

Final Project 1

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Project Template

Faculty of Management
Midocean University

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Faculty of Management

Department/ Specialization



Project title

**Sustainability Projects at King Abdulaziz International Airport Terminal
1: The Role of Project Management in Waste Recycling and Green
Airport Operations**

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Chapter 2

Sustainability Projects at King Abdulaziz International Airport: The Role of
Project Management in Waste Recycling and Green Airport Operations

Research Questions

The study aims to answer the following research questions:

1. What is the role of project management in supporting sustainability projects at King Abdulaziz International Airport (KAIA)?
2. How do project management practices contribute to the successful implementation of waste recycling programs at KAIA?
3. How do project management practices contribute to green airport operations at KAIA?
4. What are the main challenges affecting the implementation of sustainability projects at KAIA?
5. What is the relationship between effective project management and environmental and operational performance at KAIA ?

Research Objectives

The main objective of this research is to examine the role of project management in supporting sustainability projects at King Abdulaziz International Airport.

The specific objectives are

1. To examine the role of project management practices in sustainability projects at KAIA.
2. To evaluate the contribution of project management practices to the successful implementation of waste recycling programs.
3. To examine the contribution of project management practices to green airport operations.
4. To identify the main challenges affecting the implementation of sustainability projects at KAIA.
5. To examine the relationship between effective project management and environmental and operational performance.
6. To provide recommendations for improving the management of sustainability projects at KAIA.

Research Hypotheses

The following hypotheses are proposed:

- 1: Effective project management practices have a significant positive effect on the successful implementation of sustainability projects at KAIA.
 - 2: Effective project management practices have a significant positive effect on waste recycling performance at KAIA.
 - 3: Effective project management practices have a significant positive effect on green airport operations at KAIA.
 - 4: Successful implementation of sustainability projects has a significant positive effect on environmental performance at KAIA.
 - 5: Successful implementation of sustainability projects has a significant positive effect on operational efficiency at KAIA.
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Research Model

He proposed research model examines the relationship between project management practices and sustainability performance at King Abdulaziz International Airport.

Independent Variable

Project Management Practices

- Project Planning
- Resource Management
- Stakeholder Coordination
- Risk Management
- Monitoring and Control



Sustainability Project Implementation

- Waste Recycling Programs
- Green Airport Operations
- Environmentally Friendly Practices



Sustainability Performance

- Environmental Performance
- Operational Efficiency
- Reduction of Environmental Impact

Therefore, the proposed model suggests that effective project management practices improve the implementation of sustainability initiatives, which consequently contributes to better environmental performance and operational efficiency at KAIA.

. Suggested Organization for the Empirical Study

The proposed organization for the empirical study is King Abdulaziz International Airport (KAIA) in Jeddah, Saudi Arabia.

KAIA is an appropriate location for this study because it is one of the major airports in Saudi Arabia and operates within a complex environment involving airport management, airlines, ground-handling companies, contractors, cleaning services, and other operational stakeholders.

The empirical study will focus on employees, supervisors, managers, and other personnel who are directly or indirectly involved in airport operations, sustainability initiatives, waste management, environmental practices, and project-related activities.

The study of KAIA will provide an opportunity to examine how project management practices can support waste recycling programs and green airport operations and contribute to improved sustainability performance.

Research Methodology

This research will use a quantitative research approach to examine the relationship between project management practices and sustainability project performance at King Abdulaziz International Airport.

A descriptive and correlational research design will be adopted. The descriptive approach will be used to examine current project management and sustainability practices, while the correlational approach will be used to investigate the relationships between the research variables.

Primary data will be collected through a structured questionnaire distributed to selected employees, supervisors, and managers at KAIA. The questionnaire will mainly use a five-point Likert scale ranging from strongly disagree to strongly agree.

The questionnaire will include items related to project planning, resource management, stakeholder coordination, risk management, monitoring and control, waste recycling, green airport operations, environmental performance, and operational efficiency.

Secondary data will be obtained from academic books, journal articles, reports, and publications related to project management, sustainability, aviation, and environmental management.

The collected data will be analyzed using descriptive statistical methods such as frequencies, percentages, means, and standard deviations. Correlation and regression analysis may also be used to test the proposed research hypotheses and determine the relationships between the study variables.

9. References

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1. Project Management Practices

Project management practices play an important role in the successful implementation of organizational projects. Effective project management includes planning, resource management, stakeholder coordination, risk management, and monitoring and control. These practices help organizations define project objectives, allocate resources, manage potential risks, coordinate different stakeholders, and monitor project performance.

According to the Project Management Institute (PMI), project management should not only focus on traditional measures such as time, cost, and scope, but should also consider the wider impact and long-term value of projects. In sustainability-related projects, effective project management can help organizations integrate environmental considerations into project planning and implementation.

Martens and Carvalho (2014) indicated that sustainability is becoming increasingly important in project management because projects may have economic, environmental, and social consequences. Therefore, integrating sustainability principles into project management can support organizations in achieving their objectives while reducing negative environmental impacts.

In the context of King Abdulaziz International Airport (KAIA), project management practices can support sustainability projects by ensuring proper planning, effective use of resources, coordination among airport stakeholders, management of sustainability-related risks, and continuous monitoring of project outcomes.

2. Sustainability Project Implementation

Sustainability project implementation refers to the process of converting sustainability objectives and plans into practical activities and initiatives. At airports, sustainability initiatives may include waste recycling programs, environmentally friendly operational practices, energy and resource efficiency, and other green airport activities.

Airports represent complex operational environments because they involve airport management, airlines, ground-handling companies, contractors, cleaning companies, passengers, and government authorities. Consequently, implementing sustainability initiatives requires cooperation and coordination among multiple stakeholders.

The International Civil Aviation Organization (ICAO) emphasizes the importance of environmental management in airport operations. Environmental issues associated with airports include waste, air and water quality, land management, noise, energy consumption, and climate-related impacts. Appropriate planning and environmental management practices can help airports reduce these impacts.

Therefore, successful sustainability project implementation at KAIA may depend on the effectiveness of project management practices and the ability of airport stakeholders to work together toward common sustainability objectives.

3. Waste Recycling Programs

Waste management and recycling represent important components of airport sustainability. Airports generate different types of waste through passenger activities, restaurants, airline operations, offices, maintenance activities, ground-handling services, and other operational activities.

ICAO explains that effective airport waste management should consider waste separation, collection, transportation, recycling, and reduction. Airport management and relevant stakeholders should also establish clear responsibilities and integrate waste management practices into airport procedures and sustainability plans.

Effective project management can contribute to waste recycling programs by defining clear recycling objectives, allocating the required resources, establishing

responsibilities, coordinating contractors and employees, identifying risks, and monitoring recycling performance.

For KAIA, an organized waste recycling program may reduce the amount of waste sent for disposal, encourage the reuse and recycling of materials, and contribute to improved environmental performance.

4. Green Airport Operations

Green airport operations refer to practices designed to reduce the environmental impact of airport activities while maintaining operational effectiveness. ICAO identifies several areas associated with green airports, including renewable energy, smart buildings, sustainable transportation, resource protection, climate resilience, biodiversity protection, and sustainability reporting.

Green airport practices may also include reducing energy and water consumption, improving waste management, using environmentally friendly technologies, reducing emissions, and encouraging sustainable behavior among airport employees and stakeholders.

The implementation of green airport initiatives requires structured planning and coordination. Project management can provide the necessary processes for defining objectives, managing resources and risks, coordinating stakeholders, and monitoring environmental and operational outcomes.

Accordingly, effective project management practices at KAIA are expected to support the implementation of green airport operations and contribute to the airport's sustainability objectives.

5. Sustainability Performance

Sustainability performance represents the environmental and operational outcomes achieved through sustainability initiatives. In this research, sustainability performance includes environmental performance, operational efficiency, and reduction of environmental impact.

Environmental performance can be improved through practices such as waste reduction, recycling, efficient resource utilization, reduced energy consumption, and environmentally responsible airport operations. At the same time, sustainability initiatives may contribute to operational efficiency by reducing unnecessary resource consumption and improving organizational processes.

Martens and Carvalho (2016) found that sustainability variables can influence project success and emphasized the importance of incorporating sustainability considerations into project management. This indicates that sustainability and project performance can be closely connected.

For KAIA, successful implementation of waste recycling programs and green airport operations may therefore contribute to better environmental performance and improved operational efficiency.

6. Relationship Between Project Management Practices and Sustainability Performance

Previous literature suggests a positive relationship between effective project management and sustainability outcomes. Project management provides the planning, coordination, risk management, resource management, and monitoring mechanisms required to successfully implement sustainability initiatives.

Sustainability projects are more likely to achieve their objectives when environmental considerations are incorporated throughout the project lifecycle. Effective stakeholder coordination is also particularly important in airports because sustainability performance depends on the participation of different organizations and operational stakeholders.

Therefore, the literature supports the proposed research model of this study, in which effective project management practices contribute to the successful implementation of sustainability projects, including waste recycling programs and green airport operations. Successful implementation is subsequently expected to improve environmental performance, operational efficiency, and reduce environmental impacts at King Abdulaziz International Airport.

7. Research Gap

Previous studies have examined sustainability in project management and environmental sustainability in airport operations. However, there is still a need for more research examining the relationship between specific project management practices and sustainability performance within individual airport environments.

In particular, limited research focuses specifically on how project planning, resource management, stakeholder coordination, risk management, and monitoring and control contribute to waste recycling and green airport operations at King Abdulaziz International Airport.

Therefore, this research seeks to address this gap by examining the relationship between project management practices, sustainability project implementation, and sustainability performance at KAIA.

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