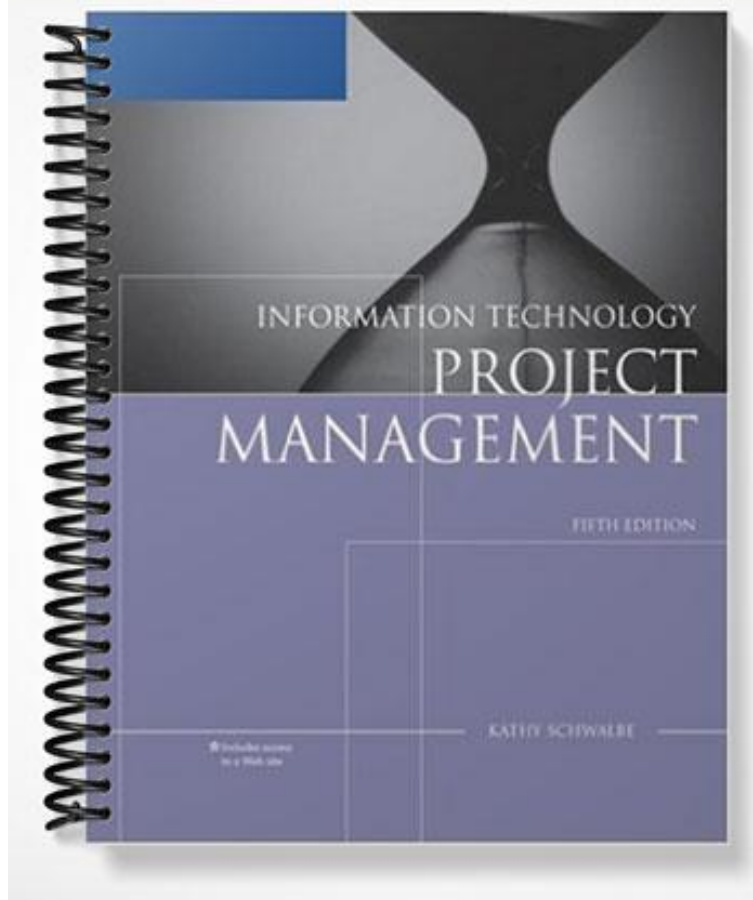


SOLUTIONS MANUAL



Chapter 2: The Project Management and Information Technology Context

Chapter Overview

Chapter 2 discusses the context of project management in general and information technology projects in particular. It describes the importance of taking a systems view when selecting and working on projects, understanding organizations and stakeholders, distinguishing between project and product development, and understanding the unique nature of information technology projects.

Chapter Objectives

- Describe the systems view of project management and how it applies to information technology projects
- Understand organizations, including the four frames, organizational structures, and organizational culture
- Explain why stakeholder management and top management commitment are critical for a project's success
- Understand the concept of a project phase and the project life cycle and distinguish between project development and product development
- Discuss the unique attributes and diverse nature of information technology projects

Instructor Notes

A Systems View of Project Management

Most students in information technology fields have heard of a systems approach. However, you should still explain what it means to look at projects in the context of a larger system. Figure 2-1 provides an example of applying the three-sphere model of systems management to the opening case. Review the opening case and this figure with the class.

Understanding Organizations

Many books and courses provide information on organizational behavior. The four frames of organizations presented here provide a good reference for helping students think about various aspects of organizations. Most people focus too much on the structural frame, but it is also important to address the human resources, political, and symbolic frames of organizations.

Many students with little work experience are not familiar with the various organizational charts shown in Figure 2-2. Provide examples of functional, matrix, and project structures. Ask students who are familiar with organizational charts to describe the type of structure their companies use, and have them explain how this structure affects project work. Table 2-1 summarizes the influences that organizational structures have on projects.

Organizational culture can also greatly affect project management. Review the ten characteristics of organizational culture and how they can hurt or help project managers and teams.

Discuss the importance of identifying and working with various project stakeholders and the importance of top management commitment. The opening case provides a good context for describing different stakeholders and their views on projects.

Stakeholder Management

You cannot overemphasize the importance of identifying and managing stakeholder relationships. Be sure students understand who the various stakeholders are on projects, especially top management. Stress that the number one factor associated with successful information technology projects is executive support. Discuss the importance of executive support in specific projects and good project management processes.

Project Phases and the Project Life Cycle

Most students in information technology fields have also heard of project life cycles. Explain that all projects follow some type of life cycle. The traditional project life cycle consists of four phases—concept, development, implementation, and close-out. Contrast the project life cycle with product life cycles. Then contrast the predictive life cycle models with the adaptive ones. You can also emphasize the fact that developing many information technology products involves several different projects.

An important part of project management is having management reviews after each project phase. The “What Went Right?” section illustrates the value of having specific deliverables and kill points at the end of project phases.

The Context of Information Technology Projects

Several issues that are unique to the information technology industry affect project management. Highlight the nature of information technology projects, the characteristics of project team members, and the diverse technologies that are often involved.

Classroom Activities

1. Systems Management

Think of a recent change that occurred at your college, in your community, or in the news. Have students use the three-sphere model for systems management and brainstorm issues related to the change based on the business, technology, and organization spheres.

2. Stakeholder Management

Divide students into groups of three or four. Ask them to list five to ten specific things that project managers can do to help manage stakeholders. You can also ask them to provide their own examples of successful and unsuccessful relationships with project stakeholders.

Troubleshooting Tips

Many students have not had to write a systems analysis or really think about how a project they are working on fits into the big picture of an organization. Provide your students with an example that they can relate to. Students tend to confuse the project life cycle with the systems development life cycle. Spend extra time on these topics, and feel free to use examples of products that are not related to information technology to further illustrate the point that products can have a variety of life cycles.

Quick Quiz

1. What are the phases of the traditional project life cycle?
ANSWER: Concept, development, implementation, and close-out
2. What type of organizational structure has project team members reporting to at least two bosses?
ANSWER: Matrix
3. What type of organizational structure gives the least amount of authority to project managers?
ANSWER: Functional
4. Name two characteristics of organizational culture that help project management.
ANSWER: Project work is most successful in an organizational culture where employees identify more with the organization, where work activities emphasize groups, and where there is strong unit integration, high risk tolerance, performance-based rewards, high conflict tolerance, an open-systems focus, and a balanced focus on people, control, and means-orientation.

Discussion Questions

1. Many people have a hard time taking a systems view when it comes to managing projects. Why do you think this is the case? What can be done to help people take a systems view?
2. Do you think it's harder to manage an IT project or a traditional project, such as building construction? Justify your response.
3. Some of the adaptive approaches to developing systems are becoming more popular. Are they better or more appropriate than prescriptive approaches in most cases? Why or why not?

Key Terms

- adaptive software development (ASD) — a software development approach used when requirements cannot be clearly expressed early in the life cycle
- agile software development — a method for software development that uses new approaches, focusing on close collaboration between programming teams and business experts
- champion — a senior manager who acts as a key proponent for a project
- deliverable — a product or service, such as a technical report, a training session, a piece of hardware, or a segment of software code, produced or provided as part of a project
- executive steering committee — a group of senior executives from various parts of the organization who regularly review important corporate projects and issues

- functional organizational structure — an organizational structure that groups people by functional areas such as information technology, manufacturing, engineering, and human resources
- human resources frame — focuses on producing harmony between the needs of the organization and the needs of people
- IT governance — addresses the authority and control for key IT activities in organizations, including IT infrastructure, IT use, and project management
- matrix organizational structure — an organizational structure in which employees are assigned to both functional and project managers
- organizational culture — a set of shared assumptions, values, and behaviors that characterize the functioning of an organization
- phase exit or kill point — management review that should occur after each project phase to determine if projects should be continued, redirected, or terminated
- political frame — addresses organizational and personal politics
- politics — competition between groups or individuals for power and leadership
- predictive life cycle — a software development approach used when the scope of the project can be clearly articulated and the schedule and cost can be accurately predicted
- project acquisition — the last two phases in a project (implementation and close-out) that focus on delivering the actual work
- project feasibility — the first two phases in a project (concept and development) that focus on planning
- project life cycle — a collection of project phases, such as concept, development, implementation, and close-out
- project organizational structure — an organizational structure that groups people by major projects, such as specific aircraft programs
- structural frame — deals with how the organization is structured (usually depicted in an organizational chart) and focuses on different groups' roles and responsibilities to meet the goals and policies set by top management
- symbolic frame — focuses on the symbols, meanings, and culture of an organization
- systems — sets of interacting components working within an environment to fulfill some purpose
- systems analysis — a problem-solving approach that requires defining the scope of the system to be studied, and then dividing it into its component parts for identifying and evaluating its problems, opportunities, constraints, and needs
- systems approach — a holistic and analytical approach to solving complex problems that includes using a systems philosophy, systems analysis, and systems management
- systems development life cycle (SDLC) — a framework for describing the phases involved in developing and maintaining information systems
- systems management — addressing the business, technological, and organizational issues associated with creating, maintaining, and making a change to a system
- systems philosophy — an overall model for thinking about things as systems
- systems thinking — taking a holistic view of an organization to effectively handle complex situations