Sales and Distribution (SD) Module Plan For SAP-ERP Implementation in Coffee Shop

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Abstract— The part of small business enterprises in a established market economy is one of the main subjects in modern industrial organizations. In coffee industry, coffee shops are booming mushrooms-like business along the street. Coffee is the most, next to crude oil, dealt goods in the world. Sales and Distribution (SD) module refers to specific sales area and functional influence of the order-to-cash processes and includes Master Data E Sales, E Shipping, E-Billing Documents, and E Partner Functions. The Enterprise Resource Planning (ERP) is industry-driven concepts and system that is universally accepted by the business as a real-world solution to achieve integrated enterprise information systems. The target of this article focused in the implementation of SAP-ERP SD Module plan for a Coffee Shop. The purpose is to examine the current organizational structure, business processes and create a suggested BPMN, to identify issues and challenges related to implementation as well as the ICT infrastructure set-up of the shop. The adoption of the ASAP model is applied in this study for there is well-organized and actual use of project resources in this tool, but this study is limited to the first two phases only due to data privacy. Data Gathering techniques such as data analysis, direct observations and interviews with coffee shop's owners were used. The findings will help the entrepreneur to enhance the business structure and processes and consider all the challenges related in the implementation. This is a period of making practical decision in using the configured plan for future ventures and optimizing enterprise resources.

Indexed Terms— Business Process, BPMN, Coffee, ERP, Sales, Distribution

I. INTRODUCTION

Micro Commercial Enterprise (Reid, G. 2002) brings innovative standards of precision and insight into the learning of small firms by importing current concepts from industrial economics and by using up-to-date statistical and econometric methods. It ponders the real conduct of small firms in a viable environment; and a unit on the political low-cost of small firms, which looks at the ethics of race and the enterprise values.

In line with the growth of coffee enthusiasts in Indonesia, coffee factories are now emerging pals' offerings the pleasure of local coffee in a distinctive way (Rahardjo, B. et. al, 2019). Coffee listed number two in the most traded commodity, next to crude oil — and one of the oldest as well, in the world with over 2.25 billion cups of coffee consumed universal on a everyday basis. The commodities are categorized by the principles of tradability — a viable asset vehicle to help craft the commodity, deliverability — all merchandises need to be actually deliverable, liquidity — commodities usually have a vigorous and well-established shop with consumers and retailers continually transacting with each other to be measured one of the highly-traded commodities (Chan, J. 2020).

For small coffee business enterprise to flourish sales and distribution operation may adopt a technology that enable tasks to be done in one place at one time. These are the basis of implementation of integrated information systems, such as SAP-ERP. In SAP-ERP Sales and Distribution is one of the modules dealing with data section that influences the order to-cash functions (Chudy, M. et. al. 2011). SD data is specific to the sales area that the customer master is extended to and can be different for each sales area in scope. The information is grouped by functional influence of the

order-to-cash processes and includes Master Data E Sales, E Shipping, E Billing Documents, and E Partner Functions.

- Objectives of the Study

This study aimed to find for the readiness of the shop to implement SAP-ERP implementation by having the configuration plan of the sales and distribution module, particularly it sought to answer the to examine the current organizational structure, business processes and create a suggested BPMN, to identify issues and challenges related to implementation as well as the ICT infrastructure set-up of the shop.

II. REVIEW OF RELATED LITERATURE

The community accomplishments of some corporations from our country by great companies and performances of European are adapting roadmaps to what the new business has come up with has been one of the most significant steps in the company's further development (whether it is independent or that it has become a secondary of the parent company (V. Costin and C. Dorian, 2019).
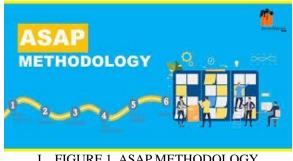
In a sales operation with a customer, the concluding price to be based on the value of the material, any discount claim, freight, and dues. This determination rest on the business guidelines related to that transaction. Based on the study of Sharma, K., & Mutsaddi, A. (2010), SAP ERP customized some shared techniques to put on business rules to the procedures designed in the system. The configuration on permits you to describe the specifications for duplicate requirements and information transmission. Different customers can shoulder different roles in a commercial transaction. The client who places the order doesn't essentially have to be the same buyer who obtains the goods, or who is accountable for paying the account. Passing on partner roles in SAP Sales and Distribution (SD) controls the jobs of partners in the sales process.

The coffee shop is presently the most quickly developing commercial in the world and become a well-known movement in food services. South Korea's per-capita coffee drinking is five times higher than Asia-Pacific areas and the total coffee marketplace is appreciated to about $3 billion in 2014 (Muhammad, S. A. 2015).

III. METHODOLOGY

This study was based ASAP Methodology which focuses only on the first two phases. The The only considerations are the analysis of the business process and how to improve it through the introduction of SAP configuration. Other techniques were data analysis, direct observations, and interviews with coffee shop owners.

ASAP methodology is utilized in SAP application projects. If adopted, this project will get the following advantages: Application time will reduce, Quality implementation will attain, and Well-organized and real use of project resources will happen. There are essentially six steps elaborate in this methodology & these are as follows: Project Preparation, Business Blueprint, Realization, Final Preparation or Testing, Go Live and Support

I. FIGURE 1. ASAP METHODOLOGY SEVENMENTOR (2022).

Data Gathering Techniques
- Document Analysis. The researcher analyzed the existing business documents which include inventory and sales that are currently being used. This method was used to provide additional information required for the proposed configuration.
- Interviews. This was conducted by the researchers to the manager and wait for staff who are currently using the business transaction processes about manual process of inventory and sales.
- Observation. This was conducted as a part of investigating the current processes involved in inventory and sales.

IV. RESULTS AND DISCUSSION

• Organizational Structure

The shop itself is the main business area. The materials are shipped and stored there but are kept in different storage locations. The master data will be composed of the data used in a purchase order. The most important of these being the product name, product quantity, the vendor's name, the price of each item and the date of order, the PO number, and the date of delivery.

The coffee shop does not deliver or ship its products, all transactions are done at the shop. The master data will include the product, product cost, date of transaction, and, other information from the receipt or sales invoice.

• Business Processes
A. General Processes

After gathering and analyzing the needed data from various sources, the current business process of the coffee shop was identified. The current general process is as follows:

1. The cafe manager orders materials from the distributor.
2. The cafe's stockman checks and records the stocks.
3. The cafe's products will be generated from the materials.
4. Products are sold to customers.
5. Transactions / Sales are accounted for and analyzed.
6. If inventory for the products is low, the cafe manager orders materials from the distributor again.

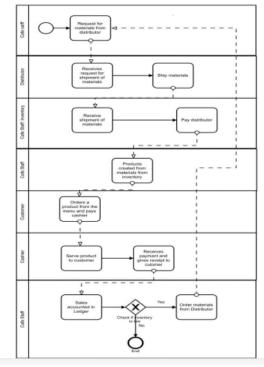Figure 2 shows the graphical representation of the general process.

Figure 2. BPMN of the general process

B. Order and Delivery Processes

The process in making an order up to the delivery of the ordered product to the customer is as follows:

1. The customer makes an order
2. Cashier takes customer's order
3. The barista prepare/cook the ordered products and sserve to customer
4. Customer asked for the bill
5. Cashier creates invoice
6. Customer pays the bill
7. Cashier accepts the payment and give the receipt to the customer

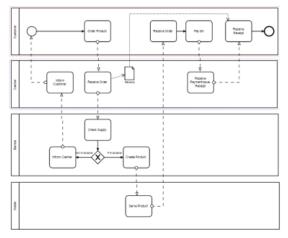Figure 3 shows the graphical representation of the product sales.

Figure 3. BPMN of the product sales

C. Inventory Process
The process in making a daily/weekly inventory is as follows:

1. The stockman conduct daily/weekly inventory.
2. The manager receives inventory and order materials thru telephone call.
3. Supplier receives order and checks supply if available.
4. If not available, supplier informs the manager.
5. Supplier delivers the raw materials.
6. Shop receives the supplies

Figure 4 shows the graphical representation of the process in making a /weekly inventory.
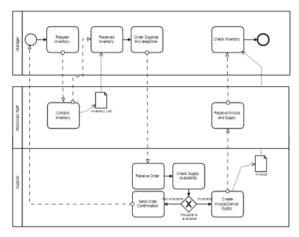

Figure 4. BPMN for Inventory

Issues and Challenges related to Implementation
After conducting interviews and observations, the shop has identified problems that the proposed configuration plan aims to solve. There were

unsynchronized and unsecured sales and inventory data. It also find outs that files are hard to retrieve during operations when staff are busy in their assigned work. Ishikawa diagrams were used to present these problems in Figure 5.
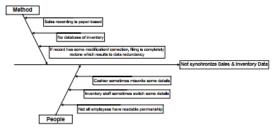

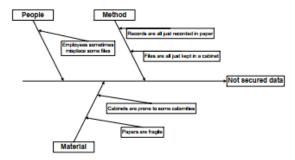Figure 5. Not synchronize sales and inventory data
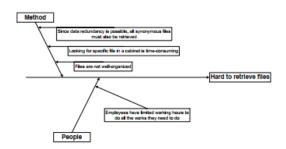

Figure 6. Not secured data

Figure 7. Difficulty in File Retrieval

ICT infrastructure readiness of the shop.
The minimum hardware and software requirements in the implementation of the SAP ERP SD module system are met by the Coffee shop's ICT infrastructure.

Software Requirements		
	Minimum	Recommended
Operating System	MS Windows 7	MS Windows 10

	Minimum	Recommended
Additional Software	Adobe Reader 8.1.3 or higher	Adobe Reader 11.0.10
Server Hardware Requirements		
	Minimum	Recommended
Processor	Intel ® core ™ i3	Intel ® core ™ i5
Memory/Storage	8 GB of RAM 500GB HDD	32 GB of RAM 2TB HDD
Printer	The printer that supports printing from Adobe Reader	EPSON L1200
Connectivity	Upstream: 1 Mbps Downstream: 1 Mbps Latency: 200ms or better	12 MP pipe

Table1. Software and Hardware Requirements

CONCLUSION

The organizational structure has a relation to the requirement of the SAP-ERP SD module since its setup is on sales, orders, delivery, and inventory a shift from manual procedure to automation and integration is necessary. For processes, the SD configuration requirements on the processes of sales, orders, delivery, and inventory are supported by the SAP ERP and the implementation could provide effective and efficient business SD operations and reports which can be used for decision making because of its transparency and fast procedure. The current master data outdated way of storage, which is unsynchronized, not secured, and hard to retrieve should be replaced with the implementation of the SAP SD module for better record keeping, storing, and reporting.

The issues and challenges related to ERP implementation include the struggle of the business size in connection with the high cost of ERP software, technical requirements, and training. The minimum hardware and software requirements in the implementation of the SAP ERP SD module system are met by the business' ICT infrastructure. Thus, SAP ERP implementation is possible.

VI. RECOMMENDATION

Business owners and the Sales and Distribution staff need to realize the kind of change it SAP-ERP SD Module may bring. It is recommended that the implementation of SAP ERP in the enterprise be more competitive and gain more advantage. To maximize the use of the integrated system, the Coffee Shop may consider the implementation of other SAP ERP modules such as MM, HR, FI, and the like.

ACKNOWLEDGMENT

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