

Assessing the Project Risk Management Processes by using Rules and Project Management Templates

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ABSTRACT: Risk management constitutes a fundamental part of successful project management, since suitable risk management can help the project manager to reduce both expected and unexpected risks in all types of projects. The major features relating to the methodology followed by the Indian corporate to assess the project risk and the relative significance assigned to different risk assessment techniques. The sensitivity analysis is used overwhelmingly (91%). It is used more significantly by public sector units and private sector firms having chartered accounts as chief financial officers. The risk adjusted discount rate is used by around one-third of the corporate. Sensitivity analysis is the most popular approach for quantifying risk. It is a behavioral approach that uses a number of possible values for a given variable to assess its impact on a firm's returns. Diversification of corporate investment is also used by the sample corporate (53%) for risk reduction. Once the nature of risk is understood and its quantum estimated, it is incorporated within the decision making framework.

Keywords: Diversification, project management, project risk, sensitivity analysis, decision making framework.

I. INTRODUCTION

Risk Management is the process of identifying, analyzing and responding to risk factors throughout the life of a project in order to provide a rational basis for decision making in regards to all risks. Proper risk management implies the control of possible future events, and is proactive rather than reactive; so it is embedded in to the project planning process. It will reduce not only the likelihood of an event occurring, but also the magnitude of its impact. While looking at a project in isolation may appear convenient and pragmatic, many consider it as a very narrow approach to project evaluation. The critics of the 'project risk' approach fall into two groups. The first group argues that the risk of a project must be judged in the context of the total risk of the firm. This means that the question to be asked is what is the incremental contribution of a project to the risk exposure of the firm as a whole? To answer this question, portfolio theory is employed. The second group takes an even broader view of risk and argues that the risk of a project must be judged in the context of the aggregate market portfolio of all assets.

1.1 Importance of Project Risk Management

Projects often get started in the right direction but then get off track. For example, project managers will spend time with their teams to develop a clear scope and detailed plan. Then something happens; something unexpected—a major disaster strikes. The project manager and team move quickly into their reactive mode – they manage this risk based on their experiences and best judgment but they have no opportunity to test it out and they hope that it'll be okay, but they do not know for sure. This is not risk management – it is management by crisis.

1.2 Ten (10) Rules for Managing Project Risk

The Risk Management Process is intended to reduce management by crisis. While there may always be some things that will occur that are unanticipated, most of these, through sound risk management, can be managed, rather than reacted to. Essentially, the Risk Management Process is a quality problem- solving process. Quality and assessment tools are used to determine and prioritize risks for assessment.

1.2.1 Identify the risks early on in your project

- Review the lists of possible risk sources as well as the project team's experiences and knowledge.
- Brainstorm all potential risks.

- Brainstorm all missed opportunities if project is not completed.
- Make clear who is responsible for what risk

1.2.2 Communicate about risks

Pay attention to risk communication and solicit input at team meetings to ensure that risk management is perceived as important for the project.

Focus your communication efforts with the project sponsor or principal on the big risks and make sure you don't surprise the boss or the customer.

Also, make sure that the sponsor makes decisions on the top risks, because some of them usually exceed the mandate of the project manager.

1.2.3 Consider opportunities as well as threats

While risks often have a negative connotation of being harmful to projects, there are also "opportunities" or positive risks that may be highly beneficial to your project and organization. Make sure you create time to deal with the opportunities in your project. Chances are your team will identify a couple of opportunities with a high pay-off that may not require a big investment in time or resources. These will make your project faster, better and more profitable

1.2.4 Prioritize the risks

Some risks have a higher impact and probability than others. Therefore, spend time on the risks that cause the biggest losses and gains. To do so, create or use an evaluation instrument to categorize and prioritize risks.

The number of risks identified usually exceeds the time capacity of the project team to analyze and develop contingencies. The process of prioritization helps the project team to manage those risks that have both a high impact and a high probability of occurrence.

1.2.5 Assess the risks

Traditional problem solving often moves from problem identification to problem solution. However, before trying to determine how best to manage risks, the project team must identify the root causes of the identified risks.

Risk occurs at different levels. If you want to understand a risk at an individual level, think about the effect that it has and the causes that can make it happen. The project team will want to ask questions including:

- What would cause each risk?
- How will each risk impact the project? (i.e., costs? lead time? product quality? total project?)

The information you gather in a risk analysis will provide valuable insights in your project and the necessary input to find effective responses to optimize the risks.

1.2.6 Develop responses to the risks

Completing a risk response plan adds value to your project because you prevent a threat occurring or minimize the negative effects. To complete an assessment of each risk you will need to identify:

- What can be done to *reduce the likelihood* of each risk?
- What can be done to *manage* each risk, should it occur?
- What can be done to *ensure opportunities are not missed*?

1.2.7 Develop the preventative measure tasks for each risk

It's time to think about how to prevent a risk from occurring or reducing the likelihood for it to occur. To do this, convert into tasks, those ideas that were identified to reduce or eliminate risk likelihood.

1.2.8 Develop the contingency plan for each risk

Should a risk occur, it's important to have a contingency plan ready. Therefore, should the risk occur, these plans can be quickly put into action, thereby reducing the need to manage the risk by crisis.

1.2.9 Register project risks

Maintaining a risk log enables you to view progress and make sure that you won't forget a risk or two. It's also a communication tool to inform both your team members, as well as stakeholders, what is going on.

If you record project risks and the effective responses you have implemented, you create a track record that no one can deny, even if a risk happens that derails the project

1.2.10 Track risks and associated tasks

Tracking tasks is a day-to-day job for each project manager. Integrating risk tasks into that daily routine is the easiest solution. Risk tasks may be carried out to identify or analyze risks or to generate, select and implement responses. The daily effort of integrating risk tasks keeps your project focused on the current situation of risks and helps you stay on top of their relative importance

1.3 Assessment of Project Risk

The major features relating to the methodology followed by the Indian Corporate to assess the project risk and the relative significance assigned to different risk assessment techniques are summarized below

- The respondent firm’s use, as can be expected, more than one technique out of the available techniques, namely, sensitivity analysis and Monte Carlo simulation.
- The sensitivity analysis is used overwhelmingly (91%). It is used more significantly by Public sector units and Private sector firms having chartered accounts as chief financial officers.
- The scenario analysis is also used widely (62%) more frequently by large firms than small firms.
- The risk adjusted discount rate is used by around one-third of the corporate.
- The decision tree analysis as well as Monte Carlo simulation to analyze project risk is not popular among corporate to any significant extent.
- Sensitivity analysis is the most popular approach for quantifying risk. The sample corporate also uses two other methods, namely, shorter payback period and higher cut-off rate.
- Diversification of corporate investment is also used by the sample corporate (53%) for risk reduction.

II. REVIEW OF LITERATURE AND RELATED STUDIES

2.1 Risk Management Procedure

The project manager working with the project team and project sponsors will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact. The project manager or other designee will serve as the Risk Manager for this project.

2.2 Roles and Responsibilities

Role	Responsibilities
Business SME (BSME)	The BSME assists in identifying and determining the context, consequence, impact, timing, and priority of the risk.
Risk Manager or Project Manager (PM)	The Risk Manager or PM is a member of the Integrated Project Team (IPT). The Risk Manager or PM determines if the Risk is unique, identifies risk interdependencies across projects, verifies if risk is internal or external to project, assigns risk classification and tracking number. During the life of the project, they continually monitor the projects for potential risks.
Integrated Project Team	The IPT is responsible for identifying the risks, the dependencies of the risk within the project, the context and consequence of the risk. They are also responsible for determining the impact, timing, and priority of the risk as well as formulating the risk statements.
Risk Owner(s)	The risk owner determines which risks require mitigation and contingency plans; he/she generates the risk mitigation and contingency strategies and performs a cost benefit analysis of the proposed strategies. The risk owner is responsible for monitoring and controlling and updating the status of the risk throughout the project lifecycle. The risk owner can be a member of the project team.
Other Key Stakeholders	The other stakeholders assist in identifying and determining the context, consequence, impact, timing, and priority of the

2.3 Risk Identification

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture and the project management plan including the project scope, schedule, cost, or quality.

2.4 Risk Analysis

All risks identified will be assessed to identify the range of possible project outcomes. Risks will be prioritized by their level of importance.

2.5 Qualitative Risk Analysis

The probability and impact of occurrence for each identified risk will be assessed by the project manager, with input from the project team using the following approach:

2.6 Probability

- High – Greater than <70%> probability of occurrence
- Medium – Between <30%> and <70%> probability of occurrence
- Low – Below <30%> probability of occurrence.

2.7 Impact

- High – Risk that has the potential to greatly impact project cost, project schedule or performance
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance
- Low – Risk that has relatively little impact on cost, schedule or performance

Risks that fall within the RED and YELLOW zones will have risk response plan which may include both a risk response strategy and a risk contingency plan.

2.8 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their affect on project activities will be estimated, a numerical rating is applied to each risk based on quantitative analysis, and then documented in this section of the risk management plan.

2.9 Risk Response Planning

Each major risk (those falling in the Red & Yellow zones) will be assigned to a risk owner for monitoring and controlling purposes to ensure that the risk will not “fall through the cracks”.

For each major risk, one of the following approaches will be selected to address it:

- **Avoid** – Eliminate the threat or condition or to protect the project objectives from its impact by eliminating the cause
- **Mitigate** – Identify ways to reduce the probability or the impact of the risk
- **Accept** – Nothing will be done
- **Contingency** – Define actions to be taken in response to risks
- **Transfer** – Shift the consequence of a risk to a third party together with ownership of the response by making another party responsible for the risk (buy insurance, outsourcing, etc.)

III. IDENTIFYING AND MEASURING LEARNING STYLES

Increase the effectiveness of projects by using project management templates

Project Management Tools and Templates are critical components for consistent project management delivery and research shows that they help improve the success rate for projects.

3.1 Establish Project Governance

Establish your terms of governance. This can be done through a PMO or management committee. Governance establishes decisions that:

- Define expectations for how projects will be managed.

- Grant power to those responsible for the successful management of projects.
- Identify how project performance will consistently be measured.
- Clarify how all projects will be managed on a consistent basis.

3.2 Ensure Consistent Project Management Methods

Design your project processes (often referred to as project management methodologies or frameworks) so that they can be adapted to all project teams and sizes of projects-whether large, medium or small. Larger projects will need a "stage-gate" approval process with specific templates which require approval signoff at each gate. When organizations establish simple concepts and processes, project managers and teams more readily accept them. They understand how these will help them to be successful.

Once the project processes are established, focus on project management training, mentoring and leading by example. Add a simple reporting system so that management and/or the Project Management Office can validate that projects are following the defined project management methods.

Ensure that all your project management methods are clear and comprehensive. They will help project teams to manage projects in a consistent manner. Complex and time consuming project methods, tools and templates force many project managers to abandon them, circumvent them and/or manage their projects in an ad hoc manner. The goal must be to ensure that project management quality is consistent.

3.3 Identify Project Management Processes

Some organizations have Project Management Offices. Others ensure consistency in the management of projects through a management committee established for this purpose. In either case, they will oversee the established project processes and ensure that each project is applying them correctly and consistently. This provides them with the assurance that each project is being managed as a quality project. Commonly used project management processes that can be established include:

- Project Management process
- Business Requirements process
- Customer requirements process
- Project Scoping process
- Project Planning process
- Project Change Management process
- Risk Management process
- Communication process
- Close-out and evaluation process
- Project Knowledge-transfer process

Before starting from scratch to develop your project management processes, tools and templates, check out the various commercial templates on the market. There may be a great basic template that you can customize for your organization that will save you time and effort.

3.4 Identify Project Management Tools And Templates

Creating tools and templates that can be used on all projects reinforces the organization's approved project methodologies and processes for managing projects. It will also provide a time-saving service to project teams and ensure consistency because all projects will use the same tools and templates. Commonly used tools and templates include:

- Project Scope Statement
- Business Requirements Document
- Milestone Report
- Change Request
- Risk Management Report
- Reporting Templates
- Meeting Template
- Close out report

According to the PMO research report "How Project Management Offices Can Improve Organizational Effectiveness", there is not much change in the top project management tools and templates used by Project

Management Offices between our 2005 and 2010 studies. The most common ones continue to be the project management process itself (79% in 2005 and 89% in 2010), Change Request (74% in 2005 and 83% in 2010), Reporting templates (72% in 2005 and 73% in 2010), Scope Statement (71%) and Issue Logs (62% in 2005 and 71% in 2010).

IV. CONCLUSION

Organizations that fail to ensure consistency on the use of project management processes, tools and templates have a higher risk of failure in the delivery of their projects. The consistent application of similar processes, tools and templates to all projects helps shape the culture of the organization into a stronger project management environment. This will be result in everyone knowing what template to use and what process to follow, every time, because it will be just a part of what everyone does when managing a project. The benefit of risk management in projects is huge because the outcome of project failure is wasted dollars that steal investor profits and have a negative impact on the organization's bottom-line. Risk assessments allow you to deal with uncertain project events in a proactive manner. This allows you to deliver your project on time, on budget and with quality results. Complete your risk assessment early on in the project's execution and continuously (i.e.; every 2 to 3 months), throughout the project's lifecycle. This will increase your project's success likelihood. And, whenever possible, measure the effects of your risk management efforts and continuously implement improvements to make it even better.

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