

Business Process Re-engineering of KE and ES Marketing Sales and Distribution Process utilizing S4 Hana

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Abstract

Business Process Re-engineering as a form of improving Sales assists the improvement of a company's function. SAP Sales and Distribution, as an example, implement better management workflow while improving current business processes. To apply the principles of Business Process Re-engineering, the authors had to select a company (KE and ES Marketing) with understanding the improvement of their current process while discovering how to integrate different departments through ERP Systems. Analyzing the current processes led the authors to choose tools, such as Flow Process Charts and Service Blueprints to gather data on time-related durations, failures, and waiting times to analyze the business. The authors also retrieved company reports, followed by the execution of to-be processes through S4 Hana. In doing so, the authors were able to follow the flow of S4 Hana configuration by using Handbooks that would replicate current functions and orders of KE & ES Marketing. The results and discussion also assisted in the improvement opportunities and analysis of processes compared to the authors' transactions through S4 Hana. Processes and changes in the future are to improve the system. The authors were able to configure current activities related to sales and distribution, such as Customer Request for Orders, Sales Orders, Display Stock Overviews, and Creating Invoices. Configurations are not limited to reduced times, better definition reports, and better customer information. The results and discussions showed that using the S4 Hana improves the productivity of the processes by around 82% percent on average. The benefits for Supplier Industries through this study provides an example of handling financial and transactional issues faced. Around the business, the impact of conducting the will provides a reference for company owners and Supplier Industries in opting for organizing workflows. The results generated by the system show how small businesses, for instance, can benefit their tasks through SAP's Sales and Distribution.

Keywords

Enterprise Resource Planning, S4Hana, Business Process Re-engineering, Purchasing, Sales and Distribution.

1. Introduction

Supplier Industries operate under the idea of sourcing goods, supplies, and services. Businesses work out as source providers in coordination with transactions from the original supplier while carrying out the contracted tasks quantitatively within a specific contracted timeframe. It acts as middlemen, retailers, or wholesale distributors. It is customary to enact the arrival of the product from original manufacturers and end-users.

KE & ES Marketing is a business that focuses on retailing various products such as inventory ingredients, wine, table utensils, and many more. KE & ES stands out in supplying places that look for premium and affordable products, such as goods from Spain and Italy, and the products are more affordable for the clients due to the better prices the company provides.

The company focuses on providing service for clients that need supplies from a supplier such as the KE & ES Marketing company; usual clients would be hotels in the Philippines. The KE & ES Marketing company advertises through calling cards to contact the company owners directly.

The company operates and resupplies company products by receiving bulk supplies from the manufacturer. Products are then sold to clients for a lower price compared to other supplier companies or similar businesses.

Since KE & ES Marketing is a business with different departments, integrating an ERP system is suggested for the management of workflow and business process of the business. An Enterprise Resource Planning system is a type of business management program that enables a company to use integrated applications. ERP systems simplify and

streamline operations, resulting in a more lean, accurate, and effective service. ERP allows the company to have better insight into its operations.

1.2 Current situation of KE and ES Marketing

KE and ES Marketing currently utilize the traditional way of business processing. They do activities such as recording, computing, scheduling, labeling, and contacting as some of the manual processes and the business uses tools such as papers, notebooks, and excel to record and operate their day-to-day transaction. The methods used were noticeably outdated and lacking in terms of automation. With these methods, there are challenges encountered that resulted in human errors of incomplete transactions, which can be seen in the following figure.

1.3 Problem Analysis Diagram

The problem analysis present made use of Why-Why Diagrams explains the present situation of the company. The given problems on incomplete transactions span factors related to both business processes and outputs.

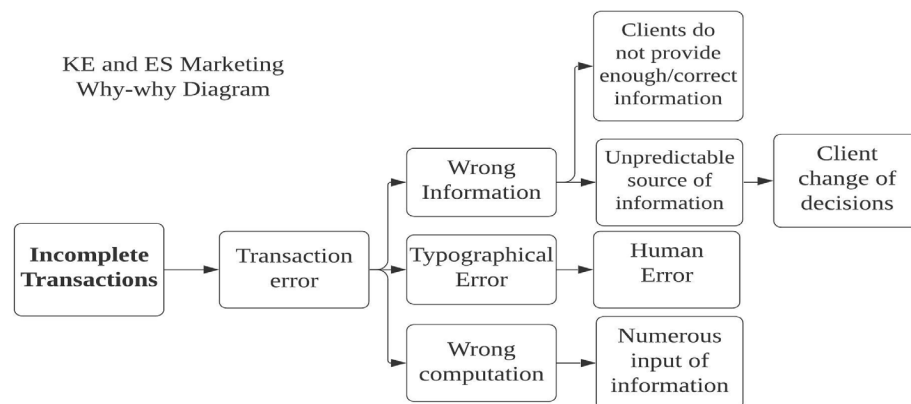


Figure 1. Problem Analysis (Why Why) Diagram of KE and ES Marketing

Incomplete transactions are not merely a result of errors, KE and ES Marketing encounters transactional errors due to wrong client information, typographical errors, and wrong computations due to numerous inputs. Problems encountered based on the diagram are the following:

1. **Wrong Information-** Information is dependent on client decisions and provided information. Changes depending on client decisions affect the result of transactions.
2. **Typographical Error-** Inputs are based on the employee/owner who will work on the given information.
3. **Wrong Computation-** Numerous inputs of information for transactional content results.

The authors were also able to record aspects such as informational and inputting errors through the given diagram. In the Problem Analysis Diagram, KE and ES Marketing experienced incomplete transactions during its current situation. With the current situation in the figure, relating to the business system can be determined.

As a sole proprietorship needing reliance on automation, the need for assistance in the business process remains a priority. The result of such problems brings businesses into the need for orientation and restructuring to a better system. The impacts of business problems result in incorrect information and excess data in part of the business; considering the status as a small business, it will be strenuous to continue transactions in managing client orders and information.

1.4 Objectives

The researchers intend to follow the following objective regarding the re-engineering of the sales and distribution process of KE & ES Marketing:

1. To improve the sales and distribution processes by utilizing S4 Hana to better the decision-making of owners.
2. To improve and increase the current time-consuming processes of KE and ES Marketing.
3. To provide reports that can easily monitor business transactions.

The settled objective is in line with the sales and distribution business process of KE & ES Marketing. The re-engineering of the said business process by the SAP S4/Hana Platform will benefit the accuracy and workload efficiency of the business.

1.5 Significance

The researchers have found that KE and ES Marketing still uses traditional transaction processes through their current inventory and monthly reports. Through the utilization of S4Hana, the study will allow KE and ES Marketing to lessen the time spent in their current processes. Besides from improving the time spent in transactions, the research study will allow KE and ES Marketing to lessen processes prone to errors by using the system.

2. Review of Related Literature

In line with the scope of the research and study conducted by the researchers regarding BPR and the utilization of ERP systems in a current business, the researchers identified that similar studies have been developed and evaluated. According to a study conducted by Bhaskar (2018), BPR methodologies could stem from learning experiences based on failed attempts at change. This is in the form of a change framework done in an organization in India wherein BPR has been seen as the best possible way for complete beneficial change within the organization. In ScienceDirect (2018), it was cited that a BPR could be aided by a new form of ERP system which is the S-ERP which integrates the sustainable and decisional areas of system re-engineering and project management. ERP systems have been deemed as universal and compatible with almost all types of organizations and businesses conducted by Masa'deh et al. (2017) noted that there is overwhelmingly large usability and scope for ERP. Most recently being integrated into the accounting and auditing areas of organizations. This results in ERP being able to streamline an organization's business process. Such research results in findings that ERP and BPR fundamentally improve the quality of products, services according to the study of (Bhavsar et al. 2019). They noted that not only that it made organizations more efficient, but it also helps organizations face competitors head-on by cutting operational costs which are brought upon by the restructuring of the business process. This result is supported by another study conducted by Jinno et al. (2017) to analyze the overall effectiveness of ERP implementation. Their findings coincide with the previous study that restructuring using ERP indeed creates a more efficient workflow. Another study tends to also support this evaluation by comparing the concept of PLCF against BPR wherein BPR has produced a faster beneficial impact on the sample organization compared to the PLCF concept (Bhavsar et al. 2019). Lastly, in line with the client company of the study, similar research conducted by Chang et al. (2019) noted that BRP utilizing ERP implementation is seen as a viable option for the supply-chain industry as seen in the implementation of the blockchain-based system on a supply-chain business in the US which resulted in the business to be more efficient and sustainable.

3. Methodology

3.1 Define Current Business Processes

The researchers were able to define the current sales process on KE and ES marketing through interviews with the owner of the company, and the researchers asked them about their company background, current business process, structures, and problems in their business.

3.2 Analyze Current Processes

The tools used to analyze the current processes of the business involve the use of FPC (Flow Process Charts), and Swimlane Diagram in current processes. The use of the Process Chart determined the time-related durations in conducting business processes. Swimlane, on the other hand, helped determine specific tasks per department and pinpoint failures of the given processes while determining the waiting time in relation. The time of the processes is also measured to get the Time efficiency of the processes.

3.3 Define Automation Process of Future State

The researchers were able to automate the Sales Department processes of KE & ES Marketing using S4 Hana. Through the processes in SAP's Sales and Distribution, the automation of the sales and distribution process of KE & ES Marketing has been streamlined. This has been made possible through the configuration of the Create Sales Order, create outbound delivery, Ship materials/Post Goods Issue, and Create Invoice. These were integrated based on the needed improvement of the As-is process of the Sales Department to boost its productivity.

4. Results and Discussion

4.1 As-is process(es) of the selected system (s)

The researchers use the Swimlane Diagram to show the current process and this will help the researchers understand the service process from the customers to employees perspective to assist the service design and improvement of processes into a more efficient and effective service.

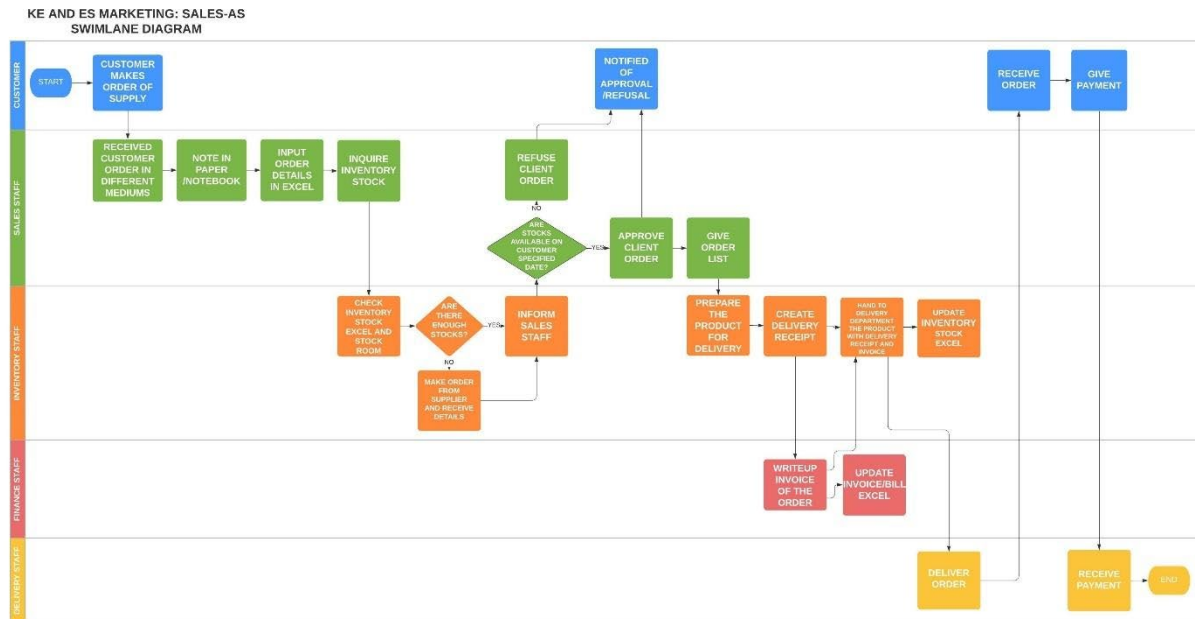


Figure 2. As-is Swimlane Diagram of KE and ES Marketing Sales Department

Figure 2 shows the As-is Swimlane Diagram of the Sales Department, it starts with Customer making an order to the company via email, chat, SMS, then the company will receive their request that will be noted and recorded in excel, followed by the Sales inquiring the inventory to check their stocks in excel and stock room if there are available stocks of the product, this has a possible error because there might be a typographical error or missing information. If there are no stocks, the staff will make an order to the supplier, and ask when it can be delivered, if it is on time, the sales will accept the order, if not, they will refuse it. And if there are stocks, the sales will immediately approve it and give the order list for the order to be prepared by the inventory staff. The inventory staff will then create the Delivery Receipt and hand it over to the Delivery staff. The possible error is miscommunication since there is no updated record that the staff can rely on and that it takes a long time. Then the Finance staff will write up the invoice of the product and hand it also to the Delivery staff, but it will have a possible failure because of writing the wrong price or wrong computation so the company will have to void it. The delivery staff will then deliver the order and wait for customer payment.

4.1.2 Determine the cycle time of the process(es).

To determine the cycle time of the Sales process the researchers use the Flow Process Chart to state the activities, record the time it takes for it to be done, and categorize what specific operation it occurs. This chart is frequently used when the process is sequential and has areas that can be improved.

End					
Step	Activity description	Time (minutes)	Distance (meters)	Operation	Transport
1	CUSTOMER MAKES ORDER OF SUPPLY	15		○	
2	RECEIVED CUSTOMER ORDER IN DIFFERENT MEDIUMS	8		×	
3	NOTE IN PAPER/NOTEBOOK	5		×	
4	INPUT ORDER DETAILS IN EXCEL	15		×	
5	INQUIRE INVENTORY STOCK	10		×	
6	CHECK INVENTORY STOCK EXCEL AND STOCK ROOM	10	5		×
7	IF THERE'S NOT ENOUGH STOCKS, MAKE ORDER FROM SUPPLIER AND RECEIVE DETAILS	15		×	
8	INFORM SALES STAFF	2		×	
9	IF THERE'S NOT ENOUGH STOCKS AVAILABLE ON CUSTOMER SPECIFIED DATE, REFUSE CLIENT ORDER	1		×	
10	IF THERE'S ENOUGH STOCKS, INFORM SALES STAFF AND ACCEPT CLIENT ORDER	3		×	
11	GIVE ORDER LIST TO INVENTORY STAFF	3	5	×	
12	PREPARE THE PRODUCT FOR DELIVERY	10		×	
13	CREATE DELIVERY RECEIPT	8		×	

15	WRITEUP INVOICE OF THE ORDER	10		x					
16	UPDATE INVOICE/BILL EXCEL	5		x					
17	HAND TO DELIVERY DEPARTMENT THE PRODUCT WITH DELIVERY RECEIPT AND INVOICE	5	6	x					
18	UPDATE INVENTORY STOCK EXCEL	5		x					
19	RECEIVE PAYMENT	5		x					
		Count:		17	0	1	0	0	
		Time per process step:		125	0	10	0	0	
		Distance traveled	16	Meter	Load Time	135	Minute		

Figure 3. As-is Flow Process Chart of KE and ES Marketing Sales Department

Figure 3 shows the As-is Flow Process Chart, and it has similar activities being done from the service blueprint, but activities such as Received Client order in different forms, Record Order in excel, Check Inventory Stock in Excel and Storeroom, Give Order List and Update each department Excls can be further improved. This chart also provides the time and distance the action takes and in the case of the As-is process of KE and ES Marketing Sales, it takes 73 minutes in total to finish the process and 14 meters of distance to travel.

4.1.3 Current reports of the company

The data gathered from the existing system includes documents that are being used for decision making and monitoring are the following:

Figure 4. As-is Documents / Excel of Monthly Sales / Excel of customers / Excel of products / Hardcopy of Sales Invoice/Delivery Receipt/Notes

Figure 4 shows the As-is Documents and KE & ES Marketing has presented the researchers with the current data that the organization has kept. Using this, the researchers would be able to analyze and evaluate the current productivity and status of the organization. The attached image above is an example of KE & ES Marketing's as-is documents containing their inventory and monthly reports. The excel for the monthly sales showcases the totality of the sales and transactions that KE & ES Marketing has accomplished. The excel of customers displays the previous records of customers that have partnered or purchased the services of the company. The excel of products features the list of products and stocks of the company that is currently on inventory along with their respective count. Lastly, the figure also exhibits the actual hardcopy of KE & ES Marketing's Sales Invoice, and Delivery Receipt which is being currently used as receipts for their sales and transactions.

4.2 To-be process(es) using ERP (S4 Hana).

The researchers use the Service Blueprint Diagram to show the process when S4 Hana has been implemented in Sales and Distribution and to showcase the area of improvement in the proposed process.

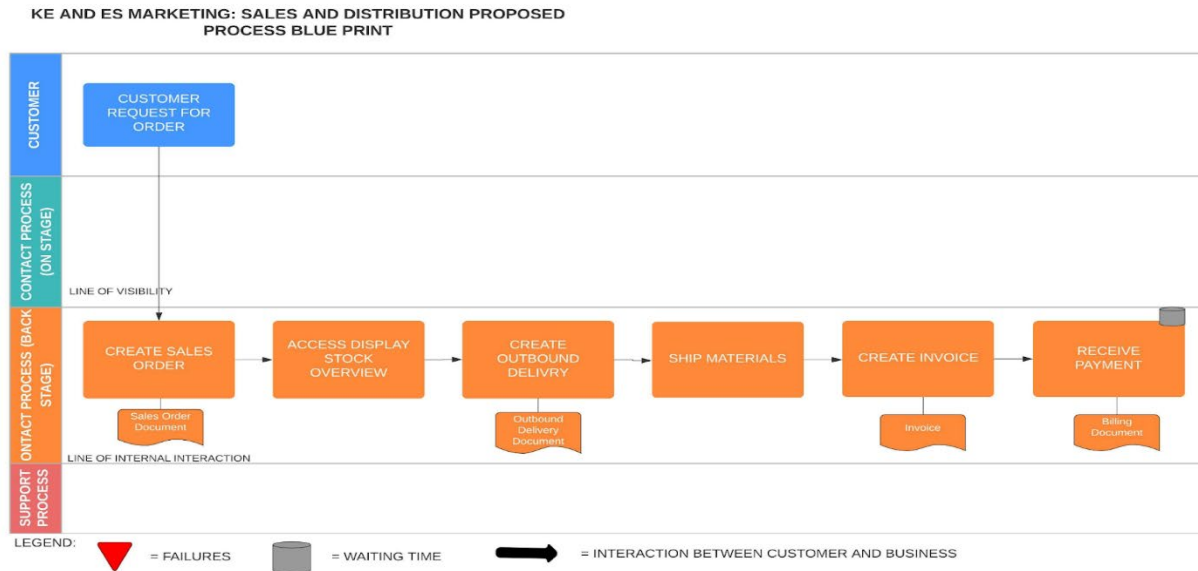


Figure 5. Proposed Service Blueprint of KE and ES Marketing Sales Department

Figure 5 shows the Proposed Service Blueprint of the Sales Department using ERP, it starts with the Customer requesting the order, then the company will create a sales order where details and computation of prices are assuredly accurate, and then they can check the stocks if there is sufficient supply, and then they would be able to create outbound delivery. The order will be packaged with customer details and handed over to the Delivery Department. It will be followed by ship materials which will be confirmed and then the company will be able to create the invoice and receive payment when confirmation of payment is proved.

4.2.1 Screenshots of the proposed sales Processes in s4hana

The results of the automation are the forms and documents that can be prepared and generated by the system, which is the following:

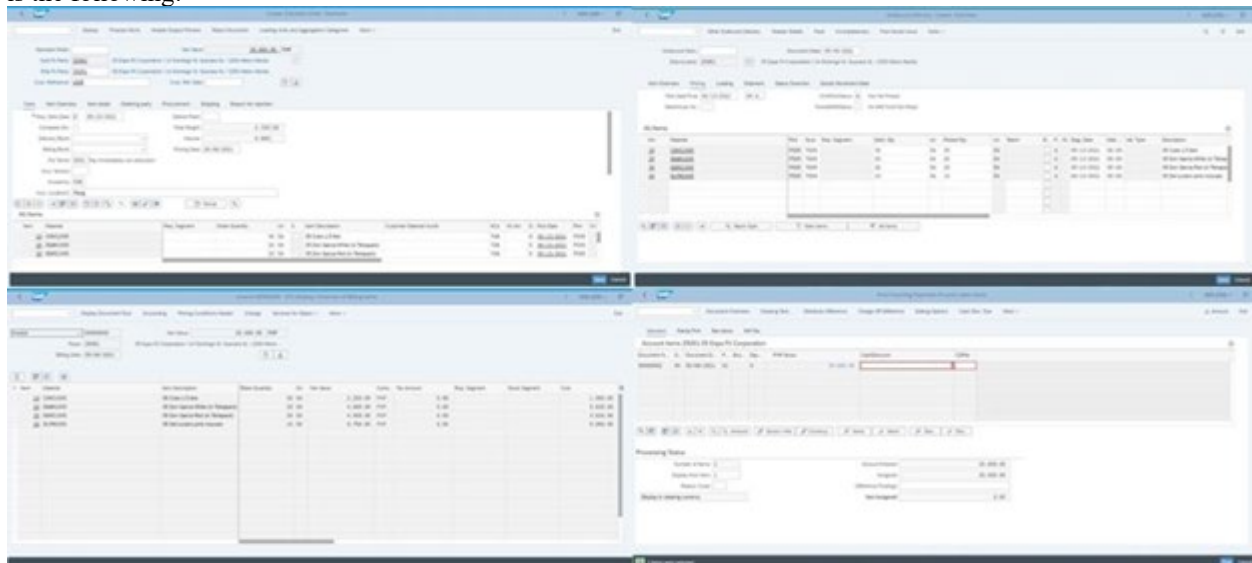


Figure 6. Proposed Configuration-Execution / Create sales order / Create outbound delivery/Ship Materials/Create Invoice

Figure 6 shows the researcher's proposed configuration of the sales and distribution process of KE & ES Marketing. Using the sales and distribution features of SAP 4/Hana, the sales process could be streamlined and organized properly and efficiently. Included in the figure is the creates a sales order portion of the sales and distribution process wherein

the sales order of a specific transaction is being generated. Lastly, the creation of the outbound delivery process in the sales and distribution process which handles the execution of the outward delivery of the transaction which is part of the final stages of the sales process in the new proposed execution for KE & ES Marketing.

4.2.2 Determine the cycle time using ERP.

To also determine the cycle time of the Proposed process the researchers use the Flow Process Chart to state the changes in the activities, and from the time it takes for an activity to be done.

Flow Process Chart

Project:

Actor:

Process:

Begin:

End:

State:

Step #	Activity description	Time (minutes)	Distance (meters)	Operation ○	Transport ⇒	Inspection □	Delay D	Storage ▽
1	Customer Request for Order	10		x				
2	Create Sales Order	1		x				
3	Access Display Stock Overview	1		x				
4	Create Outbound Delivery	1		x				
5	Ship Materials/Supply (Post Goods Issue)	1		x				
6	Create Invoice	1		x				
7	Receive Payment	1		x				
Count:				7	0	0	0	0
Time per process step:				16	0	0	0	0
Distance traveled				0	Meters	Lead Time	16	Minutes

Figure 7. Proposed Flow Process Chart of KE and ES Marketing Sales Department

Figure 7 shows the Proposed Flow Process Chart, it shows the similar activities being done from the proposed service blueprint, but it can be seen that due to the different activities in the proposed process there has been improvement in the sequence of the activities, especially on receiving orders and creating sales orders. This chart also shows the time and distance the action takes and in the case of the proposed process of KE and ES Marketing Sales, it takes 16 minutes in total to finish the process and no distance to travel. This shows that through the utilization of S4 Hana the Proposed process has minimized the time incurred compared to the As-is process.

4.3 Comparison of Improvement (As-is vs To-be)

Table 1. Time Efficiency of As-is vs To-be (Proposed) Process Activities

Activities		Time (Minutes)		Rate of Improvement
Current	Improved	Current	Improved	
The client makes the order of supply	Customer Request for Order	15	5	67%
Record order in Excel	Create Sales Order	15	1	93%
Check if stocks are available	Access Display Stock Overview	5	1	80%
Writeup the invoice of the product	Create Invoice	10	1	90%
Total of Activities		45	8	82%

Table 1 shows the Time Efficiency of the activities in detail, which focuses on the as-is process and proposed process, and the result shows the increase of improvement of time efficiency with a total percentage of 82%. Thus, proves that the use of improved processes is effective in reducing the time spent in the process.

4.4 Reports Provided by ERP (S4Hana)

To improve the decision making of the users, the system can generate a relevant report in the SD processes, and it can also be customized based on the user requirements which are:

SAP

Customer List

More

U1PH007 - Mapua Institute Manila

Customer List

Time 19:14:55 Date 05/13/2021

RFDKVZ00/LEARN-005 Page 1

Sort: Customer

Name 1	Contents 1	Name 2	Contents 2	Name 3	Contents 3	Name 4	Contents 4	Name 5	Contents
Section	COMMUNICATION WITH CUSTOMER								
Company	Language EN								
05 Espa Fil Corporation									
14 Domingo M. Guevara St.									
1550 METRO MANILA									
PHILIPPINES									
Customer	25062	Company Code	Company Code Name						
Section	TECHNICAL DATA								
SearchTerm 005	Acct Group DEBI								
Created by LEARN-005	Created on 04/21/2021								
Section	COMMUNICATION WITH CUSTOMER								
Company	Language EN								
05 Terry's Selection									
2297 BCS Prime Bldg., Pasong Tamo Extension									
1231 MAKATI									

Figure 8. Customer List Report

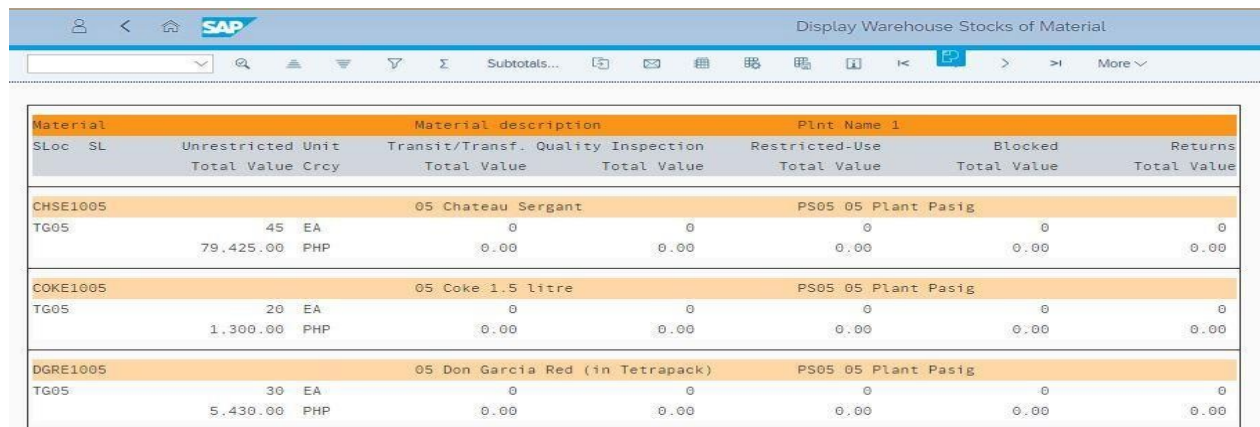
Figure 8 shows the Customer list report, and this report enables the business to check their customer's data, such as name and location and ensures information accuracy.

The screenshot shows the SAP Stock Overview Basic List report. The header includes the SAP logo, a search bar, and the title 'Stock Overview: Basic List'. Below the header, there is a navigation bar with 'New Selection', 'Refresh', and 'More'. The main content area displays the 'Selection' section with material 'CHSE1005' and '05 Chateau Sergeant'. The 'Stock Overview' section shows a table with columns for 'Client/Company Code/Plant/Storage Location/Batch/Special Stock', 'Unrestricted use', 'Qual. inspection', 'Reserved', 'Rcpt reservation', 'On-Order Stock', 'Consgt ordered', 'Stock trans.(plnt)', and 'Transfer ('. The table shows three rows of data for different storage locations: 'Full', 'PH05 KE and ES Marketing 05', and 'PS05 05 Plant Pasig', all with a quantity of 45,000.

Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use	Qual. inspection	Reserved	Rcpt reservation	On-Order Stock	Consgt ordered	Stock trans.(plnt)	Transfer (
Full	45,000							
PH05 KE and ES Marketing 05	45,000							
PS05 05 Plant Pasig	45,000							
TG05 05 Trading Goods	45,000							

Figure 9. Stock Overview Basic List Report

Figure 9 shows the Stock Overview basic list report, and this report enables the business to check the details and quantity of their material and it can also check the status of the stock, an example of this is when the business order, there would be a quantity on the On-Order Column.

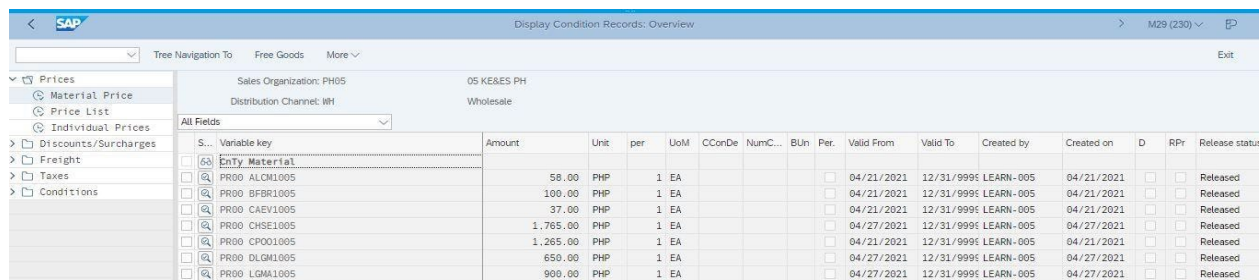


The screenshot shows the SAP 'Display Warehouse Stocks of Material' report. It displays a table with columns for Material, Material description, Plant Name 1, SLoc, SL, Unrestricted Unit, Transit/Transf. Quality Inspection, Restricted-Use, Blocked, and Returns. The table is filtered for Material CHSE1005, TG05, and Plant PS05 05 Plant Pasig. The table shows the total value of the material stock in PHP, with a total of 79,425.00 for CHSE1005, 1,300.00 for COKE1005, and 5,430.00 for DGRE1005.

Material	Material description	Plant Name 1	SLoc	SL	Unrestricted Unit	Transit/Transf. Quality Inspection	Restricted-Use	Blocked	Returns
			Total Value	Crcy	Total Value	Total Value	Total Value	Total Value	Total Value
CHSE1005	05 Chateau Sergeant	PS05 05 Plant Pasig							
TG05			79,425.00	PHP	0.00	0.00	0.00	0.00	0.00
COKE1005	05 Coke 1.5 litre	PS05 05 Plant Pasig							
TG05			1,300.00	PHP	0.00	0.00	0.00	0.00	0.00
DGRE1005	05 Don Garcia Red (in Tetrapack)	PS05 05 Plant Pasig							
TG05			5,430.00	PHP	0.00	0.00	0.00	0.00	0.00

Figure 10. Display Warehouse Stocks of Material

Figure 10 shows the Display Warehouse Stocks of the Material report, and this report also enables the business to check the details and quantity of their material, but it also displays all materials, and it includes the total cost of the material stock.

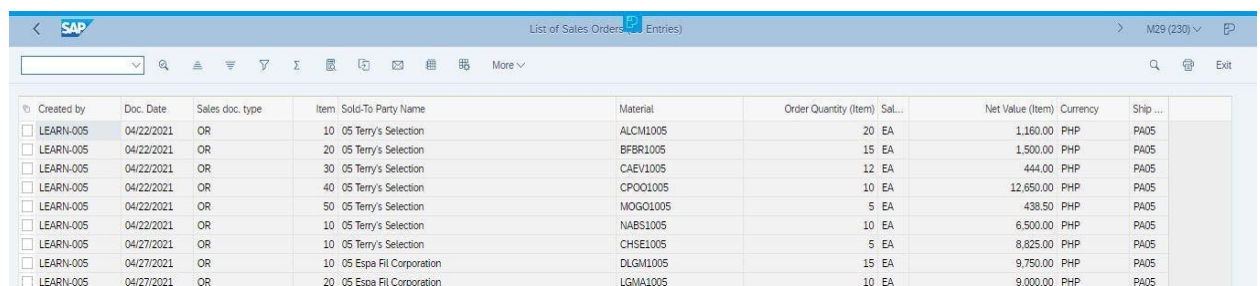


The screenshot shows the SAP 'Display Material Prices' report. It displays a table with columns for Material, Price, Unit, UoM, CConDe, NumC..., BUin, Per, Valid From, Valid To, Created by, Created on, D, RPr, and Release status. The table is filtered for Material ALCM1005, BFB11005, CAE11005, CPO11005, DGM1005, and LGMA1005. The table shows the price of the material in PHP, with a total of 58.00 for ALCM1005, 100.00 for BFB11005, 37.00 for CAE11005, 1,765.00 for CPO11005, 1,265.00 for DGM1005, and 900.00 for LGMA1005.

Material	Price	Unit	UoM	CConDe	NumC...	BUin	Per	Valid From	Valid To	Created by	Created on	D	RPr	Release status
ALCM1005	58.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released
BFB11005	100.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released
CAE11005	37.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released
CPO11005	1,765.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released
DGM1005	1,265.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released
LGMA1005	900.00	PHP	1 EA					04/21/2021	12/31/9999	LEARN-005	04/21/2021			Released

Figure 11. Display Material Prices

Figure 11 shows the Display Material Prices report, and this report enables the business to check the prices of the materials/products to be sold to the customer so that the automated price computation is correct and accurate.

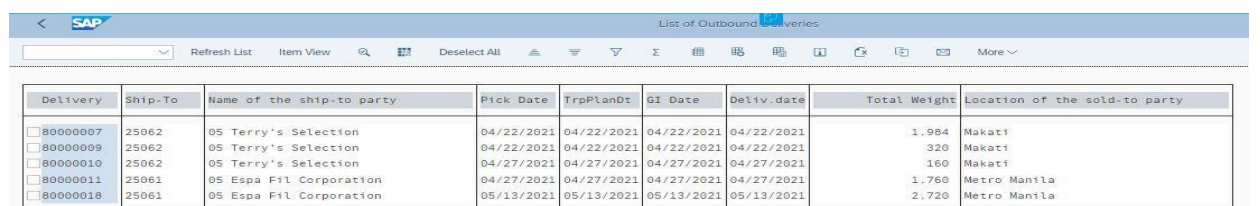


The screenshot shows the SAP 'List of Sales Order Entries' report. It displays a table with columns for Created by, Doc. Date, Sales doc. type, Item, Sold-To Party Name, Material, Order Quantity (Item), Sal..., Net Value (Item), Currency, and Ship... The table shows the sales order entries for the material ALCM1005, BFB11005, CAE11005, CPO11005, DGM1005, and LGMA1005. The table shows the net value of the sales order in PHP, with a total of 1,160.00 for ALCM1005, 1,500.00 for BFB11005, 444.00 for CAE11005, 12,650.00 for CPO11005, 438.50 for DGM1005, and 6,500.00 for LGMA1005.

Created by	Doc. Date	Sales doc. type	Item	Sold-To Party Name	Material	Order Quantity (Item)	Sal...	Net Value (Item)	Currency	Ship...
LEARN-005	04/22/2021	OR	10	05 Terry's Selection	ALCM1005	20 EA		1,160.00	PHP	PA05
LEARN-005	04/22/2021	OR	20	05 Terry's Selection	BFB11005	15 EA		1,500.00	PHP	PA05
LEARN-005	04/22/2021	OR	30	05 Terry's Selection	CAE11005	12 EA		444.00	PHP	PA05
LEARN-005	04/22/2021	OR	40	05 Terry's Selection	CPO11005	10 EA		12,650.00	PHP	PA05
LEARN-005	04/22/2021	OR	50	05 Terry's Selection	DGM1005	5 EA		438.50	PHP	PA05
LEARN-005	04/22/2021	OR	10	05 Terry's Selection	NABS1005	10 EA		6,500.00	PHP	PA05
LEARN-005	04/22/2021	OR	10	05 Terry's Selection	CHSE1005	5 EA		8,825.00	PHP	PA05
LEARN-005	04/27/2021	OR	10	05 Espa Fil Corporation	DGM1005	15 EA		9,750.00	PHP	PA05
LEARN-005	04/27/2021	OR	20	05 Espa Fil Corporation	LGMA1005	10 EA		9,000.00	PHP	PA05

Figure 12. List of Sales Order Report

Figure 12 shows the List of Sales Order Report, and this report enables the business to check all existing Sales Order and ensure that the information is correct. Additionally, the layout of the information of the report can be changed to the needs of the business.

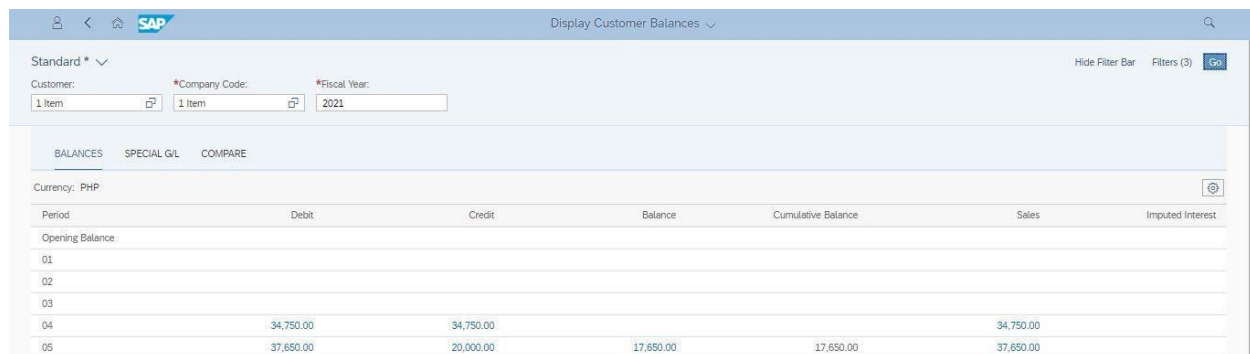


The screenshot shows the SAP 'List of Outbound Deliveries Report' report. It displays a table with columns for Delivery, Ship-To, Name of the ship-to party, Pick Date, TrpPlanDt, GI Date, Deliv.date, Total Weight, and Location of the sold-to party. The table shows the outbound deliveries for the material ALCM1005, BFB11005, CAE11005, CPO11005, DGM1005, and LGMA1005. The table shows the total weight of the outbound deliveries in PHP, with a total of 1,984 for ALCM1005, 320 for BFB11005, 160 for CAE11005, 1,760 for CPO11005, and 2,720 for DGM1005.

Delivery	Ship-To	Name of the ship-to party	Pick Date	TrpPlanDt	GI Date	Deliv.date	Total Weight	Location of the sold-to party
80000007	25062	05 Terry's Selection	04/22/2021	04/22/2021	04/22/2021	04/22/2021	1,984	Makati
80000009	25062	05 Terry's Selection	04/22/2021	04/22/2021	04/22/2021	04/22/2021	320	Makati
80000010	25062	05 Terry's Selection	04/27/2021	04/27/2021	04/27/2021	04/27/2021	160	Makati
80000011	25061	05 Espa Fil Corporation	04/27/2021	04/27/2021	04/27/2021	04/27/2021	1,760	Metro Manila
80000018	25061	05 Espa Fil Corporation	05/13/2021	05/13/2021	05/13/2021	05/13/2021	2,720	Metro Manila

Figure 13. List of Outbound Deliveries Report

Figure 13 shows the List of Outbound Deliveries Report, and this report enables the business to check the delivery and ensure that it has the correct information and that it was picked and delivered on time to the customer. The layout of this report can also be customized.



The screenshot shows the SAP 'Display Customer Balances' report. At the top, there are filters for Customer (1 Item), Company Code (1 Item), and Fiscal Year (2021). Below these, there are tabs for BALANCES, SPECIAL G/L, and COMPARE. The main table displays financial data for the customer '05 Espa Fil Corporation' in Manila. The table has columns for Period, Debit, Credit, Balance, Cumulative Balance, Sales, and Imputed Interest. The data shows an opening balance of 01, followed by a debit of 34,750.00 on 04 and a credit of 20,000.00 on 05, resulting in a final balance of 17,850.00.

Period	Debit	Credit	Balance	Cumulative Balance	Sales	Imputed Interest
Opening Balance						
01						
02						
03						
04	34,750.00	34,750.00			34,750.00	
05	37,650.00	20,000.00	17,850.00	17,850.00	37,650.00	

Figure 14. Display Customer Balance Report

Figure 14 shows the Display Customer Balance Report, and this report enables the business to check the current balance of a customer. This report shows the total sales gained from the customer and the existing balance the customer must pay.

SAP

List of Billing Documents

M29 (230)

First column

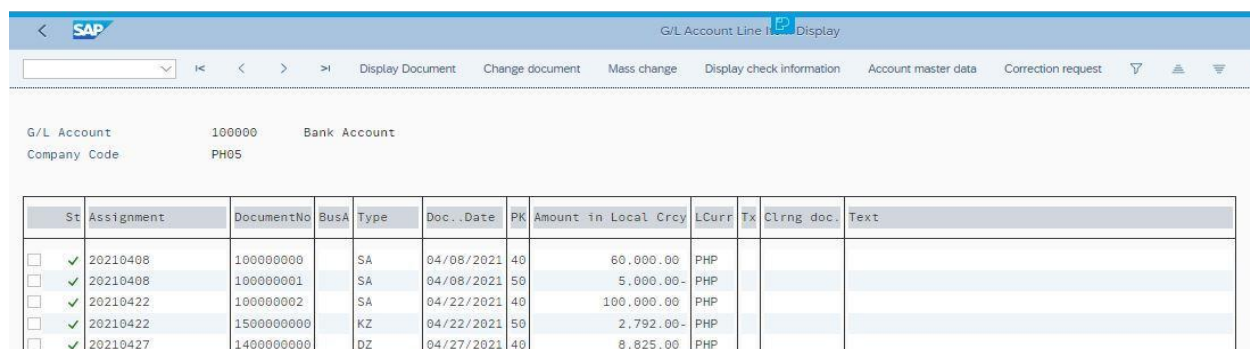
Column left

Column right

Last column

Figure 15. List of Outbound Deliveries Report

Figure 15 shows the List of Outbound Deliveries Report, and this report enables the business to check the existing bill documents with a customer, and similar to the other reports, its layout can be customized.



The screenshot shows the SAP 'G/L Account Line Display' report. It displays a list of G/L account lines for the account '100000' and company code 'PH05'. The table includes columns for St, Assignment, DocumentNo, BusA, Type, Doc..Date, PK, Amount in Local Crcy, LCurr, Tx, Clrng doc., and Text. The data shows five G/L account lines with various amounts and dates.

St	Assignment	DocumentNo	BusA	Type	Doc..Date	PK	Amount in Local Crcy	LCurr	Tx	Clrng doc.	Text
✓	20210408	100000000	SA	04/08/2021	40	60,000.00	PHP				
✓	20210408	100000001	SA	04/08/2021	50	5,000.00	PHP				
✓	20210422	100000002	SA	04/22/2021	40	100,000.00	PHP				
✓	20210422	1500000000	KZ	04/22/2021	50	2,792.00	PHP				
✓	20210427	1400000000	DZ	04/27/2021	40	8,825.00	PHP				

Figure 16. G/L Account Line Display

Figure 16 shows the G/L Account Line Display, and this report enables the business to see the flow of money in the bank. Their costs, sales, and the total amount of money within a specific date.

5. Conclusion

This research was done since there are many businesses out there that need help in their business process. The popularization of Enterprise Resource Planning (ERP) Tools help an organization's efficiency and productivity by

automating activities, better use of money, time, and resources; businesses are motivated to improve their business process using the ERP.

In this paper, the main problem is the incomplete transactions faced by the sales department due to various transaction errors caused by the traditional and manual way of recording customer data and completing transactions. To further analyze this problem, the researchers conducted analysis tools to devise a solution to resolve this problem; it was to use SAP so that the interface will simplify the processes, time, and improve the workflow of data to be recorded directly to the SAP database.

Upon implementation of S4 Hana, specifically SAP's Financial, Purchasing, and Sales & Distribution, the SAP applications could help improve and prevent human errors previously experienced by the company. Firstly, all mentioned SAP platforms could help ease handling any financial, inventorial, and transactional problems. Since KE & ES Marketing is a supplying business, purchasing stocks and updating the inventory is a vital process for the business. Using SAP Purchasing, ordering stocks, and managing inventory of products are stored and recorded in a very efficient way. The financial side of SAP could prevent human errors in areas of miscalculations and financial management since funds always revolve around the business. Lastly, using SAP's Sales & Distribution could help prevent problems within the business process because the distribution of information, product details, stock inventory, financial allocation, and many more are handled in a very accurate and efficient way using the SAP Sales and Distribution features and business management, and these advantages will certainly assist KE and ES in monitoring and improving their workflow.

This resulted that for the as-is and proposed process, there is a decrease in time spent on activities, and by automation of SAP, it lessens the possibility of incomplete transactions and human error. The generated reports also helped the users to make decisions about business operations. This proves, designing an automated business process improves the traditional business methods to eliminate the common problem that KE and ES Marketing had to deal with transaction errors and reduced time spent completing transactions.

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