

Thesis Title:

**Factors Influencing AI-Based Project Management and Its
Outcomes in Industrial Engineering Projects**

“Design and Consultancy Engineering Projects”

(Interview Structure)

Rev.00

by
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The interview will include **3 main sections**, each section is mapped to the thesis variables and objectives.

1. Introduction (Opening Script)

Thank you for agreeing to participate in this interview. This is part of my PhD research on the factors influencing the utilization of AI-based project management and its outcomes, particularly within the design and consultancy engineering sector in Saudi Arabia. Your insights will contribute to bridging academic research with practical industry experience.

This interview will be kept strictly confidential, and your identity will not be disclosed in any part of the thesis. With your consent, I would like to record the conversation solely to ensure accuracy during the analysis phase.

2. Section 1: Factors Influencing the Utilization of AI-Based Project Management (Independent Variables)

These questions explore the key challenges and enabling factors that influence the **utilization** of AI-based project management practices.

Data Privacy and Security

→ *How do concerns about data privacy and security affect your organization's willingness to utilize AI-based project management tools?*

Resistance to Change

→ *What kinds of change resistance have you encountered from staff or leadership when implementing AI-based project management practices?*

Cost of Implementation

→ *How does the cost of acquiring, customizing, or maintaining AI tools influence your organization's AI utilization decisions?*

Compatibility with Existing Infrastructure

→ *Can you describe how the compatibility between AI tools and existing systems has affected their adoption?*

Workforce Development

→ *How well-prepared do you think your team is to utilize AI-based project management tools? What training or development has been needed?*

Ethical Considerations

→ *Are there any ethical concerns (e.g., bias, data transparency, accountability) that influence how your organization approaches AI in project management?*

3. Section 2: Utilization of AI-Based Project Management (Mediating Variable)

These questions assess how AI is actually being applied and integrated into project management processes.

Transformation of Management Practices

► *How has the utilization of AI transformed your overall approach to managing design or consultancy projects?*

Improvement of Project Management Functions

► *Which specific functions (e.g., scheduling, resource allocation, reporting) have improved due to the utilization of AI-based project management tools?*

Support for Strategic Execution

► *To what extent has AI-based project management supported better decision-making or risk management throughout project execution?*

4. Section 3: AI Impact on Project Outcomes (Dependent Variables)

These questions examine the actual or perceived results from implementing AI-based practices.

Enhancing Decision-Making

→ *How has AI utilization affected decision-making processes in your projects?*

Improving Project Output

→ *Have you observed any improvements in project outcomes—such as efficiency or quality—since implementing AI-based management?*

Data Collection Accuracy

→ *How has AI impacted the accuracy and consistency of data collection across your projects?*

Enhancing Data Analysis

→ *In what ways has AI improved your ability to analyze project data and generate insights?*

Risk Identification Accuracy

→ *How effective has AI been in identifying or forecasting risks in your projects?*

Saving Time for Project Managers

→ *Have AI tools helped project managers save time or focus on more strategic tasks? How?*

Effective Collaboration and Communication

→ *How has the use of AI tools influenced collaboration and communication across project stakeholders?*