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ANALYSIS AND DESIGN OF INVENTORY ACCOUNTING INFORMATION SYSTEM APPLICATIONS TO IMPROVE INTERNAL CONTROL IN MSMEs FILO CR MALANG

Aldo Wicaksono W[1], Anik Kusmintarti[2], Nurafni Eltivia[3]
[1,2,3]Department of Accounting, State Polytechnic of Malang, Malang Indonesia
Email: *wicaksonoaldo95@gmail.com[1]*

Abstract

Many MSMEs still practice financial recording using a manual financial reporting system. Transaction data management, from journal recording to financial reporting, is still done manually. In the end, there are still many things that could be improved in writing, calculating data, and raw material inventory systems to inaccuracies in decision-making by management. Regarding the business system that is still carried out manually, especially in the inventory of goods, when MSME manufacturing requires a stock of goods, it is always constrained because of the difficulty of monitoring the availability of raw materials. A warning system regarding the availability of stock of raw materials for production can result in delays in the distribution process and fulfilment of coffee customer requests and also have an impact on Filo CR's MSME turnover. Under these conditions, it is necessary to implement a good inventory accounting information system in the management of MSME Filo CR.

This study aims to analyze and design an inventory accounting information system application to improve internal control in MSMEs Filo CR. In addition, add a recording system or feature to help facilitate the raw material inventory control system and internal control. The type of research carried out is applied research using research and development (R&D). where applied research is conducted to apply the findings to solve problems. The research findings contribute to knowledge building in various functional areas of business. In addition, this research aims to develop and provide an output or product that can apply and benefits businesses in the coffee production MSME sector. This research is expected to provide a solution and contribute to the control of coffee raw material inventory by the criteria for the production and quality of accountable and transparent financial reports.

Keywords: Inventory Accounting Information System, Coffee, Enterprise Resource Planning.

INTRODUCTION

Micro, small and medium enterprises (MSMEs) cannot be underestimated, especially for their contribution to Indonesia's economic development and progress. Many Indonesian startups have proven their success at the world level, as we know Go-Jek, Traveloka, and Tokopedia (Sanggrama, 2020). With the development and progress of economic development, the role of micro, small and medium enterprises (MSMEs) has an important meaning for a region, especially as a driving force for regional economic growth. Micro, small and medium enterprises (MSMEs) activities are one way that regional creative products can be recognized and provide business opportunities for regional business actors, besides that the important role of MSMEs is to increase per capita income and improve the economy of a region so that micro, small and medium enterprises (MSMEs) are required to be able to develop the country's economy, especially regarding development in economic growth (Halim, 2020).

As a coffee producer, Indonesia ranks fourth after Brazil, Vietnam and Colombia. Indonesia ranks seventh at the coffee consumer level (Sudarto, 2017). Many problems occur, especially in Filo CR MSMEs, where every process of recording business administration is still carried out manually, causing significant problems, especially in inventory management, considering that coffee is a seasonal product and only the best quality coffee beans can be processed at Filo CR. The purpose of this strict raw material selection process is to maintain the quality and consistency of the coffee production of Filo CR MSMEs. Indonesia is currently a large producer and, at the same time, a country with a high consumption level, which is important for coffee commodities.

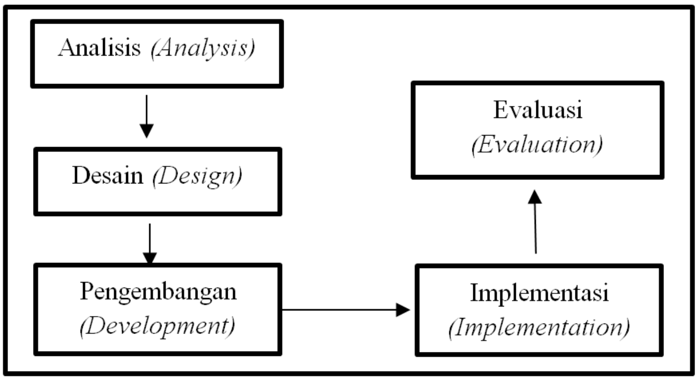
The inventory information system in the company is used to record the movement of each type of inventory that exists and is stored in the warehouse. Several procedures related to the inventory accounting system, namely recording finished products, procedures for recording the cost of finished products sold, procedures for recording the cost of finished products received back from buyers, procedures for recording the cost of products in process, procedures for recording the cost of supplies purchased, procedures for recording the cost of supplies returned to suppliers (purchase returns), procedures for requesting and issuing Warehouse goods, procedures for returning goods to the warehouse, and physical counting of inventory (Mulyadi, 2016).

This research focuses on MSME Filo CR. Filo CR is a company engaged in the coffee manufacturing sector, which in its business process produces roasted beans and ground coffee, located in Turen, Malang district. Although the business process starts with purchasing, this company's sales administration and accounting still use a manual recording process and are done. With the recording process still manual, it requires a long process. As a result, it is considered inefficient in the business process, and in the end, Filo CR has yet to be able to maximize its production capacity.

The obstacles also faced by Filo CR MSMEs, such as revenue from credit sales from various customers, which until now still occur that the proof of sales invoice is tucked away or lost. With these conditions, the administrative and accounting recording section at Filo CR still needs to be maximally handling these problems so that information related to accounting which should be a reference for business processes, is finally hampered by management in steps for decision making. ERP is an Enterprise Resource Planning that can be a solution for MSMEs. Compared to systems that are still conventional / non-IT / non-ERP, the application of ERP in MSMEs can provide better results, as are the benefits obtained by large companies. The benefits offered by ERP for MSMEs include being able to help, monitor, improve, advance the business, and reduce errors, especially errors that occur manually (Pratama, 2021). Seeing the problems faced by Filo CR manufacturing MSMEs, we built an ERP system that follows what Filo CR MSMEs need to manage business activities, focusing on inventory, administration, including financial reports and the availability of raw material stocks to achieve good internal control of the company.

METHOD

This research is a Research and Development (R&D) research. Research and Development (R&D) is a method used to produce certain products and test their effectiveness of these products (Sugyono, 2016). The application development steps use the ADDIE development mode, where each stage will be interrelated and continue continuously.



Source: Steps of ADDIE development model (Sugiyono, 2016).

In the early stages, researchers identified potential problems in a business where everything that would later be designed could have added value. Needs analysis, literature review, observing problems in business processes and collecting data on the supporting and inhibiting factors in business processes. At this stage, it also focuses on initial problems such as recording every transaction and administration that is still done manually and then analyzing how the accounting information system is needed to improve the business work system at Filo CR. The system design stage involves designing the integration of accounting information systems using BPMN. The next stage of development is designing developments in the technology field and orienting technology products utilized for business performance efficiency. At the development stage, the existing system in Filo CR is redeveloped and starts to be made for the initial prototype. The next stage is evaluation. After the product has been tested and successful, the product is a new work system applied to real conditions in a business, namely in Filo CR. If, at a later date or when the system has been applied, the shortcomings and obstacles that arise are things that need to be used to improve the system so that it can be suitable, efficient and can be useful and have more value for internal control and continuous improvement when used in business.

Evaluation is a stage carried out by the user. If he does not agree, he will repeat it at the beginning and vice versa; if he agrees, this system will continue to the next stage. The next stage is implementation. This stage is a limited trial stage of the proposed and carried out a business model. Observation at the implementation stage is carried out on users in the product implementation process. If the evaluation stage has been completed, then discussions are held, and responses and suggestions from users are received. In this way, developers can provide questionnaires to users. Suppose the implementation stage has been carried out. In that case, the validation test will be carried out by material experts and users using a validation instrument sheet with an interval scale of one to five. Data analysis uses descriptive analysis by knowing the average score of one product assessment. Then the development of the prototype into an integrated system. This research produces outputs from a business modelling system generated from Bizagi Modeler in the form of Business Process Modeling and Notation (BPMN) and designs an inventory accounting information system application to improve internal control at MSMEs Filo CR Malang.

RESULT AND DISCUSSION

1. Accounting Information System

   The accounting information system within an organization meets the needs of managing daily transactions, supporting operations and managerial and strategic activities of an organization and providing certain external parties with the necessary reports (Jogiyanto, 2015). An information system originates from a set of data that has gone through data processing into information that is useful for the recipient. Accounting is the process of identifying, measuring and reporting financial information to make clear and firm judgments and decisions for those who use this information. Accounting is identifying, collecting, storing data, developing, measuring, and communicating information (Romney & Steinbart, 2015). The accounting system is a formula organization, with records consisting of journal ledgers and auxiliary books and reports that are coordinated in such a way as to provide the financial information needed by management to facilitate the management of the company (Mulyadi, 2016). An information system is a system that can collect, record, store and process data to produce information for decision-makers. Includes people, procedures and instructions, software data, information technology infrastructure, internal controls and security measures (Romney & Steinbart, 2015). With the background of the problems in the research, a Web-based ERP integrated system is needed and can be implemented at MSME Filo CR.

2. Persediaan
   Inventory is very important in manufacturing companies. Although the inventory itself is an important part of the assets owned by companies, both trading companies and manufacturing companies, the lack of inventory available in manufacturing companies can result in fatal things for the company, such as in the end, the company is unable to meet the quota number of orders or customer requests (Widjijono & Wehartaty, 2017).
3. Internal Control
   Internal control is a process implemented by the board of directors, management, and all staff and employees to provide adequate assurance of the achievement of control objectives which include effectiveness and efficiency of operations, reliability of financial reporting and compliance with existing rules and regulations (Grafton et al., 2010). This control is very important for the company to know whether the company is running properly to be able to achieve the company's business objectives.

According to the Committee Of Sponsoring Organizations (COSO), one of the objectives of the internal control system is to ensure the effectiveness of operational efficiency funds. Internal control is a process implemented by the board of directors, management and all staff and employees to provide adequate assurance of the achievement of control objectives, which include effectiveness and efficiency of operations, reliability of financial reporting and compliance with existing rules and regulations (Sanyoto, 2012). COSO views internal control as a series of actions covering all processes in the organization. Therefore, internal control is in the basic management process, starting with planning, implementing and monitoring Internal Control.

Filo CR coffee manufacturing MSME is still running a manual system without using a computer. Because it is a coffee manufacturing company, it deals with unstable product prices, and the product itself is seasonal. Therefore, the production process depends on customer demand, and demand can be estimated based on the season. However, because the system is still manual, the production planning process and inventory control cannot do properly. Thus this causes the need for a company system to help minimize risk and facilitate the owner in planning production and controlling inventory.

Design is a system design depiction, planning and sketching or arrangement of several separate elements of a complete and functioning unit (Jogiyanto, 2015). Based on this theory, design is an activity of planning or developing a system that can solve the problems that occur. Furthermore, the design of "design" aims to design a new system that can solve the problems faced by the company in choosing the best alternative system (Nofi Cahyono, 2015). Therefore, based on this theory, design is an activity of planning and developing a system that can solve the problems that occur in the company.

A system is a collection of components, elements, or subsystems (Ladjamudin, 2018). A system is a collection of components or elements that interact to achieve a specific goal (Jogiyanto, 2015). Based on this description, information is data that has been processed and reprocessed and is then able to provide benefits and is easily understood by the recipient.

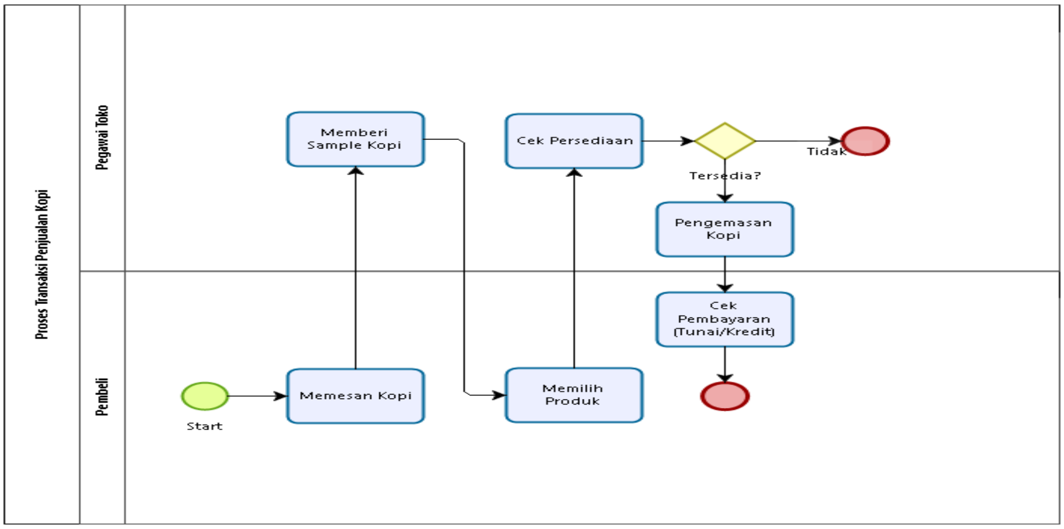
RESULT AND DISCUSSION

Inventory accounting information system to improve internal control using BPMN to determine system improvement points and the beginning of a system change. The next stage is analyzed using the COSO Framework to obtain internal control in the company, namely UMKM Filo CR Malang. In detail, it can explain the problems from the analysis, namely the need for a clear division of tasks for each part in controlling raw materials and administrative and financial processes. In addition, the process currently carried out in recording each transaction is still manual and handwritten. Therefore, inventory and financial reports in the end with the current conditions cannot be seen in real-time. The problem for the owner of Filo CR for decision-making in the company's internal control is that recaps and reports based on daily data input should carry out regularly.

Things that can do in the inventory accounting information system for effective internal control are as follows: First, a clear division of tasks from each division so that work can do effectively and efficiently. Second, data input is carried out regularly using a system to make it more effective and efficient. Third, daily data input and recap are done to understand the business position in real-time to facilitate the owner in making decisions. Finally, recap data from the previous month can be used as a reference and evaluation of business performance and good internal control for the company.

1. Customer's Coffee Purchase Process.

   The process of purchasing or ordering coffee is routinely occurring at Filo CR. These consumers regularly come to Filo CR when their coffee needs run out. It can do by knowing the business processes of Filo CR with this BPMN depiction which aims to provide information on the business processes that occur in the flow. The following describes the purchasing process flow using Business Process Management Notation (BPMN) at Filo CR.

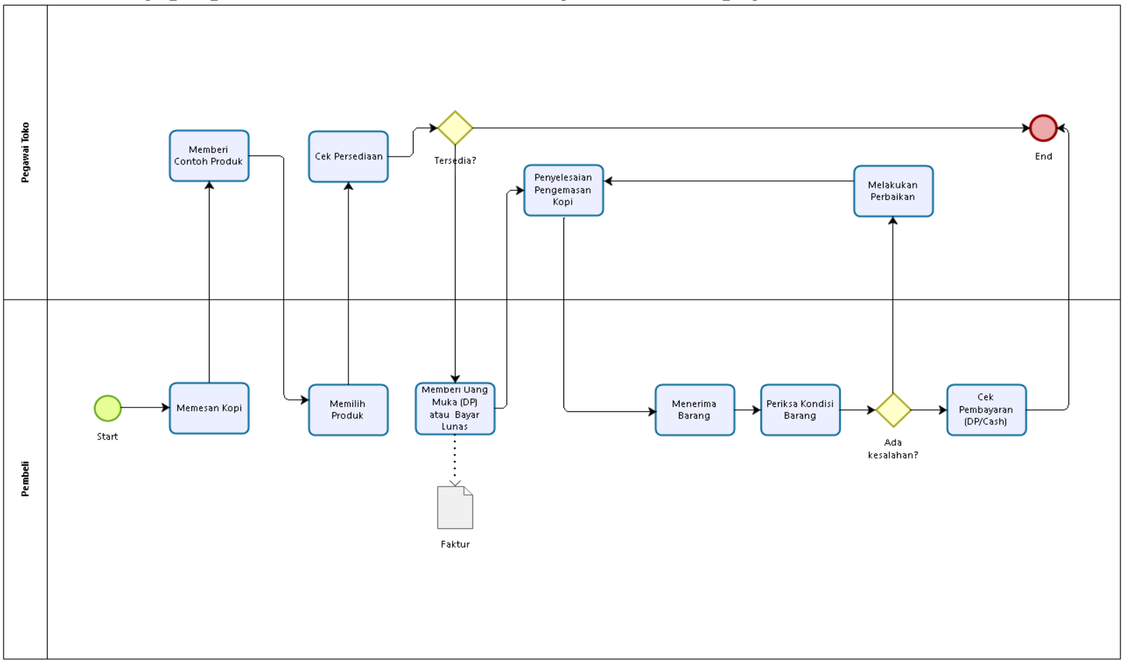


Picture of the current Coffee Purchase Transaction process (As Is)

Identification of the business process of coffee sales transactions at Filo CR

a. At the initial stage, coffee buyers come to Filo CR and ask Filo CR employees for coffee availability.

b. Filo CR staff giving coffee samples to customers.
c. When given a sample of the available coffee in stock, the buyer chooses the coffee according to what is selected.
d. If the coffee stock has been selected and the coffee is available, the employee immediately prepares the coffee, and the buyer makes a payment transaction.



Picture of the proposed Coffee Sales Transaction Process (To Be)

Description of the proposed business process of coffee sales transactions at Filo CR
a. At the initial stage, customers come in and order coffee
b. The shop staff then gave examples of products based on the variants and types of coffee sold.
c. When you (the customer) have seen examples of variants and types of coffee given by Filo CR employees, the buyer chooses the product they want.
d. Filo CR staff then check the availability of coffee based on the variant and type of coffee chosen by the buyer. The order is processed if the chosen variant and type of coffee are available.
e. Customers are required to pay for the specified and confirmed order.
f. At the stage of completing payment for the coffee purchased by the customer, the employee continues the process of packaging the coffee.
g. Buyers must re-check the coffee purchased by checking the condition of the packaging variant and the type of coffee ordered.
h. If the order is correct, the coffee can be directly brought by the customer with sat uprises, and the last step is that the buyer must bring and check the receipt or proof of payment for the coffee.

2. Raw material checking and purchase process

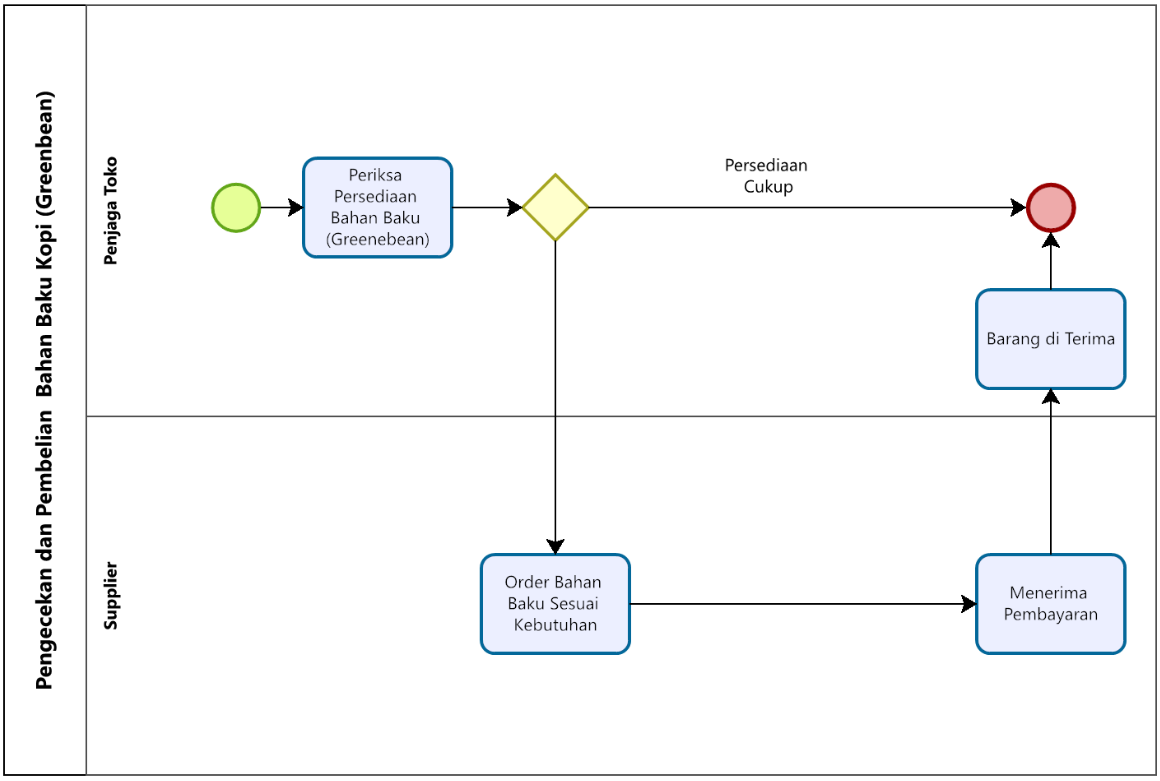


Figure The current process of checking and purchasing coffee raw materials (As is)

Identification of the current business process of checking and purchasing coffee raw materials:

a. The shopkeeper checks the availability of the raw material (Greenbean). If the supply is still sufficient, then the process is completed.
b. When raw materials are unavailable, the shopkeeper contacts the supplier to order coffee raw materials (Greenbean) as needed.
c. The supplier receives payment from the shopkeeper for the coffee order placed by the shopkeeper.
d. The supplier delivers the ordered coffee (green bean) to the shopkeeper (enters the warehouse).

3. Raw Materials Checking Process

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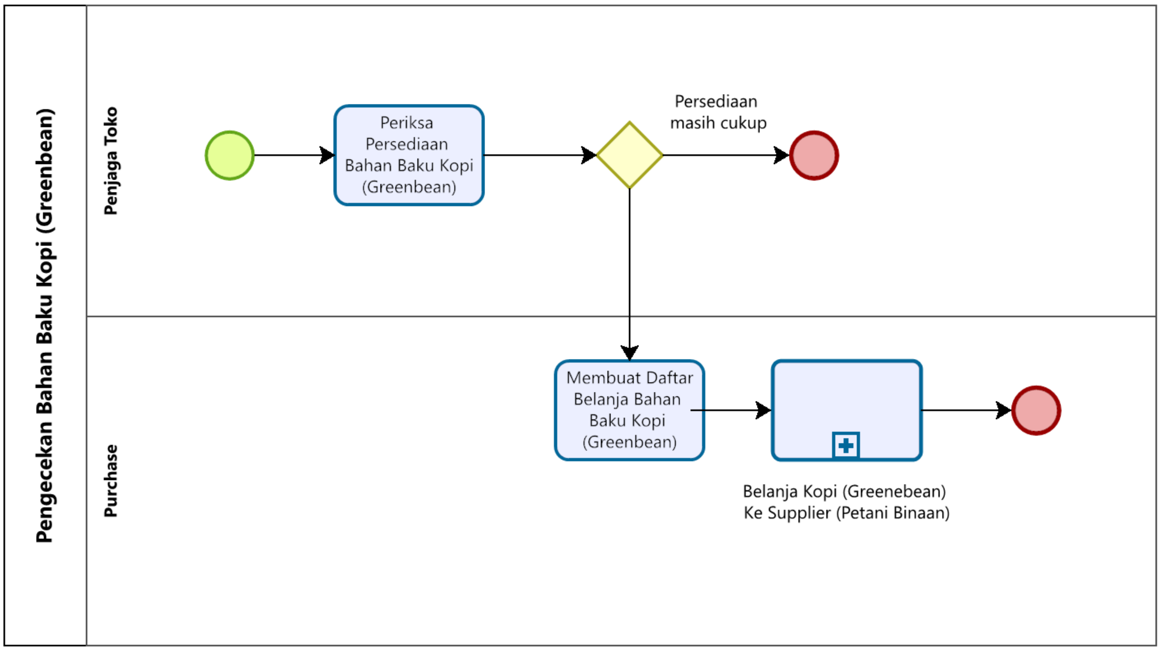
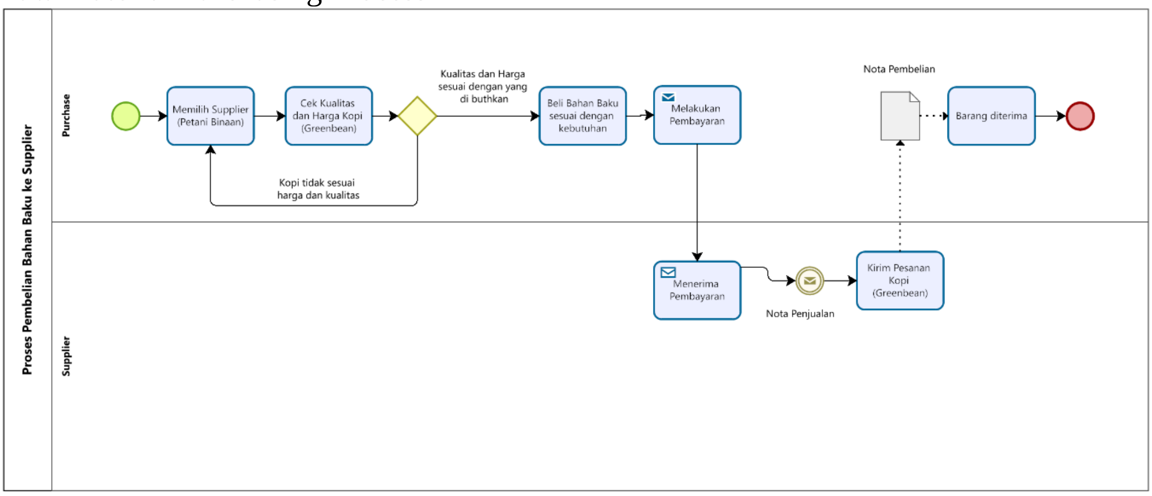


Picture of the proposed Raw Material Checking Process (To Be)

Explanation of the proposed raw material checking process

a. The shopkeeper checks the availability of raw coffee materials (Greenbean).
b. The process is completed if the supply of coffee raw materials (Greenbean) is still available and still sufficient.
c. When the raw materials have run out or have touched the minimum limit, the shopkeeper makes a shopping list for coffee raw materials (Greenbean) and submits it to the purchasing department (purchase).
d. The purchasing department receives the coffee shopping list and forwards it to the supplier.

4. Raw Material Purchasing Process



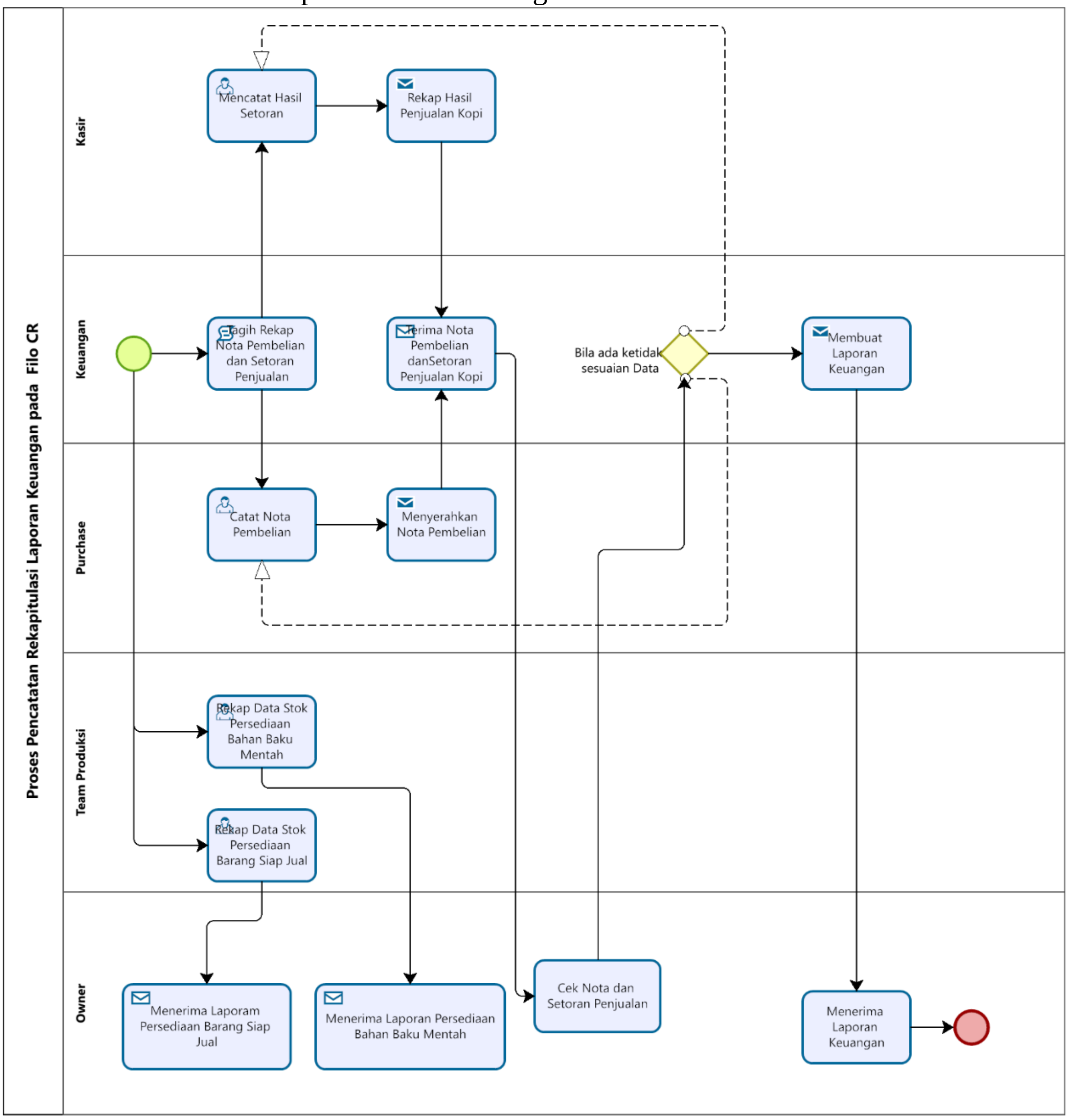
Picture of the proposed Raw Material Purchasing Process to Supplier (To Be)

Explanation of the business process flow of Purchasing Raw Materials to Suppliers at Filo CR:

a. After the shopkeeper has checked the Raw Material Inventory and declared exhausted, the Purchasing department selects suppliers (fostered farmers).

b. After choosing a source supplier (fostered farmers), remember to check the quality of the coffee and the price of the coffee offered.
c. If the price and quality meet the requirements, the purchasing department processes the purchase of raw materials according to the needs.
d. For raw materials that are suitable and ordered, the purchasing department makes a payment transaction for coffee (green beans).
e. The supplier (assisted farmer) receives payment and provides a sales receipt.
f. After checking the proof of payment, the supplier (fostered farmer) continues to send the raw coffee materials (green bean) ordered to Filo CR by including proof of purchase receipt.
g. Goods received by Filo CR.

5. Financial Statement Recapitulation Recording Process



Picture of the proposed Financial Statement Recapitulation Recording Process (To Be).

Explanation of the flow of the Financial Statement Recapitulation Recording Process;

a. The Finance Department collects reports from each division (Production Team, Purchase, Finance and Cashier).

b. Each division (Cashier, Purchase and Production Team) submits recap data to the finance department.
c. Finance re-checks the report and the suitability of the data reported from each division.
d. If the reports of each division are in accordance, the finance department forwards the recap of receipts and sales reports to be checked to the owner.
e. The production team specifically deposits a recap of raw material (green bean) inventory data and also the inventory of ready-to-sell goods to the owner.
f. The owner checks the data from each division, which is forwarded to the finance department to make financial reports.
g. The finance department submits the financial report to the owner.

CONCLUSION

The business processes currently running at Filo CR require improvement, and business processes that require improvement have been stated in the business process with BPMN depiction. Part of each division is very important and must be separated and re-emphasized duties and responsibilities between work divisions. This business process is also inseparable from the owner (owner) role in supervising and making the right decisions for the company's internal control. With the ERP-based inventory accounting information system for UMKM Filo CR, data reports can be presented in real-time. Therefore, it is useful to assist the business owner (owner) process as a material for business evaluation, efficiency, and supervision of each division to prevent fraud and accuracy in decision-making for internal control of UMKM Filo CR.

REFERENCES

Grafton, J., Lillis, A. M., & Widener, S. K. (2010). The role of performance measurement and evaluation in building organizational capabilities and performance. *Accounting, Organizations and Society*, *35*(7), 689–706. https://doi.org/10.1016/j.aos.2010.07.004

Halim, A. (2020). Pengaruh Pertumbuhan Usaha Mikro, Kecil Dan Menengah Terhadap Pertumbuhan Ekonomi Kabupaten Mamuju. *Jurnal Ilmiah Ekonomi Pembangunan*, *1*(2), 157–172. https://stiemmamuju.e-journal.id/GJIEP/article/view/39

Jogiyanto. (2015). Analisis & Desain Sistem Informasi Pendekatan Terstruktur Toeri dan Praktek Aplikasi Sistem. *Andi Press*.

Ladjamudin, A.-B. Bin. (2018). Analisis dan Desain Sistem Informasi. Yogyakarta: Graha Ilmu. *Jurnal Teknik Informatika*.

Mulyadi. (2016). Sistem Informasi Akuntansi. Edisi ke-empat. In *Salemba Empat*.

Nofi Cahyono. (2015). Pengertian Perancangan Sistem Informasi - NOFI CAHYONO. In *07/2015*.

Pratama, R. (2021). *Implementasi erp pada ukm di kota denpasar berbasis oddo*. *April*.

Romney, M. B., & Steinbart, P. J. (2015). Sistem Informasi Akuntansi, Edisi 13. *Salemba Empat, Jakarta*, 3.

Sanggrama, E. B. (2020). Sebuah Solusi untuk Perkembangan UMKM di Indonesia. *Jurnal Akuntansi*, *12*(1), 146–158. http://journal.maranatha.edu

Sudarto, M. I. D. (2017). *Peluang Usaha IKM Kopi*.

Widjijono, V. H., & Wehartaty, T. (2017). *Analisis Dan Pereancangan Sistem Informasi Persediaan Untuk Meningkatkan Pengendalian Internal (Studi Kasus Pada Pt Lomax)*. *9*(1), 83–99.