

## **Development of Web-Based ISSS (Integration of Single Selling System) To Increase the Validity of Sales Information (Case Study on Distribution Company PT Sehat Selalu Banyak Rejeki)**

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**Abstract:** *The importance of using a computerized information system becomes a vital urgency to be resolved. The existence of this need is based on the status quo condition or problems in the company, especially related to real-time data and quality control conditions that affect decision-making for companies that are currently in a "developing" condition with an "entrepreneur" -based leadership style where fluctuations and policy changes can happen at any time. A system that can be managed flexibly, easily accessed anywhere, and by actual conditions. So based on these needs, the system needed is web-based considering the relatively lower cost with a system that can be managed flexibly. By using a web-based application, several things need to be considered related to data storage and conceptualization. In interpreting business processes so that in the end they can be implemented in the form of applications, the method used is the Agile development method, where the scope of this research focuses on developing or solving minor problems so that they can require a relatively faster time in the stage of identifying issues in each object. The final result of making this system is in the form of a new system mechanism that disrupts a system that has become more efficient and effective, a prototype that is ready to be developed, and publications as a scientific basis for readers to then be used as a reference in solving similar problems.*

**Keywords:** *Quality control, Web-based information system, Distribution*

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### **I. BACKGROUND**

Problems in the flow of information are commonly found in an industry that involves many divisions in implementing its business, especially for companies that have several branches or depots to manage, so the activities that occur in it tend to be more complex and involve many people to control (Andrawina et al., 2014). Information systems have an important role in developing a business, accelerating data analysis to the stage of determining a strategy to be able to increase efficiency and effectiveness in system implementation procedures (Turner & Weickgenannt, 2017). By implementing an integrated information system, the benefits that will then be received are 1) improving the quality of service and production effectively and efficiently, 2) helping relevant decision making, and 3) facilitating coordination with external parties by cutting bureaucratic lines or long and complicated coordination (Noerlaili & Zakhra, 2013).

The use of information systems requires capital costs for system transitions such as the fulfillment of equipment, systems, and human resource development related to knowledge about system implementation which is considered relatively larger so that concerns arise regarding the sustainability of the company and the number of possible losses that will occur (Susanto, 2017). Knowing this, several things need to be identified, such as 1) the high cost of implementing an information system based on the company's capacity and the data to be managed so that starting the implementation of an information system when the company's condition is still in development is considered necessary (Rasmini & Masdiantini, 2018), 2) the process of adjusting the system transition will trigger changes in the quality of human resources so that they become more competent (Sutabri, 2014). Information systems that currently exist such as ERP (Enterprise Resource Planning) or SAP (Systems Applications and Products) we have seen many results from the products of companies that provide application services that we should easily get and adjust to the needs of the company, but in its implementation, the problems that are currently happening in the company's development are fluctuating, inappropriate language in recording and reporting, and other factors cannot be covered by this. Therefore, the company must independently find which system solution is the most suitable to be applied so that the solution chosen in solving the problem can be appropriately used so that its use is efficient and effective (Nofal & Yusof, 2016).

One type of distributor company with a high-level risk of loss is the type of distributor of processed tobacco products knowing the selling value is quite high on the relatively smaller size of the goods. The provision of opportunities in the form of consignment goods by using a credit sales mechanism within a certain maturity is an effort as a sign of binding and cooperating between the distributor and the head of the depot or branch management agent or AMO, then providing flexibility in the distribution time of the product to be circulated. The existence of the status quo is ultimately a challenge for distributor companies, especially those in this study named PT Sehat Selalu Banyak Rejeki to disrupt their information system even though it requires sacrifices, especially in terms of updating human resources and determining initial capital to be able to make it more efficient and effective work system at the company as a result of the pruning information.

The company's management must present financial statements accompanied by the company's internal control system. In 1987, the National Commission on Fraudulent Financial recommended that every organization be asked to pay more attention to the organization's internal control by expanding attention to the control environment, code of ethics, competence, audit committee, and the function of internal audit objectives (Finance et al., 2017). Control is a set of concepts relevant to all systems inherent in a company's accounting information system. Process control is broadly one of the foundations of the management function. Management is required to build and implement internal control in the entire set of organizational and information systems to ensure that organizational activities run as planned (Turner & Weickgenannt, 2017). The decisions taken by management in every activity are fundamental to the success of management. Effective control provides an opportunity for management to utilize resources effectively in fulfilling their responsibilities and to increase the reliability (level of trust) and utilization of the information obtained. In addition, internal control provides benefits for management to carry out supervision and functions examination of the accounting information system that has been designed with the assistance of the internal and external auditors. External auditors need to understand and consider the level of effectiveness of the company's internal control to assess audit risk in the audited company, meaning that it will be less likely for organizations that have poor internal control to obtain audit results with "unqualified opinions" (Rija & Ernesto Rubino, 2018). Internal control is a process that can function effectively if it is supported by the leadership of the organization, management, and all personnel in the organization. Internal control designed by the organization's management has the following objectives: 1) achieving the effectiveness and efficiency of the organization's operational activities, 2) reliability (trustworthiness) of financial reports, and 3) compliance with organizational policies and regulations (Pudail et al., 2018).

One of the implementations of internal control is to disrupt the company's performance system which was originally based on conventional to be based on information technology. Various services have provided ERP-based application options as a solution to change conventional-based information systems to technology-based ones. However, in addition to being able to solve problems, many companies consider that the complexity presented by the ERP system cannot solve the problems that occur, this is due to the inflexibility of the existing system compared to the problems that are being faced, therefore, a system needs simple information created specifically for companies that have a special character and culture so that it can be easily known and adapted according to the problems that occur (Suminten et al., 2019).

Facing these problems, the solution offered is to use a web-based ISSS that is specifically made to solve problems in related companies to integrate HO with AMO. The development of a web-based system is recommended based on client needs related to ease of access, capabilities related to system adaptation, and relatively cheaper costs if accessed in the long-term knowing that pure property rights are owned by the related company, besides it is easy to customize according to company data needs. This selling-based data management can make it easier for users to keep data in real-time and avoid continuous input errors. Thus, based on this, the researcher intends to solve the existing problems by providing solutions in the form of building an integrated sales information system that can connect the operational activities carried out by HO with AMO through a web-based information system.

## **II. LITERATURE REVIEW**

The accounting information system is a series of coordinating resources (data, materials, equipment, suppliers, personal, and funding) oriented to the process of converting inputs in the form of economic data into outputs in the form of financial information that is used to carry out company activities and provide information that can be used by the company (Tirayoh & Gracia, 2016). Some researchers reveal that the definition of an accounting information system is a series of organizational components that collect, classify, process, analyze, and communicate relevant financial information for decision-making to internal and external parties. Some explain that an accounting information system is a system that processes data and transactions to produce useful information for planning, controlling, and operating a business. An accounting information system is a collection of resources, such as people and equipment, designed to convert financial and other data into information. The accounting system consists of documents in the form of transaction evidence, recording tools,



Based on the law that was initiated by Sabanes-Oxley where the rule requires that there be strong and effective internal control in the company, especially in the process of recording transactions and preparing financial reports, so that with this it can facilitate the company in providing directives for the company's operating effective activities. One of the violations due to the ineffectiveness of internal control is the risk associated with fraud committed by employees and misuse of the promo budget. Characteristics of Financial Statements are all normative measures that must be realized in the accounting information system to meet the objectives of financial statements. This financial information report is an entity that can describe the performance of the entity in an accounting period. The description of the characteristics of financial statements based on the development of PSAK is as follows (High et al., 2006):

1. **Understandable**  
Information in financial statements is considered quality if it is easy for users to understand. Users are assumed to have adequate knowledge of economic and business activities, accounting, and a willingness to study the financial information of a company.
2. **Relevant**  
The information must be relevant to meet the needs of users in the decision-making process. That is, the quality of information should be able to influence the economic decisions of users by helping evaluate events in the past.
3. **Materiality**  
Information is considered materiality if the omission includes errors in recording the information that can affect the economic decisions of users taken based on the financial statements.
4. **Reliability**  
Information has a reliable quality, if it is free from misleading notions, material errors, and can be relied on by users as a faithful representation.
5. **Honest Presentation**  
Financial information in general does not escape the risk of presentation that is considered less honest than what it should describe.
6. **Substance over Form**  
If the information is intended to represent faithfully the transactions and other events that it purports to represent, those events need to be recorded and presented in accordance with their substance and economic reality.
7. **Neutrality**  
The information must be directed to the general needs of users, not depending on the needs and desires of certain parties. There should be no attempt to present information that benefits several parties while doing so will be detrimental.
8. **Healthy Considerations**  
The preparation of financial statements sometimes faces the uncertainty of certain events and circumstances such as the doubtful collection of receivables, and the estimated useful life of plants and equipment with claims for guarantees that may arise.
9. **Complete**  
To be reliable, the information in the financial statements must be complete within the limits of materiality and cost.
10. **Comparable**  
Users can compare the company's financial statements between periods to identify trends in financial positions and performance.

According to Fatta (2007:25), the system development model or process model also called "Workflow", that is the procedure for how the process elements relate to one another. This workflow can also be called the life cycle of the system, which is assessed from the time the system is submitted for construction to the time the system is withdrawn from circulation. One of the stages of system development is using the System Development Life Cycle (SDLC) method. In developing a system, one of the widely used programming languages is PHP which stands for Hypertext Preprocessor, which is an open-source server-side web programming language. PHP is a script that is integrated with HTML and resides on the server (server-side HTML embedded scripting). PHP is a script used to create dynamic web pages. While the management system used is MySQL, MySQL is a relational database management system (RDBMS-Relational Database Management System) that can work quickly, robustly, and is easy to use (Gustina et al., 2015).

Knowing the problems that occur in this study, the framework for solving the problems is as follows:

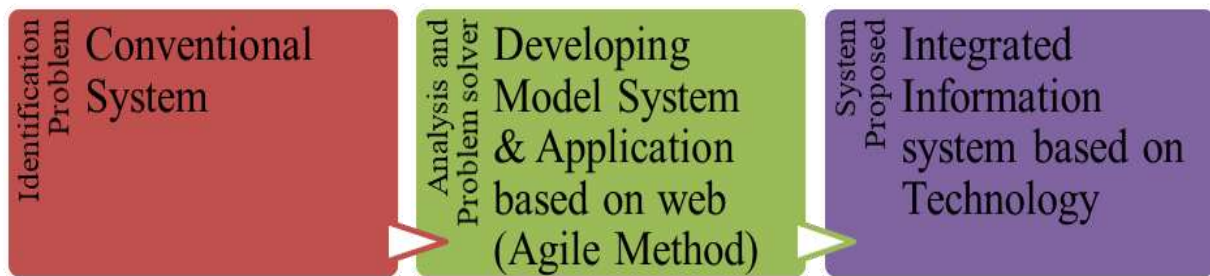


Figure 2: Conceptual Framework Flow

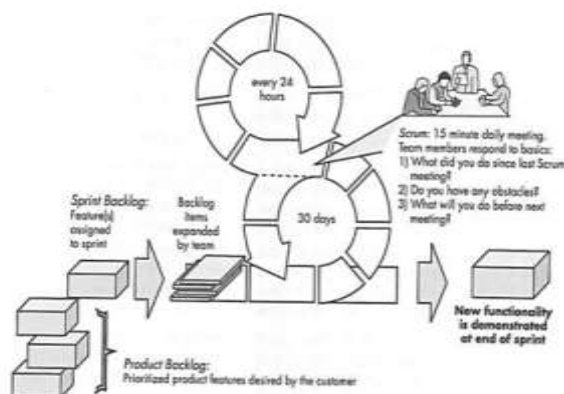
The steps are carried out by identifying the problems that occur in the chosen object so that through these problems, the right solution can be chosen to increase efficiency and effectiveness in business processes. After identifying the problem and the existence of a solution that has been determined related to the problem, the next step is solving the problem using agile methods so that in the end the problem is resolved with the solutions presented in addition to continuing to make improvements.

### III. RESEARCH DESIGN AND METHODOLOGY

This research used several methods in the research preparation, which are 1) the Agile method for developing applications and 2) the qualitative descriptive method in describing the implications of implementing ISSS to support financial validity. According to Pressman (2010:82) agile development method is the development of software that has a short time span and can adapt to any changes that may occur during the process of developing the system. One method that can be said to be an agile development method if it is interactive, incremental, flexible, responding to change, and lightweight, but there is still one important thing about the Agile development method, namely how to describe a system that can be understood easily and is able to solve party problems. Regarding the explanation of the Agile development method above, namely:

- a. **Interactive** can be implemented in the development process as a software solution by means of a periodic approach to find solutions to problems obtained during the system development process.
- b. **Incremental** is the development of certain software by considering the functionality requirements of the system and then dividing it into several smaller parts. At each development the functionality of the software will increase so that by completing one by one the small parts in a large system will then make a complete system.
- c. **Flexibility** when a software is developed, the system can adapt to these conditions because the developer has involved the client directly in the software development process. Therefore, developers must be prepared when changes occur.
- d. **Responding to change** allows changes to the requirements, code, and design of the software that has been created.
- e. **Lightweight** developer can minimize the documentation of requirements and unnecessary segments during software development because this situation can slow down the speed and time in software development.

The Scrum principle is in accordance with the principles contained in the development method where the process is schemed quickly in applying or conceptualizing software development activities, such as by doing: 1)





fulfillment of needs, 2) analysis, 3) design, and 4) delivery. The Scrum process flow can be seen in the following image:

Figure 3: Agile method picture scheme (Abrahamsson et al., 2017)

Which can be described as follows:

**1. Requirement Gathering**

In a problem-solving method, the initial step required is to analyze the genuinely happening problem (the status quo) first and then examine the most appropriate alternative solution. At this stage, both researchers and software developers perform to identify problems, determine stakeholders, formulate steps for completion by making roadmaps, and collect required documents, and various other information. At this stage, the information is collected and then examined at the feasibility level and project scope using the PIECES Performance, Information, Economics, Control, Efficiency, Service framework as a purpose to find the core of existing problems (problems), chances to improve organizational performance (opportunities), and new needs imposed by management or the government (directives).

**2. Analysis**

After collecting data, the researcher analyzes the problem and determines the precise steps to solve the problem. At this stage, the problem identification process uses BPMN (Business Process Management Notation) so that later with the visualization of the overall business flow, it is possible to analyze the efficiency and effectiveness of various ongoing business activities, especially in the marketing distribution aspect.

**3. Design**

The design stage is the stage in conducting program preparation based on the roadmap and analysis that was carried out previously. Preparation of research design using ERD system (Entity Relationship Diagram). Where in this stage, the drafting team identifies stakeholders and the primary or secondary key in each process to be visualized through the coding stage. The purpose of this stage is to transform business requirements from the requirements analysis phase to the model system that will be built later. In other words, this phase answers questions about the use of technology (data, process, interface) that ensures usability, reliability, completeness, performance, and quality built into the system.

**4. Coding**

Coding is the stage where the IT team performs activities to visualize the programming design that was conceptualized before into a programming language to then produce output in the form of a system. In its implementation, the coding process is carried out using CSS (Cascading Style Sheet), HTML (Hypertext Markup Language), Java Script, J-query, and PHP (Hypertext Preprocessor) with the use of a framework called Larafell which is a framework that can assist web developers in maximizing the use of PHP in the website development process, and the database used is My SQL which is conceptualized on a private page to then produce output in the form of a website-based system that is connected to a certain address.

**5. Testing**

The testing stage is a stage where the entire team conducts tests related to the implementation of the program made to check: 1) the suitability of the system made with the concept that was prepared previously, 2) error analysis when the application is run, 3) minimizes fraud so that it is accompanied by with the development of a security system and other considerations, and 4) smooth development of each stakeholder involved in the development of a system.

**6. Delivery of Partially Incremented Software**

At this stage, the results of the previous trial process are then followed up with improvements and further evaluation of the system developed.

**7. Feedback from User**

The question is whether the IT team has the same use as the function of each user, data collection is carried out in the form of percentages or questionnaires. In a business, the important thing in development is based on customer orientation. So, it can be concluded that customers have an important role in developing a system, knowing the following, what the IT team needs to do is provide options or a form of system mechanism where companies can communicate directly with customers or customers.

At each stage of development, there are work activities that are included in a process pattern called a sprint. For each process pattern that occurs, there will be the following set of activities (Abrahamsson et al., 2017) :

a. Backlog

A priority breakdown of the features to be built into a project. Contents on features can be added at any time.

b. Sprints

A collection of work activities that are performed to meet the requirements specified in the backlog and must be completed within a specified time (usually 30 days). Changes cannot be made to the sprint process so each team will work in a stable environment.

- c. Scrum Meeting  
Meetings held daily by the Scrum team to discuss what has been done since the last meeting, plan and discuss issues (usually 15 minutes).
- d. Demos  
Addresses the results of the implemented functionality so that it can be evaluated by the user. Demos must be features that have been completed within the allotted time.

While the next approach is done through a qualitative approach that has descriptive characteristics. The data collected is firstly directly from the source, the researcher becomes part of the main instrument of the analysis, secondly the data is in the form of words in sentences or pictures that have meaning (Mustori, 2012) .

The main data sources in this study are words and actions, the rest are additional data such as photo documentation, musical recordings/songs and other similar written works. Regarding data, the types of data can be divided into words and actions, written data sources, photos and statistics.

**Data collection techniques** are carried out through: 1) Observation (observing the research object which can be done in two ways, namely first direct observation and indirect observation), 2) Interview (to further clarify data collection is done by interview. Interviews can be conducted in two ways, namely free and programmed interviews. Free interviews are conducted on several informants and resource persons to obtain general data), 3) Documentation (In qualitative research the role of documentation is very large, data from documentation is useful to help display some data that is may not be obtained. Some written notes and pictures are needed to assist in analyzing research data).

**Data Validity** required to ensure the validity of the data in the study. This study used triangulation techniques as the data validity technique. Triangulation is a technique of checking the validity of data by utilizing something other than the data, for checking purposes or as a comparison of the data. In this study, the validity of the data uses source triangulation, which means that in this study compares and checks back the degree of confidence in information obtained through different times and tools by (1) comparing the data from the results of the study and comparing the data from observations with data from interviews, (2) comparing what people say in public with what is said in private, (3) comparing one's state and perception by sharing opinions and views.

**Research Instruments** are tools, namely the researchers themselves or the facilities used in data collection so that their work is easier and the results are better in the sense of being more accurate, complete and systematic so that they will be easily processed. Have been obtained, (2) Record collections both used and unused if necessary, check in the library into the data presentation table based on the checklist, and (3) Analyze the data that has been listed in the data presentation table to strengthen conclusions.

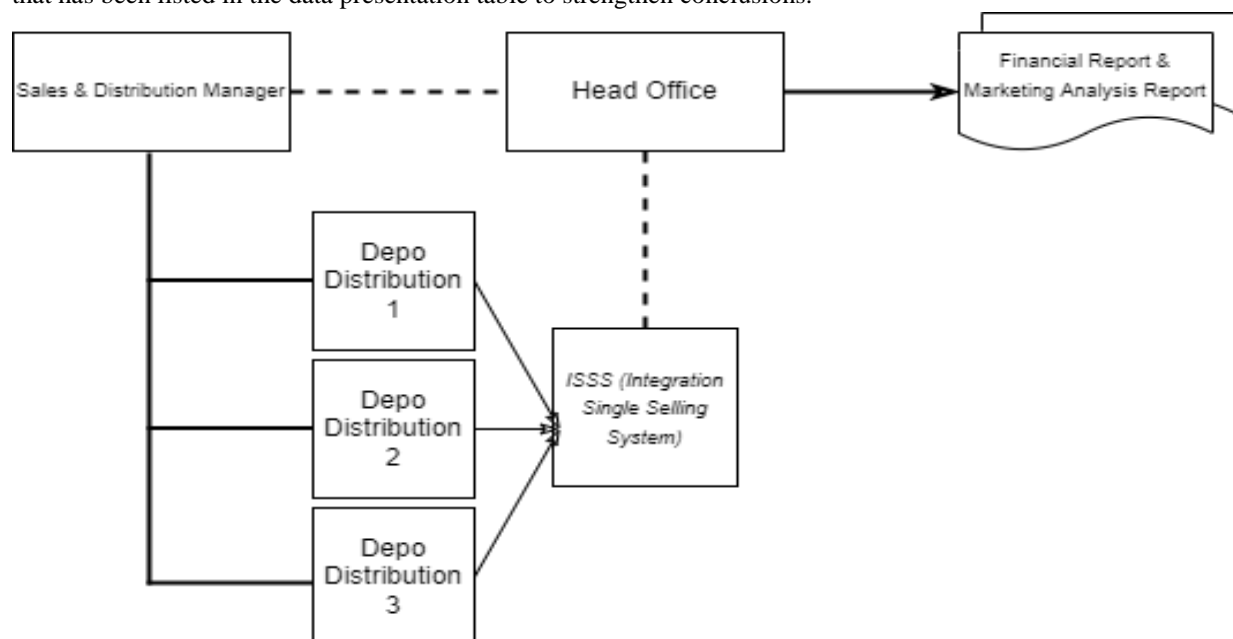


Figure 4: Development project scheme of ISSS (Integrated single selling system)

**Data analysis technique** used is the interactive analysis model. In this model there are three components consisting of data reduction, data presentation, and drawing conclusions or verification. Its activities are in the form of the interaction of the three components of the systematic analysis as follows: 1) Data Reduction (a method used by researchers in conducting analysis to emphasize, shorten, focus, discard things that are not important and organize data in such a way that it can draw conclusions or obtain main findings ), 2) Data Display (in order to get a clear picture of the overall data, which in the end will be able to draw conclusions, the researchers tried to compile it into a good and clear data presentation so that it can be understood and understood ), 3) Conclusion Drawing.

### 3.1 Equipment and Supplies

The general components contained in a system consist of software and hardware. Hardware has 3 main components contained in the system, namely client computers, servers, and network. While the software has several functions that are used as the basis for building an application. There are 4 basic software functions, namely (Turner & Weickgenannt, 2017) :

1. **Data storage**, many applications require data to be stored so that the data can be retrieved when needed. Data storage is a place to store data which in this study uses the cloud. The data storage system in the form of a cloud is considered because of the efficiency and effectiveness of access in its use.
2. **Data access logic**, where each application requires a controller to be able to access stored data, such as database queries
3. **Application logic** is the logic of how to implement an application. Documentation of application logic is carried out in the form of functional and behavioral models. Application logic can be easy or complex depending on the application to be built.
4. **Presentation logic** connects the user and the application to be built in an attractive interface. With an attractive interface design, users will find it easier to use and understand the application

### 3.2 ISSS (Integrated Single Selling System) Development Project Scheme

The system development involves several stakeholders centered on the head-office, such as the head of the depot, distribution manager and managing operator. The system is operated online while conducting transactions so that the recorded data is available in real-time. The existence of this provides convenience for all stakeholders, especially in making decisions.

### 3.3 Research Roadmap

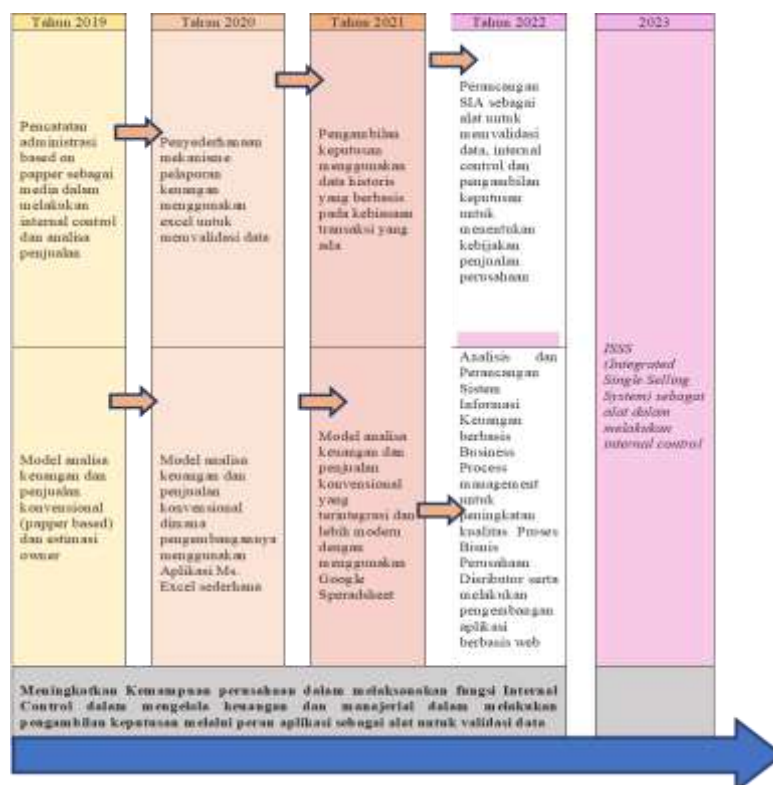


Figure 5: Research Road Map



#### IV. EMPIRICAL RESULTS

##### 4.1 General Condition of PT Sehat Selalu Banyak Rejeki

##### 4.1.1 General description of PT Sehat Selalu Banyak Rejeki

PT Sehat Selalu Banyak Rejeki (SSBR) is a company with the type of company engaged in the trading of 1) cigarettes and tobacco (46335), 2) vegetable oils and fats (46315), 3) non-alcoholic beverages instead of milk (46334), 4) rice (46311), 5) other food and beverages (46339), and chopped tobacco (46204). Established in accordance with the deed of establishment dated January 29, 2021 in Pakis District, Malang Regency, East Java. Since its establishment in the last year, PT Sehat Selalu Banyak Rejeki underlies all forms of organizational activities based on the process of developing noble character and character. Through the development of human resources based on religion, it is the basis for the company to carry out internal and control management that can help the company to develop towards a standardized and stable company.

##### 4.1.2 Historical System Changes Through BPMN (Business Process Management Notation) Analysis

BPMN provides a standardized visualization of the modeling of a business process so that the flow and schema of the business process in general can be more easily read and understood by all components involved in the business. The existing business processes at PT Sehat Selalu Banyak Rejeki include a series of activities that involve several business components within the company. The complexity of existing business processes has not yet been visualized in a model. Whereas identification and modeling of business processes is one of the initial stages in building competitive advantage through business processes. Through the process of identifying and modeling ongoing business processes (As-Is Model) it will assist management in identifying potential changes that will occur to support the efficiency and effectiveness of existing activities and ultimately improve business process performance. At PT Sehat Selalu Banyak Rejeki, one of the core processes in the running business is the distribution business scheme or sales implementation. In carrying out the process, PT Sehat Selalu Banyak Rejeki has undergone many changes of system in the sales business process scheme which consists of stages which are visualized as follows:

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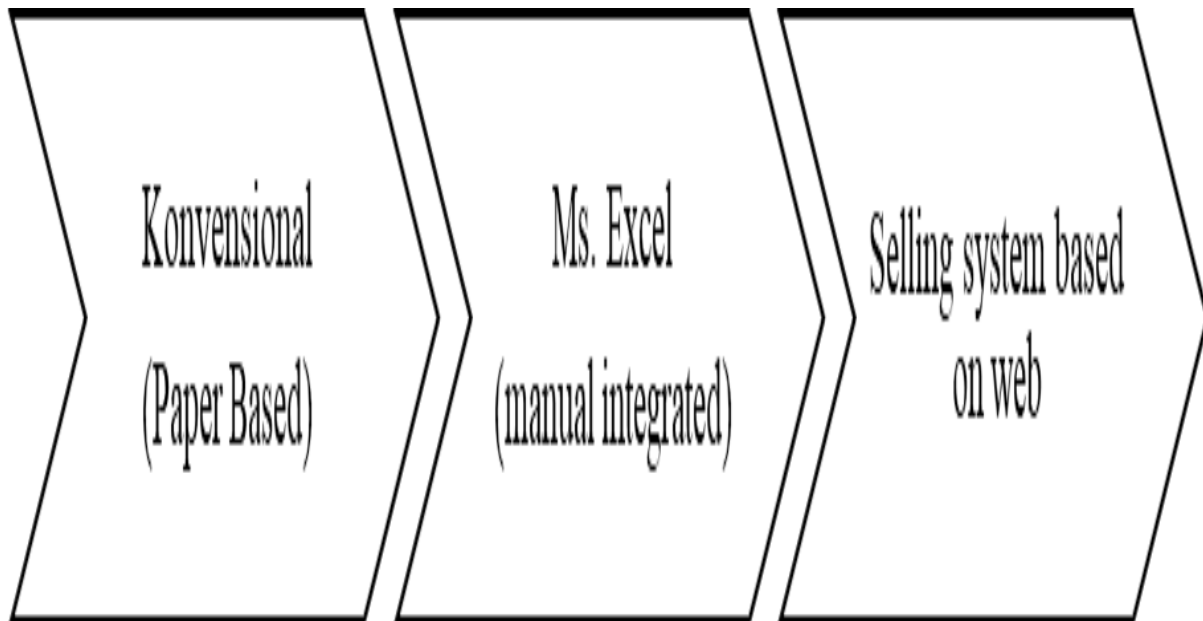
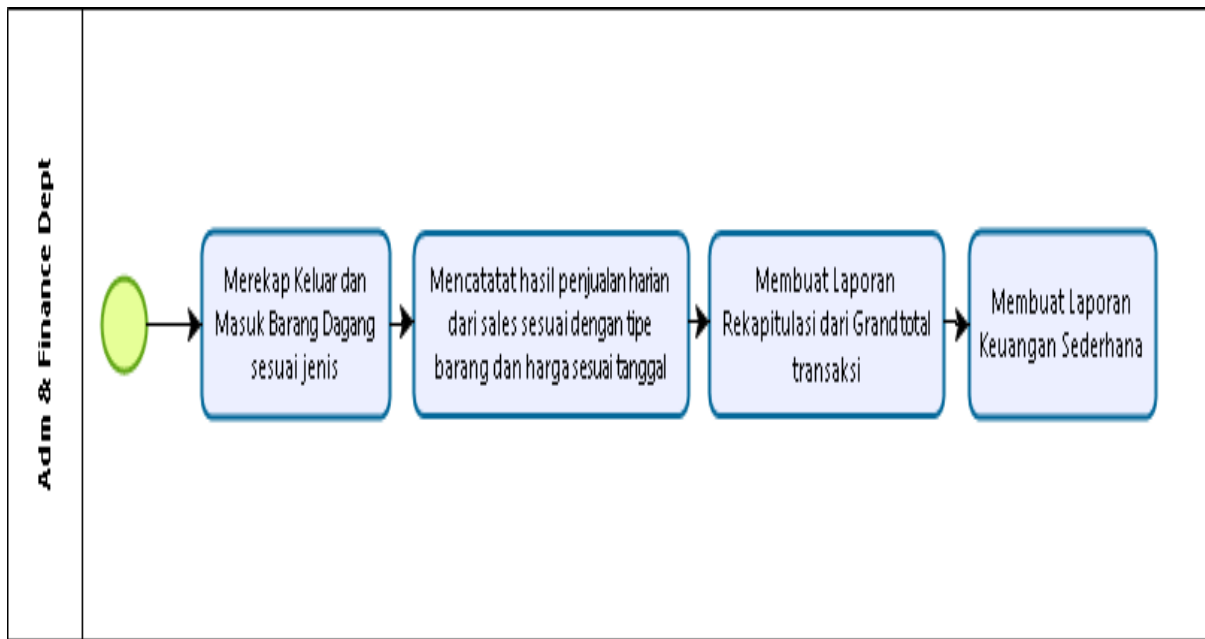


Figure 6: Sales information system historical scheme



Thus, in the historical scheme, it can be described in the visualization of BPMN as follows:

Figure 7: BPMN conventional selling system visualization

**a. Paper-based information system**

In carrying out its functions, the advantages and disadvantages of implementing administrative procedures and financial reporting can be visualized in the following table:

Table I: Details of System Weaknesses and Strengths at PT SSBR

| <i>Indicator</i>                      | <i>Advantages</i>   | <i>Weakness</i>   |
|---------------------------------------|---|---|
| Realization of bookkeeping procedures | The existing procedures are relatively shorter, this allows the company to use fewer human resources. The use of fewer human resources supports companies in reducing daily operational costs | In its implementation, there is an obligation for multi-tasking for incumbents due to the minimum number of employees                                     |
| Level of human error and fraud error  | It is easy for the principle to justify the location of the problem as a result of the minimal number of divisions of work in circulation   | The relative level of human error will be higher, this is because the obligation of employees to carry out their work is multi-tasking rather than manual |
| Cost                                  | Low operational costs in the form of employee salaries as a result of the minimal use of human resources  | There are operational costs in the form of using stationery (office stationery) because the basic bookkeeping is in the form of paper-based procedures.   |

**b. Simple computerized record keeping information system**

The use of a computerized record-based information system is one of the management's efforts in minimizing the use of costs in the form of using stationery (stationery). In its application, the use of a computerized system is still simple excel-based so it does not require paper to manage. In its implementation, the form of a computerized system can be visualized in a flowchart scheme as follows:

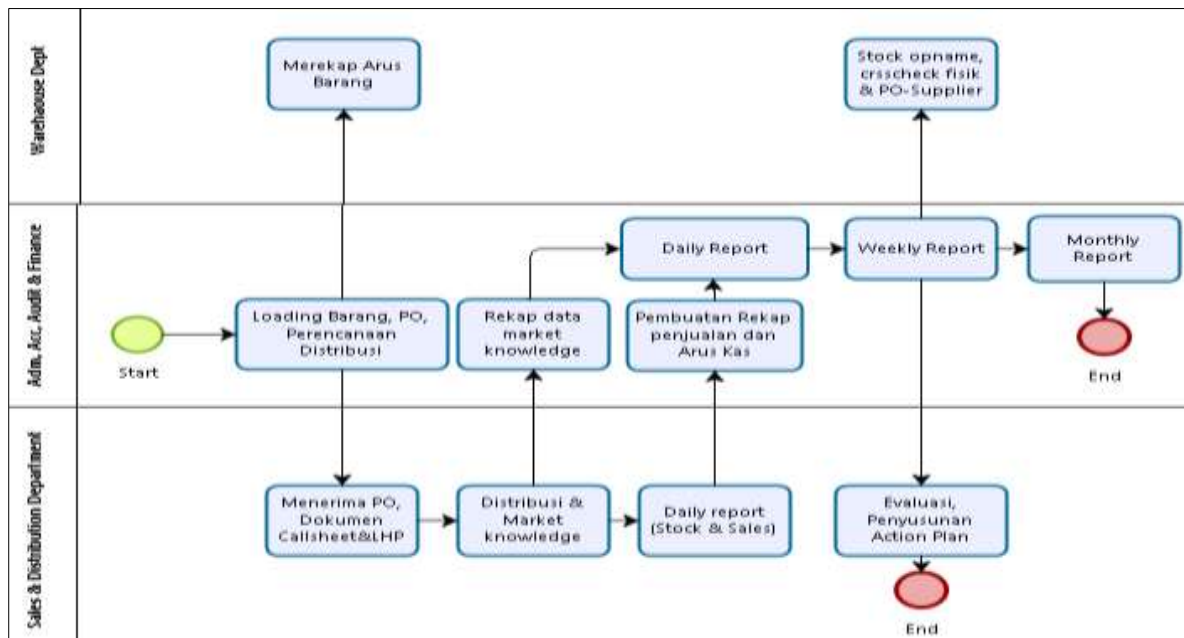


Figure 6: BPMN Excel-based selling system visualization

Consisting of three departments in implementing their business processes, this automated system using a simple excel system provides convenience for each department, especially in the administrative aspect, including tidying up existing books. This is because the system or format is similar and understandable so that it can be forwarded and analyzed in each department.

**4.1.3 Organization Vision & Mission**

**a. Company Vision**

“Become a distribution company with the best quality of service and products as a form of dedication to religion and nation”.

**b. Company Mission**

The mission of PT Sehat Selalu Banyak Rejeki is as follows:

1. Oriented on customer satisfaction in any development initiatives business
2. Implement the best standards to guarantee quality
3. Instilling the values of fiqh rules as the basis for decision making and programming work

**4.1.4 Organizational Structure**

In its implementation, the nature of the company that is still based on start-ups at PT SSBR makes the conditions for human resource needs that are still limited. The division of tasks and job descriptions are also still based on functional personal abilities, so that positions in the organizational structure are still multi-tasking, as for the visualization of the organizational structure as follows:

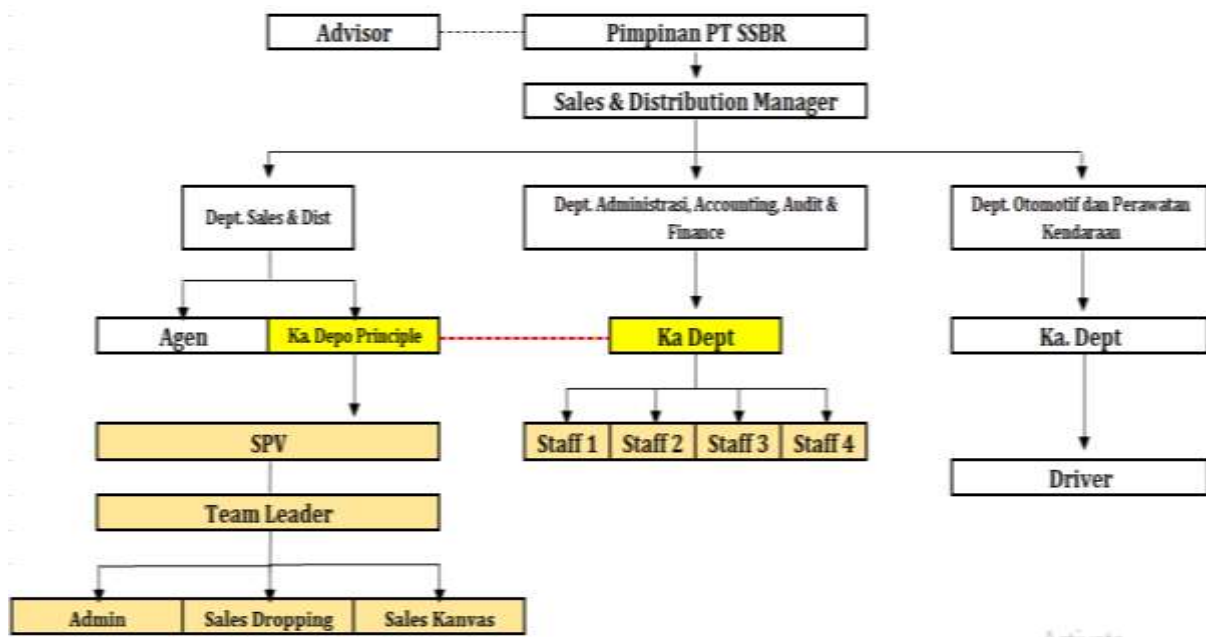


Figure 7: PT Sehat Selalu Banyak Rejeki organizational structure

**4.1.5 Job Description Details**

Based on the existing organizational structure, the job descriptions distributed for each component or position holder are as follows:

Table II: Job Description Details

| <i>Position</i>                     | <i>Job Description Details</i>   |  |
|-------------------------------------|--|--|
| Ka. Department                      | <ol style="list-style-type: none"> <li>1. Make action plan on beginning period distribution quarterly as the basis for the preparation of budgets, programs and plans distribution</li> <li>2. Supervise the realization of each <i>job description</i> staff</li> <li>3. Carry out the process of correcting each report staff</li> <li>4. Evaluate results or realization from planning action plan which made related to distribution results and cash flows occur</li> <li>5. Communicating related to financial reporting to parties affiliate (PR Cahaya Pro) in pre-ordering goods and realizing monthly financial reporting</li> </ol> |  |
| Administration Staff 1              | Sales  | <ol style="list-style-type: none"> <li>1. Pre-Order Sales &amp; Freelance</li> <li>2. Closing Report Sales &amp; Freelance</li> <li>3. Depot Distribution</li> <li>4. Daily Sales Route</li> </ol> |
|                                     | Billing Collection   | <ol style="list-style-type: none"> <li>1. Credit Note Shop</li> <li>2. Credit Note Freelance</li> </ol>  |
|                                     |  | <ol style="list-style-type: none"> <li>3. Invoice Agent</li> <li>4. Cash bond Sales or owner</li> </ol>  |
|                                     | Daily Routine  | <ol style="list-style-type: none"> <li>1. Transfer Factory</li> <li>2. Payment Facility</li> <li>3. Facilities Procurement (ATK)</li> <li>4. Transaction Report Daily</li> </ol>                   |
|                                     | Weekly Routine   | <ol style="list-style-type: none"> <li>1. Stock matching (physical and physical condition) recording)</li> <li>2. Weekly report for closing turnover</li> </ol>                                    |
| Monthly Routine (Finance Reporting) | <ol style="list-style-type: none"> <li>1. Cash Incoming Recapitulation and Go out</li> <li>2. Details Cost</li> <li>3. Details Debt</li> <li>4. Balancing report</li> <li>5. Details Cashbond</li> <li>6. Marketing Data Analysis</li> </ol>   |  |

| <i>Position</i>                   | <i>Job Description Details</i>   |   |
|-----------------------------------|--|---|
| Administration Staff 2            | Archives & Mail  | <ol style="list-style-type: none"> <li>1. Making Letter</li> <li>2. MoU sheet making, Agreement</li> <li>3. Archiving Valuable Documents and Letters Go out</li> </ol>  |
|                                   | Pre-Order Items  | <ol style="list-style-type: none"> <li>1. Procurement of goods (Submission)</li> <li>2. Checking goods out enter</li> </ol>   |
|                                   | Human Resources  | <ol style="list-style-type: none"> <li>1. Hiring</li> <li>2. CV and Document Archiving application</li> <li>3. Interview Process, Contract and Training Explanation</li> </ol>  |
|                                   | TAX  | <ol style="list-style-type: none"> <li>1. Tax Planning</li> <li>2. Report and Pay</li> </ol>  |
|                                   | Depot Controller   | <ol style="list-style-type: none"> <li>1. Marketing Analysis</li> <li>2. dept Collect</li> <li>3. Pre-order &amp; Delivery Coordination Goods</li> </ol>  |
|                                   | Payroll  | <ol style="list-style-type: none"> <li>1. Presence Recapitulation Presence</li> <li>2. Salary Submission Sales</li> <li>3. Freelance Salary Submission (Royalty)</li> </ol>   |
| Administrative Staff 3            | Daily Routine  | <ol style="list-style-type: none"> <li>1. Incoming and Outgoing Goods Recording (PO, Sales, &amp; Depot)</li> <li>2. Mobilization of large warehouse goods to warehouse small</li> <li>3. Product Procurement TUD</li> <li>4. Arrangement of Goods Returns and Implementation Return</li> </ol> |
|                                   | Weekly Routine   | <ol style="list-style-type: none"> <li>1. Stock matching (physical and physical condition) recording)</li> <li>2. Weekly report for closing Warehouse</li> </ol>  |
|                                   | Monthly Routine  | <ol style="list-style-type: none"> <li>1. Stock matching (physical and physical condition) recording)</li> <li>2. Stock matching (promo items &amp; Inventory)</li> </ol>   |
| Administrative Staff 4            | Marketing Data Collection  | <ol style="list-style-type: none"> <li>1. Mapping check area</li> <li>2. Setup Callsheet</li> <li>3. NOO Analysis &amp; RO</li> <li>4. Data archiving marketing</li> </ol>  |
|                                   | Program  | <ol style="list-style-type: none"> <li>1. Program Details (on going)</li> <li>2. Data recapitulation program</li> <li>3. Program Logging Agent</li> </ol>   |
| Ka. Dept. Automotive and Vehicles | <ol style="list-style-type: none"> <li>1. Vehicle Condition</li> <li>2. Management of Vehicle Documents.</li> <li>3. Responsible for Sales Distr. Mngr.</li> </ol>   |   |
| Supervisor                        | <ol style="list-style-type: none"> <li>1. Salesman activity report work per day</li> <li>2. Report Correction, take Solutions if there are technical problems.</li> <li>3. Area Supervision based on callsheet.</li> <li>4. Make Weekly Reports on Supervision activities</li> <li>5. Responsible for Sales Dist. Mngr.</li> </ol>   |   |
| Sales Dropping                    | <ol style="list-style-type: none"> <li>1. Distribution work according to schedule</li> <li>2. Opening of WS.. SWS.. Based on information and survey</li> <li>3. Manage distribution turnover for over stock control</li> <li>4. Coordination with Team Leader for Technical Distribution</li> <li>5. Make a distribution report properly and correctly</li> <li>6. Responsible for TL</li> </ol> |   |

In carrying out their duties, up to now, several job description holders in the organizational structure still hold multi-tasking responsibilities, while according to the results of the analysis of the problem description at PT Sehat Selalu Banyak Rejeki, one of which is due to the lack of activities in each person in charge or holder of the job description so that in terms of performance, one person can hold several.

#### **4.2 Implementation of Internal Control and Fraud Prevention using COSO Framework**

The analysis of the first criteria in the COSO Framework shows that PT SSBR has established a good control management environment. Furthermore, in general, PT SSBR has implemented risk assessment criteria as the second analysis of the COSO framework. However, accounting standards are still not fully implemented properly because there is still no recording of inventory cards from the Warehouse and Depot. As a result, there is difficulty in tracking inventory at the depot because the information available is less certain. The test results



of Control Activities as the third component show that PT SSBR carries out these activities well. However, they do not meet the criteria for evaluating controls, have not examined control measures, and have not maximized information technology. This happens because they apply semi-manual bookkeeping with the help of spreadsheets. Therefore, it is necessary to consider starting to adapt automation technology in company management.

Based on the Communication and Information component, the COSO framework has been well implemented for internal and external parties in establishing their business. Because this business has a limited number of employees. PT SSBR can develop an intimate and friendly work environment based on good communication. This type of communication allows them to establish detailed and efficient communication between owners and employees. This internal control describes how efficient communication allows all parties to communicate clearly.

In terms of the final requirements of the COSO Framework, the four PT SSBRs have implemented almost all monitoring. They carry out formal monitoring to provide incentives in the form of bonuses. The COSO framework states that the quality of work is assessed from time to time and on a regular basis. This means that business owners are watching their operations closely

In research conducted at PT Sehat Selalu Banyak Rejeki. Internal control aims to optimize the automated sales system as an effort to minimize fraud and improve internal control in the company. This can be done by knowing the internal control by comparing the theory in the field at PT Sehat Selalu Banyak Rejeki. The standard used is the standard regarding the elements of internal control according to the Committee of Sponsoring Organizations (COSO).

Based on the analysis of existing problems supported by the results or data provided by the company, it can be concluded that the internal control efforts carried out by the company through COSO analysis in terms of each division are as follows:

- 1) Financial administration  
Administration and finance on this system as a center point for the current flow. This department has the responsibility to create purchase orders as sales targets for the Sales section, then authorize the goods to be sent to sales. Then the Administration & Finance section has the responsibility to evaluate reports in the form of Daily, Weekly, Monthly, to Annual Reports.
- 2) Sale  
The Sales Department in this system receives goods, performs product knowledge, and makes sales reports.
- 3) Warehousing  
The Warehousing Department has the responsibility to prepare goods when there is a purchase order to control incoming and outgoing inventory.

Overall, the system created will integrate between existing departments. Then from the system integration, internal control in the company will lead to one department, namely Administration and Finance, then Administration and Finance will report to the company leadership. This system also makes it easy for leaders to see the ongoing flow of goods because it shows real time data for the company. This system reduces the risk of unrecorded items and late reports because the system automatically generates reports.

### **4.3 Application System Design**

#### **4.3.1 PT Sehat Selalu Banyak Rejeki Sales System Model Design**

Entity-relationship diagram is used to visualize the data modeling and mapping of a clear database design. ERD is a diagram that describes the relationship between the relevant entities of the system interest. Entity can be explained as something that causes someone to collect data to be processed into information supporting business activities. In traditional view-driven IT applications, the data model concept only focuses on selecting data structures from one or several perspectives. The event-driven data model uses the same notation as the view-driven data model, but the focus and objectives of the data modeling are different. The event-driven data model focuses on business activities for the entire business process, not just looking at organizational functions. The forms of ERD conceptualized in the ISSS formulation are as follows:

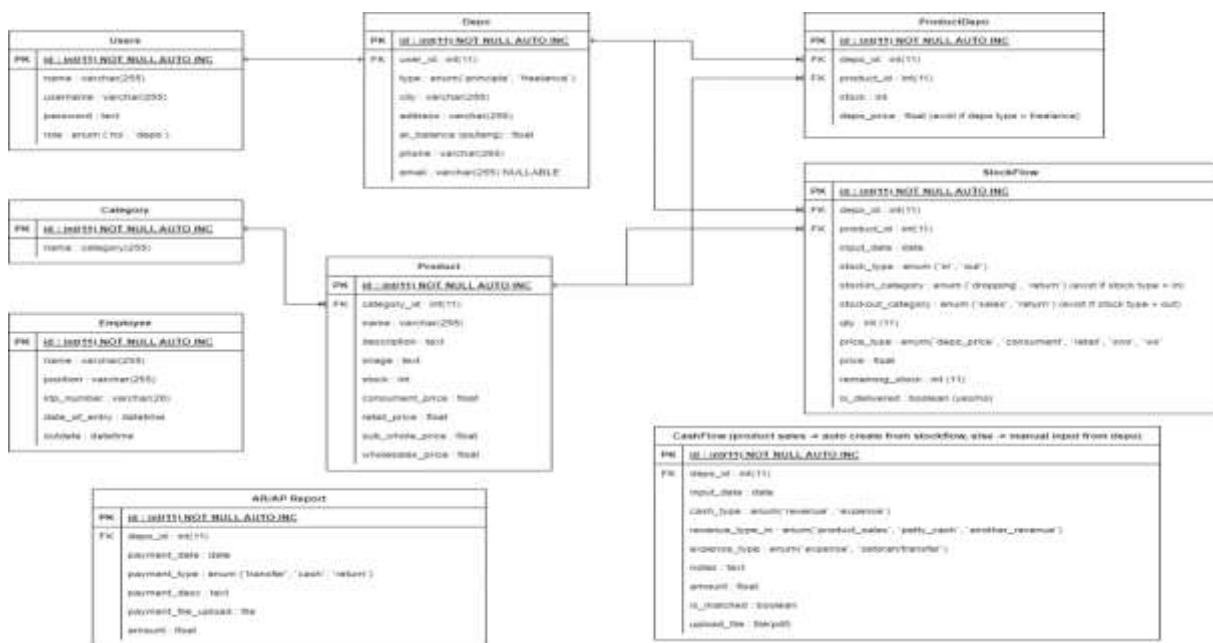


Figure 8: ERD (Entity-Relationship Diagram) Diagram

After compiling the system design using the ERD method, the next mechanism is to design the PT SSBR Business Processes Model & Notation (BPMN) using the Bizagi Modeller media. There are developments from the previous conventional system. The following is BPMN's proposal for internal control of PT SSBR, In the diagram, it can be visualized in the form of a form and financial reporting as follows:

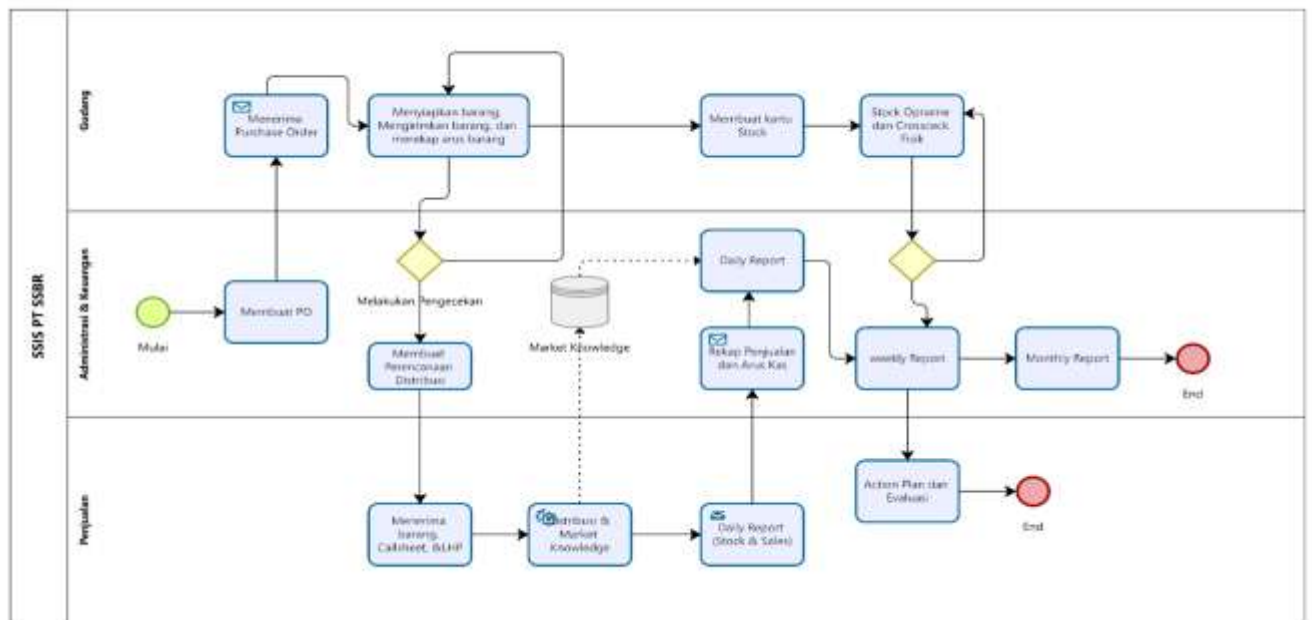


Figure 9: BPMN implementation of ISSS application

**4.3.2 User Interface and User Experience Design**

The User Interface is a visual display of a product that bridges the relationship between the system and the user. In its implementation, the orientation of using the system is to focus on the use of blue as an effort to realize the PT SSBR master color. The conceptualized layout is also oriented towards ease of understanding and use for users who manage it, and is supported by the use of simple language so that it does not make it easier for human resources to more quickly understand the application to be managed.

Meanwhile, the usage of User Experience (a series of activities carried out by users in using existing application) is carried out using a scheme such as below:

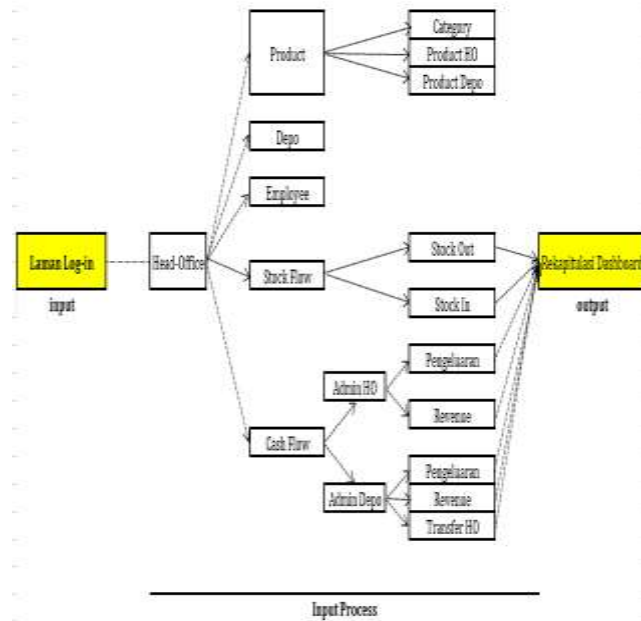


Figure 10: Visualization of user experience on ISSS

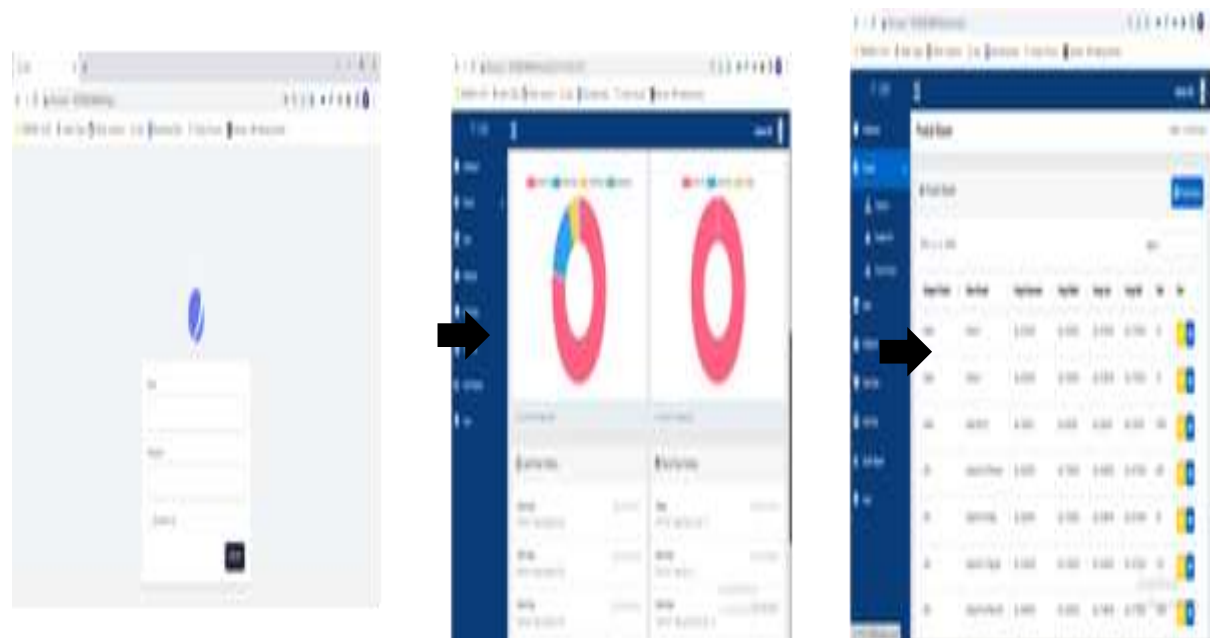


Figure 13: Master product displaying procedure on ISSS

**4.3.3 System Development**

**a. Making system design**

System design is done by creating a work mechanism in the form of information data flow in the system to then become the initial schema of mapping how the system will then be run. In designing the system, the steps taken before producing a mechanism or information diagram are through the following stages:

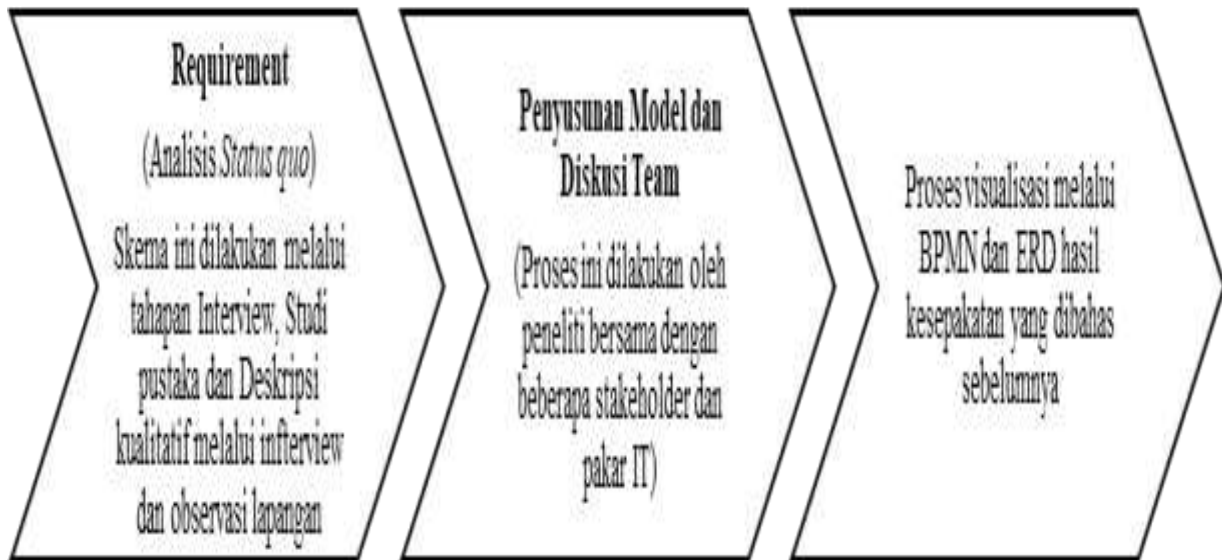


Figure 11: Mechanism of System Design

In carrying out the system design process, the components involved are as follows:

Table III: Stakeholders Involved

| <i>Information</i>  | <i>Name</i>   |
|---|---|
| <b>PT. Sehat Selalu Banyak Rejeki</b><br>Director<br>Advisor<br>Administrative staff<br>Ka. Cilegon depot | Moch. Abdul Wahab<br>Dodik E Yuwono, SH<br>Alvino Fii Ramadhan, S.Tr.M<br>Novan Tri Argunta |
| <b>IT Expert</b><br>Development 1<br>Development 2  | Muhammad Fajar Ibrahim S.Tr.T<br>M. Beny Pangestu S.Tr.Kom                                  |

**b. Setting up hosting and domain**

The process of using hosting and domains is carried out using a VPC (Virtual Private Cloud) which can be accessed through the website which is visualized in the following figure:

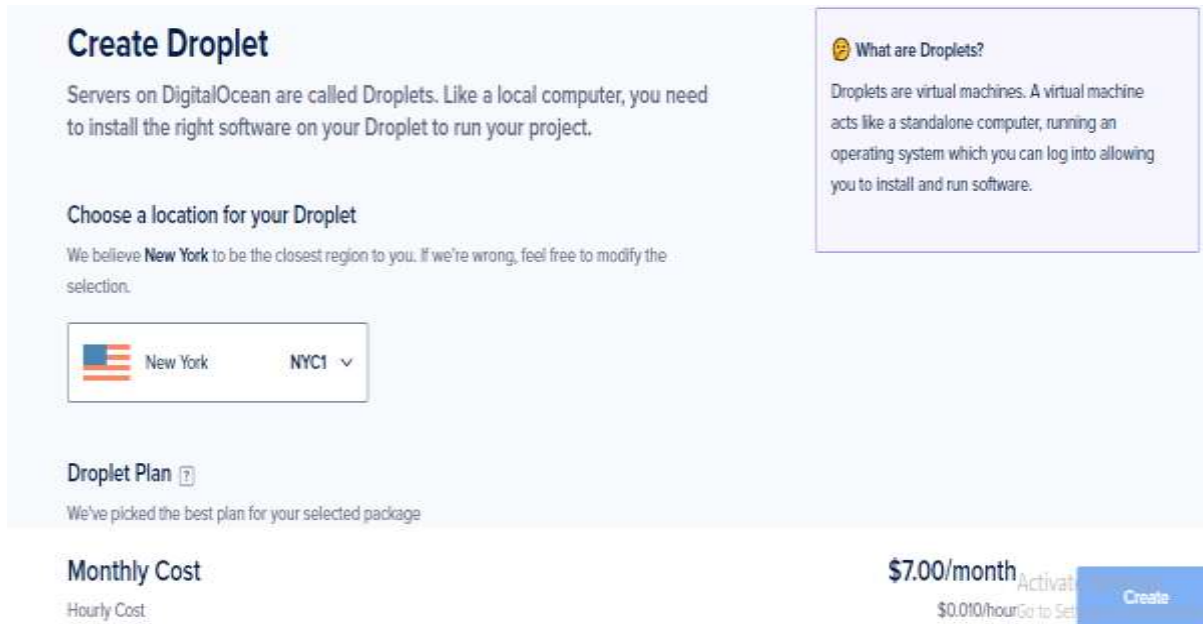


Figure 12: VPC (Virtual Private Cloud) Procurement

After providing a VPC for the web server, then the task of the development team is to develop applications using Agile methods and PHP management applications as shown below:

```
5 use App\Models\CategoryProduct;
6 use Illuminate\Http\Request;
7
8 class CategoryProductController extends Controller
9 {
10     /**
11      * Display a listing of the resource.
12      *
13      * @return \Illuminate\Http\Response
14      */
15     public function index()
16     {
17         //
18         return view('pages.product.category.index');
19     }
20 }
21
22 public function listData($status) {
23
24     if ($status != 0) {
25         $categories = CategoryProduct::orderBy('id', 'desc')
26             ->where('category.status', '=', $status)
27             ->get();
```

Figure 13: Preparing an application as a board in setting up PHP programming

### c. Coding Process and System Configuration



It is the process of assigning actions or activities to the design so that the previously conceptualized UI can be executed properly. Coding can also be interpreted as a process of reviewing and conducting raw testing by labeling in the form of words, phrases or sentences. There are two stages in coding, namely 1) initial coding, 2) open coding.

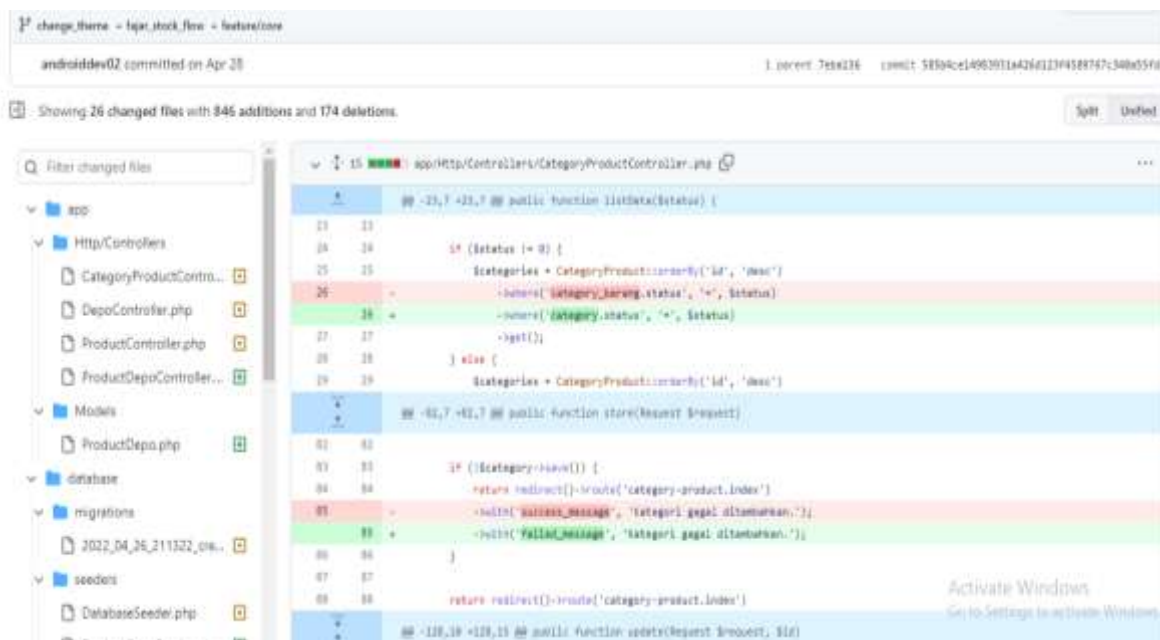


Figure 14: The process of coding

In the coding process, some of the media used are CSS (Cascading Style Sheet), HTML (Hypertext Markup Language), Java Script, J-query, and PHP (Hypertext Preprocessor) using a framework called Larafell which is a framework that can help the web. developers in maximizing the use of PHP in the website development process, and the database used is My SQL which is conceptualized on a private page to then produce output in the form of a website-based system that is connected to a certain address.

**d. Information system function testing**

In conducting the Implementation Test, this research uses the Head Office and the Depo Office which consists of the distribution areas of Cilegon and Lampung from PT SSBR. This Implementation Test is carried out for 6 months in January - June 2022. The Implementation Test uses a laptop device, internet connection, and applications that have been made previously.

**4.3.4 Evaluation of ISSS (Integration of Single Selling System) Implementation**

PT SSBR had previously developed a system for managing sales, but the current system still uses a conventional system. The conventional system is considered still unable to prevent fraud in the company. Based on the visualization of the sales system flow from PT SSBR, it is only carried out by the Administration and Finance division. In the diagram, it still does not involve the sales department and warehouse in the sales cycle. Based on interviews with the owner of the company PT SSBR and field observations, it can be determined the problems that occur from the conventional system. Based on the analysis of the application of the system carried out by students, there are several weaknesses that can trigger long-term losses found based on risk management analysis (Parr & Schmidt, 2018) as follows:

**a. Implementation of stock control**

In carrying out bookkeeping related to daily sales, sales are carried out by conventional recapitulation so that it cannot automatically cover how many recaps of sales per each sales and total per day are then used as the basis for the evaluation process. In addition, the bookkeeping concept used is not able to cover the type of credit sales so there is no credit note control process through bookkeeping recapitulation, this can trigger the possibility of fraud committed by the sales party such as by making fictitious notes or other financial risks that can harm the company. due to lack of administrative control.

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so there is no credit note control process through bookkeeping recapitulation, this can trigger the possibility of fraud committed by the sales party such as by making fictitious notes or other financial risks that can harm the company. due to lack of administrative control.

The manual recording process that does not correlate with system recording and is supported by the lack of daily control over each function results in the risk of missing or uncontrolled items arising. Inventory stock cards at PT SSBR still do not exist, so there are often errors in inventory recording between the depot and the head office. Meanwhile, inventory is an important asset for trading companies to carry out their operational activities (Dwiprastio et al., 2012) . This situation also triggers unscrupulous people at the depot to easily take stock and then report it at a later time. This triggers fraud because it opens a loophole for individuals to embezzle inventory by selling the company's products and taking the proceeds from the sale for personal gain. The manual recording process that does not correlate with system recording and is supported by the lack of daily control over each function results in the risk of missing or uncontrolled items arising.

**b. Implementation of cash-flow control**

Cash control in the old system is still considered to be ineffective because there have been irregularities from individuals in Depok. This causes material losses for the company. The misappropriation of funds for personal interests was carried out because the old system still used the semi-manual input method. The semi-manual system allows individuals to easily enter a nominal that is not in accordance with the cash situation in the field.

**c. Implementation of management functions**

In carrying out the bookkeeping related to the agent's daily sales, it is done by recapitulating the proof of payment and the existing flow stock which is carried out automatically per each depot to then be used as the basis for the evaluation process. The function of this form is to identify sales progress per each unit related to sales progress (turnover) to then become the basis for the personal evaluation process. It doesn't just stop at global achievements, the evaluation of per team units is also carried out by identifying each product brand. This is to evaluate the distribution area and program planning.

**4.4 External Status**

The current status of the output that has been achieved on August 28, 2022 is the realization of a prototype that can be accessed via the following link:

Link: <http://161.35.93.104:8080/login>

With the user decomposed in the following image:

| No | Nama       | Email          |
|----|------------|----------------|
| 1  | Admin HO   | admin@ho.com   |
| 2  | Admin Depo | admin@depo.com |

Figure 15: Users on the application link to access

As for the outputs in the form of Copyrights and scientific publications are as follows:

Intellectual Property Rights : In the Registration Process

Scientific Papers : In the Registration Process at the International Journal of Business, Marketing and Management

**4.5 Partner Role**

As for the implementation of research and development of this project, the partners involved are the Management of PT Sehat Selalu Banyak Rejeki and IT Developers.

**Contributions for each partner are:**

#### **PT SSBR Management**

- a) Doing brainstorming related to the problems faced
- b) Provide space for researchers and project developers to explore information related to financial data and managerial conditions

#### **IT Developer**

Assist researchers in developing applications and consult regarding what is the most appropriate method in developing an application

#### **4.6 Obstacles Encountered**

As for its implementation, the obstacles faced by researchers are as follows:

- a. Dual System (fix & trial)  
In assisting the application of information systems created by researchers, research subjects must also input data using the old system, perform the matching process and analyze data using different tools. The application of a mechanism like this makes personal work procedures a little longer due to double book entry.
- b. Tone of top management  
The company system that is still based on start-up makes the subjective influence of leadership in making decisions more dominant. This causes fluctuations in drastic changes in policies for implementing recording procedures or even related to commitments between the head office and the marketing office area. This drastic change in the end closed the information system implemented to standardize its own functions while still meeting the needs expected by the company.
- c. Human resources
- d. The next challenge that arises is the result of the implementation of a new information system, with a different concept from the implementation concept, it is necessary to adjust knowledge and competence in the aspect of human resources. In carrying out this concept, it is necessary to conduct training and learning related to the potential errors that occur so that the natural resources that are managed are more careful in carrying out their responsibilities.
- e. Communication  
As a result of the distance between *the marketing office areas*, in the end, communication on the development of human resources and the socialization of the latest information systems (applications) have progressed quite a long way. Spend money and time to communicate and equate perceptions related to applications developed and problems solved.

#### **4.7 Next Stage Plan**

In the next stage, the concept that wants to be followed up on the implementation of this progress is to develop a function or each feature in the application that covers more than several subjects or relationships. So it is not limited to the head office and marketing office area only. Further development can refer to direct sales between agents to agents, or basic activities between retail stores, agents and sales.

### **V. CONCLUSIONS**

Based on field observations related to the implementation of SIA for internal control at PT Sehat Selalu Banyak Rejeki (SSBR) has been carried out quite well. However, the existing system is still not able to prevent fraud by elements at the depot. The internal control system at PT SSBR still does not apply good accounting standards because there is still no recording of inventory cards in the Warehouse and Depok sections. Then the semi-manual recording system with the help of spreadsheets is still not able to prevent fraud.

Related to internal control efforts in order to prevent fraud in accordance with the COSO framework has been carried out. However, there are still components that need to be improved. The first component is improvement regarding the implementation of applicable accounting standards. Then the components of internal control of business activities related to technology infrastructure still need to be improved.

This study develops a business process model for the internal control of cigarette distribution companies by referring to the applicable SIA rules. This business model has been declared feasible after being tested by material experts and media experts. This model has also been tested by involving representatives from the Head Office and the PT SSBR Depot. The test results show that the business process model that has been developed is in accordance with the needs of the company. The application of this business process model is complemented by the creation of a website-based application to make sales requests and is able to present reports on company receivables. The existence of this application is expected to be able to maximize the company's internal control and prevent fraud.

This research is still not perfect, it still needs to be developed, especially on the recommended application. Hopefully further research may consider to continue to carry out various kinds of development based on emerging innovations.

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