

CHAPTER 8

Managing Risk

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Chapter Concepts

- Identifying risks and their potential impact
- Assessing the likelihood of occurrence and degree of impact of risks
- Risk response planning
- Controlling risks

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Learning Outcomes

- Discuss what is involved in managing risks
- Identify and categorize risks
- Assess and prioritize risks
- Prepare a risk response plan
- Develop a risk assessment matrix
- Control risks

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Identify Risks

- Can jeopardize accomplishing the project objective
- Brainstorm sources of risks
- Establish categories for risks and evaluate
- Use historical information
- Progressively elaborate and identify new risks as more information becomes available

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Assess Risks

- Determine the likelihood the risk event will occur
- Evaluate degree of impact on the project objective
- Prioritize
 - Likelihood of occurrence and degree of impact
 - Position relative to the critical path

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Risk Assessment Matrix

FIGURE 8.1 Risk Assessment Matrix

RISK	IMPACT	LIKELIHOOD OF OCCURRENCE (L, M, H)	DEGREE OF IMPACT (L, M, H)	ACTION ON TRIGGER	RESPONSIBILITY	RESPONSE PLAN
Rain on Day of Event	<ul style="list-style-type: none"> • Low attendance • Incur financial loss 	M	H	Weather forecast two days before event	Laura	<ul style="list-style-type: none"> • Reserve indoor space now • Recruit extra volunteers to work around the clock to set up indoors • Develop detailed plan
Road Construction	<ul style="list-style-type: none"> • Reduced attendance • Reduced revenue 	H	H	Highway Dept. publishes construction schedule	Allison	<ul style="list-style-type: none"> • Identify alternate routes • Have signs made • Post signs along all routes • Announce in news media

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Plan Risk Responses

- Set of actions
 - Prevent or reduce the likelihood of occurrence or the impact of a risk
 - Implement if the risk event occurs
- Establishes a trigger point for implementing an action
- Assigns responsibility for implementation
- Avoid, mitigate, or accept the risk
- Include a contingency fund to cover implementation cost

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Managing Risks for Information Systems Development

- Risks can be categorized into seven types
 - Technological risk
 - Human risk
 - Usability risk
 - Project team risk
 - Project risk
 - Organizational risk
 - Strategic and political risk

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IS Example: Risk Assessment Matrix

FIGURE 8.2 Risk Assessment Matrix for Web-based Reporting System Project

RISK	IMPACT	LIKELIHOOD OF OCCURRENCE (L, M, H)	DEGREE OF IMPACT (L, M, H)	ACTION ON TRIGGER	RESPONSIBILITY	RESPONSE PLAN
Lack of cooperation and commitment from users	Incorrect sales records in reporting system	M	H	Sales staff have difficulty using system during training	Jim	Have additional training materials to describe how to use
High number of ad hoc queries	Systems design not completed on time	L	H	More queries to be answered than time remaining to complete	Jeff	Have assigned staff work longer on tasks; staff have at least seven days of slack
Testing reveals design problems	Rework the design and development	M	H	Evaluation reveals problems	Cathy	Examine for design flaws during Evaluation task
Customized software has integration problem	System not working and no information recorded	L	H	Study of existing system identifies potential problems	Steve	Develop system with compatible programming, possibly not latest technology
Changes in membership of the project team	Lack of proper skills and knowledge to do task	L	M	Resignation statement by staff member	Beth	Assign another project team member to learn task during notice period

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Critical Success Factors

- **Identify risks** and their **potential impacts** before the project starts.
- **Involve the project team** or experts in assessing risks.
- **Assign high priority** to managing risks that have a high likelihood of occurrence and a high potential impact on the project outcome.
- **Develop response plans** for addressing high priority risks.

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Summary

- Risk is an uncertain event that, if it occurs, can jeopardize accomplishing the project objective.
- Risk management includes identification, assessment, control, and response to project risks in order to minimize the likelihood of occurrence and/or the potential impact of adverse events on the accomplishment of the project objective.
- Risk identification includes determining which risks may adversely affect the project objective and estimating what the potential impacts of each risk might be if it occurs.
- Assessing each risk involves determining the likelihood that the risk event will occur and the degree of impact the event will have on the project objective, and then prioritizing the risks.
- A risk response plan is a defined set of actions to prevent or reduce the likelihood of occurrence or the impact of a risk, or to implement if the risk event occurs.
- Regularly review and evaluate all risks to determine if there are any changes to the likelihood of occurrence or the potential impact of any of the risks, or if any new risks have been identified.

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