

## **Risk Management – A critical link in Project Success<sup>1</sup>**

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### **ABSTRACT**

Today, the global boundaries are fast diffusing and one cannot operate in isolation. Fast-paced changes brought about by the disruptive technologies have also contributed to the risks. The dynamic environment clubbed with the uncertainty in the global economy has forced us to look beyond the conventional methods to stay in control and prevent risks from adversely impacting the projects. We all need to accept the fact that the business activities today are no longer mutually exclusive but intertwined and interdependent. Above all, the activities and the tasks, we perform, are associated with higher risks than ever before.

The paper is based on the observations and discussions with the Project Managers (PMs) and other Stakeholders. It attempts to highlight the risks associated with the projects and aims to help the Project Management Fraternity to relate with these factors, generate higher awareness and enhance their success rate. To promote better understanding by co-relating with the risks associated with the construction projects, the paper dwells with the major risks one encounters while setting up a Power Project. The basic objective of the paper is to help Project teams in staying focused and initiate timely corrective steps to prevent an adverse impact on the project.

### **Key Words:**

Risks, Project Success, Stakeholders, Owners, Contractors, Project Teams

### **BACKGROUND**

Organizations often have strong and high performing project teams delivering results and achieving project objectives. Such organizations have a success rate of over 95% and yet, failure of the one-off project completely sets-off these margins. This is intriguing and forces us to probe as to WHY the project failed and HOW do we prevent such project failure which not only nullifies the efforts by the other project teams but also erodes the profitability of the entire organization.

Most of the studies have pointed out that often, the project failure is not attributed to lack of competences and skills but relates to a lack of application of the Risk Management.

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We may have the best processes and plans in place, but at times, even the most experienced project team members tend to underrate the prudence of Risk Management. To add to the woes, the fast-paced technological innovations have created higher awareness and resulted in higher expectations and ever-changing taste of the stakeholders.

Accept the RISKS and be ready for the Rewards!!!

## **OBJECTIVE**

Normal mindset associated with the word “Risk” is that we tend to look at the downside and 99% of the time, we usually perceive Risk as something dreadful, something bad is going to happen, dangerous etc. We need to remember that at times, the opportunities come disguised in the form of the risks. Moreover, Storms are known to produce good sailors, here too risky projects are known to mold and shape the Project Managers as good professionals.

The Project teams are often driven by project pressures to complete the projects within the triple constraints of Cost, Quality & Time and the team members tend to overlook the associated risks during the project phases. Most pertinent questions which help us to reach the root cause of the project failure are enlisted below.

Based on our experience, although, we may have covered key Risks in the article below, the Risks highlighted below should serve as food for thought and is not a checklist. Also, as mentioned above, the overall aim is to help project teams to clearly identify the key factors and/or combination of the factors that lead to project failure. The factors can be broadly categorized into five areas -

- 1) Owners
- 2) Stakeholders
- 3) Contract
- 4) Site
- 5) External Factors materially affecting the project success

The owners are one of the major Stakeholders and logically they should be covered under the head Stakeholders, given the fact that it is the owners who define their requirements and the project deliverables are centered on the owners requirements, Owners have been dealt separately for ease of understanding and flow of the project.

Fig-1 below gives an outline of the Risks under different heads.

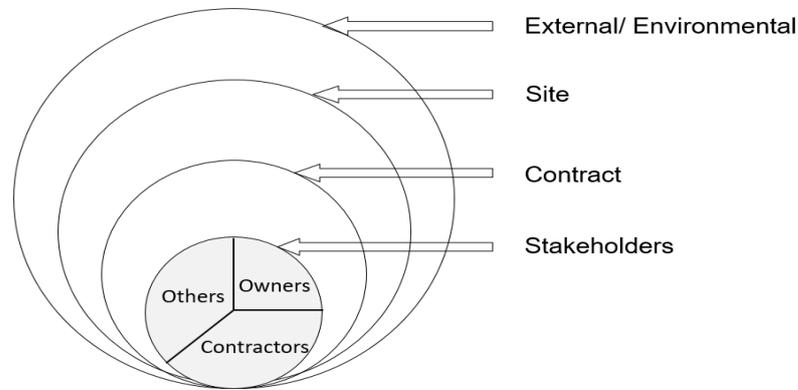


Fig: 1 Key Risks for a Construction Project – An outline

Note: % Risks factors not to scale

## 1) OWNERS

The success of the project is determined by the clarity of the project objectives for the Owner which are covered in the scope of works in the contract. It is therefore essential that the scope of works and the requirements are defined clearly and understood by the stakeholders. Clarity in project requirements help in bringing everyone on the same page and align the stakeholders to address “What” and “Why” parts of the question relating to specifying project requirements (governed by the expectations of the Owners) and that the deliverables by the Contractor are aligned to the expectations of the Owners.

Requirement management is, therefore, the starting block for any project and failure to understand the requirements leads to non-attainment of the project objectives ultimately resulting in dissatisfied Owners.

## 2) STAKEHOLDERS

Stakeholders are the key personnel who have direct interest in the project outcome. The project team members are the most important internal stakeholders who translate the contractual requirements into deliverables. Some of the questions which can help into deeper probing are:

- i. Does there exists openness and transparency between the stakeholders – Owners representatives and Contractor’s representatives? – OPENNESS, TRANSPARENCY AND FREE FLOW OF INFORMATION
- ii. Do the Stakeholders gel well and work as a cohesive unit? – TRUST & GROUP DYNAMICS
- iii. Does the Project Manager possess the needed Leadership skills? - LEADERSHIP
- iv. Do the Stakeholders (particularly the Project Team members) have the needed competencies & Skills? – PROJECT MANAGEMENT COMPETENCE

- v. Does there exist openness and transparency between the Stakeholders particularly amongst the Project team members? – OPENNESS AND TRANSPARENCY
- vi. Are communication channels well defined? - FREE FLOW OF INFORMATION

### **3) CONTRACT**

For a project to be successful, it is of utmost importance that we have clarity in the contractual requirements and that these requirements are clearly understood by the team members executing the contract. Some of the key areas of concern below help in clearly identifying the associated risks and preventing catastrophic effects:

- i. Does the Contract spell out requirements unambiguously? - CLARITY
- ii. Has the Project Team understood the requirements and identified gaps, if any? CLARITY
- iii. Do we have clarity in what the Owner wants and are the deliverables? – REQUIREMENTS & EXPECTATIONS
- iv. Has the Owner and the Project team reviewed the requirements and have agreed on the deliverables? – SCOPE CLARITY
- v. Has the Project Team communicated the scope of requirements to the procurement department? – COMMUNICATION
- vi. Has the project team reviewed the Assumptions – VALIDATION OF ASSUMPTIONS?
- vii. Has the project team reviewed the Risks – Identified possible Risks and their probability of occurrence and Impact? – RISK ASSESSMENT
- viii. Are there any verbal/side agreements to the contract? OTHER PROMISES?
- ix. Does the contract clearly stipulate the obligations of the parties – both the Owner as well as the contractor? - OWNERS & CONTRACTORS OBLIGATIONS
- x. Are the Interlinkages and interdependencies between the obligations, project activities and tasks clearly defined? INTERDEPENDENCIES BETWEEN TASKS & ACTIVITIES

### **4) SITE**

Often it is observed that the contractor accepts the project without having the needed information about the site-related activities. This is especially true for the construction projects where a host of activities are known to have a direct impact on the project completion dates. Some of these having a bearing on project duration are highlighted below:

#### **i. Access to Site and Right of Way (ROW) –**

There have been numerous cases where the delays in receipt of ROW and/or non-receipt of clear access to land have stalled major projects. Also, some of the major projects could not proceed beyond the ground-breaking ceremony as the compensation asked by the

landowners have completely made the projects unviable. It is therefore important that the feasibility studies thrust the areas for compensation and clear access to the site.

## **ii. Soil Investigations –**

Here too, some of the projects have been completely derailed due to non-availability of required details in soil investigation reports including Soil bearing strength and Soil resistivity. We tend to assume that the soil investigation reports available for the site is good enough and we finalize the Project Schedule based on the available soil data. However, during the project execution, we find that the soil bearing capacity is much lower and there is an imperative need for piling works. Some of the projects have really suffered on account of the requirement of piling works, as additional piling works not only affect the project cost but also adversely affects the project duration.

## **iii. Availability of local contractors, Fabricators, Suppliers –**

Despite the best planning to procure the items/materials, we have observed that we have to rely on the local suppliers/fabricators for meeting some unscheduled requirements and/or minor works that pop up at the last minute. This is especially true for Class B and Class C items as procuring all the items from the vendors located in different states/countries only adds to the shipment and/or local transportation costs.

## **iv. Others –**

In addition to above, Local holidays, weather conditions not limited to unseasonal rainfall and flooding of the worksite and its vicinity affecting the approach roads, security of working personnel, strikes and workers union's stronghold and influencing power also have affected the project completion and in worst cases stalled some of the mega projects wherein the local Stakeholders' influence and requirements have been underestimated by some organizations.

## **5) EXTERNAL FACTORS**

In addition to the factors mentioned previously, there are a host of external factors that can adversely impact the project timelines. Although, one would argue that these are beyond the reasonable control of the project team and leaves little scope to exercise control over these. It is better to be mindful of these factors that can possibly derail the projects and as a proactive action, we need to stay focused to prevent and/or minimize its impact.

### **i. Contingent Liabilities**

Normally, in construction projects, the contractor are usually required to furnish Performance Bank Guarantees (PBG) to safeguard against the defaults by the contractors. These performance guarantees related to –

a) Performance of the contract –

The PBG basically protects the Owner against non-performance of the contract by the contractor. The owners usually insist on submission of PBG against which the Owners agree to pay advance to the contractor. The PBG usually has Liquidity Damages (LD) Clauses which serve as a deterrent for the Contractors for willful default and empowers the Owners to invoke the PBG, in case the Contractors fails to adhere to the agreed schedule and does not take remedial measures to contain the delays.

b) Performance of the equipment delivered –

The PBG (often called as Performance Bond) basically protects the Owner against non-performance of the equipment delivered. Here too, the PBG covers LDs for lower output, higher heat rate, etc. For Eg. Typical performance parameters outlined here relate to the performance of the equipment for the Power Plant. Separate clauses relate to i) Plant output ii) Heat Rate (a measure of plant efficiency), lower the better defined in terms of consumption of fuel per unit generated – Kcal/kWh for Liquid fuels or Btu/kWh generated for Gas/Coal based thermal Power plants, iii) Auxiliary Consumption (consumption of auxiliary units also known as internal consumption) usually expressed as % of total plant output.

c) Warranty –

To protect non-performance of the contractor during the warranty period. High failure rate affecting the overall revenues in terms of plant shutdowns due to frequent tripping and shutdowns due to non-performance of the equipment delivered.

As such, the contractor often carries contingent liabilities (usually around 10% of its contract value) in the form of PBGs for the projects they undertake. If the contractor is unable to fulfill its contractual obligations. Viz. Completion of the project on time, Non-performance of Plant and Equipment, etc. the Owner has the right to invoke the PBGs submitted. It is worth stressing here that the financial condition of the contractor may be adversely affected in the event that any of these contingent liabilities materialize. Invoking of such PBGs not only results in affecting the contractor's company's image but also affects their subsequent lending by the banks and other financial institutions.

**ii. Downgrade of sovereign debt rating by an international rating agency**

Any downgrade of the country's credit rating by international rating agencies adversely affects the capacity of the companies to raise debt funds from the domestic and

international markets. Such derating not only affects the capacity to raise bonds but also directly impacts the interest rates at which the companies can float bonds and other debt instruments from the market. The cause-effect cycle does not end here, this in turn adversely impacts the company's ability to raise finance for funding its growth. As a result, this could materially affect its financial condition and operations (high cost for working capital) impeding its growth prospects.

### **iii. Material changes in local laws and regulations**

Material changes in local laws and changes in government regulations - tax structure, accounting principles etc. are known to affect smooth execution of the projects. Any changes in the regulatory framework may require a restructuring of the activities, impacting the cost structure and lowering of its overall profitability. For eg, Changes in the entire tax structure on Pan India basis for implementing Goods & Services Taxes (GST) w.e.f. Jul 1, 2017 resulted in the holdup of the deliveries for close to two weeks. Some of the suppliers were either waiting for the clarity in tax structure and applicable tax rates for their class of equipment and/or non-availability of road permits for interstate transportation, this, in turn, resulted in hold-ups of the site works across the country. Of course, it is easy to blame the changes in the system and some vendors capitalized on such opportunities to escape the delays at their end.

## **CONCLUSION**

***“Not taking risks one doesn't understand is often the best form of risk management.” — Raghuram G. Rajan***

The project team takes the best of the actions deemed fit in the given situation to proactively identify and manage the risks by following the principles of Risk Management. Although we feel that we have identified and covered almost all the Risks in our Risk Register, yet, we find that the Risk Review is usually done only when something has gone wrong or some of the Risk not identified by us earlier has occurred. Further, as emphasized in PMBOK, risk identification and management is an ongoing activity. During the project phases, some risks would have died down whereas some new risks would have emerged and are likely to occur in the current phase or coming phases of the project. This reinforces the need for conducting a risk assessment on a continual basis. Some experienced Project Managers also stress that it may not be possible to transfer all the risks as transferring risks is at a cost and cannot be done beyond a certain reasonable level. It is therefore essential to act prudently, accept the risks and create adequate risk reserve.

***“The biggest risk is not taking any risk.” – Mark Zuckerberg, chairman, CEO, and co-founder of Facebook***

A word of caution, it is good to stay focused and monitor the risks on a continual basis, at the same time, it is essential that we are not overtly concentrating on the Risks, trying

to cover the impact of all possible risks by building a safety net in the form of Risk Reserves. Often, we find that the risks do not even occur and huge contingency reserves are released at the end of the project. We may not realize that building up of such risk reserve results in higher estimated costs for the project.

Above all, given the fact that today, the margins are under squeeze and Project cost is the upmost driving force in the selection of the projects, higher reservations may lead to the project being unviable and/or in worst case could even result in loss of order intake for the organization bidding for the project. We cannot totally isolate ourselves and prevent the occurrence of the risks, but we can certainly act with mindfulness and minimize the adverse impact of the risks.

To achieve success in ever growing uncertain environment, we need to be mindful of the associated Risks and learn to operate with a Mantra ***‘Risk Management is a critical link in determining project success therefore be judicious and rational in your approach’***.

To sum up –

***“Some risks that are thought to be unknown, are not unknown. With some foresight and critical thought, some risks that at first glance may seem unforeseen, can in fact be foreseen. Armed with the right set of tools, procedures, knowledge and insight, light can be shed on variables that lead to risk, allowing us to manage them.”***

— ***Daniel Wagner***

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