

# TECH-DRIVEN BAKING: LEVERAGING MANAGEMENT INFORMATION SYSTEMS FOR OPERATIONAL EFFICIENCY AT MORLANO BALLYBOND ORLANDY

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Published: September, 2024



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**Abstract:** Management Information Systems (MIS) integrated with Enterprise Resource Planning (ERP) have become the main strategy for many organizations to increase their efficiency and productivity. ERP integrates various business functions such as manufacturing, finance, human resources, and supply chain management into one centralized system. By implementing an ERP-based SIM, companies can optimize their business processes, increase visibility into all operations, and speed up decision making. This research aims to investigate the implementation of ERP-based SIM and its impact on the operations of an organization. This research methodology uses a qualitative descriptive approach. Data was collected through in-depth interviews, direct observation and documentation, analyzed using a data reduction process. The analysis was carried out with a focus on the implementation process, system integration, and evaluation of the results obtained after implementation. The research results show that the implementation of an ERP-based SIM at the Morlano bakery has succeeded in improving coordination between departments, speeding up work flow, and increasing real-time data accessibility. This system also provides a strong basis for making strategic decisions based on accurate data and implementing ERP makes all operational processes easier and saves company costs. By saving costs and time used, efficient operations can be achieved.

**Keywords:** Operational Management, Management Information System, Enterprise Resource Planning.

## INTRODUCTION

In this era of globalization, technology is increasingly developing and many components are beginning to be created that can facilitate company operations. The emergence of Management Information Systems has become an effective solution to improve operational efficiency. However, in-depth research is still needed to understand the extent to which SIM can make a positive contribution to the company. More and more companies in Indonesia are implementing management information systems (SIM). Because they are starting to realize that SIM can bring significant benefits to improving business performance. One of them is the Morlano Balibond Orlando (MBO) bakery which has begun to implement a management information system to help the company's operational activities run well and efficiently so that it can compete with other companies and be able to meet all consumer desires with superior products.(Aulia 2022)

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Management information system is a combination of human resources and information technology applications to choose to store, manage and retrieve data to support the decision-making process of a company management information system is a collection of elements that are interconnected with each other that form a unit to integrate data, process data and store data to be used in deciding by a person manager. Decision-making and company management by managers are the main benchmarks for the success of a company, Wrong decision-making can be very fatal for the business, causing losses and of course, having an impact on operational efficiency (Rochaety 2017).

The Management Information System (SIM) is a system that processes and organizes data and information that is useful to support the implementation of tasks in an organization. The role of information in a company is likened to blood flowing in the human body, therefore information is needed and supports the survival of the company (Existence). Moreover, a Management Information System can also be interpreted as a combination of Human Resources and information technology applications to select, store, process and retrieve data to support the decision-making process of a company. (Ni'mah 2019) If the company does not have adequate information, then in a certain time the company will experience an inability to control resources, so in the process of making strategic decisions will experience obstacles, which in the end the company is unable to compete with other companies. In addition, the information system is still disproportionate, because there is not much important information that the company really needs to support operational activities. Therefore, understanding the basic concept of information systems is very important, especially to design an effective information system (effective business system). The role of management information systems is an important factor in medium-sized companies because they can face challenges in managing their operations efficiently (Ikasari 2023). SIM (Management Information System) assists medium-sized companies in integrating and managing data from various departments and functions. With a centralized system, data can be accessed easily and quickly by various interested parties. This reduces reliance on manual processes and allows for better decision-making based on accurate and real-time information. The SIM also allows for the integration of functional systems. The management information system that is developing today is Enterprise Resource Planning (ERP) (Hidayat fahrul 2023) An ERP system is a system that supports business processes by providing real-time information that is integrated between the company's functional divisions. With ERP, companies can manipulate large amounts of data or information to be processed and displayed according to their wishes. Enterprise Resource Planning (ERP) is a system concept designed to integrate all functional areas in a company to produce effective and efficient business processes. ERP standardizes, simplifies, and integrates business processes such as finance, human resources, procurement, distribution, and other departments (Goldsberry 2019).

Morlano Balibond Orlendy (MBO) Bread Factory Jember. The Morlano Bakery Company (MBO) was established in 2006 and began to use an ERP System-based SIM in 2019, This industry is located in Tanggul District or precisely in Manggisan Village. The bread production used to be branded Morisan, then now it has changed to Morlano. The name MBO stands for Morlano Balibond Oriendy. The Bread Industry is a fairly successful company in Jember. At the beginning of its establishment, the company was still small-scale both from the production process to sales, as time went by the company began to experience development after the implementation of the

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system, This can be seen from Marketing has covered Madura Island to the island of Bali, and can also be seen from sales data before and after the implementation of ERP, in 2018 where the company still uses the traditional system of selling bread per year only 4,425,400 units and in 2018 In 2020, where the company has implemented ERP, sales jumped almost 40%, namely 6,180,500, seeing from previous research that the ERP system makes it very easy for the company, especially in the production department, where the calculation of products can be ensured to be 100% accurate. However, success in every company must have problems that need to be solved, the production process in the Morlano company still uses traditional machines because the manager decides to recruit employees without paying attention to their educational background on the grounds of employing residents around the company so that the quality of human resources in the Morlano company is very low, the Morlano company has brought in more modern production machines but workers are not able to operate them. In the midst of these limitations, the morlano company is still able to meet consumer demand and is still able to carry out its operational processes (Muhammad Syaifuddin et al. 2023).

## METHOD

This research is a type of descriptive research using a qualitative research method in which primary data will be collected by making observations by providing a question related to the state of operational management in the company through the managerial and production foreman as informants who are responsible for operational activities from the beginning of the purchase of raw materials to finished goods. (Wijoyo et al. 2023) Meanwhile, the object of research in this study is at the Morlano Balibond Orlandy (MBO) Bread Factory located in Jember district. In the process of obtaining data, there are data collection techniques in the form of interviews, observations, and documentation, while in conducting data analysis, research uses data analysis techniques in the form of data reduction, data presentation and also drawing conclusions from respondents' answers. Meanwhile, in order to obtain the validity of the data, the triangulation method is carried out which can be interpreted as an effort to check the correctness of the data or information obtained by the researcher from various different perspectives by reducing as much bias as possible during data collection and analysis. Therefore, to obtain reliable information and a complete picture of certain information, researchers can use free interview methods and structured interviews (Rahmawati, Juledi, 2024)

## RESULTS AND DISCUSSION

First, based on the results of an interview with Mr. Fajar as a manager, the implementation of ERP provides convenience to the company's operational activities, with the existence of ERP facilitating operational processes such as data processing from various departments into one centralized system. This allows managers to access consistent and accurate information easily, without the need to rely on manual reports from various separate systems. Of course, this reduces data management errors. ERP also allows managers to monitor the company's operational performance in real-time. such as daily sales, stock levels, or production costs, ERP systems often provide tools to automate and optimize business processes. Managers can set up rules and workflows to improve operational efficiency, and improve response times to customer requests. Overall, ERP implementation brings significant benefits to managers by providing better access to

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information, improving operational efficiency, and enabling more strategic and timely decision-making (Agnes Fitriani et al. 2022).

The implementation of Enterprise Resource Planning (ERP) provides various conveniences for the financial department of a company. ERP integrates financial data from various departments and other modules (such as sales, purchasing, and inventory) into one centralized system. This reduces manual errors and ensures data consistency between departments. In addition, with the implementation of Enterprise Resource Planning (ERP), it is indeed very easy to identify employee data in the company. ERP provides a single data centre for employee information, including personal information, employment history, qualifications, and contact data, and manages information related to employment contracts, salary payments, and internal company policies. Managers can easily access this information without the need to search through various separate systems. ERP systems are usually integrated with attendance and working time.

Second, based on the results of an interview with Mr. Abdurrahman as the Foreman of production and product marketing, the results stated that the implementation of Enterprise Resource Planning (ERP) provides a lot of convenience for the production department in the company. ERP helps in a more effective production planning process. This includes capacity planning, demand management, and more coordinated scheduling based on inventory data, customer demand, and production capabilities. This system allows for better management of inventory levels, avoiding excess or shortage of inventory that can disrupt the production process. optimization of the use of production resources such as machinery, labor, and facilities. With integrated monitoring, companies can identify unproductive downtime, optimize workflow, and improve production output. Overall, the implementation of ERP in the production section not only improves operational efficiency but also allows companies to be more responsive to market changes and customer demands. With the adoption of this technology, companies can improve resource management, optimize production processes, and achieve higher strategic goals in the long run.

The implementation of Enterprise Resource Planning (ERP) provides various conveniences for the Quality Control (QC) department in the company. ERP provides the ability to monitor product quality in real time. The QC department can track the testing and inspection data as soon as it is carried out and quickly identify potential problems or quality non-conformities. So that information about defects or non-conformities of quality can be recorded in the system, and corrective measures or preventive measures can be monitored and tracked to ensure the problem is appropriately resolved. ERP systems provide a centralized database that integrates customer information from various sources and departments. It allows marketing teams to easily access customer profiles, purchase history, preferences, and contact data. This supports a more targeted and personalized marketing strategy. In addition, based on the results of the documentation, it can also be obtained that the company conducts financing by using ECOUNT ERP in the form of a web at a cost of Rp.700,000 per month.

According to Juliani and Masitoh (2024), The implementation of ERP systems can have an impact on a company's business strategy because it offers new opportunities for companies that did not take advantage of previous strategies. The ability of companies to use ERP allows them to change, structure, and integrate information flows and business processes. However, due to market changes and new technologies, companies must continue to adapt, change, and integrate information flows and business processes. Companies must integrate training programs, operating

procedures, and information technology to support new infrastructure during the business process transformation process. With business process replanning, integrated management functions, and cycles.

The implementation of ERP at the morlano bread factory for the first time in 2019, the initial goal of this implementation is to be a long-term investment that is expected to provide significant benefits to the company's progress. The increasingly fierce business competition makes managers think about using something different from their competitors, namely the application of ERP-based management information systems. ERP system is run by *Software* or software with a supporting website in the form of ECOUNT ERP, the company chooses the website because it has many advantages, namely easy access or flexible and can be accessed anywhere and anytime, the website only requires internet access, and only those who know the company's password and email can enter the website. In addition to some of these advantages, the ECOUNT ERP website is the cheapest ERP system compared to other ERPs such as SAP, JMC, and Odoo, where the company only needs to pay 700,000/month for maintenance costs. In obtaining simplification to make it easier to read qualitative descriptive, the Tringulation technique is used. Based on the use of data validity techniques, it can be seen as follows:

Table 1 Triangulation Techniques

Research map	Data collection methods		Conclusion
	Interview results	Observation results	
Can ERP help in monitoring and improving the quality of products or services produced by the company?	ERP provides quality monitoring features that allow companies to track the quality of products or services in real time. This can include collecting data on the number of defective products, customer satisfaction rates, or product return rates.	ERP has determined product standards so that bread that is damaged or has poor quality will be detected easily, and finished bread will go through a sorting process, with these quality standards it is very easy for employees to distinguish defective products and those that are not.	ERP implementation not only simplifies the day-to-day tasks for the Quality Control department but also improves their ability to ensure that products meet high quality standards and satisfy customers.
Can an ERP system help manage the production process efficiently? Are there any visible improvements since ERP	ERP allows for more detailed and coordinated production planning. With centralized data, companies can plan production based	Allows for better planning based on customer demand, raw material availability, and production capacity. ERP also	ERP helps improve operational efficiency, and helps in identifying opportunities to improve production

implementation?	on customer demand, raw material inventory, and production capacity. This helps to avoid underproduction or overproduction.	provides better visibility into raw material inventory, in-process goods, and finished goods. With centralized and real-time information, production can manage inventory more efficiently, and prevent raw material shortages, if raw material inventory runs out, the system will directly send data to the inventory department.	efficiency, reduce waste, and optimize processes on an ongoing basis.
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. How does an ERP system manage and analyze financial data to support strategic decision-making, such as investment, product development, or business expansion?	ERP integrates financial data from different departments and locations in one centralized system. This allows management to have comprehensive visibility into the company's financial performance in real-time. By having consolidated data, strategic decisions can be based on accurate and complete information.	Ensuring that all financial data is centralized and consistent, minimizing the risk of errors and allowing for easy access to analysis and reporting. Automatic financial recording so that mistakes can be avoided, automatic financial statements quickly and accurately, including balance sheet statements, income statements, cash flows, and others needed for financial analysis and strategic decision-making.	ERP not only facilitates the finance department by reducing manual work but also improves operational efficiency and accuracy of financial data, which is crucial for the company's long-term success.
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Does the ERP	ERP provides real-	ERP integrates	While ERP is not
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system help in time sales customer data from specifically managing and monitoring, various designed for analyzing sales data allowing departments such marketing, the data to understand companies to track as sales, and integration market trends and up-to-date sales customer service, provided by an improve marketing data, including into one centralized ERP system can strategies? sales volume, sales system. This help improve by product or allows marketing efficiency and service, and teams to have coordination across customer and better access to the company, information. customer profiles, which in turn can preferences, and support marketing purchase history to efforts. devise more effective marketing strategies.

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Source: Data Processed 2024

Based on the dias table, it can be concluded that:

According to Mr. Fajar as the manager, ERP is very helpful in facilitating all the company's operational activities.

1. ERP brings great benefits to managers by providing better access to information, improving operational efficiency, and enabling more strategic and timely decision-making.
2. The implementation of ERP allows the finance department to manage and optimize the company's financial operations more efficiently, increase transparency, and enable more timely and strategic decision-making.
3. The use of ERP in employee data management brings many benefits, including improving administrative efficiency, improving human resource management, and supporting better decision-making based on accurate and up-to-date data.

According to Mr. Rohman as the production foreman, ERP facilitates the operational process starting from purchasing raw materials to marketing products.

1. The implementation of ERP not only improves operational efficiency but also allows the Quality Control department to work more effectively in ensuring high product quality and meeting the set quality standards. With the right ERP adoption, companies can better integrate QC processes into their entire value chain, support continuous improvement initiatives, and improve customer satisfaction.
2. The implementation of ERP in the production section not only improves operational efficiency but also allows the company to be more responsive to market changes and customer demands. The company can improve resource management, optimize production processes, and achieve higher strategic goals in the long run.
3. The implementation of ERP in the marketing process brings many benefits, including improved operational efficiency, better data analysis, better integration between departme

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and improved management and response to customers. Companies can increase their competitiveness in the market in a more strategic and targeted way.

### CONCLUSION

Based on this study, the researcher concluded that the discussion of ERP implementation allows for better integration between various functions and departments within the company, reduces redundancy, improves operational efficiency, and provides better visibility into overall business processes. In addition, by providing access to consistent data and in-depth analysis, ERP assists management in making better and more timely decisions, based on accurate information. The advantages of ERP can also reduce operational costs by automating administrative tasks, managing inventory more efficiently, and optimizing the use of company resources. The existence of an ERP system can simplify internal business processes, allowing companies to increase responsiveness to customers, reduce process cycle times, and improve customer experience. Lastly, the use and implementation of ERP can help companies in particular to comply with regulations and policies, as well as increase control over business operations with centralized and monitored operational standards.

Impact on Operational Efficiency ERP implementation has a significant impact on operational efficiency in morlano companies. ERP speeds up the flow of information, enables faster and more informed decision-making, and improves data accuracy. The automation processes powered by ERP reduce delays, increase productivity, and optimize resource usage. This helps companies reduce costs, improve product quality, and provide better service to customers. Overall, the use of ERP can be an important driver in improving competitiveness, optimizing operations, and achieving sustainable growth for companies. However, the use of ERP also faces challenges such as high implementation costs, complexity in integration with existing systems, and necessary organizational culture changes. To address these challenges and maximize their benefits, companies need to invest in careful planning, adequate employee training, and effective change management.

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