THE USA JOURNALS
THE AMERICAN JOURNAL OF INTERDISCIPLINARY INNOVATIONS AND RESEARCH (ISSN- 2642-7478)
VOLUME 06 ISSUE01

PUBLISHED DATE: - 06-01-2024
DOI: - https://doi.org/10.37547/tajiir/Volume06Issue01-04 **PAGE NO.: - 17-23**

RESEARCH ARTICLE **Open Access**

THE ROLE OF RISK MANAGER IN CONSTRUCTION ORGANIZATIONS: TOOLS AND METHODS FOR EFFECTIVE RISK MANAGEMENT AND THE IMPORTANCE OF RISK ACCOUNTING

Akhtam Ialyshev
IT Project manager, Planning Manager, PMP, Uzbekistan

Abstract
This study explores how various tools and methods are used for effective risk management in construction organizations, discussing the need for creating a risk management department and the potential risks associated with ignoring risk accounting.

Keywords Risk management, risk accounting, and construction organization.

INTRODUCTION

Risk management plays a crucial role, as construction projects often involve high levels of complexity, numerous participants, and various types of risks. It is essential to provide a systematic approach to risk management and assist in making informed decisions at all stages of the project, from planning to facility operation.

RESEARCH OBJECTIVES

1. Examine the role of risk manager in construction organizations:

a. Identify key functions of risk managers at all stages of the construction project.

b. Consider the importance of a systematic approach to risk management and its impact on successful project execution.

2. Determine tools and methods for effective risk management:

a. Describe various tools and methods used by risk managers for identifying, assessing, and managing risks in construction (e.g., SWOT analysis, PEST analysis, risk matrix, Monte Carlo method, and other qualitative and quantitative risk analysis methods).

b. Analyze the advantages and disadvantages of each tool or method in the context of the construction industry.

3. Discuss the importance of risk accounting and the need for establishing a risk management department in construction organizations:

a. Examine potential risks associated with ignoring risk accounting in construction projects.

b. Describe the functions and responsibilities of the risk management department, as well as its contribution to the successful execution of construction projects.

c. Clarify how the risk management department contributes to the development of risk accounting and management culture at all organizational levels and among all participants in the construction process.

METHODOLOGY

Expert interviews:

a. Identify key experts in the field of risk management and project management.

b. Develop structured questions related to the role of the risk manager, tools and methods used, and the creation of a risk management department.

c. Conduct interviews, record responses, and analyze the information obtained.

5. Surveys:

a. Develop a survey containing questions about current risk management practices, tools and methods used, and their effectiveness.

b. Define the target audience of the survey (e.g., risk managers, project management specialists, construction engineers).

c. Distribute the survey among the selected audience and collect responses.

d. Analyze the survey results, identifying common trends and differences between respondents.

6. Document analysis:

a. Collect documents related to risk management in construction organizations (e.g., risk management policies and procedures, risk reports, risk minimization strategies).

b. Study the content of the documents, identifying key elements and features of risk management in construction.

c. Compare and analyze the documents, determining best practices and potential issues.

7. Data analysis:

a. Collect quantitative data related to risks in construction projects (e.g., statistical data on the probability and impact of risks, expert assessment results, simulations).

b. Apply statistical data analysis methods to identify patterns, correlations, and anomalies.

c. Interpret the results of the data analysis, identifying important conclusions and recommendations for risk management in construction.

8. Case studies:

a. Select specific examples of successful and unsuccessful construction projects from a risk management perspective.

b. Study each case, gathering information about the applied risk management methods, problems, and results.

c. Compare and analyze the case studies, identifying best practices, lessons, and recommendations for future projects.

9. Results: The research highlights the importance of risk management in construction projects, as they are typically characterized by a high level of complexity, a large number of participants, and various types of risks. A systematic approach to risk management helps make informed decisions at all stages of the project and contributes to the successful completion of projects.

1. The importance of risk management in construction projects:

- Risk management provides transparency and predictability in the execution of construction projects, which helps clients and project participants better understand and manage their expectations.
- Effective risk management also contributes to the preservation of an organization's reputation, as successful project completion and timely resolution of emerging issues strengthen the trust of clients and partners.

2. Types of risks associated with construction projects:

- Taking into account and managing various types of risks helps prevent potential problems at early stages of the project, which in turn reduces the likelihood of additional costs and delays.
- Risk analysis also helps determine the most important and priority areas for risk management, allowing the organization to optimize resource allocation and focus on key aspects of the project.

3. The need for a risk management department in a construction organization:

- The risk management department is a center of competencies and knowledge in the field of risk management, allowing the organization to quickly respond to changes in the external and internal environment and adapt its risk management strategies.
- Risk managers working in the risk management department can provide training and consultations for other employees of the organization, which increases the level of awareness and competencies in risk management at all levels of the organization.

Krui, Fundamentals of Risk Management (22-25)

4. Risk management tools and methods in construction:

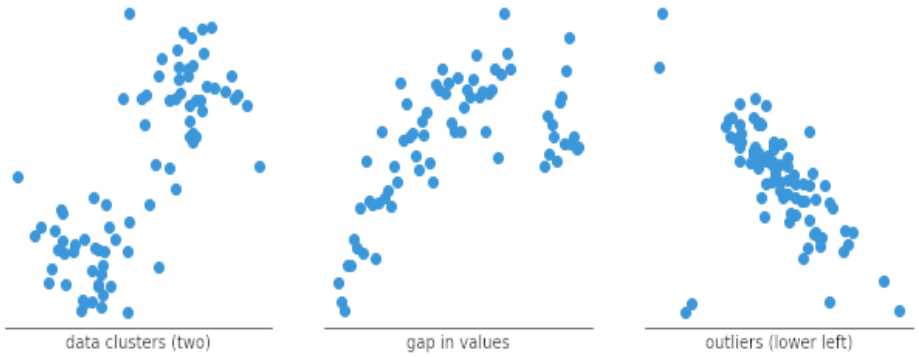
- Using various tools and methods allows risk managers to identify and assess risks from all sides, providing a more comprehensive and accurate understanding of risks associated with construction projects.
- Monitoring and analyzing the results of applying risk management tools and methods helps the organization continuously improve its practices and risk management strategies, which in turn enhances the effectiveness of the risk management process and the successful completion of construction projects.
- Risk comparison tables: Create tables that represent different types of risks, their likelihood of occurrence, potential consequences, and management strategies. This will help you and your team better assess and compare risks, as well as determine priorities

Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E
Improbable 2	2A	2B	2C	2D	2E
Extremely improbable 1	1A	1B	1C	1D	1E

https://www.stakeholdermap.com/risk/risk-assessment-matrix-aviation-safety-example.html

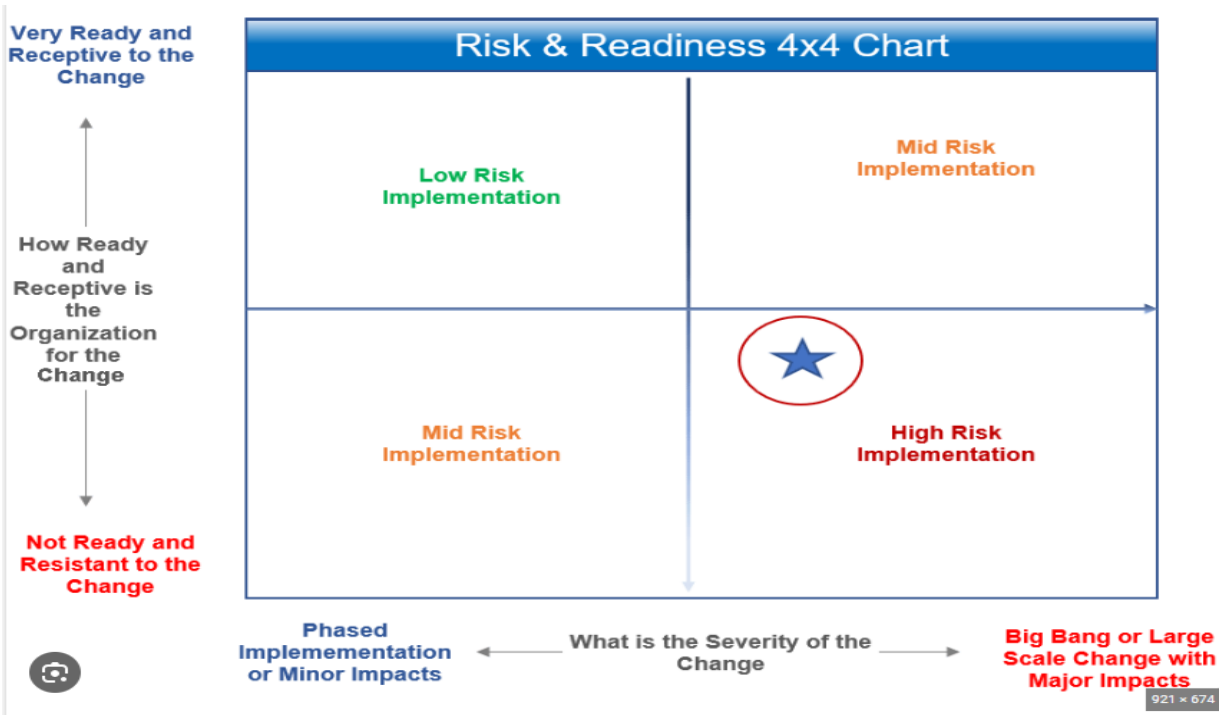
- **Scatter plots: Use scatter plots to visualize**

the relationship between the likelihood of a risk occurring and its consequences. This will help you and your team determine which risks to focus on and which risk management strategies will be most effective.



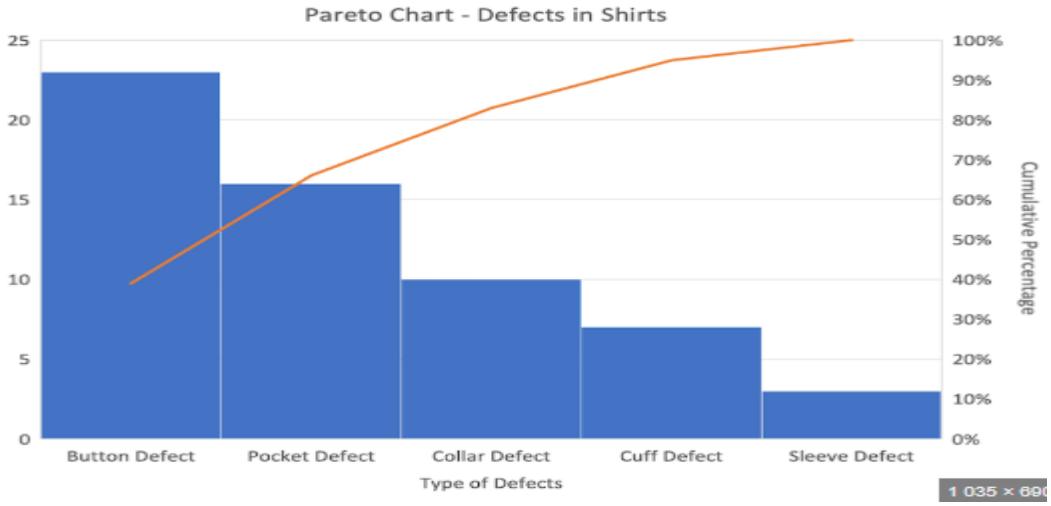
https://chartio.com/learn/charts/what-is-a-scatter-plot/

- Risk trend charts: Create charts that display changes in risk levels over time. This will help you and your team track the results of applying risk management strategies and determine what additional measures can be taken to reduce risks.



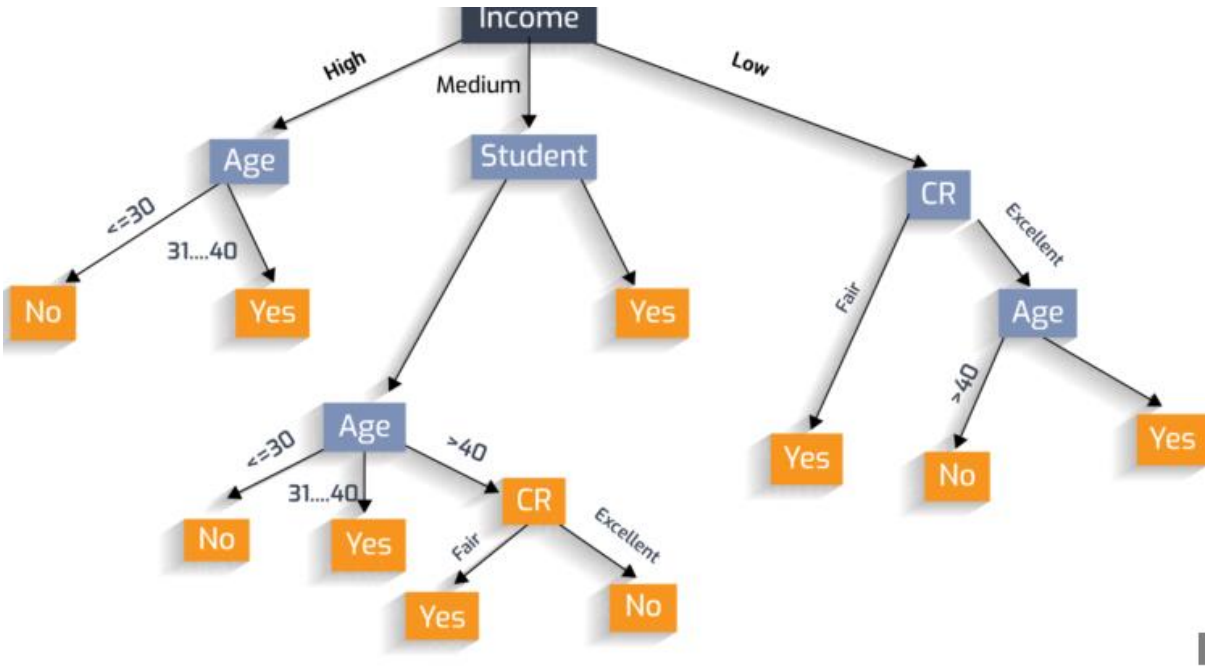
https://www.ocmsolution.com/risk-assessment-and-readout/

● Pareto charts: Use Pareto charts to identify the most significant risks affecting project execution.This will allow you and your team to determine which risks to focus resources and efforts on.



https://clubkaizenblog.wordpress.com/2021/04/03/pareto-chart/

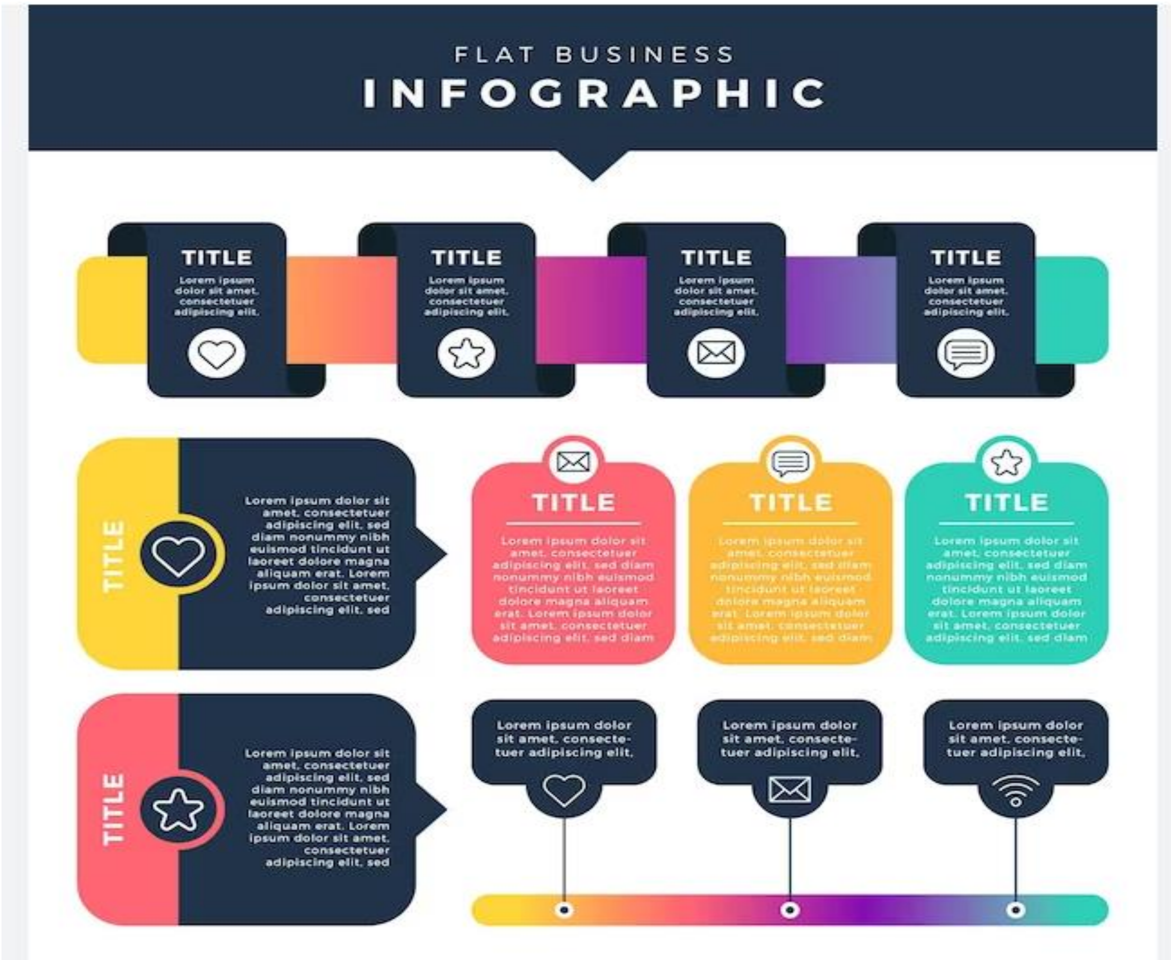
● Decision Trees: Create decision trees to visualize possible risk management scenarios and their consequences. This will help you and your team make more informed decisions regarding the choice of risk management strategies.



https://mcs.mail.ru/blog/kak-sozdat-idealnoe-derevo-reshenij

● Infographic: Develop an infographic that includes key aspects of risk management, such as the importance of risk management, types of risks, tools, and methods for managing risks. This makes the

information more accessible and visually appealing for your team and stakeholders.



https://ru.freepik.com/premium-vector/business-infographics-template_10425486.htm

*Barton T. L. Risk Management: Practices of Leading Companies (10-105)

DISCUSSION

The aim of the research is to study the role of risk manager in construction organizations, identify key functions at all stages of the construction project, and uncover tools and methods for effective risk management. The research also discusses the significance of risk consideration and the need for establishing a risk management department in construction organizations. The research methodology includes expert interviews, surveys, documentation analysis, data analysis, and case studies. Various risk management tools and methods are used in the research, such as SWOT analysis, PEST analysis, risk matrix, Monte Carlo method, and other qualitative and quantitative risk analysis methods. The research results highlight the importance of risk management in construction projects, as they typically involve a high level of complexity, a large number of participants, and various types of risks. A systematic approach to risk management helps make informed decisions at all project stages and contributes to successful project completion. The research aims to:

- Study the role of risk manager in construction organizations and determine their key functions at all stages of the construction project.
- Examine the importance of a systematic

approach to risk management and its impact on successful project completion.

- Identify tools and methods for effective risk management, such as SWOT analysis, PEST analysis, risk matrix, Monte Carlo method, and other qualitative and quantitative risk analysis methods.
- Discuss the significance of risk consideration and the need for establishing a risk management department in construction organizations for quick response to changes and adaptation of risk management strategies.

The research methodology includes:

- Expert interviews with key specialists in risk management and project management.
- Surveys to collect information on current risk management practices, tools and methods used, and their effectiveness.
- Analysis of documentation related to risk management in construction organizations.
- Data analysis related to risks in construction projects.
- Case studies of successful and unsuccessful construction projects from a risk management perspective.

As a result of the research, the importance of risk management in construction projects becomes evident for ensuring transparency, predictability, and successful project completion. The risk management department promotes the development of a risk-aware and risk-management culture at all levels of the organization and among all participants in the construction process.

*Basic Risk Management System of Real Sector Economy Organizations: Monograph / Sokolov D.V., Barchukov A.V. (15-29)

REFERENCE

1. Kruy M. Fundamentals of Risk Management
2. Barton T. L. Risk Management: Practices of Leading Companies
3. Basic Risk Management System of Real Sector Economy Organizations: Monograph / Sokolov D.V., Barchukov A.V

Open sources:

1. Project Stakeholder Analysis Methods https://moluch.ru/archive/273/62188/Методики
2. Comparative Analysis of Approaches to Project Management Definition https://moluch.ru/archive/262/60715/Сравнительный