



## VIVA-TECH INTERNATIONAL JOURNAL FOR RESEARCH AND INNOVATION

ANNUAL RESEARCH JOURNAL  
ISSN(OBJECTIVE): 2581-7280

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# EFFECTIVE RISK MANAGEMENT IN CONSTRUCTION PROJECTS

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**Abstract:** Risk management is a step to make construction projects more efficient and practical such that uncertainties should be identified before occurring and changing into crisis and a balance should be made between threats and opportunities. Accordingly, construction industry is one of the most important and job creating industries in all countries. Compared to other economic-industrial sectors, construction management is highly influenced by the perception and employment of risk management concept. Additionally, there are abundant risks in such activities since Construction projects activities are very complex and various. Hence, it seems necessary to evaluate the proper use of risk management in various stages of Construction projects life cycle. In this regard, the present study attempts to describe Construction projects life cycle step by step and analyse the way of using risk management from designing stage to reviewing and supporting stage. The risk management framework for construction projects can be improved by combining qualitative and quantitative methodologies to risk analysis. The research work includes visiting and inspecting various construction sites, analysing the field, collection of data, interpretation of data; using matrix method of risk calculation calculating risk and providing effective measures to overcome it.

**Keywords:** Analysing, Assessing, Controlling, Monitoring, Response

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## I. INTRODUCTION

Risk management is a branch of construction management. Risk management in the construction project includes the systematic way of identifying, analysing, and responding to various risk to achieve the project objective. Construction projects are exposed to risks at the time of their coming into existence. In the various stages, it must first of all be considered what risks the principal would like to counter with measures and how costly these measures are. For this, risks, possible risk costs, measures and costs of the measures must be identified, and suitable measures must be found in order to avoid errors in the future.

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Construction projects vary with the course of development, planning, realization and operating. Despite their uniqueness, recurrent processes of these phases can serve as a cornerstone for the recognition of risks in order to consider project-specific and known risks more closely. In this, particular importance is attached to the implementation and realization phase.

**II. METHODOLOGY**

**1. Risk Matrix**

Risk classification into a limited number of categories

There are many methodologies or models in regard to managing the risks in various projects, but the core process of risk management is comprised into four stages in the construction industry

Identification and classification of the risk sources, risk assessment analysis, development of management responses to risk and to control and monitor them

PROCESs OF RISK MANAGEMENT includes majorly for steps:

- Risk identification
- Risk assessment
- Risk response
- Risk monitor

Risk= Likelihood x Consequence

(it is a chance to happen accident) x (it is a result of accident)

**III. TABLE**

**Table: Risk assessment form**

What is hazard?	Who might be harmed?	How might people be harmed?	Existing risk control measures	Risk rating			Additional control	New risk rating (Residual)			Action/monitored by whom?	Action/monitored by when?
				L	C	R		L	C	R		
Fall from height	Workers	Injury or total accident	Full body harness	2	3	6	Guardrail	1	2	2	Safety officer	2:00 PM
Electrocution from overhead power lines	Workers	Electric shock due to contact with overhead power supply	Proper distance maintained	3	3	9	Hard hat	2	2	4	Safety officer	2:00 PM

#### IV. CONCLUSION

- The method of risk management is sparingly applied because of fewer know-how and awareness among the people.
- The track record is also small when handling risks in projects, resulting in it affecting the project goals.
- The current status of risk management approach of the construction industry of developing countries of the world, generally attempts to avoid or shift these risks.
- presently the awareness about risk management is on-going and a there is an intense desire to learn from past mistakes.

#### Acknowledgements

We are using this opportunity to express our gratitude to everyone who has supported us throughout the completion of this project. We are thankful for their guidance, constructive criticism and friendly advice, during the project work. We express our gratitude to Prof. Prashant Gondane for giving us an opportunity to carry out project on “EFFECTIVE RISK MANAGEMENT IN CONSTRUCTIONS PROJECTS”.

We would also like to thank Dr. Arun Kumar, the Principal for their wholehearted support. Lastly, we express our gratitude towards all those who directly or indirectly helped us in the completion studies.

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