**PROJECT RISK MANAGEMENT**

All approaches to project risk management strive to maximize project efficiency and effectiveness. Although the details of risk processes may differ depending on the project, risk management has three important parts: identification, analysis and action. Before risk can be properly managed, if must first be identified, described, understood, and assessed. Analysis is a key component, but it is not sufficient alone; it must be followed by action. A risk process that does not lead to actions to deal with identified risks is incomplete and useless. The ultimate goal is to manage risk, not simply to analyze it. Project risk management is the process for conducting risk management planning, identification, analysis, responses, monitoring, and controlling the project. The objectives of project risk management are to increase the probability and impact of positive events and decrease the probability and impact of negative events. Project issue management includes utilizing the outputs from the risk management planning. There are six steps to risk management.

**Plan Risk Management**

Planning risk management is the process of defining how to conduct risk management activities for a project. The plan risk management process should start when the project starts. Members of the project team meet to develop a risk management plan that categorizes risks, defines probability and impact, includes a probability and impact matrix, and sets forth stakeholder tolerances. Other portions of the plan will define the tools, approaches, and data sources needed to manage risks; roles and responsibilities of the risk management team; the costs necessary to perform risk management; how often the team will review risks and perform risk management; and the methods of reporting and tracking. By planning how you will manage risks, you increase the probability that your risk management methods, as well as the project itself, are successful.

**Identify Risks**

Identifying risks is the process of determining which risks may affect a project and documenting their characteristics. The process is an iterative one, as the team will need to perform it several times throughout a project’s life cycle. Upon identifying risks, you will need to input them into a risk register. The risk register is a list of all identified risks and their potential responses.

**Perform Qualitative Risk Analysis**

Performing qualitative risk analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact. Through qualitative analysis, you will be able to rank and categorize risks and distinguish which ones are high priorities. You can then identify which risks require responses in the near future, which ones need additional analysis, and which low-priority risks to keep on a watch list.

**Perform Quantitative Risk Analysis**

Performing quantitative risk analysis is the process of numerically analyzing the effect of identified risks on overall project objectives. At this point, you will need to gather and analyze information about how likely a risk is. You will also quantify risk impacts on project objectives like cost and schedule. The results of this analysis will go into the risk register along with the results of the qualitative analysis.

**Plan Risk Responses**

Planning risk responses is the process of developing options to enhance opportunities and reduce threats to project objectives. Taking priority into consideration, you assign an owner to take responsibility for a specific risk.

There are four ways to address a negative risk.

* ***Avoid*:** You can avoid a threat by making changes to the project itself to prevent the risk from impacting it.
* ***Transfer:*** You transfer a threat to a third party. In this case, the risk is still present, but another party will have ownership and responsibility of it (like insurance).
* ***Mitigate:*** You mitigate a threat by taking steps to lessen either the likelihood that it will happen or the impact it will have on project objectives. Taking action to prevent or reduce the probability of an event is typically more effective than fixing a problem after it occurs. If it is not possible to reduce or prevent a risk, developing a response to mitigate the impact may be helpful. In this case, the risk still occurs, but using the risk response will decrease the severity of its impact.
* ***Accept:*** You accept a threat by deciding not to take any action. This approach leaves the team to address the risk if it becomes real, typically through a contingency reserve.

There are also four ways to address a positive risk.

* ***Exploit:*** You exploit an opportunity by doing everything possible to ensure that the event will happen.
* ***Share:*** You share an opportunity by allocating some or all of the ownership and responsibility to a third party who can best use the event to the benefit of the project.
* ***Enhance:*** You enhance an opportunity by increasing its probability or its positive impacts.
* ***Accept:*** You accept an opportunity by taking advantage of an event when it occurs, but does not actively pursue it.

**Monitor and Control Risks**

Monitoring and controlling risks is the process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, retiring risks and/or issues, contingency modification, and evaluating risk process effectiveness throughout a project. Continuous risk monitoring ensures risks are detected and managed and that risk response actions that are implemented and effective. Risk monitoring continues for the life of the project.

**Communication and Accountability**

Although communication and accountability are not actually steps, it is extremely important that the project team practices them throughout the life cycle of a project. Communication and consultation with a project’s sponsor and stakeholders is critical to executing successful risk management and achieving project outcomes that are broadly accepted. This interaction helps everyone understand the risks and trade-offs that must be made in a project and supports the project manager’s efforts.

Regular reporting is an important component of communication. Reports on the current status of risks and risk management ensure that all parties are fully informed and understand the risks, thus avoiding unpleasant surprises.