

Understanding Project Risk Management

Welcome!

Progress always
involves Risk
and so do Projects!



What is Risk Management about?



Managing Risk is similar to Managing Uncertainty.... Project Risk is ALWAYS in the future and could turn out positively or negatively.

Project Risk is *uncertainty* regarding any event or condition that will affect one or more of the projects OBJECTIVES.

The goal of Risk management is to increase the Probability of positive risk events and reduce negative risk events and their impact.

Properly sized and executed RISK MANAGEMENT efforts should PAY \$\$ for themselves!

Some Important things to remember about Risk:



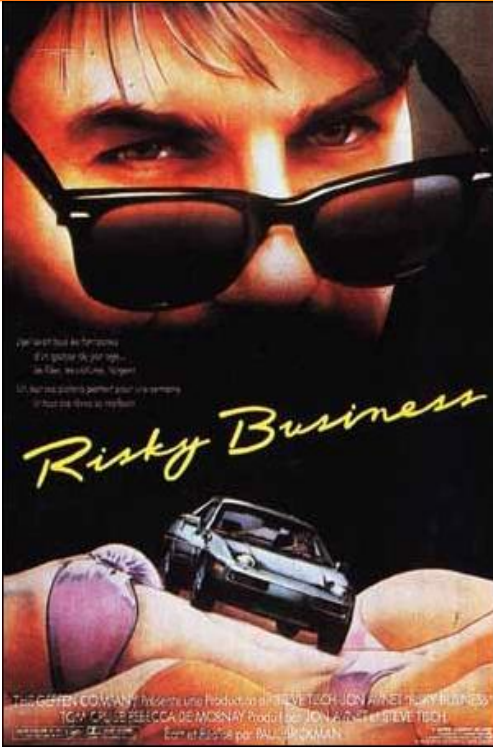
Risk Planning and management will allow you to identify, mitigate and monitor risk but:

- You can NEVER eliminate ALL project Risk
- You can reduce risk and its negative impact
- You must accept that future events (unknowns) may cause adverse effects
- **“Risk Happens!”**

The #1 mistake project teams make is to IDENTIFY risks but then do nothing about them.

Your project team will spend a lot of time contributing to a long list of risks, but rarely spend the same time mitigating them.

Why does a PM need to worry about Risk anyway?



Why worry?

1. To avoid being blindsided
2. To manage/control project outcome
3. Avoid crisis style management and the “firefighting” syndrome

An opportunity cannot be realized without taking risks.

Risk is essential to making PROJECT progress
BALANCE is the real key.



Guiding Principles of Project Risk Management:



- Risk Planning and management is a **TEAM** effort... work cooperatively to identify, assign, and strategize how to mitigate risk
- Recognize the value of opportunities you will uncover and the potential impact of adverse threats
- Continually be “**THINKING-FORWARD**” towards what happens next and what uncertainties will spring up with each deliverable
- **RISK MANAGEMENT MUST BE INTEGRATED** with **PROJECT MANAGEMENT** and it is a continuous process requiring constant **TEAM** vigilance and communication

Today's Topics



Project Risk Management Fundamentals:

What is RISK?

- What are the advantages of using a Risk Management Process on your project?
- What are Methods of Risk Identification?
- When do you identify Risks in a project?
- How do you communicate Risks?
- How to determine who is responsible for what/ which risks? Risk Ownership?

Today's Topics

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"No fingerprints, no picture ID, no Social Security number.
I'm afraid your baby presents a serious security risk."

- Basic Stages in the Risk Management Plan
 1. Risk Identification (remember: just because it looks like risk, it may not be)
 2. Risk Quantification and Qualification
 3. Risk Response
 4. Risk Monitoring and Controlling

- Learn why RISK Management Planning is often ignored or not performed

Today's Topics

Risk Management Model		Probability		
		Low	Medium	High
Impact	Severe/Critical	Substantial management required	Must monitor and manage risks	Extensive management crucial
	Moderate	May accept risks but monitor them	Management effort useful	Management effort required
	Limited/Minor	Accept risks	Accept risks but monitor them	Monitor and manage risks

RISK ANALYSIS

Quantification and Qualification:

When quantifying risk, we will learn about the two RISK dimensions – **Probability** and **Impact** of the risk occurring

Qualitative Risk analysis (RISK RANKING) is less precise, it is less expensive to achieve in terms of time and money, and results are generally good.

Today's Topics

What can you do about Risk?

Establishing your Risk Response – Risk Reduction

1. Avoid the Risk
2. Transfer or Deflect the Risk
3. Mitigate the Risk
4. Accept the Risk

What is a Risk Trigger (early warning sign)?

Today's Topics

Risk Control – the importance of continually monitoring risks, and identifying change in the status of any risk

Discuss Significance of developing a RISK REPOSITORY, aka Risk Log or Risk Register, or Risk Database

Learn the importance of holding Regular Risk Reviews to identify any changes in risks, outstanding risks, probabilities, and new risks, and actions taken.

Risk Management

Risk Management is the process involved with identifying, analyzing and responding to risk. It includes MAXimizing the results of positive events and MINImizing the consequences of the adverse project events.

STUDIES SHOW THAT:

- Risk Management is OFTEN overlooked in IT Projects
- Most “runaway” projects don’t use Risk management processes
- Proper Risk Management is a project INVESTMENT

What are some benefits of Risk Management?

- Formalizing a Risk management plan helps the project team gain a better understanding of the project
- The Risk Identification process helps to identify issues earlier and incorporate the negatives and positives into your overall plan
- Risk planning increase the chance of project success
- Risk management helps to manage stakeholders expectations
- Risk planning helps to define ACCOUNTABILITY and ownership of issues and risk

Why is Project Risk management often ignored?

Because there are many OBSTACLES to RISK Management

- The risk process is often seen as too complex and overwhelming (takes too long to complete)
- Too many people on the team spending too much time on the Risk planning process
- Team members may not be familiar with the risk management process
- The Risk Management Process is abandoned once the project gets underway
- Risk process and Risk Mitigation is not integrated with the other Project Processes
- There is a lack of Administrative Management support for RISK Management

Management has a negative attitude toward RISK?

RISK AVERSION STYLE: Management may USE RISK (set the organizations threshold to RISK so LOW) that PROJECTS with any RISK will not be done. Setting the RISK BAR LOW gets management off the hook for decision making

NO NEWS IS GOOD NEWS MANAGEMENT: Believe that Project Managers cause the risk by reporting it; in these organizations project risks and issues are reported too late to deal with them effectively

KNEE JERK-REACTION: Management chooses to deal with the problem symptoms rather than the root cause, therefore same risks/issues continue to occur

OUR MIND IS ALREADY MADE UP: Management will not review changing circumstances or reverse past decisions based on new information

IF ANY OF THE ABOVE ATTITUDES exist, Risk Management/Planning will not be seen as a VALUE to the Project or Organization, and will often be IGNORED

Who should become RISK team members?

- Project Manager
- Project Sponsor
- Risk Owner
- Project Team
- Other Interested Stakeholders
- Larger projects may use separate groups to work through the RISK IDENTIFICATION PROCESS in different project phases or for major deliverables
- “too few people on the project can’t solve the problem, too many people create more problems than they solve”

When does Project Risk Management Plan Begin?

Risk Management Planning:

- Should begin as early in the project as possible
- Start meeting early to familiarize project team with the risk process, tools, techniques and what is expected
- Define the level of Risk planning detail and depth of the Risk process
- Determine the project specifics that the Risk Management Plan will address (to determine how “BIG” the Risk Planning and Risk Management effort should be **SMALLER, LESS COMPLEX PROJECT=Smaller RISK PLANNING EFFORT** (and generally fewer risks))

Is Project Risk Management Ongoing?

YES!!

Risk management identification and planning is an ONGOING process through the projects Lifecycle:

- RISK identification and planning must occur at regular intervals throughout the entire project
- Whenever changes are made to SCOPE, DELIVERABLES or the PROJECT PLAN
- On completion of major milestones or at specific check points the Project and Risk Manager determine throughout the Project

Scaling SIZE on the Risk Management Effort...

Smaller Projects generally do not require a lot of risk planning and identification (fewer Risks, and fewer participants in the Risk management effort) 1-6 months in duration

Medium Size Projects (typically impact multiple departments or two plus sites, and may involve a vendor(s)) 6+ months duration

Large Projects are generally ORGANIZATION Wide and typically have multiple site involvement and many vendors, these projects are usually over a year to complete (usually several years)

Small, Medium and Large Risk management options?

Small Projects – Risk identification may be done in a lunch meeting, with Project Manager and possibly a few key stakeholders, identify all key threats and opportunities and create a short statement on how to respond to each if the risk occurs

Medium Projects - Risk Identification is typically broken up by major deliverables (You may have separate risk identification groups), use Qualitative analysis for small risks, and Quantitative for significant risk analysis. DETAIL your risk response plan and contingency plan for avoidance, mitigation, deflection (transfer) or acceptance

Small, Medium and Large Risk management options (continued)?

Large Projects – With Large projects, the consequences of failure may justify EXTENSIVE RISK Management planning and management.

Spending several weeks on Risk Identification, Analysis and a Response plan is not unusual. You may identify many (100+ project risks)

It is recommended to use Qualitative Risk analysis as a screen tool to prioritize risks and use QUANTITATIVE risk analysis with all risks that will cost your project a great deal of money or time if they are incurred.

REMEMBER...Stakeholders must see VALUE to the RISK identification and management process, SIZE YOUR PLAN ACCORDINGLY-based on project complexity and SCOPE

The Methodology – the Risk Management Plan

The Risk Plan defines “how” the risk process is to be STRUCTURED and CONDUCTED throughout the projects LIFE CYCLE.

The Risk management plan contains an analysis of likely risks (both high and low impact) as well as the strategies that will be used to mitigate the risks, so that the project will not become derailed when/if these problems/issues arise.

The Risk Plan may contain all or some of these:

Overall Risk Methodology, Roles and Responsibilities, Timeframes, Risk Rating Scoring Techniques, Risk communication plan, Risk Tracking process.

Start RISK identification with PEOPLE:

RISK IDENTIFICATION TOOLS (use more than 1):

- 1. RISK Brainstorming** – develop a comprehensive set of Project RISKS
- 2. Delphi Technique** – used to reach a consensus of experts, project risk experts can participate anonymously, facilitator uses questionnaire to solicit ideas
- 3. Interviewing** – conduct interviews of experienced project participants, stakeholders and subject matter experts
- 4. Root Cause Analysis**-identify the underlying causes that may leads to problem and develop preventative action steps (prevent reoccurrence)

Continue with RISK identification with PAPER:

RISK IDENTIFICATION TOOLS CONTINUED:

5. Conduct a DOCUMENT Review:

- Project Documentation
- Previous project Files
- Contracts
- Assumptions, Constraints documented

6. Checklist Analysis –review historical project data and available information

Continue with RISK identification with SWOT:

RISK IDENTIFICATION TOOLS CONTINUED:

7. SWOT Analysis

Strengths- Attributes of project, resources or company/hospital helpful in achieving project objective

Weaknesses- Attributes of project, resources, or company -hospital harmful to achieving project objectives

Opportunities- External Conditions that are helpful to achieving the project objectives (ex. Need for this medical service -MRI in your community)

Threats- External conditions which could do damage to your projects objectives (there are already too many MRI clinics serving your immediate community)

Identifying RISKS for the RISK Register --- some categories

Risks may be:

1.Human- from individuals or organizations, illness, death, close of organization, etc.

2.Operational – disruption to supplies, operations, loss of access to essential equipment, computers, failures in distribution of materials

3.Reputational- loss of a business partner, employee confidence drops, damage to the product reputation in the market

4.Procedural – from failures of accountability, internal systems and controls, organizational failure, fraud, security concerns, etc.

5.Financial- business failure, bankruptcy, stock market, interest rates, unemployment, etc.

6.Project- risk of cost over-runs, tasks taking too long, insufficient quality of services and products produced

Risk Categories continued:

7. **Technical** – from unexpected advances in technology, technical failure, a bug in the software that takes time to fix.
8. **Natural** – threats from weather, hurricane, tornado, flooding, fire, an accident, a disease, virus, etc.
9. **Political** – regulatory changes, ARRA, government funding availability, foreign influences, changes in tax regimes
10. **Other** – from “Six forces model”, Stewart Neill, evaluate threats from Buyers, Competitors, New Entrants, Suppliers, Substitute products, and complementary Products (more for development IT projects, and research)

Common Risk Sources in Healthcare IT :

- inexperienced project team or Project Manager
- Team where no one has worked together before
- many complex projects underway simultaneously, with similar resource needs
- New Administration, CNO, CIO, IT director, MD
- Dependencies on medical vendors or other ongoing project deliverables within organization
- Complex or unrealistic project requirements
- Organization priorities do not correlate with Project

Examples of Specific Risks within the Categories :

HUMAN:

- project is under-resourced or lacks a resource need
- project team does not have access to expertise or external support
- poor project team communication with vendors
- people on team not empowered to make decisions or have no authority to do so
- unclear communication to stakeholders

PROCEDURAL/PROCESS:

- project methodology or approach is not clear to team
- project control mechanisms are not appropriate (change, configuration)
- ineffective training process for team to comply with procedures

TECHNOLOGY

- technology performance is less than what is required

Tracking IDENTIFIED Project RISKS:

Risk Number	Risk Description / Risk Event Statement	Responsible Party	Date Identified month-day-year	Last Updated month-day-year	Impact H / M / L	Impact Description (anticipated impact on Budget, Scope, Quality, Time, Other)	Probability of Project Impact H / M / L	Timeline to Impact Near/Medium term/Far	Response Action Planned	Actions Currently Underway	Planned Future Actions	Risk Status Open / Complete / Moved to Issues List
R1	The SQL database used for patient account number is not clean, and some of the fields are not available or not defined correctly, this may cause development delay to the project.	Sr. Project Programmer	1/14/2010	4/15/2010	H	This will impact the time to complete the project if additional experienced SQL programmer resource is not available, and will cost \$4,000.00 for an outside firm to correct	L	N	Contract with a SQL programming resource internally	Sr. Programmer is talking to Director of IT department to get additional SQL resource involved before June 2010.	Follow up June 1, 2010 from Sr. Programmer on availability of resource is required.	Open

Qualitative and Quantitative Risk Analysis:

- Try to keep RISK ASSESSMENT simple
- Risk assessment is not PERFECT try to be as accurate as possible (there are many unknowns)

Basic Information required for assessment:

- Probability (likelihood it will happen)
- Impact (consequence if it happens)
- Timeframe (when it may happen, and critical to prioritizing risk)

Qualitative Risk Analysis

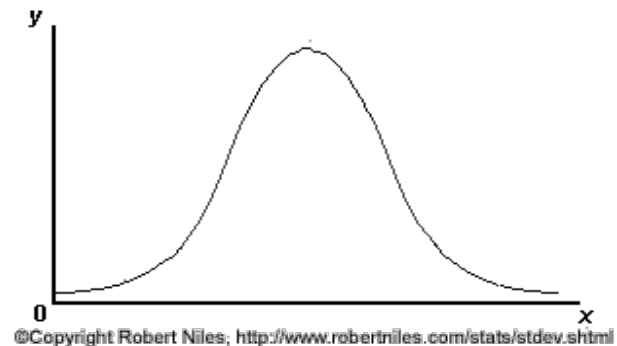
Qualitative Risk Analysis:

- Prioritizes Risks
- Rapid Method / most cost effective
- Values such as risky, not risky, high, low, med.
- Prepares risks for further analysis or action
- Uses relative probability and likelihood for occurrence
- Prioritization should be re-visited during the project lifecycle
- Qualitative process can lead to Quantitative process use
WHEN NECESSARY

Quantitative RISK Analysis

Data Gathering TOOLS for QUANTITATIVE ASSESSEMENT:

1. **Interviewing** - draws on experience and historical data to quantify the probability and impact of project objectives
2. **Probability Distributions** (distribution curves)- used in modeling and simulation of project risk data, may help team perform quantitative analysis



Quantitative RISK Analysis

- Attaches numeric values to risk
- Severity is assessed from these Quantitative **values** for impact and probability

SIMPLE QUANTITATIVE ANALYSIS Example:

In evaluating the Risk of the designated Senior programmer for project being inexperienced, it was assigned a Probability 7 and had an impact on the project of 9 (scale 1-10, 10 having highest impact). This provides us a quantitative:

RISK severity number of $9 \times 7 = 63$

Quantitative RISK Analysis Techniques

TECHNIQUES for evaluating / Quantifying data for Decision analysis are:

a. Monte Carlo Simulation Analysis- creates a simulation or model that describes how a process will likely turn out, simulation provides value ranges

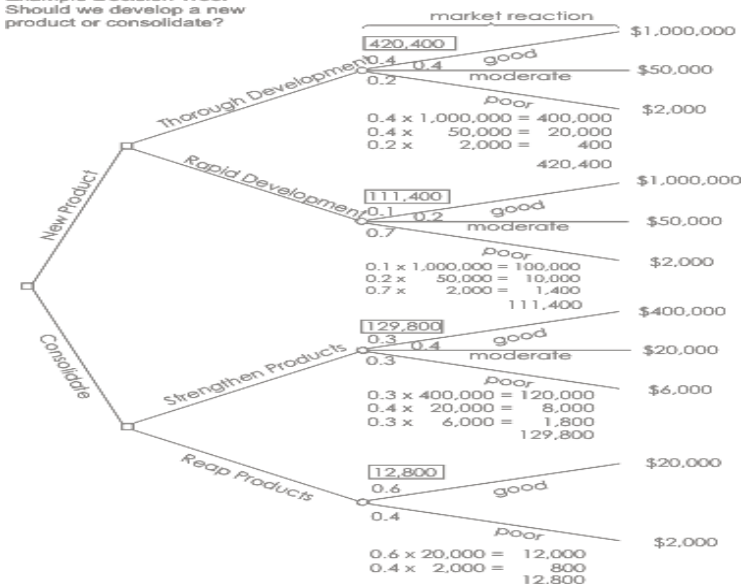
b. Decision Tree Analysis – tool to visualize a decision regarding risk

Ex. calculate numeric value of risks and plot on decision tree

c. Statistical estimating

d. Expected value

Figure 3
Example Decision Tree:
Should we develop a new product or consolidate?



Risk Responses Adding VALUE

Risk Response-developing options and determining actions to reduce threats

- Implementing a RISK RESPONSE plan adds value to your project
- Risk Response Plans Prevent threats and/or minimize negative impacts
- Try to prevent a risk from occurring by influencing the causes or decreasing the negative effects that could result

What can you do about negative RISK (threats)?

Risk Response:

1. **AVOID** the Risk – do something to remove it. (use a different supplier, different vendor, different PM)
2. **TRANSFER** the Risk – make someone else responsible (assign a different resource, assign a vendor to take the liability)
3. **MITIGATE** the Risk – take action to decrease the impact or chance of the risk occurring (if the risk relates to availability of resources, try to get management signoff on when the resource will be available)
4. **ACCEPT** the risk- the risk might be so small any effort to do anything is not worth the cost

What can you do about positive RISK (opportunity)?

Risk Response:

- 1. ACCEPT THE RISK (for both positive and neg. risk)**
- 2. Share the Risk** – Risk sharing involves sharing opportunity, responsibility and accountability with another party, team or organization that has the best chance to SEIZE the opportunity
- 3. Enhance the Risk-** Risk enhancement increases the probability that the opportunity will occur by focusing on the trigger conditions and optimizing the chances
- 4. Exploit the Risk** – Risk exploitation is used when the team, party or organization desires to insure the opportunity is realized and maximized. Commonly done by hiring experts or consultants to assure the most technologically advanced resources are available for the project

Ownership of the RISKS

Determine who is responsible for MONITORING each PRIORITY RISK
= Risk OWNER

Determine who PAYS the bill if the RISK is incurred as an ISSUE and COMMUNICATE the information to that person or area (especially if it is a different department or business area than is involved in your project)=Risk STAKEHOLDER

The RISK OWNER and the PERSON or DEPARTMENT that pays when/if the risk is incurred may be two different people. But the RISK OWNER MUST BE IN COMMUNICATION with the RISK STAKEHOLDER regarding the status of the RISK during the project

Reviewing Risk Roles and Responsibilities

Project Manager- responsible for developing, coordinating and guiding the team through process/plan of Risk management (with some risk management activities) Less work on RISK is required when you have a DEDICATED RISK MANAGER

Team/Stakeholders/Customers- responsible for contributing subject matter to the process and performing risk management activities

Sponsor – takes ultimate responsibility for the projects success or failure, so ultimately responsible for risk management success or failure

Risk Manager/ Risk Officer – supports the PM in developing, updating and maintaining the Risk management Plan, Risk Register and response strategies

Risk Owner- develops and updates the risk response strategy, informs PM and RM of any changes in the risk, and risk trigger events

Project Team specific Risk Responsibilities

Team performs risk management activities:

- Identifies project risks and describe them (record on register)
- Assesses risk priorities (looking closely at probability and impact)
- Helps identify risk owners and risk stakeholders
- Assists project manager and risk owner in development of risk response strategies
- Assists the project manager in activities associated with Risk Monitoring and Controlling

What happens during monitoring and controlling:

Monitoring and Controlling is the process of continuously observing the project risks, identifying new risk, implementing risk response plans, and monitoring the trigger events that may call you to use the Contingency (Risk Response plans)

- Risk Review Meetings (Specific to PROJECT RISK)
- Monitor project events for Risk Triggers (escalations)
- Conduct Risk Reassessment – identify new risks
- Engage in Risk Auditing – examine the effectiveness of your risk response plans in dealing with identified risks

Monitoring and controlling Risk Continued:

- Employ **Variance** and **Trend** Analysis
compares planned results to actual
- Review **Reserve Analysis** (Risk Contingency fund)
compares amount of the contingency
reserves remaining to amount of risk
remaining at any time – DETERMINE- is
remaining amount adequate
- ADD Project Risk to Project Status meetings
Make it a periodic agenda item at your status
meetings, discuss what has been identified and
status of the RISK

Controlling RISK Things to remember:

- Risk management gets easier the more you do it include risk discussions in Status meetings, team meetings, and separate RISK mtgs.- communicate
- As a Project Manager, it's better to use your time doing RISK management than be wasting time Putting out fires and dealing with crisis situations
- If the Project is going smoothly and requiring less Of your PM effort, it is because you changed your Process and are being more proactive with RISK
- Smooth sailing occurs when you are in CONTROL of your WELL MANAGED project

REVIEWING THE RISK MANAGEMENT PROCESS:

- Choose THE RISK PROCESS..you can IMPLEMENT for your project (SIZE MATTERS)
- Identify RISK (Risk within the team/stakeholder control)
- Assess RISK Impact (Qualify and Quantify Risk)
- PRIORITIZE the RISKS
- Create RESPONSES to RISK (High priority first)
- RESPOND/TRACK/Monitor RISKS (re-assess, identify new)
- CONTROL and RESPOND to RISK until project is complete

A FEW THOUGHTS....:

- Don't make the RISK process too overwhelming or time consuming...your team will not BUY into it!
- Don't have too many people on your RISK team
- Don't make your reporting mechanisms too difficult
- Communicate the Plan, the Process and the Response/controlling mechanisms
- Integrate the Risk process with your project, the project plan and project meetings (not standalone)
- Get and maintain ADMINISTRATION support for your RISK Effort – COMMUNICATE VALUE....