

Session 41

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Risk Management

Topic Description

Risk is one of the three constants in any project. For any project to be successful risk must be identified, qualified, responded to. This session will present the fundamentals of risk management, especially during project initiation and planning. A "Risk-Based Graded Approach Worksheet" will be presented with guidelines for its implementation and use.

Speaker Biography

Tom Sauerbrun, PMP is a principal consultant with over three decades of project management experience on numerous project types, specializing in project planning and risk assessment, completion of fast-track projects and turn-around of troubled projects. He has shared these experiences and practical application of PM principles in numerous public, private, and graduate level seminars. A member of PMI for over two decades, he served on the D/FW Chapter Board of Directors, receiving the International Chapter of the Year Award in 1988.

Executive Overview of Risk Management

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What is Risk?

- Risk - an uncertain event or condition that, if it occurs, has a positive or negative effect on a project objective.
- Risk Event – A discrete occurrence that may affect the project for better or worse.
- Probability – The likelihood that a risk will occur, usually shown as a per cent.
- Impact – the effect on project objectives if the risk event occurs, usually given in \$'s.

What is Risk Management?

- Risk Management is the systematic process of identifying, analyzing, and responding to project risk.
- Risk Management includes maximizing the probability and/or impact of positive risk events (opportunities) and minimizing the probability and/or impact of negative risk events (threats).

Risk in a project environment.

- A project is
 - temporary endeavor undertaken
 - to produce a unique product or service.
- The three constants in a project
- Let's take a look at risk in the design phase.

How “Risk Management” impacts the project team.

- Project Management is:
 - The application of knowledge, skills, tools, and techniques
 - To project activities
 - To meet or exceed
 - Stakeholder
 - Needs and expectations for the project.
- Let’s take a look at who the stakeholders are in your design projects.

Formal Risk Management includes:

- Risk Identification:
- Risk Qualification:
- Risk Quantification:
- Risk Response Planning

Risk Identification

- Involves determining which risks might affect the project and documenting their characteristics.
- Is an iterative process.
- Roles and Responsibilities of Stakeholders, Project Manager, and Team.

Risk Qualification

- Qualitative Risk Analysis is:
 - The process of assessing the impact and likelihood of identified risks.
 - Prioritizes risks accordingly to their potential effect on project objectives.
 - One way to determine the importance of addressing specific risks and guiding risk responses.

Risk Quantification

- Quantitative Risk Analysis aims to analyze numerically the probability of each risk and its consequences on project objectives.
- Uses analysis techniques (e.g., Monte Carlo simulation) to identify realistic and achievable cost and schedule targets.
- Generally follows Qualitative Risk Analysis.

Risk Response Planning

- Is the process of developing options and determining actions to enhance opportunities and reduce threats to project objectives.
- Avoidance:
 - Change the Project Plan to eliminate the risk.
- Transfer:
 - Shift the consequence of a risk to a third party.
 - Includes ownership of the response and management of the risk.

Risk Response Planning, cont'd.

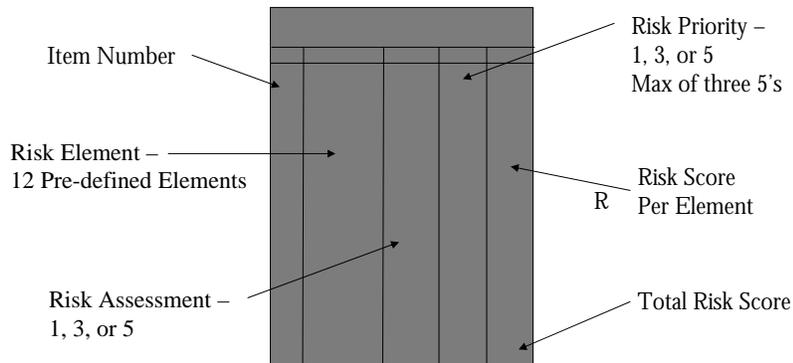
- Mitigation:
 - Reduce the probability and/or impact of an adverse risk (i.e., threat) to an acceptable threshold.
- Accept:
 - The project team has decided not to change the Project Plan to deal with a specific risk.
 - Develop a Contingency Reserve Fund should the risk occur.

“Risk Based Graded Approach Worksheet” Introduction

- During the initiation process design teams need a process to identify and grade overall project risk level based on pre-determined, standardized criteria.
- This process needs to be done quickly, free from hours of data collection and analysis.
- Results need to identify areas of “high risk” early in the design phase.
- Results should provide a baseline for future formal risk analysis.
- The analysis should allow input from all stakeholders.

Sample “Graded Approach Worksheet”

- Sample Worksheet includes:



The 12 “Risk Elements”

- Technology
- Project Schedule
- Interfaces
- Experience/Capability
- Environmental Contamination
- Regulatory Involvement

The 12 Risk Elements, cont'd.

- Vendor Issues
- Resource Issues
- Quality Requirements
- Project Funding
- Political Visibility
- Public Involvement

Three Examples

- Now that we have the basics, let's complete several examples; two of mine, then one of a design project.
 1. \$7.5M, one year duration, 10MW CILC power plant, customer was NASA, using standard 2MW diesel generators.
 2. \$380K, three month duration project to build a memorial to serviceman that lost their lives in battle, sponsor was a military wives club, it had to be done by Memorial Day.
 3. \$2M project to design a bridge to replace one damaged by a tropical storm on Hutchinson Island. Design must be completed within six months and support fast track construction during snow-bird season.

Review and Interpret Results

- Utilizing a standardized methodology to grade various risk elements we have:
 - Identified and graded an overall risk level during the initiation process of your project.
 - Completed analysis in a timely manner; minutes vs. hours.
 - Identified risk based focus areas (i.e., 5 X 5's) early in the design phase of the project.
 - Provides a basis for formal risk analysis during the planning process.
 - Allows input from each internal and external stakeholder.

Other “Risk Elements”

- Other elements that may be considered for incorporation into the graded approach worksheet include:
 - Safety
 - Customer Acceptance
 - Et al.
- If additional “risk elements” are added be sure to modify the scoring table (e.g., if there are 14 elements in your worksheet the high risk should start at 140).

Thank You

- Thank you for your time and consideration.
- Now, are there any questions?

Additional Information

- For additional information regarding risk management and other project management classes please contact:

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Project Sunrise Risk Based Graded Approach Worksheet

ITEM	RISK ELEMENT	RISK ASSESSMENT	PRIORITY	TOTAL
1	Technology			0
2	Project Schedule			0
3	Interfaces			0
4	Experience/Capability			0
5	Environmental Contam.			0
6	Regulatory Involvement			0
7	Vendor Issues			0
8	Resource Availability			0
9	Quality Requirements			0
10	Project Funding			0
11	Political Visibility			0
12	Public Involvement			0
			Risk Score	0
	Risk Score = 0 - 70	Low Risk		
	Risk Score = 70 - 120	Medium Risk		
	Risk Score = >120	High Risk		