

Sales system's requirement analysis using structured system analysis and design method.pdf

by

Submission date: 14-Nov-2021 08:06PM (UTC+0700)

Submission ID: 1702166660

File name: Sales system's requirement analysis using structured system analysis and design method.pdf (309.86K)

Word count: 6115

Character count: 33471

PAPER • ³ OPEN ACCESS

Sales system's requirement analysis using structured system analysis and design method

¹
To cite this article: Indah Mutiarasari US *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **575** 012049

View the [article online](#) for updates and enhancements.

3
Sales system's requirement analysis using structured system analysis and design method**Indah Mutiarasari US, Grace T. Pontoh, and Abdul Rahman**

Accounting Department, Faculty Economics and Business, Hasanuddin University

Email: miss_indah@yahoo.com

Abstract. This study aims to analyze and evaluate the internal control of the sales system using the Structured Systems Analysis and Design Methods. Data Sources used are primary data collected directly through observation by carrying out daily activities at PT RRM. The data obtained were then analyzed based on the needs analysis module and the internal control evaluation indicators used in this study. The results showed that the current sales system applied at PT RRM still uses manual procedures and not enough internal physical control. There are several indicators of internal control that have not been implemented or are still felt to be lacking, especially in the authorization, access control, and segregation of duties. The study also produced five catalogs of needs, all of which were met in the proposed sales system design concept, which is an integrated sales system. The results of this study can improve the company's operational efficiency.

1. Introduction

The 4.0 industrial revolution is being heavily discussed as the internet-based era. The industrial revolution makes boundaries between countries blurred and globalization increasingly unstoppable. Communities are connected by satellite-based digital connections that make it easy to communicate and trade across countries. The industrial revolution demands computerization, automation, and digitalization. If you want to survive, businesses nowadays must clean up and start evaluating their business. One thing that can be done is to increase efficiency through business process optimization.

The business process that occurs within the company, especially operational processes consists of several systems, such as cash receipts and disbursements, sales, purchases, payroll, financial reporting, etc. These systems make the task more organized and efficient. An efficient system maximizes the management of company resources so that it doesn't waste time, effort, and cost. Besides the system, another thing that can help improve efficiency is internal control. Internal control is a form of supervision and management of the company's operations. Therefore, companies must have a good system and internal control to achieve the desired level of efficiency.

PT RRM is a company which engaged in general trade and export of plants, especially seaweed. Countries that are the company's export destinations include; China, Denmark, USA, Canada, and Chile. In addition to exports, the company also has a weekly sales contract with a semi-finished goods company located in Suppa District, Pinrang Regency. The average sales turnover obtained by PT RRM is Rp15,000,000,000 up to Rp20,000,000,000 per month. Despite getting a large turnover, the company is currently still using a manual system.



The sales transaction at PT RRM begins with the entry of a Purchase Order copy from the buyer into the company's e-mail held by the sales department. The sales department then contacts the warehouse to ask about the availability of goods ordered by telephone. The sales staff awaits confirmation from the warehouse regarding the readiness of new goods and then orders the container. No document is given to the warehouse which shows the demand for goods. The manual system requires physical documents as evidence and these documents are very important for the audit trail.

The company currently uses technology, but it's still limited to basic use. The existing system is very dependent on HR and manual procedures. Computers aren't connected in a network so the information between departments moves in a form of hard copy documents. If the document that becomes the track record of the transaction does not exist, the company will find it difficult to trace back if there are problems in the future. Another problem that is not uncommon is a problem related to human error. Incorrect data input on the scales of exported goods, wrong delivery addresses for export documents to the buyer's office, and poor coordination with the completeness of export documents with the EMKL a.k.a forwarder-cargo ship expedition, often results in late delivery and complaints.

This research will create an automated sales system. An automatic system will reduce the risk of errors due to human error. The functions that previously performed by the employees will be processed automatically by a computer through an integrated sales system. Sales staffs only need to enter sales orders using a computer connected to the system to initiate transactions. Furthermore, the computer program will process the transaction according to the procedure and keep records related to the transaction in a file so that the transaction track record is available and can be traced. The company's operations will be more efficient because transaction processing is faster and more organized, and far from the risk of errors due to human error.

The essence of the contingency approach in accounting information systems is that no system can be applied to all circumstances, but depends on the situation and conditions of each company. The contingency approach explains that the system used differs depending on the situation. According to Gordon [1], contingency theory implies that accounting information systems must be designed flexibly and consider the organizational environment and structure that make up the organization. Accounting information systems need to be adjusted with consideration of certain decisions or in other words accounting information systems need to be designed within an adaptive framework.

The use of contingency theory is to make accounting information as an instrument in evaluating managerial performance. Accounting information systems can act as agents of change in facilitating organizational performance. Systems can be specifically designed to improve poor organizational functions by providing information relevant to the opportunities and key problems of the organization [2].

Sales activities are part of the revenue cycle, which is a cycle that there is a movement of goods or services occurs to another entity, and the payment for those goods or services. In sales activities, the company exchanges information with outside parties named customers. Sales information will be reported and collected in a journal and ledger that will be useful in preparing financial reports and sales performance. Goods, quantity, price, and destination of the delivered goods must be correct so that the company avoids loss and complaints from dissatisfied customers. Therefore, inputting the order data must be done carefully [3]. A company conducts sales activities by following certain procedures, called sales procedures. The sales system consists of sales order and returns procedures. The sales procedure starts with the receipt of an order from the buyer. The order then sent, and an invoice is made to record sales and billing to the buyer [4].

A procedure is a series of activities that are carried out repeatedly and consistently. The procedure is part of a system that involves several people in one or more departments in ensuring the consistency of handling everyday economic activity or transaction. Sales procedures generally start from receiving an order from the buyer. The sales department then makes a sales invoice by adding important information according to the order from the buyer. For large companies that provide credit sales, credit checks are required first. Documents in a form of sales invoices are also sent to the warehouse

department to be prepared and checked for availability. This procedure continues until the item is received to the buyer and the company gets the payment for the item sold [5].

The component of internal control is explained by Hall [6] by dividing it to two categories, called information technology (IT) control and physical control. IT control is divided into two groups: general control and application control. General control is aimed at controlling data centers, databases, network security, system development, and program maintenance. Meanwhile, application control ensures the quality of specialized computer systems such as sales order processing, debt, and salary applications. If the system is still operating with a manual system or involves the use of physical computers and is still triggered by human activities, then the internal control used is physical. Physical control is divided into six categories as follows: (1) transaction authorization, (2) segregation of duties, (3) supervision, (4) accounting record, (5) access control, (6) independent verification.

Structured System Analysis and Design Method (SSADM) is the most widely used analytical method in the UK. This method can be used as a whole or just a part, according to the needs of the designer or project being worked on. Besides, other alternative procedures that are suitable for the project being carried out can also be used [7]. Maryani [8] suggests the reasons why SSADM is widely used. This is because it is flexible and easily adapted to a variety of system environments, be it in a system environment that has not been developed at all, existing systems that are manual or semi-automatic, or systems that require maintenance. A structured method is a way of analyzing and designing that gives the analyst a clear set of tasks to do with specific instructions. The following is a comparison of structured methods with traditional methods known as SDLC (System Development Life Cycle).

Table 1. Comparison of Structured and Traditional Methods

Structured Method	Traditional Method
1. Have detailed procedures that are explained step by step	1. Have broad/general guidance
2. Has a wider set of integrated equipment and techniques	2. Have uniform individual equipment and techniques
3. Integrated documentation	3. Additional documentation
4. Able to use in partial automation	4. Limited automation capabilities

Source: Duncan et al. [7]

10 Research Methods

This research uses a qualitative approach. This type of research is a case study. This research approach and type were chosen based on the research objective, namely to gain an understanding of the company's business processes through the analysis of sales system requirements using structured systems analysis and design methods. The types of observations to be made in this study are (1) active participant observation and (2) non-hidden observation. The observation method is the most appropriate method for research that requires descriptive data. Observation is a data collection technique that is direct and occurs naturally by involving oneself with activities in the field.

This study uses one of the modules in the SSADM, which is the requirements analysis module. The following stages are explained in the modules used.

1. Stage 1 – Investigation of the Current System Structure

The outputs of this stage are DFD (Data Flow Diagrams) and RC (Requirement Catalogue). At this stage, the analyst focuses on the condition of the system and the scope of existing business operations, as well as understanding the position or interests of existing system users and their objectives. Information about user needs and business processes that have been collected becomes the basis for analysts to make DFD and RC. In addition to DFD, ERD (Entity Relationship Diagrams) are also created to help ensure that the attributes and entities involved are appropriate. Problems encountered in the current system investigation process are contained in RC accompanied by requirements for the new system [7].

2. Stage 2 – Business System Option

The RC that has been made is consolidated. They are checked, combined into one RC if possible, and deleted if necessary. After that, the analyst gives priority to the RC sheet. If DFD, ERD, and RC are ready, then the analyst focuses on 'what the system has to do.' The new system solves specific problems faced by the company in conducting the business. All needs that cannot be met by the old system will be met by the new system. Analysts when making designs are not limited by hardware or software limitations so that the design results are truly logical [11].

The documentation techniques used in this study are (1) Context diagram (2) DFD (Data Flow Diagrams) (3) ERD (Entity Relationship Diagram). The documentation technique is used to explain the sequence of processes that occur in the image. of images makes it easy for readers to understand the series of processes that occur compared to if only explained in a few paragraphs.

3. Results and Discussion

3.1. Current Sales Order Processing System

3.1.1. Context Diagram: The context diagram shows the exchange of data with external entities which are the source or destination of the data in the sales order processing system, as shown in Figure 1.

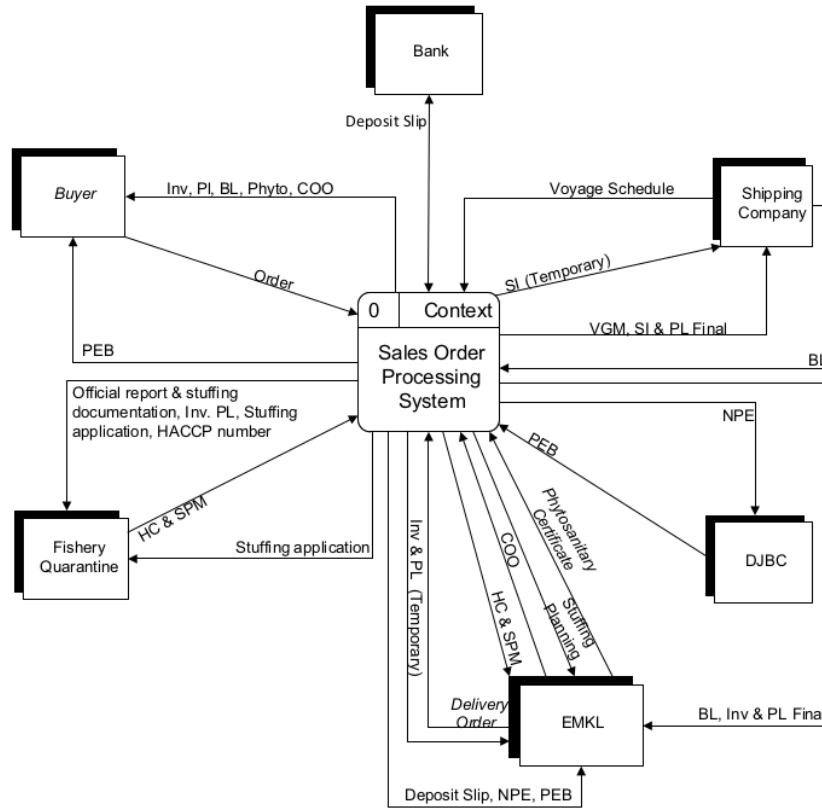


Figure 1. Sales Order Processing System Context Diagram

3.1.2. *DFD*: Data flow in the sales order processing procedure is shown in Figure 2, which is explained in the following description.

- 1) Receive order. Purchase Order (PO) from the buyer is used as the basis for creating Invoice (Inv), Packing List (PL), and Shipping Instruction (SI) documents. Exporters use the services of forwarding and shipping companies to send goods.
- 2) Ordering vessel and container space. SI is given to the shipping party to order the ship space, while PL and Inv. gave to the forwarding company a.k.a EML to order containers.
- 3) Production and collection of goods. Usually, the goods to be exported are already available in the warehouse or in the process of production. However, it's often if there is a demand for goods coming in, the supply of goods in the warehouse is insufficient. If this condition occurs, the production department will contact the purchasing department. Next, the purchasing department will buy dry seaweed from the farmers and arrange the distribution to reach the warehouse. However, if there is not enough time for that, the purchasing department will buy raw materials from other exporters' warehouses to cover the shortage of goods.
- 4) Preparation and stuffing process. EMKL will provide a copy of the Delivery Order (DO) document and seal that has a serial number. This seal will be used in containers that have been ordered according to DO. An application letter for stuffing must be submitted to the BBKIPM (Balai Besar Karantina Ikan, Pengendalian Mutu dan Keamanan Hasil Perikanan) or Fish Quarantine Center, Fisheries Product Quality and Safety Control so that exporters can obtain supervision from the quarantine party.
- 5) Prepare stuffing and export documents. Official reports and stuffing activity documentation are made and reported to BBKIPM. The exporter must obtain several export requirements documents from the fish quarantine party namely, Health Certificate (HC), and the Load Approval Letter (SPM-Surat Persetujuan Muat). Exporters are required to notify the Directorate General of Customs (DJBC-Direktorat Jenderal Bea Cukai) regarding the export of goods through the PDE (Pertukaran Data Elektronik) Electronic Data Exchange administration system. Through the application, exporters will receive an Export Service Note (NPE-Nota Pelayanan Ekspor) which means that DJBC has approved the export of these goods.
- 6) Finalize the data. All temporary documents such as SI, Inv, and PL are filled with final data. The information entered includes container number, ship name, ship departure number, etc. that previously unknown and uncertain. After all, data has been completed, a statement of the weight of the exported container known as VGM (Verified Gross Mass) is made based on the record of the weight of the goods when stuffing.
- 7) Bill buyers and pay fees. Sending Goods Export Notification (PEB-Pemberitahuan Ekspor Barang) to the buyer and paying the retribution fee to the Goods Quality Control and Control Center (BPPMB-Balai Pengawasan dan Pengendalian Mutu Barang) of Rp10/kg of goods exported. The exporter must also pay a fee of Rp5/kg of goods exported to the Indonesian Seaweed Association.
- 8) Shipping the documents. In addition to goods, original (physical) documents relating to exported goods are also sent to the buyer's office a few days after the ship sails and receipt of payment from the buyer.

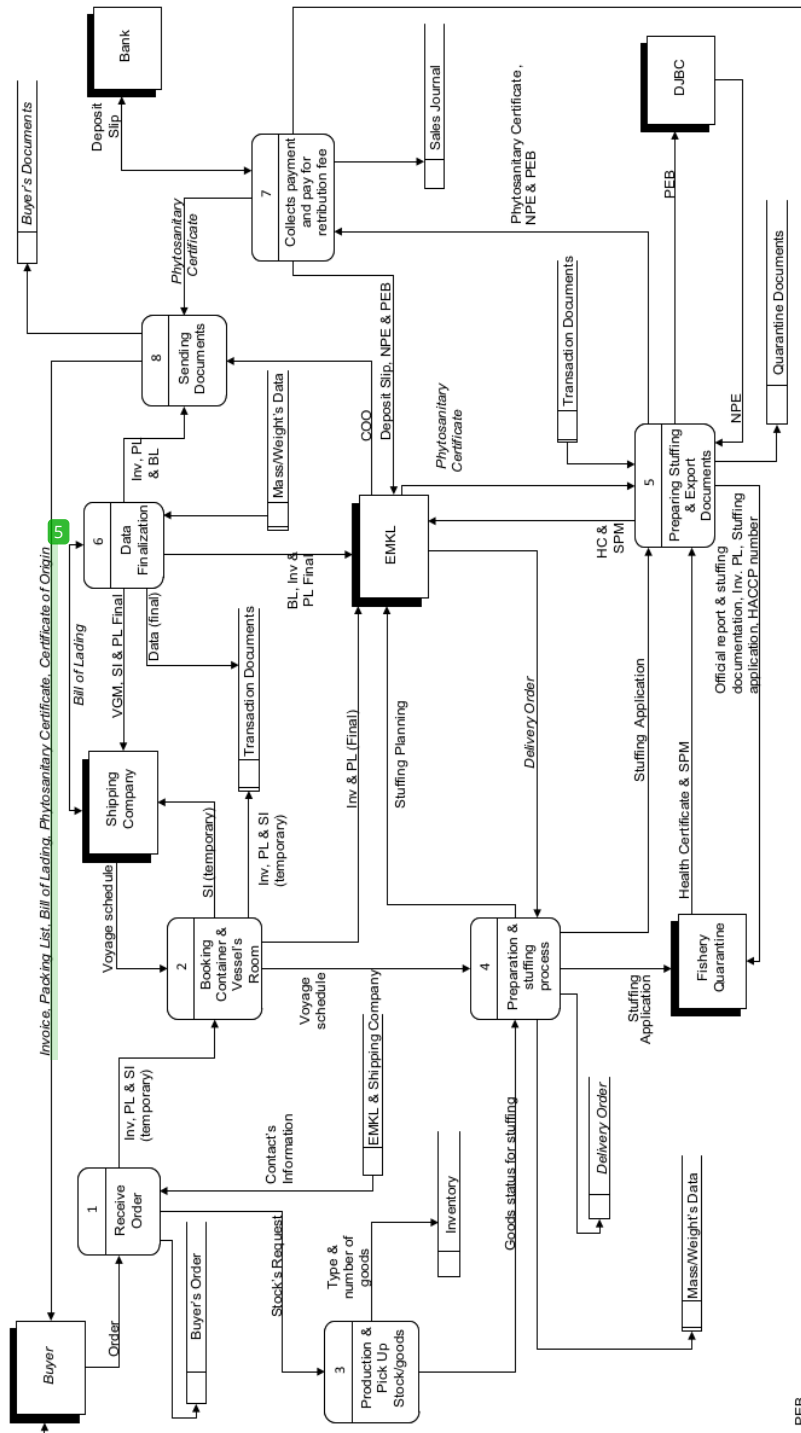


Figure 2. Current Data Flow Diagram

3.1.3. ERD

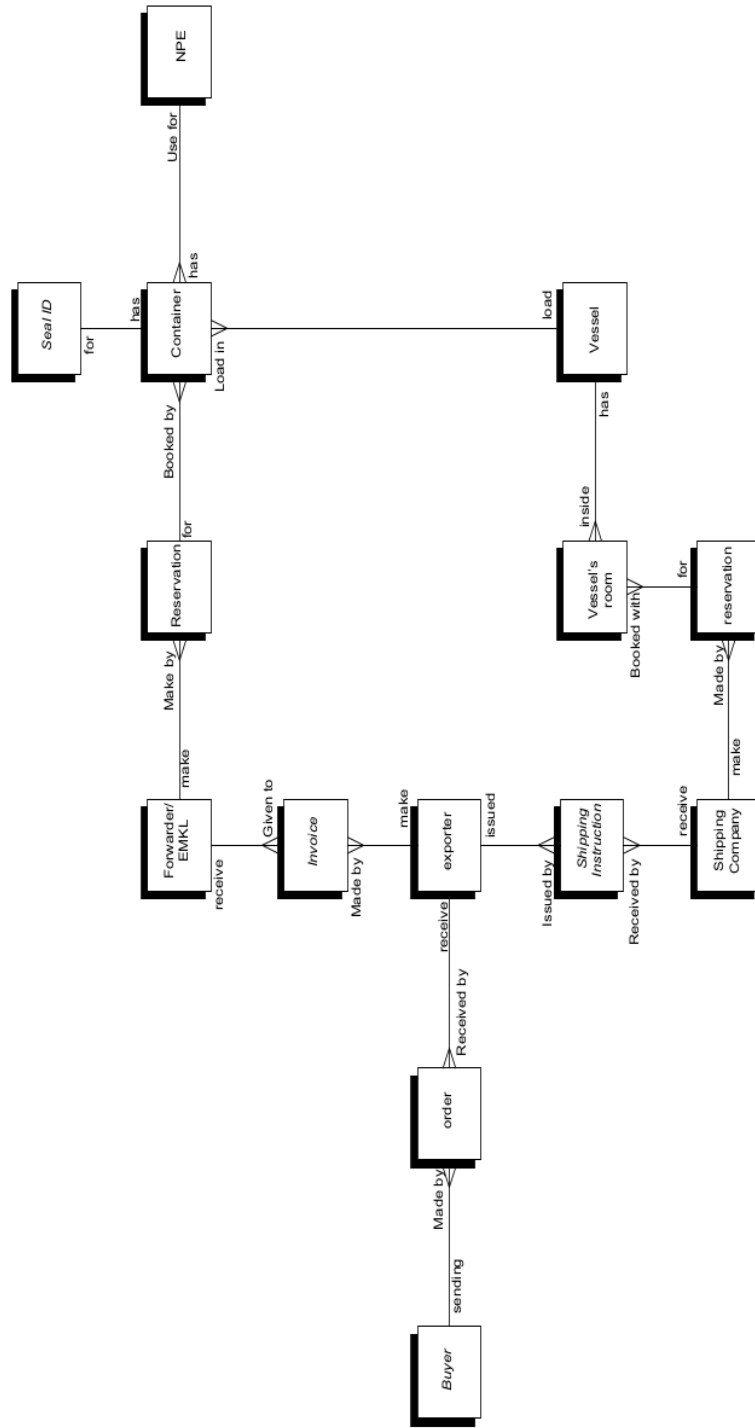


Figure 3. Entity Relationship Diagram

3.2. Internal Control Evaluation and Determining System Requirement

3.2.1. *Physical Internal Control*: Internal control is carried out in the form of physical control activities, namely; transaction authorization, segregation of duties, accounting records, access control, and independent verification. Based on these categories, the company's internal control is evaluated and several weaknesses are presented in the following points.

- 1) After the Purchase Order (PO) is received, the order is directly processed by the export department staff without further authorization because it is considered to have been known by the director and marketing staff during the negotiation process with the buyer. It's better if the invoices are made to obtain authorization from the director or marketing staff involved in the negotiation process. It is possible that the PO sent by the buyer is not in accordance with the agreement at the time of negotiations. If the transaction is processed without further authorization, the loss party, if there is a disagreement with the deal at the time of negotiation, is the exporter.
- 2) Shipping companies and expeditions used for services should be with the authorization of marketing staff. At this stage, the export department staff usually decide for themselves which shipping company and forwarder will be used. Preferably, forwarder and shipping companies are chosen by authorization from marketing staff so that companies can use the services of forwarder and shipping companies whose price of service is proportional to the profits obtained by the company from the transaction. Without authorization, export department staff can conduct a monopoly so that exporters are forced to use the services of shipping and expensive forwarder.
- 3) There must be a separation of duties between the person maintaining the inventory and the person holding the inventory records. The existing conditions, the stock of goods in the warehouse, and the inventory record are the responsibility of the head of the production. This task should be separated to avoid fraud. Although the stuffing is supervised by quarantine officers, administrative staff assist in calculating units of goods loaded into containers, and export staff also go down to the field to collect documentation, but each of them has a specific task and is not in direct contact with the inventory records. In the end, only the head of production updates the inventory records after stuffing and keeping stock in the warehouse. Although the location of production (receipt of goods, drying, and packing) is close to the storage place of finished goods, it doesn't mean the task of storing finished goods inventory and recording the inventory can be given to just one person. Ideally, the inventory records are held by accountants. Thus, accountants can also carry out the function of inventory accounting. Potential fraud will also be avoided because these two tasks have been carried out by different functions.
- 4) All accounting cycles, from journals to posts to the financial statements, are all done by one person. This is indeed the job of the accountant, but it would be nice if the task of keeping a journal and posting was done by different people. In this way, no one has full access to accounting records so fraud can be prevented.
- 5) There is no implementation of supervision in the company. Supervision does not need to be applied to small companies that have few employees and work in one room. However, the company uses four rooms to work so the application of supervision needs to be considered.
- 6) Warehouse area and packed house are equipped with CCTV, but if there are blackouts, supplies, and machinery at the location are vulnerable to damage. Moreover, there are lodgings for workers or employees who want to stay overnight at the office. Instead, all machines and supplies are stored in a locked room so access can be restricted.
- 7) There is no verification process in the sales processing system at this time. The export staff works on their own in handling documents, the accounting staff also works on their own in making financial reports. The production department also only follows instructions from the export department staff regarding the demand for goods. Each of them carried out their duties without any documents or verification processes between one part and another. The verification function is important to do especially on matters relating to demand for goods, handling of stuffing and export documents, and accounting records. Other functions must verify the accuracy and

completeness of the tasks performed by other functions, such as billing functions that reconcile PEB with PO or Invoice to ensure that buyers are billed according to the goods sent, as well as sales recorded in the correct period. The procurement of the general ledger function should also be carried out so that there is a journal reconciliation.

3.2.2. Requirement Catalogue (RC)

Sales system needs are identified through observation during the research period and also comes from requests or desires of the system user. All these needs may not be fulfilled by the new system. Therefore, this catalog of needs is given a priority number. Sales system needs to be met are summarized in the five requirements catalogs as follows.

Requirement Catalogue			
System:	Sale	Varian:	-
Functional Needs:	Accurate and up to date cost and price goods data	Number:	1
		Priority:	1
Description	Performance Value	Acceptable Range	
Frequency of inputting cost data and prices of goods	Immediately before the negotiation process and making an agreement with buyers	Immediately before the negotiation process and making an agreement with buyers, every week	
Benefits: offer the right price to buyers, prevent losses due to miscalculated costs and prices of goods			
Comments: reports accessed through the system, automatic data processing procedures			
Related Documents: PO, Sales record, deposit slip			
Related (RC) Needs:			
Solution offered: Directors and marketing staff can access the report through a system based on data on sales, purchases, service fees of EMKL and Shipping company, as well as administration of documents that are inputted periodically to the system by each related section staff through computers that have been connected through the system.			

Figure 4. Accurate and Up to Date Cost and Price Goods Data

Requirement Catalogue			
System:	Sale	Varian:	-
Functional Needs:	Accurate, fast, and inexpensive management report	Number:	2
		Priority:	2
Description	Performance Value	Acceptable Range	
Access only to directors, marketing staff, and finance	Information on request	24 hours	
Benefits: easier to meet marketing needs, budgeting needs, and get performance reports			
Comments: Access to obtain the latest information on sales status, cash flow, and monitor the performance of the company according to the needs or positions in the company			
Related Documents: Sales records, inventory records, transaction documents, buyer documents.			
Related (RC) Needs: -			
Solution Offered: The system can be supplemented by executive support programs for directors who automatically provide information extracts from data sources that have been inputted by staff.			

Figure 5. Accurate, Fast, and Inexpensive Management Report

Requirement Catalogue			
System:	Sale	Varian:	-
Functional Needs:	Improved procedures in the form of early notice to the production department	Number:	3
		Priority:	1
Description	Performance Value	Acceptable Range	
The task starts with the receipt of a request for goods from the export department, but information about the goods requested by the buyer has been obtained by the production department so there is more time available to prepare the order	After negotiations and agreements are made	On the day the agreement was made, before PO document's made	
Benefits: reduce the time required for procurement and production of goods requested by the buyer by preparing goods in advance before the PO enters, making the task of the production and purchasing part easier and unhurried because time is chased, preventing insufficient stock so that exporters do not need to buy goods from other exporter			
Comments: This process is not carried out by the system, but only improved procedures in the form of a notification to the production department to prepare goods to be ordered immediately after the negotiation process.			
Related Documents: trade contracts, inventory records			
Related (RC) needs: -			
Solution Offered: -			

Figure 6. Early Notice to the Production Department

Requirement Catalogue			
System:	Sale	Varian:	-
Functional Needs:	Eliminating errors in making output documents	Number:	4
		Priority:	1
Description	Performance Value	Acceptable Range	
Documents that require the same information only need to be inputted once to avoid differences in the data presented on the document. For example, the total goods sent on Inv, PL, and PEB. The difference in the total delivery of goods sent to one of these documents can cause delivery delays because they do not pass document requirements.	Each transaction processing	24 hours	
Benefits: accurate data statement, more efficient by preventing unnecessary costs from re-processing documents or fines, and not wasting time			
Comments: it required user interface that is easy to use by users, as well as automatic filling in other parts of documents that require the same information as the previous document.			
Related Documents: Purchase Order (PO), transaction documents, quarantine documents, weighing data			
Solutions Offered: Invoice, PL, SI and other documents are produced by system automatically from data entered once based on PO. When the document is ready to be printed, the user only needs to double check to make sure it is correct.			

Figure 7. Eliminating Errors in Making Output Documents

Requirement Catalogue			
System:	Sale	Varian:	-
Functional Needs:	Accurate calculation	VGM	Number: 5 Priority: 2
Description	Performance Value	Acceptable Range	
VGM calculations must be carried out appropriately to avoid misalignment reporting and minimize the risk of accidents due to dishonest or negligent in reporting. This document will also be created with the help of automatic calculations.	Each container shipped	Each container shipped, according to transaction	
Benefits: the accuracy of the report, the risk borne due to an error statement burden on VGM documents decreases			
Comments: Automatic calculation and checking of the suitability of the data inputted with the source document ensures the accuracy of the data presented			
Related Documents: Weight report, Stuffing documentation			
Related Documents: RC number 4, eliminating errors making doc output.			
Solution Offered: data warehouse scales of weight are used as a basis in making VGM, the final result or calculation is done automatically by the system			

Figure 8. Accurate VGM Calculation

3.3. Required Sales System

The integrated sales system aims to improve performance and reduce operational costs. Tasks such as accounting records, management reports, flexibility, and speed of access to data provide many benefits for the company, as described in the following description.

- 1) To be better prepared in negotiation, exporters can read the information about service costs, prices of goods, and the latest production costs generated by the system based on previous transaction data and data inputted by each department. With this data, the Director and marketing staff can provide price certainty with accurate and faster calculations to buyers. After a trade agreement is reached, information on goods to be ordered by the buyer is delivered early to the production department so that the stock of goods can be prepared in advance.
- 2) The export department staff enters the information contained in the PO through a computer connected to the central sales system and initiates transaction processing. The system automatically generates the draft of temporary documents (Invoice, Packing List, and Shipping Instruction). Invoice first forwarded to the Director/marketing staff for validation. Invoice draft compared with PO documents, then returned to the order receipt function for immediate processing.
- 3) The shipping company and EMKL used are only those that have been authorized by the system. If the export department staff wants to use new forwarder and shipping services, the export department staff must first get approval from the Director. The system will also provide shipping and forwarder information used by export staff.
- 4) After checking the selected EMKL and shipping company track record and performance/services, booking space for ships and containers can be done immediately.
- 5) The printer/terminal in the production department automatically generates a document requesting the goods that indicate the item must be packaged. Through the terminal/computer in the production department, information about the status of the readiness of the goods is sent to the export department.
- 6) After receiving the ship's schedule from the shipping company and knowing the status of the readiness of the goods for stuffing, the stuffing plan is then made manually by the officer to be sent to the EMKL. Once the Delivery Order (DO), container, and the seal has arrived at the

warehouse, requests for stuffing supervision are then sent to the fish quarantine as usual. Next, the export department officer enters the data in the DO and the weight data of goods into the system. The system will automatically access the inventory subsidiary file to update the inventory after stuffing.

- 7) Furthermore, the task is carried out as usual through the fish quarantine service system and the Directorate General of Customs (DJBC). Documents obtained from quarantine and Customs are then stored in quarantine files.
- 8) Furthermore, the file will be accessed by the billing function to charge the buyers by sending PEB files to the buyer's e-mail. The payment of the retribution and the other fee is processed via transfer by the cashier according to the request of the export department staff.
- 9) The system will automatically perform the required accounting tasks. Updating the ledger accounts in real-time and producing various kinds of management reports according to programming criteria.
- 10) VGM (Verified Gross Mass) document is carried out by the system based on the previously inputted data. The final VGM, SI, and PL are then forwarded to the shipping party to receive the Bill of Lading (BL).

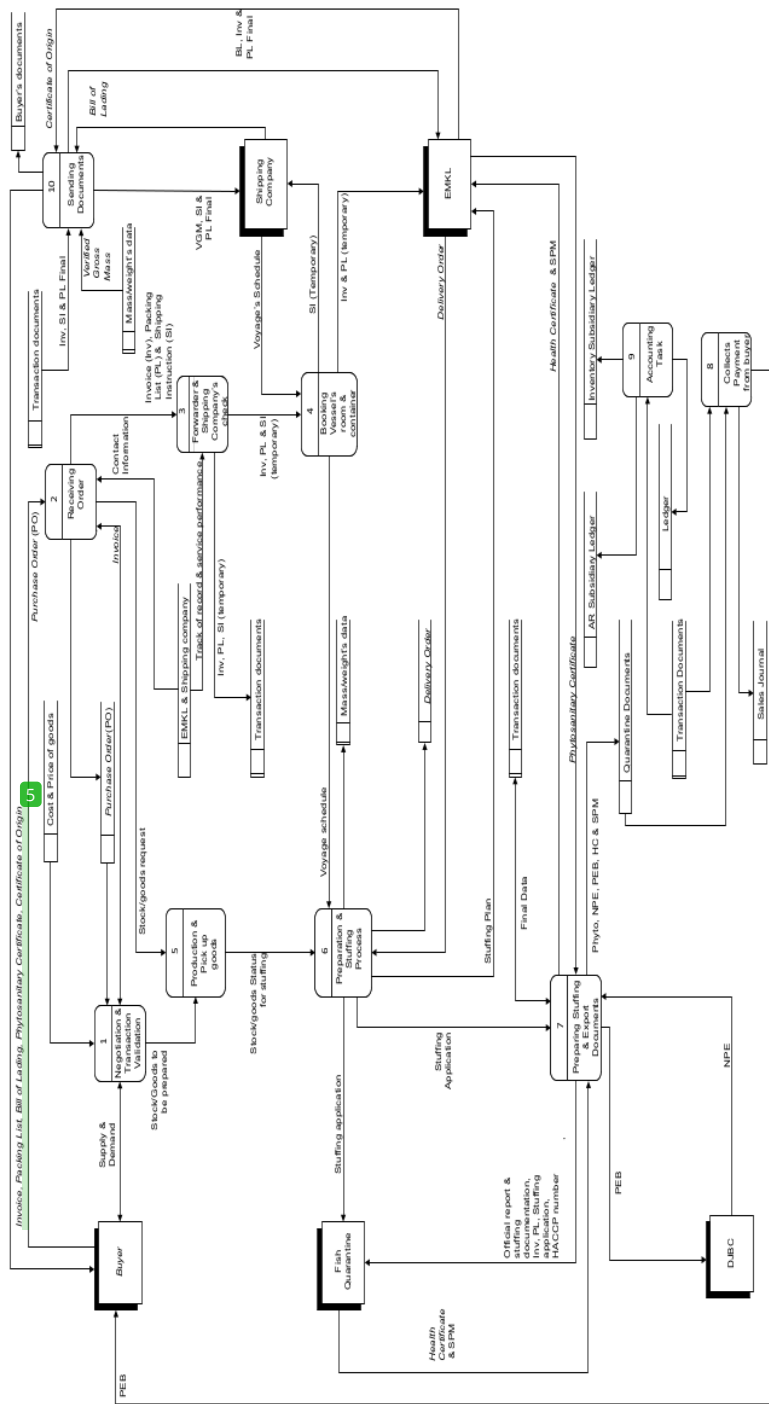


Figure 9. Business System Option DFD

4. Conclusion

The sales order processing system currently in operation requires improved processing and internal control procedures. Several needs cannot be met by the current system as the times evolve and the transaction volume increases. In addition, free trade which presents opportunities but also threats to business actors, as well as many requirements and documents needed to be able to export make companies have to work fast so that sometimes they do not carry out certain procedures that can ultimately harm the company. The lack of supervision and not doing regular business evaluations also further widen the gap in the company's internal control.

Based on one of the instruments used in the structured method, five catalogs of needs are produced which are expected to be fulfilled in the new sales system, namely; accurate and up to date cost and price goods data, accurate, fast, and inexpensive management report, early notice to the production department, eliminating errors in making output documents, and accurate VGM calculation.

Transactions are still processed manually so the internal controls carried out are physical internal controls. Internal control evaluation indicators used are; transaction authorization, segregation of duties, accounting records, access control, and independent verification. Weaknesses of internal control are found in almost each of these indicators so that it can be said the company's internal control is not good enough.

References

- [1] Gordon L A and Miller D 1976 A contingency framework for the design of accounting information systems *Readings in accounting for management control* (Springer) pp 569–85
- [2] Priantinah D 2005 Korelasi Sistem Informasi Akuntansi dengan Penilaian Kinerja Manajemen *J. Pendidik. Akunt. Indones.* **4**
- [3] Romney M B and Steinbart P J 2015 Accounting Information Systems 13th Global Edition *Engl. Pearson Educ.*
- [4] Umami R 2013 *Sistem Akuntansi Penjualan Pada PT Alfa Scorpii Air Tiris* (Universitas Islam Negeri Sultan Syarif Kasim Riau)
- [5] Ranatarisza M M and Noor M A 2013 *Sistem Informasi Akuntansi pada Aplikasi Administrasi Bisnis* (Universitas Brawijaya Press)
- [6] Hall J A 2011 Accounting Information Systems 9th edition *Engag. Learn.*
- [7] Duncan J 1995 *SSADM in Practice: A Version 4 Text* (Macmillan International Higher Education)
- [8] Maryani M and Suardi A H 2007 *Requirement Analysis Pada Metodologi SSADM* (Fakultas Teknik Unpas)

Sales system's requirement analysis using structured system analysis and design method.pdf

ORIGINALITY REPORT

8%

SIMILARITY INDEX

6%

INTERNET SOURCES

4%

PUBLICATIONS

7%

STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Universitas Hasanuddin Student Paper	3%
2	mafiadoc.com Internet Source	1%
3	iopscience.iop.org Internet Source	1%
4	Submitted to University of Hull Student Paper	1%
5	en.e-b2b.org Internet Source	<1%
6	www.coursehero.com Internet Source	<1%
7	Submitted to Rivers State University of Science & Technology Student Paper	<1%
8	Submitted to Florida Atlantic University Student Paper	<1%

Submitted to University Of Tasmania

9

Student Paper

<1 %

10

worldwidescience.org

Internet Source

<1 %

11

ru.wikipedia.org

Internet Source

<1 %

12

cms.angkasapura2.co.id

Internet Source

<1 %

13

eprints.ubhara.ac.id

Internet Source

<1 %

14

"Management Accounting in China and Southeast Asia", Springer Science and Business Media LLC, 2021

Publication

<1 %

Exclude quotes On

Exclude bibliography On

Exclude matches < 5 words