

InnoSoft

KANBAN Based ERP

InnoSoft - KANBAN Based ERP System

Normal ERP systems are based on Forecast, Sale orders, MRP, Purchase orders, Creating Production plan (Batch processing), Production and Report operation. QC and Warehouse management modules form the other part of the ERP.

Normal systems work with lot of manual intervention for Production planning, setting up of priorities for production, report operation and finally dispatch.

In case of KANBAN based manufacturing the entire flow from receiving material to creating finished goods and dispatching is different from normal production. The KANBAN based system is Pull system thereby avoiding any build up of Inventory.

At every stage of the ERP, like Forecast, Receiving material, storing and issuing, Production planning, production, Assembly, QC, FG dispatch, etc the control is by the KANBAN cards or e-KANBAN without much user intervention.

This creates the need for system to be fully automated at every level. The warehouse management system also is fully automated for proper flow of material.

InnoSoft provides both the normal ERP and KANBAN BASED ERP

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KANBAN Based ERP



Manufacturing using KANBAN based Production and Warehouse

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Some of the software modules in a KANBAN based system are as follows

- Module for Request for quotation for calculating the cost of new FG or modifications
- Forecast from Customers for four to six months
- Create Forecast for suppliers by using MRP for four to six months
- Bill of material (BOM) for all WIP and Finished goods
- Product delivery sheet (PDS) from Customer (for delivery of FG)
- Product delivery sheet (PDS) from Supplier for receiving Raw material
- Production planning based on replenishment method or other methods
- Production of WIP for assembling finished goods (FG)
- Report operation for Production
- Assembly of finished goods (FG)
- Report operation for Assembly of FG
- Warehouse for Receive goods (GRN)
- Warehouse for all areas with transfer and borrow return
- Warehouse for Finished goods (multiple warehouses)
- Dispatch based on pick and shop from Finished good warehouse
- QC having all modules like QC inspection, NG analysis
- Customer claims , Supplier claim,
- ECN, QPR, 8D report
- Supplier evaluation, Customer complaint and analysis



Request for Quotation

- RFQ is needed when a customer asks for a new FG or a modification to the current FG
- The system calculates all the cost for Raw material and processing
- Cost of Engineering
- Cost of Transport
- Overheads etc
- This is turned into a quotation for the customer
- After the customer accepts the pricing the part is added to the FG item list

Long term Planning and FORECAST of Raw material

- The customer will give the forecast for four to six months
- The forecast given can be daily usage, weekly usage or monthly usage
- From this data MRP will be run and the material requirement will be calculated
- Purchase requisition will be created from this for all material
- Appropriate Purchase orders will be created on the vendors for forecast
- The purchase orders will be the forecast to suppliers

Short term planning and execution of receive Raw material

- Short term planning is issuing the Product delivery sheet (PDS) to suppliers
- Using this PDS the supplier will send the goods as per the cycle time
- The product delivery sheet will have the delivery for the day or two days or three days
- Supplier will attach the Kanban card with details of the delivery
- The details will be PDS number, PO number, Item number, KANBAN ID etc



Production Planning

- Production planning will consist of making the WIP to make the finished goods (FG)
- It will also have the planning for finished goods
- The planning is based in many ways one of them is the replacement method
- In replacement method the PP is based on the delivery to the customer
- There is a provision of adjusting the PP to take care of holidays, unusual demand etc

BOM

- BOM is created for every FG or WIP
- BOM has the Assembly BOM (AP) and INDIVIDUAL parts (IP)
- BOM has detailed information for Raw material required at every stage
- The routing or the steps for the processes are also created
- The timing for each process like set up time, run time, jig changing time etc
- BOM revisions are kept track off for any changes

Production of WIP

- Based on PP and the Production lot size the production plan is given to production daily
- The PP is per work center but the report operation is per machine or equipment to give reports on performance
- The raw material is issued based on the KANBAN
- Production is done in quantity and KANBAN boxes
- Report operation is done for every machine
- It consists of WIP produced, the loss time and the stop time
- It also consists of NG analysis by the QC at production stage

Assembly of Units

- Assembly of various FG is done as per the BOM
- The Raw material is issued as per the KANBAN flow for Assembly
- Each line has the assembly PP information
- Report operation is done for every line
- Report operation will have number of units made, NG etc
- It will also have the stop time if any and analysis for NG

Receive Warehouse

- The KANBAN boxes are received at the Receive warehouse
- The KANBAN card on boxes will be read and the goods are received in warehouse
- The QC will be done as per the rules of the company
- The items after QC will be stored at the appropriate warehouse for further processing





Finished goods Warehouse

- QC is done for all finished goods
- They are then allotted automatically to the warehouse and sub warehouse
- Location allocation can also be done
- Auto allocation is based on Item number and the Customer number
- The location helps in final picking and shopping and goods dispatch

Warehouse Management

- Warehouse management in this program is done by using Bar code units and mobile devices
- All warehouse management for warehouse receive, QC, RM store and Assembly store is done by using Bar code unit and is fully automated
- All other warehouses like FG warehouse, WIP warehouses are also fully automated
- There are unlimited number of warehouses and sub warehouse that can be created in the program based on the user requirements
- The warehouse system besides having warehouse receive and dispatch also has Transfer of goods between warehouses and borrow return
- Other features are Stock adjust and price adjust
- The warehouse is fully online so the stock can be seen in real time

Quality Control

Inspection and ECN

- Creation of Templates for each item, the template can have dimension, appearance and functional information
- NG analysis templates can also be made for finding the detail of NG with root cause
- Engineering change module to control Engineering change from Customer or supplier is maintained and controlled

Claim Analysis and control

- Customer Claim module looks at all the problems of claim and return goods from Customer
- Supplier claim has the module for getting the claim from supplier
- Both modules can have CN/ DN or replacement
- Quality problem report can be generated and tracked till the end
- 8D report for supplier with root cause etc can also be maintained

Document Management system

- A document management module for all drawings, specs is kept to take care of all documents generated in the production unit
- Documents can be stored, retrieved and used

Evaluation systems

- Supplier evaluation module
- Customer complaint and analysis module

