Project Management

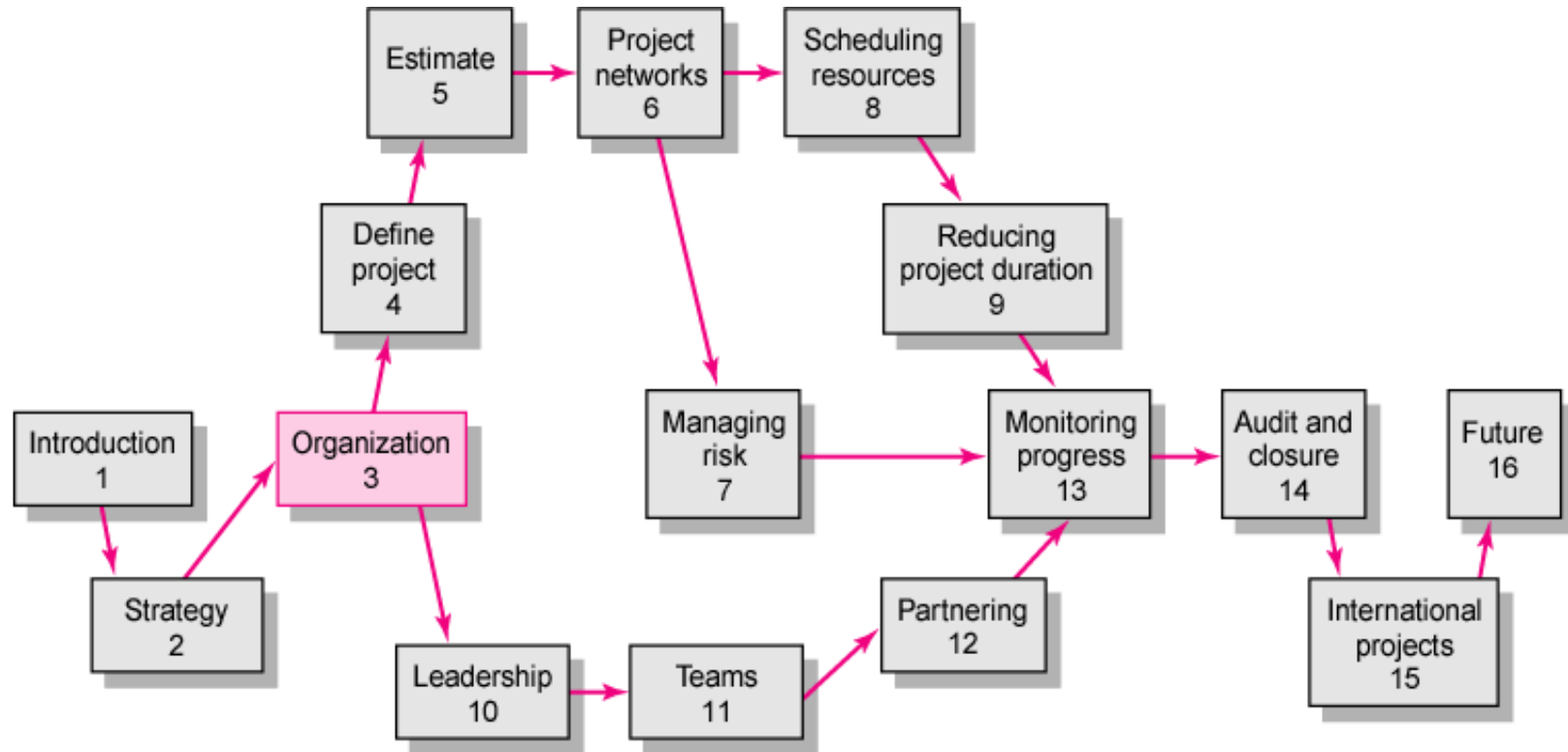## THE MANAGERIAL PROCESS

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Eric W. Larson
Third Edition

Chapter 3

Organization: Structure and Culture

PowerPoint Presentation by Charlie Cook

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                  ┌──────────┐      ┌──────────┐      ┌──────────┐
                  │ Estimate │ ───▶ │ Project  │ ───▶ │Scheduling│
                  │    5     │      │ networks │      │resources │
                  └──────────┘      │    6     │      │    8     │
                       ▲            └──────────┘      └──────────┘
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                  ┌──────────┐           │                 ▼
                  │  Define  │           │           ┌──────────┐
                  │ project  │           │           │ Reducing │
                  │    4     │           │           │project duration│
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│Introduction│   │Organization│    │ Managing │ ───▶ │Monitoring│──▶│ Audit and│   │  Future  │
│    1     │    │    3     │      │   risk   │      │ progress │   │ closure  │   │    16    │
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Project Management Structures

- ## Challenges to Organizing Projects
  - –The uniqueness and short duration of projects relative to ongoing longer-term organizational activities
  - –The multidisciplinary and cross-functional nature of projects creates authority and responsibility dilemmas.

- ## Choosing an Appropriate Project Management Structure
  - –The best system balances the needs of the project with the needs of the organization.

Project Management Structures

- Organizing Projects: Functional organization

  - Different segments of the project are delegated to respective functional units.

  - Coordination is maintained through normal management channels.

  - Used when the interest of one functional area dominates the project or one functional area has a dominant interest in the project's success.

Functional Organizations
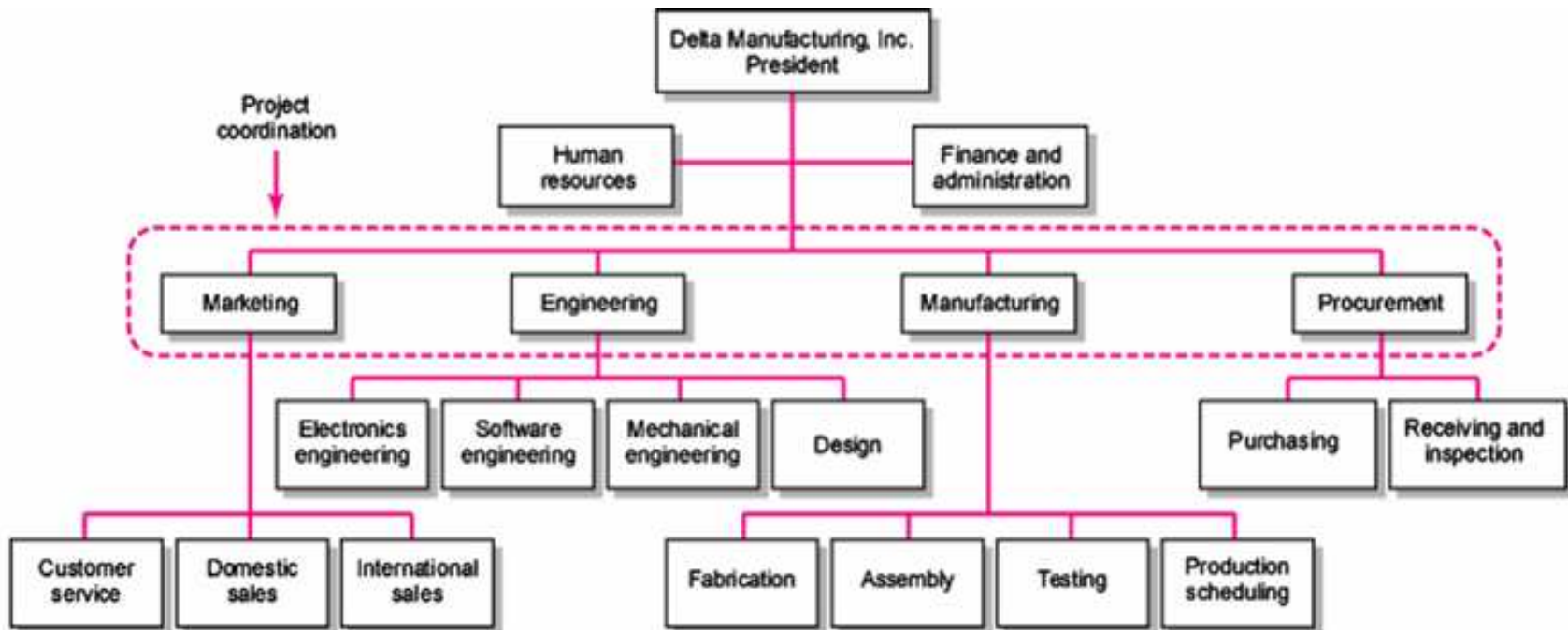
FIGURE 3.1

Functional Organization of Projects

- **Advantages**

  - **No Structural Change**

  - **Flexibility**

  - **In-Depth Expertise**

  - **Easy Post-Project Transition**

- **Disadvantages**

  - **Lack of Focus**

  - **Poor Integration**

  - **Slow**

  - **Lack of Ownership**

Project Management Structures (cont'd)

- Organizing Projects: Dedicated Teams

    – Teams operate as separate units under the leadership of a full-time project manager.

    – In a ***projectized*** organization where projects are the dominant form of business, functional departments are responsible for providing support for its teams.

Dedicated Project Team

Zeus Electronics, Inc. President

Human resources

Finance and administration

Marketing

Engineering

Manufacturing

Procurement

Project manager
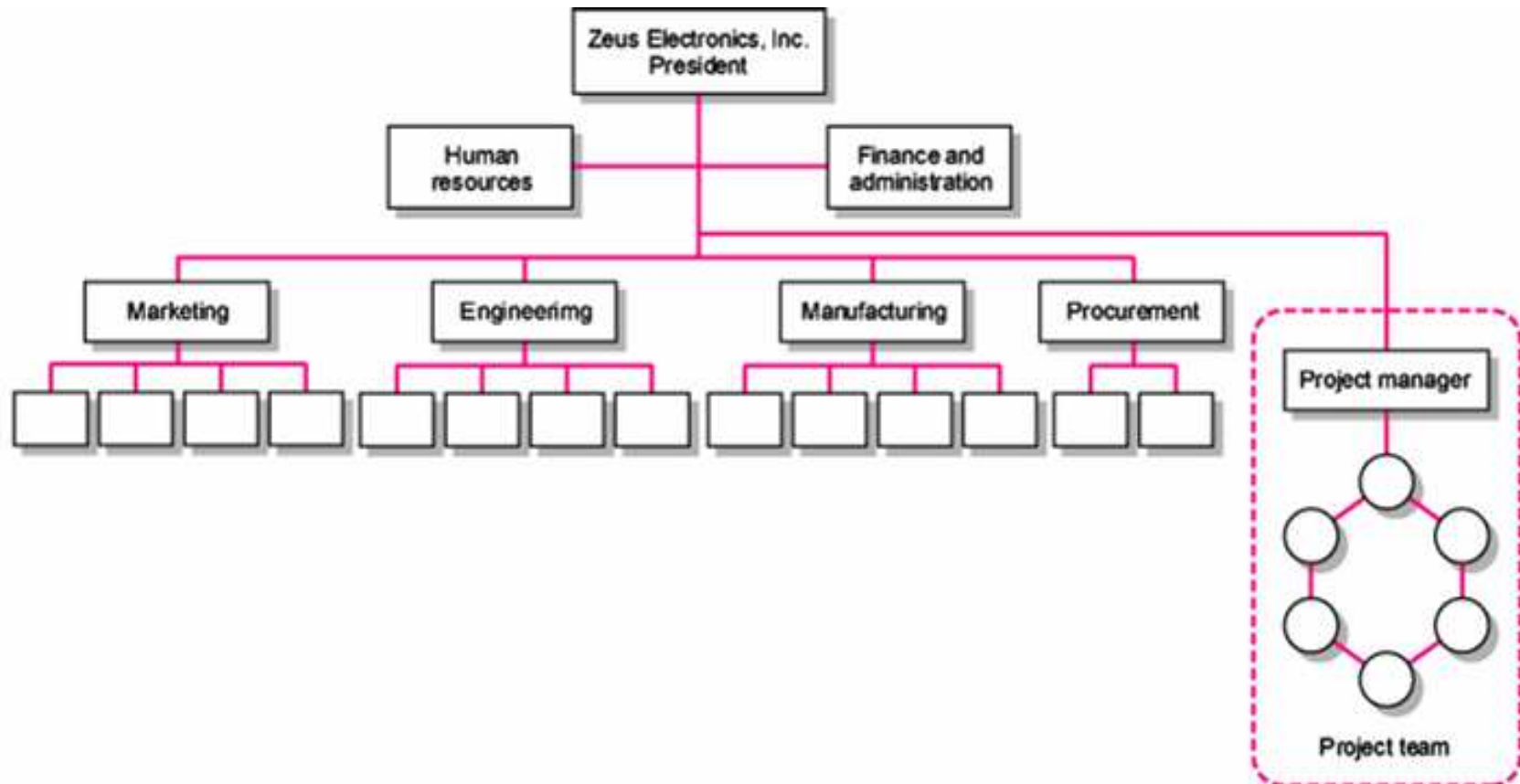
Project team

FIGURE 3.2

Project Organization: Dedicated Team

- **Advantages**
  - Simple
  - Fast
  - Cohesive
  - Cross-Functional Integration

- **Disadvantages**
  - Expensive
  - Internal Strife
  - Limited Technological Expertise
  - Difficult Post-Project Transition

Project Organizational Structure
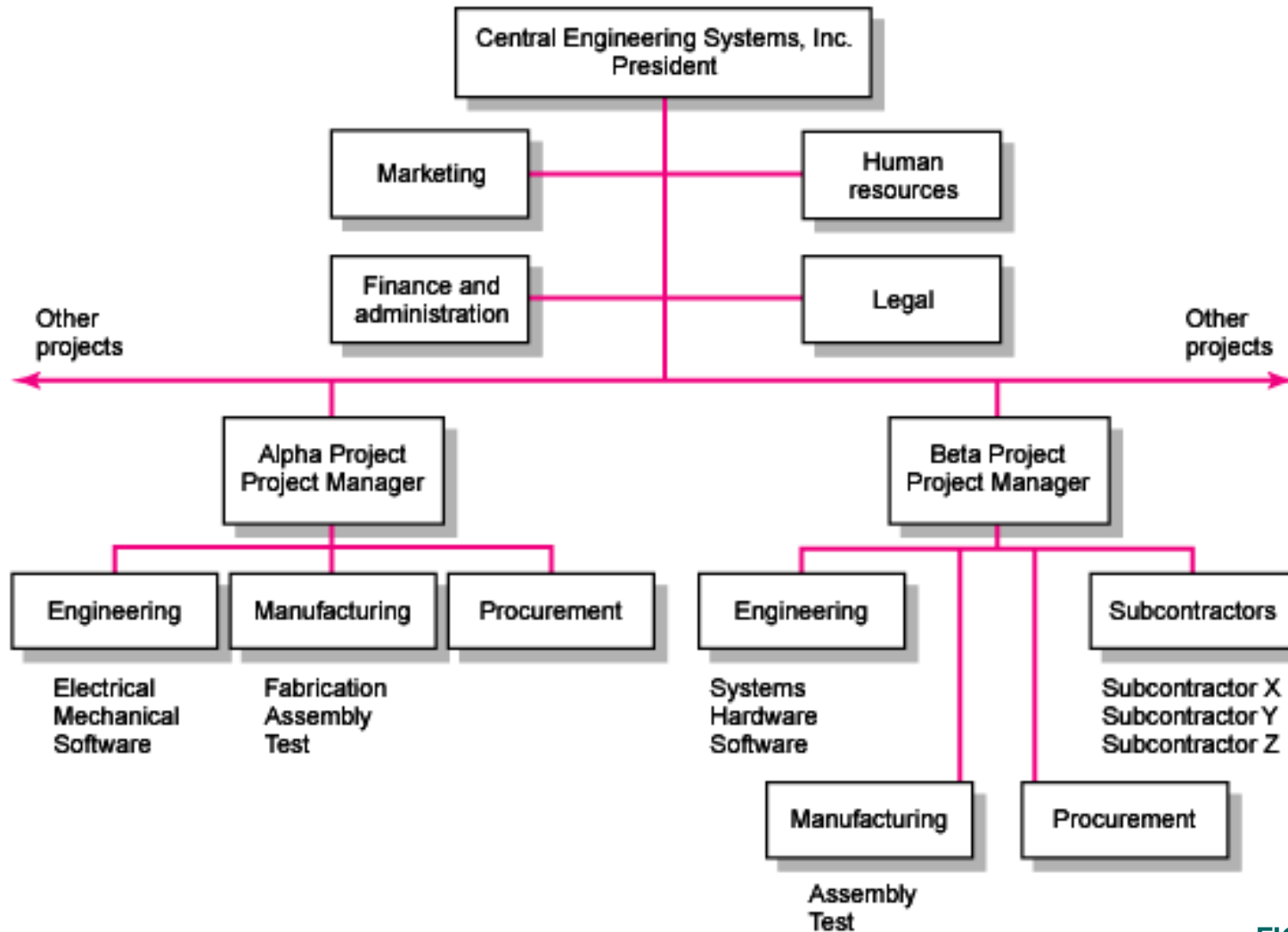
FIGURE 3.3

Project Management Structures (cont'd)

- ## Organizing Projects: Matrix Structure

  - Hybrid organizational structure (matrix) is overlaid on the normal functional structure.

    - Two chains of command (functional and project)
    - Project participants report simultaneously to both functional and project managers.

  - Matrix structure optimizes the use of resources.

    - Allows for participation on multiple projects while performing normal functional duties.
    - Achieves a greater integration of expertise and project requirements.

Matrix Organization Structure
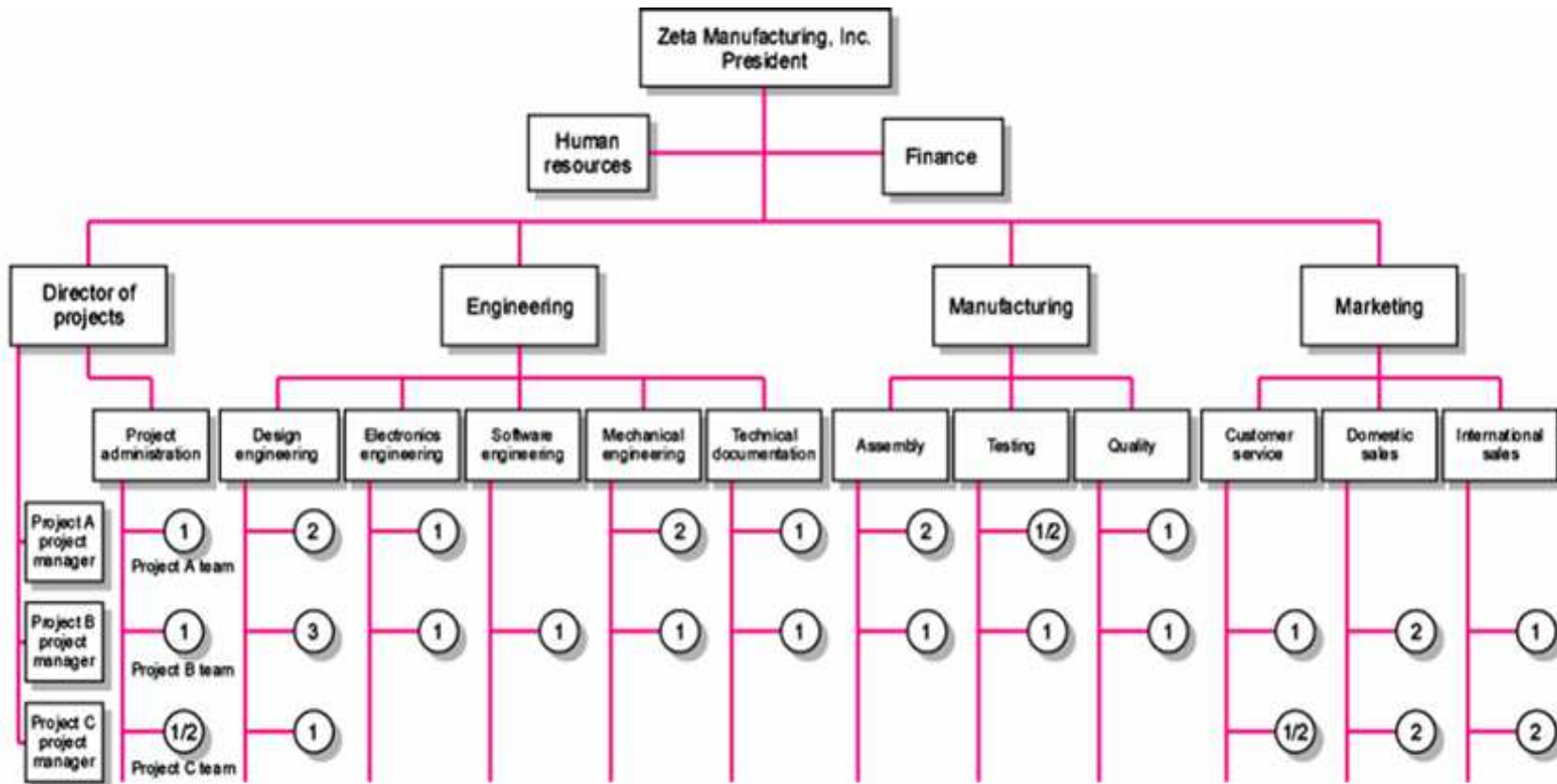
FIGURE 3.4

Division of Project Manager and Functional Manager Responsibilities in a Matrix Structure

Project Manager	Negotiated Issues	Functional Manager
What has to be done?	Who will do the task?	How will it be done?
When should the task be done?	Where will the task be done?	
How much money is available to do the task?	Why will the task be done?	How will the project involvement impact normal functional activities?
How well has the total project been done?	Is the task satisfactorily completed?	How well has the functional input been integrated?

TABLE 3.1

Different Matrix Forms

- ## Functional (also Weak or Lightweight) Form
  - –Matrices in which the authority of the functional manager predominates and the project manager has indirect authority.

- ## Balance (or Middleweight) Form
  - –The traditional matrix form in which the project manager sets the overall plan and the functional manager determines how work to be done.

- ## Strong (Heavyweight) Form
  - –Resembles a project team in which the project manager has broader control and functional departments act as subcontractors to the project.

Project Organization: Matrix Form

- **Advantages**
  - **Efficient**
  - **Strong Project Focus**
  - **Easier Post-Project Transition**
  - **Flexible**

- **Disadvantages**
  - **Dysfunctional Conflict**
  - **Infighting**
  - **Stressful**
  - **Slow**

Project Management Structures (cont'd)

- ## Organizing Projects: Network Organizations
  - An alliance of several organizations for the purpose of creating products or services.
    - A "hub" or "core" firm with strong core competencies outsources key activities to a collaborative cluster of satellite organizations.
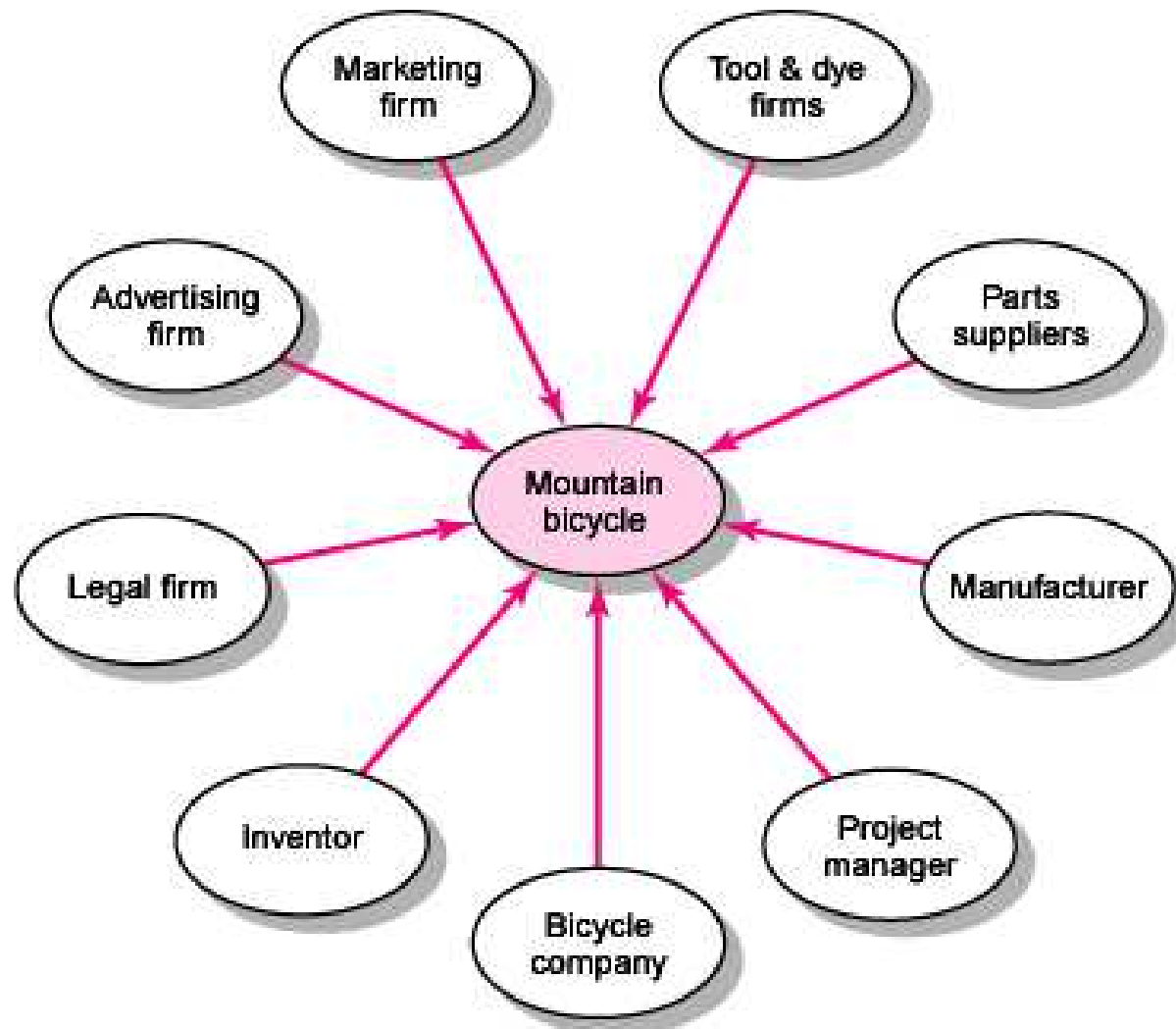
Mountain Bicycle Network Project

FIGURE 3.5

Project Organization: Network Form
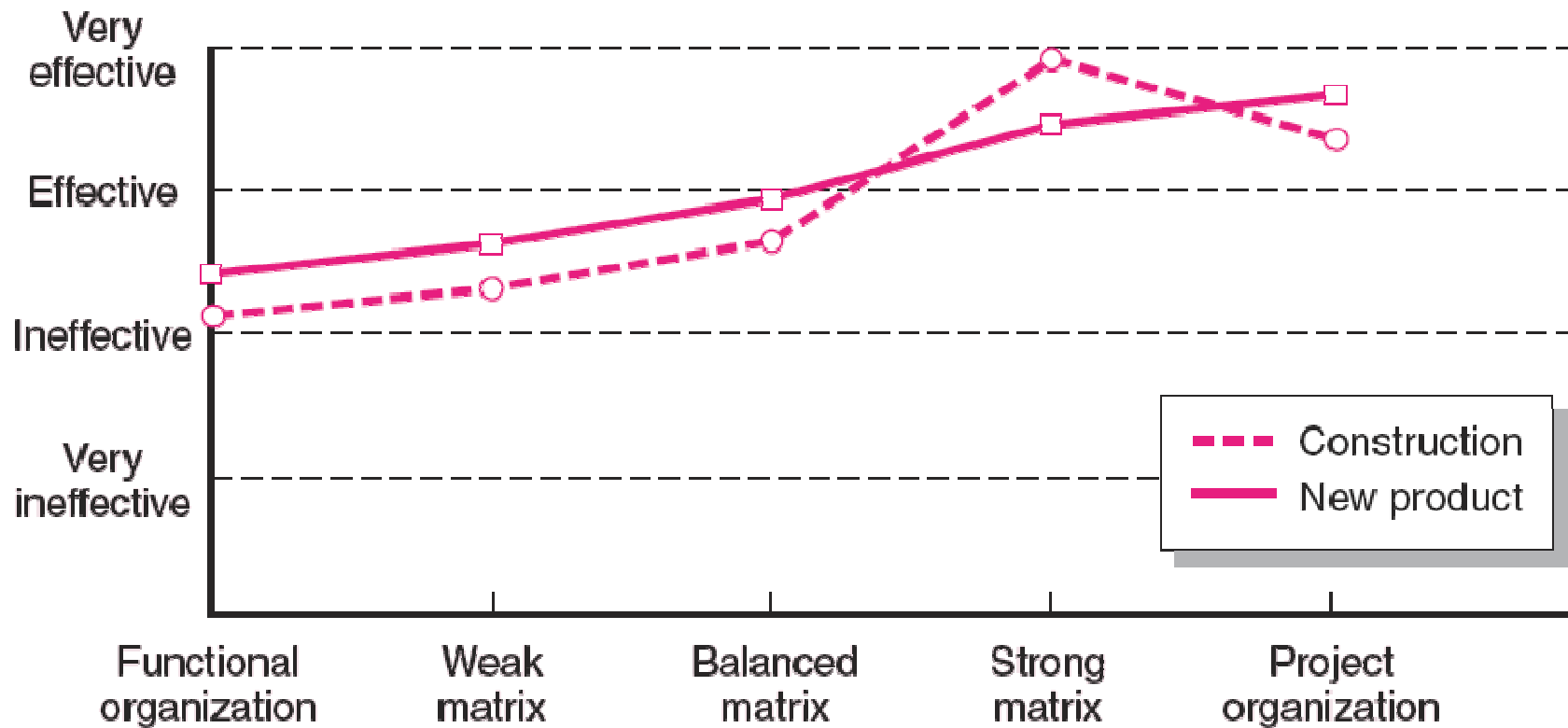
- **Advantages**

  - **Cost Reduction**

  - **High Level of Expertise**

  - **Flexible**

- **Disadvantages**

  - **Coordination of Breakdowns**

  - **Loss of Control**

  - **Conflict**

Rated Effectiveness of Different Project Structures by Type of Project

Legend:
- — — — Construction
- ———— New product

X-axis: Functional organization, Weak matrix, Balanced matrix, Strong matrix, Project organization

Y-axis: Very effective, Effective, Ineffective, Very ineffective

FIGURE 3.6

Choosing the Appropriate Project Management Structure

- Organization (Form) Considerations
  - How important is the project to the firm's success?
  - What percentage of core work involves projects?
  - What level of resources (human and physical) are available?

Choosing the Appropriate Project Management Structure (cont'd)

- Project Considerations
  - Size of project
  - Strategic importance
  - Novelty and need for innovation
  - Need for integration (number of departments involved)
  - Environmental complexity (number of external interfaces)
  - Budget and time constraints
  - Stability of resource requirements

Organizational Culture

- Organizational Culture Defined

  –A system of shared norms, beliefs, values, and assumptions which bind people together, thereby creating shared meanings.

  –The "personality" of the organization that sets it apart from other organizations.

  - Provides a sense of identify to its members.

  - Helps legitimize the management system of the organization.

  - Clarifies and reinforces standards of behavior.

Key Dimensions Defining an Organization's Culture

Job	1. Member identity	Organization
Individual	2. Team emphasis	Group
Task	3. Management focus	People
Independent	4. Unit integration	Interdependent
Loose	5. Control	Tight
Low	6. Risk tolerance	High
Performance	7. Reward criteria	Other
Low	8. Conflict tolerance	High
Means	9. Means-ends orientation	Ends
Internal	10. Open-system focus	External

FIGURE 3.7

Identifying Cultural Characteristics

- Study the physical characteristics of an organization.

- Read about the organization.

- Observe how people interact within the organization.

- Interpret stories and folklore surrounding the organization.

Organizational Culture Diagnosis Worksheet

I. Physical Characteristics
Architecture, office layout, decor, attire

_____

_____

_____

II. Public Documents
Annual reports, internal newsletters, vision statements

_____

_____

_____

III. Behavior
Pace, language, meetings, issues discussed,
decision-making style, communication patterns, rituals

_____

_____

_____

IV. Folklore
Stories, anecdotes, heroines, heroes, villains

_____

_____

_____

FIGURE 3.8

Implications of Organizational Culture for Organizing Projects

- **Challenges for Project Managers in Navigating Organizational Cultures**
  - Interacting with the culture and subcultures of the parent organization
  - Interacting with the project's clients or customer organizations
  - Interacting with other organizations connected to the project

Cultural Dimensions of an Organization Supportive of Project Management

1. Member identity
Job ———————— Organization

2. Team emphasis
Individual ———————— Group

3. People focus
Task ———————— People

4. Unit integration
Independent ———————— Interdependent

5. Control
Loose ———————— Tight

6. Risk tolerance
Low ———————— High

7. Reward criteria
Performance ———————— Other

8. Conflict tolerance
Low ———————— High

9. Means-ends orientation
Means ———————— Ends

10. Open-system focus
Internal ———————— External

FIGURE 3.9

Key Terms

Balanced matrix

Dedicated project team

Strong matrix

Matrix

Organizational culture

Weak matrix

Projectitis

Projectized organization

Network organization
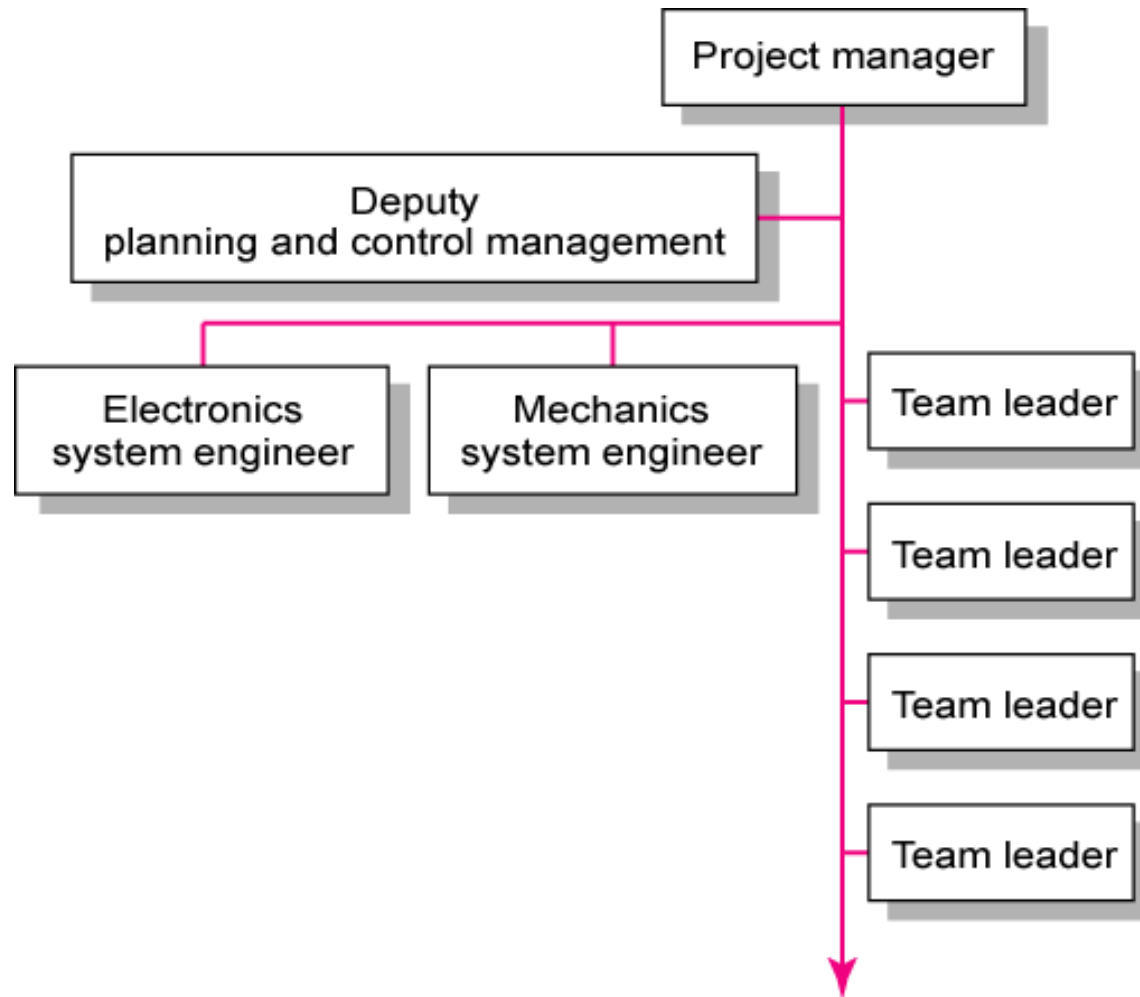
Organization of Product Development Projects at ORION

FIGURE C3.1
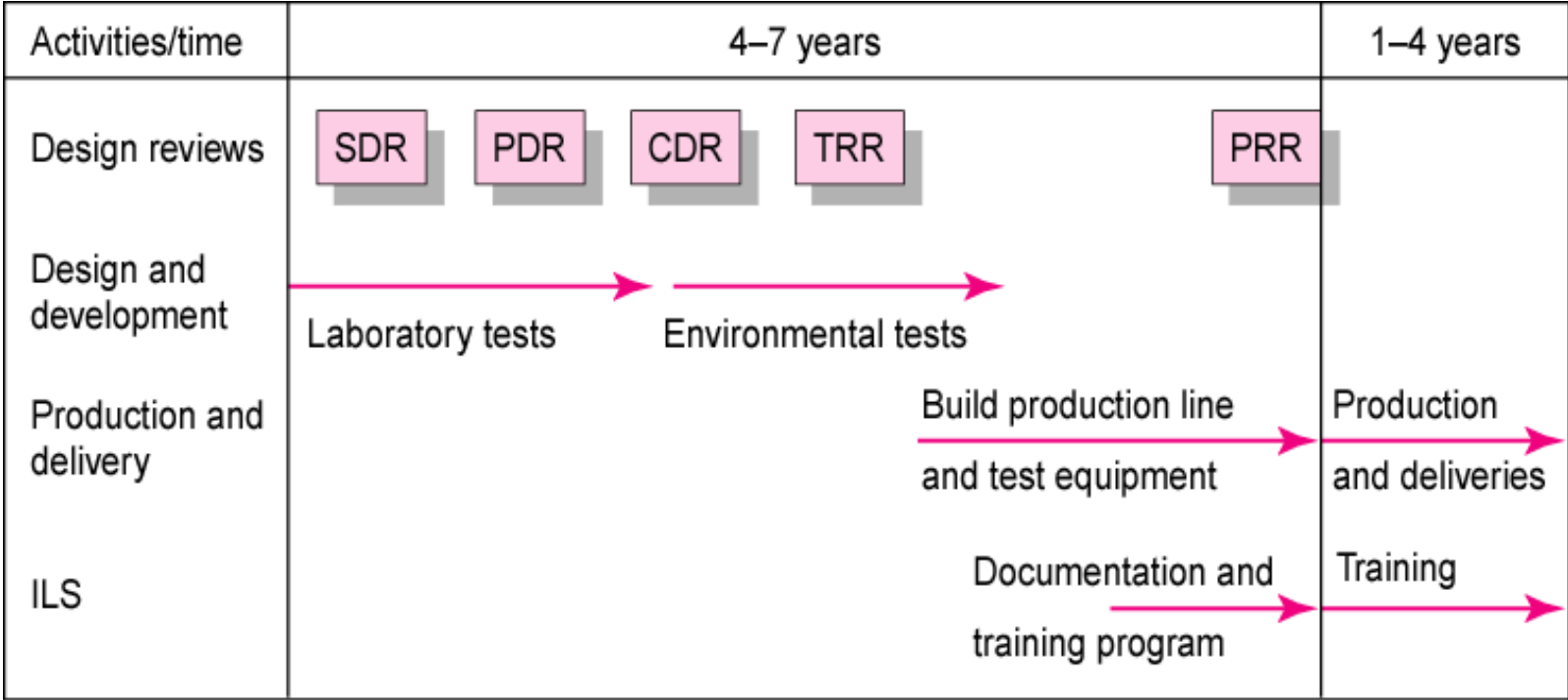
Traditional Master Plan at ORION

Activities/time	4–7 years					1–4 years
Design reviews	SDR	PDR	CDR	TRR	PRR	
Design and development	Laboratory tests →		Environmental tests →			
Production and delivery				Build production line and test equipment →		Production and deliveries →
ILS				Documentation and training program →		Training →

FIGURE C3.2

Proposed Project Organization for the Jaguar Project
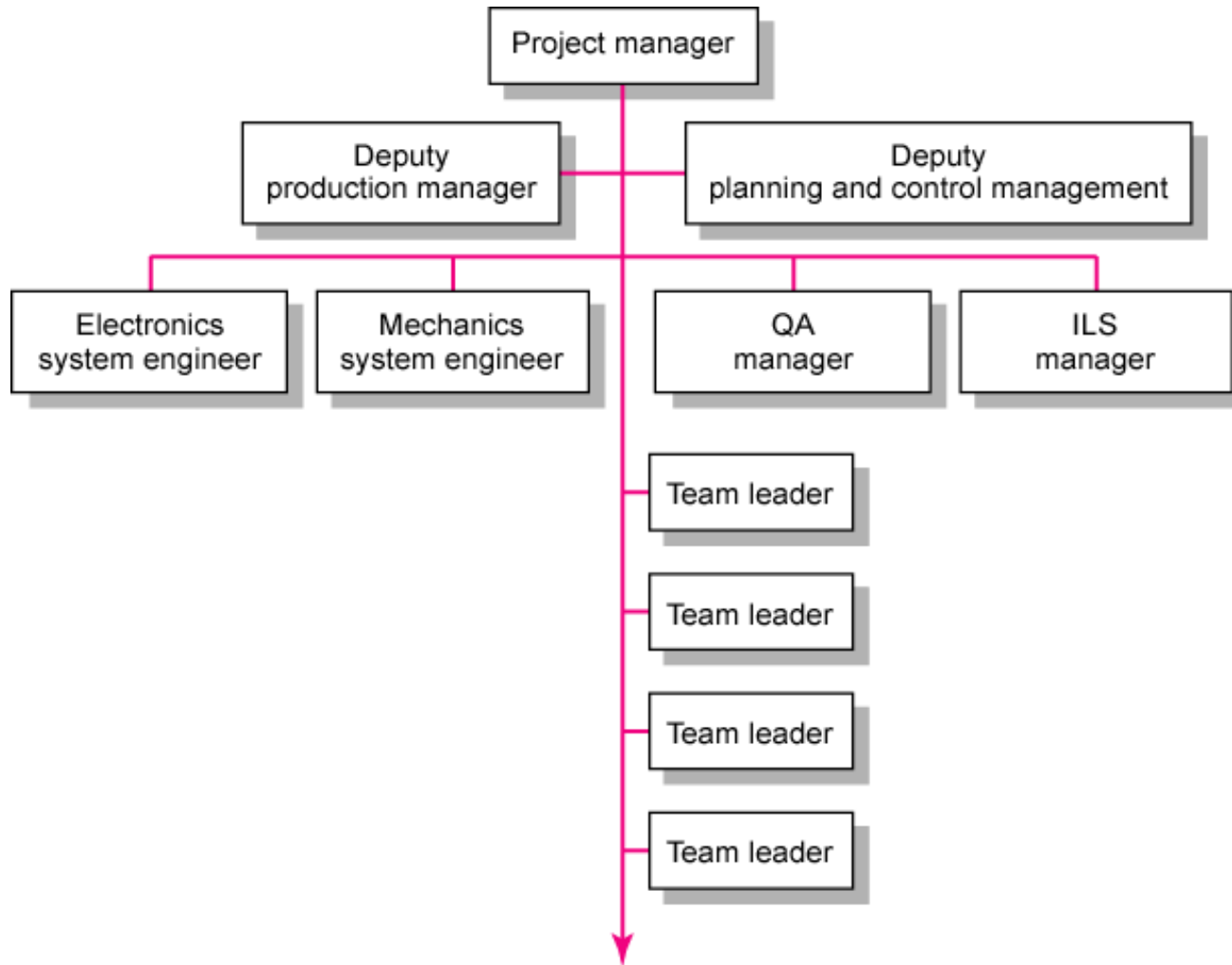
FIGURE C3.3

Jaguar Master Plan

Activities/time	3–4 years				1–4 years
Design reviews	SDR	PDR	CDR	TRR	PRR

Design and development → Laboratory tests → Environmental tests →

Production and delivery — Build production line and test equipment → Production and delivery →
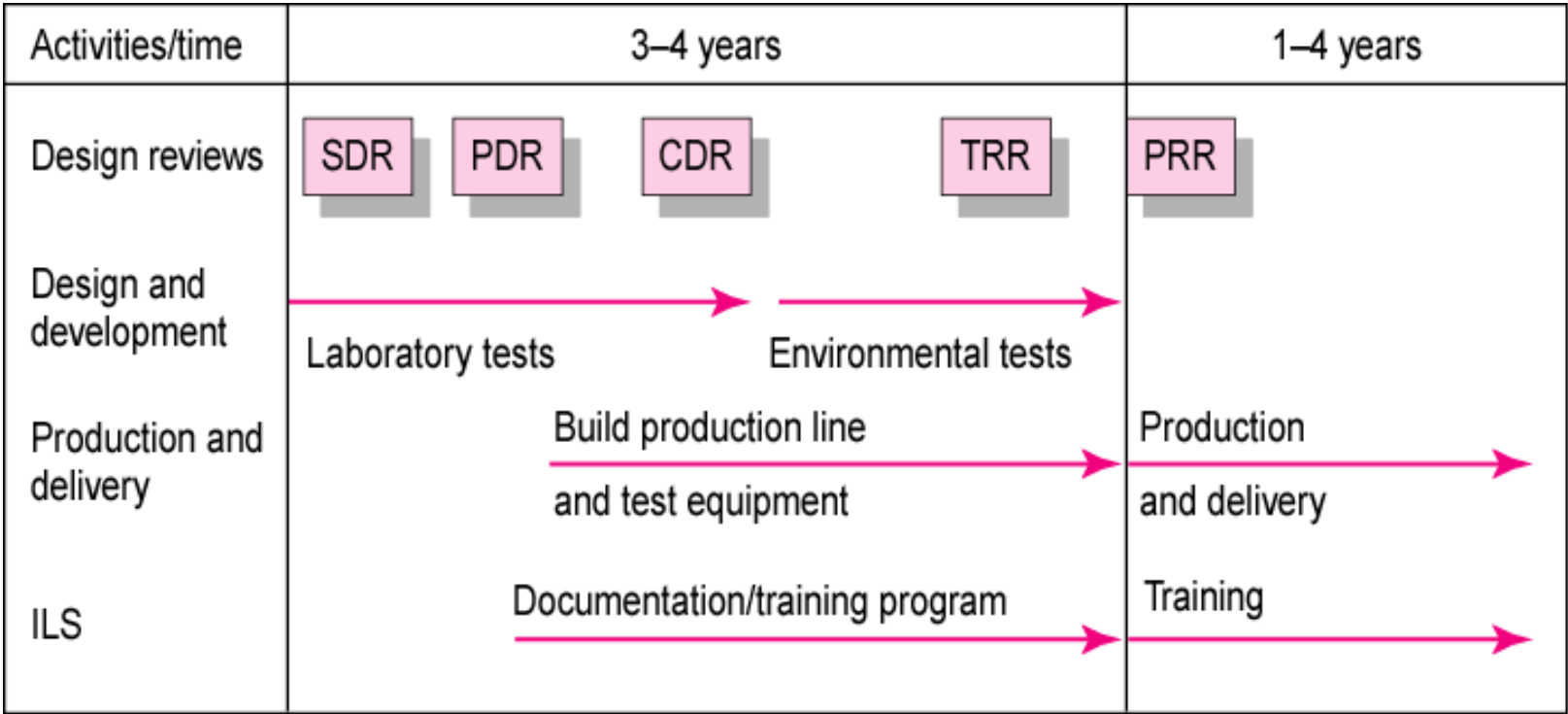
ILS — Documentation/training program → Training →

FIGURE C3.4

Mechanisms for Sustaining Organizational Culture

Methods of maintaining organizational culture:

Formal statement of principles
Top management behavior
Reactions to organizational crises
Allocation of rewards and status
Rituals, stories, and symbols

Recruitment of employees who fit the culture → Organizational culture → Removal of employees who deviate from the culture

FIGURE A3.1