

Project Risk & Supply Chain Risk

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Lecture 2



PMG 663
Project Risk & Supply Chain Risk



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

What Is a
Project?

What Is a
Risk?

Types of
Project
Risk

WHAT
DO YOU
NEED TO
KNOW



Supply chain
management

Risk in
Supply chain

Supply Chain Risk
Management
(SCRM)



- Plan Risk Management
- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Plan Risk Responses
- Monitor and Control Risks



A Project : A temporary efforts that has a defined goal and definitive start and stop point

- A time-scoped/time-boxed activity
- Has a beginning, middle and an end
- Creates a unique product, service or result
- A 'progressive elaboration'

Risk

An unplanned or uncertain event that can impact a project

What is a Risk?



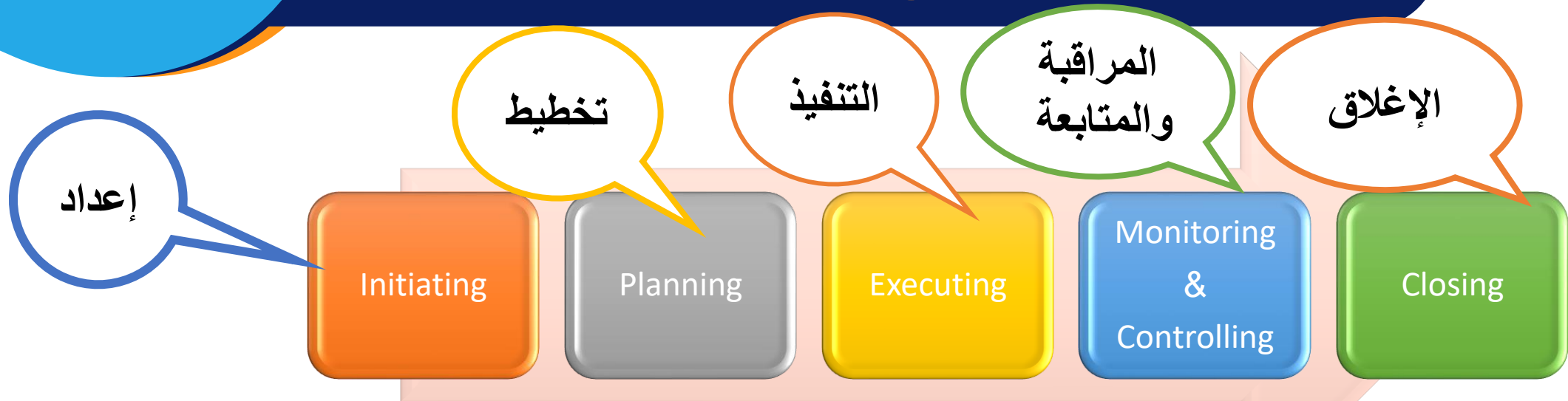
Risk

A risk is any uncertain event or condition that might affect your project. Not all risks are **negative**. Some events (like finding an easier way to do an activity) or conditions (like lower prices for certain materials) can help your project. When this happens, we call it an **opportunity**; but it's still handled just like a

**What is a
Risk?**



Project Risk Management



- Plan Risk Management
- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Plan Risk Responses

Monitor and
Control Risks

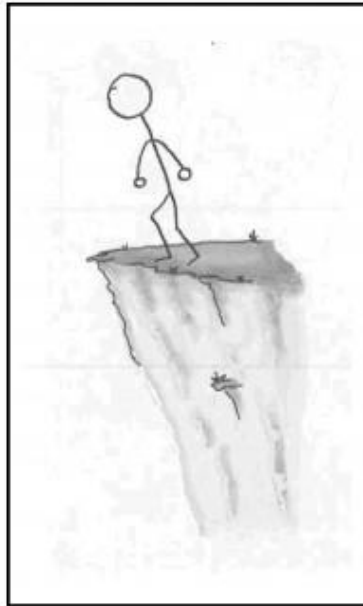
A key objective of performing project risk management is to increase the probability of project success by minimizing or eliminating negative risk events and increasing the probability of positive events.

- Risk Management includes the processes of planning risk management, identifying risks, performing qualitative and quantitative analysis of risks, planning responses to risks, and finally monitoring and controlling risks on the project
- Risk is always in the future
- Risk involves uncertainty - it may or may not occur
- Assess your organization's tolerance for risk: are they risk tolerant or risk averse?
- There will be known risks and unknown risks
- Risks can be negative or positive and are identified as threats or opportunities
- Risk is considered from the moment the project is conceived

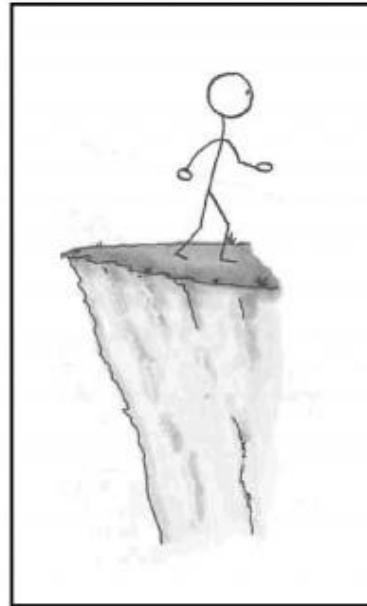


Risk Management Planning?

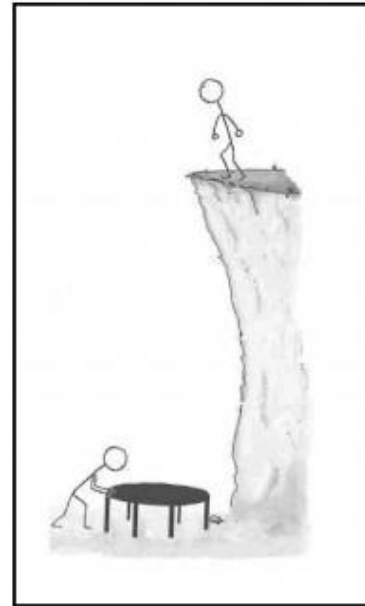
If your project requires that you stand on the edge of a cliff, then there's a risk that you could fall. If it's very windy out or if the ground is slippery and uneven, then falling is more likely



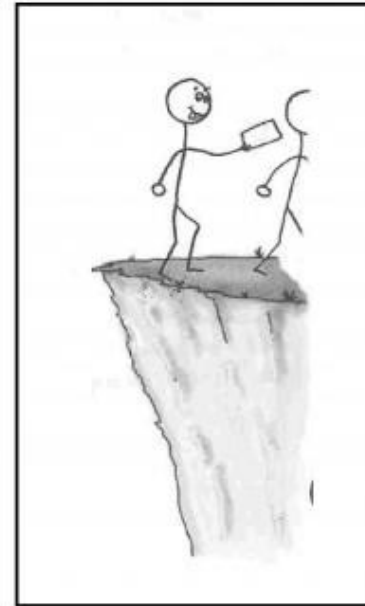
Your project



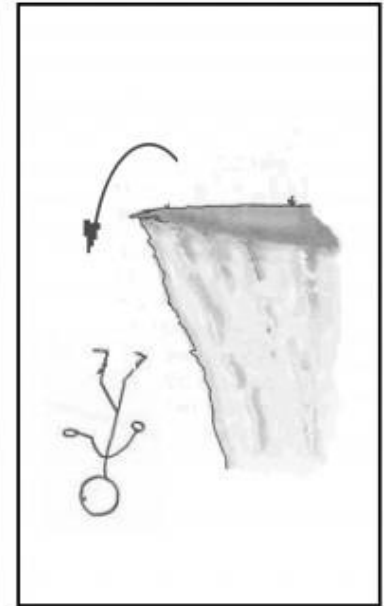
Avoid



Mitigate

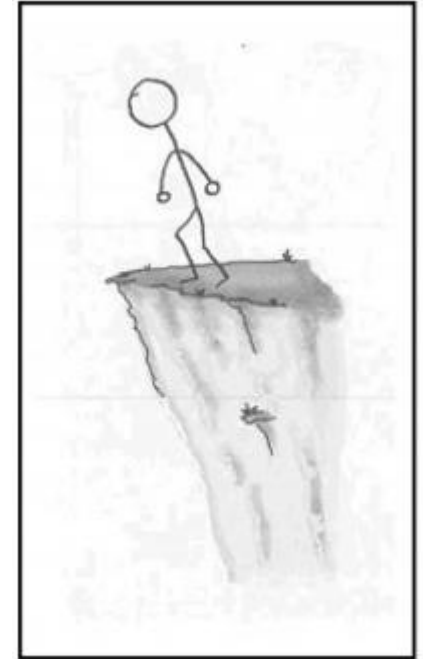


Transfer



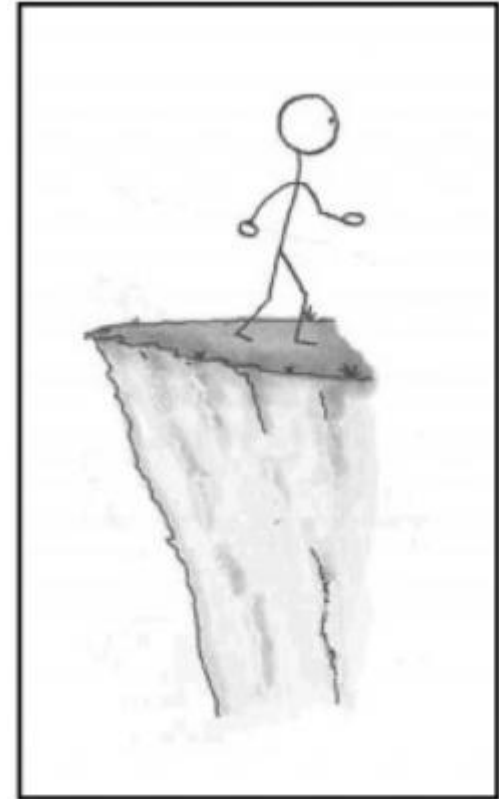
Accept

When you're planning your project, risks are still uncertain: they haven't happened yet. But eventually, some of the risks that you plan for do happen, and that's when you have to deal with them. There are four basic ways to handle a risk.



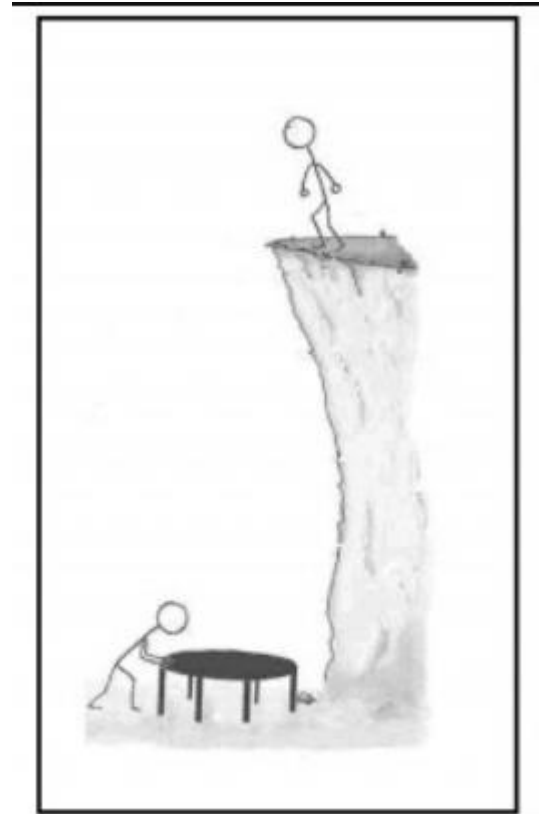
Your project

1.Avoid: The best thing you can do with a risk is avoid it. If you can prevent it from happening, it definitely won't hurt your project.



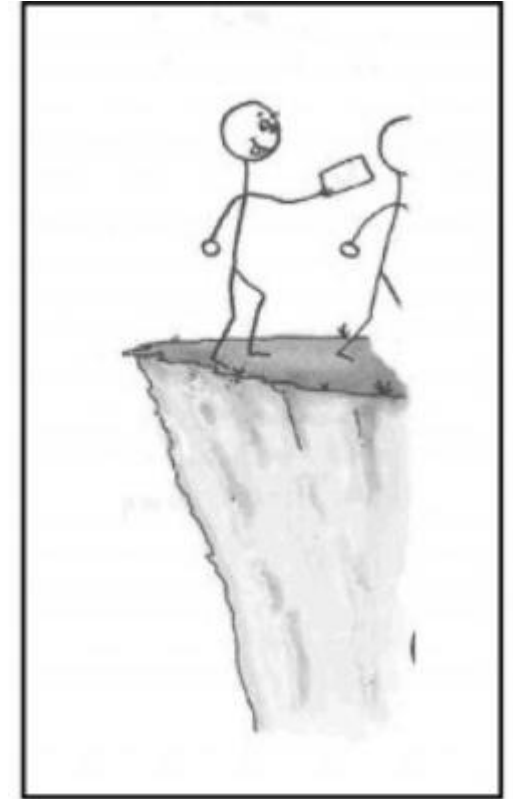
Avoid

2. Mitigate: If you can't avoid the risk, you can mitigate it. This means taking some sort of action that will cause it to do as little damage to your project as possible.



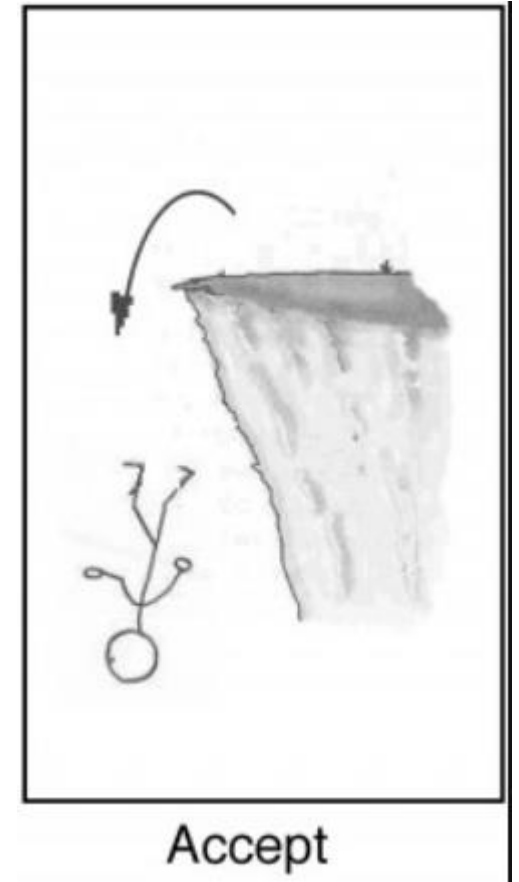
Mitigate

3.Transfer: One effective way to deal with a risk is to pay someone else to accept it for you. The most common way to do this is to buy insurance.



Transfer

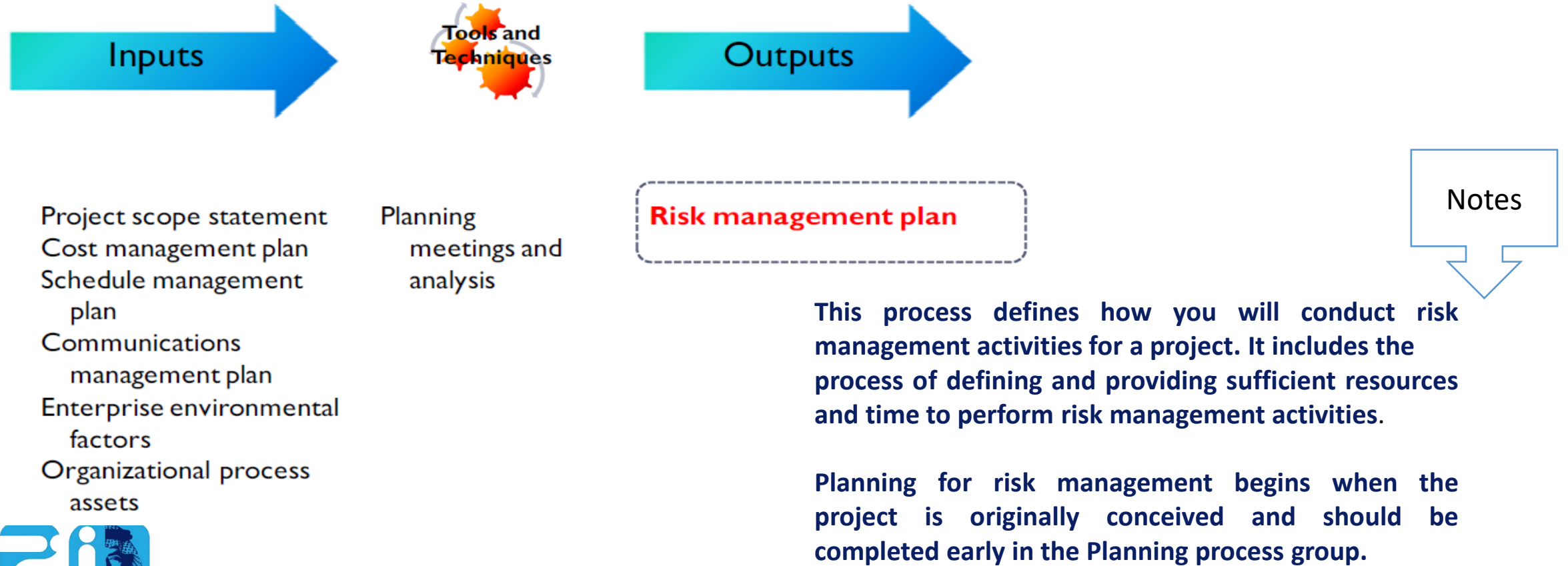
4. Accept: When you can't avoid, mitigate, or transfer a risk, then you have to accept it. But even when you accept a risk, at least you've looked at the alternatives and you know what will happen if it occurs. If you can't avoid the risk, and there's nothing you can do to reduce its impact, then accepting it is your only choice.



By the time a risk actually occurs on your project, it's too late to do anything about it. That's why you need to plan for risks from the beginning and keep coming back to do more planning throughout the project.

Chapter 02

Plan Risk Management



Components Include:

- Methodology
- Roles and responsibilities
- Budgeting
- Timing
- Risk categories
- Definitions of probability and impact
- Stakeholder tolerances
- Reporting formats
- Tracking

Which Define:

- How you will do risk management
- Who will do what
- What risk. Will cost
- When we do risk.
- **Example** internal, external
- Will it happen and how severe the risk may be
- Risk tolerant or risk averse
- What goes into the report
- Audit of risk process

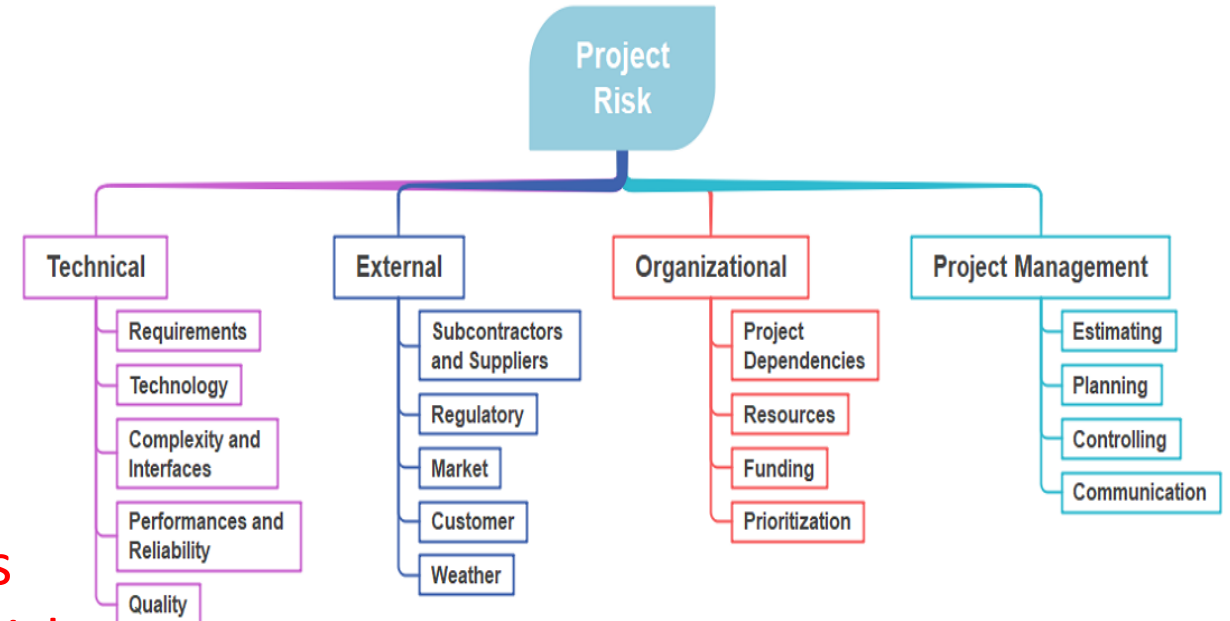


The output of the Plan Risk Management process is the creation and completion of the Risk Management Plan. The major categories in a risk management plan include:

- Risk management methodology
- roles and responsibilities
- Budgeting
- Timing
- Risk Categories
- Definitions of probability and impact
- Probability and impact matrix
- Revised stakeholder's tolerances
- Reporting Formats
- Tracking

The risk categories in a project management plan can be graphically represented with a tool that is similar to the work breakdown structure (WBS) called a Risk Breakdown Structure (RBS).

The **RBS** enables you to see all project risks grouped by basic themes and the specific risk areas occurring in relation to each theme



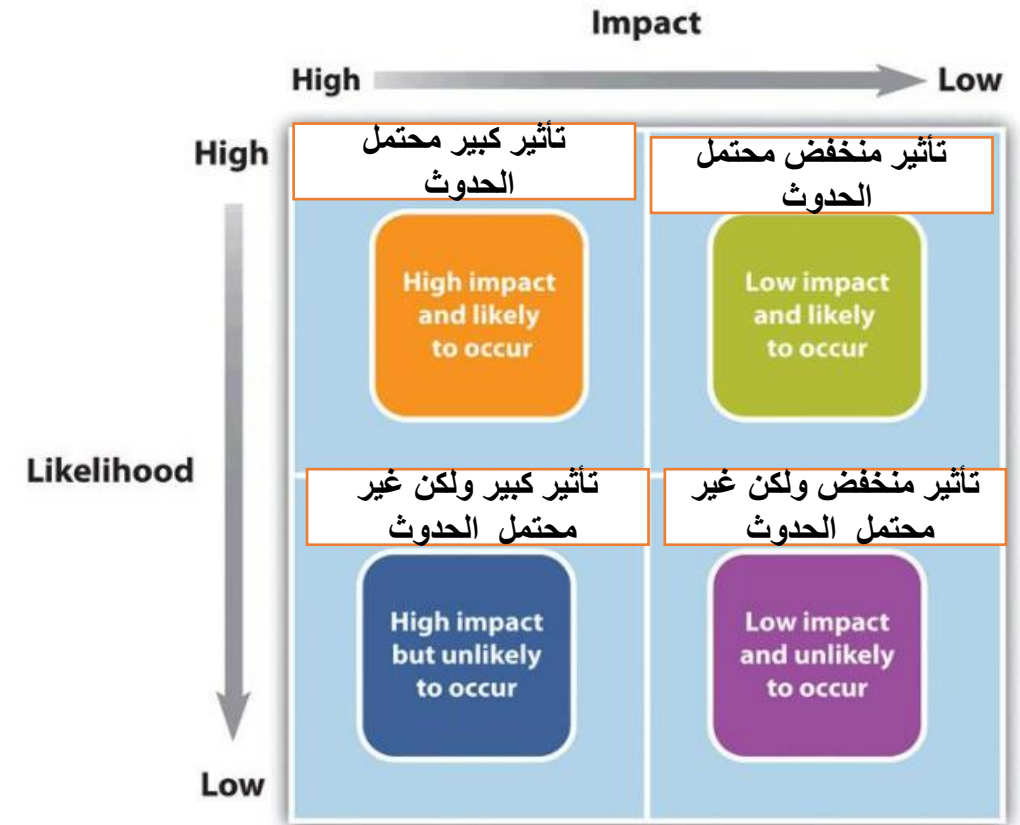
Risk identification is the process of identifying and assessing threats to an organization, its operations, and its workforce. For example, risk identification may include assessing IT security threats such as malware and ransomware, accidents, natural disasters, and other potentially harmful events that could disrupt business operations. Companies that develop robust risk management plans are likely to find they're able to minimize the impact of threats, when and if they should occur.

There are five core steps within the risk identification and management process. These steps include risk identification, risk analysis, risk evaluation, risk treatment, and risk monitoring.

1.Risk Identification: The purpose of risk identification is to reveal what, where, when, why, and how something could affect a company's ability to operate. For example, a business located in central California might include "the possibility of wildfire" as an event that could disrupt business operations.

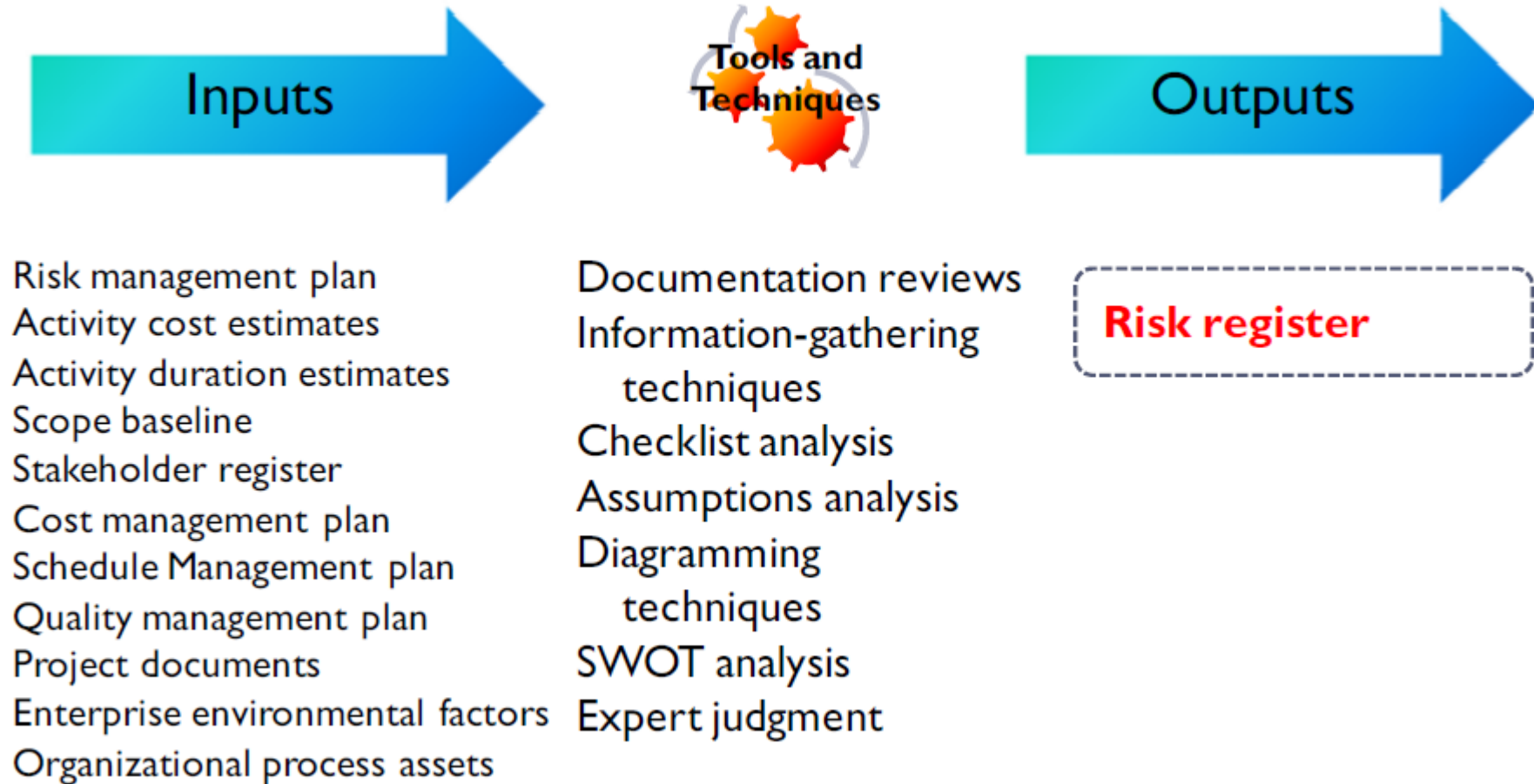
2. Risk Analysis: This step involves establishing the probability that a risk event might occur and the potential outcome of each event. Using the California wildfire example, safety managers might assess how much rainfall has occurred in the past 12 months and the extent of damage the company could face should a fire occur.

3. Risk Evaluation: Risk evaluation compares the magnitude of each risk and ranks them according to prominence and consequence. For example, the effects of a possible wildfire may be weighed against the effects of a possible mudslide. Whichever event is determined to have a higher probability of happening and causing damage, it would rank higher.



4. **Risk Treatment:** Risk treatment is also referred to as Risk Response Planning. In this step, risk mitigation strategies, preventative care, and contingency plans are created based on the assessed value of each risk. Using the wildfire example, risk managers may choose to house additional network servers offsite, so business operations could still resume if an onsite server is damaged. The risk manager may also develop evacuation plans for employees.
5. **Risk Monitoring:** Risk management is a non-stop process that adapts and changes over time. Repeating and continually monitoring the processes can help assure maximum coverage of known and unknown risks.

identify risk



This Process is used to determine which risks may affect the project, and can include the following resources when performing risk identification activities:

- Project Manager
- Project Team
- Risk Team
- Stakeholders
- Customers
- Subject matter experts

The above-mentioned risk information gathering techniques are well established and have been in use for many years.

Brainstorming

Delphi Technique

Root Cause Analysis

Expert Interviewing

SWOT Analysis



Brainstorming and Delphi

Brainstorming is a technique developed by Alex Osborn, The four fundamental steps to brainstorming are as follows:

1. **Focus on quantity:** The idea is to facilitate problem solving through the concept, quantity breeds quality. The idea assumes that the greater the number of ideas generated, the greater the chance of producing an effective solution.
2. **Withhold criticism:** In brainstorming, criticism of ideas generated is postponed until the team is ready to analyze the input. Instead, participants focus on extending or adding to ideas. By suspending judgment, participants will feel free to generate unusual ideas.
3. **Welcome unusual ideas:** To get a good and long list of ideas, unusual ideas are welcomed. They can be generated by looking from new perspectives and suspending assumptions. These new ways of thinking may provide better solutions.
4. **Combine and improve ideas:** Good ideas may be combined synergistically, to form a single improved good idea, as suggested by the counterintuitive " $1+1=3$ ". It is believed to stimulate the building of ideas by a process of association.

Delphi Technique



The Delphi Technique was developed by the RAND Corporation (an acronym for **R**esearch **A**nd **D**evelopment) in the 1960s and was created as an interactive forecasting method that relies on a panel of independent experts. Usually, all participants maintain anonymity. Their identity is not revealed even after the completion of the final report. This stops them from dominating others and using their authority or personality. This frees participants from their personal biases, minimizing the "bandwagon effect" or "halo effect", allowing them to freely express their opinions, encouraging open critique and admitting errors by revising earlier judgments.

Root Cause Analysis (RCA) and Expert Interviewing



The RCA Technique RCA is a reactive method of problem detection and solving, initially. The analysis is performed after an event has occurred. This allows practitioners to identify process 'triggers', so that RCA becomes a proactive method. In other words, RCA is able to forecast the possibility of an event before it might occur.

Expert Interviewing is the process of interviewing subject matter experts to obtain critical information for the project.



SWOT Analysis



This one analysis is generally set up as a grid with strengths and weaknesses as the two major columns, and opportunities and threats as the two major rows in the grid.

The idea is to see where the organization's strengths and weaknesses play against opportunities and threats using the four following comparisons:

	Strengths	Weaknesses
Opportunities		
Threats		

SWOT Analysis



- **Strengths-Opportunities** - identifies how organizational strengths help the organization to capitalize on opportunities
- **Weaknesses-Opportunities** - identifies organizational weaknesses, from the perspective of making the necessary improvements, to enable the organization to capitalize on opportunities
- **Strengths-Threats** - identifies how our organizational strengths help us deal with competitors or threatening situations
- **Weaknesses-Threats** - identifies how our organizational weaknesses leave us vulnerable to external competition or threats

	Strengths	Weaknesses
Opportunities		
Threats		



Chapter 02

The Risk Register

Risk Register													
Project						PM							
Project ID						Updated							
Sponsor						Version							
Risk Priority	Description	Probability	Impact	Result	Risk Category	Risk Trigger	Response Strategy	Contingency strategy	Owner	Entry Date	Response Due Date	Actual Date	Risk Realized?
				0									
				0									



The risk register becomes a key planning tool for the project. Understand that although a risk identifies only the probability of an event occurring, the possibility of the event is deemed to be real, true and requires assistance in monitoring.

The risk register : contains a description of the risk, it's probability, its impact in dollars, a category of risk, the triggering event that indicates the risk is about to occur, the risk response strategy, the risk owner, the date the risk was identified, a due date for resolution and most importantly, the risk's priority.

Note

Any risk with a probability percentage of 70% or greater is no longer a risk, it's an issue!