

Design of eSCM and eCRM Integration in Extraprise Scope: Case of Nurafni Collection

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Abstract – Opportunities in the utilization of information technology to gain an edge in the business competition should be the main focus of every organization. The presence of the ecosystem in managing business processes, resulting in a supply chain relationship between one company with other companies that make up an enterprise. The case study conducted in the organization Nurafni Collection as a place of business process which initially still performs business transactions in a manual to be used as research in applying electronic supply chain management (eSCM) which is combined with electronic Customer Relationship Management (eCRM). So can be seen the results holistically, then assisted using a modeling archimate.

Keyword: Information Technology, Business Process, eSCm, eCRM, Archimate

I. INTRODUCTION

The need for implementation of supply chain management on an organization can not be avoided given so many areas of the business (entities) that form the business process is small, but the combination of each process a small business will make the business enterprise more widely. Referring to the issue of the enterprise in question is the linkage between the business process internal or external from a core organization (the producers) concerned. It is also commonly known as the presence of the supplier; producers, customers.

The problem that arises in the case study on the company Nurafni collection (producer) is the number of business processes that need to be improved between existing entities. The existing internal business processes seem uncontrolled and assume what is happening is all-natural. The relationship with the supplier was also impressed there are no constraints in terms of the dependence of raw material of supplier is very high causing the production of party producer to become uncertain, because when the stock of raw material is empty then the automatic production of no can not run. A relationship with the customer is also difficult to evaluate the extent to which the needs of customers or monitoring the extent of use of the product that has been used.

This research will be designing for the system management e-supply chain consists of several entities as well as describe the various problems that occur on each entity. The main entity here for the first consists of the manufacturer, where the manufacturer is the main party that acts as the seller of the product or services of the company Nurafni

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Collection to consumers directly, as for the scope from the manufacturer which consists of the activities of the service consumer directly, ordering the raw material to the suppliers, manufacturing, product promotion and product delivery to consumers.

Also, there are suppliers of the party acting as a supplier of raw materials to the manufacturer by the specifications and the amount requested by the manufacturers, suppliers to buy these raw materials from the major manufacturers of raw materials and then distribute them. After that, some consumers are entities that last as long as the customer can order the products offered by large manufacturers.

The main problem that occurs is where each entity experienced difficulties in doing various activities such as ordering goods, searching as well as the provision of information about products and companies, reporting, media promotion and so on. it is certainly very time-consuming and the cost for each entity is related. The existence of an integrated system can facilitate each entity in the conduct of various activities of the supply chain run as well as efforts to the optimization of the supply chain to be built.

II. LITERATURE REVIEW

System integration is an inevitability at this point, which is where the organization must change its business processes in a better way using information technology. The need to exchange information between organizations can occur along with its existence as a supplier, producer, or customer, so the exchange of this information can be used as part of the function of the electronic supply chain management (eSCM).

As expressed by Lidija Pulevska-Ivanovska and Neda Kaleshovska that eSCM is a new dimension that utilizes information technology as well as re-engineers the business processes of the organization that lead to cooperation partnerships [1].

Meanwhile, according to Rozahi Istanbul M., Ishak Abdulhak that the adoption of eSCM is the value of the supply system the management system using information technology where the efficiency of the supply chain and accurate information can reduce the cost of the chain and increased sales through the availability of the system is accurate [2].

Improving the relationship between the producer with customers known as customer relationship management (CRM) would be important, due to the intense competition in obtaining customers needed continuous interaction and one of them is by utilizing the role of information technology. This is reinforced by the description of the Rozahi Istanbul M., that the management in the CRM consists of the business process that takes over between a company and its customer's derivatives in the chain of distribution [3].

eSCM and eCRM is a combination that should be the main focus in integrating the needs of between 3 enterprise different, namely: suppliers, producer, customers.

This is by that expressed from the research of Muhammed Kürşad Özlen Nereida Hadžiahmetović that consideration of the positive main is almost all of the companies and the workers acknowledge customer relationship as an important component for their company, in this case including a combination of supply chain, customer relationship, and information technology in a company [4].

Meanwhile, according to Sameer Jain, Vinay Kumar, Vikrant Deshmukh, Vini Rawat in his research that the need for integration of systems (ERP, SCM, CRM) is a system requirement to be integrated to achieve the sharing of business resources and the integrated deployment of various resources according to customer needs of customers [5].

This also affects the quality of the staff, the better supply chain can improve the attraction of customers. This has critical effects on the fulfillment of the customers that improve the company's performance [6].

III. METHODE

This research was conducted on companies in Nuraini collection is done by interview and analyze the condition of each business process into the routines of the company. In addition to the findings of the internal company, I also surveyed the external, namely the supplier about the extent of the readiness of fulfillment in accepting any booking from the manufacturer. The last thing that is done with a few loyal customers to get a variety of reasons to remain a customer in Nuraini collection.

Stages of design in this research 1) analysis of various aspects of the availability of information technology infrastructure and implementing that need to be available in each enterprise. According to Anote Chanopas, Donyaprueth Krairit, Do Ba Khang the need for understanding and the contribution they were between the top management about the importance of the flexibility of the IT infrastructure[7]. 2) information Disclosure is realized by the integration of information systems between enterprises, some of which are described by Y. Joseph, A.Gunasekaran, E. Adeleye, and K. Sivayoganathan that the integration of information systems aimed at facilitating the exchange and sharing of information in an organization [8]. 3) the Establishment of architectural design related to all of the needs that occur in the eSCM using the design of archimate. As written by Sybren de Kinderen1, Khaled Gaaloul1, and H.A. (Erik) Proper, archiMate is a modeling language enterprise architecture which established that enables the organization is modeled from a holistic perspective.

IV. DISCUSSION

The discussion begins by collecting a variety of problems that occur between the supplier, producer, and customer as follows. Discussion related to producers with a customer :

- a. The absence of media that can support the process of marketing products to every customer so when the customer requires information of the product & company more details will be experiencing difficulties that will impact the customer trust in the products or the company.
- b. The process of making the booking reports are still using the available media to make the frequent occurrence of ambiguity so that it is considered to be less accurate and efficient.
- c. The absence of media can provide detail information such as order status, shipment and so on.
- d. The company doing the shipping itself, not to cooperate with the company introduction is often overwhelming.
- e. The absence of the seller that would accept the custom order by providing consultants to assist in the design of the goods.

Discussion of the related problems between the suppliers with the producers, namely :

- a. The process of booking records on the supplier that is still manual and not yet stored neatly using a database is considered to be less accurate and not efficient.
- b. Ordering raw materials via telephone or meet in person to make producers difficulty and requires less time to perform the activity.
- c. It cannot be sure the time that it takes to create and send the raw materials to the producers hinder the process of the manufacture of the finished product on the producers.
- d. Has not been applied to the implementation of the system of cooperation contracts between suppliers and the producers make one of the party just by changing the policy or detrimental to the other party.
- e. Using the system manual party producers do not bias monitor the progress of orders placed to the supplier.

Some issues that arise are summarized into a number of planning will be integrated with the relationship between supplier, producer, and customer, such as building management on the position of back office and front office, as follows :

a. Back Office

a.1. Logistics Drone User drone delivery is a logistics company and retail outlet. These companies rely heavily on the transfer of commodities from one place to another. Using a set of drone delivery is very helpful to keep logistics operations continuous. One example is the service delivery of the product to the consumers who go to its customers.

a.2. The random show, using the technology scene is integrated which will store items on the first sequence of randomly generated will be maximized with the on the same order and adjacent to each other. The management system will know the location of every item and can determine the distance of the shortest journey to choose the order.

a.3. Automatic delivery, utilizing a blend between artificial intelligence, machine learning, the Internet of Things, and big data analysis.

a.4. Store without a cash register, Before shopping in the store, then the buyer just simply download the app on her phone each. The application was also connected with the user's credit card so that any items to be purchased are billed directly on the account of the customer's application.

b. Front Office

b.1. Online transactions, booking and sale/purchase of online.

b.2. Chatbots, created to alleviate the problems facing the industry today. The goal of chatbots is to support and scale the business team in their relationship with the customers like on social media.

b.3. Promotion social media, new business strategies by using social media and utilizing the site to sell and buy online.

All the conditions thoroughly about the interconnectedness of business processes, back-office applications, and front office, as well as the infrastructure, involves three enterprises can be seen in the design of archimate here:

In figure 1. The design of the archimate Enterprise Nurafni Collection can provide a comprehensive picture of the business process on the position of the layer business (yellow color), then the application layer (blue color), the next layer of infrastructure (green color). The design layer also represents all aspects related to all business process activities for suppliers, producers, customers.

This design has also included the eSCM and eCRM components, which excel in optimizing the supply chain functions of all information resources, which have an impact on activities that can automatically move along with the controls that have been made according to the needs of each connected / integrated party.

The design of the archimate seems that every business process that can be connected directly on the parties integrated. It means that not all information regarding the business processes of each enterprise is connected or can be viewed by unauthorized people, but the process control business can still be done by each enterprise according to the context of the needs that have been agreed to be integrated together.

The design of the archimate in figure 1. Explain that most of the processes that occur from upstream to downstream occur in the virtual world. Therefore in the process of eSCM use a technology called EVN (Extraprise Value Network), which includes the concept of eSCM and eCRM. eSCM helps the relationship between the Supplier and the Manufacturer, while eCRM helps the relationship between the Manufacturer with the Customer/Retailer [10].

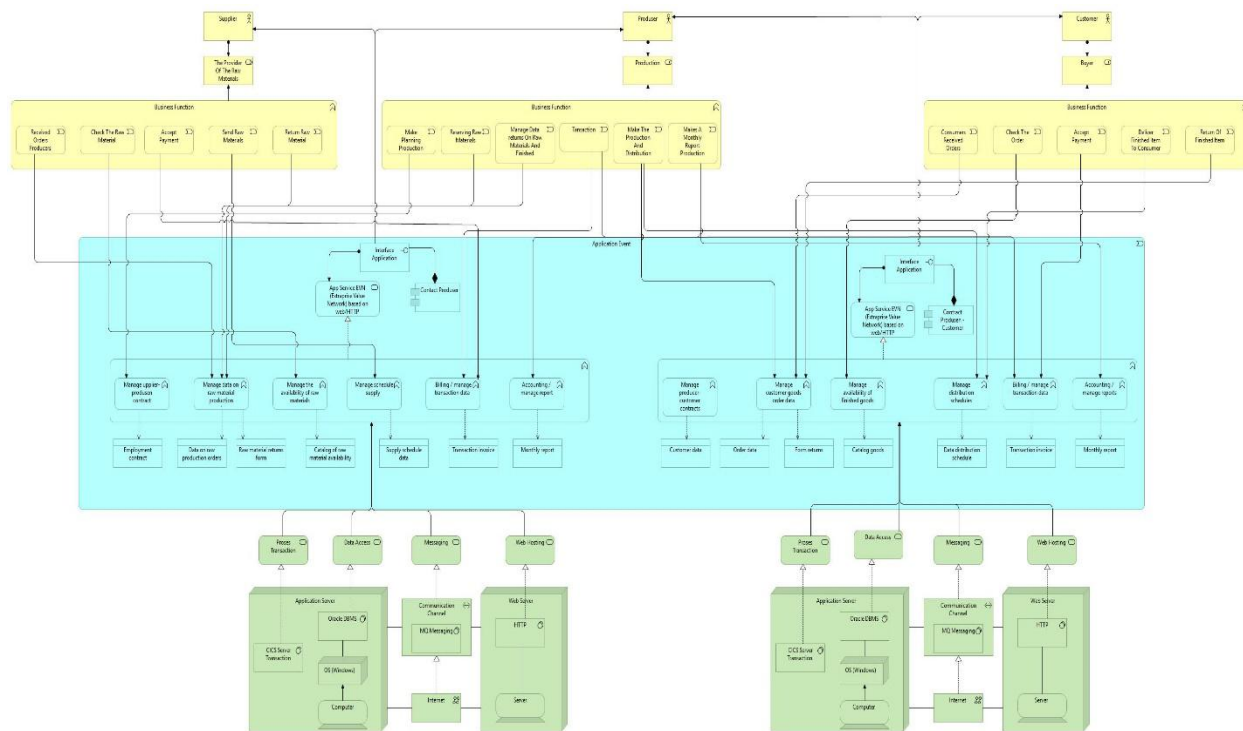


Figure.1. The Design of The Archimate enterprise Nurafni Collection

In the relationships that occur between the Supplier to the Manufacturer, occurred in an application that overshadows the concept of SCM. Before making transactions of raw materials, Suppliers, and Manufacturers in advance to perform the contract work by the agreement. So in the process of ordering raw materials, manufacturers simply by making a booking via the internet (the virtual world).

Manufacturers see the catalog raw materials provided in the application by the Supplier. Then the manufacturers order the raw materials by the requirements to the Supplier. After receiving the order, the Supplier will send the raw material by the order.

During the shipping process, both the Supplier and the Manufacturer can perform monitoring until finally the raw materials delivered are accepted by the Manufacturer. If the raw material received by the Manufacturer by the booking, then the next step is the transaction between the Manufacturer with the Supplier. However, if there is a discrepancy, then the Manufacturer reserves the right to return the raw material to the Supplier. And the Supplier will initiate the same process as ordering raw materials.

Furthermore, in the relationship between the Manufacturer with the Customer/Retailer, use the app that houses the concept of CRM. Customer will cooperate with Manufacturers obliged to perform a contract on cooperation with the Manufacturer, so the Customer data recorded in the database. The process of booking, the Customer access application that connects the Customer with the Manufacturer. Then the Manufacturer will accept orders of the Customer and sends the finished goods to the Customer by the orde.

Activities that occur the same as an activity between the Manufacturer with the Supplier. Where if goods so received Customer/Retailer is not by the order, then the Customer/Retailer is entitled to return of finished goods to the Manufacturer. However if the goods are received according to the order, then the next Customer making a payment to the Manufacturer by the agreement previously established.

V. CONCLUSION

The design of Archimate that is produced can be understood by all management in each enterprise according to its function as a supplier, producer, and customer. After analyzing the various problems that have arisen, it is answered that many opportunities can be done by various companies in carrying out their business processes by utilizing several activities in the context of eSCM and eCRM. Besides that, it is also the main consideration that the role of face-to-face to get/provide information is all in function in the virtual world (online).

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