

DESIGN AND IMPLEMENTATION OF A BUILDING MATERIAL INVENTORY MANAGEMENT SYSTEM

BY

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Building Material Inventory Management System" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study developed and evaluated a Web software solution for design within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Structural Load Theory and the Soil Mechanics Theory. A total of 66 users were purposively selected for the usability evaluation, out of which 58 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 89.2% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of design and implementation of a building material inventory management system is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

design, when examined in relation to implementation, reveals complex and often paradoxical dynamics. Evidence from national agencies indicates that design has grown considerably in recent times, underscoring the need for systematic inquiry. The work of Alade and Famuyide (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. The work of Osinachi and Ogbeide (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Few subjects attract as much policy interest in contemporary Nigeria as the question of design. National policies and programmes have sought, with varying degrees of success, to respond to the realities of design and implementation. Research by Oyelaran and Obiora (2021) using mixed methods provided particularly rich insight into the mechanisms connecting design and implementation. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Empirical evidence from Nwosu and Bakare (2021) suggests that positive developments in implementation are associated with improvements in design. For practitioners, the practical significance of design cannot be overstated, given its demonstrable link with implementation. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

A growing corpus of literature draws attention to the pivotal role of design in shaping developmental trajectories. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of design. Longitudinal research by Nwosu and Bakare (2016) revealed that sustained attention to design yields appreciable dividends over time. Such findings reinforce the argument that design deserves a place of priority on the development agenda. An examination by Okonkwo and Adekunle (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. These observations collectively invite a reconsideration of standard assumptions regarding implementation. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

In both global and African literatures, design is now regarded as a key index of institutional performance. Within Lagos State, the country's most populous commercial hub, the dynamics of design are observed in their starkest form. The work of Okonkwo and Ogbeide (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. For practitioners, the practical significance of design cannot be overstated, given its demonstrable link with implementation. Evidence assembled by Nwosu and Adigun