# Chapter 1
# Projects in Contemporary Organizations

As noted earlier, the material in Part I of this text focuses on project initiation, which relates to the context of the project. Although this material may not appear germane to someone who wants to learn about how to actually manage a project, having only the planning and execution tools and being ignorant of the context of the project is a recipe for disaster. It's like knowing how to sail a ship but not understanding your role as the captain and the purpose of the trip.

Project initiation begins with the judicious selection of the organization's projects to align them with the organization's overall strategy.

Chapter 2 describes how to evaluate and select projects that contribute to the organization's strategy and discusses the information needed as well as the management of risk during this process. The chapter concludes with a description of an eight-step procedure called the "project portfolio process" that aligns project selection with the strategy.

Chapter 3, "The Project Manager," concerns the many roles of the project manager (PM), the multiple responsibilities, and some personal characteristics a project manager should possess. It also discusses the problems a PMfaces when operating in a multicultural environment.

Next, Chapter 4 covers a subject of critical importance to the PM that is almost universally ignored in project management texts: the art of negotiating for resources. The chapter also describes some major sources of interpersonal conflict among members of the project team.

Concluding Part I of the book, Chapter 5 discusses various ways to establish the project organization. Different organizational forms are described, as well as their respective advantages and disadvantages. The staffing of the project team is also discussed.

## CHAPTER OVERVIEW

Overview – This section provides a short overview of the modern history of project management. Many of the now accepted practices of project management were actually first developed by the U.S. Government to further the development of complex weapons systems and space hardware.

1.1 The Definition of a "Project" – This section describes the common characteristics of a project used to distinguish projects from other types of work. Three Project Objectives: The Triple Constraint – Scope, time, and cost are three of the most

 

important knowledge areas in project management. Each of these must be managed concurrently due to the effect that each one has on the other.

- Characteristics of Projects
    - Unique
    - One-time occurrence
    - Finite duration
- Many projects also have the following characteristics:
    - Interdependencies – Project activities interact with each other and with other projects, groups, and activities within the organization.
    - Limited budgets (for personnel and other resources)
    - Conflict
- Nonprojects and Quasi Projects – Routine tasks are not considered projects because they are performed over and over again. Projects on the other hand, are one-time events. Quasi-projects are those that do not have a specific task identified, no specific budget, and no specific deadline defined. Although there are some uncertainties, project management skills can still be used to manage them.

1.2 Why Project Management? – While project management has limitations, most organizations receive real benefits from its use. Benefits include better control, better customer relations, increase in projects' return on investment, etc. Project management is not easy; for the participants (to paraphrase Churchill) it may seem to be the worst form of management except all the others that have been tried. In spite of that, project management is a growing career path that is highly rewarding.

- Forces Fostering Project Management – These include expansion of knowledge across academic disciplines which can be used in problem solving, satisfying the demand for increasingly complex products and services, and an ever-expanding worldwide market forces us to consider cultural and environmental issues in the production and distribution of products and services.
- The Project Manager & Project Management Organizations – The complexities of project management coupled with the increased recognition of the necessity for projects has led to an astronomical growth in the professional society devoted to project management, the Project Management Institute (PMI). PMI, through its efforts to define and standardize the body of knowledge, has made a significant contribution in establishing project management as a true professional)
- Trends in Project Management – Increased competition and consistent developments in technology are pushing the boundaries of project management into new spheres. As the field of project management matures, a variety of trends are identified and discussed.

1.3 The Project Life Cycle – This section describes the typical life cycle of most projects. Commonly projects have a slow start, a busy middle and a slow end. When this pattern is graphed as percent complete versus time, it results in the classic S-shaped life cycle

 

curve depicted in Figure 1-3. Some projects follow a different pattern, particularly if they involve integration and testing of disparate parts at the end.

- Risk During the Life Cycle – Risk or uncertainty changes throughout the life cycle of a project. At the start, there is the largest amount of uncertainty about the outcomes at the end. As time passes, the end point can be predicted with more and more accuracy.

1.4 Agile Project Management – This section introduces Agile Project Management. The Manifesto for Agile Software Development, the foundation of Agile approaches, is presented and discussed. Following this, the 12 Agile Principles are presented. The section also discusses the characteristics of Agile approaches and Scrum, how the level of uncertainty in the project can be used as a guide regarding the extent to which Agile approaches are used, and some tips for implementing Agile.

1.5 The Structure of This Text – This book is arranged to follow the life cycle of a project, beginning with project initiation, which includes topics on startup, organization and proposals. The second part covers project implementation including planning, scheduling, budgeting and controlling projects. The final part discusses project termination. Throughout the text, the importance of managing both people and risks are emphasized.

## TEACHING TIPS

Most students intuitively know more about project management than they realize. Through experiences at work, school or in the community, almost every adult has participated in or even managed a project at one time or another. For these students, the instructors will be able to foster many "aha" moments when the student will recognize the situation and be able to apply the concepts just learned. One way to facilitate discussions that accelerate this process is to apply pair-wise brainstorming. In conventional brainstorming or class discussions, many students will choose not to participate, unless the instructor takes the time consuming route of going individually around the room. In pair-wise brainstorming, the instructor divides the class up into two or three person teams to discuss the question or issue at hand. The advantage of this technique is that it creates an environment where all students feel comfortable participating in the discussion. After sufficient time has passed, the instructor "regroups" the class to collect the thoughts generated by the teams. These can be written on a whiteboard or easel for further discussion.

For this introductory chapter, an excellent topic to apply this technique to is the question of how a project is different from other work. With some assistance from the instructor, the students will collectively come up with the same list as in the text. They will generally overlook conflict, though they will readily recognize its applicability.

 

The instructor needs to circulate among the groups during this time to listen to what the students are talking about. The object is not to take over their discussion, but rather to offer encouragement and guidance if needed. This will also help keep the discussions from drifting onto baseball or some other interesting but not relevant subject. Eventually many of the groups will fall silent (or get onto baseball) signaling the time to move on to the whole class discussion. The groups usually need about 20 minutes and the following class discussion can be done in about 30 minutes.

## PROJECT MANAGEMENT IN PRACTICE

### A Unique Method for Traveler-Tracking at Copenhagen Airport

**Question 1: Are the triple constraints of this project clear? What are they?**
Yes.
Scope – Passenger flow analysis, including the impact on security screening
Time – Three years
Cost – The cost included two, $30 readers, plus the additional time and effort to analyze the results and implement the solutions.

**Question 2: What was unique about this project? What was the main conflict?**
The uniqueness of the project was the use of the cell phone Bluetooth signals to track passengers. The main conflict was related to passenger privacy.

**Question 3: Why are the travelers themselves a stakeholder in this project, since most of them won't even know they are being tracked?**
Passengers are stakeholders because it is their cell phone signals being tracked and because they benefits from improved service.

**Question 4: How widespread do you think this technology will become? What uses will be garnered from it? Do any of them concern you?**
This technology has the potential to become more widespread if the privacy issue can be resolved.
Student responses will vary considerably on the second and third questions.

### The Smart-Grid Revolution Starts in Boulder, Colorado

**Question 1: Are the triple constraints of this project clear? List each of them.**
The triple constraints are all clear
Scope: "smart-grid" electrical system that would span the entire city
Time: 3 years
Cost: $100 million

 

**Question 2: Given the range of benefits listed for the new technology, what interdependencies and conflicts do you suspect smart grids will create for utilities?**

Interdependencies: all of the system to work correctly; customer technology abilities and system use

Conflicts: users and the system; employees fearful of getting replaced

**Question 3: A major portion of this project had to do with carefully managing all the stakeholders. List those mentioned in the article and divide them into the four groups mentioned above. Do any stakeholders fall into more than one of the groups?**

The stakeholders and their groupings are below. Some of these stakeholders fall into multiple categories.

| Clients | Parent organization | Project team | Public |
|---|---|---|---|
| Xcel | leading technologists | Accenture consulting for engineering | business leaders |
| customers | business leaders | energy industry consultants | IT experts |
| | IT experts | leading technologists | Boulder city managers |
| | senior project manager | IT experts | Boulder city leaders |
| | Project Management Office | senior project manager | user-citizens |
| | | Project Management Office | |

Many of these will fall into more than one group.

**Question 4: What conflicts do you suspect might have occurred between all the different stakeholders in this project?**

Conflicts that could have arisen are numerous and could have included:

- Business leaders and city managers related to costs versus features
- Engineers versus city leaders related to costs
- Citizens versus city leaders related to costs

**Question 5: Why do you imagine Xcel agreed to invest $100 million in this risky experiment? What might their ancillary goals have been?**

Any new project idea is a risky experiment. Xcel Energy believes that if everything is planned properly and the scope and results of the project are clearly documented, then with careful execution it is possible to employ a new technology that helps the company to manage its resource pool effectively and efficiently. An ancillary goal could have been to learn from this project and apply it to other municipalities.

**The Olympic Torch Relay Project**

**Question 1: Which of the three universal and three common characteristics of projects are displayed in the regular torch relay?**

The three universal characteristics are unique, one-time, and finite duration. Each of these are displayed in the torch relay.

 

The three common characteristics are interdependencies, resources, and conflict. Of these, the interdependencies and resource characteristics are the main ones displayed.

**Question 2: Since this is such a regular project—every four years since 1936—would you consider it a nonproject, or a quasi-project? Why, or why not?**
I would consider this a project because each torch relay is unique in that they all travel different routes and are managed by different organizations.

**Question 3: Is the torch relay another part of the Olympics themselves, perhaps a sub-project?**
The torch relay is a project by itself based on its length and complexity. You could consider it a project that is part of the overall Olympic "program."

**Turning London's Waste Dump into the 2012 Olympics Stadium**

**Question 1: What shape of life cycle did this stadium project have? Compare it with the life cycle of the river dredging portion of the effort. With the Olympic Torch Relay project described earlier.**
The life cycle of this project is S-shaped. As the project is initiated and better understood, it would gain momentum giving the project a S-shape. An example would be the time when the team realized that a lighter roof was required. As the understanding of the project increases so does the momentum.
Even river dredging as a project was S-shaped due to obvious reasons as was the torch relay.

**Question 2: Which of the "triple constraints" seems to be uppermost here? Which constraints were Crockford trading between?**
Time is the constraint that seems to be the uppermost here, given the deadline of the project and the required amount of work to be done before the project could take-off. Crockford was trading between scope and time, since the team involved people from different positions and this could have led to scope creep, thereby increasing the time required.

**Question 3: Were there any ancillary goals for this project? What might they have been?**
The ancillary goals of this project could be the learning of skills needed in the integration of a tightly scheduled project and the coordination and control of the various resources in the project.
Also, the impact of using a waste dumpsite as a Olympics stadium is in itself one of those properties that commands respect towards a nation's engineers and their combined vision.

 

## MATERIAL REVIEW QUESTIONS

**Question 1: Name and briefly describe the societal forces that have contributed to the need for project management.**

Refer to the section titled "*Forces Fostering Project Management*" in the text.

1) Modern societies have experienced an exponential expansion of human knowledge. As a result, an increasing number of academic disciplines can be used in solving problems associated with the development, production, and distribution of goods and services.
2) Satisfying the continuing demand for more complex and customized products and services depends on the producers' ability to make product design an integrated and inherent part of their production and distribution systems.
3) Worldwide markets force producers to include cultural and environmental differences in their managerial decisions about what, where, when, and how to produce and distribute output.

**Question 2: Describe the life cycle of a project in terms of (1) the degree of project completion; (2) required effort.**

Refer to Figure 1-3, Figure 1-4, and Figure 1-5: *The Project Lifecycle* and to Section 1.3 in the text. A lifecycle is used to describe a period of time between a starting point and a terminating point. As the project nears termination, the percentage of project completion should rise. For most projects, the required effort and the project completion level are strongly correlated. While problems may detract from efficiency, it's usually true that as more work is done, the completion level rises as well. There are limitations, particularly in intellectual projects (e.g. software development) where too many cooks can spoil the broth and hurt the project more than help it.

The typical life cycle is then characterized by a slow beginning, when the project is organized, a busy middle when most of the work is done, and a tapering off to completion as tasks are wrapped up and finishing touches are added.

**Question 3: Describe the limitations of project management.**

Refer to Section 1.2 in the text. Project management is an approach taken to initiate, plan, execute, control, and terminate projects with the intent of achieving the objectives used to justify the project's approval. There are some important limitations associated with project management. They include:

1) The project characteristic of uniqueness tends to be associated with uncertainty. Uncertainty can affect a project for better or for worse. For example, it can be difficult to forecast important items related to budget, schedule, customer satisfaction, and business impact.
2) Projects often use a temporary organizational structure that is different from the way most organizations typically perform work. This can lead to conflicting priorities between the project and daily operations, especially when management has not clearly established formal authority over the resources responsible to multitask on one or more projects and on one or more routine jobs.

 