Chapter 2:
The Project Management and Information Technology Context

Information Technology Project Management,

Learning 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

Learning Objectives (continued)

- 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

Projects Cannot Be Run in Isolation

- Projects must operate in a broad organizational environment

- Project managers need to use **systems thinking**
  - Taking a holistic view of carrying out projects within the context of the organization

- Senior managers must make sure projects continue to support current business needs
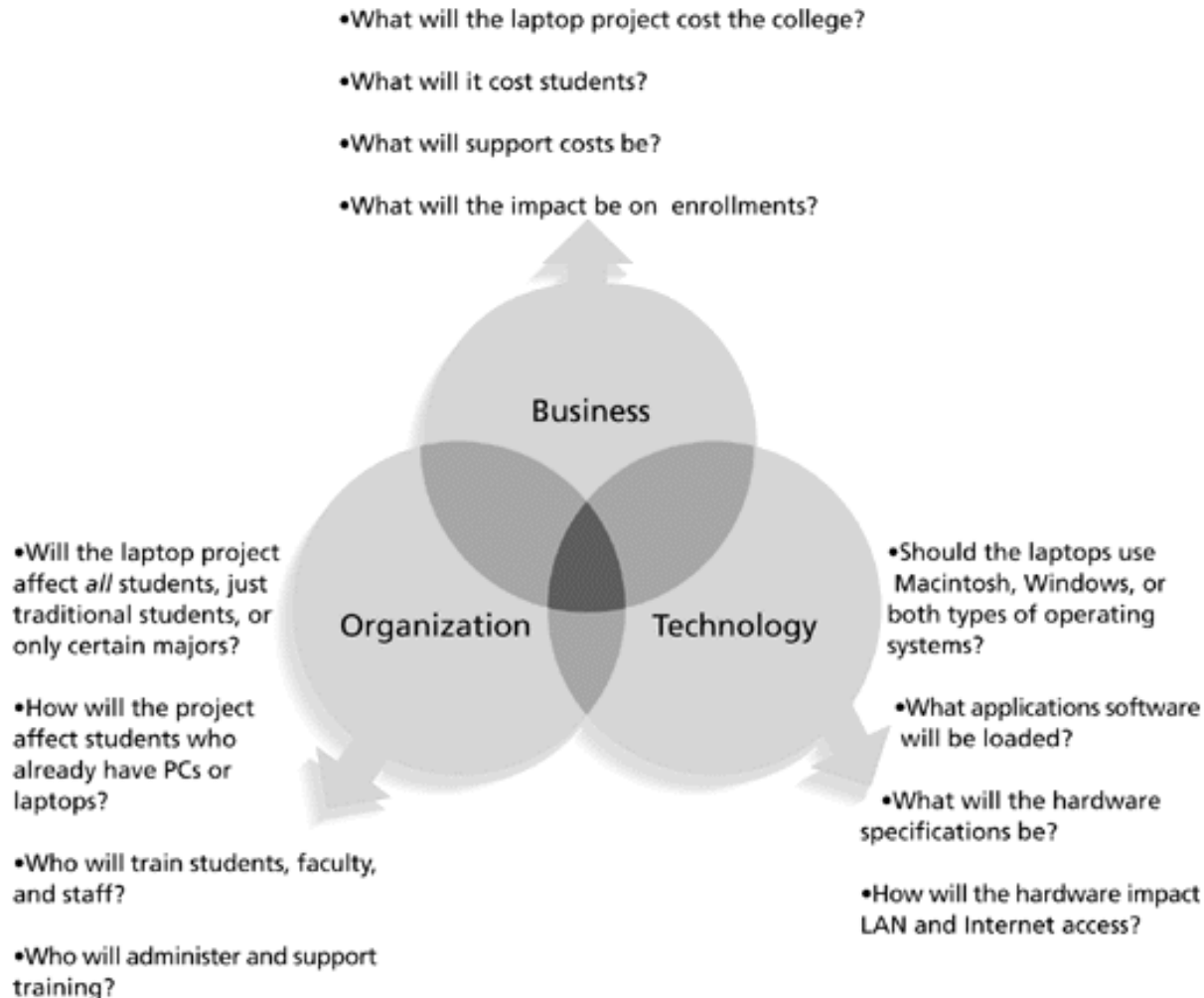
A Systems View of Project Management

- A **systems approach** emerged in the 1950s to describe a more analytical approach to management and problem solving
- Three parts include:
    - **Systems philosophy**: an overall model for thinking about things as systems
    - **Systems analysis**: problem-solving approach
    - **Systems management**: address business, technological, and organizational issues before making changes to systems

Media Snapshot

- The Press Association Ltd, the largest news agency in the United Kingdom, hired a consulting firm to help turn things around after management noticed its profit margins were sliding

- The consultants suggested using a holistic view and a top-down strategy to make sure projects supported key business goals

- They also suggested releasing short-term results to accrue benefits on an incremental basis and reviewing projects on a regular basis to ensure strategic alignment

Figure 2-1: Three Sphere Model for Systems Management

• What will the laptop project cost the college?

• What will it cost students?

• What will support costs be?

• What will the impact be on enrollments?

Business

Organization   **Technology**

• Will the laptop project affect *all* students, just traditional students, or only certain majors?

• How will the project affect students who already have PCs or laptops?

• Who will train students, faculty, and staff?

• Who will administer and support training?

• Should the laptops use Macintosh, Windows, or both types of operating systems?

• What applications software will be loaded?

• What will the hardware specifications be?

• How will the hardware impact LAN and Internet access?

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Understanding Organizations

Structural frame: Focuses on roles and responsibilities, coordination and control. Organization charts help define this frame.	**Human resources frame:** Focuses on providing harmony between needs of the organization and needs of people.
Political frame: Assumes organizations are coalitions composed of varied individuals and interest groups. Conflict and power are key issues.	**Symbolic frame:** Focuses on symbols and meanings related to events. Culture is important.

What Went Wrong?

Many enterprise resource planning (ERP) projects fail due to organizational issues, not technical issues. For example, Sobey's Canadian grocery store chain abandoned its two-year, $90 million ERP system due to organizational problems.

As Dalhousie University Associate Professor Sunny Marche states, "The problem of building an integrated system that can accommodate different people is a very serious challenge. You can't divorce technology from the sociocultural issues. They have an equal role." Sobey's ERP system shut down for five days and employees were scrambling to stock potentially empty shelves in several stores for weeks. The system failure cost Sobey's more than $90 million and caused shareholders to take an 82-cent after-tax hit per share.*

*Hoare, Eva. "Software hardships," The Herald, Halifax, Nova Scotia (2001).

Organizational Structures

- Three basic organization structures
  - **Functional:** functional managers report to the CEO
  - **Project:** program managers report to the CEO
  - **Matrix:** middle ground between functional and project structures; personnel often report to two or more bosses; structure can be weak, balanced, or strong matrix

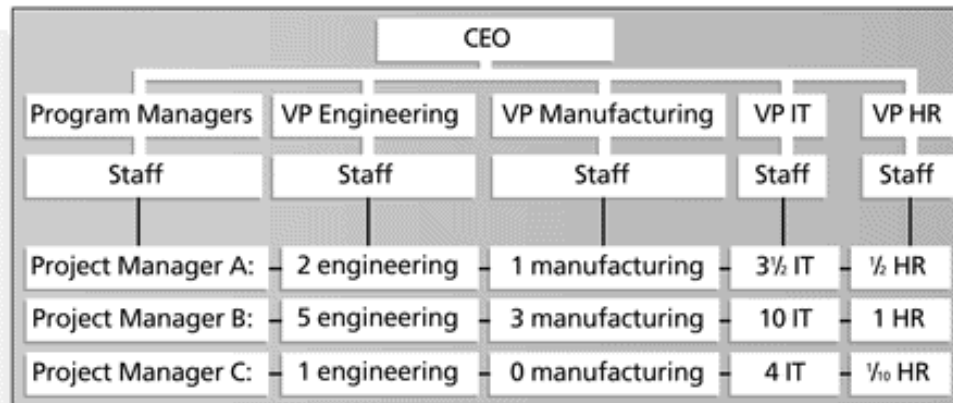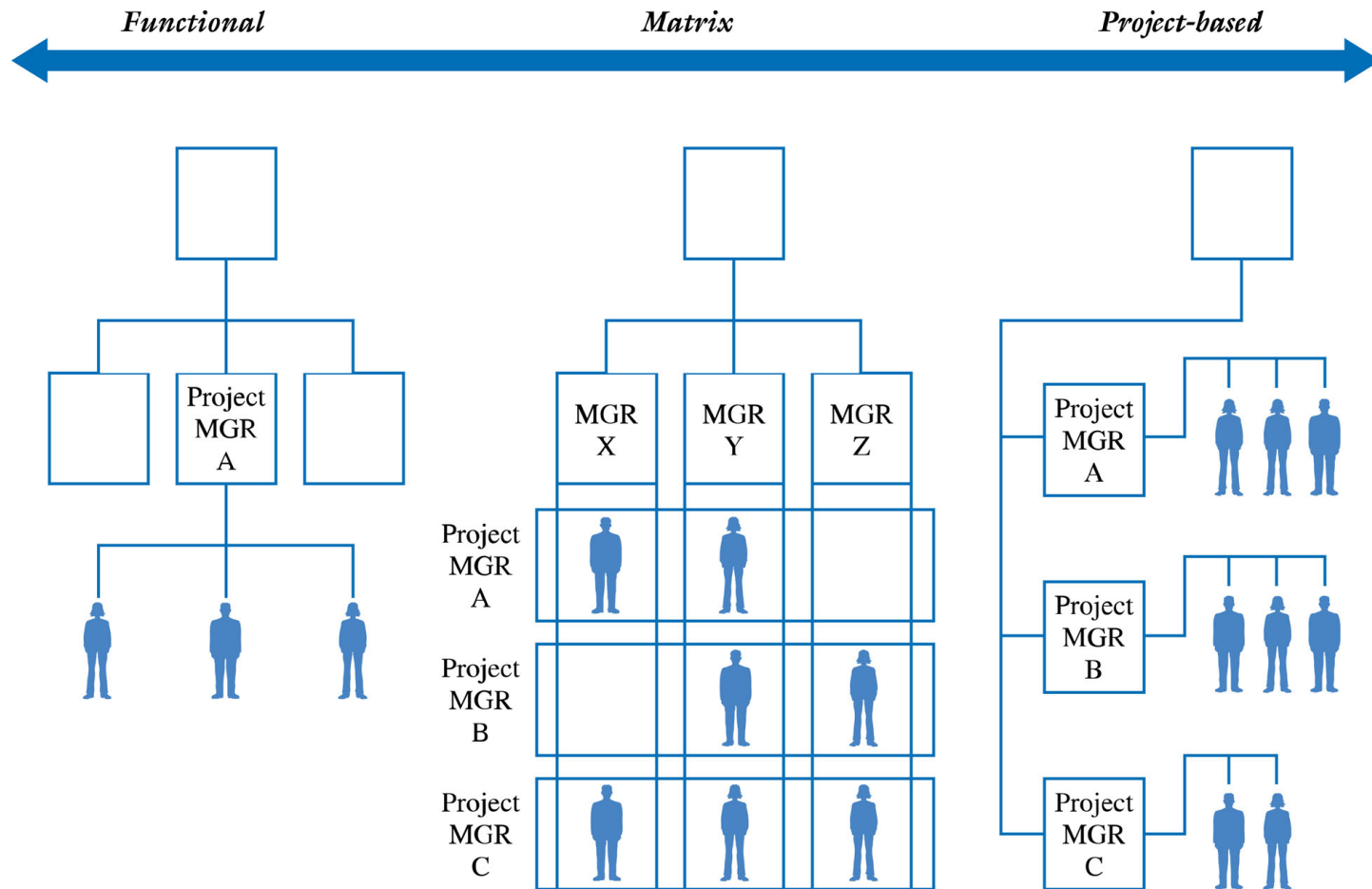# Figure 2-2: Functional, Project, and Matrix Organizational Structures
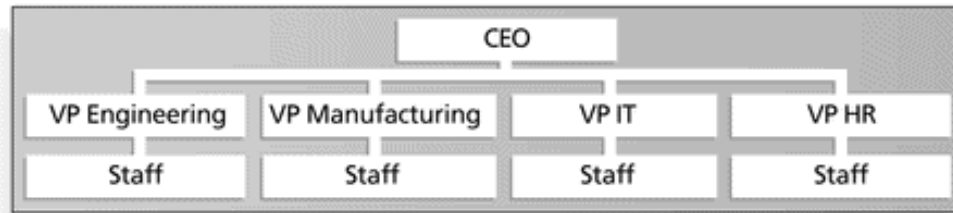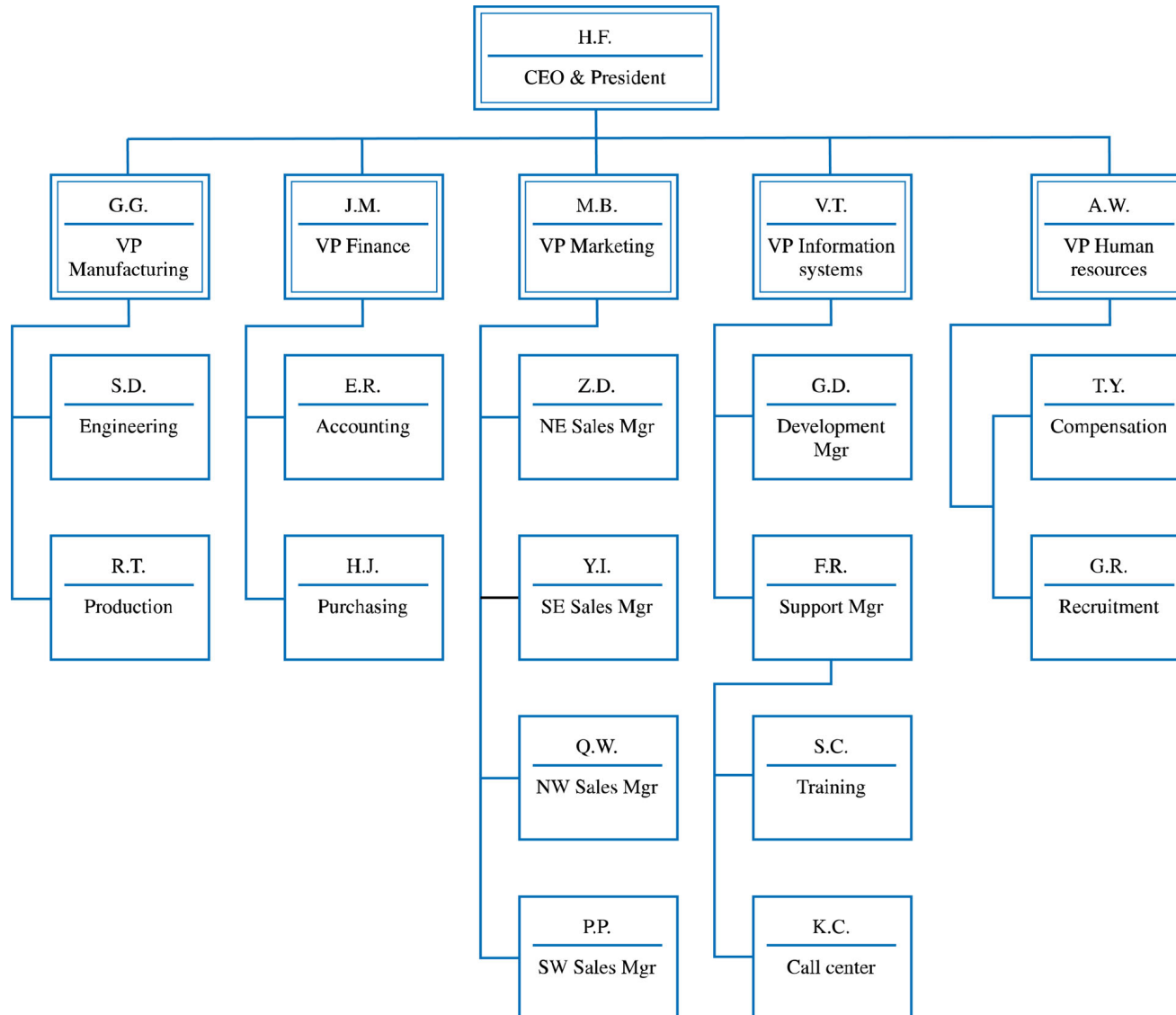
Organization and Project Planning Organizational Structure

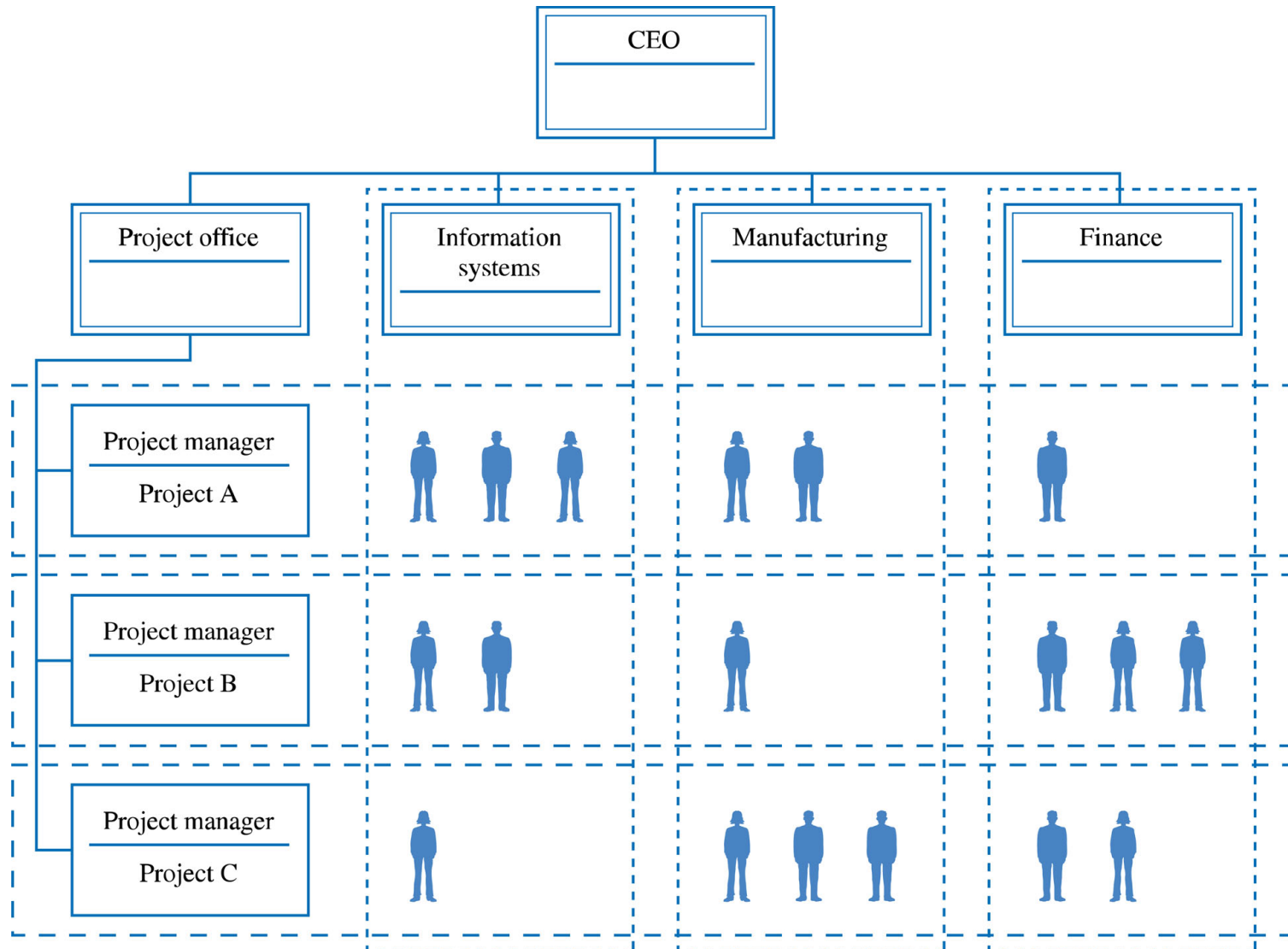# The Functional Organization

The Project Organization

Program manager

Project A
Project manager

Project B
Project manager

Project C
Project manager
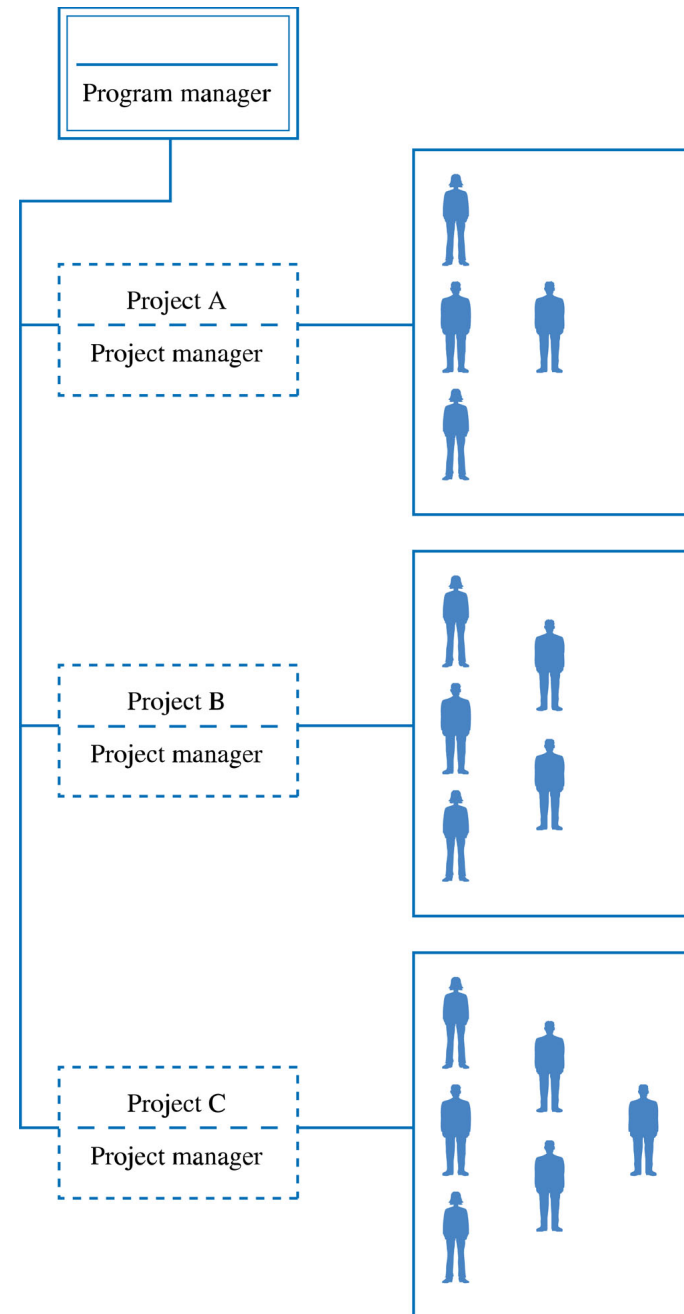
The Matrix Organization

Table 2-1: Organizational Structure Influences on Projects

Project Characteristics	Organizational Structure Type				
	Functional	Matrix			Project
		Weak Matrix	*Balanced Matrix*	*Strong Matrix*	
Project manager's authority	Little or none	Limited	Low to Moderate	Moderate to high	High to almost total
Percent of performing organization's personnel assigned full-time to project work	Virtually none	0-25%	15-60%	50-95%	85-100%
Who controls the project budget	Functional manager	Functional manager	Mixed	Project manager	Project manager
Project manager's role	Part-time	Part-time	Full-time	Full-time	Full-time
Common title for project manager's role	Project Coordinator/ Project Leader	Project Coordinator/ Project Leader	Project Manager/ Project Officer	Project Manager/ Program Manager	Project Manager/ Program Manager
Project management administrative staff	Part-time	Part-time	Part-time	Full-time	Full-time