

Macro Flow of ERP

An Intraprise® solution for
Manufacturing Industries



Software & Management Consultancy





Head Office

Megh e-Biz .Com Pvt. Ltd.

1/9, Shreeram Apartment, Shanti Sadan, Erandwana, Karve Road,
Pune 411 038, Maharashtra, India.

Tel: +91-20-25412068, 32915801. Mobile: 09850978486. Email: sales@mebpl.com

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1. Introduction

“Intraprise” – A Full Fledged ERP System for your Business Needs

Every company is asking its personnel to do more with less and to leverage technology to increase productivity. But one needs to understand and accept the solution that will provide positive return on investment.

Competition today is forcing companies to integrate tightly with their customers and suppliers and reduce the time requirement to flex the supply chain. The demand for products is getting higher in variety and shorter in lead-time. Only through a tight integration – from the customer’s customer to supplier’s supplier – can a company hope to successfully compete. Before any company can be linked effectively into a world-class agile supply chain, their own internal processes must be world class. Like the old saying, a chain is only as strong as its weakest link. Many companies are attempting to link with suppliers and customers only to find that the relationship unravels due to lack of basic controls in their own business. ERP is a way to effectively plan and manage all the resources of an enterprise.

There is no doubt; Enterprise Resource Planning (ERP) systems have vastly improved the way organizations get work done. ERP’s success as a key enterprise system for any organization is due to its three-tiered architecture. Through this architecture, ERP have solved scalability problems, unified company operations and effectively addressed security issues. This architecture allows hundreds and even thousands of users to work from the same database, at headquarters and literally from anywhere on the planet.

As a crucial evolutionary step in business automation, ERP was originally envisioned as a “one-size-fits-all” modularized software approach to the management of most core business activities. Today ERP is used to manage sales & marketing, production, purchasing, logistics, inventory management, vendor management, customer relationship management and service, finance, taxation, excise, payroll & employee management, human resources and many other basic business activities. In addition one can also utilize best of breed applications for many of their specific needs. All of these additional systems to specific needs can be integrated into and work with the core ERP system.

Hence, ERP is one solution to manage and control your entire business transactions and activities. We call it as “Intraprise” – A full-fledged ERP system for your business needs.

“Intraprise” – Introduction

It is a totally **integrated solution**, which maintains all detailed information of various departments, Locations, Divisions & Companies, on-line & interrelates simultaneously.

“**Intraprise**” solution combines with modules in Finance Management, Materials management, Production Planning & Controlling, Purchase order processing, Sales order processing, MIS, Excise, Marketing, Dispatch, Payroll & not only individually but also in combination to save organization’s valuable time, efforts to give it required information at your finger tips.

This software package once installed generates documents for foolproof transactions with built-in controls. It provides routine information required by the companies to satisfy the statutory requirements related to bookkeeping. Easy generation of reports for management and taxation purposes viz. Sales tax, Income Tax, etc and thus thoroughly satisfies the audit requirements. It provides crisp information (MIS) at any time for important Management decisions. All this is achievable with reduced quantum of efforts.

“**Intraprise**” assists in preparing documents directly on a system. It does not leave any scope for Errors / Omissions ensuring that the documents are complete & correct. No extra / repeated entries / efforts are necessary. Thus, do the job only once accurately through this package and reap the benefits.

Legitimate

“**Intraprise**” gives total accounting solution and seamless integration of accounting among financial, materials management, production planning & control, sales order processing, purchase order

processing, excise, marketing, etc. It is capable of maintaining accounts of multiple companies under one common procedure.



Benefits of “Intraprise”

This ERP System “Intraprise” is a system for effectively planning and managing all the resources of an enterprise, from the perspective of the business manager. This system not only helps you in maintaining production & inventory but even your supply chain management and customer relationship management that guides you to ensure the management has the information needed to run an organization efficiently.

The added value of information is dependent on the level of knowledge of the user. “Intraprise” provides quick access to data and information that were generated in different areas of the company. That means decision makers are exposed to new information that helps them in taking better and faster decisions. Under the roof an integrative information system that uses one big database for the whole organization (With optional connectivity to the intranet and internet), the availability of integrative information has become a reality and hence “Intraprise” ensures better business.

Entrenched

Another point of view is the added value of the “Intraprise” system to the performance of the company. In the other words, “Intraprise” system contributes to the prosperity of the company. Given the availability of all this information, it helps management in taking the right decisions. The right algorithms / logics that are embedded with the system gives you the right information at right time, rather well in advance. For instance, does the organization hold the right amount of inventory? That amount is dictated by the algorithms chosen for the purchasing policies and by the parameters set for the Material Resource Planning, like batch sizing and dispatch policy.

With “Intraprise”, as a company, one can be benefited in many and different ways. Few of them are listed below.

- **Modular Structure:** “Intraprise” is distributed in different modules viz: Sales & Marketing Management, Material Resource Planning, Purchase Order Management, Stores & Inventory Management, Production Planning & Control, Finance & Tax Management, Excise Management, Payroll & HRD Management, and Customer Relationship Management. Other existing applications can also be integrated with the system if so desired.
- **Pull Down Menus:** Hot search keys for instant menu selection are been provided. No knowledge of computer or programming is necessary to use the package, as it is totally menu driven.
- **Entry Level Validation:** The system checks errors at entry level with automatic number generation for all documents.
- **Pen-less accounting:** Maintain on-line & print debit / credit vouchers, journals, cash, bank, cheques, invoices, bills passing slip, receipts, issues, transfers gate passes etc.
- **Balancing:** Balances are rolled automatically year after year.
- **Complete Modification / Deletion Facility:** One can make any kind of changes or deletion of records but only by the authorized personnel with password security and the changes made are reflected in all books & accounts immediately.
- **Flexible Reports:** The system is designed in such a manner that once the data is captured completely the reports may be generated as and when required on the basis of the parameters (viz. date, period, company, value, person, etc.)
- **Password:** User level security and authentication ensures that every user is watched and is accountable for all the transactions.
- **Searching / Sorting facilities** – These facilitates ensure that it is not at all complicated to find any document related to any event.
- **Security** – This disallows any document to be changed if any other document has been generated using this data.
- **User Friendly:** Needless to say that “Intraprise” is designed and developed in such a way that even a layman can start using the system with very less amount of training.

2. The Management Perspective

- The saving can be achieved by efficient and proper control on production & dispatch activities
- Easy to upgrade or add newer functionality.
- Reliable and maintenance free.
- Establish responsibility to every action of the employee.
- Capture all relevant transactions.
- Maintaining complete required history.
- Considerably reduction in paper work for every staff members so they can concentrate on the bigger picture.
- Improvement in quality and products through MIS data.
- Maintaining the data integrity of different plants.
- Maintaining the data integrity between transactions.
- To make the workflow system efficient and organized.
- Manage and control all the processes involved in plant.

3. The User Perspective

- Will perform at optimum level being accounted for responsibilities.
- Easy to Navigate.
- User-friendly GUI.
- Less paperwork will help concentrating on core functional areas.
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4. Business Benefits

- **Better decision-making** -- Access the right information in real time to identify concerns early and pursue opportunities proactively.
- **Improves Productivity, Efficiency, and Responsiveness** -- Extend the reach of business processes to connect more people in real time -- within and beyond the enterprise. Provide easy access to consolidate, consistent views of your processes.
- **Reduce costs through increased flexibility** -- Deploy additional business functionality as your needs evolve, reducing costs and facilitating change.
- **Adaptability to business change** -- Seamlessly integrate your end-to-end processes, and take advantage of the latest Web-based technologies.
- **Reduced risk** -- Implement ERP with minimal disruption to ongoing business processes. Take advantage of *i-manufact* as a trusted partner for long-term growth.
- **Better financial management and corporate governance** -- Gain deep visibility into your organization and fulfill global needs and legal requirements
- **Optimized IT spending** -- Eliminate high integration costs and the need to purchase supplemental third-party products. Deploy additional solutions incrementally, as needed.
- **Faster, higher ROI** -- Install ERP using rapid implementation techniques at less than half the cost of traditional approaches.
- **Higher staff morale and productivity** -- Provide employee self-services to boost staff morale and increase productivity.
- **Features included in ERP or *i-manufact***
 - ERP includes features and functions that enable end-user service delivery -- innovative support for business roles that help you empower employees and managers while boosting motivation, productivity, and efficiency. Supports managers in fulfilling their cost and budget responsibilities, including annual budget planning, budget monitoring, cost analysis, and correction of postings.
 - **Business planning and simulation** -- Capabilities for strategic planning, financial statement planning enables you to update budgets more frequently, meet changing business conditions, and combine traditional, bottom-up budgeting with top-down strategic planning.
 - **Strategy and performance management** -- *i-manufact* helps you translate strategies and objectives into meaningful plans for every segment and department of your enterprise.
 - **Cost and profitability management** -- Assign overhead costs, manage the costs incurred by products and services, and analyze the profitability of products and services.
 - **Working capital and cash flow management** -- Manage working capital management with functions that optimize logistics processes and improve liabilities and receivables management. Manage cash flow, including cash flow calculations and middle- and long-term planning.
 - **Payment behavior analysis** -- Manage receivables by analyzing payment histories and determining the day's sales outstanding, which form the basis for payment optimization.
 - **Procurement monitoring** -- Monitor purchasing operations and provide a detailed analysis of purchasing activities and procurement processes.
 - **Inventory and warehouse management** -- Assess your organization's actual stock situation based on quantity- and value-based criteria. Analyze warehouse activities, such as the physical flow of materials and workloads.
 - **Manufacturing reporting** -- Provide various standard reports and analyses detailing production-related information.
 - **Order fulfillment analysis** -- Evaluate and improve order fulfillment using key performance indicators for transportation and order management, strategic performance measurements or the distribution statistics needed for supply chain optimization, and operative performance measurements that capture the day-to-day information used for process optimization.

- **Customer service analysis** -- Monitor financial trends, costs, and revenues per customer, as well as service contracts and operations.
- **Quality management** -- Plan, collect, settles, and evaluate quality-related costs. The solution includes a quality management feature that provides data to determine standard or user-defined quality scores.
- **Sales analysis** -- Provide your sales organizations with an accurate overview of current sales performance and an overview of sales force effectiveness.

5. Technology

- **The Package** has been developed using cutting edge technology that gives the security and ruggedness to ensure its functionality in the prevailing conditions at the shop floor.
- **The Front-end** is developed using Visual Basic.
- **The Backend used** - MS-SQL server database that ensures total security and no data loss or corruption.
- **The Reports** are developed using Crystal Report.

6. System requirements

1. Hardware:

- **Server:** Minimum

Processor Intel® X Processor at 3.0GHz, 2MB Cache, 800MHz Front Side Bus
Memory 2.0GB DDR2, 400MHz, Single Ranked DIMMs
Hard Drive [80GB](#) 7.2K RPM Serial ATA Hard Drive
CD-ROM / DVD-ROM 52 X IDE Internal CD-RW/DVD ROM Drive
Network Adapters 10/100/1000 NIC PCI Express
Operating System Microsoft® Small Business Server 2003, Standard Edition

- **Client (Workstation) :** Minimum

Processor Pentium® D Processor 820 with Dual Core Technology (2.80GHz, 800FSB)
Memory 1 GB DDR2, 400MHz,
Hard Drive 40 GB
Network Adapters Integrated [10/100/1000 Ethernet](#)
Operating System Windows® XP Home Edition or Windows 98

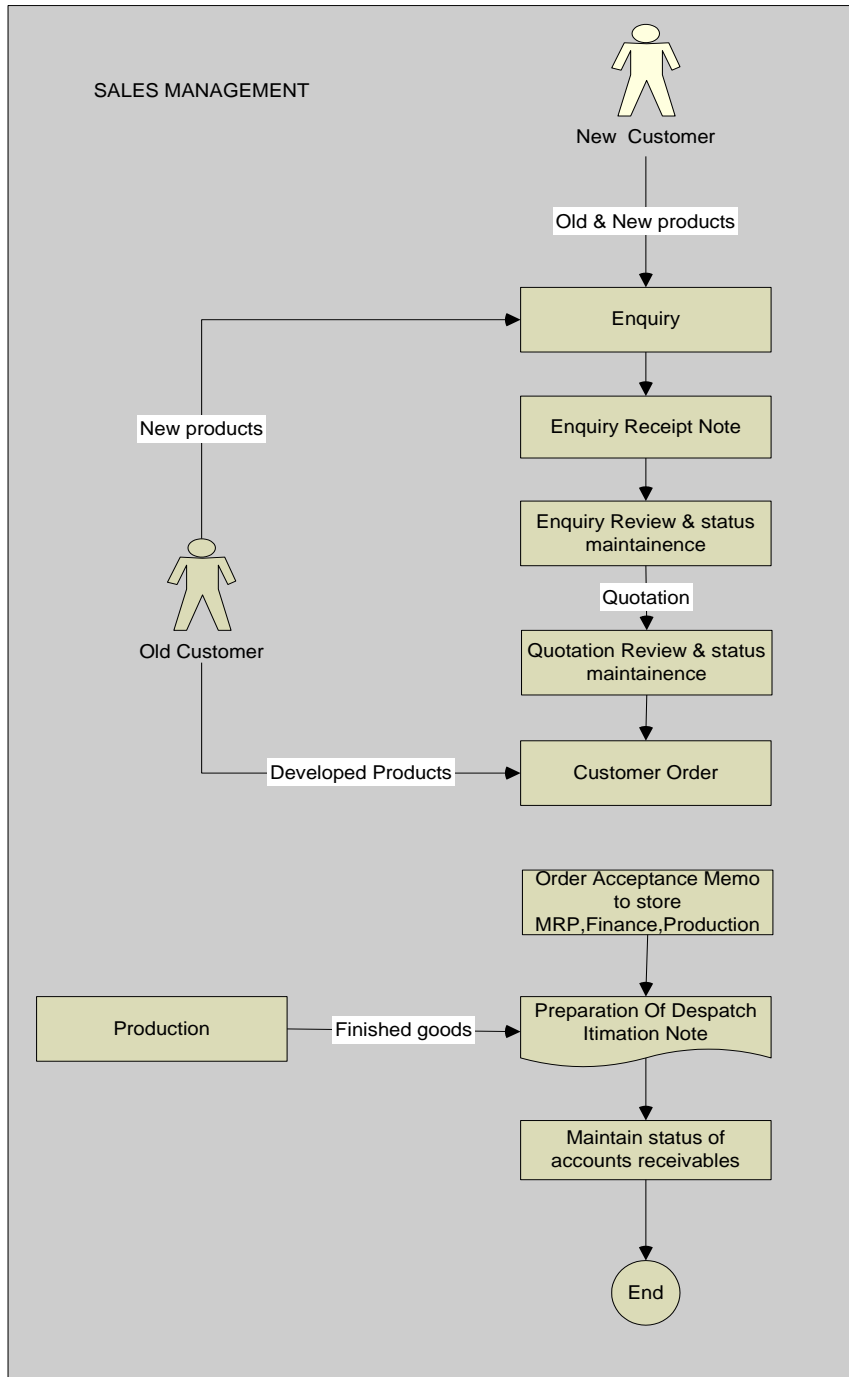
2. Software (Minimum):

- Microsoft® Small Business Server 2003, Standard Edition
- Windows® XP Home Edition or Windows 98
- SQL server.

3. Network (Minimum): 100 Mbps

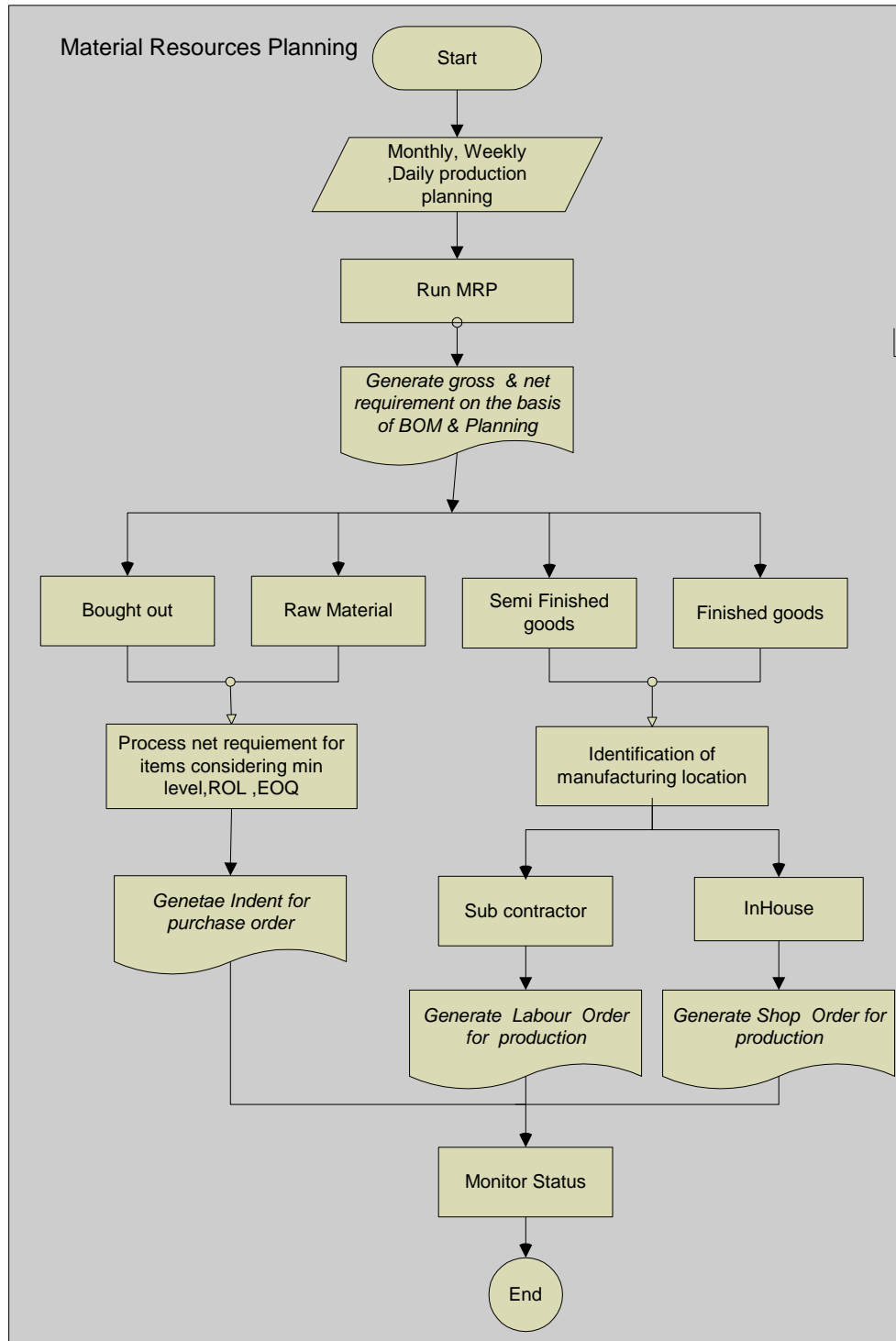
Following are the few and important features with micro level diagram for major modules: -

MODULE: Sales Management



- Maintains summarized information and status of transactions from enquiry to order acceptance.
- Predefined communication templates help user for quick reference and maintain unique approach in communication.
- Detail delivery schedule and delivery tracking status is available all the time.
- The Delivery Schedule and Order data available to Production and MRP departments.
- Provides overview information of deliveries against order and schedule.
- Provides detail information of accounts receivables.

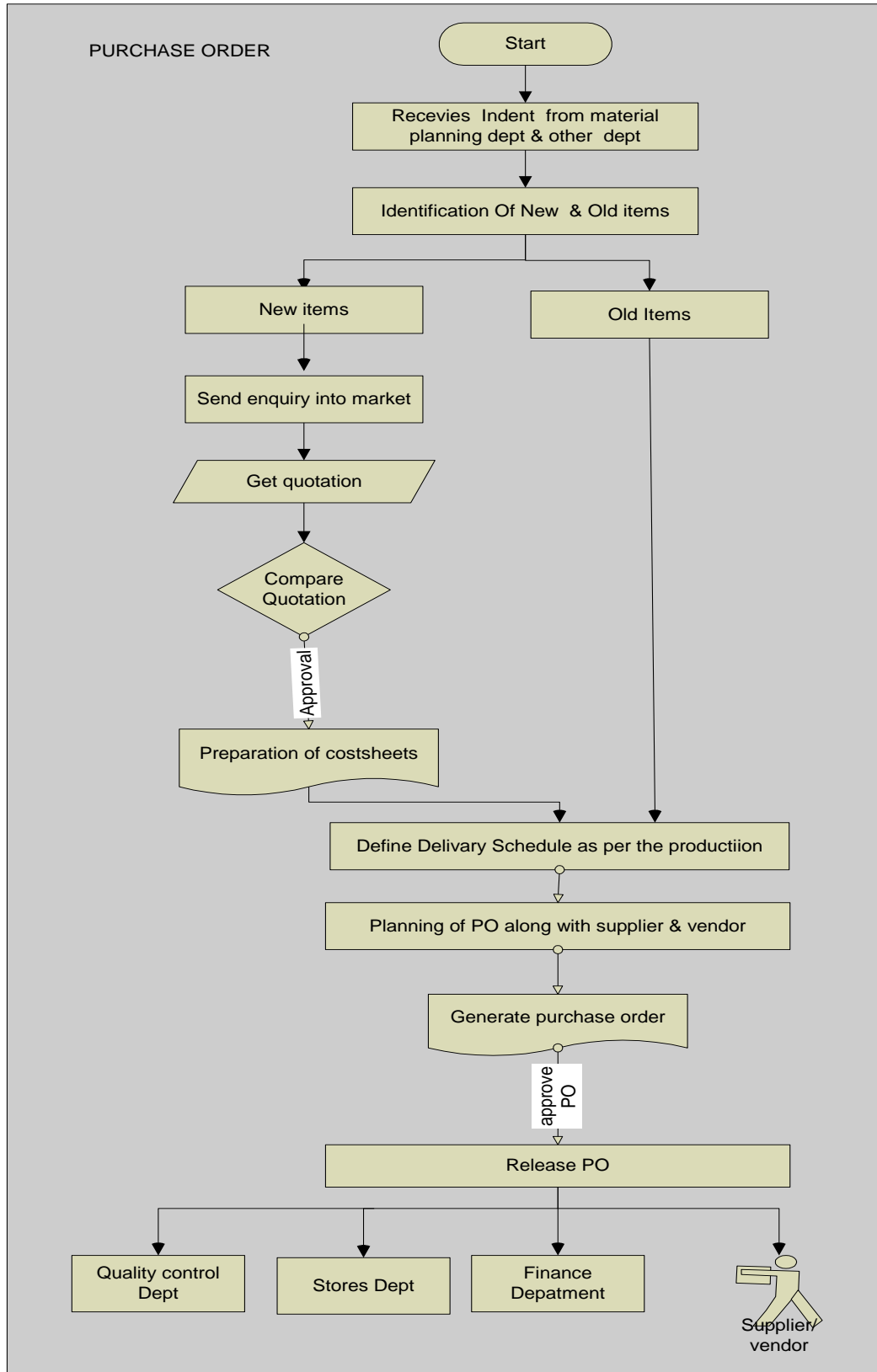
 **MODULE: Material Requirement and Planning (MRP)**



- History of “Bills of Material” with versions is tracked.
- Provision of relationships detail between items or equivalent items for an item.
- Plans the material requirements for yearly, half yearly, quarterly, and monthly on the basis of forecasting.
- Calculates the gross and net requirement of material on the basis of delivery schedule and forecasting.

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- Auto Indent for procurement facility.
 - Generates auto shop/work orders for production.
 - Displays auto labor orders to vendors.
 - Facility to track activities of Purchases, Material receipt, Production and dispatch to customer against plan.

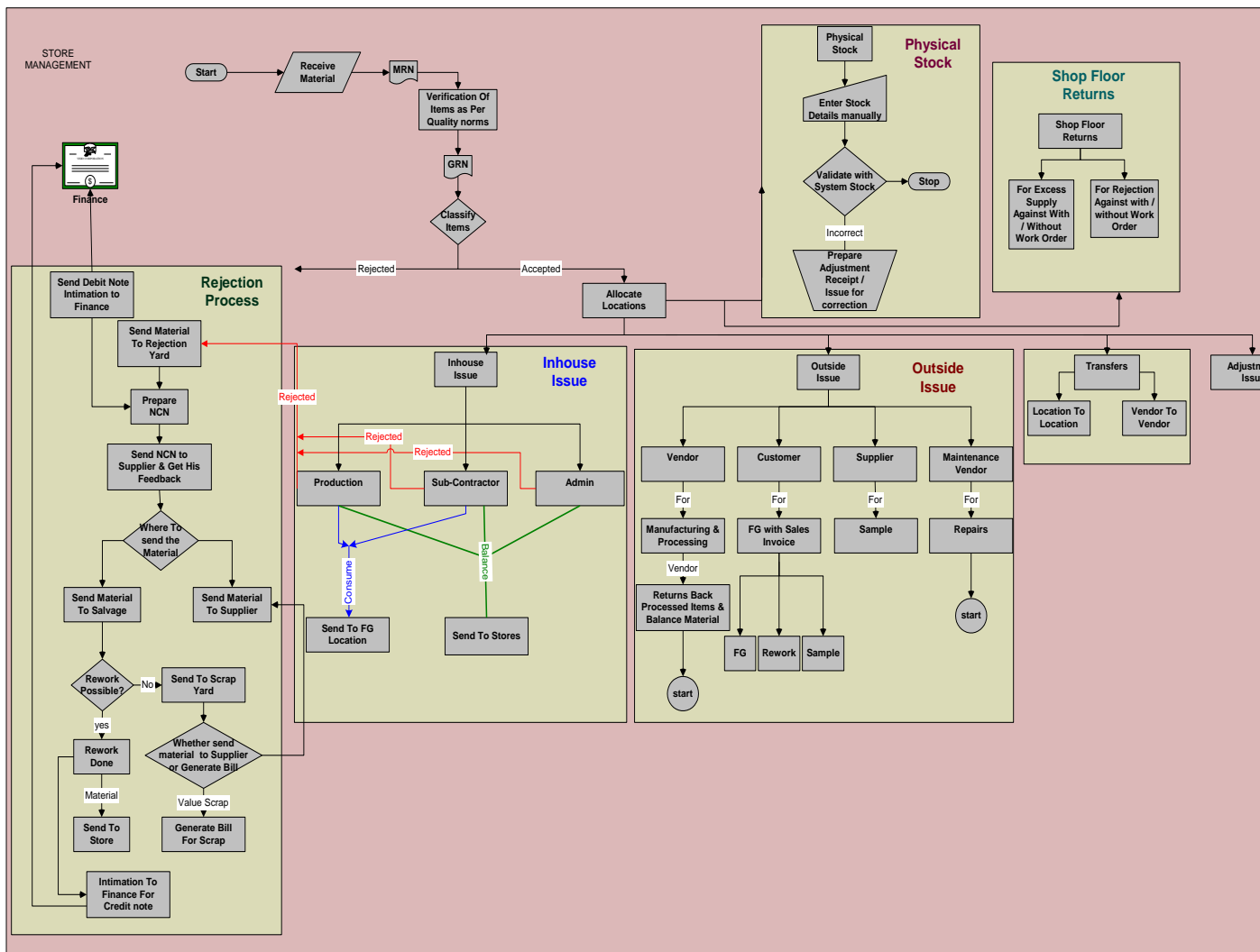
 **MODULE: Purchase Order Management (OM)**



- Plans procurement of material on the basis of Production plan and request received from various departments.
- Material requirement generated from MRP can be distributed logistically between suppliers/Vendors.

- Tracking of complete order transaction flow from order placing to payment through stages such as material receipt, rejection of material, bills receipt, bills passing and payment.
- Provides Facility to force close, Hold or cancel order.
- Facilitate to compare rates between vendor/supplier.
- Maintains detail history of supplier/vendor along with items supplying, rates history, rating analysis, quality details, logistics information.
- Easy maintenance of PO details with vendor, supplier, trader, consignee, manufacturer along with taxes information.
- Pull over order creation provision.

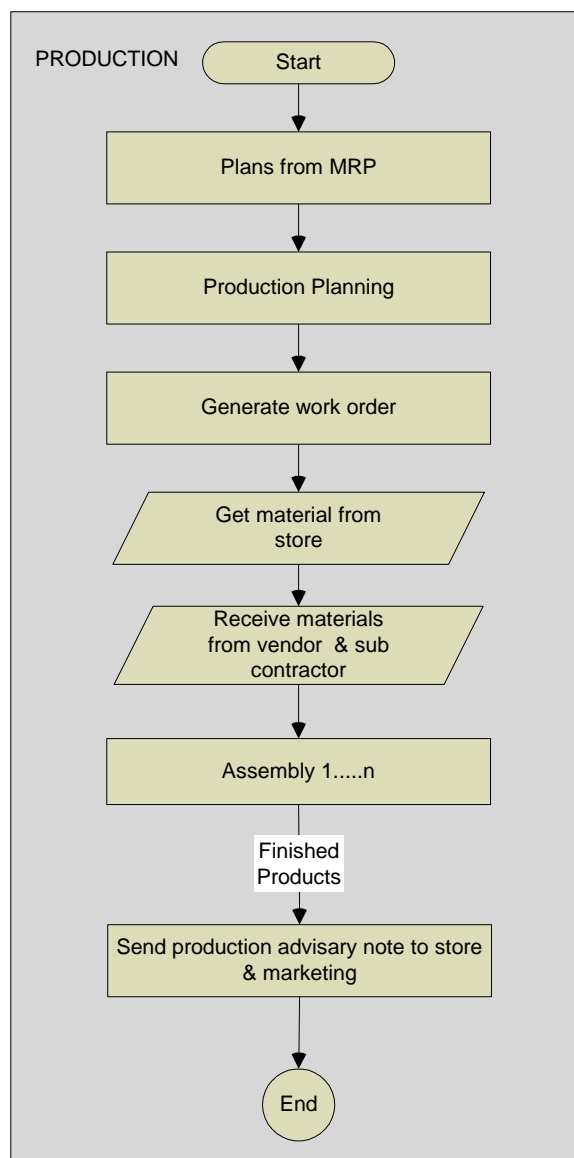
MODULE: Store Management (IM)



- Classifies different types of material group and regrouping it.
- Defines properties for different types of material group such as MOC, UOM, Conversion factor, Lot info, formula parameters, Formulas for calculating weight/quantity etc.
- Calculate material weight or quantity through specific user defined formulae or from westernman table.
- Produce material receipt depending upon type of lot and tracks inventory by lot.
- Depending upon the shape of item different parameters are displayed for creating dimension for that material.

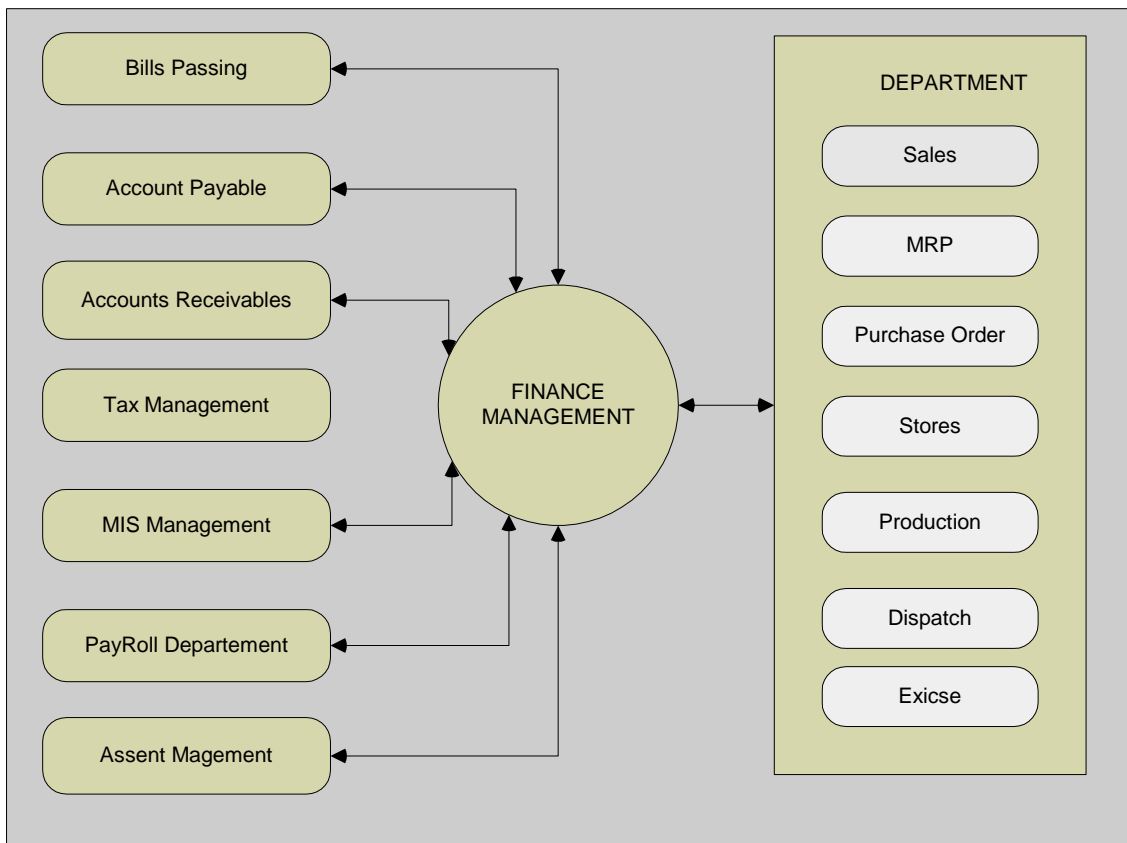
- Additional description information for a particular item is provided in an order to reduce generation of multiple item code for same item.
- Predefining the database table based on items parameter and generating logically a unique item code based on that parameter so as to give a distinct description.
- Provides information of items based on availability of QC and QC lot size, QC method, minimum & maximum stock level of items, lot information, weight and quantity calculation, purchase & sales ledger, Tax information, Supplier/Vendor information, Cost sheet of item, logistics information etc.
- Overall maintenance of vendor balance along with challan date wise.
- Forecasting of balance material to be receive from vendor after processing.
- Tracking of complete item transaction flow from Material receipt to consumption of an item.
- Tracking of item history by individual part no wise (Manufacturers item).
- Depending upon the products of the manufacturer inventory is maintained.

 **MODULE: Production Management (PM)**



- Generation of production report by individual operation wise or Production report of final operation along with reverse calculation.
- Tracks resource utilization (Man & Machine).
- Efficiency & Productivity tracking.
- Management of time, material & cost.
- Production Status (Planned Vs. Actual).
- Operation Cost (Standard. Vs. Actual).
- Analysis of Idle Time Machine x Reason wise.
- Analysis of Operator X Machine Wise.
- Rejection analysis of Operator X Reason wise.
- Analysis of Rejections Part x Reason wise.
- Analysis of Sub-Contractor for Rejections X Reason wise.
- Performance Analysis of Sub Contractor.
- Tool Life calculations.
- Turnover performance.
- Part performance.
- Downtime Analysis.
- Breakdown Costs.

 **MODULE: Finance Management (FM)**



- Produce flexible charts for accounts.
- Multiple Companies, Divisions, and Cost Centers.
- Yearly Business Plan vs. actual Plan.
- Multiple budgets and forecast.
- Full account history for any year.
- Overall reporting and audit trailing.
- Powerful financial reporting.
- Last year & Year to Date transaction details.

- On-line Accounts Posting.
- Cash Flow Management (with cost centers, Job, Accounts wise).
- Receipt-reminders & payment-advice generation with bill-by-bill ageing.
- User defined tax-codes & tax formula are supported.
- Takes into consideration the Statutory and Accounting requirements of Indian Business Houses.
- Customer/Supplier outstanding, General Ledger/ Sub-Ledger balances can be obtained instantaneously.
- Takes into consideration various facilities, which are required for an Indian business houses like Excise, Central Sales Tax (various types), Sales Tax - with separate sales tax reports for each and every type of sales tax like CST, VAT etc.
- Adjustments of invoices/bills/debit notes during data entry. Generates a Journal Voucher (JV) at the time of entering receipts or payments for amounts like interest charges for late payments, Tax Deducted at Source, etc.
- Reports printing can be done: customer wise, supplier wise, account code wise, Bank wise, Period wise.
- Planning, authorization, passing, and creation of payment voucher along with Cheque printing facility.

 **MODULE: Vendor Management (FM)**

- Records detail transaction history of items sent and received from vendor.
- Provides information on vendor performance analysis.
- Tracks vendor rating analysis.
- Generates vendor cost sheet by item Vs operation Vs rate.
- Records every delivery Challan, Excess supply items and scrap generated at vendor location.

 **MODULE: Maintenance Management [MM]**

- Break Down Memo
- Completion Memo
- Machine Wise Master Checklist
- Schedule Generation Against Checklist Data
- Preventive Maintenance Schedules
- Machine Audit Parameter Entry
- Surprise Auditing

 **MODULE: Quality Management [QM]**

- Check List for Quality.
- Maintains Quality at various stages.

 **MODULE: Human Resource Management System [HRMS]**

- Tracking performance by Performance Management System [PMS]
- Competency mapping
- Training needs Identification
- Income Tax Provisional calculation
- Full and final Statement

 **MODULE: Excise & Tax Management (ETM)**

- According to government and companies rules and regulation all records are maintained.
- Retrieves data from various modules and generates reports in predefined format.

 **MODULE: Payroll Management (PR)**

- Records attendance sheet on daily and monthly basis.

- Generate salary slip and maintains salary detail such as salary register, salary summary register, Annuals perks register.
- Maintains Income tax register Income tax Form.
- Keeps records of Professional tax and professional tax registers.
- Generates bank statement.
- Reports E.S.I statement and Summary.
- Produce Provident fund such as provident fund statement and Employer contribution report.

7. Standard Input & Output

1. Sales Management

Inputs:

- Enquiry registration slip (to log in an enquiry)
- Enquiry Status (weather quotation was made or order confirmed)
- Enquiry receipt note (details of enquiry)
- Enquiry review memo (in-hose document for preparation of quotation)
- Quotation (made manually or from specific quotation)
- Quotation status (order confirmed /on hold/ lost)
- Quotation review memo (In-house document Reference for sales order)
- Customer order (details of the order)
- Order Status Note (confirmed / in process / completed / delivered...)
- Order Acceptance memo (In- house document as reference for manufacturing)
- Order confirmation note (Note sent to the customer)
- Order Review memo (In-house document with order details)
- Advance Invoice Note (made out to the customer after order confirmation)
- Invoice forwarding Note (made to the customer for invoice)
- Payment forwarding Note (made to the customer once any payment is received)
- Goods clearance Memo (once the order and payments are in order)
- Customer Inspection Memo

Output:

- Enquiry register (Of all the enquiry along with the status and other details)
- Quotation register (Of all the quotations along with the status and other details)
- Customer Order Register Of all the enquiry along with the status and other details)
- Analysis – enquiry, quotations and orders

2. Material Requirement And Planning

Inputs:

- Order schedules (from marketing)
- Budgetary requirement (from marketing)
- Break-even quantity
- Forecasting from Marketing (Tentative Plan)

Output:

- Material Gross and Net requirement
- Indents from plan
- Allocate vendor/supplier to components / parts
- Tracking plan against Production and delivery schedules
- MRP shortfalls w.r.t. Products

3. Purchase Order Management

Inputs:

- Indents (from planning)
- Indents (from store for stock and shortage)
- Quotations (from suppliers)
- Quotation comparison statement
- Cost sheet Vendor wise with Terms & conditions
- Purchase Orders
- Delivery Schedules
- Contract Orders
- PO Amendments Hold / Cancel / Force Close

Output:

- Valuation and performance (w.r.t. Vendors)
- Vendor X Item wise Tracking Sheet
- Purchase order Registers
- Report on Pending, Delayed Purchase / Job Order
- Report on Excess Supply against Purchase order
- Report on Vendor Rating Analysis
- Report On Vendor Wise rejection Analysis
- Report On Hold / Closed / Force close orders

5. Inventory Management

Inputs:

- Material receipt note
- Quality Control (As per QS standards)
- Goods Receipt & Inspection Note (GRIN for Loan, Returns, material receipt)
- Material Issue Voucher [MIV] (Raw Materials / Component Parts etc. issued to production. These are made on the basis of production plan / indents / etc.)
- Material issue Voucher – (Free issues made to parties)
- Delivery Challan (D,C. for Loan Returns, Repairs, Processing and deliveries).
- FORM 57 F4 (DC for vendors / subcontractor)
- Material Return Note -Excess from shop floor.
- Stocktaking Cards (Occasionally used for physical stock entry).
- Stock Adjustment Voucher (for any difference between actual and physical).
- Rejection from Shop Floor, Material received from Supplier.
- Salvage - Rework
- Scrap Reports.

Output:

- Daily Transaction List for all Transactions.
- Stock Ledger [Details and Summary].
- Consumption Report w.r.t. Cost Center and Items.
- Product wise material cost against c Cost
- Product Wise Stock Balance report
- Stock Status Report [w.r.t. Material Class].
- Stock Valuation Report.
- Statement of Items below Reorder Level.
- Statement of Items above Maximum /Minimum Level.

- Statement of Slow & Non Moving Items.
- Perpetual Inventory Reports with variance.
- Rejection Analysis for Subcontracted & Purchase Items.
- Excess Consumption report against B.O.M. & actual.

6. PRODUCTION

Inputs:

- Production plan
- Daily Production Schedule (Auto / Manual)
- Shop Progress report
- Daily Production Report for Assembly Shops Stages
- Finished goods report

Output:

- Production Flow-Chart. (Against plan)
- Production Status (Planned Vs. Actual)
- Operation Cost (Standard. Vs. Actual).
- Analysis of Idle Time Machine x Reason wise.
- Analysis of Operator X Machine Wise
- Rejection Analysis of Operator X Reason wise
- Analysis of Rejections Part x Reason wise.
- Analysis of Sub-Contractor for Rejections X Reason wise
- Performance Analysis of Sub Contractor
- Calculation of efficiency of man and machine
- Tool Life calculations.
- Turnover performance
- Part performance
- Downtime Analysis
- Breakdown Costs

7. Finance

Inputs:

- Bank Payment (Any payments made to various suppliers, vendors, taxation, rent, etc.)
- Bank Receipt (payments arrived in the bank from the customers, advances, dividends etc.)
- Cash Payment (made to petty cash expenses, suppliers for minor / non – inventory purchases)
- Cash Receipt (made during return of advances etc.)
- Credit Expense Vouchers (for non inventory purchases)
- Petty Cash Vouchers (to monitor petty cash transactions)
- Sales Invoice (made during sale of goods / services / items)
- Sales Returns (from sales)
- Sales Debit Notes (for corrective action against sales invoice)
- Sales Credit Notes (for corrective action against sales invoice)
- Purchase Vouchers (Suppliers Bills Entry)
- Purchase Debit note (for corrective action against purchase bills)
- Purchase Credit note (for corrective action against purchase bills)
- Journal Vouchers (J.V.).
- Purchase Bills Passing. (for clearing of bills on purchases)
- Linking of Receipts, Payments and their advances

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- Linking of transaction with TDS Module

Output:

- Day Books by the type of transaction for all transactions
- Sales Register with Product, Sales Tax Summary
- Sales Tax Register [Sales tax code wise]
- Purchase Register with product, Purchase tax Summary
- Purchase Tax Register [Purchase tax code wise]
- Cash Book
- Bank Book [Bank Account wise]
- Register of Sales Debit & Credit Notes
- Register of Purchase Debit & Credit Notes
- Journal Register
- Ledger [General Ledger, Debtors, Creditors]
- Trial Balance (General Ledger, Debtors, Creditors)
- Profit & Loss Account
- Balance Sheet
- Cost Center Vs Expenses Analysis
- Group wise Expenses Analysis
- Fund flow analysis
- Cash Flow Analysis