

Designing Business Process Models For Msmes In Campus Canteens Using Business Process Modeling Notation (Bpmn)

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Abstract

Micro, Small, and Medium Enterprises (MSMEs) Canteen at the Campus of Garut Institute of Technology, as a food service provider on the campus, is endeavoring to overcome obstacles in optimizing the ordering process. Initially, customers could only place orders directly in the canteen. However, given the increasingly complex needs, researchers have proposed an innovative solution by applying the Business Process Modeling Notation (BPMN) method. Through the remodeling of the food ordering business process using WhatsApp, the aim is to provide new alternatives for customers, simplify the ordering process, and enhance service affordability. This approach not only leverages the latest technology to meet increasingly sophisticated customer expectations but also increases the operational efficiency of the canteen. The use of Business Process Modeling Notation is based on interviews with customers and direct observation of canteen activities, providing a more comprehensive picture of each stage in the ordering process. Consequently, this solution is expected to not only offer convenience to customers but also improve daily canteen operations, including monitoring the stock of goods and increasing overall efficiency in conducting business activities.

Keywords: Business Model, Business Process, Business Process Model Notation, Canteen Campus, MSMEs.

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Introduction

Micro, Small, and Medium Enterprises (MSMEs) are defined as economic entities with specific income and criteria, similar to micro-enterprises (Sari, 2023). According to (Suryani, 2018), MSMEs can be characterized as businesses with fewer than 100 employees and annual revenues ranging between 100 million and 500 million. To survive in an increasingly competitive environment, Micro, Small, and Medium Enterprises (MSMEs) must leverage digitization as a crucial strategy (Sedyastuti, 2018). MSMEs need to undergo digital transformation to enhance their competitiveness (Evangeulista et al., 2023). If a canteen is chosen as an MSME implementing digitization, significant benefits are likely to be realized (Ramadhanti, 2022). In this case, canteen digitization may involve elements of human resource management, marketing, and sales (Artanto et al., 2022). Associating the concept of MSME digitization with a case study of campus canteens shows the implementation of digital strategies in the micro-enterprise sector (Harjowiryo & Siallagan, 2021). In this context, the implementation of digitization may include the use of electronic platforms to expand marketing reach and improve operational efficiency (Sutisna & Handra, 2023).

Several crucial steps must be considered when operating an MSME, one of which is the sales process in the canteen (Alfin, 2021). Concerning digitally conducting sales transactions, it may be necessary to model the current business processes that are already in operation, transforming them into computerized processes (Marlina et al., 2020). In managing the business, it is crucial to pay special attention to the sales process (Irmawati, 2011). Having a well-defined sales workflow will positively impact business

performance, productivity, and customer satisfaction (Nanincova, 2019).

Similar research explains that with a well-defined sales process, a business can identify the necessary steps in the sales cycle and pinpoint areas for improvement at each stage. This leads to increased efficiency in completing the sales process, making it faster and more effective (Ramadhan & Purwandari, 2018). Another study suggests that having a well-defined sales process allows a business to identify elements that need improvement in the sales process, helping enhance business effectiveness by recognizing shortcomings and implementing necessary improvements (Saleh & Said, 2019). This aids businesses in improving the efficiency of the sales process (Suryaningrat et al., 2021). Therefore, in this research, the researcher proposes modeling the sales transaction flow as a suggestion to enhance customer satisfaction or improve the performance of campus canteen MSME towards higher levels. With a well-defined sales process, the business can provide excellent service, effectively meeting the needs of customers (Indrasari, 2019). This will create customer satisfaction with the services consumers receive and make them more likely to engage in further transactions with the business.

In this study, Business Process Model and Notation (BPMN) are used to delineate each stage related to sales transactions and product orders. Additionally, the diagram serves as the initial stage in designing an information system (Sudipa, 2018). The current business processes run by campus canteen MSME will be mapped out. The current process condition will be qualitatively analyzed through observation and interviews with campus canteen MSME to identify constraints and issues in the sales business process (Utami et al., 2023).

Subsequently, a to-be business process modeling will be conducted for campus canteen MSME with the aim of ensuring that the sales process can create customer satisfaction with the services provided to consumers. To assess the performance improvement from the to-be model, qualitative analysis with simulation will be conducted. For this purpose, software is needed to illustrate and model business processes using Microsoft Visio application (Firanda et al., 2021).

Methodology

This research method involves several steps, starting from identifying the problem, conducting a literature review, performing observations or interviews, analyzing and modeling existing business processes, designing and analyzing solutions, providing recommendations for the desired business processes, and concluding the research findings.

Problem Identification

The business process related to MSME campus canteens is identified. The researcher then investigates the existing conditions to formulate specific problems. Therefore, the problem formulation can be detailed as follows:

- How to depict the sales business process model of MSME Campus Canteen using Business Process Model and Notation (BPMN) on Visio Application?
- What recommendations can be given for the sales of MSME Sekata Canteen using the concept of Business Process Model and Notation (BPMN) on Visio Application?

Literature Review

This step involves searching and identifying theoretical references from previous research journals through online sources and related literature to support the implementation of this research.

Observation or Interview

Interviews are designed to gather data and information related to the sales business process in MSME campus canteens. Before starting the question-and-answer session, the initial step involves preparing a list of questions. This list aims to guide the questions to be asked to align with the needs and expected responses from the respondents.

Analysis and Modeling of As-Is Business Process

Modeling the as-is business process is done through the Visio application, using notations understandable to readers. After completing the modeling, an analysis is conducted using the Visio application to obtain the results.

Recommendations for To-Be Business Process

In this stage, the researcher develops a new model based on a comparison with the current ongoing business process. This model will be improved to provide recommendations to stakeholders so that the sales process of MSME campus canteens can run more optimally, effectively, and efficiently.

Conclusion

After designing the desired (to-be) business process model and comparing it with the current (as-is) business process model, differences in time for each business stage can be identified. The results of this analysis will serve as a basis for evaluating the performance of the ongoing business process and formulating improvement recommendations for the future.

Result

In the Results and Discussion section, it was found that information related to the business process was obtained through a series of interviews and observations

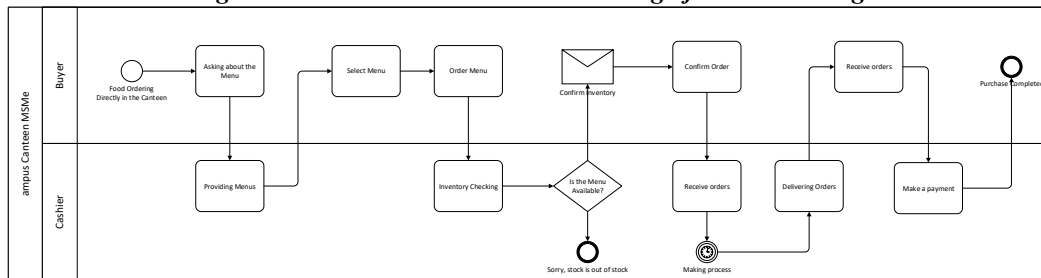
conducted with various parties involved in the campus canteen. This approach was taken to gain a deeper understanding of the business process activities in the MSME campus canteen. The research results identified several activities that are integral parts of the business process taking place in the MSME campus canteen. The following are the results

from the modeling of the as-is and to-be processes in the MSME campus canteen.

As-Is Business Process Modeling

Modeling of the food ordering process in the campus canteen before the implementation of digitization, including the ordering process in the sales business process of the MSME campus canteen.

Figure 1. As-Is Business Process Modeling of Food Ordering



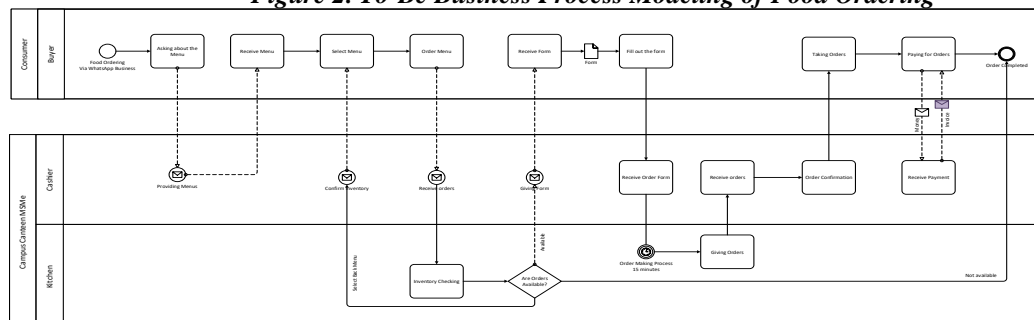
Based on the food ordering process flow in Figure 1, it can be observed that it starts with the direct food ordering process at the canteen, conducted by consumers in the role of buyers. The process begins with inquiring about the menu from the cashier at the MSME campus canteen, progressing to the process of selecting and placing an order. Subsequently, the ordered menu is received by the cashier, followed by inventory checking. If the desired order is available, the production process continues; otherwise, the ordering process concludes, and the customer is either refunded or prompted to choose an alternative menu. Next, for available orders, the buyer

confirms the selection of a new menu. The cashier then acknowledges the order, proceeds with the order preparation, and delivers it to the buyer. Finally, the buyer completes the transaction by providing payment to the cashier, and the food ordering process at the campus canteen is successfully executed.

To-Be Business Process Modeling

Modeling of the food ordering business process in the campus canteen, as previously identified. The following is the modeling of the ordering process in the sales business process of the campus canteen.

Figure 2. To-Be Business Process Modeling of Food Ordering



Based on the food ordering process flow in Figure 2, it is observed that it begins with the food ordering process through WhatsApp, conducted by consumers in the role of buyers. The process starts with inquiring about the menu from the cashier at the MSME campus canteen, progressing to the process of receiving, choosing, and placing an order. Subsequently, the ordered menu is received by the cashier and then handed over to the kitchen department of the MSME campus canteen for inventory checking. If the desired order is available, the production process continues; otherwise, the ordering process concludes, and the customer is either refunded or prompted to choose an alternative menu.

Next, for available orders, buyers are encouraged to fill out a form provided by the cashier. The cashier then receives and hands over the form to the kitchen department to initiate the food order preparation process. Processed orders go through the order retrieval process via the cashier and are collected by ITG student buyers at the MSME campus canteen. Subsequently, buyers complete the transaction by providing payment to the cashier, and the cashier provides an invoice as proof of the food order through the WhatsApp Business.

Conclusion

In this study, Business Process Model and Notation (BPMN) were used as tools to detail each stage related to sales transactions and product orders in the MSME campus canteen. The resulting diagrams are expected to serve as the initial foundation in designing an information system. Business process

mapping in the MSME campus canteen was conducted through qualitative analysis of the current process conditions, using observation and interview methods. This was done to identify constraints and potential issues that may arise in the MSME campus canteen sales business process.

Furthermore, business process modeling was carried out to-be with the aim of enhancing customer satisfaction with the services provided to consumers. In this context, emphasis on process improvement and refinement remained the main focus, with innovative additions through the utilization of WhatsApp as an ordering platform. The selection of WhatsApp is expected to optimize the sales process and provide convenience for customers in placing orders.

To evaluate and measure the performance improvement of the to-be model, qualitative analysis was conducted using simulation. To implement business process modeling and simulation with the additional feature of ordering through WhatsApp, software usage is required, in this case, utilizing the Microsoft Visio application. The successful implementation of the to-be model is expected to provide significant benefits, both in operational efficiency and in delivering a positive experience to customers.

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