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Odoo's Enterprise Resource Planning Implementation Fostering Export Sales Business Agility in SMES Naruna Ceramic

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ABSTRACT
A dynamic business world is being created by the rapidly growing technology. This condition requires businessperson to be able to implement technology into their business processes. The implementation of an integrated information system can be done to increase the effectiveness of employee performance. An integrated information system called Enterprise Resource Planning can be implemented to increase the effectiveness of employee performance. Naruna Ceramic is a UMKM located at Jl. Sawosari No. 2 Bugel, Salatiga. Naruna Ceramic is an exporter that manages its export sales data manually, so there are no data integration between departments, resulting in a lack of effectiveness in employee performance. In this research, an information system design was carried out to boost business performance at Naruna Ceramic UKM by deploying Odoo ERP. The application method utilized is Rapid Application Development (RAD). The three steps of RAD are requirements planning, system design, and implementation. The User Acceptance Test (UAT) method is used to test the system. The test findings demonstrate how well the system meets business requirements, making its installation at UKM Naruna Ceramic very suited and successful in fostering business agility.

Keywords: System, Information, Odoo, ERP, Business

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Implementasi Enterprise Resource Planning Odoo Menumbuhkan Kelincahan Bisnis Penjualan Ekspor di UKM Keramik Naruna

Abstrak
Dunia bisnis yang dinamis diciptakan oleh teknologi yang berkembang pesat. Kondisi ini menuntut pelaku bisnis untuk dapat mengimplementasikan teknologi ke dalam proses bisnisnya. Penerapan sistem informasi yang terintegrasi dapat dilakukan untuk meningkatkan efektivitas kinerja pegawai. Sistem informasi terintegrasi bernama Enterprise Resource Planning dapat diimplementasikan untuk meningkatkan efektivitas kinerja karyawan. Naruna Ceramic merupakan UMKM yang berlokasi di Jl. Sawosari No.2 Bugel, Salatiga. Naruna Ceramic merupakan eksportir yang mengelola data penjualan ekspornya secara manual, sehingga tidak ada integrasi data antar departemen sehingga kurang efektifnya kinerja karyawan. Pada penelitian ini dilakukan perancangan sistem informasi untuk mendongkrak kinerja bisnis pada UKM Keramik Naruna dengan menerapkan Odoo ERP. Metode aplikasi yang digunakan adalah Rapid Application Development (RAD). Tiga langkah RAD adalah perencanaan kebutuhan, desain sistem, dan implementasi. Metode User Acceptance Test (UAT) digunakan untuk menguji sistem. Hasil pengujian menunjukkan seberapa baik sistem memenuhi persyaratan bisnis, membuat pemasangannya di UKM Naruna Ceramic sangat cocok dan sukses dalam menumbuhkan ketangkasan bisnis.

Kata Kunci : Sistem, Informasi, Odoo, ERP, Bisnis

INTRODUCTION

A dynamic business world is being created by the rapidly growing technology. This condition requires businessperson to be able to implement technology into their business processes. (Surasma Surung et al., 2020). Information systems can simplify a company's business processes. Information system technology can be used to produce relevant, accurate, and timely information that supports the efficiency and effectiveness of business processes (Cholik, 2021). Enterprise Resource Planning (ERP) is a type of information system that supports companies in the efficiency of their business processes by integrating all business processes. ERP is generally applied to companies and to certain micro and medium enterprises (Widyawati et al., 2022).

SMEs have a strategic role in the development of Indonesia's national economy. In 2018 the number of SMEs in Indonesia reached 64.19 million units or 99% of all national companies capable of printing 61.07% of Indonesia's GDP (Ministry of Finance, 2020).However, as a pioneer in SME export sales since 2019, Naruna Ceramic still uses Microsoft Excel in their export sales business processes. The unintegrated business processes has a significant impact in reduced effectiveness of the company's performance.

To overcome these issues, an Enterprise Resource Planning-based sales information system must be designed. Odoo is one of the open-source ERP software appropriate for small and medium-sized organizations (Cahya Putri & Suhendi, 2021). Odoo includes marketing and supply chain management modules. Sales, invoicing, purchasing, inventory, and manufacturing modules were used in this study. This module's implementation is designed to assist organizations in meeting their needs in the export sales process and having a single integrated database in each division.

The purpose of this research is to better understand Naruna Ceramic UKM's business process flow and the availability of a database design that meets the objectives of the export sales system. At UKM Naruna Ceramic, the Odoo application was integrated with sales, invoicing, purchasing, inventory, and manufacturing modules to achieve this goal.

Theoritical Framework

ERP (Enterprise Resource Planning)

ERP or Enterprise Resource Planning is an application that integrates information across all divisions within an organization by combining information into a single database (Surasma Surung et al., 2020). ERP software promises benefits for companies including increased efficiency, effectiveness, and profitability (Prastyo et al., 2016).

There are two types of ERP in circulation, namely commercial or paid ERP and open-source ERP. Currently, there are various ERP software on the market, both commercial (paid) and open-source ERP software. One of the popular open-source ERP systems today is Odoo. The features offered by Odoo are very informative and license-free so they can be used by small companies (MSMEs) (Nugroho, Firdaus, et al., 2023).

Odoo

Odoo is one of the implementations of the ERP application which was first named Tiny ERP then in 2016 it was renamed Open ERP and experienced development so it changed its name to Odoo (Nasir & Suhendi, 2018). Odoo is a web-based data processing system in an ERP system that is open to study, modify, improve, and disseminate (Nugroho, et al., 2023). There are many modules provided by Odoo to meet the needs of business processes including sales, inventory, invoicing, purchasing, and manufacturing modules. All modules that have been installed can be integrated directly.

Business Agility

Business agility is a company strategy to succeed in a dynamic business environment (Hendriyani & Raharja, 2019). The foundation of business or corporate agility lies in the integration between information systems or technology, people, business processes, and facilities (Lin, Chiu, & Tseng, 2005).

METHOD

The Odoo ERP implementation for UKM Naruna Ceramic consists of numerous steps, beginning with problem identification so that researchers can articulate the difficulties encountered and what must be remedied in this study. In the research technique and system configuration employed in this study, the literacy study refers to past research as a reference. Then,

through observation and interview with the firm, do a system requirements study. In the data analysis stage, Odoo is used to analyze the company's business processes and make business process proposals. The Odoo ERP system design was created utilizing the Rapid Application Development (RAD) approach. Rapid Application Development (RAD) is a technique for creating information systems in a relatively short period of time, typically between 30-90 days (Noertjahyana, 2002). The User Acceptance Test (UAT) was then used to determine the practicality of the Odoo ERP system (Surasma Surung et al., 2020).

RESULT AND ANALYSIS

Implementation of an information system for UKM Naruna Ceramic using Odoo ERP, the installed module aids in the process of creating export sales paperwork. Sales orders, purchase orders, invoices, and delivery slips are examples of these documents. The Odoo system includes modules as sales, purchasing, invoicing, inventory, and manufacturing. The stages of developing the Odoo system for UKM Naruna Ceramic are as follows:

a. Saler Order

Sales orders are used in this system to trigger work orders or production orders for the production division based on customer demands. Making a sales order begins with creating a new quotation in the sales module, followed by inputting the customer order and selecting confirm the order if all orders and quantities are entered.

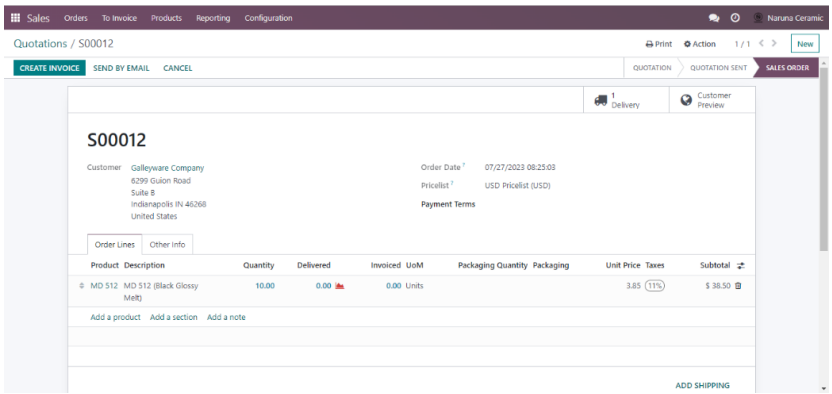


Figure 1. Sales Order Form (Primary data processed, 2023)

b. Purchase Order

When the available production raw materials do not fulfill the sales orders, purchase orders will be generated automatically. Reordering rules are applied to raw material manufacturing to activate automatic raw material ordering. When the request for quotation (RFQ) is confirmed in the purchase module, the purchase order format is obtained.

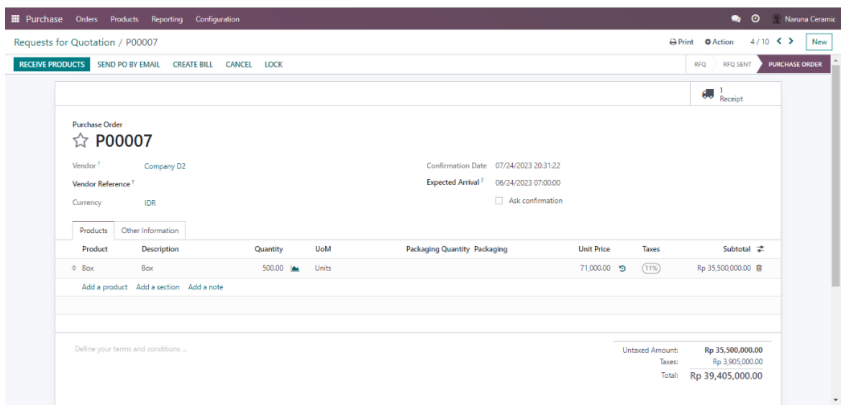


Figure 2. Purchase Order Form (Primary data processed, 2023)

c. Invoice

Installing the invoicing module will generate invoices. By pressing the create invoice button in the sales module, you can create invoices. Then, in accordance with the customer's agreement, select the form of invoice you wish to use.

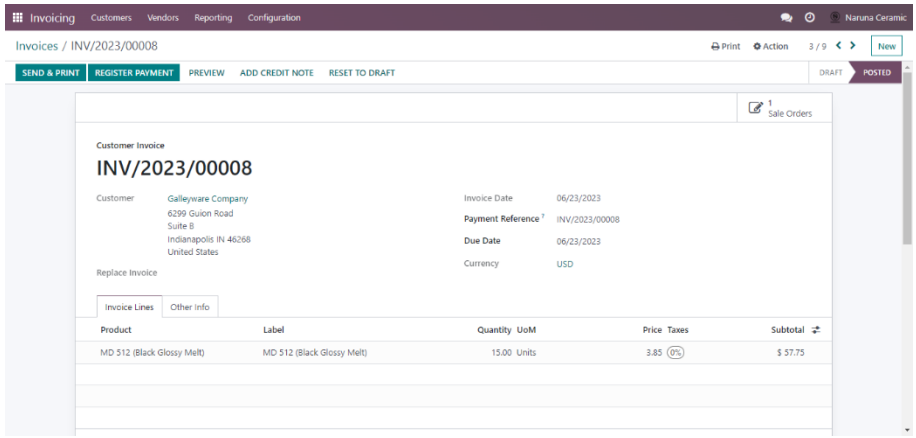


Figure 3. Invoice Form (Primary data processed, 2023)

d. Delivery Slip

The sales module generates delivery slips before pushing sales orders that require delivery slips. To obtain a delivery slip sheet, press the truck image or delivery text.

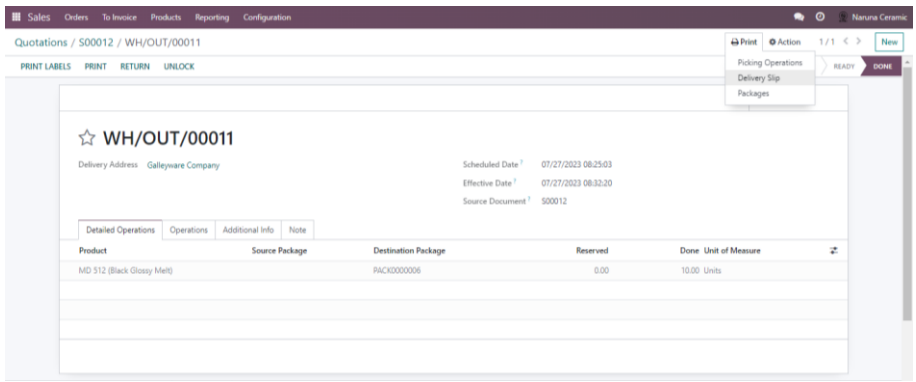
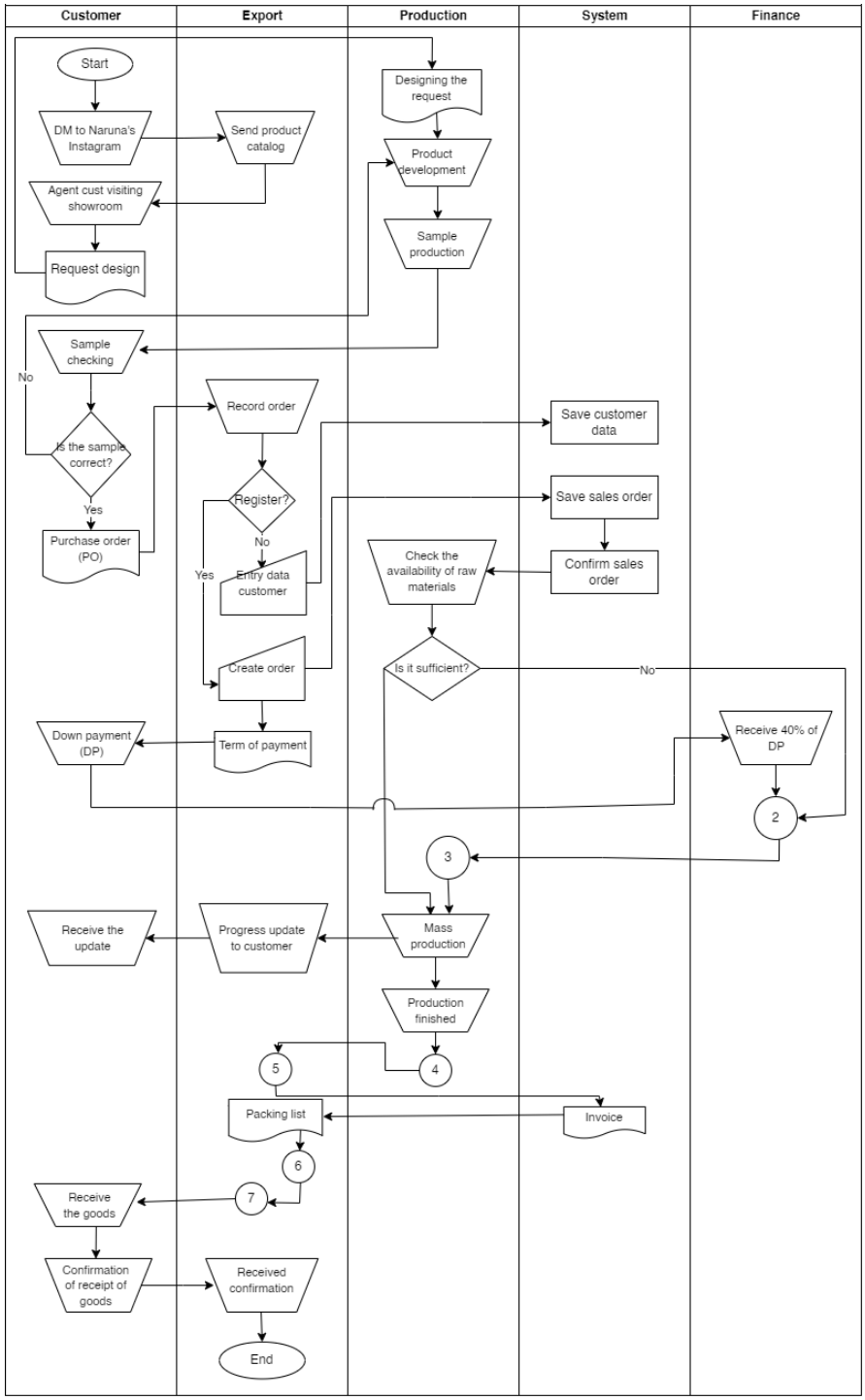
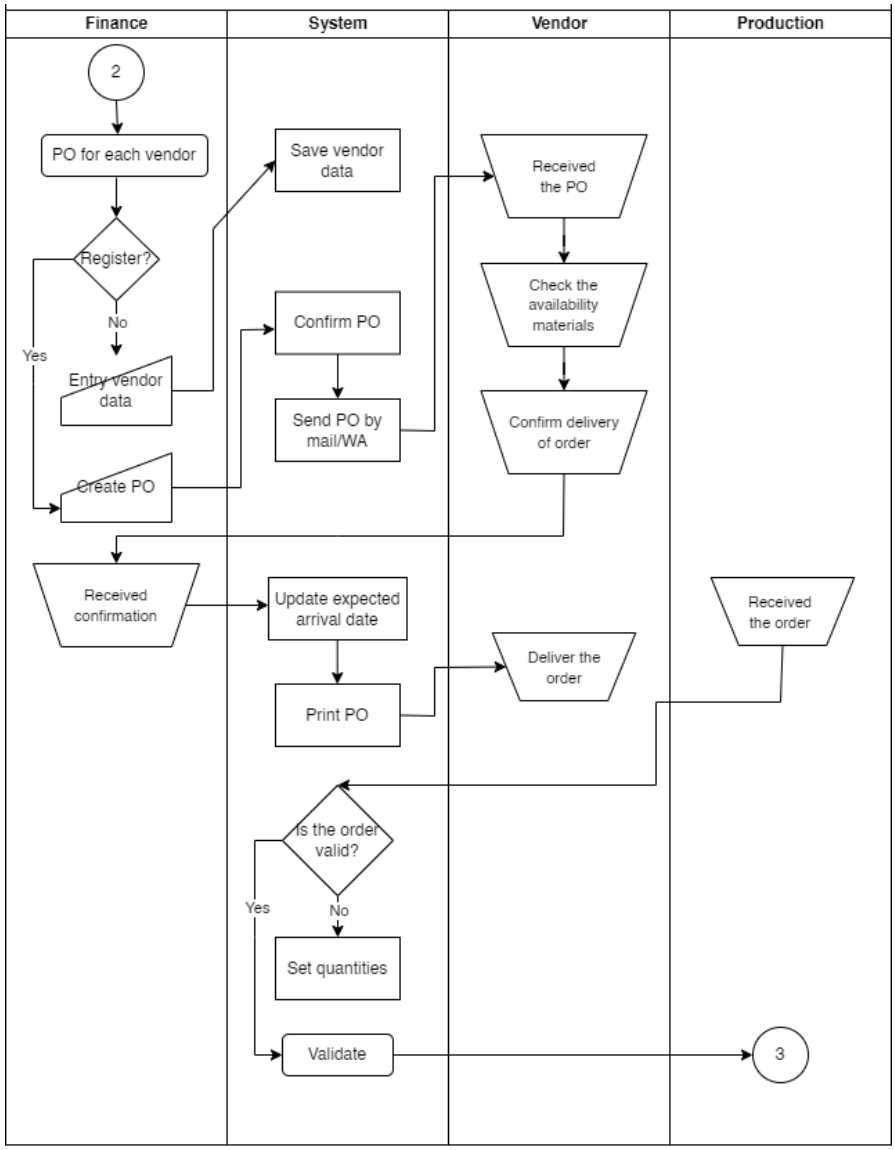
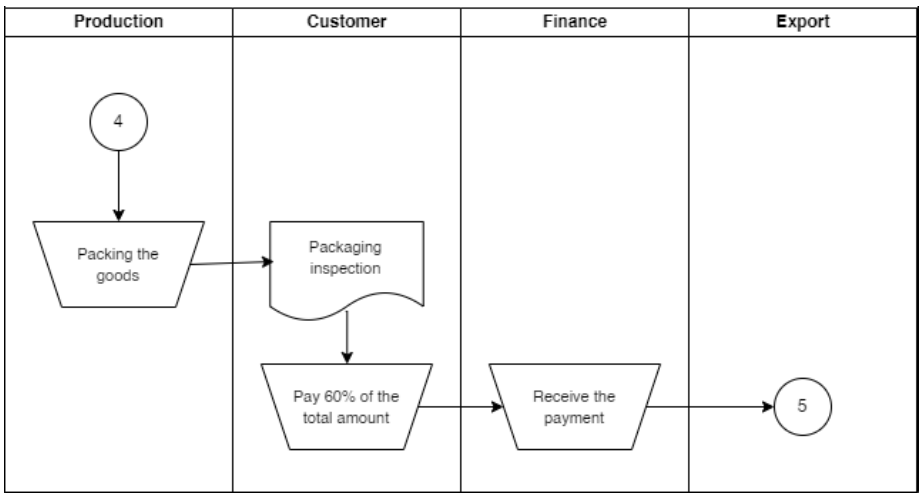


Figure 4. Delivery Slip Form (Primary data processed, 2023))

The figure 5 is flowchart that describes the export sales business process that occurs after implementing the Odoo system.


Customer
Export
Production
System
Finance
Start
DM to Naruna's Instagram
Agent cust visiting showroom
Request design
Send product catalog
Designing the request
Product development
Sample production
Sample checking
No
Is the sample correct?
Yes
Purchase order (PO)
Record order
Register?
No
Yes
Entry data customer
Create order
Down payment (DP)
Term of payment
Save customer data
Save sales order
Confirm sales order
Check the availability of raw materials
Is it sufficient?
No
Receive 40% of DP
2
3
Receive the update
Progress update to customer
Mass production
Production finished
5
4
Packing list
Invoice
6
7
Receive the goods
Confirmation of receipt of goods
Received confirmation
End


Finance
System
Vendor
Production
2
PO for each vendor
Register?
No
Yes
Entry vendor data
Create PO
Save vendor data
Confirm PO
Send PO by mail/WA
Received the PO
Check the availability materials
Confirm delivery of order
Received confirmation
Update expected arrival date
Print PO
Deliver the order
Received the order
Is the order valid?
Yes
No
Set quantities
Validate
3


Production
Customer
Finance
Export
4
Packing the goods
Packaging inspection
Pay 60% of the total amount
Receive the payment
5

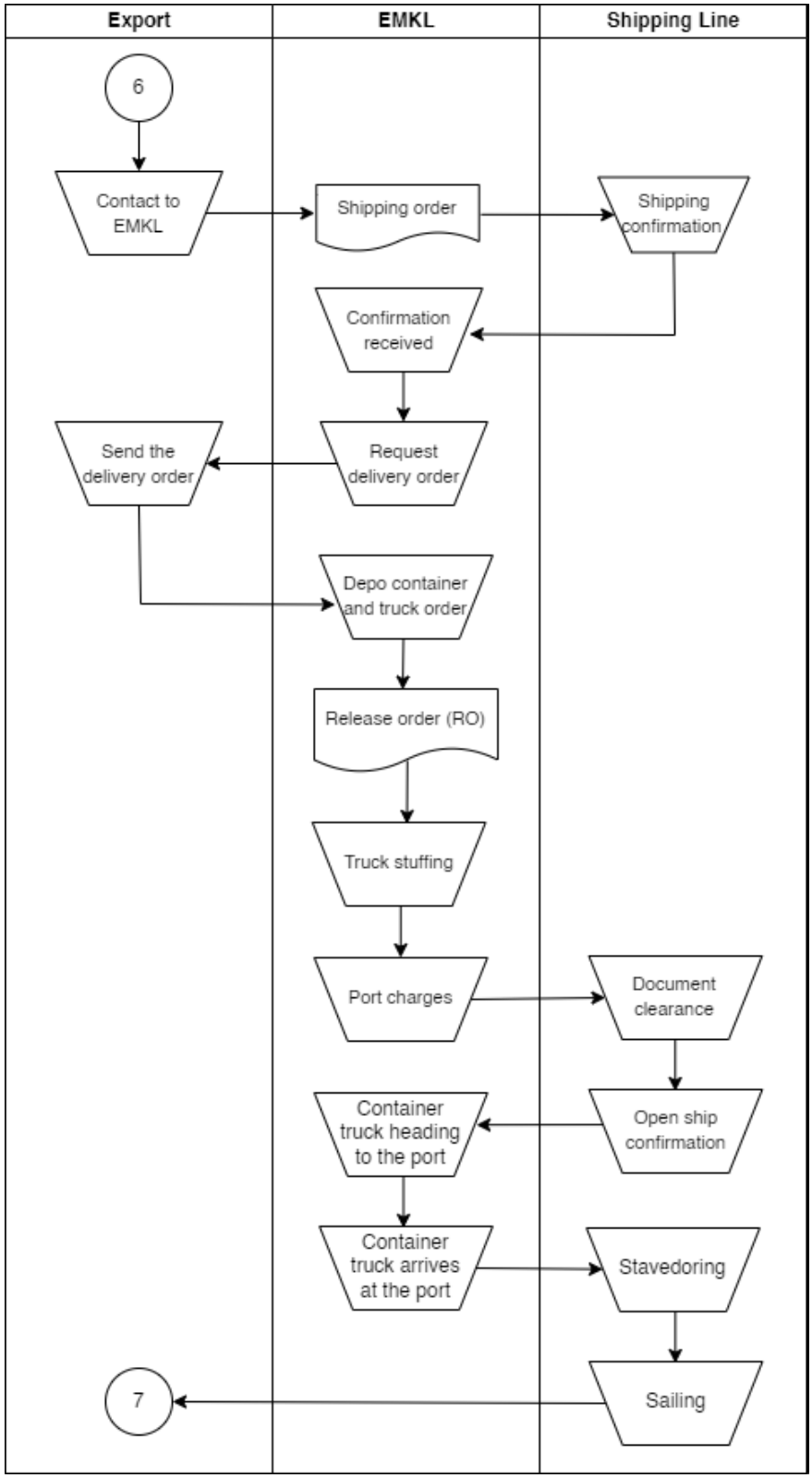


Figure 5. Business Process Analysis After Odoo ERP Implementation (Primary data processed, 2023)

User Acceptance Test

The purpose of UAT is to determine the success rate of the Odoo ERP system implementation (Surasma Surung et al., 2020). UAT is carried out by testing three UKM Naruna Ceramic employees who would serve

as system users. The GAP analysis approach based on (Nugroho, Lestari, et al., 2023) is used to fill the list of assertions regarding the suitability of the system for the company's needs, using NPF method, namely (1) N (No fit) means the system cannot meet the needs; (2) P (Partial) implies the system can meet the demands, but only partially; (3) F (Full) system can meet the needs of the entire system. Therefore, the combination of UAT and GAP analysis is shown in Table 1

Table 1. UAT Mix GAP Analysis Table

Number	Acceptance Requirements	Odoo System	Test Result (Number of User)		Comments
			Accept	Reject	
1	The system must automatically enter and save data on the results of the company's export sales transactions and raw material purchases.	Any data arising from export sales transactions and raw material purchases within the organization, such as the whole database of Quotation, Sales Order, Delivery Slip, Purchase Order, and Invoice will be automatically stored by the system.	3 (Commisis oner, Export and Accounting Staff)	0	
2	The system is capable of producing invoices, delivery slip, and purchase order in a patented format.	The system generate invoices, delivery slip, and purchase order automatically in a patented format, making it easier for users to the documents.	3 (Commisis oner, Export and Accounting Staff)	0	If possible, the delivery slip format should be the same as the packing list format that was already used.
3	The system can securely keep vendor and customer data and it is integrated into all company divisions.	The system automatically construct databases for vendors and customers, as well as transactions completed by each vendor and consumer.	3 (Commisis oner, Export and Accounting Staff)	0	
4	The system must automatically generate purchase order forms for vendors based on production demands related to customer demands.	According to customer requests, the system will automatically generate purchase orders for vendors based on the needs of production raw materials.	3 (Commisis oner, Export and Accounting Staff)	0	Vendors will not send raw materials until these requirements have been met. So that the production process cannot be carried out according to the time requested by the customer
5	The system has ability to create a secure database and integrated it into each division.	The Odoo system can manage permissions for users so that data security is very strong since users can only access what they require and all divisions's data can be integrated with one another.	3 (Commisis oner, Export and Accounting Staff)	0	

CONCLUSION

According to the results of interviews with the company, the implementation of information system design implementing ERP Odoo was very successful in overcoming the company's issues. And the results of the UAT test show that the system's level of fit with the company's needs seems quite appropriate.

Sugestions

According to the results of this study, it is expected that the company would be able to apply this information system as a whole to all divisions within the company, particularly the production division, due to the fact that production houses and offices are in different places.

If further research happens, it is suggested that modules linked to the sales management module, especially the installation of email marketing and marketing automation modules, would be able to be integrated. In order to better support the company's exports.

Limitation

The limitations of the sample documents provided were encountered during this research, and real implementation in companies requires a lengthy process that includes financial and human resource preparation, as well as socialization and commitment from all top management stakeholders down to the employee level.

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