

OPTIMIZING SUPPLY CHAIN MANAGEMENT THROUGH BUSINESS PROCESS REENGINEERING AT BK ROTAN FURNITURE

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Abstract

In the rapidly evolving era of digital transformation, technology plays a crucial role in revolutionizing business management, especially in the supply chain process. Traditional systems are now being replaced by integrated solutions such as Enterprise Resource Planning (ERP). One such ERP platform is Odoo, which offers comprehensive features to integrate various aspects of the business, from raw material procurement, inventory management, sales, invoicing, to Customer Relationship Management (CRM). With its open-source approach, Odoo gives companies the flexibility to customize the software to their specific needs. The implementation of Odoo at BK Rattan, a rattan manufacturing company, highlights the system's ability to streamline supply chain processes and modernize operations. The Odoo integration allowed BK Rattan to combine various key elements of the business, such as materials procurement, manufacturing planning, and customer relationship management. This accelerates data-driven decision-making and significantly reduces operational costs. This case study analyzes the implementation of BK Ratan. Data was collected through in-depth interviews and system analysis, which showed improved business process efficiency and cost savings. With seamless integration between functions, Odoo is able to improve supply chain visibility, speed up raw material procurement, optimize inventory, and simplify customer relationship monitoring. The results of this study confirm Odoo's role as a solution to address supply chain management challenges in the digital age. Besides driving efficiency and cost-effectiveness, the use of Odoo also supports business sustainability through better resource management and adaptability to market changes. Therefore, Odoo becomes a strategic partner in steering companies towards a successful digital transformation.

Keywords: Business process reengineering, Customer Relationship Management (CRM), Digital transformation, Enterprise Resource Planning (ERP), Supply chain management.

INTRODUCTION

BK Rattan Furniture Semarang is a creative industry engaged in the manufacture and marketing of rattan-based furniture. BK Rattan Furniture Semarang faces challenges in supply chain management, such as raw material miscalculation, sub-optimal inventory management, and the use of manual systems in document creation. In the midst of a 10% decline in global demand for rattan furniture in recent years, innovation is needed to improve the company's efficiency and competitiveness in the international market. Reliance on manual systems has led to operational inefficiencies as well as the absence of an integrated supply chain performance evaluation system.

The concept of Supply Chain Management (SCM) and the application of digital technology such as Odoo ERP have been proven to provide benefits in various industries, but its implementation in the rattan furniture sector, especially MSMEs, has rarely been studied. In addition, the SCOR model as a supply chain performance evaluation method has also not been widely used to measure the impact of digital innovation in this sector. Previous research has shown the importance of SCM

in improving efficiency (Eriksson *et al.*, 2013), the benefits of the SCOR model in performance evaluation (KyoungKwon *et al.*, 2018), as well as the potential of digital technology to optimize supply chains (Dehghani Sadrabadi *et al.*, 2023), but has not yet provided solutions specific to the rattan furniture industry.

This research aims to integrate Odoo application-based SCM in BK Rotan Furniture's operations to increase operational efficiency, improve inventory management, and support performance evaluation using the SCOR model. The implementation of digital technology such as Odoo ERP is expected to be a solution to overcome existing operational constraints, optimize the supply chain as a whole, and increase the company's competitiveness. This research will also identify operational constraints, design an Odoo ERP-based SCM system, and evaluate its effectiveness using the SCOR model. Thus, this research contributes to supporting the digital transformation of rattan furniture MSMEs in Indonesia, both theoretically and practically.

LITERATURE REVIEW

Supply chain management (SCM) is a strategic approach that aims to improve the efficiency and effectiveness of material, information, and financial flows in a system, from suppliers to end consumers. Christopher (2011) explains that integrated SCM can create value for customers through good coordination in planning, procurement, production, distribution, and product returns. In the MSME sector, effective SCM implementation has been proven to reduce waste and increase competitiveness.

Digitalization in the form of Enterprise Resource Planning (ERP) has also shown a positive impact on supply chain management. ERP systems, such as Odoo, enable the integration of various business functions, including inventory, finance, and logistics, in one centralized platform (Monk & Wagner, 2012). Research by Dehghani Sadrabadi *et al.* (2023) revealed that ERP adoption is able to increase productivity, reduce manual errors, and speed up the decision-making process, especially in MSMEs that face limited resources.

The SCOR (Supply Chain Operations Reference) model is a relevant framework for evaluating and improving supply chain performance. This model includes five main processes, namely Plan, Source, Make, Deliver, and Return (Supply Chain Council, 2017). KyoungKwon *et al.* (2018) showed that SCOR can help organizations identify operational weaknesses, design improvement strategies, and measure the impact of digital transformation on supply chain performance.

Digital transformation is a strategic necessity for MSMEs to compete in the global market. According to Eriksson *et al.* (2013), digitalization allows MSMEs to overcome resource limitations, reach a wider market, and improve operational efficiency. In the furniture sector, Wong *et al.* (2020) noted that the implementation of digital technologies, such as ERP, helps increase productivity, reduce waste, and support design flexibility. However, the implementation of technology in the rattan furniture sector requires adjustments to industry-specific characteristics, such as dependence on natural raw materials and flexibility of production processes.

Inventory management is also an important focus in supply chain management. Chopra and Meindl (2016) emphasize that effective inventory management can reduce storage costs, prevent raw material shortages, and ensure a smooth production process. With the help of technology such as ERP, inventory can be monitored in real-time, improving accuracy and supporting operational efficiency (Monk & Wagner, 2012).

RESEARCH METHOD

Based on the literature review, it can be concluded that the integration of digital technology-based SCM, such as Odoo ERP, as well as performance evaluation using the SCOR model, has great potential to overcome operational challenges at BK Rotan Furniture. This research contributes by contextually applying these concepts to the rattan furniture industry which faces declining global demand and the limitations of traditional operational systems.

3.1 Partner Search

The first stage in the research design was partner search. The research team focused on partners who have business reach on an international scale, and in this study, the partner object chosen was BK ROTAN.

3.2 Field Study

After the partner was found, the next step was to conduct a field study. The research team identified problems through observations and interviews with BK Rattan to obtain the necessary data.

3.3 Business Process Identification

Next, the identification of business processes at BK ROTAN was carried out. Business processes were identified by following the flow of product-related information from the raw material preparation process, production process, to product distribution to customers. Based on the results of this identification, the researcher then analyzes the identification results to find improvements and system development that can support existing business processes more optimally.

3.4 System Planning

The next stage is system planning, which is carried out in accordance with the needs analysis in the previous stage. The designed system is adjusted to the Odoo system used in this research to ensure compatibility between the needs and features available in the Odoo system, with the aim of producing a work system that can streamline business processes at BK ROTAN.

3.5 System Testing

After planning, testing of the Odoo system that has been created is carried out. System evaluation is carried out at this stage, and if there are deficiencies, improvements are made so that the system can meet the needs of BK ROTAN. This system improvement is carried out on parts that are still not optimal. The results of these improvements are expected to be able to produce a system that will help business processes at BK ROTAN.

3.6 System Implementation

The last stage is system implementation. The results of this improvement process are implemented in the BK ROTAN business process, starting from ordering raw materials to vendors, the production process, to the distribution of goods to customers.

The development model used in this study refers to the development model according to Borg & Gall. Based on the definition of research and development according to Borg & Gall, this is a process used to develop or validate products used in education. This model includes systematic steps including (1) research and data collection, (2) planning, (3) development of product drafts, (4)

field trials, (5) refinement of initial products, (6) field trials, (7) refinement of field test products, (8) field implementation tests, (9) refinement of final products, and (10) dissemination and implementation. These steps were carried out by researchers in order to create a model of ERP system implementation in small and medium enterprises. This research was conducted at BK Rattan with primary data obtained through observation and interviews with BK Rattan.

Aspect	Details
Objective	Optimize supply chain efficiency and operational performance through ERP Odoo implementation.
Challenges Identified	• Lack of integrated systems causes supply chain management difficulties. • Resistance to change and organizational culture adaptation.
Expected Benefit	• Centralized management of operations (production, distribution, etc.). • Improved decision-making with better visibility of the supply chain. • Increased operational efficiency, cost reduction, and productivity enhancement.

RESULTS AND DISCUSSION

The research results indicate that the implementation of Odoo ERP in optimizing the supply chain at BK ROTAN FURNITURE Semarang has significant potential to improve the company's efficiency and operational performance. Through direct interviews with relevant parties within the company, we identified several key findings such as the need for system integration. Respondents revealed that the current separate and non-integrated systems cause complexity in supply chain management. The implementation of Odoo ERP is expected to address this issue by providing a unified platform to manage all operational aspects, from production to distribution.While acknowledging the potential benefits of ERP implementation, respondents also recognized that the challenges of adaptation and organizational culture change could be obstacles. The process of change required to adopt the new system must be managed eff The results show that the implementation of Odoo ERP in optimizing the supply chain at BK ROTAN FURNITURE Semarang has significant potential to improve the company's operational efficiency and performance. Through direct interviews with relevant parties within the company, we identified some key findings such as the need for system integration. Respondents revealed that the current separate and unintegrated

systems cause complexity in supply chain management. The implementation of Odoo ERP is expected to address this issue by providing a unified platform to manage all aspects of operations, from production to distribution. While acknowledging the potential benefits of ERP implementation, respondents also recognized that the challenges of adaptation and organizational culture change can be an obstacle. The change process required to adopt a new system must be managed effectively to ensure successful implementation. Overall, we anticipate that the implementation of Odoo ERP will bring significant improvements in operational efficiency, cost reduction, and increased productivity. They expect that the system will provide greater visibility across the supply chain, enabling faster and more accurate decision-making. Overall, we anticipate that the implementation of Odoo ERP will bring significant improvements in operational efficiency, cost reduction, and increased productivity. They expect that this system will provide greater visibility across the entire supply chain, enabling faster and more accurate decision-making.

1.Login Page

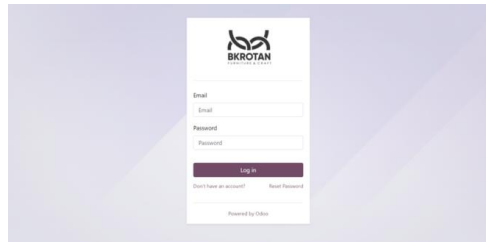


Figure 1. Login Odoo Bk Rotan
Source: Primary data processed, 2024

The Login Page on the Odoo website serves as a standard security feature to safeguard the confidentiality of company data. Designed with a simple and intuitive interface, the login page allows users to easily enter their username and password. This login feature functions as a crucial security layer to protect the confidentiality of company data. With strong authentication, access to the Odoo ERP system is restricted only to users with valid credentials, ensuring that sensitive company data is protected from unauthorized access and potential security breaches.

2.The Main Page Display of Odoo

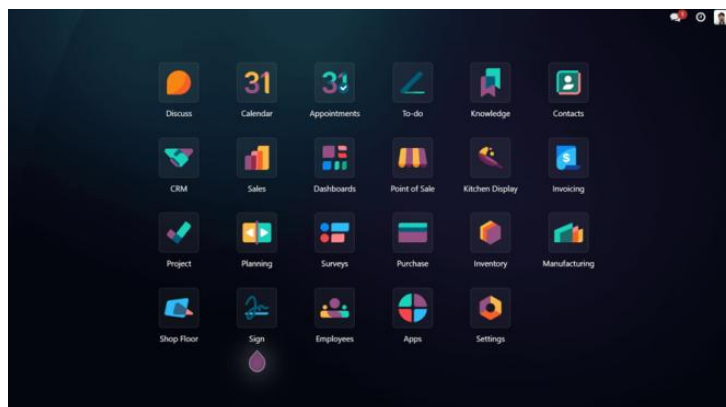


Figure 2. Initial odoo display of BK Rotan
Source: Primary data processed, 2024

The Odoo main page can be accessed after the user logs in. On the main page, there are applications that have been installed according to the needs, such as CRM, Purchase, Inventory, Manufacturing, Sales, Invoicing. After the user successfully logs in, they will be directed to the Odoo main page which displays various applications that have been installed according to the company's needs. On this main page, users can access important modules such as CRM for managing customer relationships, Purchase for procurement management, Inventory for inventory management, Manufacturing for production processes, Sales for sales, and Invoicing for invoicing. This layout is designed to be intuitive and user-friendly, allowing users to quickly access and manage various aspects of the company's operations from one integrated platform.

3.Purchase Module

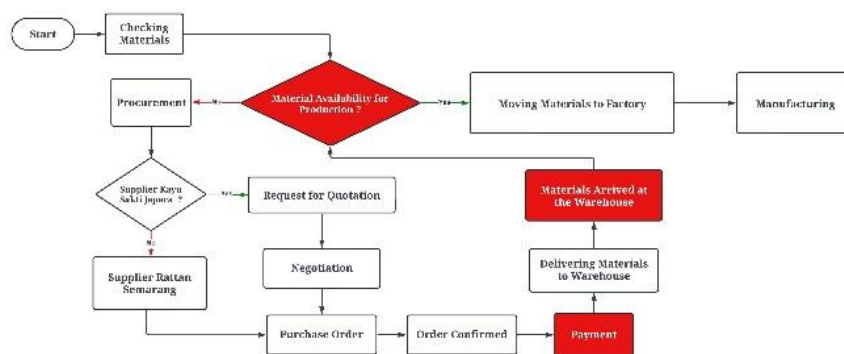


Figure 3. Flowchart Purchase BK Rotan

Source: Primary data processed, 2024

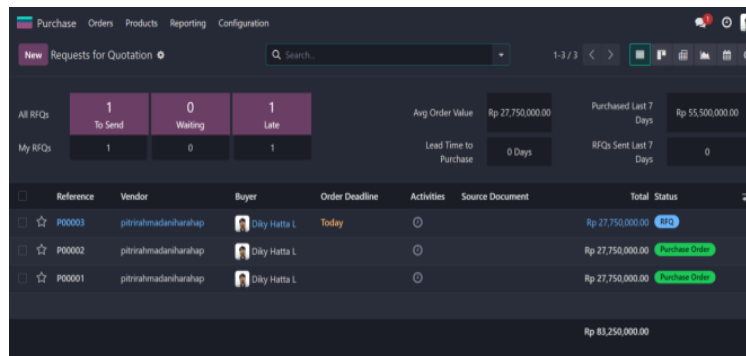


Figure 4. Odoo purchase section

Source: Primary data processed, 2024

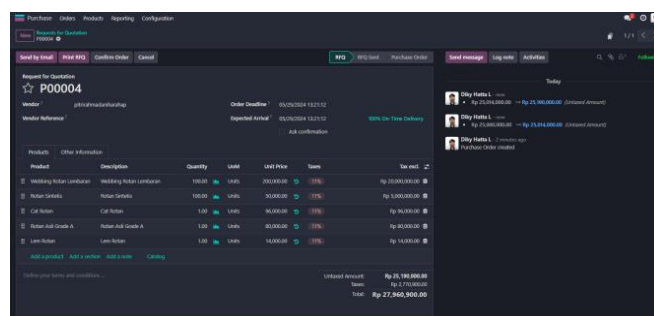


Figure 5. Odoo RFQ section

Source: Primary data processed, 2024

The role of purchasing can be expanded to collect, analyze, and process internal and external data within the organization to support complex decision-making processes (Bienhaus and Haddud, 2018). Therefore, the purchasing function evolves into a strategic interface that promotes efficiency, effectiveness, and profitability for the entire organization. Ohman *et al.* (2021) found that the integration of data, analytical knowledge, and PSM knowledge affects the analytical capabilities of the PSM function. Company structure and collaboration between departments are crucial for analytics, along with data and tools (Ohman *et al.*, 2021). The use of effective information processing technology helps integrate, store, and manage data for decision-making (Karttunen *et al.*, 2023a).

Effective contract management involves arranging the procurement workflow cycle to payment and can control errors and conflicts between invoices and purchase orders as well as negotiated requirements (Allal-Cherif *et al.*, 2021; Handfield *et al.*, 2019). Applications are useful for developing procurement strategies and organizing negotiations with vendors (Karttunen *et al.*, 2023).

The Purchasing application is utilized to support the procurement operations of raw materials for rattan furniture from suppliers, ranging from RFQ to confirmation and validation that the purchased raw materials have arrived at the company's warehouse.

The Purchase application in Odoo is used to support the procurement operations of raw materials for rattan furniture from suppliers. This process begins with the creation and sending of Request for Quotation (RFQ) to suppliers. Upon receiving quotations, the company can negotiate and select the best supplier before confirming the purchase order. This application also allows users to monitor the status of raw material deliveries and validate when the raw materials arrive at the company's warehouse. Thus, the entire purchasing process becomes more organized, efficient, and transparent, ensuring that raw materials are available on time and in suitable conditions.

4.Manufacturing Module

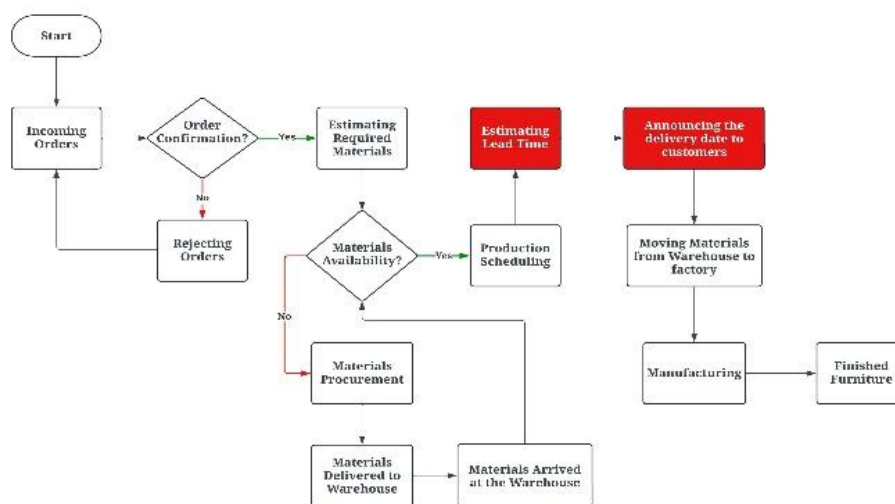
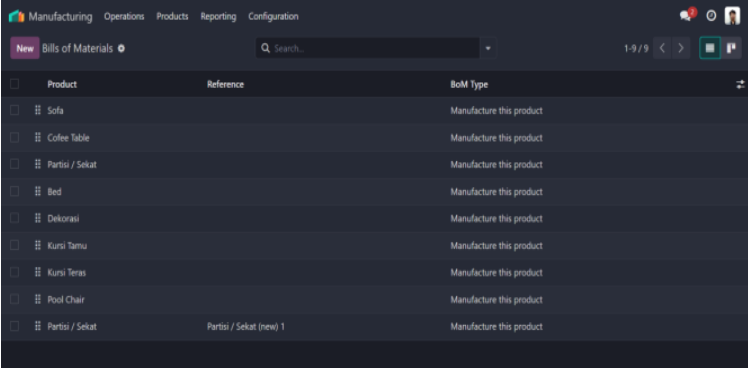


Figure 6. Flowchart manufacturing BK Rotan
Source: Primary data processed, 2024



Product	Reference	BoM Type
Sofa		Manufacture this product
Coffee Table		Manufacture this product
Partisi / Sekat		Manufacture this product
Bed		Manufacture this product
Dekorasi		Manufacture this product
Kursi Tamu		Manufacture this product
Kursi Teras		Manufacture this product
Pool Chair		Manufacture this product
Partisi / Sekat	Partisi / Sekat (new) 1	Manufacture this product

Figure 7. Odoo manufacturing
Source: Primary data processed, 2024

Manufacturing flow management is an SCM process that encompasses all activities required to move products through the factory (Goldsby and Garcia-Dastugue, 2003). Many sustainable supply chain and operational flow strategies begin with lean and six sigma process improvement initiatives (Souza, 2012), assuming that leaner processes will require less energy and reduce resource consumption. In many cases, these improved processes do indeed lead to better resource utilization. However, while optimizing the entire supply chain is the goal, these initiatives often result in local optimization. Therefore, more collaborative work is needed from SCM and CE experts to determine how to streamline the entire supply chain while managing flow at a consistent supply chain level consistent with resource conservation principles. The goal, then, is not resource savings but rather comprehensive resource recapitalization (Hazen *et al.*, 2020).

The manufacturing application serves as a production system. There are features to determine the bill of materials, which contains a list of required raw materials and their quantities, making it easier for each rattan furniture production. Additionally, there is also input lead time so that the waiting time for production until the furniture is finished will automatically follow the lead time.

5.Inventory Module

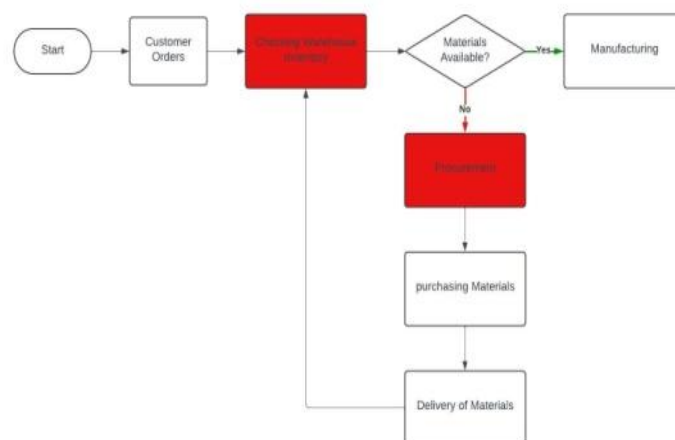
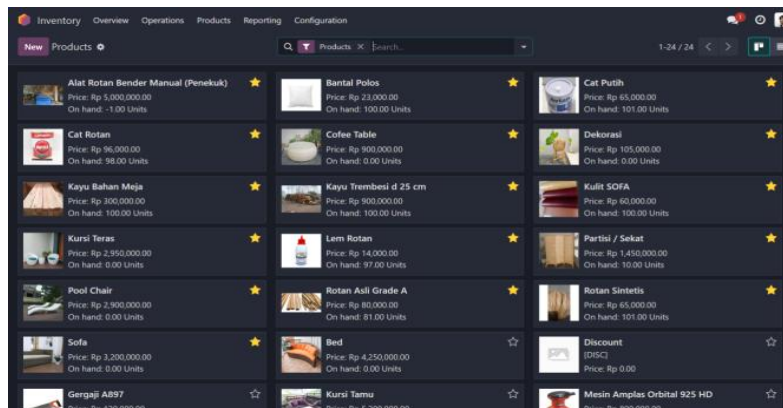


Figure 8. Flowchart inventory BK Rotan
Source: Primary data processed, 2024



Product	Price	On hand
Alat Rotan Bender Manual (Penekuk)	Rp 5,000,000.00	-1.00 Units
Bantal Polos	Rp 23,000.00	100.00 Units
Cat Putih	Rp 65,000.00	101.00 Units
Cat Rotan	Rp 96,000.00	98.00 Units
Coffee Table	Rp 900,000.00	0.00 Units
Dekorasi	Rp 105,000.00	0.00 Units
Kayu Bahan Meja	Rp 300,000.00	100.00 Units
Kayu Trembel d 25 cm	Rp 900,000.00	100.00 Units
Kulit SOFA	Rp 60,000.00	100.00 Units
Kursi Teras	Rp 2,950,000.00	0.00 Units
Lem Rotan	Rp 14,000.00	97.00 Units
Partisi / Sekat	Rp 1,450,000.00	10.00 Units
Pool Chair	Rp 2,900,000.00	0.00 Units
Rotan Asli Grade A	Rp 80,000.00	81.00 Units
Rotan Sintetis	Rp 65,000.00	101.00 Units
Sofa	Rp 3,200,000.00	0.00 Units
Bed	Rp 4,250,000.00	0.00 Units
Discount (DISC)	Rp 0.00	0.00 Units
Gerbang AIS7	Rp 170,000.00	0.00 Units
Kursi Tamu	Rp 5,200,000.00	0.00 Units
Mesin Ampelas Orbital 925 HD	Rp 800,000.00	0.00 Units

Figure 9. Odoo inventory section
Source: Primary data processed, 2024

Inventory management offers greater competitive advantage than other SCM strategies. The implementation of better strategies will provide a significant position in the international market. Organizations achieve significant growth as a result of market-driven development policies. However, the possibility of SCM failure questions the success of other strategies (Owusu-Kwateng *et al.*, 2022).

In the realm of inventory control strategies, several factors contribute to supply uncertainty, including lead time, cost, and supply disruption risk (Zhou *et al.*, 2023).

The Inventory application in Odoo is utilized to monitor the stock of furniture and raw materials owned by BK Rotan. Through this application, the company can easily track the quantity and location of available goods (onhand). Detailed information about stock, including available quantity, storage location, and status, is available in real-time. Thus, the management team can efficiently manage inventory, avoid stock shortages or excess, and plan procurement better. This helps BK Rotan maintain smooth operations and meet customer demands more effectively.

6.Sales Module

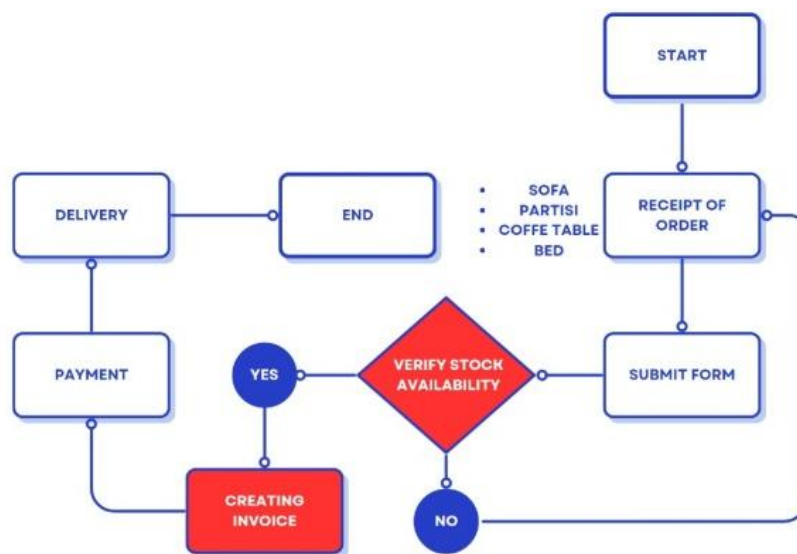


Figure 10.Flowchart sales Bk Rotan
Source: Primary data processed, 2024

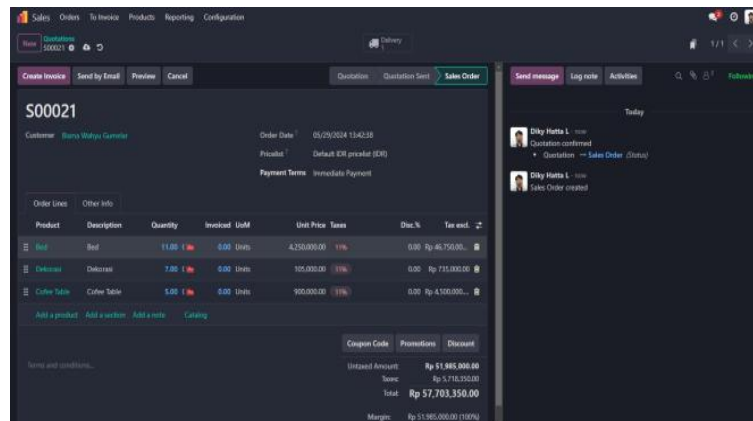


Figure11. Odoo screenshot sales order section

Source: Primary data processed, 2024

Order fulfillment refers to processes related to the receipt, processing, and delivery of orders (Croxtton, 2003). The processes related to order receipt and processing have substantially changed over the past few years, evolving from orders received via telephone, fax, or mail to orders received via electronic data interchange, e-commerce, and fully automated processes. These advancements will form the basis of order fulfillment practices, and industry leaders have introduced disruptive innovations that will transform the order fulfillment landscape in ways that can ultimately sustain (Hazen *et al.*, 2020).

The Sales Order display in Odoo before invoice creation presents comprehensive and detailed information about the sales orders that have been placed. This page includes details such as customer name, order date, quantity of items ordered, unit price, and total order. Users can also view shipment status, including estimated delivery dates and inventory status. Additionally, the Sales Order display allows users to add special notes or specific instructions from the customer. With this clear and structured information, the sales team can easily track pending orders, monitor inventory availability, and prepare for the next steps in the sales process before invoice creation.

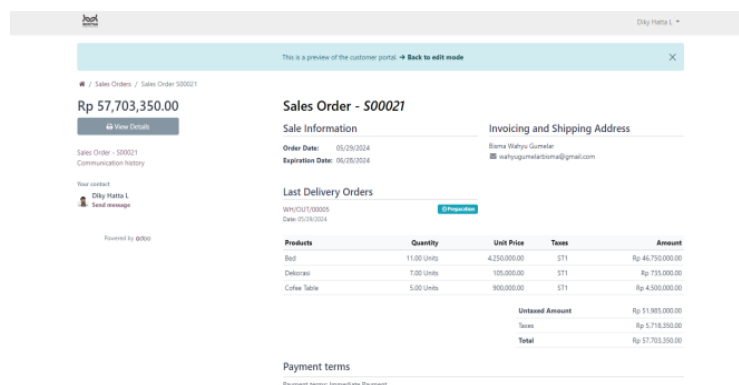


Figure 12. Odoo screenshot sales order preview section

Source: Primary data processed, 2024

The preview of Sales Orders in Odoo provides users with a comprehensive and detailed overview of the sales orders before confirmation. In this view, users can see all information related to the order, including customer details, the list of products ordered, quantities, unit prices, total

costs, applied discounts, and applicable taxes. This display also presents the order status, expected delivery dates, and payment terms. With this preview feature, users can ensure that all order information has been input correctly, minimizing errors before the orders are sent to customers. Additionally, this preview facilitates internal communication and coordination between the sales, production, and shipping teams, ensuring that the entire process runs smoothly and efficiently.

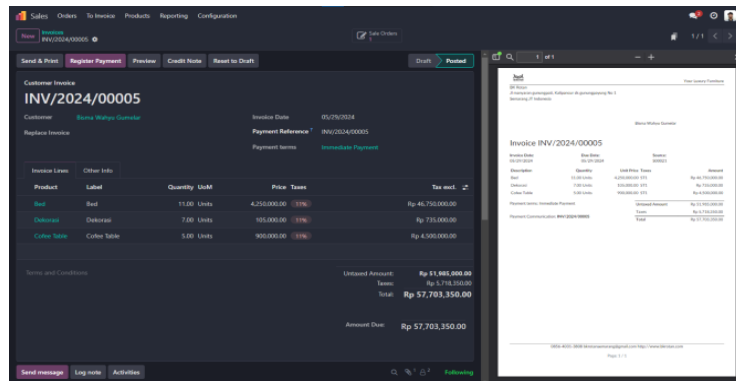


Figure 13. Odoo screenshot invoice section

Source: Primary data processed, 2024

The print invoice output in Odoo before registering payment displays comprehensive information about the sales transaction that has been conducted. The invoice includes details such as the company name and address, customer name and address, invoice number, invoice date, and a description of the goods or services sold. Additionally, subtotals, applicable taxes, and the total amount due by the customer are clearly stated. This invoice layout is designed to facilitate customers in understanding the details of their transactions before making payments. With this invoice, the company can ensure transparency and accuracy in every transaction, as well as facilitate the billing and financial recording process. The invoice covers all important details such as invoice number, issue date, customer information, description of goods or services purchased, quantity, unit price, total cost, and payment terms. The customizable invoice design allows the company to add a logo and branding elements, providing a professional touch that reinforces the company's image. Furthermore, the generated digital format facilitates storage and delivery to customers, increasing efficiency and reducing the likelihood of errors. Odoo invoices also support payment tracking features, helping the company monitor payment status in real-time.

7. CRM

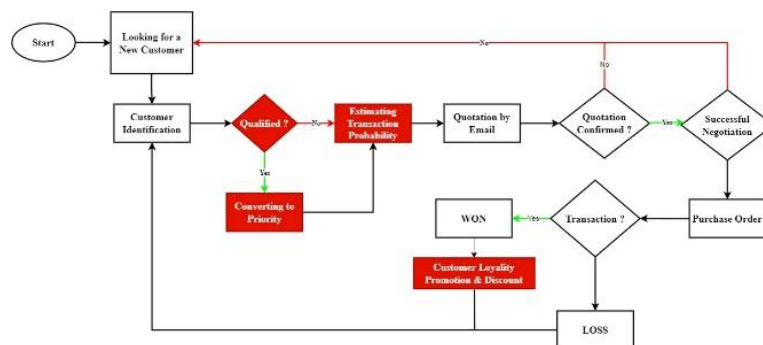


Figure 14. CRM flowchart BK Rotan

Source: Primary data processed, 2024

Customer Relationship Management (CRM) encompasses all processes related to a company's customers, linking customers with the entire supply chain processes of the company. CRM involves reviewing corporate strategies and marketing, segmenting customers, and deciding how to differentiate offers (Lambert, 2014). Decisions in CRM should be vertically aligned with corporate-level strategies. Assuming the adoption of a turnover orientation at the corporate level, there are many areas where CRM processes are restructured to support the implementation of economic turnover (Hazen *et al.*, 2020).

By leveraging CRM applications, BK Rotan can foster better relationships with customers, increase customer retention, and ultimately enhance profitability. With the Odoo application, BK Rotan can easily identify customers, manage them, and implement various programs to enhance customer loyalty such as discounts or promotions.

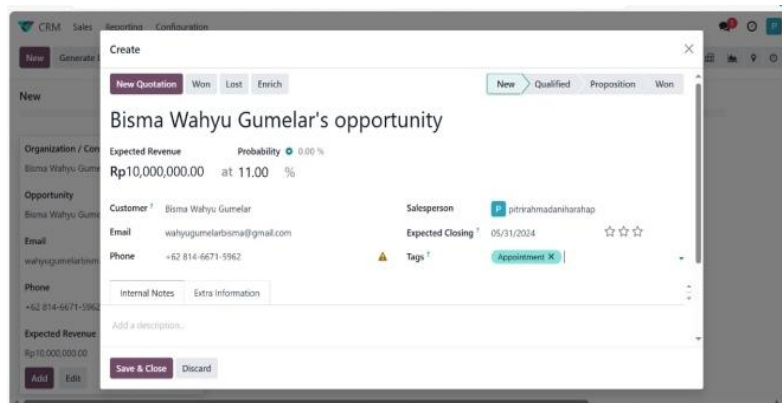


Figure 15. Odoo screenshot leads section
Source: Primary data processed, 2024

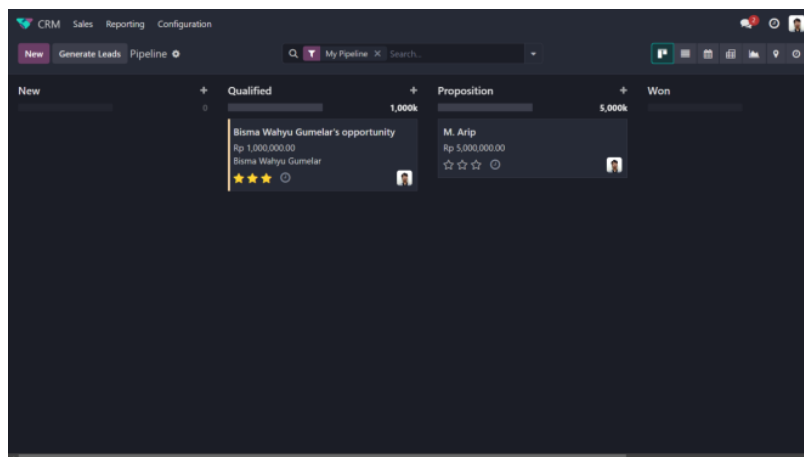


Figure 16. Odoo screenshot pipeline section
Source: Primary data processed, 2024

The CRM view in Odoo for generating leads is designed to allow users to easily manage sales prospects. On this page, users can input detailed information about potential customers, including their name, contact details, lead source, and specific needs. This feature enables users to track the status of each lead, from the initial stage to becoming more concrete sales opportunities. This user-friendly interface is also equipped with various analysis and reporting tools, aiding the sales team in

identifying potential prospects, prioritizing follow-ups, and optimizing marketing strategies. With Odoo CRM, the lead management process becomes more structured and effective, increasing conversion opportunities and business growth.

DISCUSSION

A research gap is a gap or discrepancy in the research that arises in the systematic discussion where drawing conclusions is still limited (Lira, 2020).

The following is an analysis of the gap between the existing business processes at BK Rotan and BPR. N (No Fit) means the system does not meet the requirements. P (Partial) means the system meets the requirements, but only partially. F (Full) means the system meets the requirements entirely. This reflects an evaluation of how well the Odoo ERP can align with the needs and improve the existing business processes.

GAP ANALYSIS					
No	Business process	Need			INFORMATION
		N	P	F	
1	Purchase			V	AS IS (Existing Process Business) There are no records of payment and receipt of goods at the warehouse Odoo ERP system (Business Process Reengineering) It is automatically recorded in Odoo and price calculations do not need to be calculated using a calculator one by one
2	Supply			V	Check regularly for inventory in the warehouse Procurement of raw materials from suppliers is contacted one by one and there is no RFQ Can view inventory easily with On Hand monitoring Raw material procurement is automatically recorded in Odoo and there is an RFQ feature and send by email to suppliers
3	Manufacture			V	Leadtime not estimated There is no schedule or ability to estimate that the furniture will be delivered by a certain date to the customer Leadtime can be specified and the length of the waiting time automatically follows In Odoo, products can be estimated when the goods will be ready by scheduling them
4	Sale			V	Checking the inventory of ready-to-sell furniture in the warehouse Invoices are created one by one Can monitor via On Hand Invoices automatically created
5	CRM			V	Haven't implemented CRM and don't think it's important In Odoo there are features for implementing CRM and it is easy to use to support BK Rotan's economic turnover and increase customer loyalty.

Table1. Gap Analysis
source: processed primary data, 2024

The gap analysis results indicate that the implementation of Odoo ERP in optimizing the supply chain at BK ROTAN FURNITURE Semarang has significant potential to improve the company's efficiency and operational performance. These findings were obtained through direct interviews with the production manager, logistics manager, and IT personnel involved in supply chain management. These interviews provided in-depth insights into purchasing, inventory, manufacturing, sales, and CRM.

BK Rotan revealed that the current separate and non-integrated systems cause complexity in supply chain management. This difficulty impacts operational efficiency and the ability to manage inventory and distribution processes effectively.

Supply chain literature suggests the application of various aspects of circular economy thinking and sustainable supply chain management (Govindan & Soleimani, 2017; Guide & Van Wassenhove, 2009; Stindt et al., 2016; Liu et al., 2018). However, the application of this thinking across different fields remains fragmented (Geissdoerfer et al., 2018). Systematic application of

these principles can leverage insights from GSCM, SSCM, and CLSCM while addressing differences in these fields (Hazen *et al.*, 2020).

The gap analysis above compares the current business processes (AS IS) with the proposed business processes after implementing Odoo ERP (business process reengineering). This gap analysis identifies needs in various business processes at BK Rotan, such as purchasing, inventory, manufacturing, sales, and customer relationship management (CRM).

Of the five aspects considered, the owner of BK Rotan believes that the Odoo ERP software can meet the needs and improve efficiency, especially in monitoring warehouse inventory.

Although the implementation results show positive potential for the Odoo ERP implementation, the owner chose not to use it because they are still comfortable with the existing system (AS IS). For author/s of only one affiliation (Heading 3): To change the default, adjust the template as follows.

CONCLUSION

The implementation of Odoo ERP at BK Rotan has the potential to increase efficiency in the process of creating digital invoices and overall company operations. Without the implementation of Odoo ERP, all operations must be performed individually and not integrated, increasing the likelihood of human error. This includes errors in transaction recording, which can lead to inefficiency and data inaccuracies. Despite this, BK Rotan's partner does not plan to adopt Odoo ERP as the owner feels more comfortable with the current system, despite its various challenges and limitations.

This research shows that the implementation of Odoo ERP in optimizing the supply chain at BK ROTAN FURNITURE Semarang has significant potential to improve the company's efficiency and operational performance. Key findings from interviews with relevant parties within the company indicate that the current separate systems create complexity in supply chain management. System integration through Odoo ERP is expected to provide a unified platform to manage all aspects from production to distribution. However, adaptation challenges and organizational culture changes are acknowledged as obstacles that need to be managed effectively for successful implementation. Respondents expect that Odoo ERP will increase operational efficiency, reduce costs, and improve productivity by providing greater visibility across the supply chain, enabling faster and more accurate decision-making. Therefore, the implementation of Odoo ERP is expected to bring significant positive changes to BK ROTAN FURNITURE Semarang.

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REFERENCES

- Chen, L., Lu, Y., & Zhao, R. (2019). Analysis and application of modern supply chain system in China. *Modern Supply Chain Research and Applications*, 1(2), 106–119. <https://doi.org/10.1108/mscra-01-2019-0004>.
- Dehghani Sadrabadi, M. H., Makui, A., Ghousi, R., & Jabbar zadeh, A. (2023). An integrated optimization model for planning supply chains' resilience and business continuity under interrelated disruptions: a case study. *Kybernetes*. <https://doi.org/10.1108/K-04-2023-0547>.
- Eriksson, D., Hilletoft, P., & Hilmola, O. P. (2013). Creating value through whole saler and retailer interface. *Industrial Management b and Data Systems*, 113(8), 1169–1188. <https://doi.org/10.1108/IMDS-02-2013-0078>.
- Hazen, B. T., Russo, I., Confente, I., & Pellathy, D. (2020). Supply chain management for circular economy: conceptual framework and research agenda. *International Journal of Logistics Management*, 32 (2), 510–537. <https://doi.org/10.1108/IJLM-12-2019-0332>.
- Karttunen, E., Lintukangas, K., & Hallikas, J. (2023a). Digital transformation of the purchasing and supply management process. *International Journal of Physical Distribution and Logistics Management*, 53 (5–6), 685–706. <https://doi.org/10.1108/IJPDLM-06-2022-0199>.
- Karttunen, E., Lintukangas, K., & Hallikas, J. (2023b). Digital transformation of the purchasing and supply management process. *International Journal of Physical Distribution and Logistics Management*, 53(5–6), 685–706. <https://doi.org/10.1108/IJPDLM-06-2022-0199>.
- Kyoung Kwon, O., Han, H.-N., & Chung, H.-M. (2018). Evaluation of Supply Chain Financial Performance from the Perspective of Balance, Strength, and Resiliency: A Case of Korean Enterprises. In *Journal of International Logistics and Trade* (Vol. 16, Issue 1).
- Mulyana, A., & Setiawan, R. (2024). Pengembangan Model Logistik Terpadu pada Industri Furniture Rotan. *Jurnal Manajemen dan Bisnis*, 15(2), 89–102.
- Owusu Kwateng, K., Fokuoh, B., & Tetteh, F. K. (2022). The relationship between vendor managed inventory and operational performance. *Modern Supply Chain Research and Applications*, 4(3), 202–222. <https://doi.org/10.1108/mscra-03-2022-0009>
- Prasetyo, B., & Susanto, A. (2023). Implementasi Teknologi Informasi dalam Manajemen Rantai Pasok Industri Rotan. *Jurnal Teknologi Informasi dan Bisnis*, 8(1), 45–56.
- Rimmer, P. J., & Hamilton, M. K. (2008). Integrating the supply chain management system operated by multinational corporations within global logistics. In *JOURNAL OF INTERNATIONAL LOGISTICS AND TRADE* (Vol. 45, Issue 1).
- Santoso, C., & Suryanto, D. (2022). Penerapan Sistem ERP dalam Meningkatkan Efisiensi Produksi dan Distribusi. *Jurnal Sistem Informasi Bisnis*, 5(2), 78–89.
- Wibowo, E., & Pratama, F. (2021). Analisis Kinerja Rantai Pasokan Menggunakan Metode SCOR pada Industri Furniture Rotan. *Jurnal Manajemen Operasi dan Logistik*, 12(1), 34–47.
- Widianto, G., & Cahyono, H. (2020). Strategi Pengembangan Pasar Ekspor Produk Furniture Rotan. *Jurnal Bisnis dan Ekonomi Global*, 9(2), 110–123.
- Zhou, Y., Shen, X., & Yu, Y. (2023). Inventory control strategy: based on demand forecast terror. *Modern Supply Chain Research and Applications*, 5(2), 74–101. <https://doi.org/10.1108/mscra-02-2023-0009>