

CHAPTER - 11 MANAGING RISK

RISK :

Def - "Risk is an uncertain event or condition."

If it occurs has a positive or negative effect on project objectives.
Risk has a cause & if it occurs a consequences.

* PROJECT POTENTIAL RISKS :

These are identified before the project starts as,

- Equipment malfunction
- Change in Technical Requirements
- Schedule Slippage
- Cost overrun

RISK MANAGEMENT PROCESS :

Risk Management Process is a proactive approach rather than reactive. It is a preventive process design to ensure that surprises are reduced & that negative consequences associated with undesirable events are minimized.

It also prepares the project manager to take action when a time, cost and/or technical advantage is possible. The sources of project risks are unlimited.

The major components of the Risk Management Process are details as ;

STEP-1 : RISK IDENTIFICATION

STEP-2 : RISK ASSESSMENT

STEP-3 : RISK RESPONSE DEVELOPMENT

STEP-4 : RISK RESPONSE CONTROL

* STEP-1: RISK IDENTIFICATION

Def - "Analyze the project to identify sources of Risk."

The risk management process begins by trying to generate a list of all the possible risks that could affect the project. One common mistake that is made early in the risk identification process is to focus on objectives and not on the events that could produce consequences.

* TOOLS FOR RISK IDENTIFICATION:

Project Managers use two major tools for the identification of the risk as;

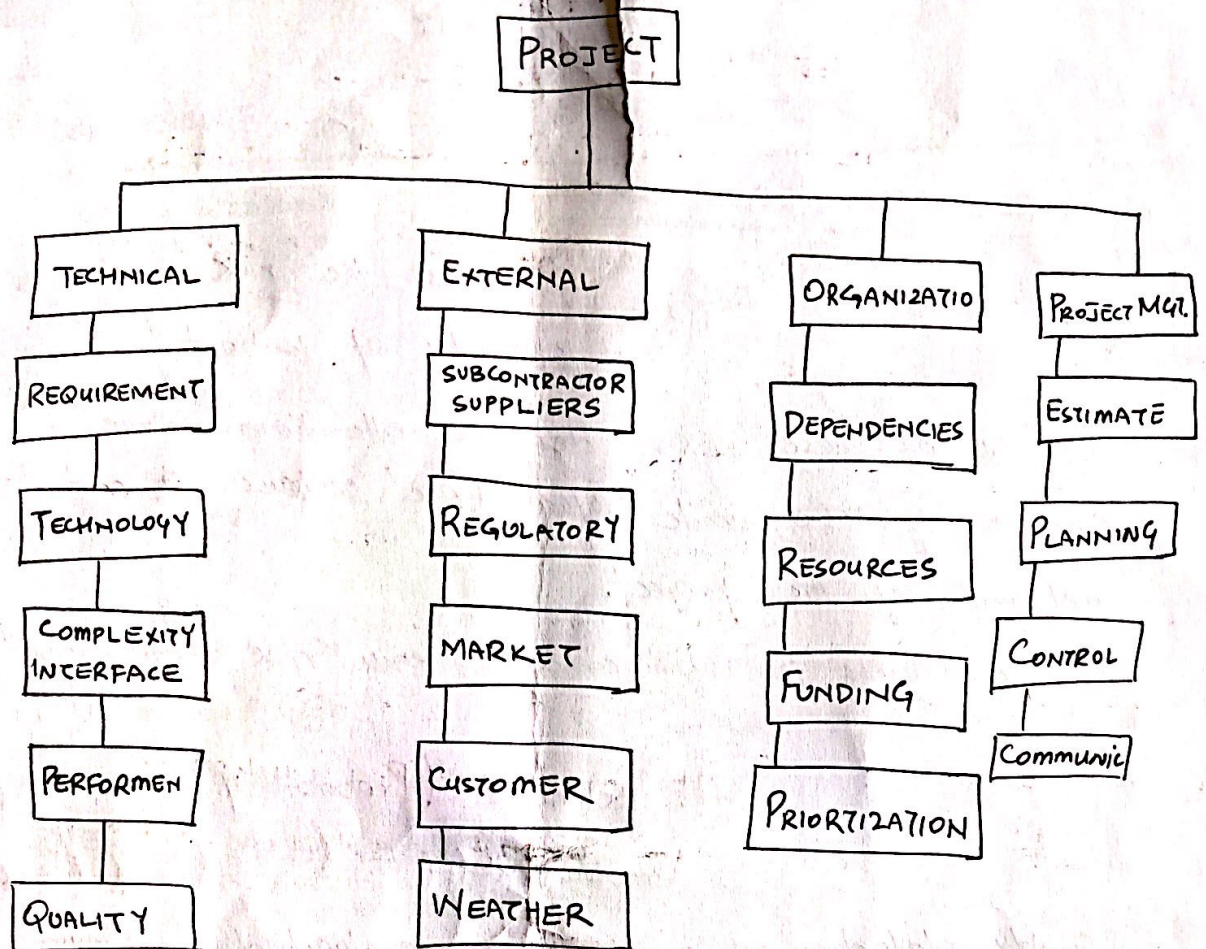
(i) Risk Breakdown Structure

(ii) Risk Profile

(i) RISK BREAKDOWN STRUCTURE (RBS):

Def - "The possible breakdown of risk in conjunction with the work breakdown."

RBS helps management team identify and eventually analyze risks. The focus at the beginning should be on risk that can affect the whole project as opposed to a specific section of the project or network.



(ii) - RISK PROFILE :

Def — "Risk Profile is a list of questions that address traditional areas of uncertainty on a project."

These questions have been developed & redefined from previous, similar projects. Risk profile recognise the unique strengths & weakness of the firm. Risk profile also address both the technical and management risks.

Questions related to the fields as;

- TECHNICAL REQUIREMENT
- BUDGET
- SCHEDULE

- QUALITY
- MANAGEMENT
- WORK ENVIRONMENT
- CUSTOMERS

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RISK

* STEP-2: RISK ASSESSMENT

Def — "To assess the risk in terms of the severity of impact."

Not all of these risks deserve attention. Some are trivial & can be ignored, while others pose serious threats to the welfare of the project.

Managers assess the significance of each risk event in terms of

- Likelihood (Probability)
- Impact

Simply stated, risk need to be evaluated in terms of the PROBABILITY of the event is going to occur & the impact or consequences of its occurrence.

The quality & credibility of the risk analysis process requires that different levels of risk probabilities & impacts.

* RISK ASSESSMENT TOOLS :

There are two major tools use for the Risk assessments as;

- (a) - RISK ASSESSMENT MATRIX
- (b) - RISK SEVERITY MATRIX

RISK ASSESSMENT MATRIX :

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RISK EVENT	LIKELIHOOD	IMPACT	D. DIFFICULTY	WHEN
- Interface problems	4	4	4	Conversion
- System freezing	2	5	5	start-up
- User backlash	4	3	3	Postinstallation
- Hardware malfunctions	1	5	5	Installation

1 = Very Low

5 = Very High

1 = lots of time to react

5 = No warning

(b) - RISK SEVERITY MATRIX :

5					
4			USER BACKLASH	INTER FACE PROBLEM	
3					
2					SYSTEM FREEZING
1					HARDWARE MALFUNCTION
	1	2	3	4	5

IMPACT

GREEN ZONE (minor risk)

YELLOW ZONE (moderate risk)

RED ZONE (major risk)

* STEP-3: RISK RESPONSE DEVELOPMENT:

Def - "The step for developing a strategy to reduce possible damages."

Responses to risk can be classified as ;

- (i) - MITIGATING RISK
- (ii) - AVOIDING RISK
- (iii) - TRANSFERRING RISK
- (iv) - RETAINING RISK

(i) - MITIGATING RISK:

Def - "How to reduce the Risk?"

Reducing risk is usually the first alternative considered.

Managers use two strategies for mitigating risk.

- (i) Reduce the Likelihood
- (ii) Reduce the Impact

Most risk teams focus first on reducing the likelihood of risk events.

(ii) - AVOIDING RISK:

Def - "changing the project plan for activity to avoid the Risk."

Although it is impossible to eliminate all risk events, some specific risks may be avoided before you launch the project.

TRANSFERRING RISK:

Def - "Transferring the Risk to another state."

This transfer does not change risk. Passing risk to another party almost always results in paying a premium for this exemption. e.g;

- Insurance
- BOOT (Build Own Operate Transfer)

(iv) - RETAINING RISK:

Def - "To accept the Risk of an event occurring."

Some risk are so large it is not feasible to consider transferring or reducing the event. e.g;

- Earthquake
- Flood

The project owner assume the risk because the chance of such an event occurring is slim.

* STEP-4: RISK RESPONSE CONTROL:

Def - "The step to implement risk strategy, monitor & adjust plan for new risk & change management."

Typically the results of first three steps of the RMP are summarise into formal document call the Risk Register.

* CHANGE CONTROL MANAGEMENT:

A major element of the Risk Control process is change management. Changes come from many sources as Project customers, owner, project manager & Team members. Most changes occur in THREE types;

- (i) Scope change
- (ii) Baseline Cost & Schedule change
- (iii) Improvement change

CONTINGENCY PLANNING:

Def - "A Contingency plan is an alternative plan that will be used if a possible foreseen risk event become a reality."

The Contingency plan represents action that will reduce or mitigate the -ve impact of the risk event.

(i) TECHNICAL RISK:

Technical Risks are Problematic; they can often be the kind that cause the project to be shut-down.

(ii) SCHEDULE RISKS:

Schedules can be altered by working activities in parallel or using start-to-start relationships.

(iii) COST RISKS:

Projects of long duration need some Contingency for price changes. usually upward these are.

FUNDING RISKS :

Severe budget cuts or lack of adequate funding can have a devastating effect on a project. Typically when such a fate occurs there is a need to scale back the scope of the project to what is possible.

OPPORTUNITY MANAGEMENT :

Def - "An opportunity is an event that can have a positive impact on project objectives."

- e.g;
- Unusually favorable weather can accelerate the construction project work.
 - Drop in fuel prices may create savings.

CONTINGENCY MANAGEMENT :

Contingency can be managed in THREE possible ways;

- (i) - Budget Reserve
- (ii) - Management Reserve
- iii - Time Buffers.