

## Managing Project Risks

This document describes the process for managing risks in an information technology (IT) project. A risk is an uncertain event that if it occurs has a negative impact on the project's outcome. To manage risks, the project team needs to first identify the risks that may occur during the course of their project. For each risk, the project team needs to assess the probability of the risk occurring and the impact to the project if the risk occurs. For risks that have a significant probability of occurring and/or impact on the project if they occur, the team needs to devise plans to manage the risks. These plans are designed to eliminate or reduce the risks or to transfer them to another organization such as by purchasing insurance or a maintenance contract from an external vendor. A project risk that becomes an actual problem is called an *issue*. The document describes a 7 step process to manage project risks. The steps are:

### ***Steps to Manage Project Risks***

1. Identifying and documenting the risks.
2. Assessing the probability and impact of the risks.
3. Prioritizing the risks.
4. Creating risk management plans to manage the most important project risks.
5. Reviewing the risk management budget with the project sponsor.
6. Monitoring and continuing to identify and assess risks.
7. Implementing the risk plans.

### **Step 1: Identifying and Documenting the Risks**

The first step is to identify the sources and categories of risks for the IT project and record them in a risk register. A risk register is a document used to record information about the risks for a project. An example risk register is shown in Table 1, and a template for a [risk register](#) is available to download. To begin the risk identification process, the project manager should convene a meeting of the project team and begin by identifying the categories of project risks that the team should examine. Listed below is a sample list of risk categories to consider. However, the project manager should lead the project team through a brainstorming session to identify the risk categories since the team members will have the best information about the project.



## **Step 2: Assessing the Probability and Impact of Risks**

After identifying the project risks, the project team should determine a method for estimating the probability of each risk occurring and the impact to the project if it occurs. As an example, the project team can estimate a probability score and an impact score for each risk as part of their risk brainstorming session. By performing the estimation process as a team, the members of the project will build a stronger understanding about the probability and impact of the risks and what are the most significant project risks. The probability is often estimated as a percentage of the chance that the risk may occur during the course of the project. The impact of the risk is often assigned a score on a 1 to 5 scale where 1 means the impact of the risk to the project is very low and 5 means the impact is very high. For each risk, the project manager should calculate a risk score by multiplying the probability score by the impact score. For example, if the probability score is 80% and the impact score is 3, the risk score would be 2.40 ( $0.80 \times 3 = 2.40$ ). The team should also identify how urgently the risk needs to be addressed. For example, does the risk need to be addressed immediately or does it need to be addressed during a later phase of the project.

## **Step 3: Prioritizing the Risks**

The next step is to prioritize the risks to determine which ones the team should create plans to manage. The team should establish some simple rules to determine which risks need to have plans created. The rules are usually based upon thresholds for the probability and impact scores and/or the total risk score. Here is an example set of rules that can be used with the scoring method described below.

### ***Example Threshold Rules of Risks to Manage***

The project team must create a risk management plan for every risk that has:

- A probability of 30% or greater or
- An impact score of 3 or greater or
- Risk score of 0.90 or greater.

The project team then identifies every risk that meets the criteria of the rules.



#### **Step 4: Creating Plans and a Budget to Manage the Most Important Project Risks**

For every project risk that requires a risk plan, the team should identify what is the best action that they can take to eliminate, reduce, or transfer the risk. The project manager should work with the project team to assign a member to be the *risk owner* for each risk. This person should have the appropriate expertise to devise a risk management plan that identifies:

- The actions that need be taken to eliminate, reduce, or transfer the risk.
- The staff and /or vendors that need to work on managing the risk.
- The cost to manage the risk.

The plan should also include a risk trigger. A risk trigger is a indicator that a risk is about to occur or has occurred. Triggers may be discovered during the risk identification process and monitored as the project is executed. Once the risk trigger occurs, the project team needs to implement a risk response. The risk owners may need to consult with other project team members to devise the risk plans. After the plans have been created, the risk owners give their risk plans to the project manager who will compile all of the risk plans. The project manager should lead a review of the risk plans with the project team to make sure all members understand the work they need to perform. The team should also identify situations in which the risk plans may conflict with one another or offers opportunities to manage sets of risks together. The risk plans are then adjusted by the risk owners based upon feedback from the team, and the project manager updates the risk register with the management plans.

Next, the project manager identifies the total cost and the tasks to implement all of the risk management plans and identifies the adjustments that need to be made to the project budget and schedule. All project budgets should include a contingency reserve of at least 10% of the total project budget since there are always uncertainties about what project work needs to be performed and the cost of managing risks. If the total cost of managing risks is small, the contingency funds in the project budget may be sufficient.

#### **Step 5: Reviewing the Risk Management Budget with the Project Sponsor**

If the contingency budget is not sufficient to manage the risks, the project manager should meet with the project sponsor to discuss the needed resources and seek the sponsor's approval for the risk budget. It is possible that the sponsor may need to request additional funding from a campus leader or approval committee. After the sponsor has approved the project budget for risk management, the project team can proceed with the implementation of the risk plans as required.

## **Step 6: Monitoring and Continuing to Identify and Assess Risks**

The project manager in collaboration with the project team, sponsor, and stakeholders should continue to identify and assess emerging project risks and create and implement risk management plans as needed. The project manager and risk owners in collaboration with the project team should continue to review the identified risks to see if they have changed in any ways as the project team learns more about the project. When monitoring risks, here are some activities to consider conducting:

- Determine if the risk management plans have been executed.
- Identify and analyze new risks.
- Assess the effectiveness of the risk management plans that have been executed.
- Share risk status information with the project team and sponsor.
- Identify any unanticipated results of risk management activities.
- Update the risk management plans as lessons are learned from the project.

## **Step 7: Implementing the Risk Plans**

The project manager should have the risk owners implement the planned risk management activities in order of the risk score and urgency to eliminate, reduce or transfer risks. If any risk triggers have occurred, the risk management plans should be implemented. After the plans have been implemented, the risk owner should determine if the planned activities have successfully managed the risks and identify if any residual risks remain after the plans have been implemented. The information about residual risks should be recorded in the risk register and assessed to determine if any additional risk management plans need to be created and implemented.