



# IT Project Management (IIT 223-2)

Lecture 06

# Project Risk Management

# Process Group and Knowledge Area Mapping

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Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
1. Integration	01	01	01	02	01
2. Scope		04		02	
3. Time		06		01	
4. Cost		03		01	
5. Quality		01	01	01	
6. Human resource		01	03		
7. Communication		01	01	01	
8. Risk		05		01	
9. Procurement		01	01	01	01
10. Stakeholder	01	01	01	01	

# Project Risk Management

Initiation	Planning	Execution	Control	Closure
	<b>8.1</b> Plan Risk Management	<b>8.6</b> Control Risk		
	<b>8.2</b> Identify Risks			
	<b>8.3</b> Perform Qualitative Risk Analysis			
	<b>8.4</b> Perform Quantitative Analysis			
	<b>8.5</b> Plan Risk Response			

## Project Risk Management Cont...

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

## Project Risk Management Cont...

- A study by Ibbs and Kwak show how risk management is neglected, especially on IT projects
- KPMG study found that 55 percent of runaway projects did no risk management at all

# What is Risk?

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

# Project Risk Management Processes

## ➤ 8.1 Plan Risk Management

- The process of **defining how to conduct risk management activities** for a project.

## ➤ 8.2 Identify Risks

- The process of **determining which risks may affect the project** and documenting their characteristics.



# Project Risk Management Processes

## Cont...

### ➤ 8.3 Perform Qualitative Analysis

- The process of **prioritizing risks** for further analysis or action by assessing and combining their probability of occurrence and impact.

### ➤ 8.4 Perform Quantitative Analysis

- The process of **numerically analyzing the effect of identified risks** on overall project objectives.

# Project Risk Management Processes

## Cont...

### ➤ 8.5 Plan Risk Response

- The process of **developing options and actions** to enhance opportunities and to reduce threats to project objectives.

### ➤ 8.6 Control Risks

- The process of **implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks and evaluating risk process effectiveness** throughout the project.

## 8.2 Identify Risks

- Risk identification is the process of **understanding what potential unsatisfactory outcomes** are associated with a particular project
- Several risk identification tools and techniques include
  - Brainstorming
  - The Delphi technique
  - Interviewing
  - SWOT analysis

## 8.3 Perform Qualitative Analysis

- **Assess the likelihood and impact of identified risks** to determine their magnitude and priority
- Risk quantification tools and techniques include
  - Probability/Impact matrixes
  - The Top 10 Risk Item Tracking technique
  - Expert judgment

# Sample Probability/Impact Matrix

Probability	High	risk 6	risk 9	risk 1 risk 4
	Medium	risk 3 risk 7	risk 2 risk 5 risk 11	
	Low		risk 8 risk 10	risk 12
		Low	Medium	High
		Impact		

## 8.4 Perform Quantitative Analysis

- The **consequences of a risk expressed in numbers** called as risk quantification.
- **For Example,**
  - Those who smoke 20 cigarettes a day has a 60% chance of living beyond age 40.
  - A bulb has a 70% chance to be used up to 7500 hours.



## 8.4 Perform Quantitative Analysis Cont...

	Low	Medium	High
Risk	Probability	Impact	Rating
Earthquake	0.1	0.4	0.04
Schedule Overrun	0.5	0.8	0.4
Not meeting requirements	0.5	0.2	0.1
Low quality raw materials	0.5	0.8	0.4
Adverse weather	?	?	??
Contractor out of business	?	?	??
Over pricing	0.9	0.4	0.36
Early completion	0.1	0.2	0.02
Legal implications	0.5	0.4	0.2

## 8.5 Plan Risk Response

- After identifying and quantifying risks, you **must decide how to respond to them**
- Four main strategies:
  - **Risk avoidance**: eliminating a specific threat or risk, usually by eliminating its causes
  - **Risk acceptance**: accepting the consequences should a risk occur



## 8.5 Plan Risk Response

- **Risk transference:** shifting the consequence of a **risk** and responsibility for its management to a third party
- **Risk mitigation:** reducing the impact of a risk **event** by reducing the probability of its occurrence

## 8.6 Control Risks

- Risk control involves **executing the risk management processes and the risk management plan** to respond to risk events
- **Risks must be monitored** based on defined milestones and decisions made regarding risks and mitigation strategies
- Sometimes workarounds or unplanned responses to risk events are needed when there are no contingency plans

# **Project Stakeholder Management**

# Process Group and Knowledge Area Mapping

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9. Procurement		01	01	01	01
10. Stakeholder	01	01	01	01	

# Project Stakeholder Management

Initiation	Planning	Execution	Control	Closure
<b>10.1</b> Identify Stakeholders	<b>10.2</b> Plan Stakeholder Management	<b>10.3</b> Manage Stakeholder Engagement	<b>10.4</b> Control Stakeholder Engagement	

# Project Stakeholder Management Processes

## ➤ 10.1 Identify Stakeholders

- The process of **identifying people, groups or organizations** that could impact or be impacted by a decision, activity or outcome of a project.
- And **analyzing and documenting relevant information** regarding their interests, involvements, interdependencies, influence and potential impact on project success.

# Project Stakeholder Management Processes Cont...

## ➤ 10.2 Plan Stakeholder Management

- The process of **developing appropriate management strategies** to effectively engage stakeholders throughout the project lifecycle based on the analysis of their needs, interests, and potential impact on project success.

# Project Stakeholder Management Processes Cont...

## ➤ 10.3 Manage Stakeholder Engagement

- The process of **communicating and working with stakeholders** to meet their needs or expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle.



# Project Stakeholder Management Processes Cont...

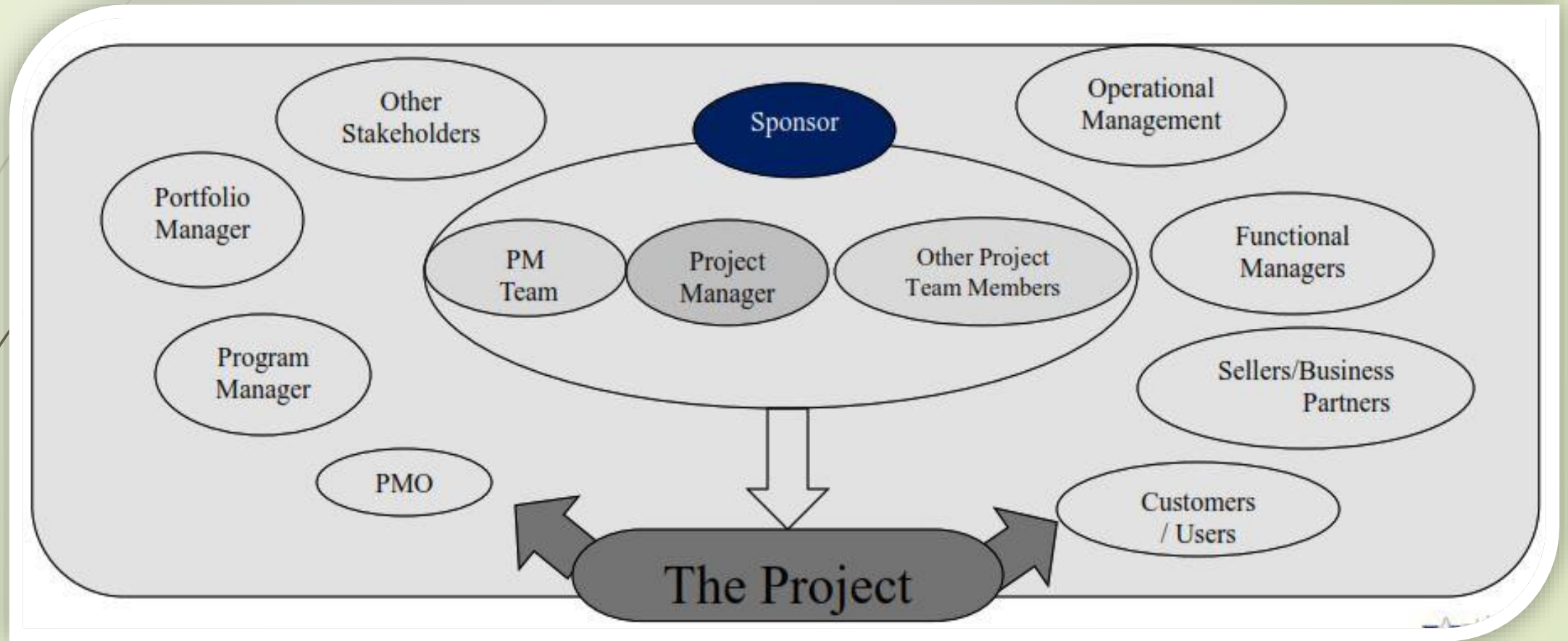
## ➤ 10.4 Control Stakeholder Engagement

- The process of **monitoring overall project stakeholder relationships** and adjusting strategies and plans for engaging stakeholders.

# Stakeholders

- Stakeholders are **persons and organizations who are actively involved in the project**, or **whose interests may be positively or negatively affected** by the performance or completion of the project
- In short - **Stakeholders are the people involved in or affected by project activities**
- Stakeholders may exert influence over the project, its deliverables and the project team members

## Stakeholders Cont...



# Importance of Stakeholders

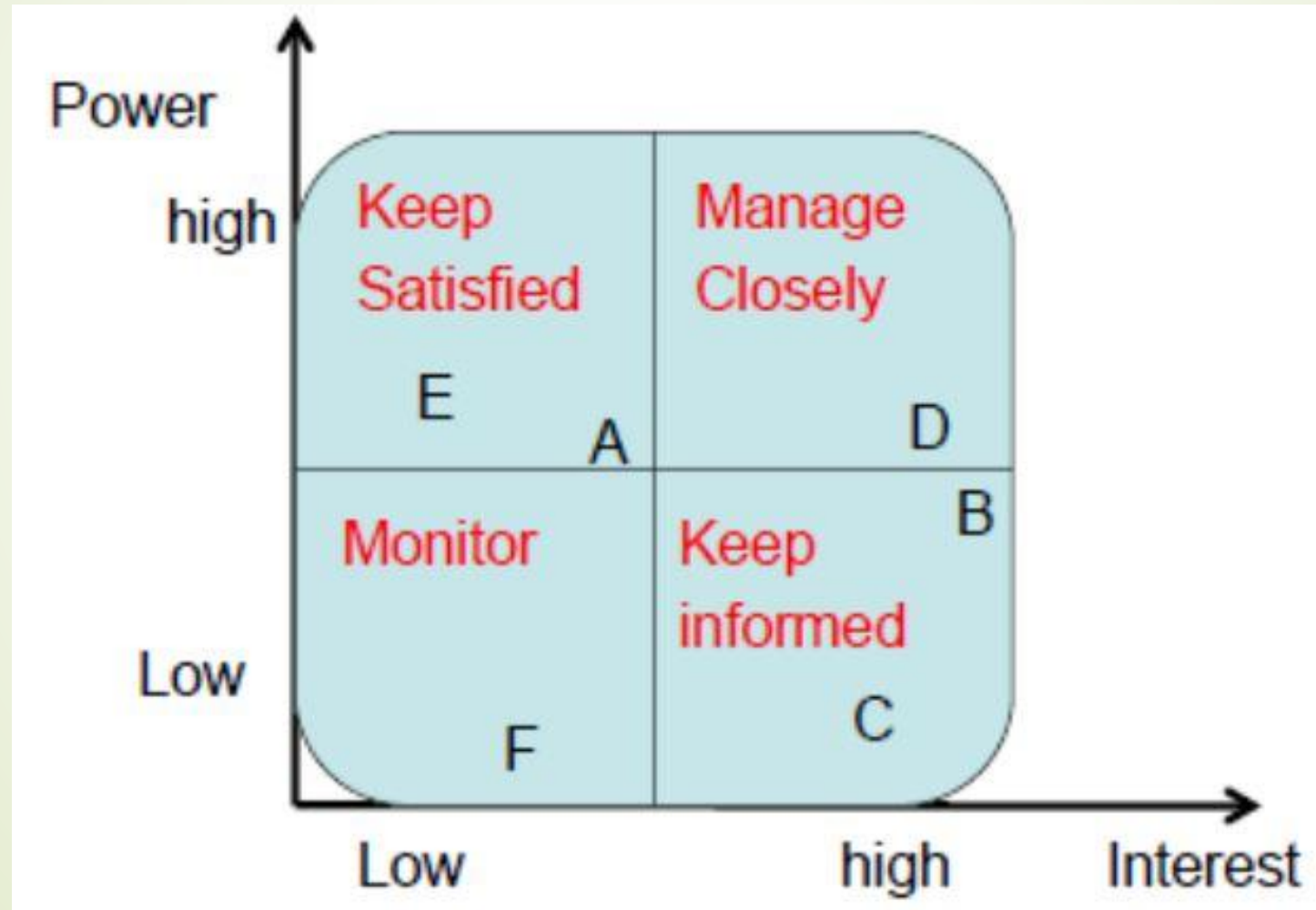
- Recall that project stakeholders are the people involved in or affected by project activities
- **Project managers must take time to identify, understand, and manage relationships with all project stakeholders**
- Using the four frames of organizations can help meet stakeholder needs and expectations

# Sample Stakeholder Analysis

Stakeholder Name	Title	Influence in the organization (Strong, Medium, Low)	Importance [Critical for Current Engagement, Critical for Growth]	Relationship status [Negative, Neutral, On board, Champion]	Virtusa Relationship Owner
John MacFarlane		Strong	Critical for growth	On board	Fariba/Dave S
David N Potter		Strong	Critical for current	On board	Fariba / Tom P



## Sample Stakeholder Analysis Cont...





# Thank You!!!

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