Selection and Development," *Project Management Journal* (September 2000): 23–32.

Herrenkohl, Roy C., *Becoming a Team: Achieving a Goal* (Mason, OH: Thomson South-Western, 2004).

Hixson Architecture Engineering Interiors, http://www.hixson-inc.com/about/history.asp, accessed May 15, 2007.

Jedd, Marcia, "True Colors," *PM Network* (December 2005): 56–60.

Jiang, James J., Gary Klein, and Houn-Gee Chen, "The Relative Influence of IS Project Implementation Policies and Project Leadership on Eventual Outcomes," *Project Management Journal* (September 2001): 49–55.

Kendra, Korin, and Laura J. Taplin, "Project Success: A Cultural Framework," *Project Management Journal* (April 2004): 30–45.

Kent, Simon, "The Buck Stops Here," *PM Network* (February 2006): 42–46.

Kloppenborg, Timothy J., "The 10 Commandments of Assessing Project Management Maturity," *PM Network* (November 1999): 64–66.

Kloppenborg, Timothy J. and Charles R. Glagola, *Quality Performance Measurements of the EPC Process: The Blueprint* (Austin, Texas: published by Construction Industry Institute 1994): 16.

Kloppenborg, Timothy J. and Joseph A. Petrick, *Managing Project Quality* (Vienna, VA: Management Concepts, 2002).

Kloppenborg, Timothy J. and Joseph A. Petrick, "Project Life Cycles and Group Character Development," *Project Management Journal* (June 1999): 8–13.

Kloppenborg, Timothy J., Deborah Tesch, Chris Manolis, and Mark Heitkamp, "An Empirical Investigation of the Sponsor's Role in Project Initiation," *Project Management Journal* (August 2006): 16–25.

Ladika, Susan, "Treat Diversity as Your Asset for Uncommon Goals," *PM Network* (November 2003): 24–28.

Larson, Erik W. and David H. Gobeli, "Matrix Management: Contradiction and Insight," *California Management Review* (Summer 1987): 127–138.

Laufer, Alexander, Todd Post, and Edward J. Hoffman, *Shared Voyage: Learning and Unlearning from Remarkable Projects* (Washington, DC: National Aeronautics and Space Administration, 2005).

Lussier, Robert N. and Christopher F. Achua, *Leadership: Theory, Application, and Skill Development,* 3rd. ed. (Mason, OH: Thomson South-Western, 2007).

Mullaly, Mark, "Longitudinal Analysis of Project Management Maturity," *Project Management Journal* (August 2006): 62–73.

Pennypacker, James S. and Kevin P. Grant, "Project Management Maturity: An Industry Benchmark," *Project Management Journal* (March 2003): 4–11.

Project Management Institute Code of Ethics and Professional Conduct, http://www.pmi.org/prod/groups/public/documents/info/AP_PMICodeOfEthics.pdf.

Royer, Paul S., *Project Risk Management: A Proactive Approach* (Vienna, VA: Management Concepts, 2002).

Salwin, Peter, "Fostering Innovation and Entrepreneurship in a Value Driven Organization," *Leadership and Management in Engineering* (July 2003): 153–158.

Sheridan, Richard B., "Innovate Inside the Box," *PM Network* (May 2004): 19.

Shiba, Shoji, Alan Graham, and David Walden, *A New American TQM: Four Practical Revolutions in Management* (Portland, OR: Productivity Press, 1993).

Sotiriou, Dean and Dennis Wittmer, "Influence Methods of Project Managers: Perceptions of Team Members and Project Managers," *Project Management Journal* (September 2001): 12–20.

Turner, Susan G., Dawn R. Utley, and Jerry D. Westbrook, "Project Managers and Functional Managers: A Case Study of Job Satisfaction in a Matrix Environment," *Project Management Journal* (September 1998): 11–19.

Vandersluis, Chris, "Think about 'Projectizing' Your Business," *Computing Canada,* 03190161, Vol. 24, Issue 36 (September 28, 1998).

Wang, Xiaojin, "Dimensions and Current Status of Project Management Culture," *Project Management Journal* (December 2001): 4–17.

Ward, J. Leroy, "Project Management Techniques for Adaptive Action," *Chief Learning Officer* (December 2005): 20–23.

Whitten, Neal, "Role Clarification," *PM Network* (February 2004): 22.

Wysocki, Robert K., *Effective Software Project Managemant* (Indianapolis, IN: Wiley Publishing Inc., 2006): 38–52.

Zimmerer, Thomas W. and Mahmoud M. Yasin, "A Leadership Profile of American Project Managers," *Project Management Journal* (March 1998): 31–38.

Endnotes

1. *PMBOK® Guide* 362.
2. Ibid.
3. *PMBOK® Guide* 354.
4. *PMBOK® Guide* 364.
5. Ramon J. Aldag and Loren W. Kuzuhara, *Mastering Management Skills* (Mason, OH: Thomson South-Western, 2005).
6. Adapted from Erling S. Andersen, "Understand Your Project's Character," *Project Management Journal*

(December 2003): 4 and Ramon J. Aldag and Loren W. Kuzuhara, *Mastering Management Skills* (Mason, OH: Thomson South-Western, 2005).

7. Adapted from Erling S. Andersen, "Understand Your Project's Character," *Project Management Journal* (December 2003): 4–11.
8. Adapted from Korin Kendra and Laura J. Taplin, "Project Success: A Cultural Framework," *Project Management Journal* (April 2004): 30–45.
9. *PMI Code of Ethics and Professional Conduct (Newtown* Square, PA: Project Management Institute, 2006): 12–13.
10. *PMBOK® Guide* 364.
11. *PMBOK® Guide* 376.
12. Marcus Buckingham and Donald O. Clifton, *Now, Discover Your Strengths* (New York: Free Press, 2001): 30.
13. Shoji Shiba, Alan Graham, and David Walden, *A New American TQM: Four Practical Revolutions in Management* (Portland, OR: Productivity Press, 1993).

Project Management *in action*

Developing Organizational Integrity through Revolutionary Management

Greg Fischer, Iceberg CEO, has studied management and leadership with his company and with other company CEOs for many years and has adapted a model first developed by Shiba, Graham, and Walden[13] to explain his view of modern management. Fischer's model, called The Five Revolutions of Management, is shown in Exhibit 3.21.

The first revolution, leadership, deals with setting the direction and culture of the organization. It also recognizes that leaders need to manage interactions of processes and people and to improve all business systems.

The second revolution, customer focus, deals with truly understanding all of an organization's customers and using that knowledge in making important business decisions.

The third revolution, speed, recognizes that the pace of change in organizations is far faster than it used to be and that leaders need to utilize various methods for accelerating the speed at which their companies can both create and react to change.

The fourth revolution, total participation, is that all workers in a company should be part of work teams and that the work teams should be given time and direction to work on important problems.

The fifth revolution, mutual learning, recognizes that companies frequently require rapid, break-through improvement that can only come from being exposed to new ideas from outside the organization.

The result of the five revolutions is organizational integrity where opportunities abound.

Exhibit 3.21 The Five Revolutions of Management

Speed
- Annual planning/hoshin
- Reactive problem solving
- Proactive problem solving
- Cycle time reduction
- Measurement system
- Personal PDCA
- Technology strategy

Leadership
- Purpose
- Mission
- Values and beliefs/culture
- Strategic planning
- Manage interactions
- Business system improvement

Mutual learning
- Benchmarking
- Seminars
- Study groups
- Roundtables

Customer focus
- Customer loyalty process
- Value of the customer
- Concept engineering

Organizational integrity
- The result of a virtuous system
- Opportunity proliferation

Total participation
- 100% Natural work team participation
  - Systematic business improvement process
  - Systematic alignment method
  - Systematic mobilization method
  - Shared leadership development

Source: Greg Fischer, Iceberg Ventures.