# 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. It also discusses recent trends affecting IT project management, including globalization,

outsourcing, virtual teams, and agile project management.

## Chapter Objectives

* Define the systems view of project management and how it applies to information technology (IT) projects
* Summarize 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
* Distinguish between project and product life cycles
* Discuss the unique attributes and diverse nature of IT projects
* Summarize recent trends affecting IT project management, including globalization, outsourcing, virtual teams, and agile project management

## 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 2-3. 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.

### Focusing on Stakeholder Needs

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 a top 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 and Product Life Cycles

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.

***Recent Trends Affecting Information Technology Project Management***

Globalization, outsourcing, virtual teams, and agile project management are recent trends affecting the job of IT project managers and their teams. Discuss these and other trends you think are important.

## 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.

1. 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.

1. The Economy and Other New Developments

Recent changes in the economy have also had an impact on IT project management. Discuss changes in the types and numbers of IT projects being done now and other issues related to this topic or other recent developments. Agile is a hot topic, so you could have students discuss that as well. See some recent articles/links from [www.kathyschwalbe.com](http://www.kathyschwalbe.com) under Resources. The videos are often of interest to students.

## 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

1. What type of organizational structure has project team members reporting to at least two bosses?

ANSWER: Matrix

1. What type of organizational structure gives the least amount of authority to project managers?

ANSWER: Functional

1. Name two characteristics of organizational culture that help project management.

ANSWER: Any of the following: 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.

1. What is the most popular agile methodology?

ANSWER: Scrum

## 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 (like agile) are becoming more popular. Are they better or more appropriate than prescriptive approaches in most cases? Why or why not?

## Key Terms

**agile** Quick and coordinated in movement; a method based on iterative and incremental development, in which requirements and solutions evolve through collaboration

**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 IT, manufacturing, engineering, and human resources

**human resources (HR) frame** A frame that focuses on producing harmony between the needs of the organization and the needs of people

**IT governance** The authority and control for key IT activities in organizations, including IT infrastructure, IT use, and project management

**Kanban** Developed in Japan by Toyota Motor Corporation, it uses visual cues to guide workflow

**kill point** A management review that should occur after each project phase to determine if projects should be continued, redirected, or terminated; also called a phase exit

**matrix organizational structure** An organizational structure in which employees are assigned both to functional and project managers

**offshoring** Outsourcing from another country

**organizational culture** A set of shared assumptions, values, and behaviors that characterize the functioning of an organization

**outsourcing** An organization’s acquisition of goods and services from an outside source

**phase exit** A management review that should occur after each project phase to determine if projects should be continued, redirected, or terminated; also called a kill point

**phase gate review** See phase exit

**political frame** A frame that 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 articulated clearly and the schedule and cost can be predicted accurately

**product life cycles** A process used to define, create, and deliver products

**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

**Scrum** The leading agile development methodology for completing projects with a complex, innovative scope of work

**structural frame** A frame that 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** A frame that focuses on the symbols, meanings, and culture of an organization

**systems analysis** A problem-solving approach that requires defining the scope of the system to be studied, and then dividing it into 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 modifying a system

**systems philosophy** An overall model for thinking about things as systems

**systems thinking** A holistic view of an organization to effectively handle complex situations

**virtual team** A group of people who work together despite time and space boundaries using communication technologies