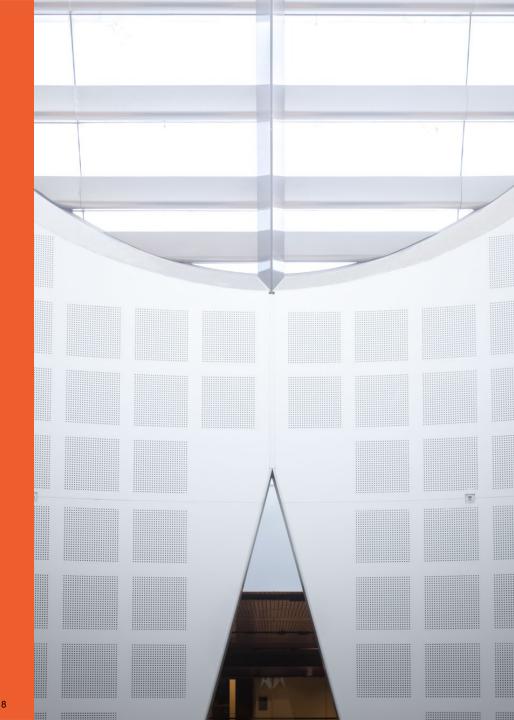
INFO6007 Project Management in IT

Lecture 9
Managing Project Risk

Semester 2, 2020 Dr Rabiul Hasan





Recapture From Lecture 8

We discussed **Project Leadership and Communication Management**:

- Project Leadership
- Leadership Styles
- Processes of Project Communication Management
- Face-to-face Communication
- Stakeholder Communications

Important Review From Lecture 8

Make Me a Leader -- Full Feature Documentary

A feature-length documentary on how leaders can optimise brain and body performance to thrive in the 21st Century.

Short video (recommended to watch):

https://www.youtube.com/watch?v=DhZvPooCiQQ

Long video (recommended to watch):

https://www.youtube.com/watch?v=S0MNnx54aVw

Update on the Knowledge Test

 Marking was completed early this week, expected to release by tomorrow, Thursday.

Update on The Final Exam

- The number of questions are significantly reduced by almost a half
- Expected writing time is ONLY 5 to 8 hours within the given 48 hours
- Open-book, take-home
- Further details on the final exam will be provided in week 12
 Assessment

Details	Criteria						
Туре		Description	Weight	Due	Length		
Final exam (Take-home extended release) (=) 77		Final exam Take-home open-book exam, needs to be submitted online through Canvas. 50% Formal exam exam period					
		Outcomes assessed: <u>LO2 LO3 LO4</u>					

Where Are We Now? -- Course map

Week	Topics/Activities			
Week 1	Introduction to IT Project Management			
	Other: Form Assignment Groups			
Week 2	Managing Project Scope			
Week 3	Managing Project Time			
Week 4	Managing Project Cost			
Week 5	Managing Project Quality			
Week 6	Managing Project Resources			
Week 7	Knowledge Test			
Week 8	Project Leadership and Communication Management			
Week 9	Managing Project Risk			
	Assessment Due: Group Project			
Week 10	Managing Project Procurement			
Week 11	Presentation			
Week 12	Course Review			
Exam Period	Assessment Due: Final Exam			

Learning Objectives

- Discuss Project Risk Management Processes
- Explain the process of identifying risks and developing risk register
- Discuss the risk response strategies
- Discuss the concept of residual and secondary risks.

Risk?

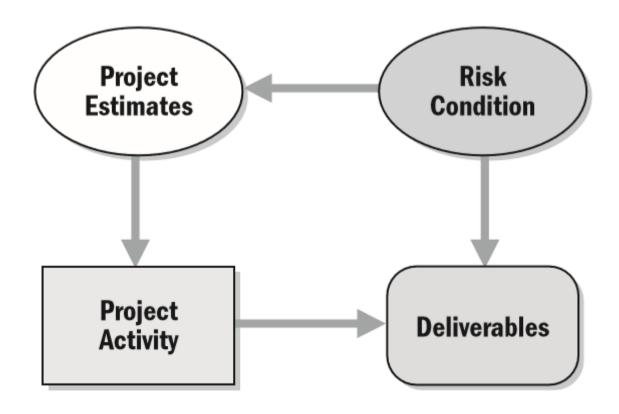
- General meaning -- "the possibility of loss or injury"
- Project risk is an uncertainty that can have a negative or positive effect on meeting project objectives

Why Risk Management?

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	

Influence of Risk



Negative & Positive Risk

- Negative risks: potential problems that might occur in the project and how they might obstruct project success
- Positive risks: risks that result in good things happening;
 sometimes called opportunities

Project Risk Management Processes

- Planning risk management: Deciding how to approach and plan the risk management activities for the project
- Identifying risks: Determining which risks are likely to affect a project and documenting the characteristics of each
- Performing qualitative risk analysis: Prioritizing risks based on their probability and impact of occurrence
- Performing quantitative risk analysis: Numerically estimating the effects of risks on project objectives
- Planning risk responses: Taking steps to enhance opportunities and reduce threats to meeting project objectives
- Controlling risk: Monitoring identified and residual risks, identifying new risks, carrying out risk response plans, and evaluating the effectiveness of risk strategies throughout the life of the project

Categories of Risk — Example?

Following are some categories of IT project risks.

- Market risk:
- Financial risk
- Technology risk
- People risk
- Structure/process risk

Risks Identification

- Identifying risks is the process of understanding what potential events might hurt or enhance a particular project
- Risk identification tools and techniques include:
 - Brainstorming
 - The Delphi Technique
 - Interviewing
 - SWOT analysis

Risk Analysis

Probability and Impact Matrix

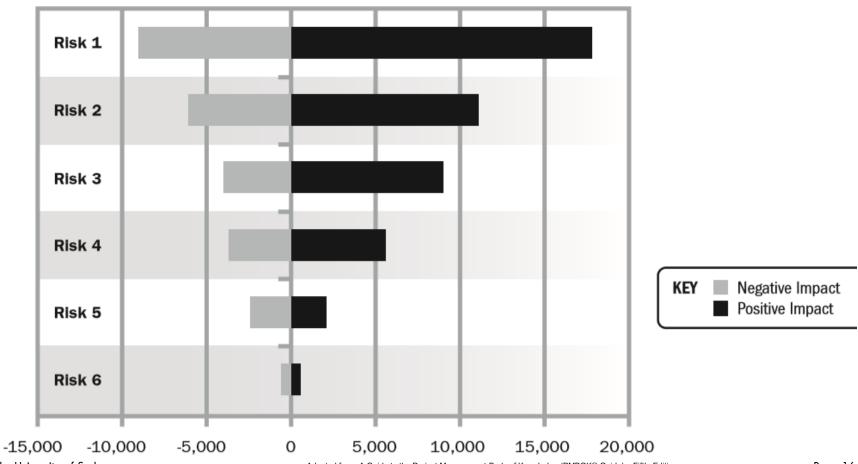
Probability	Threats					Opportunities				
0.90	0.05	0.09	0.18	0.36	0.72	0.72	0.36	0.18	0.09	0.05
0.70	0.04	0.07	0.14	0.28	0.56	0.56	0.28	0.14	0.07	0.04
0.50	0.03	0.05	0.10	0.20	0.40	0.40	0.20	0.10	0.05	0.03
0.30	0.02	0.03	0.06	0.12	0.24	0.24	0.12	0.06	0.03	0.02
0.10	0.01	0.01	0.02	0.04	0.08	0.08	0.04	0.02	0.01	0.01
	0.05/ Very Low	0.10/ Low	0.20/ Moderate	O.40/ High	0.80/ Very High	0.80/ Very High	O.40/ High	0.20/ Moderate	0.10/ Low	0.05/ Very Low

Impact (numerical scale) on an objective (e.g., cost, time, scope or quality)

Each risk is rated on its probability of occurring and impact on an objective if it does occur. The organization's thresholds for low, moderate or high risks are shown in the matrix and determine whether the risk is scored as high, moderate or low for that objective.

Risk Analysis

 Sensitivity analysis. It helps to determine which risks have the most potential impact on the project.



Risk Register

- A risk register is:
 - A document that contains the results of various risk management processes and that is often displayed in a table or spreadsheet format
 - A tool for documenting potential risk events and related information

Risk Register – Contents

- An identification number for each risk event
- A rank for each risk event
- The name of each risk event
- A description of each risk event
- The category under which each risk event falls
- The root cause of each risk
- Potential responses to each risk
- The risk owner or person who will own or take responsibility for each risk
- The probability and impact of each risk occurring.
- The status of each risk

Risk Register

■ The following is a template of Risk Register. You may add more contents (e.g. risk status) as needed

Risk	Risk	Risk	Risk	Category	Mitigation Plan	Impact	Description	Likelihood of	Contingency
No.	name	Description	Owner		(what to do to avoid	level	of impact	occurrence	Plan (what to do
					the risk occurring)				if the risk occurs)

No.: R05

Rank: 1

Risk name: New customer

Description: We have never done a project for this organization before and don't know too much about them. One of our company's strengths is building good customer relationships, which often leads to further projects with that customer. We might have trouble working with this customer because they are new to us.

Category: People risk

■ Etc.

Class Exercise 1 — IBM and HP on notice

■ Task1: Review the case and identify potential risks (max five names) and the level of impact.

Risk Response Strategies

- Response strategies for negative risks:
 - Risk avoidance or eliminating a specific threat, usually by eliminating its causes
 - Risk acceptance or accepting the consequences should a risk occur.
 - Risk transference or shifting the consequence of a risk and responsibility for its management to a third party.
 - Risk mitigation or reducing the impact of a risk event by reducing the probability of its occurrence.
- Response strategies for positive risks:
 - Risk exploitation involves doing whatever you can to make sure the positive risk happens.
 - Risk sharing involves allocating ownership of the risk to another party
 - Risk enhancement involves changing the size of the opportunity by identifying and maximizing key drivers of the positive risk.
 - Risk acceptance applies to positive risks when the project team cannot or chooses not to take any actions toward a risk.

Residual and Secondary Risks

- Residual risks are risks that remain after all of the response strategies have been implemented
- Secondary risks are a direct result of implementing a risk response

Class Quiz

- Q1: Who will take responsibility for each risk?
- Q2: Who is responsible for managing project risks?
- Q3: How many risks you need to identify for your project? Why?

Q4:

- How to present (the best way to deal with) risk in your project proposal?
- What is the objective of discussing risks in the project proposal?

Class Exercise 2 – Risk Management Activities using the case of Self Driving Uber

- Q.1: What the project team could have done well to avoid this risk (accident)?
- Q.2: Create a risk register, you may use some assumptions based on the case.
- Q.3: What did you learn from this project in term of managing risk?
- Q.4: Which response strategy would you use on this accident?

Class Exercise 3 – South Australia Health IT Project

- A brief case is uploaded on Canvas week 9.
- Review the case study and answer the questions provided.

Lecture Summary

 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

Main processes include:

- Plan risk management
- Identify risks
- Perform qualitative risk analysis
- Perform quantitative risk analysis
- Plan risk responses
- Control risks

Announcement (if any)

Q & A?

Thanks everyone!