

Midocean University

College of Management

Department of Project management



Title in English

Agail project management style for infrastructure designs in
construction plans for Neom project in Saudi Arabia.

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Acknowledgment

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Abstract

Chapter 1:

1.1 Introduction:

The introduction section of the thesis provides an overview of the topic, "Agile project management style for infrastructure designs in construction plans for NEOM projects in Saudi Arabia." It introduces NEOM as a transformative initiative aimed at building a sustainable and technologically advanced city. The introduction highlights the importance of effective project management in infrastructure design and emphasizes the need for an agile approach to address the challenges in this context.

1.2 Problem Statement:

The problem statement identifies the key challenges in infrastructure designs within construction plans for NEOM projects in Saudi Arabia. It highlights the limitations of traditional project management approaches in responding to the dynamic nature of infrastructure design projects, which require flexibility, collaboration, and adaptability to meet evolving needs and technological advancements.

1.3 Study Purposes:

The study purposes outline the objectives of the research. They include exploring the application of Agile project management style in infrastructure designs for NEOM projects, examining its potential benefits, and understanding its impact on project outcomes such as efficiency, quality, and stakeholder satisfaction. The study aims to contribute to the knowledge and practice of project management in the context of NEOM projects in Saudi Arabia.

1.4 Study Questions:

The study questions provide specific inquiries that the research seeks to answer. Some potential study questions for this thesis may include:

1. How can Agile project management principles be applied to infrastructure designs within construction plans for NEOM projects in Saudi Arabia?
2. What are the potential benefits of adopting Agile project management style in infrastructure design processes for NEOM projects?
3. How does Agile project management enhance collaboration, adaptability, and quality in infrastructure design projects within NEOM?

1.5 Research Hypotheses:

The research hypotheses propose expected outcomes or relationships that the study aims to test or validate. Sample research hypotheses for this thesis may include:

1. The application of Agile project management style in infrastructure designs will result in improved project efficiency and quality for NEOM projects.
2. Agile project management will enhance collaboration and adaptability among stakeholders involved in infrastructure design projects within NEOM.

1.6 Theoretical Model:

The theoretical model presents a framework that guides the research and illustrates the relationships between Agile project management principles, infrastructure design processes, and project outcomes in the context of NEOM projects. The model may depict how Agile methodologies can facilitate iterative design, stakeholder engagement, and adaptive planning in infrastructure projects to achieve improved efficiency, quality, and stakeholder satisfaction.

Chapter 2

Literature Review

2.1 Introduction:

The literature review section provides an overview of existing research and scholarly works related to the topic of "Agile project management style for infrastructure designs in construction plans for NEOM projects in Saudi Arabia." It sets the context for the study and highlights the importance of understanding the current state of knowledge in this area.

2.2 Dependent Variable:

In the literature review, the dependent variable is explored, which refers to the outcome or variable that is influenced or affected by the independent variable. In this case, the dependent variable may include project efficiency, quality, stakeholder satisfaction, or other relevant factors related to infrastructure design projects within NEOM.

2.3 Independent Variable:

The independent variable is examined in the literature review, representing the factor or variable that is manipulated or controlled to observe its effect on the dependent variable. Here, the independent variable is the application of Agile project management style in infrastructure designs for NEOM projects. The literature review discusses various aspects of Agile project management, its principles, and its potential impact on project outcomes.

2.4 Past Studies:

The literature review provides a summary of past studies and research conducted in the field of Agile project management, infrastructure design, and construction projects. It explores relevant literature that examines the application of Agile methodologies in the construction industry, particularly in infrastructure design projects. The review identifies key findings, methodologies, limitations, and gaps in previous research, paving the way for the current study.

2.5 Example Study:

"Agile Project Management in Road Infrastructure Design: A Case Study" Summary: This study conducted a case study analysis of the application of Agile project management in road infrastructure design projects. It explored the use of Agile methodologies, such as Scrum or Kanban, in managing the design process, stakeholder collaboration, and adapting to changing requirements. The study evaluated the benefits and challenges of implementing Agile in road infrastructure design projects and provided insights into its effectiveness.

2.6 Theoretical Framework:

The literature review section also presents the theoretical framework of the study. It highlights the theoretical perspectives, concepts, and models that guide the research. The review may discuss relevant theories and frameworks related to Agile project management, infrastructure design, and project outcomes. These theories and frameworks provide a foundation for understanding the relationship between the independent and dependent variables and help in developing research hypotheses.

The literature review synthesizes the existing knowledge and research findings, highlighting the gaps and areas that require further exploration. It establishes the theoretical foundations and supports the research objectives and questions of the current study. It also sets the stage for the research methodology and data analysis that will be carried out to address the research objectives.

Chapter 3

Research Methodology

3.1 Introduction:

The research methodology section outlines the approach and methods used to conduct the study on "Agile project management style for infrastructure designs in construction plans for NEOM projects in Saudi Arabia." It provides an overview of the overall research design, population of the study, sample characteristics, sample size determination, data collection procedures, and the method of analysis.

3.2 Research Design:

The research design describes the overall plan and structure of the study. In this case, it may involve a combination of qualitative and quantitative research methods. The research design should be aligned with the objectives of the study and the nature of the research questions. It may include elements such as case studies, surveys, interviews, or a mix of these approaches.

3.3 Population of the Study:

The population of the study refers to the target group or population from which the research sample will be drawn. In this case, the population may include stakeholders involved in infrastructure design projects for NEOM projects in Saudi Arabia. These stakeholders may include project managers, designers, engineers, contractors, and other relevant individuals or organizations involved in infrastructure design within NEOM.

3.4 Sample Characteristics:

The sample characteristics describe the key attributes or criteria used to select participants from the population. This may include factors such as professional experience, expertise, role in the project, or other relevant criteria. The sample should be representative of the population and include individuals or organizations with diverse perspectives and experiences related to infrastructure design in NEOM projects.

3.5 Sample Size Determination:

The sample size determination involves estimating the number of participants or cases needed to achieve sufficient statistical power and representativeness. The sample size can be determined using various methods, such as statistical formulas or sampling techniques. Factors such as desired level of confidence, expected effect size, and feasibility should be considered in determining the appropriate sample size for the study.

3.6 Data Collection Procedures:

The data collection procedures describe how data will be gathered from the selected sample. This may involve methods such as surveys, interviews, observations, or document analysis. The procedures should be clearly defined and address aspects such as data sources, data collection tools, data collection timeline, and ethical considerations. The data collection procedures should align with the research questions and objectives of the study.

3.7 Method of Analysis:

The method of analysis outlines how the collected data will be analyzed to answer the research questions and test the research hypotheses. This may involve qualitative analysis techniques such as thematic analysis, content analysis, or quantitative analysis methods such as statistical tests or regression analysis. The chosen method of analysis should be appropriate for the type of data collected and the research objectives of the study.

The research methodology section provides a clear and comprehensive overview of the approach, design, and methods used in the study. It ensures transparency and rigor in the research process and allows for the replication and validation of the findings.

Summary

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