

Project Management Readiness in the Construction Industry: Evaluation of the Kingdom of Saudi Arabia's 2030 Vision

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Abstract: Saudi Arabia's Vision 2030, launched in 2016, aims to enhance the nation's global standing through large-scale construction projects, which have introduced key Project Management practices vital for the kingdom's development. This paper examines the role of Project Management in Saudi Arabia's construction industry, exploring its impact on organizational success, sustainability, and challenges. It suggests strategies to improve management practices and client handling, advocating for the integration of management systems into organizational culture. The study concludes that Project Management is essential for the industry's growth and recommends its broader implementation for future improvements. This research paper reviews the application of Project Management in Saudi Arabia's construction industry, highlighting its role in organizational success and sustainability. The study will also explore strategies to improve management practices and offer solutions for better client handling.

Keywords: Project management.

1. Introduction

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. The practices and application of project management differ in each organization. Effective and efficient project management enables organizations to sustain and cope up with the changing business environment. PMI defines the Project management body of knowledge (PMBOK) as a term that describes the knowledge within the project management profession [1].

Project management depends on the significant process employed by the organization. This research undertook to evaluate those project management practices and applications in the Saudi Arabian construction industry in lieu of its 2030 vision. The management decision-making and support of the government will have a great impact on the project management applications.

As of today, the argument regarding Project success does not show and that there is no clear definition that those applications and practices implemented according to Project Management. Project success is depending on the success of the by-product in relation to Project management.

However, project management best practices put in place for

a given project do not guarantee project success as the best practices and methods depend on the concept and criteria unique for each project [2].

2. Project Management Conceptual Framework

Project management is a structured process, involving initiating, planning, executing, monitoring, and closing projects to meet organizational goals. Over the years, project management has evolved to include cost control, scheduling, work breakdown structures, and performance management tools. It is vital for organizations to adapt project management practices to cope with the rapidly changing business environment, influenced by factors like globalization and technology.

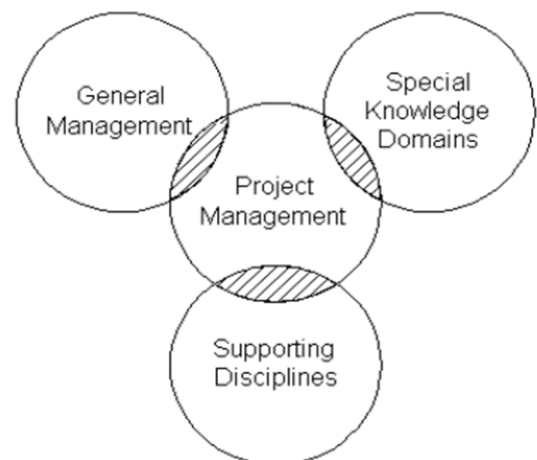


Fig. 1. Basic management concept

Source: Hendrickson, 2008 [3]

The Project Management Body of Knowledge (PMBOK) details essential concepts and emerging trends, guiding the implementation of project management processes [17]. While various methodologies like the Critical Path Method (CPM), Lean Six Sigma, and PRINCE2 are used, their application varies based on the project's unique characteristics. Effective project management helps improve performance, meet

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objectives, and manage constraints like scope, cost, and time [18].

In the context of Saudi Arabia's Vision 2030, project management plays a critical role in realizing the country's large-scale construction projects. As the nation pursues its ambitious development goals, the strategic use of project management is crucial for ensuring success and addressing challenges such as cost overruns and delays. By adopting best practices and integrating modern management trends, Saudi Arabia aims to achieve significant economic and infrastructural advancements.

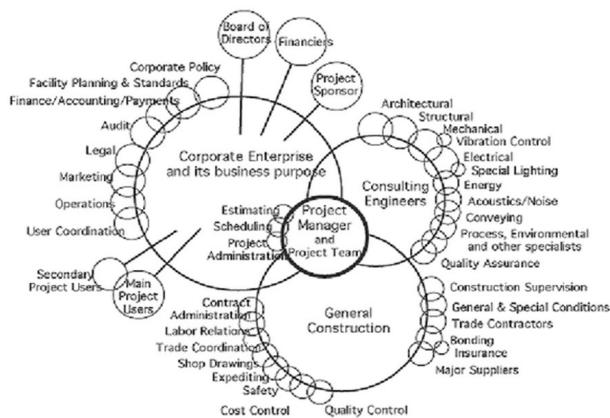


Fig. 2. Project management concept for construction
Source: Google image

According to the Project Management Institute, “any way of doing things” in the organization can be labeled as the best practice. Best Practices is the verified process that carries measurable signs of progress in efficient and effective. According to Moses [4] there are project management practices available to improve the project status in each organization. These “best practices” are usually derived from project management methodologies, international standards, industry conventions, and the organization’s guidelines from past projects.

A. The impact of Management for Construction Towards Vision 2030

The Kingdom of Saudi Arabia (KSA) has witnessed a huge increase in construction during the last two decades. However, many projects experienced time delays, cost overruns and the generation of massive amounts of waste. Saudi construction industry is booming, with the current expenditure rising to more than US\$120 billion a year (Alrashed *et al.*, 2014). [5]

Saudi Arabia, one of the fastest-growing countries in the Middle East with a construction market worth more than \$50 billion, has recently made modest inroads in adopting green building practices, including lean construction (Alarcón *et al.*, 2011). [6]

Saudi Vision 2030 is driving demand for construction products in the country. In some ways, Vision 2030 was designed to be too big to fail. With so many initiatives being pushed across so many industries and sectors of society, it's almost guaranteed that some progress will be made. But the huge project can also be viewed as too big not to fail — and the

government knows it.

3. Research Methodology

The research onion used in this study is adapted from the famous concept of Saunders and Lewis (2012) [21] shown below. The research onion is a tool that will be used to detail the steps of the research study. Accordingly, it consists of six respective parts and has been carefully taken into account each layer mentioned to facilitate the research methodology used in this study.

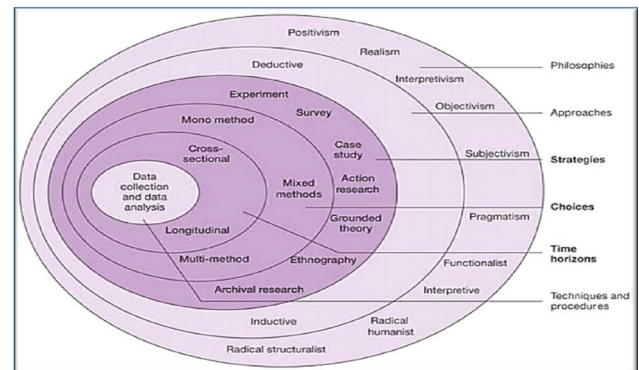


Fig. 3.

Source: Saunders *et al.* 2009, p. 819 [7]

For this current research study, the selected research philosophy is Positivism. Positivism is chosen because it entails factual information, which is needed for the research to be successful. This true data will, in turn, serve as evidence for the research to be studied perfectly.

A. Positivism

According to this paradigm, this type will permit the information gathered through social observation. The theories and data acquired by the positivist will narrate its study according to the current systematic concepts and existing normal occurrences in the world. Those data and information are realistic details that support the research philosophy made from the foregoing and created practices. Observations may occur at times due to the nature of human behavior in society and situations that emerge in various cases (McNabb, 2008) [8]. According to this position, the researcher’s own beliefs have no value in influencing the research study. The positivism philosophy approach is mainly related to the observations and experiments to collect numeric data (Easter-by-Smith *et al* 2006) [9].

1) Research Approach

The research approach is used to achieve the research aim and provide information on how the process is governed in a strategic style. Commonly the research approach is composed of various phases such as the theory, observations, analysis, and hypothesis (Monette, 2010) [10].

The inductive style of research approach is chosen by the researcher. As the current research on evaluating the Project management application and practices for the construction industry in Saudi Arabia, is a theory-based concept so the main aim of the research will be to deliver the hypothesis. For this

reason, the inductive style of research is selected by the researcher.

2) Research Strategy

The research strategy is being achieved through the data gain according to the study methods. The type of information to be gathered will be defined based on the nature of the strategy of each researcher. The different types of research strategies are the likes of qualitative strategy and quantitative strategy (Burns, 2007) [11].

The current project utilizes a qualitative strategy from these research strategies. This is because the qualitative strategy will enable the researcher to collect data from clear observations imposed of similar situations that are being defined in the current research study.

3) Data Collection Methods

Research methodology encompasses various research techniques to accumulate the required data concerning the research theme. This kind of research technique is called a data collection technique. These data collection techniques are more valuable and are useful for the successful completion of the study. Primarily, two kinds of research are included in the research methodology such as primary research and secondary research techniques. These are explained below (Grinnell, 2010) [12].

The researcher selected only interview primary research techniques because this technique is more valuable for collecting qualitative information about the study. In this thesis, the interview is conducted. By conducting these, updated information about the study is gathered. This gathered information is useful for the successful completion of the study. Furthermore, the researcher emphasizes that the use of the Interview as a Primary research technique takes into consideration the following:

Interviews: These techniques are crucial when compared to other primary research techniques. These are systematically scheduled and prepared by the researcher effectively. Through these, accurate and real-time data regarding the study is collected from individuals by interviewing them. Interviews are more qualitative and are conducted by the higher officials and managers of organizations. The researcher asked a series of questions to individuals to collect their real-time views regarding the study and these are more useful for the present study (Reis, 2000) [13].

For secondary research technique, the researcher selected and employed the Literature review because this technique is more valuable for collecting more amount of information about the study. This gathered a wide range of data is useful for the successful completion of the study.

By using the literature review technique, a wide range of data is collected by referring a larger number of documents (Khanzode, 2004) [14].

Literature review: This technique is considered as the major secondary research technique which is more useful for collecting a vast amount of information about the study. By using this technique, the researcher gathers data from various secondary sources such as books, articles, journals, PDFs, whitepapers, etc. The gathered information using this technique

is useful for this study (Rubin, 2010) [15].

4. Study Results

Both primary and secondary research techniques are employed and certain in order to gather the data concerning the research theme. The techniques employed will further provide detailed information and relevant data in order to derive the precise findings and results as presented in this chapter. Moreover, the results and discussions of the study and limitations of the study are also presented and defined to analyze the research activities in fulfilling a successful study. The evolution procedure of primary and secondary information is given below.

A. Primary Data Analysis

As presented, the primary data analysis the researcher selected is “Interviews” which have been systematically scheduled and conducted by the researcher in order to collect accurate views regarding the research theme. These interviews are conducted to the ten (10) Project managers of Riyadh Metro Constructions. Base on the mandatory criterion, below are the significant data gathered.

1) Project Management and its Significance in the Company

The project management practices and applications should be in the system of each organization as responded to by eight (8) project managers out of Ten (10) who participated in this interview.

2) The Various Challenges and Benefits of Project Management in the Organizations Considering the Vision of Saudi Arabia for 2030

Project Managers quoted that “clients specific criteria for chosen project is the main challenge they have undergone in relation the full cooperation or support of the client to complete the project according to the agreed requirements benefits them as well taken into account by the time vision 2030 takes effect it should be completed”.

3) Project Management has Been Used and Adopted on Saudi Arabia's 2030 Vision that Helps the Construction Industry Like for Example for Riyadh Metro Project

The responses gathered for this question from three (3) participants are using the CPM as the main project management in their respective organizations. And five (5) participants adopted the PMI/PMBOK method. The other two (2) respondents stated that the Agile type suits their organization in making their business and it facilitates many benefits that strengthen their position to provide high management best approach.

4) The Pros and Cons of Performing Project Management in the Construction Industry, are you Going to Implement Project Management

Seven (7) respondents in reference to this query retorted to go with the implementation of Project management. Advantages are again constituted from the Project manager's perspective with respect to the internal and external aspects of the organization. The other three (3) project managers have responded that they are Neutral.

5) The Effect of Implementing Saudi Vision 2030 on the Construction Industry

The maximum number of managers responded that “it is very significant to their organization in improving their business performance by maintaining the quality and truthfulness of their respective projects and services”. The majority quoted that “implementing Saudi Vision 2030 in the construction industry is timely and effective as it enhances the process towards better results as the government imposes strict compliance on all projects.”

B. Secondary Data Analysis

The Saudi government created a new vision for the kingdom up to 2030 and named it Vision 2030 which plays a vital role not only in Saudi Arabia's economic status but also in all Gulf Council Countries (GCC) as a whole shown on Fig. 4. [19]. The one feature of many defined stated visions of 2030 is incorporating sustainable development in the public and private industries [20]. It is said to focus on environmental protection with the growing infrastructure, industrialization and booming construction in the country. The government aims to provide the construction industry more cost-effective and efficient through the initiation of better waste management, green buildings, project management, and lean construction.

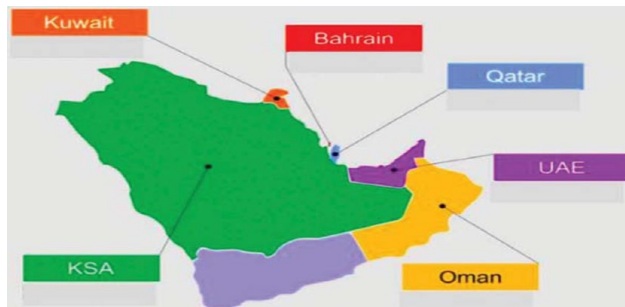


Fig. 4. Gulf council countries (GCC)
Source: Adapted from Morgan, 2016

According to Crawford (2005) [16], Project management success has no relation to the performance of the project management given the significant project outcomes and failure rates. In addition, the possibility and magnitude of the projects warrant research that is said to influence project success relies on the factors the organization imposed. Thus, both project management performance and project success independently impact the status of projects.

5. Findings of the study

This thesis examines the role of Project Management in Saudi Arabia's construction industry in the context of Vision 2030. The study uses primary research (interviews) and secondary research (literature review) to gather and analyze relevant data to achieve the research objectives. Key findings include:

- Construction companies face challenges in standing out in a competitive market and must refine performance and strategies for growth.
- Effective Project Management practices are essential

for improving quality and meeting deadlines.

- Key Project Management traits, such as stakeholder partnership, leadership, and commitment, enhance business performance and help firms gain competitive advantage.
- Different nations have developed Project Management models to drive continuous improvement, tailored to their business environments.
- The PMBOK Guide and PMI are widely adopted project management frameworks.
- Project Management positively impacts business performance, leading to successful project completions that meet scope requirements.
- Implementing Project Management in construction results in improved profits, higher customer satisfaction, better business performance, and skilled employees.

6. Limitations of the Study

The research study encountered several limitations. One major challenge was the difficulty in handling secondary data due to the vast number of references, which was time-consuming to evaluate. Additionally, scheduling interviews with project managers proved challenging due to their busy schedules, often resulting in postponed sessions. Gathering accurate, real-time information from higher officials was also a time-consuming process. Another limitation was ensuring the confidentiality of organizational data, which required careful management of sensitive information. Despite these challenges, the researcher successfully navigated these limitations and completed the study without affecting its overall objectives.

7. Conclusion

The project management models discussed in this report have been carefully crafted to align organizational goals with the Kingdom of Saudi Arabia's Vision 2030, particularly in the area of innovative transportation. I strongly encourage organizations to adopt Project Management strategies, ensuring that all activities and objectives are aligned with the broader business venture without compromising its integrity. A thorough and meticulous approach to research will be invaluable in supporting project managers' decision-making processes, enabling them to make informed choices that enhance the project's success.

As competition in the project management field continues to intensify, organizations must strive to distinguish themselves by maintaining a laser focus on efficiency, quality, and innovation. Project Management, as a strategic approach, is essential for optimizing resources, refining processes, and driving outcomes that not only meet but exceed customer expectations. By leveraging effective Project Management practices, organizations can enhance their competitive positioning, deliver superior results, and contribute meaningfully to the advancement of industry standards and national development goals.

Appendix A: Interview Data

Table 1
Project management

Project Management Practice	Number of Mentions	Percentage (%)
Schedule & Costs	8	100%
Resources & Risk	7	87.50%
Quality Management	6	75%
Planning	5	62.50%
Communication	4	50%
Client Coordination	3	37.50%

****Source: Interview Data (2024)**

Table 2
Challenges and benefits of project management

Category	Percentage/Importance
Challenges: Client Criteria & Cooperation	80% (8 out of 10 managers)
Benefits: Organizational Goals Achievement	90% (9 out of 10 managers)
Benefits: Business Sustainability	75% (7 out of 10 managers)
Benefits: Construction Progress	85% (8 out of 10 managers)
Benefits: Managing Constraints	70% (7 out of 10 managers)
Benefits: Strategic Competency	60% (6 out of 10 managers)

****Source: Interview Data (2024)**

Table 3
Project management adopted on Saudi Arabia's 2030 vision

Project Management Methodology	Number of Participants	Percentage (%)
CPM (Critical Path Method)	3	30%
PMI/PMBOK	5	50%
Agile	2	20%

****Source: Interview Data (2024)**

Table 4

Methodology	Efficiency	Quality	Cost Management	Flexibility	Risk Management
CPM	High	Medium	High	Low	Medium
PMI/PMBOK	Medium	High	Medium	Medium	High
Agile	Medium	Medium	Low	High	Medium

****Source: Interview Data (2024)**

Table 5
Pros and cons of performing project management in the construction industry

Response Category	Number of Respondents	Percentage (%)
In Favor (Agree)	7	70%
Neutral	3	30%

****Source: Interview Data (2024)**

Table 6

Theme	Number of Mentions	Percentage (%)
Pros: Improved Process	4	40%
Pros: Better Coordination	2	20%
Pros: Clear Goals & Objectives	2	20%
Cons: Rigidity	1	10%
Cons: Resource Constraints	1	10%

****Source: Interview Data (2024)**

Table 7
Effect of implementing Saudi vision 2030

Response Category	Number of Respondents	Percentage (%)
Very Significant	10	100%
Neutral/No Opinion	0	0%

Table 8

Benefit Type	Number of Mentions	Percentage (%)
Improved Quality Standards	5	50%
Government Certification/Guarantees	4	40%
Timeliness & Compliance	1	10%

****Source: Interview Data (2024)**

References

- [1] Project Management Institute, Inc. (2017), A guide to the Project Management Body of Knowledge, 6th Edition, Newton Square, Pennsylvania 19073-3299 USA.
- [2] L. Koskela and G. Howell (2002), "The underlying theory of project management is obsolete," in *Proc. of the Project Management Institute Research Conference*, pp. 293-302.
- [3] Hendrickson, Chris (2008), Project Management for Construction: Fundamental Concepts for Owners, Engineers, Architects and Builders (version 2.2)
- [4] Moses, Sylvia (2018), 15 Killer Project Management Best Practices for Managers [Online], Available at <https://www.workamajig.com/blog/project-management-best-practices>
- [5] Alrashed I., Alrashed A., Saud A., Taj S. A., Phillips, M. and Kantamaneni K. (2014). Risk Assessments for Construction projects in Saudi Arabia. *Research Journal of Management Sciences*, Vol. 3(7).
- [6] Alarcon, G.M. and Lyons, J.B. (2011) The Relationship of Engagement and Job Satisfaction in Working Samples. *The Journal of Psychology*, 145, 463-480.
- [7] Saunders, M., & Lewis, P. (2012). *Research methods for business students* (6th ed.). Pearson Education.
- [8] McNabb, D. E. (2008). *Research methods for political science: Quantitative and qualitative methods* (2nd ed.). M.E. Sharpe.
- [9] Easterby-Smith, M. (2006) 'Dynamic capabilities and the role of organizational. knowledge', *European Journal of Information Systems*, 15(5).
- [10] Monette, D. R. (2010). *Applied social research: A tool for the human services* (8th ed.). Wadsworth Cengage Learning.
- [11] Burns, N. (2007). *Understanding nursing research: Building an evidence-based practice* (3rd ed.). Saunders Elsevier.
- [12] Grinnell, R. M. (2010). *Social work research and evaluation: Foundations of evidence-based practice* (9th ed.). Brooks/Cole.
- [13] Reis, H. T. (2000). *The role of social interaction in promoting positive mental health*. In E. C. Chang & M. F. McKenna (Eds.), *Handbook of social and clinical psychology* (pp. 225-240). Academic Press.
- [14] Khanzode, A. (2004). *A study of literature review techniques in research methodology*.
- [15] Rubin, A. (2010). *Research methods for social work* (7th ed.). Brooks/Cole.
- [16] Crawford, L. (2005). Project management success and failure rates: Implications for project managers. *Journal of Project Management*, 12(3), 45-56
- [17] Project Management Institute. (2017). *A guide to the project management body of knowledge (PMBOK® guide)* (6th ed.). Project Management Institute.
- [18] Saudi Government. (2016). *Vision 2030: Kingdom of Saudi Arabia*. <https://www.vision2030.gov.sa>
- [19] Fahad Al-Harthi, Mohammed (2016), Is Saudi Vision 2030 Realistic [Online], 3rd May 2016, Available at <https://www.arabnews.com/news/saudi-vision-2030-realistic>
- [20] Saunders, M., & Lewis, P. (2012). *Research methods for business students* (6th ed.). Pearson Education.