

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

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Dedication

I dedicate this work to my beloved parents, 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.

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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.

Methodology: The study will employ a mixed-methods research design. An extensive literature review will establish the theoretical foundation. Qualitative data will be collected via semi-structured interviews with project managers and PMO leaders to identify pain points and validate proposed VMZ.ai features. Quantitative data will be gathered through a survey to measure the perceived impact of the integrated system on efficiency, communication, decision-making, and organizational learning, allowing for the testing of the research hypotheses.

Findings: The research anticipates that the results will 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.

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 identified theoretical gap. Practically, it provides a detailed blueprint for developing VMZ.ai, offering organizations a tangible model to modernize their 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.

Value Management Zone (VMZ.ai): An AI-Powered Project Management Information System (PMIS) with Integrated Communication and Comprehensive Archiving

Chapter 1

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Research Introduction

In today's dynamic business environment, projects have become crucial drivers of strategic implementation and organizational innovation. The increasing complexity of multi-stakeholder projects in a globalized context has transformed project management from a tactical function to a core organizational capability. While traditional Project Management Information Systems (PMIS) have evolved from manual processes to sophisticated digital platforms, they often remain passive data repositories rather than proactive, intelligent systems. The emergence of Artificial Intelligence (AI) presents unprecedented opportunities to revolutionize project management through predictive analytics, automated workflows, and enhanced decision-making capabilities. This research introduces VMZ.ai, an advanced PMIS that integrates AI capabilities, real-time collaboration tools, and structured knowledge archiving to address the limitations of current fragmented systems.

Research Problem

The core challenge in contemporary project management lies in the fragmentation of essential functionalities across different platforms. Current PMIS solutions typically operate in silos, requiring project teams to navigate multiple applications for data analytics, communication, and knowledge management. This fragmentation results in workflow inefficiencies, data disconnects, and reactive project management approaches. The theoretical gap exists in the lack of a unified framework that integrates AI's predictive capabilities with project management principles, collaborative communication, and organizational knowledge management. Practically, organizations face operational challenges including manual risk analysis, disconnected communication tools, and unstructured historical data archiving that hinders organizational learning and continuous improvement.

Research Significance

Theoretical Significance:

- Develops a novel conceptual framework for next-generation PMIS integrating AI, communication, and archiving
- Bridges existing theoretical gaps by exploring synergistic effects of integrated technologies
- Provides foundation for future research on AI-driven project management methodologies

Practical Significance:

- Offers a comprehensive blueprint for VMZ.ai development addressing real-world PMIS limitations
- Enables organizations to enhance project efficiency through predictive analytics and automation
- Facilitates better knowledge management and organizational learning through structured archiving
- Provides competitive advantage through modernized project management practices

Research Questions

1. How does AI-driven predictive analytics integration affect project schedule and budget forecasting accuracy?

2. What impact does integrated communication workspace have on team collaboration and project outcomes?
3. What essential features are required for a comprehensive archiving system to support effective knowledge management?
4. How can AI-powered PMIS optimize resource allocation and strategic decision-making at program and portfolio levels?
5. What are the perceived benefits and adoption rates of unified AI-supported PMIS compared to traditional fragmented tools?

Research Objectives

1. To design a conceptual and technical framework for VMZ.ai integrating AI, real-time communication, and comprehensive archiving
2. To investigate AI's potential in automating routine tasks and providing predictive insights for project teams
3. To define requirements for seamless collaborative workspace within PMIS supporting various communication channels
4. To develop a structured system for archiving and retrieving project, program, and portfolio data to facilitate organizational learning

Research Hypotheses

- H1: AI-driven predictive analytics integration significantly reduces project schedule overruns and budget deviations
- H2: Integrated video/voice communication increases team communication efficiency and satisfaction compared to external platforms
- H3: AI-supported archiving system enhances organizational learning by reducing time and effort for retrieving past project lessons
- H4: Unified AI-powered PMIS adoption improves PMO effectiveness and decision-making capabilities

Research Model

The research model establishes relationships between independent variables (AI Integration, Integrated Communication, Comprehensive Archiving) and dependent variables (Project

Management Efficiency, Communication Effectiveness, Decision-Making Quality, Organizational Learning). The model posits that effective integration of these independent variables within a unified PMIS platform will positively influence all dependent variables, creating synergistic effects that enhance overall project management performance.

Scope of the Study

This study focuses on the conceptual design and theoretical validation of VMZ.ai as a modern AI-supported PMIS. The research scope encompasses defining core functionalities, technical architecture, and potential benefits for PMOs and project teams. The study is limited to conceptual development and does not include building a commercial product, serving instead as a detailed proof-of-concept and foundation for future implementation. The research specifically addresses AI applications, integrated communication, and archiving within project, program, and portfolio management contexts.

Project Structure

- **Chapter 1:** Introduction - Background, problem statement, objectives, and scope
- **Chapter 2:** Literature Review - Theoretical foundations of PMIS, AI in project management, and collaborative communication
- **Chapter 3:** Methodology - Research design, data collection methods, and analytical techniques
- **Chapter 4:** Results & Discussion - Research findings and their implications
- **Chapter 5:** Conclusion & Recommendations - Summary of findings, conclusions, and future work directions

Chapter 2: Literature Review

Reference List

1. Project Management Institute. (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Seventh Edition.
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3. Chen, L., & Zhang, R. (2021). Artificial Intelligence in Project Management: A Review and Future Research Directions. *International Journal of Project Management*.
4. Thomas, D. M., & Bostrom, R. P. (2022). The Impact of Communication Tools on Virtual Project Team Performance. *Information Systems Management*.
5. Jennex, M. E., & Bartczak, S. E. (2022). A Revised Model for Organizational Memory in Project-Based Organizations. *Journal of Knowledge Management*.

Appendix: Questionnaires for your research variables

Section A: AI Integration

(5-point Likert Scale: Strongly Disagree to Strongly Agree)

1. The system provides accurate predictions of project timelines
2. AI features help identify potential risks proactively
3. Automated reporting saves significant time
4. Resource allocation suggestions are valuable

Section B: Integrated Communication

1. Built-in communication tools reduce app switching
2. Video/voice integration improves collaboration
3. Communication history is easily accessible
4. Real-time collaboration features are effective

Section C: Comprehensive Archiving

1. Historical project data is easily retrievable
2. Archiving system helps avoid past mistakes
3. Knowledge transfer between projects is efficient
4. Lessons learned are properly documented and accessible

Table of research instruments

Variable Type	Construct	No. of Items	Measurement Scale	Reference
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Independent	AI Integration	4	5-point Likert	Chen & Zhang (2021)
Independent	Integrated Communication	4	5-point Likert	Thomas & Bostrom (2022)
Independent	Comprehensive Archiving	4	5-point Likert	Jennex & Bartczak (2022)
Dependent	Project Efficiency	3	5-point Likert	PMBOK Guide (2021)
Dependent	Communication Effectiveness	3	5-point Likert	PMBOK Guide (2021)
Dependent	Decision-Making Quality	3	5-point Likert	Williams (2022)
Dependent	Organizational Learning	3	5-point Likert	Jennex & Bartczak (2022)