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Implementation of the Erp (Enterprise Resource Planning) Program in Oil Palm Plantation Data Processing

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ABSTRACT

In all activities in oil palm plantation offices, we often find problems regarding the distance between offices and gardens which are very far away, even the distance between the gardens and offices is between islands, so we need a computer operational system program to reach all the data needed for processing a data into a financial reports and work progress of a job.Many people do not know about the program that is used to connect one part to another so that in data processing and monitoring the progress of a job it becomes hampered or the resulting data is incomplete or invalid for use because the authenticity of the data produced is dubious or vulnerable. to be manipulated by various parties, so with a program that can reach all of them, it can increase the efficiency of data processing and can be processed and produce accurate data for the company to need in the continuity of the company.

1. Introduction

Every company wants accurate and timely financial reports, but on the other hand there are obstacles in receiving data carried out in the field and within the Head Office because the program used is not efficient because there are separate user modules so that data reception is carried out. with its own recommendations that are prone to human error

Over time, humans began to develop programs that could be used for their needs in receiving data accurately and precisely, the program was called ERP (Enterprise Resource Planning). The history of ERP itself began in the early 1960s which at that time was only for monitoring balance information companies, inventories, to reporting work status to date have developed into programs that even manufacturing companies can use, obtain data in real time without any barriers to waiting for each other to get information, combine data from various modules in one system without opening the program the others are all summarized in one program in the ERP system.

In this final project we will explain the use of this ERP system in the world of palm oil companies which have a high complication rate in receiving accurate and precise data caused by the distance of the company, many operational divisions, and so on, for the example of the company we take is PT. XYZ

2. Method

The method used in this research is Cause and Effect Analysis (Causality) and Observation. According to Sugiyono (2016: 55), causal associative analysis is an analysis that aims to determine the relationship between two or more variables. With this analysis it will be possible to build a theory that functions to explain, predict and control a symptom and According to Sugiyono (2014:145) "observation is a complex process, a process composed of various biological and psychological processes". According to Riyanto (2010: 96) "observation is a data collection method that uses direct and indirect observations. The use of this method is used to find the root cause of data processing that is not timely and irregular.

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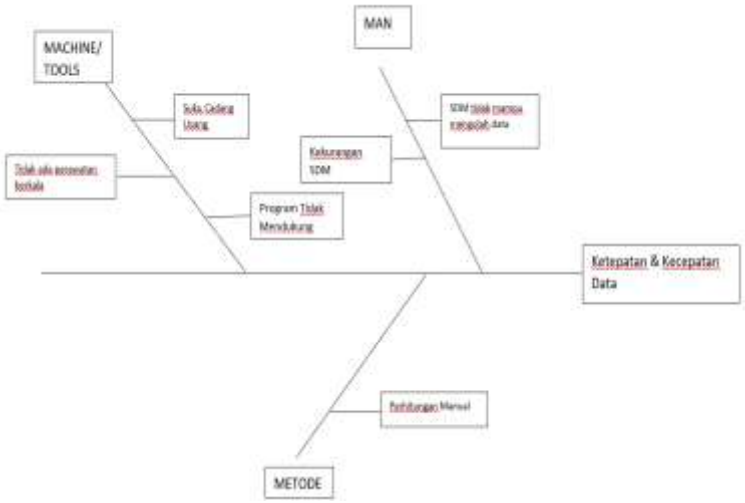

Root of the problem: In the calculation, it is still in manual condition, it is necessary to use a program that can be used to process data so that it is faster and more precise and training is given about the program that will be used. With this, direct observations were also carried out by comparing the ERP program system and the manual system at PT. XYZ.

3. Results and Discussion

According to experts, ERP is a computer-based system designed to process various company transactions and to facilitate integrated planning in real time, production, and consumer response (Daniel E. O'Leary). The purpose of making an ERP system itself is as follows:

a. Coordinate the organization's business completely and thoroughly.
b. Allows software to automate and integrate many business processes Share common databases and business practices across the enterprise Generate real-time information Enables integration of transaction processing and planning activities
c. Reducing time-consuming performance processes and eliminating data duplication.
d. Helps increase sales because it helps manage goods or services more quickly.

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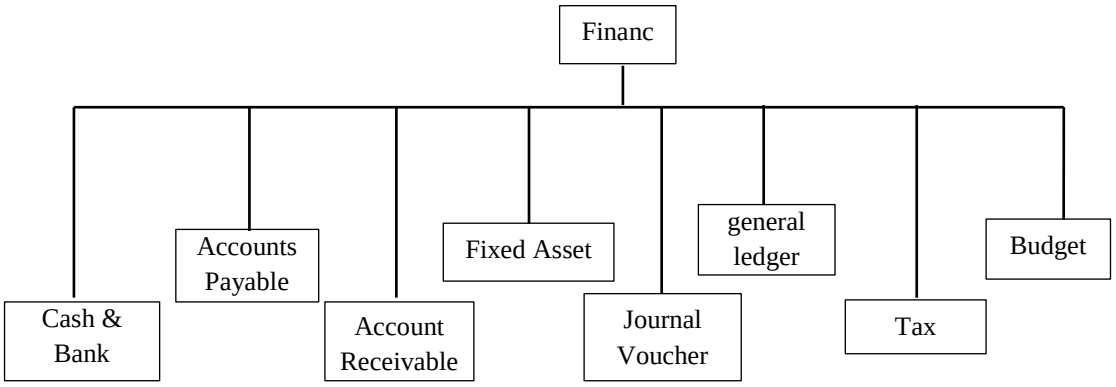
3.1 Research result

From our experience in using ERP systems at PT. XYZ we found that there are interrelationships between modules that have very diverse functions where a schematic and explanation of the modules that are the core of the ERP program can be made including:

a. Finance Module

The main module is closely related to the company's financial statements.

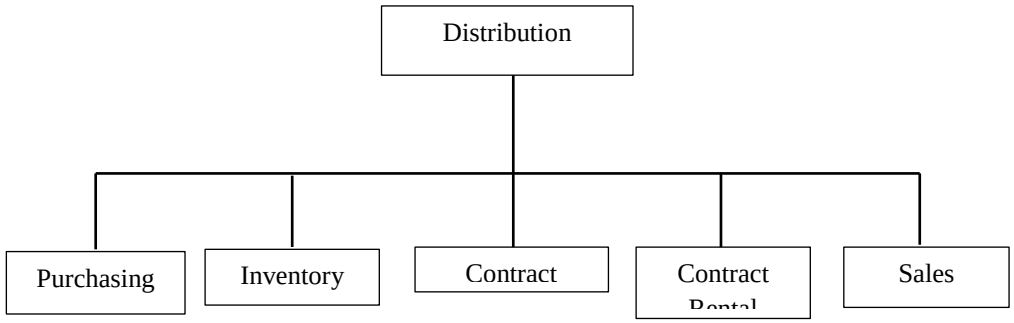


The main tasks of the Finance Sub-Module are

1) Cash & Bank: module for receiving and disbursing cash or bank.
2) Account Payable : document validation module for payment.
3) Fixed Asset : module for asset removal and book value calculation.
4) Journal Voucher: a module for journaling in the accounting section.
5) General Ledger: a module that contains reports such as Balance Sheet, Profit and Loss, General Ledger, and so on.
6) Tax : tax module for reconciliation between ERP system and E-Faktur system.
7) Budget : budget calculation module in each section.

b. Distribution Module

Main Modules related to warehouse stock, purchasing, sales, long-term contracts and short-term contracts



The main tasks of the Distribution Sub-Module are

1) Purchasing: Module for making Material Requests, offers, and Purchase Orders.
2) Inventory: module for receiving and releasing goods/stock in the warehouse.
3) Contract: module for making contracts and reports on contract work, the contract period is longer.
4) Contract Rental: module for making contracts and reports on contract work, the contract period is 1 month to 3 months.
5) Sales: module for issuing sales contracts to customers

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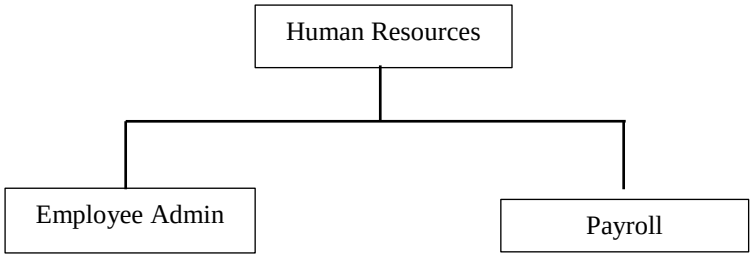
c. Human Resources (HR) Module

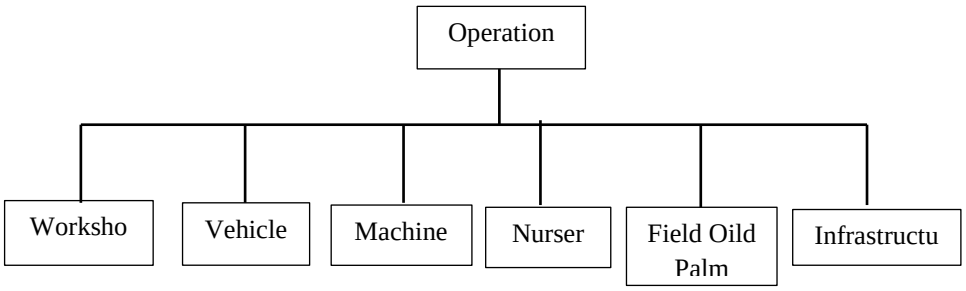


The main tasks of the Human Resource Sub-Module are

1) Employee Admin : as a module for adding new employees.
2) Payroll: module calculation/calculation of attendance, leave, permits, and Official Travel Money.

d. Operation Module

Main module that is useful in monitoring the period of use of a machine or vehicle that will undergo maintenance to be processed to the stage of making a work contract.



1) Workshop: maintenance scheduling module related to the factory.
2) Vehicle: maintenance scheduling module related to vehicles.
3) Machine : maintenance scheduling module related to machine.
4) Nursery : maintenance scheduling module related to seedlings.
5) Field Oild Palm : maintenance scheduling module related to field.
6) Infrastructure: maintenance scheduling module related to infrastructure.

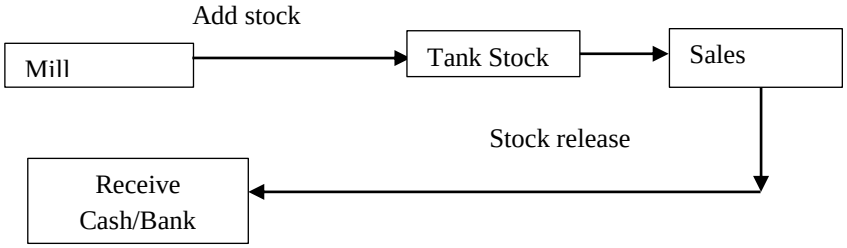
e. Mill Operation Module

Main Module as well as sub-module that operates in terms of production, starting from stock monitoring, production monitoring, yield calculation, FFA (Free Fatty Acid) reports and CPO water content.

f. Utilities Modul Module

Main Module as well as a sub-module that is useful for Approval of a document or Approval of a job application or document approval.

g. Sales Schematic Flow Example



From the schematic above, there are 4 interrelated modules, namely:

1) Operation: where this sub module functions as a module for providing Daily Production Reports which will be the basis for additions that occur in the stock tank and record the release of tank stock which is based on the Sales Contract carried out by the Marketing section.

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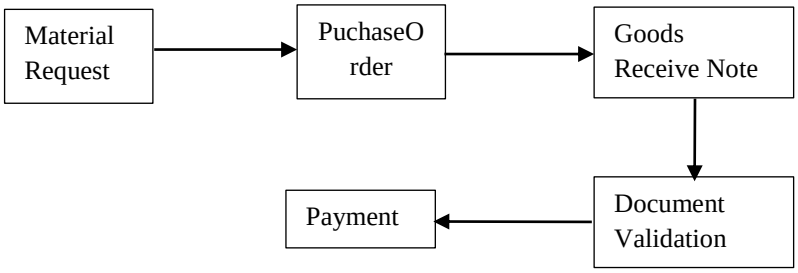
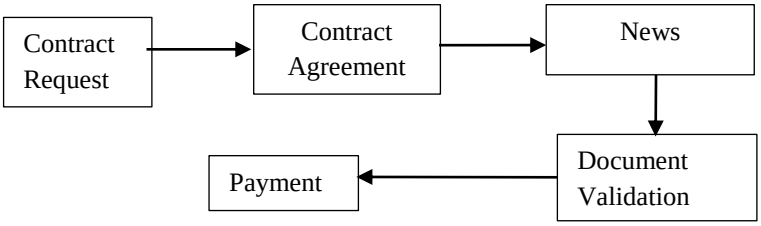
2) Sales: this sub-module functions as a basis for making outgoing shipments or to customers and monitoring shipments made so that they have a basis when billing is about to be made.
3) AR/Account Receiveable: this sub module functions in billing the customer based on the delivery report.
4) Cash & Bank : a sub module that functions as a record of receiving funds from customers.

h. Example of Procurement Schematic Flow

a. Product Material



b. Contract Products



From the scheme above, the procurement is divided into 2 parts, namely:

1) Material Product: Procurement in the form of purchasing a product/material for factory or office needs.
2) Contract Product: Procurement is the same as a Work Order where this module aims to make requests for Repairs/Work in the field.

In the Material Product or Contract Product, there are 5 sub-modules that play an important or interrelated role, namely:

1) Inventory : this sub module is useful for doing MR (Material Request).
2) Contract: a sub module that functions to carry out CR (Contract Request) and continue to become a finished contract or CA (Contract Agreement).
3) Purchasing: is a sub-module of forwarding from MR to procurement to making PO so that the required material can be supplied by the Supplier.
4) AP (Account Payable): The module validates the document after the work or material has been completed at the supplied stage to be forwarded to the finance department for payment.
5) Finance: make payments for what has been validated by the Account Payable module.

From the modules that we use, we can feel the difference in the use of the ERP system with the manual calculation system, taken from the data we obtained from the supporting documents of PT. XYZ that there were errors made from manual calculations so that the financial statements experienced errors that were required to be re-reported in subsequent years, therefore there was a sanction given by the Director General of Taxes due to the correction of the return report.

But in the use of the ERP program system the data processing is carried out very precisely and accurately because the data is taken in real time, as well as the support from the ERP system itself which can lock reports that have been fixed so that human errors caused can be minimized properly. For the use of ERP systems in oil palm plantations, it is highly recommended because the work systems needed by oil palm companies are diverse, so they experience limitations in data collection if done manually.

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4. Conclusion

Dalam penggunan sistem ERP dalam PT. XYZ mendapatkan hasil yang maksimal dalam proses pengolahan data yang akurat dan transparan. ERP mempermudah dalam penerimaan data yang dikarenakan modul-modul user yang saling berhubungan. Penggunaan ERP mampu memperhitungkan kegiatan operasional sehingga kesalahan dalam perhitungan diminimalis dengan baik. Sangat membantu untuk pihak Accounting dalam merangkum laporan perusahaan karena data yang bersifat real time.

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