# Chapter 11: Project Risk Management

## Information Technology Project Management, Seventh Edition


Note: See the text itself for full citations.

# Learning Objectives

- Understand risk and the importance of good project risk management
- Discuss the elements of planning risk management and the contents of a risk management plan
- List common sources of risks on information technology (IT) projects
- Describe the process of identifying risks and create a risk register
- Discuss qualitative risk analysis and explain how to calculate risk factors, create probability/impact matrixes, and apply the Top Ten Risk Item Tracking technique to rank risks

# Learning Objectives (cont'd)

- Explain quantitative risk analysis and how to apply decision trees, simulation, and sensitivity analysis to quantify risks
- Provide examples of using different risk response planning strategies to address both negative and positive risks
- Discuss how to control risks
- Describe how software can assist in project risk management

# The Importance of Project Risk Management

- Project risk management is the art and science of identifying, analyzing, and responding to risk throughout the life of a project and in the best interests of meeting project objectives
- Risk management is often overlooked in projects, but it can help improve project success by helping select good projects, determining project scope, and developing realistic estimates

# Research Shows Need to Improve Project Risk Management

- Study by Ibbs and Kwak shows risk has the lowest maturity rating of all knowledge areas
- A similar survey was completed with software development companies in Mauritius, South Africa in 2003, and risk management also had the lowest maturity
- KLCI study shows the benefits of following good software risk management practices

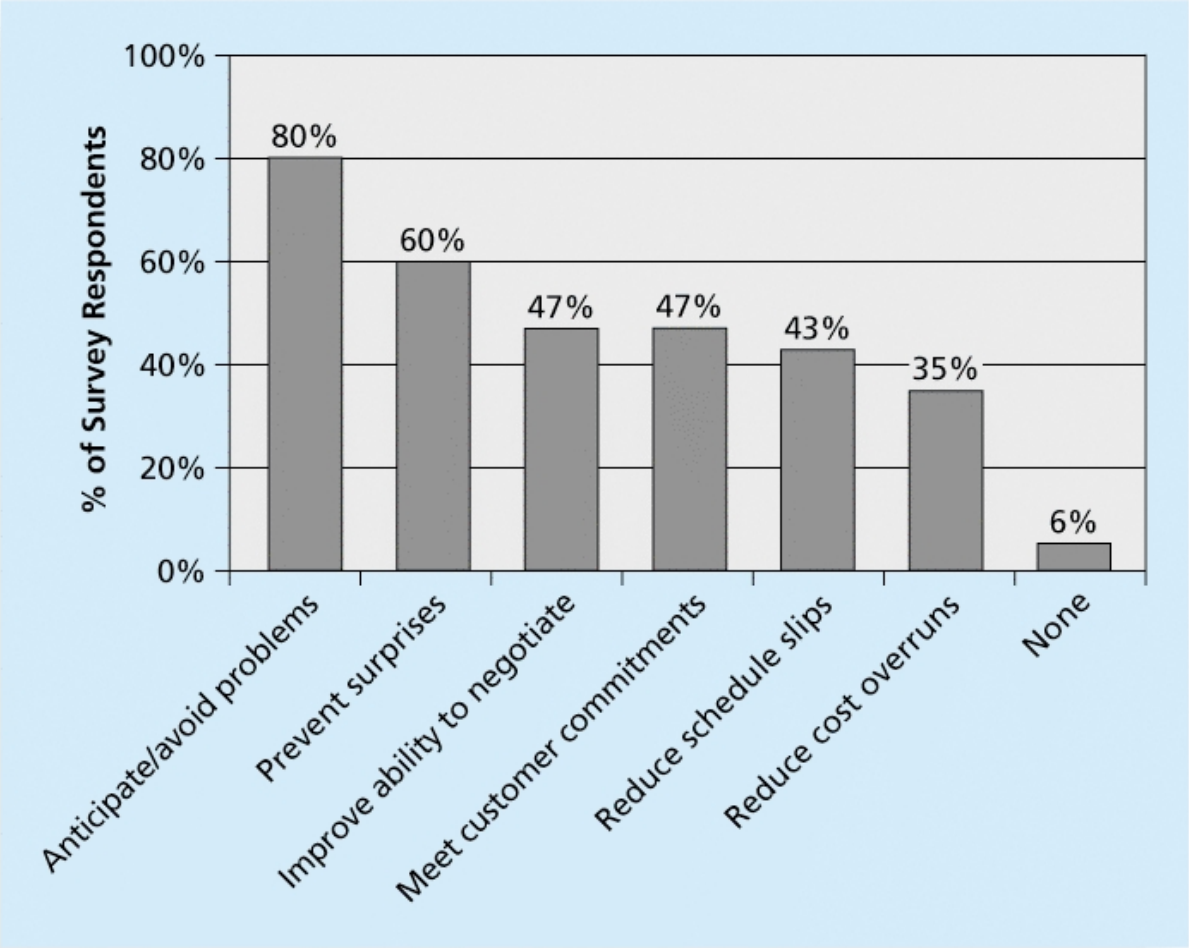
# Table 11-1. Project Management Maturity by Industry Group and Knowledge Area*

**KEY: 1 = LOWEST MATURITY RATING 5 = HIGHEST MATURITY RATING**

| *Knowledge Area* | Engineering/ Construction | Telecommunications | Information Systems | Hi-Tech Manufacturing |
|---|---|---|---|---|
| *Scope* | 3.52 | 3.45 | 3.25 | 3.37 |
| *Time* | 3.55 | 3.41 | 3.03 | 3.50 |
| *Cost* | 3.74 | 3.22 | 3.20 | 3.97 |
| *Quality* | 2.91 | 3.22 | 2.88 | 3.26 |
| *Human Resources* | 3.18 | 3.20 | 2.93 | 3.18 |
| *Communications* | 3.53 | 3.53 | 3.21 | 3.48 |
| ***Risk*** | **2.93** | **2.87** | **2.75** | **2.76** |
| *Procurement* | 3.33 | 3.01 | 2.91 | 3.33 |

*Ibbs, C. William and Young Hoon Kwak. “Assessing Project Management Maturity,” *Project Management Journal* (March 2000).

# Figure 11-1. Benefits from Software Risk Management Practices*




*Source: Kulik and Weber, KLCI Research Group

# Global Issues

- Many people around the world suffered from financial losses as various financial markets dropped in the fall of 2008, even after the $700 billion bailout bill was passed by the U.S. Congress
- According to a global survey of 316 financial services executives, over 70 percent of respondents believed that the losses stemming from the credit crisis were largely due to failures to address risk management issues
- They identified several challenges in implementing risk management, including data and company culture issues

# Negative Risk

- A dictionary definition of risk is “the possibility of loss or injury”
- Negative risk involves understanding potential problems that might occur in the project and how they might impede project success
- Negative risk management is like a form of insurance; it is an investment

# Risk Can Be Positive

- Positive risks are risks that result in good things happening; sometimes called opportunities
- A general definition of project risk is an uncertainty that can have a negative or positive effect on meeting project objectives
- The goal of project risk management is to minimize potential negative risks while maximizing potential positive risks