

DESIGN AND IMPLEMENTATION OF ODOO ERP MODULES TO OPTIMIZE PROCUREMENT AND INVENTORY AT A FOOD SUPPLY CHAIN UNIT

FAQIH BAHRUL ILMI



DEPARTMENT OF AGROINDUSTRIAL TECHNOLOGY
FACULTY OF AGRICULTURAL ENGINEERING AND TECHNOLOGY
IPB UNIVERSITY
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Faqih Bahrul Ilmi
F3401211107



ABSTRACT

Faqih Bahrul Ilmi. Design and Implementation of Odoo ERP Modules to Optimize Procurement and Inventory at a Food Supply Chain Unit. Supervised by TAUFIK DJATNA and INDAH YULIASIH.

PT XYZ's business unit faced operational inefficiencies from using spreadsheets for purchase and inventory management. This manual system impeded data integration, real-time analysis, and strategic decision-making, while increasing risks of error and complicating food loss analysis. This project aimed to design an Odoo Enterprise Resource Planning (ERP) system with purchase and inventory modules to improve efficiency and support food loss analysis. The system was developed using a design thinking approach, from exploration to validation.

The result is an integrated module prototype on Odoo v17 that manages both Just-In-Time (JIT) and Just-In-Case (JIC) procurement methods. Evaluation showed process time efficiency gains of 92.10% for purchasing and 88.79% for inventory. User Acceptance Testing (UAT) also yielded high satisfaction scores of 90 and 92.5. The system provides an integrated solution to support data-driven decision-making at PT XYZ.

Keywords: *business process efficiency, design thinking, food loss, Odoo ERP system, purchase and inventory management*

ABSTRAK

Faqih Bahrul Ilmi. Desain dan Implementasi Modul ERP Odoo untuk Optimalisasi Pembelian dan Persediaan pada Unit Usaha Rantai Pasok Pangan. Dibimbing oleh TAUFIK DJATNA dan INDAH YULIASIH.

PT XYZ menghadapi ketidakefisienan operasional akibat penggunaan spreadsheet untuk manajemen pembelian dan persediaan. Sistem manual ini menghambat integrasi data, analisis real-time, dan pengambilan keputusan strategis, sekaligus meningkatkan risiko kesalahan dan mempersulit analisis kerugian pangan. Proyek ini bertujuan untuk merancang sistem Odoo Enterprise Resource Planning (ERP) dengan modul pembelian dan persediaan guna meningkatkan efisiensi dan mendukung analisis kerugian pangan. Sistem ini dikembangkan menggunakan pendekatan desain berpikir, dari tahap eksplorasi hingga validasi.

Hasilnya adalah prototipe modul terintegrasi pada Odoo v17 yang mengelola metode pembelian Just-In-Time (JIT) dan Just-In-Case (JIC). Evaluasi menunjukkan peningkatan efisiensi waktu proses sebesar 92.10% untuk pembelian dan 88.79% untuk persediaan. Uji Penerimaan Pengguna (UAT) juga menghasilkan skor kepuasan tinggi sebesar 90 dan 92,5. Sistem ini menyediakan solusi terintegrasi untuk mendukung pengambilan keputusan berbasis data di PT XYZ.

Kata kunci: *efisiensi proses bisnis, kehilangan pangan, manajemen pembelian dan persediaan, pemikiran desain, sistem ERP Odoo*



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DESIGN AND IMPLEMENTATION OF ODOO ERP MODULES TO OPTIMIZE PROCUREMENT AND INVENTORY AT A FOOD SUPPLY CHAIN UNIT

FAQIH BAHRUL ILMI

Undergraduate Final Report
as one of the requirements to obtain the degree
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**DEPARTMENT OF AGROINDUSTRIAL TECHNOLOGY
FACULTY OF AGRICULTURAL ENGINEERING AND TECHNOLOGY
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Thesis Examination Team:

- 1 Dr. Andes Ismayana, S.TP., M.T.
- 2 Prof. Dr. Ir. Yandra Arkeman, M.Eng.

Thesis Title : Design and Implementation of Odoo ERP Modules to Optimize
Procurement and Inventory at a Food Supply Chain Unit
Name : Faqih Bahrul Ilmi
NIM : F3401211107

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Approved by

Supervisor 1:
Prof. Dr. Eng. Taufik Djatna, S.TP., M.Si.



Supervisor 2:
Dr. Indah Yuliasih, S.TP., M.Si.



Acknowledged by

Head of Department:
Prof. Dr. Ono Suparno, STP, MT
NIP 197212031997021001



Examination Date:
July 7th 2025

Graduation Date:



PREFACE

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May this scientific work be beneficial to those in need and contribute to the advancement of knowledge.

Bogor, July 2025

Faqih Bahrul Ilmi

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