

Risk Management is the process of identifying, assessing and controlling threats to an organization's capital and earnings.



Risks stem from a variety of sources, including financial uncertainties, legal liabilities, technology issues, strategic management errors, accidents and natural disasters.



Why is risk management important? A successful risk management program helps an organization consider the full range of risks it faces.

Risk management also examines the relationship between risks and the cascading impact they could have on an organization's strategic goals.





□ If an unforeseen event catches your project unaware, the impact could be minor or major.

- In a worst-case scenario, though, it could be catastrophic and project failure.
- impact of negative events while maximizing positive events.
- manage and mitigate significant risks.



To reduce risk, an organization needs to apply resources to minimize, monitor and control the



The risks modern organizations face have grown more complex, fueled by the rapid pace of globalization.

Volatility

Risk management has perhaps never been more important than it is now.



Technology **Evolution**

New risks are constantly emerging, often related to and generated by the now-pervasive use of digital technology. Climate change has been dubbed a "threat multiplier" by risk experts.

Manifestation

A recent external risk that manifested itself as a supply chain issue at many companies -- the coronavirus pandemic -quickly evolved into an existential threat, affecting the health and safety of their employees.





"We **don't manage** risks so we can **have no risk**. We manage risks so we know which risks are **worth taking**, which ones will get us to our goal, which ones have **enough of a payout** to even take them,"



Risk appetite vs. risk tolerance

If risk appetite represents the official speed limit of 70, risk tolerance is how much faster you can go before likely getting a ticket.





It all about risk taking capacity !

Risk tolerance (RANGES FROM 70-80 MPH): the acceptable deviation from the organization's risk appetite.

> Unacceptable risk (80 MPH AND ABOVE)



What is How is it risk exposure? calculated? Risk exposure is The level of risk the quantified potential exposure is calculated by loss from business multiplying the probability activities currently of a risk incident occurring underway or planned. by the amount of its potential losses: Risk exposure = risk impact x probability

Risk exposure at a glance

Why is risk exposure important?

Risk exposure in business is used to rank the probability of different types of losses and to determine which losses are acceptable or unacceptable.

What are the most common types of risk exposure?

Brand damage, compliance failures, security breaches and liability issues.



IDENTIFY RISK

ASSESS RISK

RISK MANAGEMENT PROCESS

REVIEW CONTROLS CONTROL

Project Risk Management includes the processes and activities required to Increase the probability and impact of positive events, and to decrease the probability and impact of negative events in the project.







Risk Management Process



Expected Monetary Value (EMV)

Is a type of decision tree where you calculate the expected monetary value of a decision based on its risk event probability and monetary value. It uses Decision Tree Diagram.

EMV = Probability * Impact







Deciding how to approach, plan and execute the risk management activities for a project.





Identify Risks



Identifying & documenting characteristics of risks that might affect the project



Identify Risks

INPUT

- Cost/Schedule/Quality
- Human Resource
 Management Plan
- Project Scope Baseline
- Activity cost estimates
- Activity duration estimates
- Stakeholder Register
- Project / Procurement
- Enterprise Environmental Factors
- Organizational Process

- Documentation Reviews
- Checklist Analysis
- Assumption Analysis
- Expert Judgment
- SWOT Analysis

TOOLS

- Information Gathering Techniques
- Diagramming Techniques



Perform Qualitative Risk Analysis



Prioritizing risks & assessing their probability of occurrence & impact. Subjective in Nature (Low, Medium, High)



Perform Qualitative Risk Analysis

INPUT

- Baseline
- Risk Management Plan
- **Risk Register**
- Enterprise Env. Factors
- Organizational Process Assets

- Risk Probability and Impact Assessment
- Probability and Impact Matrix
- Risk data quality assessment
- **Risk Categorization**
- Risk Urgency Assessment
- Expert Judgment

TOOLS



Perform Quantitative Risk Analysis



Is performed on risks that have been prioritized by the Perform Qualitative Risk Analysis. It analyzes the effect of those risk events & assigns a numerical rating.







Perform Quantitative Risk Analysis

INPUT

- Risk Management Plan
- Cost & Schedule Mgmt Plan
- **Risk Register**
- Enterprise Env. Factors
- Organizational Process Assets

Data Gathering and Representation

TOOLS

- Quantitative Risk Analysis and Modeling Techniques
- Expert Judgment



Plan Risk Responses



Process of developing options, and determining actions to enhance opportunities and reduce threats to the project's Objectives.





Control Risks



A process of implanting risk response plan, identifying, analyzing, and planning for newly arising risks, keeping track of identified risks, residual risk and secondary risks







Risk Managing Approach

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Acceptance

Strategies for Negative risks or Threats

Changing the project management plan to reduce the threat and protect project objectives

Passive or active acceptance. No changes to the project management plan

Avoidance

Transfer

Shifting the negative impact of a threat and ownership of the response to a third party.



Opportunity Managing Approach Strategies for Positive risks or Opportunities

Exploit Make sure opportunity occur

Accept Allocation of reserves to projects



Enhance

Increase likelihood or impact or risks

Share

Give third party to ownership of opportunity



Key element for implementing Risk Management Plan

1.Communication and consultation.

Raising risk awareness is an essential part of risk management, risk leaders must also develop a communication plan to convey the organization's risk policies and procedures to employees and relevant parties.

2.Establishing the context.

This step requires defining the organization's unique risk appetite and risk tolerance -- i.e., the amount to which risk can vary from risk appetite. Factors to consider here include business objectives, company culture, regulatory legislation, political environment, etc.

3. Risk identification.

This step defines the risk scenarios that could have a positive or negative impact on the organization's ability to conduct business. As noted above, the resulting list should be recorded in a risk register and kept up to date.

4. Risk analysis:

The likelihood and impact of each risk is analyzed to help sort risks. Making a risk heat map can be useful here, as it provides a visual representation of the nature and impact of a company's risks. An employee calling in sick, for example, is a high-probability event that has little or no impact on most companies.

- Risk mitigation, Risk sharing or transfer, Risk acceptance
- 6. Risk treatment. This step involves applying the agreed-upon controls and processes and confirming they work as planned.
- 7. Monitoring and review. Are the controls working as intended? Can they be look for key risk indicators that might trigger a change in strategy.

5. Risk evaluation. Here is where organizations determine how to respond to the risks they face. Techniques include one or more of the following Risk avoidance,

improved? Monitoring activities should measure key performance indicators and







Risk management best practices 1. create value for the organization;

- 2. be an integral part of the overall organizational process; 3. factor into the company's overall decision-making process;
- 4. explicitly address any uncertainty;
- 5. be systematic and structured;
- be based on the best available information; 6.
- 7. be tailored to the project;
- 8. take into account human factors, including potential errors;
- 9. be transparent and all-inclusive;
- 10. be adaptable to change; and
- 11. be continuously monitored and improved upon.
- 12. "digitally reform," This entails using AI and other advanced technologies to automate inefficient and ineffective manual processes.



Failure to act

Left untreated, potential, inherent and avoidable risks lurking in all phases of business can ruin reputations and weaken bottom lines.

Lack of transparency Immature ERM programs Supply chain oversights Lagging security controls Poor governance

- Toxic work culture

- Reckless risk-taking

If you ignore Risk Management!









OPPORTUNITY







Limitations of Risk Management

- 1. Prioritizing the risk management processes too highly
- 2. Keep an organization from ever completing a project or even getting started.
- 3. Project is suspended until the risk management process is considered complete.
- 4. Distinction between risk and uncertainty. Risk can be measured by impacts × probability.
- 5. If risks are improperly assessed and prioritized, time can be wasted in dealing with risk of losses that are not likely to occur.
- 6. Spending too much time assessing and managing unlikely risks is to be avoided.
- 7. Unlikely events do occur but if the risk is unlikely enough to occur it may be better to simply retain the risk and deal with the result if the loss does in fact occur.
- 8. Qualitative risk assessment is subjective and lacks consistency. The pr<mark>imary justification for a formal risk assessment process is legal and bureaucratic.</mark>



Plan Risk Management

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

Identify Risks

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

Perform Qualitative Risk Analysis

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

Perform Quantitative Risk Analysis

Plan Risk Responses

The process of numerically analyzing the effect of identified risks on overall project objectives. The process of developing options and actions to enhance opportunities and to reduce threats to project objectives

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







SWOT

Strengths, Weaknesses, Opportunities, and Threats (SWOT) are analyzed to increase the breadth of considered risks



Residual Risk

Are those that remain after avoidance, transference, or mitigation responses have been taken.



Secondary Risk

Risks that arise as a direct result of implementing a risk response



Fallback Plan

Is Plan–B, if the risk has a high impact, or the primary response proves to be inadequate



Avoidance

Changing the project management plan to reduce the threat and protect project objectives







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