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# ODOO ERP DESIGN TO ENHANCE EFFICIENCY IN PROCUREMENT, INVENTORY, AND MANUFACTURING FOR AN AGRIFOOD-TECH SME

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DEPARTMENT OF AGROINDUSTRIAL TECHNOLOGY

FACULTY OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

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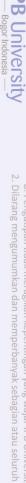
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Hereby I declare that the thesis titled "Odoo ERP Design to Enhance Efficiency in Procurement, Inventory, and Manufacturing for an Agrifood-Tech SME" is my own work, prepared under the guidance of my advisors Prof. Dr. Eng. Taufik Djatna, STP, Msi. and Dr. Indah Yuliasih, S.TP., M.Si. This thesis has not been submitted to any other institution in any form. All information taken or cited from the works of others, whether published or unpublished, has been clearly mentioned in the text and included in the References.

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Bogor, July 2025

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## **ABSTRACT**

ERMA SITI NUR ROBI'AH. Odoo ERP Design to Enhance Efficiency in Procurement, Inventory, and Manufacturing for an Agri-Food Tech SME. Supervised by TAUFIK DJATNA and INDAH YULIASIH.

Digital transformation is a key strategy to enhance operational efficiency, particularly for agri-food tech startups. However, some business lines still encounter challenges as their procurement, warehousing, and production processes remain manual and lack integration. This study aims to design and implement an Odoo-based ERP system focused on three main modules: Purchase, Inventory, and Manufacturing. The system is developed using a Software Engineering approach, combined with Design Thinking and Scrum, to support iterative and user-centered development. The project successfully produced an integrated cross-departmental ERP module, featuring automation for purchase requests, stock recording, and production scheduling. The implementation results showed an average increase in operational efficiency of 85.7%, and all user needs were met with an average satisfaction level of 94%, based on the User Acceptance Test. The implementation of this system enables the company to streamline business processes, improve information accuracy, and support faster, data-driven, and integrated decision-making.

Keywords: efficiency, enterprise resource planning, integration, odoo, operational

## **ABSTRAK**

ERMA SITI NUR ROBI'AH. Perancangan Sistem ERP Berbasis Odoo untuk Peningkatan Efisiensi Pengadaan, Pergudangan, dan Produksi pada UKM Agri-Food Tech. Dibimbing oleh TAUFIK DJATNA dan INDAH YULIASIH.

Transformasi digital merupakan strategi kunci untuk meningkatkan efisiensi operasional, khususnya bagi startup di bidang agri-food tech. Namun, beberapa lini bisnis masih menghadapi tantangan karena proses pengadaan, pergudangan, dan produksi yang dijalankan secara manual dan belum terintegrasi. Penelitian ini bertujuan untuk merancang dan mengimplementasikan sistem ERP berbasis Odoo yang berfokus pada tiga modul utama: Purchase, Inventory, dan Manufacturing. Sistem dikembangkan menggunakan pendekatan Software Engineering, dipadukan dengan Design Thinking dan Scrum, untuk mendukung pengembangan iteratif dan berpusat pada pengguna. Proyek berhasil menghasilkan modul ERP terintegrasi antardivisi, dengan fitur otomatisasi permintaan pembelian, pencatatan stok, dan penjadwalan produksi. Hasil implementasi menunjukkan peningkatan efisiensi operasional rata-rata sebesar 85,7%, dan seluruh kebutuhan pengguna terpenuhi dengan tingkat kepuasan rata-rata 94% berdasarkan User Acceptance Test. Penerapan sistem ini memungkinkan perusahaan untuk merampingkan proses bisnis, meningkatkan akurasi informasi, serta mendukung pengambilan keputusan yang lebih cepat, berbasis data, dan terintegrasi.

Kata kunci: efisiensi, enterprise resource planning, integrasi, odoo, operasional



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# ODOO ERP DESIGN TO ENHANCE EFFICIENCY IN PROCUREMENT, INVENTORY, AND MANUFACTURING FOR AN AGRIFOOD-TECH SME

## ERMA SITI NUR ROBI'AH

Undergraduate Final Report
As one of the requirements for obtaining a degree of
Bachelor of Engineering with Honours
at
Department of Agroindustrial Technology

DEPARTMENT OF AGROINDUSTRIAL TECHNOLOGY

FACULTY OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

IPB UNIVERSITY

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## **PREFACE**

Praise and gratitude to Allah, the Almighty, for His abundant mercy and compassion, allowing the author to complete this main agro-industrial design project, which has been carried out from February to June 2025. The main agroindustrial design project titled "Odoo ERP Design to Enhance Efficiency in Procurement, Inventory, and Manufacturing for an Agrifood-Tech SME" is one of the requirements for completing the undergraduate program in the Department of Agricultural Industrial Technology, Faculty of Agricultural Engineering and Technology.

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Bogor, July 2025

Erma Siti Nur Robi'Ah



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