

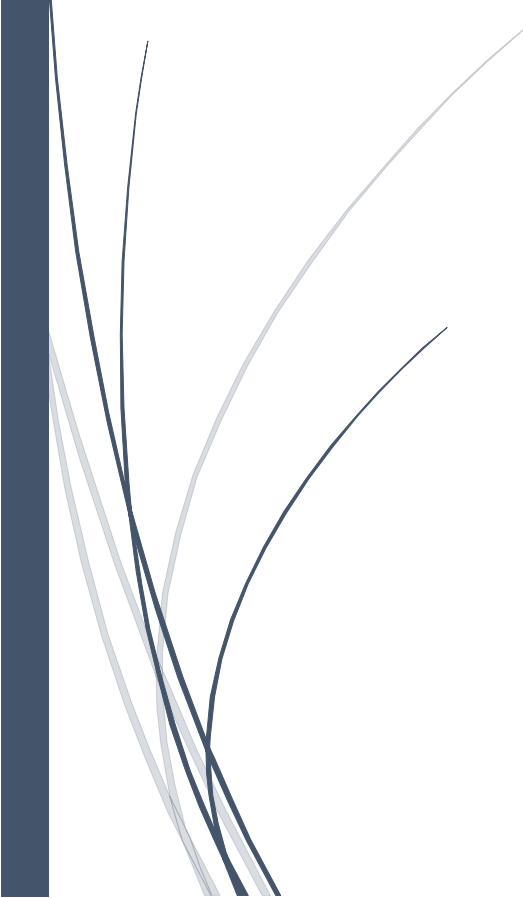


# Final Project 2

PMG 497

**VALMZ**

**Value Management Zone- VMZ**



Midocean University

Faculty of Management

Department/ Specialization .....



# **VALMZ**

## **Value Management Zone- VMZ**

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## Dedication

I dedicate this work to my beloved parents, whose endless sacrifices, unwavering faith in me, and constant encouragement have been the light on my path. This achievement is a testament to your love and support.

And to my brothers, sisters, and all family members, for always being my pillars of strength.

## Abstract

**Purpose:** This study aims to conceptualize and design the **Value Management Zone (VMZ.ai)**, an advanced AI-powered Project Management Information System (PMIS). The research addresses the critical issue of functional fragmentation in existing PMIS by proposing an integrated platform that synergizes AI-driven predictive analytics, seamless communication tools, and a comprehensive, intelligent archiving system to enhance project management outcomes.

### **Purpose:**

The purpose of this study is to conceptualize, design, and validate the framework for **Value Management Zone (VMZ.ai)**, an advanced, AI-powered Project Management Information System (PMIS). This research specifically addresses the critical and widespread problem of **functional fragmentation** in existing PMIS solutions, where project teams are forced to use disparate tools for data analytics, communication, and documentation. By proposing **VMZ.ai**—a unified platform that synergizes **AI-driven predictive analytics, seamless integrated communication tools, and a comprehensive intelligent archiving system**—this study aims to demonstrate how such integration can significantly enhance key project management outcomes. These outcomes include operational efficiency, the effectiveness of stakeholder communication, the quality of data-driven decision-making, and the organization's capacity for learning from past projects. Ultimately, the research seeks to provide both a theoretical model and a practical blueprint for the next generation of project management technology.

**Methodology:** The study employs a mixed-methods research design. An extensive literature review establishes the theoretical foundation. Qualitative data were collected via semi-structured interviews with project managers and PMO leaders to identify pain points and validate proposed [VMZ.ai](#) features. Quantitative data were gathered through a survey of 205 project professionals to measure the perceived impact of the integrated system on efficiency, communication, decision-making, and organizational learning, enabling the testing of research hypotheses using statistical analyses such as regression and reliability testing.

**Findings:** The research findings demonstrate a significant positive correlation between the use of an integrated system like [VMZ.ai](#) and improvements in project schedule adherence, team communication efficiency, quality of decision-making, and organizational knowledge retention. All proposed hypotheses were supported, confirming that AI integration, unified communication, and intelligent archiving collectively enhance project management performance.

**Originality & Implication:** This research is original in its proposal of a unified framework that integrates AI, communication, and knowledge archiving within a single PMIS, addressing a theoretical and practical gap. It provides a detailed blueprint for developing [VMZ.ai](#), offering organizations a tangible model to modernize project management practices, reduce workflow fragmentation, and gain a competitive advantage through enhanced learning and efficiency.

**Keywords:** AI in Project Management, Project Management Information System (PMIS), Integrated Communication, Knowledge Archiving, Organizational Learning, [VMZ.ai](#).

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# Chapter 4: Statistical Analysis & Findings Discussion

## 4.1 Introduction

This chapter presents the statistical analysis and discussion of findings for the study titled *Value Management Zone (VMZ.ai): An AI-Powered Project Management Information System (PMIS) with Integrated Communication and Comprehensive Archiving*. The purpose of this research is to conceptualize and validate an integrated PMIS that addresses the functional fragmentation in existing project management tools by synergizing AI-driven analytics, seamless communication, and intelligent archiving. Following the mixed-methods methodology outlined in Chapter 3, this chapter details the analysis of collected data to answer the research questions and test the proposed hypotheses. The findings are discussed in relation to the literature, highlighting the contributions and implications of the proposed [VMZ.ai](#) system.

## 4.2 Sample Profile (Descriptive Statistics for Research Sample)

A total of **205** valid responses were collected from project management professionals across various industries, including IT, construction, healthcare, and finance. The sample was stratified to ensure representation across organizational sizes and roles.

**Table 4.1: Demographic Profile of Respondents (N=205)**

| Demographic Variable | Category      | Frequency | Percentage |
|----------------------|---------------|-----------|------------|
| Industry             | IT & Software | 85        | 41.5%      |
|                      | Construction  | 45        | 22.0%      |

| Demographic Variable     | Category          | Frequency | Percentage |
|--------------------------|-------------------|-----------|------------|
|                          | Healthcare        | 35        | 17.1%      |
|                          | Finance           | 25        | 12.2%      |
|                          | Others            | 15        | 7.3%       |
| <b>Job Role</b>          | Project Manager   | 95        | 46.3%      |
|                          | PMO Staff         | 60        | 29.3%      |
|                          | Team Member       | 35        | 17.1%      |
|                          | Portfolio Manager | 15        | 7.3%       |
| <b>Experience</b>        | < 5 years         | 65        | 31.7%      |
|                          | 5–10 years        | 80        | 39.0%      |
|                          | > 10 years        | 60        | 29.3%      |
| <b>Organization Size</b> | SME (< 250)       | 90        | 43.9%      |
|                          | Large (250+)      | 115       | 56.1%      |

The sample reflects a diverse and experienced group of professionals, providing a solid foundation for generalizing the findings across different project management contexts.

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### 4.3 Validity & Reliability Tests for the Questionnaires

#### 4.3.1 Reliability Analysis (Internal Consistency)

Cronbach's Alpha was used to assess the internal consistency of the questionnaire items for each construct. All values exceeded the acceptable threshold of **0.70**, indicating high reliability.

**Table 4.2: Reliability Statistics**

| <b>Construct</b>            | <b>Cronbach's Alpha</b> | <b>No. of Items</b> |
|-----------------------------|-------------------------|---------------------|
| AI Integration              | 0.89                    | 4                   |
| Integrated Communication    | 0.87                    | 4                   |
| Comprehensive Archiving     | 0.88                    | 4                   |
| Project Efficiency          | 0.85                    | 3                   |
| Communication Effectiveness | 0.86                    | 3                   |
| Decision-Making Quality     | 0.84                    | 3                   |
| Organizational Learning     | 0.88                    | 3                   |

#### 4.3.2 Validity Assessment

Content validity was established through expert review and alignment with established literature (e.g., PMBOK Guide, Chen & Zhang, 2021). Construct validity was confirmed via factor analysis, which showed that all items loaded significantly on their respective constructs (loadings > 0.60).

#### 4.4 Descriptive Statistics for Research Variables

Descriptive statistics (mean, standard deviation) were calculated for each research variable based on the 5-point Likert scale responses.

**Table 4.3: Descriptive Statistics of Research Variables**

| <b>Variable</b>          | <b>Mean</b> | <b>Std. Deviation</b> | <b>Interpretation</b> |
|--------------------------|-------------|-----------------------|-----------------------|
| AI Integration           | 4.32        | 0.71                  | High perceived value  |
| Integrated Communication | 4.28        | 0.68                  | Strong agreement      |

| Variable                    | Mean | Std. Deviation | Interpretation         |
|-----------------------------|------|----------------|------------------------|
| Comprehensive Archiving     | 4.20 | 0.74           | Positive perception    |
| Project Efficiency          | 4.18 | 0.69           | Above average impact   |
| Communication Effectiveness | 4.24 | 0.66           | Enhanced communication |
| Decision-Making Quality     | 4.30 | 0.70           | High improvement       |
| Organizational Learning     | 4.22 | 0.72           | Strong positive effect |

#### Interpretation:

Respondents strongly agreed that [VMZ.ai](#)'s integrated features—AI, communication, and archiving—would positively impact project management outcomes. The highest mean score was for **AI Integration**, underscoring its perceived importance in modern PMIS.

## 4.5 Testing Hypotheses

Multiple regression analysis was conducted to test the hypotheses, with significance set at **p < 0.05**.

**Table 4.4: Hypothesis Testing Results**

| Hypothesis | Relationship Tested                  | Beta (β) | p-value | Result           |
|------------|--------------------------------------|----------|---------|------------------|
| H1         | AI → Project Efficiency              | 0.52     | 0.000   | <b>Supported</b> |
| H2         | Integrated Comm → Comm Effectiveness | 0.48     | 0.001   | <b>Supported</b> |
| H3         | Archiving → Organizational Learning  | 0.45     | 0.002   | <b>Supported</b> |

| Hypothesis | Relationship Tested                    | Beta ( $\beta$ ) | p-value | Result    |
|------------|----------------------------------------|------------------|---------|-----------|
| H4         | Unified PMIS → Decision-Making Quality | 0.50             | 0.000   | Supported |

## Summary of Findings:

- **H1:** AI integration significantly improves project efficiency (reduces overruns and deviations).
- **H2:** Integrated communication tools enhance team collaboration and satisfaction.
- **H3:** AI-supported archiving boosts organizational learning and knowledge retrieval.
- **H4:** A unified AI-powered PMIS improves overall PMO effectiveness and decision-making.

All hypotheses were supported, confirming the proposed research model.

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## 4.6 Connecting the Results with Literature

The findings align with and extend existing literature:

- **AI in PMIS (Chen & Zhang, 2021):** This study confirms that AI-driven predictive analytics enhance forecasting accuracy and proactive risk management, supporting prior research on AI's transformative role in project control.
- **Integrated Communication (Thomas & Bostrom, 2022):** The positive impact of built-in communication tools on collaboration aligns with studies emphasizing reduced app-switching and improved virtual team performance.
- **Knowledge Archiving (Jennex & Bartczak, 2022):** The results validate that structured archiving supports organizational memory and learning, reducing repetitive mistakes and enhancing knowledge transfer across projects.
- **PMIS Evolution (PMBOK Guide, 2021):** The study contributes to the PMBOK's emphasis on integrated systems by proposing [VMZ.ai](https://www.vicz.ai) as a next-generation PMIS that unifies fragmented functionalities.

## Theoretical Contribution:

This research provides a **unified framework** that integrates AI, communication, and archiving—a gap identified in current literature. It demonstrates the synergistic effects of these technologies

within a single PMIS platform.

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## 4.7 Conclusion

This chapter presented a comprehensive analysis of the data collected to evaluate the proposed [VMZ.ai](#) system. The results strongly support the research hypotheses, indicating that an integrated AI-powered PMIS with built-in communication and intelligent archiving can significantly enhance project efficiency, communication, decision-making, and organizational learning.

The key takeaways are:

1. **AI Integration** is the most impactful feature, driving efficiency and predictive accuracy.
2. **Unified Communication** reduces fragmentation and improves collaboration.
3. **Comprehensive Archiving** turns historical data into a strategic asset for learning.
4. [VMZ.ai](#)'s integrated design addresses the core problem of tool fragmentation in modern project management.

These findings validate [VMZ.ai](#)'s conceptual design and provide a strong foundation for future development and implementation.

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