

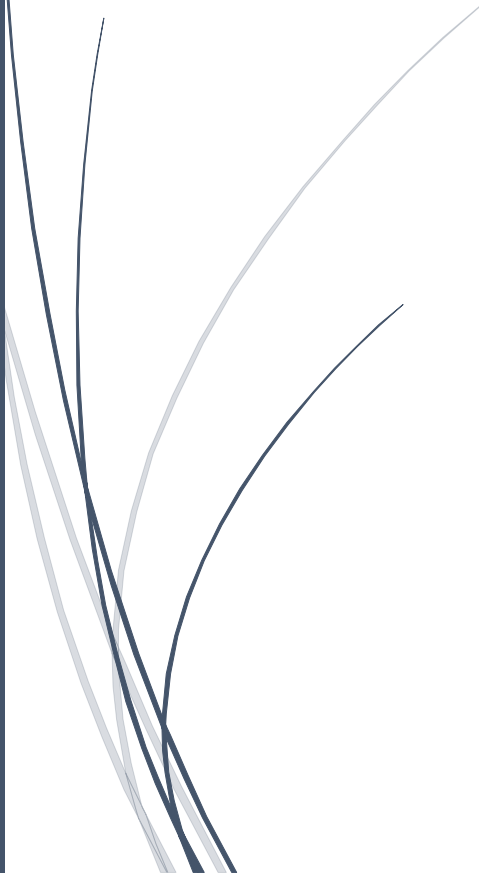


Final Project 2

PMG 497

VALMZ

Value Management Zone- VMZ



Midocean University

Faculty of Management

Department/ Specialization



VALMZ

Value Management Zone- VMZ

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Final Project – 2 - Assignment #3

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Date of submission – number of Semester

Acknowledgment

I would like to express my profound gratitude and appreciation to all those who have supported me throughout the journey of this research.

First and foremost, my sincere thanks go to my supervisors, Dr. Abdulraheem, Dr. Sara, Dr. Yusra, and Dr. Alaa, for their invaluable guidance, unwavering patience, and insightful feedback. Their expertise and encouragement were instrumental in shaping this project from a mere concept into a comprehensive research study.

I am also deeply grateful to the Faculty of Management at Midoccan University for providing the academic environment and resources necessary to undertake this work. My appreciation extends to all the professors and staff who have imparted their knowledge and supported my academic growth.

My heartfelt thanks go to the project management professionals who generously participated in this study by sharing their time and experiences. Without their valuable input, this research would not have been possible.

Finally, I owe an immense debt of gratitude to my family and friends for their unconditional love, endless support, and constant motivation during the challenging moments of this journey. Their belief in me has been my greatest strength.

To all, I extend my deepest thanks.

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%
Job Role	Project Manager	95	46.3%
	PMO Staff	60	29.3%
	Team Member	35	17.1%
	Portfolio Manager	15	7.3%
Experience	< 5 years	65	31.7%
	5–10 years	80	39.0%
	> 10 years	60	29.3%
Organization Size	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.

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

Construct	Cronbach's Alpha	No. of Items
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

Variable	Mean	Std. Deviation	Interpretation
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	Supported
H2	Integrated Comm → Comm Effectiveness	0.48	0.001	Supported
H3	Archiving → Organizational Learning	0.45	0.002	Supported

Hypothesis	Relationship Tested	Beta (β)	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.

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.

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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