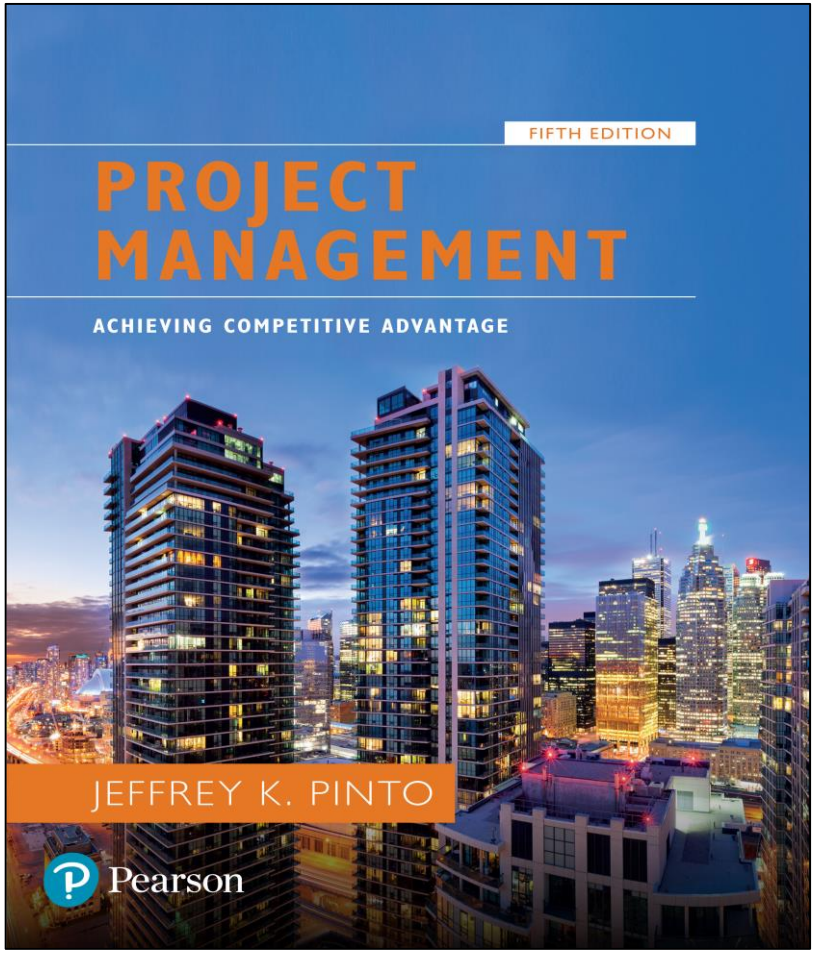
# Project Management: Achieving Competitive Advantage

Fifth Edition




## Chapter 7

Risk management

# Learning Objectives

**7.1** Define project risk.

**7.2** Recognize four key stages in project risk management and the steps necessary to manage risk.

**7.3** Explain the Project Risk Analysis and Management (PRAM) process.

# Questions to Consider in Risk Management

- What is likely to happen (the probability and impact)?
- What can be done to minimize the probability or impact of these events?
- What cues will signal the need for such action (i.e., what clues should I actively look for)?
- What are the likely outcomes of these problems and my anticipated reaction?

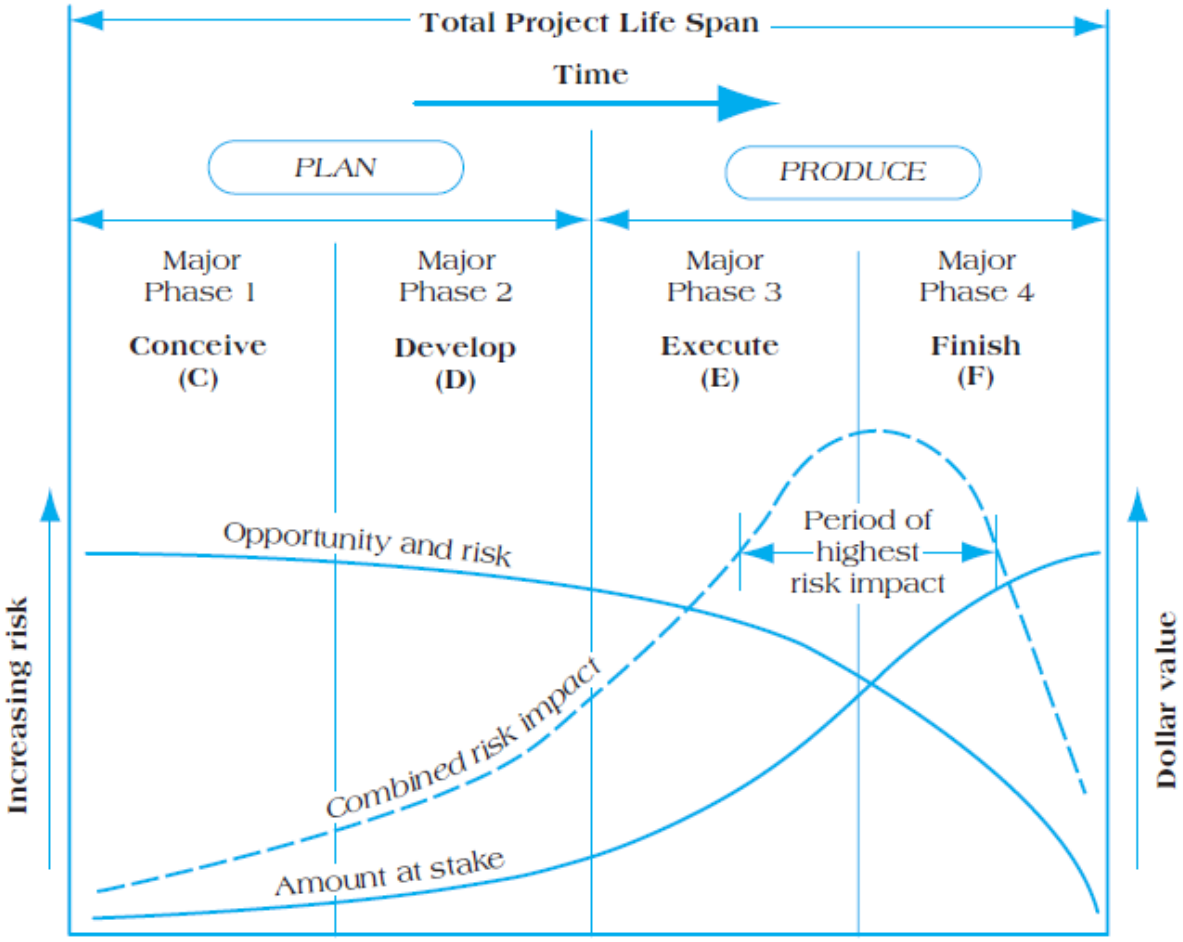
# Risk Management

Risk management—the **art** and **science** of **identifying, analyzing, and responding** to risk factors throughout the **life of a project** and in the best interest of its objectives.

Project risk—an **uncertain event** or **condition** that, if it occurs, has a **positive** or **negative** effect on one or more **project objectives** such as scope, schedule, cost, or quality.

$$\text{Risk} = (\text{Probability of Event})(\text{Consequences of Event})$$

# Figure 7.2 Risk Versus Amount at Stake: The Challenge in Risk Management



# Four Stages of Risk Management

1. Risk **identification**
2. **Analysis** of probability and consequences
3. Risk **mitigation** strategies
4. **Control** and documentation

# Risk Clusters

- Financial
- Technical
- Commercial
- Execution
- Contractual or legal risk

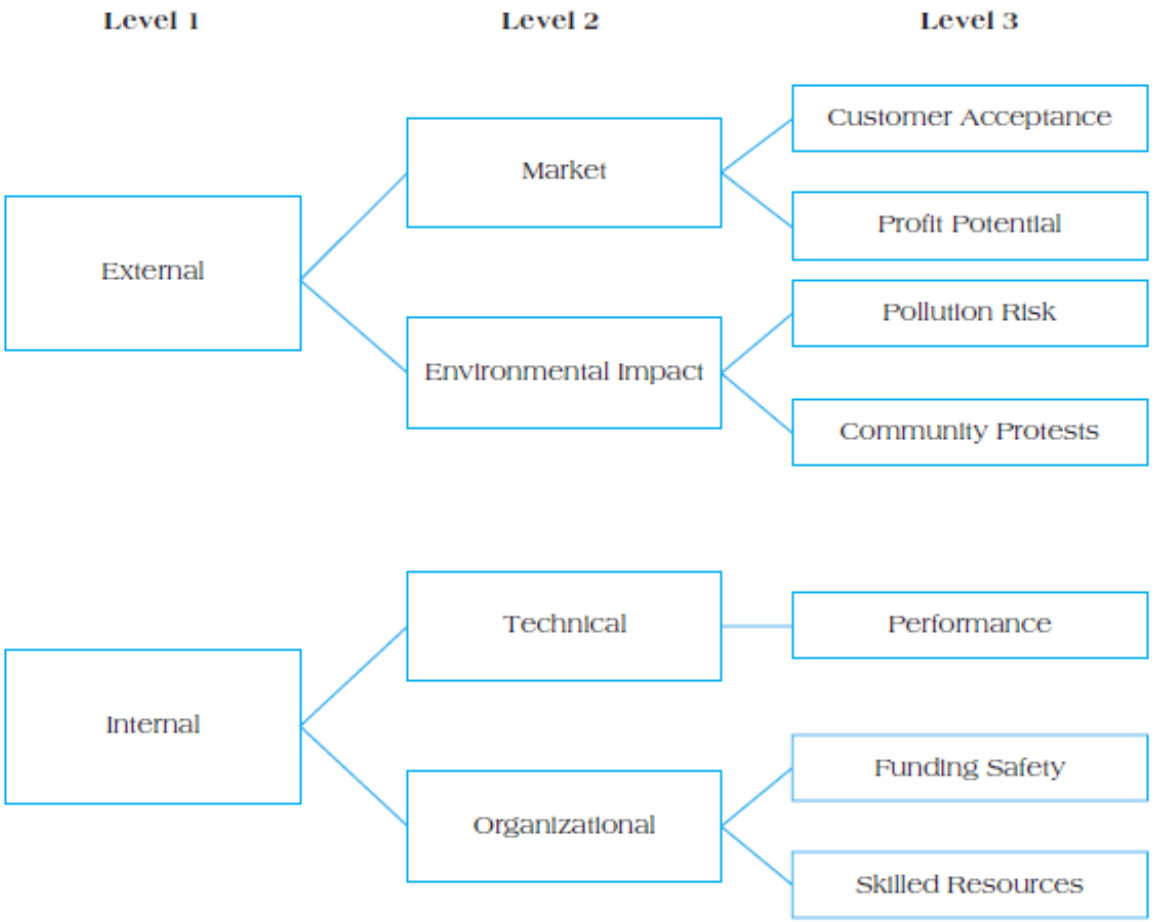
**Common Types of Risks**

- Absenteeism
- Resignation
- Staff pulled away
- Time overruns
- Skills unavailable
- Ineffective training
- Specs incomplete
- Change orders

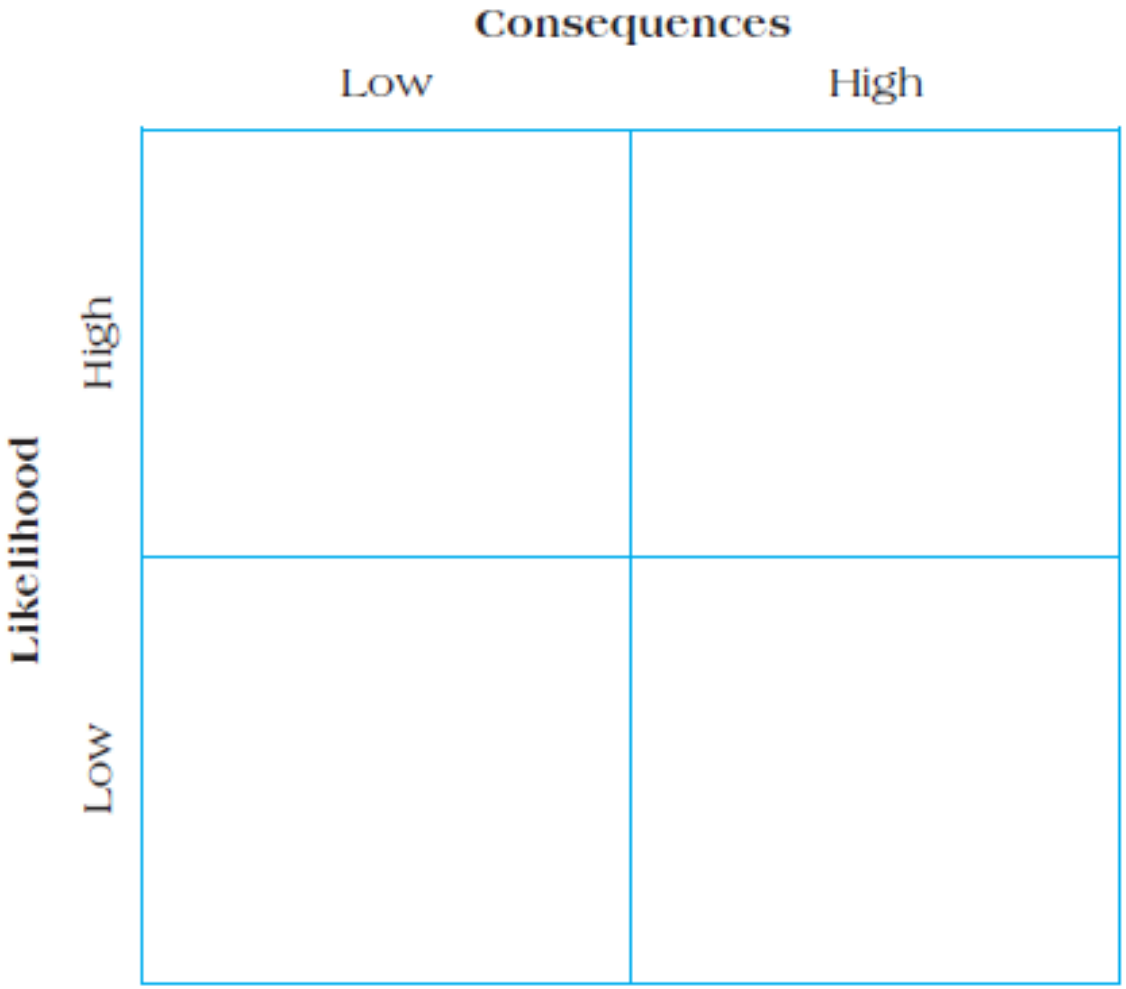
# Risk Factor Identification

- Brainstorming meetings
- Expert opinion
- Past history
- Multiple (or team-based) assessments

# Figure 7.4 Risk Breakdown Structure (RBS)



# Figure 7.5 Risk Impact Matrix



# Risk Mitigation Strategies

- Accept
- Minimize
- Share
- Transfer
- Contingency Reserves
  - Task contingency
  - Managerial contingency
- Insurance
- Workaround
- Other Mitigation Strategies
  - Mentoring
  - Cross training
- Control and Documentation
  - Change management

# Control and Documentation

**Helps managers classify and codify risks, responses, and outcomes**

Change management report system answers:

- What?
- Who?
- When?
- Why?
- How?

# Project Risk Analysis and Management (PRAM)

**PRAM** presents a **generic methodology** that can be applied to multiple project environments, and encompasses the key components of project risk management.

**Key Features of PRAM**

- Risk management follows a **life cycle**.
- Risk management **strategy changes** over the project life cycle.
- **Synthesized, coherent** approach.

# Nine Phases of Risk Assessment

1. Define
2. Focus
3. Identify
4. Structure
5. Clarify ownership of risks
6. Estimate
7. Evaluate
8. Plan
9. Manage

# Summary

1. Define project risk.
2. Recognize the four key stages in project risk management and the steps necessary to manage risk.
3. Explain the Project Risk Analysis and Management (PRAM) process.

# Thank You