# Project Risk Management

## PROJECT MANAGEMENT FOR DEVELOPMENT ORGANIZATIONS

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## A methodology to manage development projects for international humanitarian assistance and relief organizations

# Risk Management

Risk management deals with the processes to identify, analyze and respond to risk throughout the project life cycle, with the goal to ensure the project will be able to reach its objectives. Risk management also helps the project by determining the right scope, making realistic schedules and better cost estimates that take in account provisions to respond to risk events. Risk management also helps project stakeholders understand the true nature of the project, identify its weaknesses, threats, strengths, and opportunities.

The main purpose of risk management is to build an understanding of the potential problems that might occur on the project and how they might impede project success, by developing strategies to reduce the impact of potentially adverse events on the project. Risk management is an investment the project is willing to make to reduce the impact to the project. There are costs associated with risk management and these costs should not exceed the potential benefits.

Project risk management is concerned with the analysis of the various risks and reducing their impact. The probability that a risk may occur varies as the project makes progress, a risk identified as low impact and low probability may change in a couple of months to high impact and high probability. The role of the project manager is to ensure there is a constant evaluation of the risk factors and update the response plan accordingly.

Risk management is a systematic process of identifying, analyzing, responding, monitoring and evaluating project risks. It involves a series of steps and techniques to help minimize the probability and impact of adverse events and maximize the probability and results of positive events within the context of risk to the overall project objectives. Project risk management is most effective when it is done early in the life of the project and is a continuous responsibility throughout the project's life cycle.

## Definition of Risk

A dictionary definition of risk is "the possibility of potential harm that may arise from some present process or from some future event"[1]. As such risk is also associated with the probability that the event may or may not occur.

Risks are also associated with the potential benefits or pay off a project may receive in light of potential risks. For example, a project may embrace a particular approach that has a high risk of creating resistance from local interest groups, but the payoff to the community is high. In this case, the project faces a decision to use the approach and face the risks or avoid the risk by using a different approach that may not have the same impact or a payoff.

## Objective of Risk Management

The project risk management plan helps project stakeholders and the project team makes informed decisions regarding alternative approaches to achieving their objectives and the relative risk involved. Risk management encourages the project team to take the following appropriate measures:

- Minimize the negative impacts to project scope, budget, schedule and quality.
- Maximize opportunities to improve the project's objectives with lower cost, shorter schedules, enhanced scope and higher quality.

## Sources of Risk

Due to the complexity of the environment they have to act, development projects face many risks that can jeopardize their viability, development projects need to build better awareness of all the internal and external factors that influence the environment that create high risks for the project. Some of these factors include:

[1] Merriam-Webster Dictionary, 2012

- Unclear project objectives and poorly defined project scope.
- Limited access to goods and services.
- Poor local infrastructure.
- Lack of project ownership and support from stakeholders.
- Political, social and economic environment.
- Influence of interest groups, local government, media, and other NGOs.
- Low understanding of the external environment.

Having a budget, a detailed schedule, and a well-defined Logframe are not a guarantee that the project will be a success. There are many factors that can intervene and limit the ability of the project team to deliver the project benefits. Risk factors are conditions that exist in the project environment that the project has little or no influence, in some cases risks are unavoidable and the project must develop strategies to minimize its impact. Risk management is not a one-time exercise, the project must be able to develop risk management strategies during the project initiation and all project planning phases to increase the chances of project success.

# Risk Management Process

There are four stages to risk management, they are:

- **Plan**: Risk Planning, involves the identification, quantification and development of a response plan
- **Do**: Risks Response, includes the activities to mitigate, monitor risks and respond to risk events.
- **Check**: Risk Plan Evaluation, involves the evaluation of the risk management plan and response actions taken by the project
- **Adapt**: Risk Plan Improvement, the actions to improve the risk plan and response mechanisms as well as an update on the risk levels

Risk Management inputs and outputs:

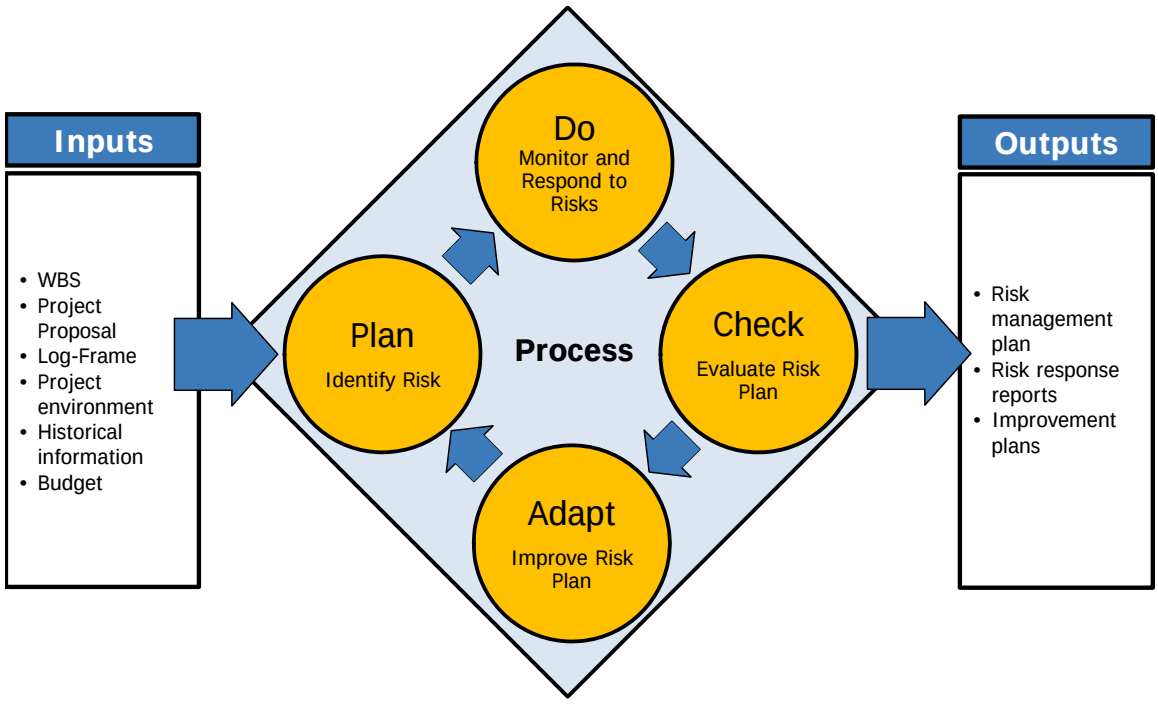


Figure 1 - Risk Management, IPO Diagram

**Inputs:** Inputs for the project risk management include the following documents or sources of information:

- WBS
- Project Proposal
- Log-Frame
- Project environment
- Historical information

**Outputs:** The project team will use the above information to develop three important documents for the project:

- Risk management plan
- Risk response reports
- Improvement plans

# Risk Planning

The risk management plan is a process that helps the team decide the best approach and plan for risk management activities during the life of the project. The project team needs to hold several meetings to develop the risk management plan, starting with the identification of project risks, and reviewing project documents such as the project contract, WBS, budget, schedule, roles and responsibilities, including documents from previous projects and organization's policies and guidelines for risk management. Additionally, the project needs to assess the risk tolerances of the various key stakeholders, what may seem a low impact risk to the project team may be a high impact risk to a stakeholder. Some stakeholders may be risk-averse, which will require a different approach in the risk management plan.

The risk management plan will document the procedures for managing risk during the project life cycle, the plan will summarize the results of the risk identification, risk quantification and risk analysis, and the procedures for responding to a risk event including the evaluation of the risk management plan. The risk management plan is also used as an input to the project budget and project schedule, since the identification and quantification of risks may require changes in the project schedule and the provision of a contingency budget to cover the costs of a risk event response.

The plan also determines the roles and responsibilities of the people involved in responding to a risk event and the steps required to evaluate the response plan. The risk management plan can include the methodology to identify and quantify risks, reporting formats, authorization procedures and a description of how the team will track and document the risk events. Additionally, the risk management plan may include contingency plans and fallback plans with their appropriate contingency budget reserves. These are detailed as follows:

- Contingency plans are predefined actions that the project team will take if one of the identified risks occurs.

- Fallback plans are plans used for risks with high impact that are put in place when the activities to reduce or mitigate the risk have not worked.
- A contingency budget reserve is a financial provision that the project or organization holds to mitigate costs caused by a risk event.

Risk planning consists of three stages: Identifying all the risks that may have an impact on the project, quantify the impact and probability for each identified risk and develop a risk response plan.

**Risk Identification**

This is the step where the project team identifies and names all risks. The project can use a combination of brainstorming and reviewing risk management plans from previous similar projects. Identifying risks is the process of gaining an understanding of the negative outcomes of a project. The project manager and the project team should investigate all sources for information about potential risks to the project, to facilitate this search risks can be categorized into two groups: internal and external risks.

- **Internal risk:** comes from the project organization or internal conditions such as limited support from the organizations, lack of qualified resources on the team, and the organization's management processes and project management competencies. Internal factors also include stakeholders, including intended beneficiaries and the local communities, which have a strong influence in the project outcomes. In most cases, internal factors can be managed, and their impact reduced by getting the support and commitment to the project.

- **External risk:** comes from the environment and these are more difficult to manage. These include all the factors that the project has little or no influence to change and the best strategy is to develop contingency plans that will help minimize their impact. External factors include political system, socioeconomic context, geography, infrastructure, and the local natural environment.

The identification of the project risk should be captured in a **Risk Log** that during the life of the project the log will be updated to reflect the new information on each risk and update their risk impact and probability. The project team should list all risks that may have an impact on the project, one way to start this process is to review each one of the project process areas, such as scope, schedule, budget and quality, as a way to identify potential risks.

Another source for project risks is the information from previous similar projects, it is a good way to learn from the past, and therefore, increase the chances to reduce risks on current and future projects.

Table 1 – Risks by process area

| **Process Area:** | **Risk Factors or Conditions** |
|---|---|
| Scope | Poor planning or poor scope definition and inadequate scope control, low stakeholder involvement |
| Schedule | Estimating errors, poor allocation of resources, external dependencies |
| Budget | Estimating errors, currency exchange fluctuations, budget constraints and donor regulations |
| Quality | Poor quality definition, inadequate controls, and quality assurance program |
| Team | Team conflicts, absence of leadership, poor definition of responsibilities, low skills |
| Stakeholder | Low interest and support to the project, lack of ownership, conflicts of interest and priorities |
| Information | Poor communication skills, information overload, communication interferences |
| Risk | Ignoring critical risks, poor risk analysis, inadequate response plans |
| Contract | Contract clauses, good and services availability |

There are several methods for identifying risks, the project team needs to start the process by first reviewing the project documentation, analyzing project assumptions on which project plans were developed, interviewing key stakeholders and reviewing previous projects.

The most common technique for identifying project risk is the use of brainstorming in which a group attempts to generate a list of potential risks for the project, the result is a comprehensive list that the group then uses

to quantify based on their probability and impact to the project. Another useful technique is interviewing people with experience in a specific subject matter to identify risks in the project. A good source of people to interview is team members from a similar or past project, and key project stakeholders who can provide a different view of project risks from their perspective. A final technique for risk identification is to conduct a SWOT analysis with the project team. The SWOT (Strengths, Weaknesses, Opportunities and Threats) is an analysis, usually used in strategic planning, but that can provide valuable insights to identify the potential risks to the project.

**Risk Quantification**

Quantifying the risks is a process that requires an analysis of the risk factors by determining their probability of occurrence and their impact to the project. Risk quantification takes the form of a matrix that places probability and impact together. All risk identified need to be quantified in two dimensions, probability and impact:

- Probability is the chance or likelihood that the event will occur or not, some risks are almost certain that they will occur while others are a remote possibility.
- Impact is the result or consequences of a risk event to the project, measured by the effect on the project.

A good practical method is to use a scale of high to low (or one to three) for each risk level of impact and probability. The risk factor is determined by multiplying impact with probability and organizing the results from high to low, providing a list of prioritized risks.

Table 2 – Risk assessment

| Risk | Risk Probability | Risk Impact | Risk Index (P x I) | Risk Priority |
|---|---|---|---|---|
| Risk A | Medium (2) | Low (1) | 2 | 4 |
| Risk B | Low (1) | High (3) | 3 | 3 |
| Risk C | High (3) | High (3) | 9 | 1 |
| Risk D | Medium (2) | High (3) | 6 | 2 |

It is not necessary, or economically feasible to prepare a response plan for all risks identified in the project, for that purpose the project needs to prioritize the risk based on their level of impact and probability. The table above helped determine a risk prioritization list that the project can use to prepare the response plans.

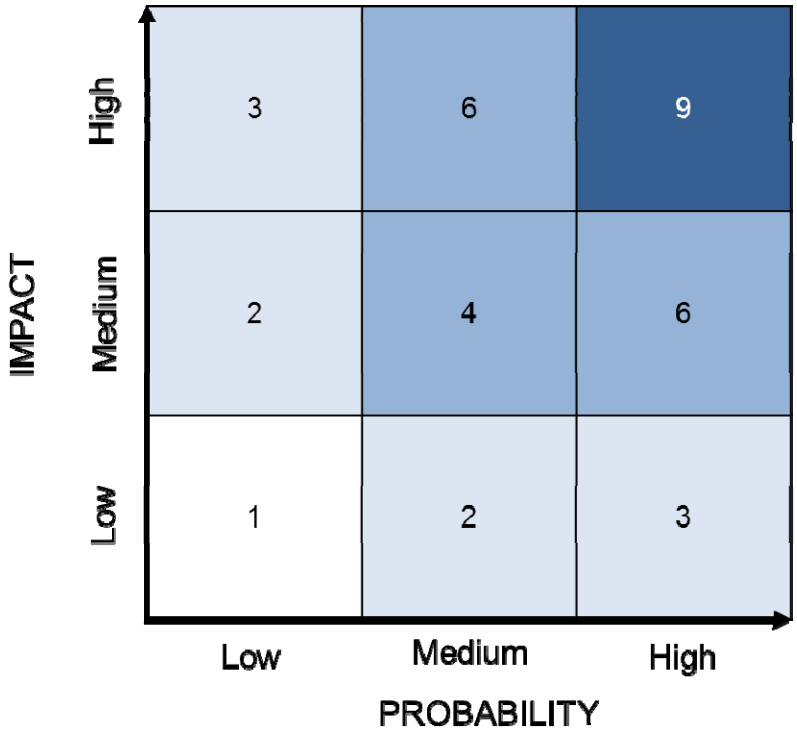


Figure 2 – Impact Probability Matrix

## Risk Response Plan

Risk quantification provides an analysis of risks prioritized by their probability and impact to the project. Risk response planning is to determine the actions needed in case of a risk event.

There are four strategies the project can do to respond to a risk vent:

- **Avoid the risk**: Making changes to the project to remove the risk.
- **Mitigate the risk**: Take action to reduce the impact or the chance of the risk occurring.
- **Transfer/Share the risk**: Moving the liability of the risk to a third party, or Share the risk with a partner organization.
- **Accept the risk**: To accept the consequences of the risk, sometimes due to the inability to develop a response strategy. The risk might be so small the effort to do anything is not worthwhile.

Table 1 – Risk response strategies

| Risk Level | Response Strategy |
|---|---|
| **9** | Avoid the Risk, take immediate action. |
| **6-4** | Mitigate or Transfer the Risk, first priority . |
| **3-2** | Mitigate or Transfer the Risk, second priority. |
| **1** | Accept the risk, monitor regularly. |

A risk response plan should include the strategy and action items to address the strategy. The actions should include what needs to be done, who is doing it, and when it should be completed. The actions that the project can take as part of its risk response strategies are: developing preventive plans and develop contingency plans.

- **Preventive plans:** involves the review of the risk log to identify if any steps can be taken to prevent risk from happening or reduce the probability that the risk may occur. Preventive actions use transfer or avoidance risk strategies. The cost of prevention actions needs to be weighed against the impact of the risks. The tasks are then added to the project schedule with a clear assignment of roles and responsibilities.

- **Contingency plans:** are plans for those risks where the project cannot build prevention strategies, these plans use mitigation and risk acceptance strategies. Preventive plans seek to minimize the impact of the risk event in the project. Contingency plans include a list of resources such as budget and personnel.

The response plan needs to be updated as soon as the project evaluates the risk log and updates the risk factors. Failure to do that may result in using an outdated response plan that does not reflect the most current factors that expose the project to more risks.

The project manager is ultimately responsible for the analysis and monitoring of risks with assistance from the project team. There may be some risks that are outside the control of the project manager, these risks fall within the responsibilities of the organization's management team. The project manager should discuss any such risks with the management team to ensure that the risks are being adequately monitored and a response has been planned. The project will develop a simple table that describes the list of risks prioritized, the preventive or contingency plans developed and the people responsible for it. The table below shows an example:

Table 42 – Risk matrix log

| Risk | Probability | Impact | Index | Risk Response Plan | Responsible |
|---|---|---|---|---|---|
| Risk C | High (3) | High (3) | 9 | Immediate Action, **Avoid** risk, change schedule dates | Project Manager |
| Risk D | Medium (2) | High (3) | 6 | Contingency Plan, **mitigate** risk by adding resources. | Coordinator |
| Risk B | Low (1) | High (3) | 3 | Preventive Action, **transfer** risk to a consultant | Specialist |
| Risk A | Medium (2) | Low (1) | 2 | Contingency Plan, **accept** risk, loss is not significant. | Administrator |

## Risk Contingency Budget

This is a technique for all the identified risks, the idea is to request a risk contingency budget to cover the impact to the project if one or more of the risks occur. The project will need to calculate the monetary impact to the project if the risk event occurs, the second step requires assigning a probability value to each risk expressed in percentages. Multiply the impact value with the risk probability, add all the values, the result is the risk contingency budget.

Table 3 – Risk budget

| Risk | Probability | Impact | Contingency Budget |
|---|---|---|---|
| Risk C | .60 | 70,000 | 42,000 |
| Risk D | .40 | 50,000 | 20,000 |
| Risk B | .10 | 40,000 | 4,000 |
| Risk A | .40 | 5,000 | 2,000 |
| **Total** | | **$165,000** | **$68,000** |

From the example above, the potential impact to the project is $165,000. But neither the donor nor the organization is in a position to assign these funds, the only reason the project would need that much money is if every risk occurred. The risk contingency budget should reflect the potential impact of the risk, this is the total contingency request for the project that for this example is $68,000. This value will need to be added to the project budget as risk contingency. If risk B and D actually occurred, the project will be able to use the contingency budget. If risk C also occurred, the risk contingency budget will not be enough to protect the project from the impact. Because risk C has a 60% chance of occurring, the project team needs to put their efforts on this risk to make sure that it is managed so that its impact on the project will be lessened through proactive risk management techniques such as prevention or mitigation.

## Force Majeure Risk

Force Majeure, or greater force, is a sentence to describe risks that are so catastrophic that they are outside the scope of risk management planning. There is little that the project can do to prevent them or mitigate them and

when they occur, the impact is so large that may cause the project to be closed or postponed for many months. The following are some examples of Force Majeure risks:

- **Nature Events:** Earthquakes, hurricanes, floods, volcano eruptions, etc.
- **Human Events:** Economic collapse, civil unrest, war, terrorist acts, social instability, etc.

The responsibility to develop response plans to this type of risk falls under the responsibility of the organization's management, since the risk will impact not only the project but the organization. Some donor contracts include clauses that deal with Force Majeure events and release responsibility from the organization for the losses caused by these events.

## Risk Response

Once the risk management plan has been approved the team will carry the activities assigned to the. The team will focus on the tasks to avoid, mitigate or transfer the risk. Depending on the number of risks and the priorities assigned in the plan, the team will start working and report on the progress of the project manager.

- **Avoid Risk** – The project team can avoid the risk by changing the activity that will create the risk. For example, severe weather conditions can delay the completion of key project activities. In this case, the project manager may choose to move the calendar or cancel the activity altogether. In this case, the project should evaluate the consequences to the project objectives
- **Mitigate Risk -** These are activities designed to reduce the impact to the project if the risk were to occur. For example, an activity that may take too much time to complete will delay the entire project, the plan will require an increase in the resources or people available during the performance of that critical activity.

- **Transfer/Share Risk –** This activity includes the process to transfer or share the risk with a third party who may have more expertise. For example, the project team may not have the skills required to complete a critical activity and the project manager decides to hire a consultant to do that work.
- **Accept the Risk -** Due to its low probability and Impact, the best action is to accept the risk. Even if it happens the cost of doing a response can be higher than the cost of the risk impact. The project manager should do a risk/benefit analysis to determine the cost of accepting the risk. These risks should be monitored regularly to see if their probability or impact changes over time.

Once the planned risk response activities are completed the project manager should update the risk register and communicate the results to key stakeholders.

**Monitoring the risk registry**

An important activity during this phase is to monitor the risk registry for any changes. As more information is obtained the risk will change their levels of probability. The team will monitor the risks with top priority and determining if the triggers are close to occur. Monitoring also includes a revision of the assumptions made at the start of the project about each risk. During the life of the project the conditions, assumptions and knowledge of the environment changes and with that the initial information the project had about the risks also changes. It is a good practice for the team, as it makes progress and builds more understanding about the project environment, that they review the original assumptions they made regarding the project risks impact and probabilities.

Risk monitoring is an ongoing activity performed by the project team throughout the entire life of the project. Risk management does not stop with risk analysis and development of a response plan. The identified risk may not occur, or their probabilities or impact may diminish. Previously identified risk that during the analysis stage was categorized as low impact or low probability may turn into high probability and high impact.

Additionally, new risk may come that the team wasn't aware at the start of the project. All newly identified risk will need to go through the same process as those identified during the risk planning phase. New identified risk would also have an impact on the preventive actions or contingency plans developed initially. The project will need to update this information and make the necessary changes to the project plans.

## Risk Triggers

For some types of risk, it is easy to identify the triggers or situations that cause a risk to occur, for example schedule disruptions caused by transportation strikes, budget changes caused by currency fluctuations or severe weather events on the host country can be monitored closely by following the news and other sources of information that give indicators about the proximity of the risk event. Each risk should have a list of trigger indicators that the project will monitor during the life of the project. One good practice is to develop an early warning system, this can be done by publishing the Risk Log with a color indicator that represents the risk level for each risk from green to red. As the possibility of a risk changes the project will update the Risk Log and change the color assigned to that risk. The table below shows an example.

Table 6 – Risk trigger matrix

| Risk | Trigger Status | Date Updated | Event |
|---|---|---|---|
| Risk A | (Red) | 02/15/2009 | Heavy rains forecasted for next week will generate floods in the project area |
| Risk B | (Yellow) | 02/01/2009 | Increased probability of higher costs to the project due to floods |
| Risk C | (Green) | 02/15/2009 | No changes |
| Risk D | (Green) | 02/01/2009 | No changes |

The objective is to have everyone on the team, and some key stakeholders aware about the risks to the project and develop a level of readiness that will facilitate a proactive response to a risk event. The worst situation is

when the risk event surprises the project and leaves them with no options, or time to prepare to respond properly to the risk.

In certain situations, by understanding the imminence of a risk event, the project can prepare the actions to reduce the impact such as moving the place or time of training events, postpone the transportation of material to and from the project, reduce the local currency deposits to reduce the exposure of currency fluctuations, or prepare the project team for a severe weather event.

**Risk Event Response**

Risk event response involves executing the risk contingency plan to respond to a risk event. Executing the plan ensures that the people assigned to those duties, the risk owners, carry out the actions to mitigate, prevent or respond to a risk event. Preventive actions occur when the project implements measures to reduce the impact or probability of a risk. The project can also decide to put in place actions to respond to a risk event by implementing the contingency plans and workarounds.

During risk response, the project manager will notify the key stakeholders about the event and the steps that the project is taking to reduce the impact to the project, these will include the request for authorization to use the risk contingency budget required and assign the personnel for the activities planned. The project manager should supervise the activities and include the results in the project reports. The risk owners assigned to respond to the risk will receive their orders and resources required to implement their actions, the organizations' management will be informed as well as the donor and beneficiary representatives as appropriate.

Not all plans always go as planned, and the risk that originally was rated as medium impact may result in a high impact risk causing more damage to the project than previously thought. The project manager should monitor closely the impact to the project. Especially in the areas of schedule, budget and scope and develop contingency plans to mitigate the impact to the project. Responding to risk should be more than just implementing the planned actions, the project needs to take this opportunity to measure how

effective was its initial analysis of the risk and how effective was the response plan.

# Risk Plan Evaluation

### Risk Evaluation

**1.** Like any other plan, the initial assumptions and estimates on risks will usually have changed over time. It is through practice, experience, and evaluation of the results that will create the opportunities to make changes in the plan and contribute information to allow possible different decisions to be made in dealing with the risks being faced.

**2.** The results of risk analysis and management plans should be updated periodically. There are three reasons for this:

- Evaluate the effectiveness of actions taken, and how the project was able to use the plan to address the risk.
- Evaluate whether the previously selected contingency plans are still applicable and effective and make the appropriate changes
- Evaluate the possible risk level changes in the project environment.

### Evaluating the Risk Response Plan

All risk response plans need a post evaluation to determine if the actions were as effective as planned. The team should review the risk management plans the project created to respond to a risk event. The evaluation should be another opportunity for the project to review the assumptions made at the moment of identifying and quantifying the risks.

The project team should meet and discuss the results of the risk response plans, the effectiveness of the prevention actions and mitigation plans, review the roles and responsibilities of the risk owners and how they were able to conduct their duties. In general, the team should address the following areas during the risk response evaluation:

- The ability of the team to identify risks and make adjustment to the plans for new risks and their accuracy in determining probability and impact.
- The participation of stakeholders in the risk response actions.
- The effectiveness of the mitigation plans and how the plan was able to address the identified risks and satisfactorily mitigate or reduce the impact of the risk event.
- The need for workarounds to address unplanned or unexpected risk events.
- The accuracy of the contingency budget in addressing the risk response actions.
- The appropriateness of the risk strategies to mitigate, transfer, accept or avoid risks.
- The ability of the risk owners to manage the risk event and take full ownership of their role.
- The ability of the risk owners to document recommendations and modifications to the plans.

A key outcome of this review is to update and adapt the risk management plans and strategies originally developed.

**Risk Audits**

Risk audit is another approach to evaluating the risk management plan, the audits are usually done by a third party who audits the risk response actions and determines if the proper actions were taken as planned. One advantage of having a third party do the audit is that they will bring a different perspective to the evaluation and an unbiased opinion that can shed new light and open opportunities for improvements.

When properly done, risk audits evaluate the effectiveness of the risk management plan and risk response plans. The audit is a good time to review what went well, what did not go well, and what can be done to improve the risk management processes. Performing an audit after a risk event or at the end of a project provides an opportunity for assessing the following:

- Completeness of the risk identification process
- Accuracy of probability and impact scores
- Identification and monitoring of risk trigger
- Mitigation and Contingency plans
- Risk contingency budget
- Completeness of the risk management plan
- Performance of the risk owners
- Effectiveness of the risk response plans
- Recommendations for future risk plans

For large or medium size projects, risk audits may be performed at the end of major milestones throughout the project. Audits for small projects can performed at the end of the project. The list below contains some of the steps to conduct a Risk Audit:

- Organize the team. Participants include the project team members, and other people helped identify the risks, assisted with the response plans, and how the risk triggers and risk events were monitored throughout the project. During the meeting, the project manager may decide to include senior managers from the organization, some key stakeholders, and even a beneficiary representative because their perspective of the risk events may be different from the project team's perspective.
- Conduct the audit. Using the Risk Log the team should start by examining the risk list and review the risks that occurred, the risk that didn't happen and list the risks that occurred that were not listed in the log. Participants should also review if the response plans were effective and, if not, what could have been done to make them more effective.
- Develop recommendations. The next step is for the team to recommend how the risk management plans, risk planning, risk monitoring, and risk response plan, and even the risk evaluation process could be enhanced or improved. The team should document all that went well and decide what could be done better next time.
- Develop the risk audit report. The last step is for the project to document the risk audit process and the recommendations that emerged from the audit, along with the lessons learned

documentation and assign activities to the team to incorporate all recommendations in the project plans.

The key message is that the project should spend enough time to evaluate not only its efficiency in responding to a risk event but its effectiveness at identifying the risk.

# Risk Management Improvements

### Updating the Risk Management Plan

Recommendations from the risk evaluation or the risk audit process are inputs used by the team to update the risk management plan, there is no use of monitoring, evaluating and auditing the risk response plan if the findings and recommendations are not incorporated in the risk management plan process.

Adapting is a survival strategy that the project uses to continuously improve and proactively respond to the changing environment it needs to operate, adapting the risk management plan is part of the strategies the project has to reduce the impact of the risk to the project. It draws its lessons from the experiences that gained in responding to a risk event, and the insights and knowledge it gains as the project makes progress.

The project should adapt its approaches, plans and strategies around risk management by incorporating the recommendations that were developed in the risk evaluation and risk audit exercises, the recommendations are categorized into four areas:

- Updating the Risk Log,
- Updating the Risk Response Plan
- Communicate to Stakeholders

## Updating the Risk Log

The team should update the risk logs by including the new risk identified by the risk audit, delete risks that never occurred and review the risk quantification analysis for each risk. The team should pay special attention to the assumptions and information that lead the project to list the first list of risks and take in account the new information on the project and the sources used to identify risks.

The team should also update the risk log by reviewing and changing the levels of risk probability and risk impacts and reclassifying the order or priority of risks in the log. Each risk should be reviewed, and all original assumptions checked, especially the quantification of risk values.

As the project makes progress many risks that originally were identified as low risk change their status. Some risk can have a low impact when the project is in the early stages of implementation, but their impact increases as the project makes progress. For example, the impact to the project in its early stages is limited because the project has not used any significant resources, but mid trough the project the risk has more impact because more resources were invested.

Risk probability has similar but opposite tendencies. A risk that had a high probability to occur at the start of the project will reduce its probability as the project gets closer to its completion, this is due to the fact that more information about the risk is known. Risks are most likely to occur during the initiating phase and less likely to occur during the closing phase, this relationship can be seen in the diagram below.

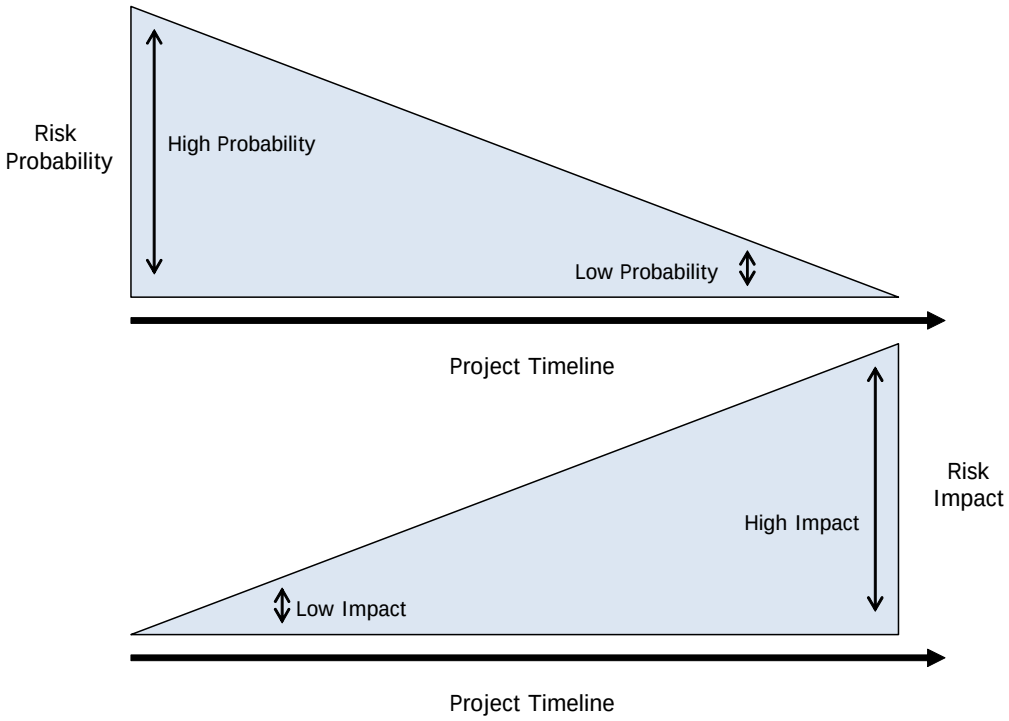


Figure 5 - Risk Impact and Risk Probability

At the beginning of the project, there are many uncertainties, risk probability decreases as the project gets more information about the project and has a better understanding of the causes of risk to occur. Impact increases due to the investment, resources and commitments made to the project. Updating the log will generate a new Risk Log that the team will use to update the risk response plan.

## Updating the Risk Response Plan

The changes and updates to the risk log, risk quantification and the risk prioritization demand for an update to the risk response plan by changing the contingency plans, the preventive actions, the roles and responsibilities of the risk owners and the risk contingency budget. The project manager is responsible for updating the response plan and to communicate all key stakeholders on the changes to the plan. The communication should include the most important changes that were made to the plan, with special emphasis on the risk priority list and the names of the risk owners.

Communication to the stakeholders should highlight the new high probability, high impact risks and the actions that the project has devised to mitigate the risk.

The effectiveness of a risk response plan is that it is an iterative process, and effective communication is a key element. The project needs to build a constructive communication exchange between key stakeholders, project team members, management, and the project donors to keep them informed of the project risk and the plans the project has to devise to reduce their impact to the project.

**Lessons Learned**

Project risk management requires a considerable investment in time and resources if the project wants to obtain any benefits. A good practice for the project is to continuously adjust the management process to achieve the best results for the efforts invested. The objective is to make the process as efficient as possible by reducing the steps that do not produce an outcome that is proportional to the effort required. It does not make sense to develop a complex process to deal with risk management that ends up costing more than the cost the process is trying to avoid. The project team should aim to learn as much as possible from every risk event and apply the lessons to the plans and processes to build more efficiencies and reduce steps or actions that do not add value.

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Drawing from our deep understanding of the challenges and the needs for realistic solutions that can improve the way in which projects are managed and services are delivered, PM4DEV offers the only adapted Project Management Methodology for development organizations. Our services include:

- **Consulting,** to help organizations implement a project Management methodology that will increase the impact of their interventions.
- **On Site Training** on project management methods to increase and develop the skills of project managers
- **Online Learning** for project managers that want to develop their own competencies on a flexible online learning environment.

To get more information on these services, visit our web site at www.pm4dev.com/services or send us an email to info@pm4dev.com. We offer competitive prices and high-quality material developed by international certified experts in Project Management.

This Point of view provides a summary of themes, that in PM4DEV's experience, have proved critical in the successful implementation of project management methodologies.

It draws on the expertise of Project management professionals and provides a guide to deliver a methodology that increases the chances of project success.

For more information about PM4DEV services, contact us at: info@pm4dev.com

The Sustainable Development Goals (SDG) aim by 2030 to end poverty, protect the planet, and ensure prosperity for all.

PM4DEV is committed to provide resources and develop knowledge and expertise to support development organizations in their efforts to achieve these ambitious goals.


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