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## 2 Leading Project Teams

Interest in and demand for project management has increased a great deal over the past 20 years. This increase in interest and demand can be seen in a number of ways. One way is in the number of books oriented to project management, which now number in the thousands. Another is in the growth of training programs offered in project management, which are now widely available and also number in the thousands.<sup>1</sup> Still a third way is in college recruiting. Recruiters often develop much more interest in students when they mention their project management training or their experience in leading project teams. Perhaps most indicative of interest in project management is the results one gets from simply “Googling” project management.

Part of this increase in demand is due to growth in what can be called “traditional” project work. Most of the early work in project management was done by engineers working for large “performing” companies that conducted large-scale projects for outside clients.<sup>2</sup> Working on projects like high-rise construction or large weapon systems, these professionals developed most of the project management tools we now use. Certainly, demand for these kinds of projects has increased over the years.

Interest in project management, however, has grown in a number of other areas as well. One of these areas is new product development. Product life cycles have shrunk a great deal because organizations have turned to using new product development as a competitive strategy. To remain competitive, organizations have to constantly update and remodel what they offer their customers. Companies have found that bringing new products to market is best managed in a project environment using cross-functional project teams.

Another area of growth is in the demand for new organizational processes. Organizations not only have to constantly develop new products to remain competitive, but they have to constantly develop themselves as well. From quality circles to “Tiger Teams,” organizations have looked to project teams to reinvent and reengineer themselves to attain ever-increasing levels of quality and efficiency.

These kinds of challenges have produced what might be called a “project mindset.” Whenever something of significance needs to be done—a problem solved or an opportunity seized—higher management assembles project teams to do the work. Whether the projects are making process improvements, starting new ventures, developing new client services, finding and opening new market niches, or even running political campaigns, leaders have come to value project management tools and skills in planning and conducting them.

With this broadening of project work, the composition of project teams has also changed. Although many are still composed of builders or engineers, most are not. Members come from all walks of life and from all professions. Project teams are assembled in laboratories, universities, government offices, school districts, on the shop floor, and in the executive suite, to name just a few project “work sites.”

The level of skills required for these project teams has also changed. Although the full range of skills used by professional project engineers is always useful, most of the need is for more entry-level project skills. Smaller projects depend less on sophisticated tools to do such tasks as cost or risk analysis and depend much more on tools needed to organize projects, clarify deliverables, work with stakeholders, and manage and lead project teams.

This book is written to help convey entry-level project tools and skills for the newcomer to project management. It is designed so it can be used as a supplemental text in courses dedicated to topics other than project management. In these kinds of venues, its aims are twofold. First, it aims to help student teams become more effective at doing course projects by learning project management techniques and applying them to their work. Teams are simply more effective and learn more when they have the skills to do the course’s projects well. Second, it aims to help prepare students to enter the kind of “project life” that has come to dominate so much of modern organizational work. From whatever area of study students emerge, recruiters see project training and experience as value added, and this gives the student a comparative advantage over those who have not benefited from such training.

This book, then, is designed to be of help in a wide range of professional programs. This includes, of course, undergraduate and MBA-level business courses such as business strategy, entrepreneurship, organizational behavior, information systems, project management, and operations management, among others. It was also written, however, to serve project management needs in a wider range of curricula including education, health care, sciences, information technology, engineering, political science, and other programs whose students will someday be called on to lead project work in their field. Since its first publication, it has been used in a variety of consulting and training venues as well.

In the remainder of this chapter, we examine some of the fundamental notions of what characterizes projects and what makes them unique. We then turn our attention to how the basic tools of project management are addressed in this book as well as essential elements of successful project leadership.

## PROJECT FUNDAMENTALS

### DEFINING CHARACTERISTICS OF PROJECTS

The Project Management Institute defines a **project** as a temporary endeavor undertaken to create a unique product, service, or result.<sup>3</sup> The two defining characteristics of projects, then, are that they are unique and temporary.

#### *Projects Are Unique*

Projects are unique in terms of the outcomes they produce. Just how unique they are, however, can vary a great deal. At one extreme, we might find the development of new weapons systems. They may require yet-to-be-developed composites for armor, space-age munitions, cutting-edge guidance systems, and the like. Most projects, however, produce products and services far less exotic. Custom-built homes, for example, are unique from one another but similar in other respects: basics of foundations, wiring, plumbing, and the like. When a company opens a new market area, it is likely producing a unique outcome, although the company may have opened many others in the past—each new one is likely different in some significant way from all the others. Although these projects may not present the design challenges of a new weapons system, those who lead them know how challenging they are.

This leads us to another aspect of what makes projects unique. They are unique in terms of how they are conducted. They are unique in terms of their staffing, their stakeholders, the resources used, when things have to be done, how work is to be coordinated, and a host of other operational aspects.

It is because organizations face these kinds of challenges on an almost daily basis that project management tools and skills have become so much in demand. There is little doubt that these tools and skills can help with these kinds of projects. How they are used to plan and control a project, however, is always a problem-solving process, and each new project has to be handcrafted.

#### *Projects Are Temporary*

Projects are also temporary endeavors. They have a life cycle that fundamentally affects their structure, dynamics, and operations and, as a result, their management. Project life cycles have been described in a number of ways, but we will focus on five stages: initiation, planning, launch, execution, and closing.<sup>4</sup> **Project initiation** is the stage in which a project's key stakeholders first come together to define the broad outlines of a project. A key objective

of this stage is to come to a common understanding of what the project is supposed to produce and estimate what it will take to do so. Given this understanding and these estimates, another key objective is to decide whether to move forward with the project.

In organizations dedicated to project work, the initiation phase results in an assessment of whether a project fits with the organization's profit goals or business model. We examine it here in a more general way—to make sure significant stakeholders are on board before moving too far down the road.

The **project planning** stage emerges once a decision is made to move forward. Here, more detailed planning is done to “nail down” a wide range of project specifics, including the precise tasks required to produce the project's products and services, more precise estimates of resource needs and their costs, and the time required to perform project work. In addition, how project tasks will be arranged across the project's life cycle will be determined and mapped onto a project schedule. These come together in a project plan—a blueprint—of what the project will look like, and the plan is used in the actual conduct of the project. This plan, too, needs to be approved by significant stakeholders before major project work actually begins.

The **project launch** is done once the planning is complete and initial resources are committed. Beginning the actual work on a project is a critical juncture in any project's life and demands a great deal of leader attention. Not the least of this attention is aimed at assembling the right project team, structuring the team so that it can reach its potential, and correctly initiating its project work.

The major objective of the **project execution** stage—the stage in which tasks are delegated to team members and most of the project's work is done—is to keep the project on track once it has been launched. Working with the project team, leaders need to monitor and control the pace of project work, its costs, and performance quality. Working with external stakeholders, leaders need to maintain project support; ensure flow of project resources; and minimize but adapt to project pressures, disruptions, and changes.

Finally, in the **project closing** phase, final products, services, and other project outcomes are delivered to the client. Project ties to the performing or host organization are retired, and the project team itself disbands. Each of these activities requires proper managerial and leadership attention.

## PROJECT PARAMETERS

There are three major parameters to every project: project scope, costs, and time. *Project scope* refers to the sum total of all work to be done to produce

the project's deliverables—the products and services to be delivered to the customer. *Costs* are the sum total of project costs to do the project's work. Finally, *time* is the amount of time given to complete the project.

These parameters are closely linked. If the project's scope of work changes to accommodate a change in deliverables, for example, costs and time are affected. If a project is given more time, on the other hand, work might consume fewer resources, resulting in lower cost. Costs generally increase, however, when the time given to do the project is shortened. Close attention needs to be given to each of these areas from the very beginning of a project through its execution.

### DIMENSIONS OF PROJECT LEADERSHIP

Although there are many dimensions of leadership, the literature has traditionally focused on two: the task and social-psychological dimensions. Traditional project management attends well to the task side of project leadership. Project tools help leaders do a variety of task work, including clarifying the project's mission and objectives; planning, organizing, and structuring project work; coordinating the flow of resources and task outputs; and controlling the operational side of project work.

The social-psychological dimension of leadership focuses on how leaders operate in the social context and in one-on-one relationships that surround and support task work. Much of this literature focuses on leader-subordinate relationships and is relevant to working with the project team. Among other things, leaders need to staff, develop, motivate, and ensure commitment from their project teams.

Project leaders must also attend to the broader social context in which their projects reside. Leaders need to identify and work with their key project stakeholders, taking into account their interests and needs. Project leaders bridge the gap between their teams and the project's other stakeholders. Being the key liaison between these two worlds, leaders must be able to communicate effectively with both team members and stakeholders. They must negotiate agreement between and among them, solve personal and political as well as technical problems, and maintain support and commitment to the project from all parties, to name just a few job responsibilities. Faced with challenges such as these, it is not surprising that many project leaders wish all they had to worry about was the task side of projects, no matter how complicated and complex they may be.

This book is oriented to these kinds of issues. In the first part, the task side of project leadership is given primary attention. Project management tools are presented and discussed in terms of how they are used by project

leaders. In the second part of the book, leadership issues come to the forefront. We focus on the team, the project's stakeholders, and the leader himself or herself. A final chapter is devoted to project reports.

## OVERVIEW OF BOOK

This book is divided into two major sections. The first focuses on tools leaders use in project initiation and planning. The second section focuses on the human resources of project leadership and includes attention to writing up project reports.

### CHAPTERS 2–5: FUNDAMENTALS OF PROJECT INITIATION AND PLANNING

Chapters 2 through 5 are devoted to project initiation and planning. Although technical issues receive the most attention, managerial and leadership issues are also discussed. The purpose of this section is to help the reader develop an entry-level understanding of these project management tools and how project leaders use them.

#### *Chapter 2: Determining the Direction and Initial Specifications of a Project*

This chapter is designed to help new project leaders sort out what to do when they are first approached about a project and the steps they need to take to initiate it. The objective of project initiation is to determine the basic parameters of a project so stakeholders can make decisions about whether to move ahead with it.

We begin by discussing the project's basic mission statement and how to identify those who have an important stake in the project. Next, we examine how to refine the project's broad mission into concrete deliverables—the products, services, and other outcomes the project is responsible for producing. Then, we discuss developing good early estimates of a project's resource, cost, and time requirements. Before a project moves too far forward, relevant stakeholders need a good estimate of these requirements and must agree to them. Finally, we discuss the need to develop a project charter that lays out the important parameters of the project so all relevant stakeholders can review and sign off on it. We wrap by outlining some of the essential elements of the project's plan—the blueprint of the project that will be developed over the next few chapters.

### *Chapter 3: The Work Breakdown Structure*

The operational foundation of any project is the scope of work needed to produce its deliverables. The work breakdown structure helps create that foundation by detailing all the tasks needed in a project. This chapter reviews what work breakdown structures are; how they are developed; and how they are used in project planning, organization, and control.

We examine first what a work breakdown structure is and the various roles it plays in project planning and control. We go on to discuss how work breakdown structures are developed, focusing on both core and support tasks in the project. Finally, we discuss how work breakdown structures are used to estimate project resources, timelines, and costs. We attend as well to how work breakdown structures can be used to develop the project's organizational structure.

### *Chapter 4: Project Scheduling*

Project schedules arrange when project tasks are to be done across the project's life cycle. The project schedule is a principal managerial tool used to organize, coordinate, and control project work.

First, we review three common scheduling tools and how they are used. Next, we discuss the basic components of any project schedule and their uses. We then focus on the Gantt or bar chart and discuss how to construct it. Finally, we discuss the various ways project leaders can use schedules to plan, organize, and control a project.

### *Chapter 5: Managing Project Risk*

Because projects produce new and unique products and have so many stakeholders, they carry with them a great deal of risk. Managing that risk is an important task for any project leader. This chapter presents some of the principal ideas behind risk management in project planning and execution.

First, we examine the principal sources of risk in project work: risk from the project itself, from the host organization, from producing deliverables, and from the larger project environment. Next, we discuss how risk is assessed using both qualitative and quantitative methods. We then review four common methods of dealing with risk: accepting it, avoiding it, reducing it, and transferring the risk to others. Finally, we discuss how a risk management plan is developed and used in project execution.



## CHAPTERS 6–8: FUNDAMENTALS OF PROJECT LEADERSHIP

Project leadership requires working effectively with two groups of project participants: the project team and external project stakeholders. In Chapter 6, we examine how best to construct and develop project teams to do project work. In Chapter 7, we identify who stakeholders are, their differing interests, and some ways to work with them. Chapter 8 focuses specifically on project leadership.

### *Chapter 6: Developing Project Teams*

Project teams are the key resource leaders use in any project. This chapter is designed to help project leaders understand how teams are best constructed and developed. We cover first what a team is and what constitutes team success. We then turn attention to those elements of a team's structure that can help or hinder its success. Team factors covered include team size, composition, governance, identity, interactions, and a common team mindset. These factors need to be given attention in the construction of a team and its development.

We end by discussing the developmental stages groups go through on their way to becoming truly effective teams: forming, storming, norming, performing, and adjourning. We discuss the characteristics of each stage and, importantly, what teams need from their leaders to be effective and to progress further in their development.

### *Chapter 7: The Project Team's Environment*

Projects operate in an environment of stakeholders who will influence and likely determine project success. Leaders need to work in this environment to make sure the project gets the support and resources it needs to complete its work. This chapter identifies the characteristics and needs of a project's principal stakeholders and how to work effectively in the project's stakeholder network.

We begin by identifying some of the more important project stakeholders and provide suggestions about how best to work with them. Project leaders play a key liaison role in tying these stakeholders together and to the project. Properly used, this liaison role can provide the leader with the social capital he or she needs to acquire critical project resources and support. We examine social networks and the social capital that comes from them in this chapter, as well as how project leaders can develop and use them.

*Chapter 8: Leading Project Teams*

Project leaders are expected to play a number of roles in any project. We review those roles and the expectations that come with them, and we offer suggestions about how best to address those expectations. Projects need different things from their leaders at different stages in their life cycle. We address those needs and how to meet them during project initiation and planning, project launch, execution, and, finally, project closing. Finally, we focus on how project leaders can help individual project members develop within the project to add value to it.

**CHAPTER 9: WRITING PROJECT REPORTS**

Projects often require a number of reports to be produced at various times in their life cycles. We focus on the final, formal project report to address issues important to any project report. Writing effective reports requires knowledge of who will read them and what they are looking for in project reports. We begin by identifying some of the more important readers of project reports and how best to address their needs. We then turn our attention to the report itself. Our approach is to walk through the final project report and discuss how different sections of the report should be written. We start with the front end, addressing such elements as the cover page, the table of contents, and, most important, the executive summary. We then turn attention to the body of the report, covering introductions, major sections and subsections, conclusions and recommendations, and references. We finish with a discussion of supporting appendices. At each juncture, we discuss basic elements of the section and how to address the needs of different readers.

**SUMMARY**

Interest in project management has increased dramatically over the past 20 years. Much of this increase can be attributed to increased demand for more traditional projects conducted by larger construction and engineering firms. Most of the increase, however, has come from smaller scale projects aimed at different missions, staffed by a wider range of project personnel, and often conducted by organizations for themselves. Although sophisticated project management skills and tools are always useful, these kinds of smaller projects have increased the demand for what might be called a more entry-level skill set. This book is addressed to those skills and tools.

Projects are temporary endeavors undertaken to create unique products, services, or other outcomes. Projects are unique not only in the outcomes they produce but in the design and operation of the projects themselves. Each project is, to some extent, handcrafted, and leaders need to learn the basic tools to do the work anew with each new project. Projects are also temporary endeavors that have a life cycle that deeply affects project operations and leadership requirements. The stages of a project can be broken out into initiation, planning, launch, execution, and closing. Each stage has its own objectives and needs to which leaders must attend.

All projects have three basic parameters: project scope, cost, and time. Project scope is the sum total of tasks needed to produce the products and services of a project—its deliverables. The costs of a project are all related costs that are expended in doing project work. Time is the time given to the project to complete its work. These three parameters are connected so that increases or decreases in one will affect one or more of the others.

Two basic dimensions of leadership are explored in this book: the task and social-psychological sides of leadership. The task dimension focuses on what is needed to get the task done. Project management tools and techniques go a long way toward addressing these needs. The first part of this book focuses on this aspect of project leadership: project direction and specification, the work breakdown structure, and project schedules.

The social-psychological dimension focuses on how leaders operate in the broader social and personal context of the project. The second part of this book deals with addressing these needs: constructing and developing teams, identifying and dealing with project stakeholders, exploring the leadership role, and communicating with stakeholders through project reports.

## ENDNOTES

1. The reader is invited to do a Google search on “training project management” to see current offerings.
2. Those who pay for getting project work done are called by various names. The term *client* is often used in the consulting industry. *Customer* is used most often by organizations that do work for the federal government and by the Project Management Institute. The terms *client* and *customer* are used interchangeably here. The label of *end user* will be used to specify those who will actually use the output of a project. Often that is the client or customer paying for the project, but it need not be. Although the military procures fighter aircraft, for example, the pilots and maintenance crews are the end users.

3. The Project Management Institute. (2008). *A guide to the project management body of knowledge*. Newtown Square, PA: Author.

4. These labels are taken in large part from what the Project Management Institute (2008) characterized as the basic processes that occur in different project phases: initiating, planning, executing, monitoring and controlling, and closing. Here, *executing* refers to the actual conduct of the project, which includes monitoring and controlling processes. *Launch* is added to give special focus to the initial process of assembling resources and kicking off the project. This short but critical stage requires the undivided attention of project leaders.

## KEY TERMS

**Project:** a temporary endeavor undertaken to create a unique product, service, or result.

**Project Closing:** the stage in which final products, services, and other project outcomes are delivered to the client.

**Project Execution:** the stage in which tasks are delegated to team members and most of the project's work is done.

**Project Initiation:** the stage in which a project's key stakeholders first come together to define the broad outlines of a project.

**Project Launch:** the stage in which actual work on the project is begun.

**Project Planning:** the stage in which more detailed planning is done to establish a wide range of project specifics, ending with the creation of a project schedule and plan.