IMPLEMENTATION OF ERP-BASED AUTOMATED INVENTORY MANAGEMENT SYSTEM AT SABANA FRIED CHICKEN FRANCHISE COMPANY

Antonius Cahyono[1*], Manik Ayu Titisari[2], M. Nusron Ali M[3]
[1,2,3] Universitas PGRI Adi Buana Surabaya
Email: antonwongso168@gmail.com

Abstract

The implementation of an Automated Inventory Management System (AIMS) based on Enterprise Resource Planning (ERP) has a crucial role in improving the operational efficiency of franchise companies. This research investigates the AIMS implementation strategy for Sabana Fried Chicken, detailing the process and benefits. Qualitative approaches and literature analysis are used to deeply understand this implementation. Sabana Fried Chicken adopts JD Edwards Enterprise One 9.0 to manage accounting and inventory. The system facilitates tight control over inventory, allowing store managers to accurately plan, manage, and forecast inventory. In addition, this system also simplifies the process of journal entry, allocation, and bank account reconciliation. A deep understanding of the Operational Information System, Enterprise Collaboration System, Sabana Fried Chicken Management System, and Sabana Fried Chicken's Field Management System was revealed. Successful implementation is supported by comprehensive employee training, efficient inventory management, as well as adaptation to fluctuations in customer demand. Risk coverage analysis and SWOT analysis highlight the challenges and opportunities facing companies, with strategic recommendations to address risks and capitalize on existing opportunities. This research provides in-depth insight into AIMS implementation strategies in franchise companies and makes important contributions to the inventory management and ERP literature. The findings are expected to guide other companies in facing similar challenges and harnessing the full potential of technology to improve their efficiency and competitiveness.

Keywords: AIMS, ERP, Sabana, Inventory Management

Introduction

In the modern business era that continues to grow, efficient and accurate inventory management is one of the key aspects of maintaining company sustainability. Companies, including Sabana Fried Chicken, are increasingly recognizing the importance of adopting technology to automate and improve their inventory management (Nashrullah, 2019). *Automated Inventory Management System* (AIMS) Enterprise Resource Planning (ERP)-based has become the top choice for many companies, including Sabana Fried Chicken, in improving the efficiency and accuracy of inventory management. Sabana Fried Chicken, a franchise company with over 1300 business partners, understood the need to update their inventory management system (Nugroho et al., 2019). To improve operational efficiency and provide the best service to customers, Sabana Fried Chicken decided to adopt an ERP-based Automatic Inventory Management System. This decision

is based on the understanding that good inventory management not only minimizes costs and increases efficiency, but also plays an important role in increasing customer satisfaction and maintaining the Company's reputation (Suminten, 2019).

A case research conducted by Septian Widianto, a researcher at Semarang State University, proves the importance of implementing this system in minimizing errors in data management and speeding up the process of incoming and outgoing goods transactions (Utami et al., 2020). With the adoption of this system, Sabana Fried Chicken is expected to achieve a higher level of accuracy in tracking their inventory, automatically reordering, and optimizing stock management. This research will examine the implementation process of an ERP-based Automated Inventory Management System in Sabana Fried Chicken using qualitative methods (Ikhsan et al., 2020). Through observation and analysis of documents, this research analyze depth how these systems are implemented and the concrete benefits derived by companies from the application of these technologies.

In addition, case studies in research conducted by Titisari, Karya, dan Hadi (2021) Became a reference in making this research. In this research, SWOT analysis is used to formulate problems from internal and external factors of the company. Meanwhile, the Analytical Network Process (ANP) method is used to assess the weight of each alternative strategy so that the strategy with the highest priority weight can be identified. Using Super Decision software, the best alternative strategy for Soya Agung is to promote products and education with a weight of 0.214760. Research findings show that industries that can compete in the modern market require the right marketing strategy. As an SME that produces tempeh from local non-genetically modified soybeans, Soya Agung still has limitations in marketing its products.

Thus, this research will not only provide a comprehensive overview of the implementation process and benefits obtained by Sabana Fried Chicken but can also be a valuable reference for other companies that are considering the adoption of an ERP-based Automated Inventory Management System (Winarto, 2021). The research aims to develop a business strategy for Small and Medium Enterprises (SMEs) making organic tempeh using SWOT analysis and Analytical Network Process (ANP) with formulate problems from internal and external factors, develop alternative strategies, and select, and make strategic decisions that are in line with company goals. It is expected that the results of this research will not only increase our understanding of the importance of technology in managing inventory but also make a positive contribution in increasing the productivity and competitiveness of companies in this digital era.

Method

This research uses a qualitative approach with a literature research to investigate the implementation of *an Automated Inventory Management System* based on *Enterprise Resource Planning* (ERP) in Sabana Fried Chicken companies. The qualitative approach was chosen because this research aims to understand in depth the implementation process as well as the benefits obtained by companies from this automated inventory management

system. Literature research became the main method in this research. Researchers will collect data from various literature sources, including scientific journals, books, articles, and documentation related to the implementation of *ERP-based Automated Inventory Management Systems* in similar companies (Firmansyah & Hidayat, 2021). This literature analysis will be conducted carefully to understand the concepts, theories, and best practices associated with ERP-based automated inventory management systems.

The research process begins with the identification of relevant literature on the Automated Inventory Management System and its implementation in the business context, especially in the restaurant and franchise industries such as Sabana Fried Chicken. The literature data found will be filtered based on inclusion and exclusion criteria to ensure the accuracy and relevance of the information used in the research. In addition, this research will also involve critical analysis of case studies, scientific articles, and research reports related to the implementation of *the Automated Inventory Management System* in companies similar to Sabana Fried Chicken. The data from the literature research will be carefully organized, analyzed, and compiled to gain an in-depth understanding of the implementation process and the benefits obtained by the company from this system.

Qualitative analysis methods will be used to evaluate the literature data that has been collected. This approach allows researchers to dig deep into information about the implementation of ERP-based Automated Inventory Management Systems, including challenges that may be faced by companies and effective strategies for overcoming these problems. Through a literature research approach with this qualitative method, this research is expected to provide deep insight into the process of implementing an ERP-based Automated Inventory Management System in Sabana Fried Chicken companies and the benefits obtained by the company (Fanani et al., 2022). The results of this research are expected to contribute to the scientific literature on inventory management and serve as a useful reference for other companies interested in adopting similar technologies in managing their inventory.

Result and Discussion
Sabana Fried Chicken Operational Information System

Sabana Fried Chicken's Operational Information System uses a Transaction Processing System (TPS) as an important part of supporting its business operations. TPS is responsible for processing and recording business transaction data in two basic principles, namely batch processing and real-time (online) processing. Sabana Fried Chicken has integrated a computer network with their customers, providing order information through a Point of Sale (POS) system. POS is a vital part of the operational process, managing direct transactions with customers. The transaction process starts when the customer orders food, the cashier checks the stock inventory, and if stock is available, the cashier inputs the transaction data and delivers the food to the customer. If stock is not available, customers can choose another menu or wait (Christianto, 2022). After payment is made, the cashier gives the food along with the payment receipt to the

customer. This shows how important this system is in supporting customer experience and managing transactions efficiently at Sabana Fried Chicken.
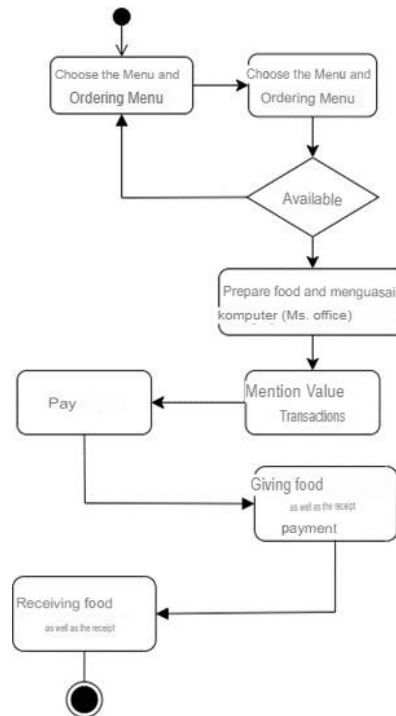

Figure 1. Sabana Fried Chicken Operational Information System Flowchart

Enterprise Collaboration System (ECS)

The Enterprise Collaboration System (ECS) adopted by the Sabana Fried Chicken franchise company marks a step forward in optimizing communication and collaboration within the company. By utilizing intranet, extranet, and internet, Sabana Fried Chicken forms a global communication network that connects customers, internal parties, suppliers, and other stakeholders. The system not only facilitates email messaging and video conferencing, but also provides a platform for teamwork, increased productivity, and work automation. For example, ECS allows Sabana Fried Chicken outlets to be connected to a single network, enabling efficient coordination and exchange of information (Macnico et al., 2022). Thus, ECS not only integrates the company's internals but also strengthens connectivity with customers and business partners, supporting the company's growth and operational efficiency in an increasingly connected global context.

Process Control System

Sabana Fried Chicken has developed an internal control system called the Sabana Fried Chicken Management System. The system provides support to store managers to perform business forecasting, inventory management, and human resource management. Through this control system, Sabana Fried Chicken outlets can operate efficiently and effectively, optimizing profits. The advantage of this system lies in its ability to facilitate business planning, inventory management, and human resource management, all of which are key factors in a company's operational success. The system is also automatically

connected to the headquarters, allowing managers to monitor performance, control operations, and coordinate with each outlet more efficiently (Sulaksono & Nursyamsi, 2022). Thus, the Sabana Fried Chicken Management System plays an important role in increasing efficiency, optimizing operations, and generating maximum profits for the company.

Management Support System

The Management Support System implemented by Sabana Fried Chicken, known as Sabana Fried Chicken's Field Management System, is an Information System that provides reports and data views to managers and business professionals of the company. For example, sales managers can access information through computer networks, view sales results of their products, and access daily sales analysis reports through the company's intranet. The system also allows the evaluation of sales results carried out by sales staff (Darmawan & Seabtian, 2022). Using this Information System, store managers can forecast business, manage inventory, and manage human resources. The data generated by this application is used as a basis for decision-making that impacts the company's operations and strategy, reinforcing the role of this system in supporting the decision-making process at Sabana Fried Chicken.

Decision Support System/DSS

Decision Support System / DSS is a system that provides computer support directly to a manager in the decision-making process. For example, a production manager in a manufacturing company can use DSS to determine the number of products to be produced, based on sales estimates related to promotions to be carried out, sales locations, and the availability of necessary raw materials. DSS provides managers with the information needed interactively using a variety of analysis models, simulations, and other tools. In the context of Sabana Fried Chicken, the use of DSS is seen through the ability of each store manager to monitor system performance directly and interactively. They can also use management analysis tools in forecasting business and managing inventory more effectively (Heriyanto et al., 2022). By using DSS, managers can make smarter and more timely decisions, improve operational efficiency, and help the company achieve its business goals.

ERP Implementation in Sabana Fried Chicken

The implementation of the Enterprise Resource Planning (ERP) System in Sabana Fried Chicken can involve the use of various kinds of software, one of which is JD Edwards Enterprise One 9.0. This software has a variety of features that help manage key aspects of the company, including finance, assets, projects, suppliers, fulfillment processes, and manufacturing. Some of the key features include improved data input capabilities that ensure data consistency and accuracy, a new user interface that adopts Oracle standards to increase productivity, and dynamic configuration capacity that allows sales and customer service to enter complex sales orders. In addition, the integrated

accounting module ensures sophisticated project accounting and provides accurate data for compliance and financial management. There are also improvements specific to the food and beverage industry, as well as support for standards such as Web Services for Remote Portlets (WSRP) and Java Database Connectivity (JDBC) to increase IT staff flexibility and make it easier to use systems effectively (Qowindra & Wiratama, 2023). JD Edwards Enterprise One 9.0 also offers enhanced batch process management with out-of-the-box functionality, which improves process monitoring and management as well as batch reports. By implementing this ERP, Sabana Fried Chicken can improve operational efficiency, better manage projects and finances, and ensure the quality of data necessary for the company's sustainable growth and success.

JD Edwards General Accounting (G/L)

JD Edwards General Accounting (G/L) is a general accounting module that allows users to set up an accounting system to record and post journal entries from various modules within JD Edwards. This module covers the process of sales renewal, receipt of purchase orders, inventory transactions, vouchers and checks payable, accounts receivable and receipt of receivables, and other functions. Users can record these journal entries in multiple currencies, and even create balances per G/L account and currency for easier analysis. This module also allows users to allocate costs to various business units and accounts automatically by using an allocation program. In addition, users can enter budgets either as journal entries or upload them from Excel (Darmawan & Seabtian, 2022). Then, the data can be exported from J.D. Edwards to Excel for further analysis using tools such as PivotTables.

J.D. Edwards also provides automated programs for bank account reconciliation, accounts payable trading, accounts receivable trading, voucher suspension logging, and received-not-vouchered liability accounts. At the end of the month, users can restate balances in multiple currencies and create consolidated financial statements based on the restated balances. With these features, JD Edwards General Accounting makes it easier for users to manage and analyze company financial data with accuracy and efficiency. JD Edwards General Accounting System provides a variety of key features that include:

1. Account Management
   The system allows users to manage the company's account list, enter new accounts, change account details, and set up the account structure according to business needs.
2. Incoming Journal Processing
   Users can record and process incoming journal entries from various modules within J.D. Edwards, including entries from sales, purchasing, inventory, and other finance.
3. Allocation
   The system facilitates the automatic allocation of costs to different business units and accounts, helping companies manage expenses and income more efficiently.
4. Automatic Account Reconciliation

This module includes automated programs to accurately and efficiently reconcile bank accounts, accounts payable, accounts receivable, voucher suspension logging, and received-not-vouchered accounts.

5. Consolidated Reporting in Every Currency

The system allows restating account balances in multiple currencies and creating consolidated financial statements with accuracy, making it easier for companies operating in global markets.

6. Yearly Closing

This module supports the closing process of the financial year, ensuring all transactions and journal entries are completed correctly and accurately.

7. Integrity Reporting

The system allows users to monitor data integrity, check for errors, and identify anomalies in journal entries and transactions, ensuring the accuracy and reliability of the company's financial information.

With these features, the JD Edwards General Accounting system provides strict control, high accuracy, and efficiency in a company's accounting management, ensuring that the resulting financial statements are a proper reflection of the company's financial health.

JD Edwards Automated Inventory Management System

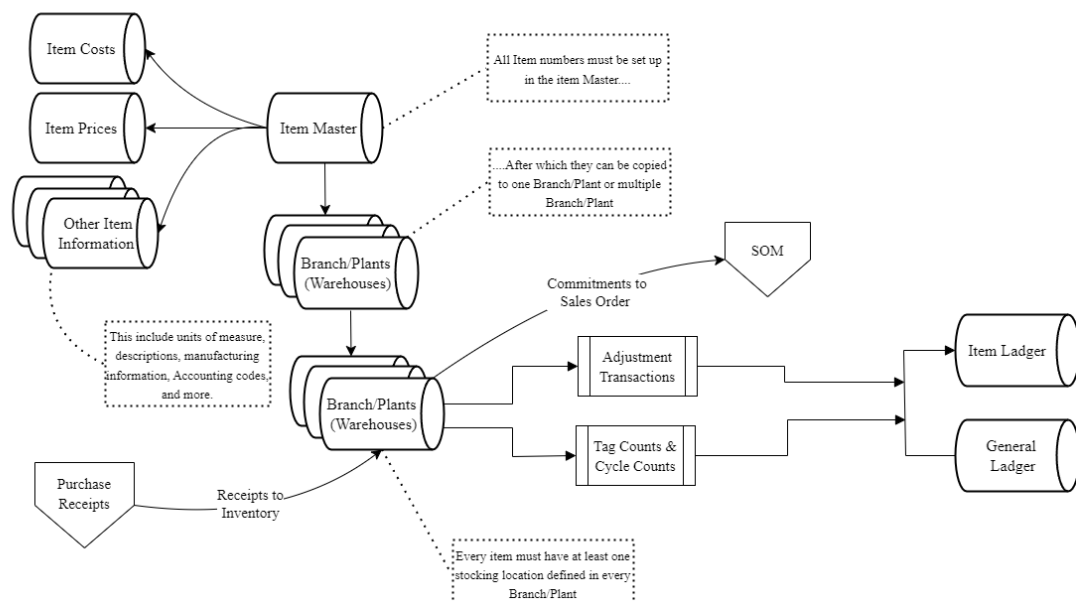**System 41 - Inventory Management**

Figure 2. JD Edwards Inventory Management System

The JD Edwards Inventory Management Module serves as the information hub for all inventory items in the Company's system (Christianto, 2022). This module manages the receipt of shipments from purchase orders or work orders, provides a real-time view of the items available for sale, and has the following key features:

1. Stock and Non-stock Goods Management

   This module allows companies to manage stocked items and non-stocked items, ensuring the availability of goods needed for company operations.

2. Cost and Price of Goods

   This system allows accurate management of costs and prices of goods. This pricing and cost information is important for profit and loss calculations and decision-making in selling pricing.

3. Lot Processing dan Serial Number Tracking

   This module allows tracking of goods based on lot number (lot processing) and serial number (serial number tracking). This is very important, especially in industries such as pharmaceuticals or electronics, where the unique identification of each item is urgently needed.

4. Inventory Transaction Processing

   This system records all inventory transactions, including receipt of goods, issuance of goods, and stock adjustments. This provides full visibility into the movement of goods throughout the supply chain.

5. Tag Number and Cycle Count

   This module supports regular stock counting by setting the number of counting cycles and generating a list of items that must be checked in each counting cycle.

6. Kit Processing

   This module allows companies to create product kits or packages from several different items in stock, providing flexibility in selling products in package form.

   With these features, JD Edwards Inventory Management enables companies to efficiently manage inventory, ensure the availability of the right goods at the right time, and accurately track and manage stock movements, which are key aspects of successful supply chain management.

Risk Coverage Analysis

Table 1. Risk Coverage Analysis of Sabana Fried Chicken Franchise Company

No.	Risk	Coverage	Time	Cost	Quality	Expected Results	Success Indicators
1.	Lack of Low Employee / HR Training	Provide comprehensive training for all new and existing employees	Complete training within a certain time before the restaurant opens	Allocate sufficient budget for employee training	Ensure that employees understand the appropriate standards and procedures for preparing food and serving customers	Employees who are well-trained and ready to provide superior service	Employee attendance and understanding rate in training
2.	Inconsistent Raw Material Inventory	Build strong relationships with raw material	Establish consistent delivery schedules	Manage budgets wisely and find	Maintain the quality of raw materials to	Consistent and high-quality raw	Availability of sufficient raw materials and

No.	Item						
		suppliers and have a backup plan in case there are delays in delivery	and ensure sufficient stock to meet customer demands	alternative solutions if raw material costs rise sharply	match restaurant standards	material inventory	under quality standards
3.	Fluctuations in Customer Demand	Use market analysis to understand trends in customer demand	Monitor demand patterns and adjust restaurant supplies and staff according to changing demand	Develop a budget that takes into account fluctuations in customer demand	Ensuring that customer service remains satisfactory despite customer surges	Increase customer satisfaction and high customer retention	Analysis of sales trends and customer feedback
4.	Competition with Other Franchises in the Same Area	Identify competitive advantages and marketing strategies that differentiate from competitors	Conduct attractive and unique promotions and marketing strategies to attract customers	Looking for ways to reduce operational costs without sacrificing quality	Ensure better service and products than competitors	Increased market share and competitive advantage	Increased market share and long-term sustainability
5.	Changes in Food Health and Safety Regulations	Have an in-house team or consultant who understands current regulations and ensures compliance	Update procedures and protocols if there are regulatory changes	Allocate budget for periodic inspections and testing	Ensure that all products comply with applicable food health and safety standards	Comply with all health and food safety regulations	Satisfactory inspection and inspection results from local authorities

SWOT Analysis

Table 2. SWOT Analysis of Sabana Fried Chicken Franchise Company

Aspects	Strengths	Weaknesses Internal	Opportunities	Threats
Special Products	Unique fried chicken recipe and taste that customers love.	The limited variety of the menu may make some customers look for other options.	Introduction of new menus or increased variety in menus.	Competition with other fast food restaurants.
Known Brands	Sabana Fried Chicken has built a brand	Lack of innovation in	Aggressive marketing campaigns to	Defamation or competitor

	that is known in the local market.	marketing and branding.	increase brand awareness.	attacks on brands.
Employee Training	Employees are well-trained to provide superior customer service.	Limited human resources can affect the quality of training.	Development of better training programs and improved human resource management.	A high employee turnover rate can reduce the quality of service.
Quality of Raw Materials	Use of high-quality raw materials to ensure consistent taste.	Dependence on certain suppliers who can experience supply problems.	Establish relationships with multiple suppliers to reduce supply risk.	Rising raw material prices can affect profit margins.
		External		
High Market Demand	The constant demand from customers who love fast food.	Low acceptance in some locations due to local food preferences.	Market penetration in areas that have not been reached by competitors.	Changes in dietary trends lead to a decrease in fast food consumption.
Pertumbuhan Waralaba	Increasing public interest in opening a restaurant franchise.	High start-up capital requirements for opening a franchise can reduce the interest of potential investors.	Support and training programs for prospective franchisees to increase the number of outlets.	The success of competitor franchises can reduce market share.
Health and Hygiene Awareness	Possibility to present a healthy menu and low-calorie food options.	Changes in consumer preferences are leading to the demand for organic and healthy foods.	Development of healthy menus and marketing campaigns to attract customers who care about health.	Stricter government regulations related to food health and hygiene.
Technology and Online Booking	Use of technology to improve	Expensive technology investment to	Launch of online ordering applications and	Competition with large online food

ordering and delivery efficiency.	implement an online ordering system.	delivery services to improve customer satisfaction.	ordering platforms.

Conclusion

The introduction of an ERP-based Automated Inventory Management System in Sabana Fried Chicken has had a significant impact on the company's operations and decision-making. Through the use of ERP technology, companies can automate inventory management processes, optimize finances, and obtain accurate data for smarter decision-making. This system not only improves operational efficiency but also improves service quality and customer satisfaction. With this integration, Sabana Fried Chicken can strengthen its position in the franchise market and strengthen the foundation for long-term growth.

In the face of challenges and opportunities in the market, Sabana Fried Chicken has identified and managed risks through careful coverage strategies. From employee training to efficient raw material inventory management, companies have taken concrete steps to address risks that may arise. Along the way, the company's SWOT analysis shows success in leveraging internal strengths, such as distinctive products and familiar brands, to deal with external challenges, such as competition with other franchises and changing consumer preferences. With a focus on innovation, training, and regulatory compliance, Sabana Fried Chicken has successfully established itself as a formidable player in the fast-food franchise industry. With these measures, the company has a solid foundation for sustainable success in this competitive market.

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