

**APTERP**®

**BUSINESS STRATEGY OPTIMIZED**

**WWW.APTERP.COM**

**MANUFACTURING**

**ADAPTIVE BUSINESS CONCEPTS LLC.**

# ABOUT US

**Adaptive Business Concepts LLC (ABC)** is a global technology solutions and services provider for **APTERP**, based in Dubai, UAE, with research and development centers in UAE, and India. ABC is providing complete customizable and integrated solutions for various business segments across MENA Region. It is our assurance that our Enterprise Resource Planning solution, APTERP (Application Process Technology ERP), will deliver the complete business process tool for pioneering firms to manage the entire business processes.

APTERP, from the house of ABC, is a holistic business IT solution, developed keeping in mind the requirements of managing all the business entities of an organization under a single roof. It addresses all the business modules, namely, Procurement, Inventory, Production, Sales, Finance, QC, Payroll & HR, and Asset Management. Complimenting these functionalities is the facility to view managerial reports for effective decision-making.

APTERP seamlessly integrates all the branches to the corporate office, hence providing access to business processes from a single application. The system is highly adaptable, allowing easy customization, and helps you cope with constant change of including multiple entity, currency, & location deployment. The solution employs user-friendly graphical interface for ease of handling the functions required by the users. It clearly defines the workflow and effectively assists in managing each process. Since the system connects all locations, the top management can avail the real time information of the day-to-day activities at any given point of time. The solution is developed in conformity with the regional requirements of economic and legal statutes.


With prompt service, over the years, APTERP has evolved itself to deliver the exact thoughts and intents of the customers and partner with them in their quest for success. It is with great assurance and confidence that we are proud to represent prominent customer across the globe.

# INTRODUCTION

During the conservative 90's when business process automation and enterprise resource planning was not considered a value driver rather treated as a cost for doing business, a few far sighted technologists envisioned a time when enterprise business application technology would be considered core to an enterprise's business strategy. Keeping this goal in mind, a technology platform was conceptually designed, developed and built with the aim of meeting and exceeding the strategic requirements of enterprises.

Within a short period of time, this platform gained acceptance from a wide spectrum of enterprise customers across industry sectors and organization sizes. Branded as APT – Application Process Technology, it enables collaborative work making people and organizations more efficient and effective, increasing business insight and consequently the strategic momentum needed for an enterprise to stay ahead.

APT provides an integrated view of core enterprise business processes, usually in real-time while also facilitating information flow between business functions and key external stakeholders. Built using leading edge technology, APT can provide significant results through self-service access to critical information for faster decision making. APT ERP solutions can be deployed in any organization regardless of size – from small and mid-market to large enterprises.



# APTERP MANUFACTURING

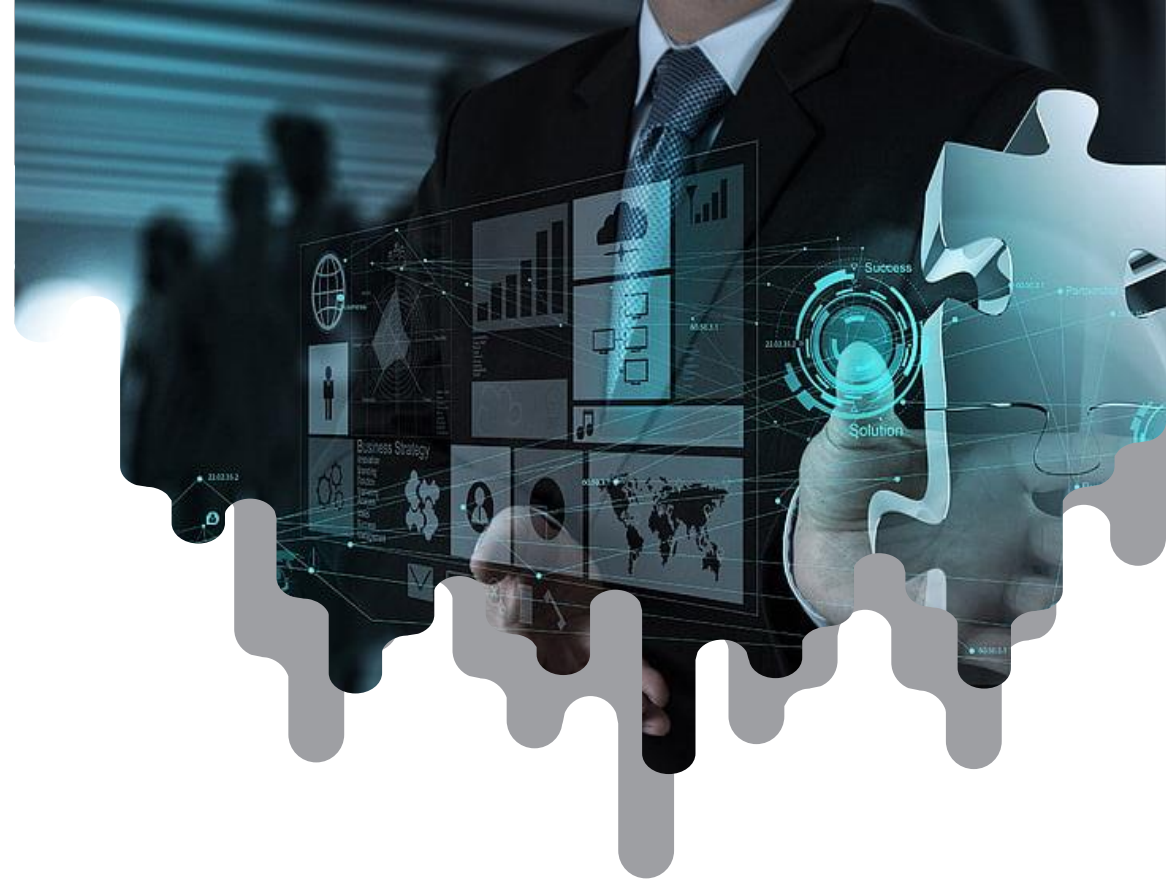
# PROCESS MANUFACTURING

As the name denotes, process manufacturing is the processing and mixing of raw materials and ingredients to generate final products. These days, process manufacturers are using intelligence and skill to thrive in an advancing universe of customer trends and monetary needs.

But the ERP solution for process manufacturers has to trace elements. This means you must keep track of weights, masses, volumes, sizes, magnitudes, and expiry dates too. The completed products as well as packaging need to be handled by inventories. An ERP software will join all sides of a procedure like product planning, scheduling, development, marketing, and much more.

APT ERP is a flexible software solution that lets process manufacturers boost the proficiency of supply chain and escalate clarity as well as durability of data. The software is a totally packaged solution intended to deliver multi-level product traceability from primary raw material purchases up to final delivery.

From gaining and quality control to recipe controlling and optimization, then to order scheduling; whole processes are essential modules of the process manufacturing. APT ERP for process manufacturing contains all such activities faultlessly and has many more to give than a typical ERP system. You will experience the business software applications we deliver will be the precise mix to assist you to handle any challenges.



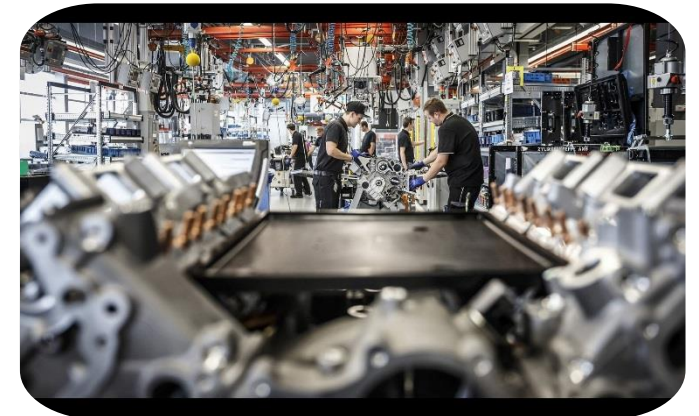
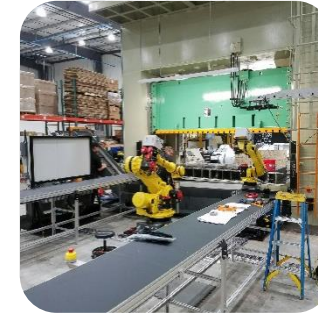
# MANUFACTURING HIGHLIGHTS



- ✓ Dynamic production process modeling
- ✓ Management of byproducts, co-products and recycling materials  
Consolidating demand through Master Scheduling from various sources like sales order, production plan, new projects, etc.
- ✓ Centralized supply planning integrated with Distribution
- ✓ requirement Planning (DRP)
- ✓ Master Production Scheduling (MPS) and RCCP to finalize the independent items requirements
- ✓ Process parameter management
- ✓ Reservation system provided for hard and soft allocation
- ✓ Forward and backward scheduling
- ✓ Process order rescheduling, reprocess order generation based on shop floor reporting and new order
- ✓ Action and exception messages in Material Requirements Planning (MRP) to optimize the material plan
- ✓ Back flushing of raw materials based on shop floor reporting
- ✓ Control point reporting for continuous production
- ✓ Labor & process parameter reporting
- ✓ Activity elements to capture overhead cost
- ✓ Multiple lot issues & receipts
- ✓ Maintenance of process parameters for routing

# KEY PROCESS

- ✓ Tools requirement planning can be mapped to BOM
- ✓ Infinite and finite capacity
- ✓ SOP to balance demand & supply
- ✓ Resource planning to check whether resources are available to meet the SOP
- ✓ Master scheduling consolidates the demand from sales orders, production plan, replenishment order, service order for certain time period
- ✓ Rough cut capacity planning to identify critical resources
- ✓ MRP to explode the BOM, net quantity finalization, lead time calculation
- ✓ Detailed amount of labor and machine resources defined in CRP
- ✓ Production order can be generated without any planning (manual)
- ✓ Sub contracting can be carried out to resolve capacity constraints in-house
- ✓ ECR & ECO to keep track of engineering changes





## DISCRETE MANUFACTURING

**APT ERP** is a full-featured **ERP software solution** for discrete manufacturers that handles scheduling, development, and manufacturing needs, etc. Our solutions aid you remain top of your business by managing superiority and competence. The ERP software for discrete manufacturers will record every part for engine assembly, formulate a necessary material plan, production schedules, and make smarter decisions to satisfy client demand professionally.

Accurate planning is essential for all stages of manufacturing. It could be the creation of a list of raw materials, tools, components, measurements, and bill of materials related to it. Every section and task should be evaluated, tracked, and final reports have to be made. A report generation tracks the process plan for each product.

Serial numbers are associated with every product. There may be batch numbers too. If the products meet the desired quality and are certified, APT ERP will notify the certification authority and compliance reports will be produced. The software expands functioning efficiency, increasing global demand, and dipping lead time as well as operational overheads.

The burden of both machines and employees has to be diminished as well. Because we need a smooth working of them to attain our objectives. The software functionality brings a whole solution for discrete manufacturers across diverse trades and gives the proper balance of manufacturing principles, time-phased requirements, and on-time delivery.



# MANUFACTURING HIGHLIGHTS



- ✓ Dynamic BOM and routing definition with BOM tree structure
- ✓ Confirming production plan through Sales and Operation Planning (SOP) and resource planning at item group level
- ✓ Consolidating demand through master scheduling from various sources like sales order, production plan, new projects, etc
- ✓ Centralized supply planning integrated with Distribution Requirement Planning (DRP)
- ✓ Master Production Scheduling (MPS) & RCCP to finalize the independent items requirements
- ✓ Forward and backward scheduling
- ✓ Finite and infinite capacity planning
- ✓ Action and exception messages in Material Requirements Planning (MRP) for optimized material plan
- ✓ Provision of online item availability
- ✓ Production order rescheduling, rework order and direct order generation based on shop floor reporting and urgent / new order
- ✓ Effective WIP management
- ✓ Control point reporting for repetitive manufacturing
- ✓ Engineering change management & project management
- ✓ Flexible and configurable functional workflow
- ✓ Order rescheduling and labor reporting

# KEY PROCESS

- ✓ Tools requirement planning can be mapped to BOM
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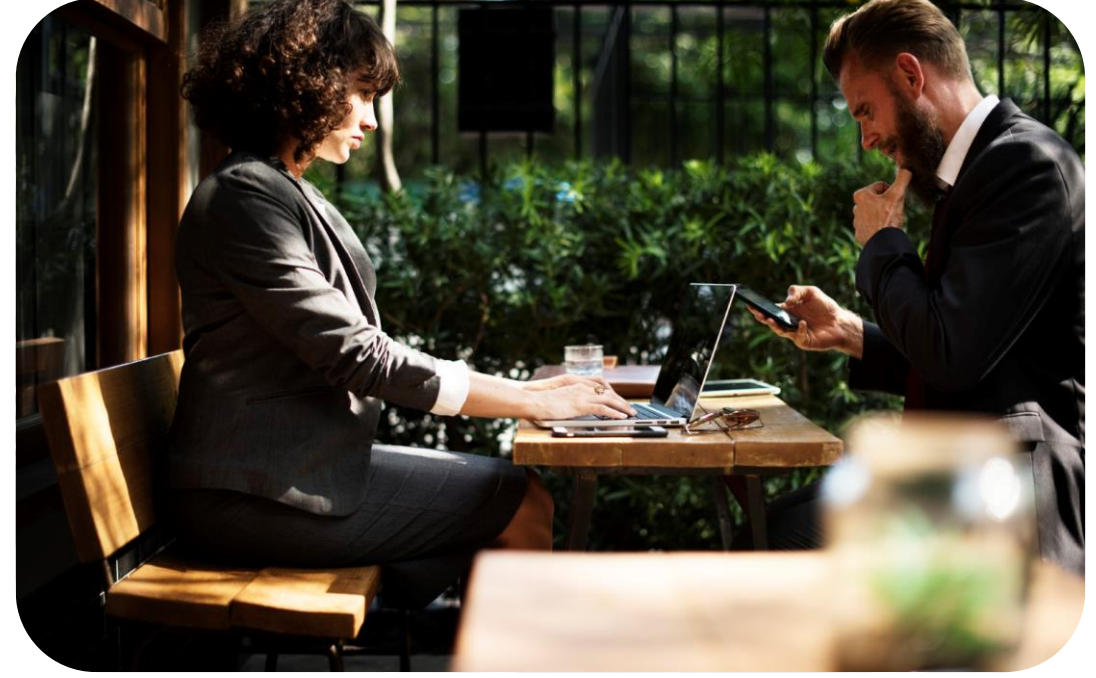


# APT ERP - MANUFACTURING



## FLEXIBLE

APT ERP Manufacturing module provides the flexibility to customize the formulas and procedures of the production strategy of a company. APT ERP Manufacturing is ready to use solution, which can be customized to meet the individual requirements of manufacturing facilities.



## POWERFUL DASHBOARD

Extended Dash Board makes APT ERP Solutions live and informative. Dash Board contain alerts, triggers, user messages, and KPIs, metrics, charts, trends, and data visualizations. Drilling down from dashboard gives you quick access to the data. The functionality of this Dashboard can again be customized as per the users' roles & preferences.

# MANUFACTURING FUNCTIONS



- ❖ Order Management
- ❖ Import & Procurement
- ❖ Formulas and Recipes
- ❖ Engineering Change Orders
- ❖ Good Manufacturing Practices
- ❖ Inventory Management
- ❖ Manufacturing Management
- ❖ Scalable Batches
- ❖ Kitting and Assembly
- ❖ Machine Maintenance
- ❖ Warehouse Management
- ❖ Bill of Materials
- ❖ Routing Maintenance
- ❖ Production Reporting

# MANUFACTURING FEATURES

- ❖ Provision to define Process
- ❖ Summarized Analysis Reports
- ❖ Process Related Reports
- ❖ Power Consumption reports for Process
- ❖ Items allocation for each process with a provision to define wastage
- ❖ Batch Processing / Individual Process Defining
- ❖ Allocation provision for Machines with Processes
- ❖ Process-wise costing reports
- ❖ Management Systems for decision supporting



# FUNCTIONAL MODULES



**SALES**



**PURCHASE  
&  
INVENTORY**



**FINANCE  
&  
ACCOUNTS**



**PRODUCTION**



**HR  
&  
PAYROLL**

# SALES MODULE



## Enquiry

This document will be used to provide data for Enquiry from Customers to the system where Customer Requirements record in to the software helps the company to follow up with the customer.



## Quotation

This is a formal statement of promise (submitted usually in response to a request for quotation) by potential supplier to supply the goods or services required by a buyer, at specified prices, and within a specified period. A quotation may also contain terms of sale and payment, and warranties. Acceptance of quotation by the buyer constitutes an agreement binding on both parties. Based on the Enquiry user can create Quotation for customer. This quotation will be given to the customer and based on this customer will able to get the price details for their requirement.



## Sales Order (LPO)

A Sales Order may be for products and/or services. It's a seller-generated document that authorizes sale of the specified item(s), issued after receipt of a customer's purchase order. A sales order usually implies that there will be no additional labor or material cost incurred for the sale, except where it is used to initiate a process. Here the project is awarded and here after project will be allocated. In simpler word Sales Order is the formal way to receive the confirm order from the customer. It's a one kind of agreement in which supplier and customer will be bound together. Here Supplier will bound to deliver the mentioned Products and services in this document.



## Delivery Note

Delivery Order document keeps record of stock and delivery status of the goods that are sold from the company. A delivery order is a document which affects the stock of the company. The accounts of the company remain unaffected.



## Invoice

An invoice is a commercial document issued by a seller to a buyer, relating to a sale transaction and indicating the products and agreed prices for products or services the seller has provided the buyer. It describes the quantity sales made by a firm or an individual. It is a very important document in a company's dossier as it shows a record of billings. Invoice is prepared by accounts division.



## Receipt

The receipt voucher is preparing by the accountant after receiving the payment from the customers. The accountant should select the against invoice number when it is entering to the computer.



## Purchase Request

Purchase Request is a document used by Store department to initiate Purchase Department to start the purchase process. PR does not making any impact on inventory, finance or job costing of the company but enabling some controls between the departments.



## Incoming Quotations

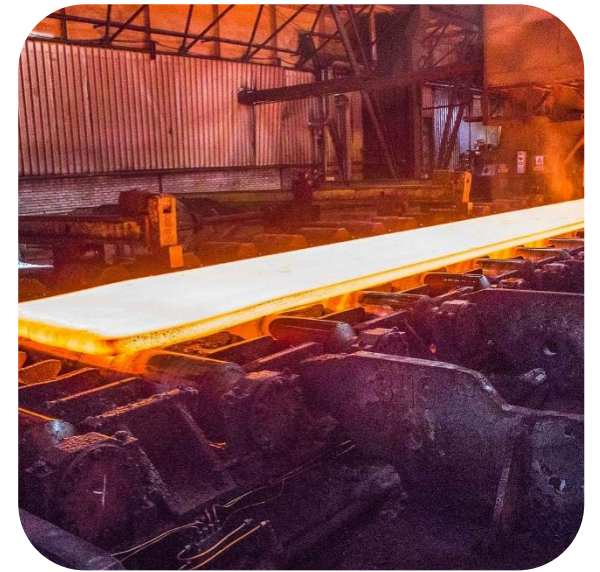
Quotation is a document given from a seller to a buyer includes at specified prices, and within a specified period. A quotation may also contain terms of sale and payment.

## Quotation Comparison

This document automatically compares and selects the optimum quotation from the list

## Purchase Order

Purchase Order (PO) is an agreement between the company and a vendor for supplying materials to company under the agreed terms of payment and agreed terms of delivery time. This document is a commitment to vendor for financial payment once they have supplied the materials to the company. PO should be strictly against a PR in order to ensure the appropriate approval for the purchase. Making PO against PR secures the company to ensure that the items mentioned in the PO are the items which are really not in stock and needed for the project. System will list PR and its origin and provide a summary about the reason, the material purchase and its expected consumption later. PO generally will not make any impact on Inventory, Accounts or Job Costing unless company making as advance payment for the PO.





## **Goods Receiving Note (GRN)**

Goods Received Notes are the document which allows materials to enter in the inventory list. This document mainly deals only with the quantities and cost or any figures are not mentioning in this document. Following are the strict policies a user should observe while preparing this document;

- a. No Goods should receive unless supplier not producing an approved PO
- b. Goods should not accept if it is not in good quality.
- c. No extra quantity should receive from the vendor under regular GRN
- d. Received should keep only at the designated place for the item.
- e. No Fixed Asset items should receive under regular GRN.
- f. Goods should be rejected if the supply is in another form or another brand of the item.
- g. Should collect the official delivery note from the vendor from the vendor system and should issue delivery acceptance only from the ERP system.
- h. It is the responsibility of the store that item should be scrutinized as per the PO if there special items are ordered.
- i. Should store the items as per the storing instructions of the vendor in order to ensure the storage life of the item.



## Landed Cost

Landed cost is the total cost incurred for the inventory company purchasing from vendors. The costing elements for inventory depends how it is purchased and how it is shipped to the warehouse. As per the convenience, company can purchase the materials from the local market or from the international market.

### I. Local Purchase

During local purchase landed cost can calculate by posting the Purchase Invoice (PI) against to the GRN which is posted from the store. PI mainly generated from two documents;

- a. Quantity will be picked from the selected GRN(s) in the PI; and
- b. Cost or Rate will be picked from the PO of the selected GRN.

Following are the strict code of policies should observer during PI;

1. Should not change any quantity in the PI since the quantity will be picked automatically from GRN.
2. Should not change the Rate column since these rates are the approved rate which was agreed with the vendor.
3. Should not process PI, if the total amount is not matching with the physical invoice submitted by the vendor.
4. Any mismatch in the invoice, Accounts department should disqualify the invoice and should send for the consideration Purchase Department.
5. Ensure that supplier invoice reference number and supplier invoice date are correct in the system. This date is very important to calculate payment due date for the vendor against the invoice.



## II. Import Purchase Import

purchase mainly used when purchasing materials from another country or same country which is having many associated cost to allocate. This form of purchase invoice will have a main vendor and many other vendors who are providing various services to complete the purchase process. All these vendors will submit their invoice as and when they have rendered the service to company. To find the total cost from all these vendors towards an item needed a disciplined level invoice posting process in the system. Following are directions in the system in order to record all the above invoices;

1. All the associated invoices should be posted against to a GRN and each invoice should be allocated in item level.
2. All these invoices are called "Cost Statement (CS)" and system allows multiple CS against the GRN.
3. First CS should be from main vendor and this CS rate column will be automatically picked from the respective PO.
4. Associated PO Rate should be entered in item level manually or use the function "Allocate" for allocating the rate per item pro-rate basis of item amount.
5. The vendor filed should be selected the actual vendor name and the amount will directly posted to respective GL account and Accounts Payable (AP) module.
6. Each CS will be posted as per the agreed master payment terms of the selected vendor.
7. The GRN should close with Import Purchase Invoice (IPI) once all the CSs are posted in the system. Import Purchase Invoice and CS(s) documents will post the entry to the financial module, costing module and AP module as follows;

# PURCHASE MODULE



## Purchase Invoice

A commercial document presented to a buyer by a seller for payment within a stated time frame that indicates what has been purchased, in what amount and for what price. A purchase invoice can be used to prove that something was bought and how much was paid for it. Purchase invoice is prepared by accounts division after getting the invoice from the supplier for the materials supplied to the company.

## Payment

Whenever we give Supplier Payment against Purchase Invoice, this module will be used for that. There are other payments are also there, for which we have to use this document. In short this document is commonly used to make a payment. As this is related to finance manger must have to look that this document will be used properly and for all payment that has be made by the finance department.

## Purchase Return

In variety of cases system can return the materials purchased from the vendors back to them and can claim a credit note for the same





## APT ERP Production Management Module

APT ERP Production Management module is an online production monitoring system for the factories or companies who are executing various process of the production work. Monitoring a production from the production floor is a tedious job since it involve many factors in it. The term 'Production' is a complex term since the process involving in production are varying product wise, machine wise, department wise, etc. Other complexity of this monitoring is it happens at various locations of the company or at the outsourced production yards. Coordinating all these parameters at one roof and relates it to the commercial order and generate a status needs lot of technology and coordination between the departments and a sophisticated software system on board.

# PRODUCTION

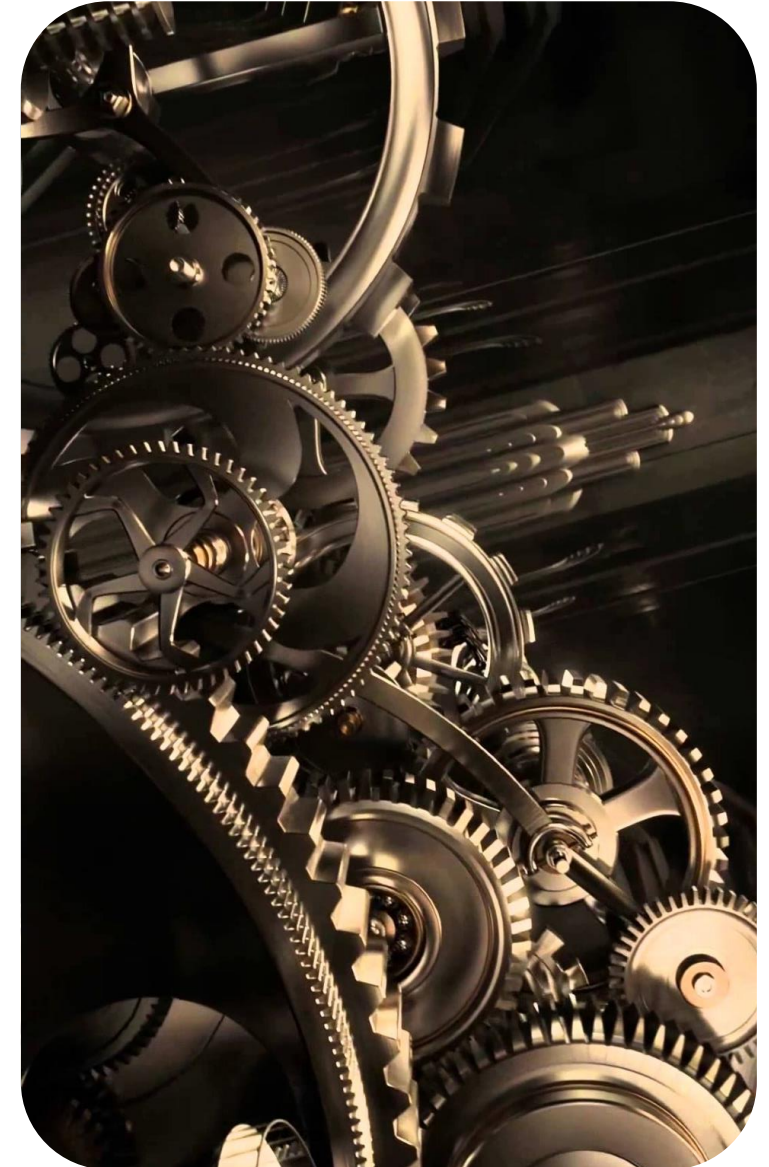
Generally, there are four major elements which needs to manage in production management which are Materials, Machines, Manpower and Methods. These 4 elements are called 4Ms of the production management. CPM manages Manpower and Machine Hours in this system and the Materials managements can be done through an integrated Inventory and store management system which can be integrated with this module.

Methods are production techniques which production departments shall adopt in order to make a profitable output. CPM is a tool which helps the factory or project manager to plan his work in a particular manner and distribute the same to various process centers with a pre-scheduled production tag and get the regular information from them with an automatic online interfaces.



## **CPM mainly deals with following steps;**

- a. Getting a job order from an ERP or an Order management module with billable quantity.
- b. Define the resource capacity of the production process in order to estimate an automatic schedules
- c. Setup a Process or work sequence against to the job number
- d. Estimate the required hours and process quantities of each process involved
- e. Assign the process jobs to respective process or production departments
- f. Identify the approximate ETD by considering the existing job schedules
- g. Get the update from each departments at every completion of the process or shift session ends
- h. Process the inputted department data and relate with preschedule work estimation and calculate the approximate ETD for the job considering all factors of the production
- i. Provide the live status of the job and provide detailed execution summary of the production with subsequent reports.
- j. Generate reports based on all elements of the production like Item wise, department wise, Machine wise, employee wise, etc as per the requirements.





## Creating Job Order

- a. First step of the process is to get a job order into the system;
  - i) Job can create directly in the application by providing the information like Job No, Job Date, Customer Name, Product or Job Name, Quantity to delivered or produced, Schedule Type (Finite or Infinite), Special Instructions, Due Date for delivery, Priority No, Remarks, etc
  - ii) Jobs can inherited from another ERP system through an API function which are available with this application. The Job code which are passing to this module is an important key to incorporate the material cost of the production later for the reporting process.



# PRODUCTION MODULE



Generate Dashboards and management KPIs from the data

CPM tool generates many indicative reports or KPIs which enables the management to control the production process. It is very important that production manager needs to take many effective steps for the production process in order to manage various critical requirements from the customers and management. Production is a complex process which engages many factors like machinery, special facilities, skilled people etc. and an effective management of these resources can be possible only with a dynamic reporting tool on board.

Following are the some possible information can be processed with the above inputs; Production Status

1. Job wise status reports (% of completion)
2. Job wise average time required against one billable quantity
3. Approximate date and time required for completing the job as per the current schedule and available resources.
4. Automatic amended ETDs as per the change in the production job schedules
5. Delay of production from the initial estimated ETD or commitment
6. Product / Job wise consumption man power and machine hours and the cost
7. Job wise estimation and actual report Production Performance
  - a. Day wise production details
  - b. Comparison of current day performance with the average previous daily performance
  - c. Short come / Excess on production for the day
  - d. Employee wise productivity report
  - e. Machine wise ROI report
  - f. Capacity utilization status – Man and Machine



## Material Requisition

Material Requisition is the stage where a lot of control is required in the operation. This document will be for multiple uses. This document will define the raw material required for the entire production for each finished good item.



## Material Transfer to Production

This document will be used to issue raw material to production. By this document system will reduce the quantity of issuing item to production department.

Note: - This Document will be separate based on each branch with separate unique voucher number.



## Production Assembly

Once Production department has received the raw material then they will start producing the finished good. Once done then finished goods will be issued to store / FG store. Remaining raw material will also return to store if not required.



## Finished Goods Transfer

Once QC has done then Passed Item Qty will be received by store / FG store / Delivery store. After that it will be ready to deliver to customer.



## Finance & Accounts

Finance is the most sensitive part of the company. Finance module should be always under proper watch and control. This module having several activities like mentioned bellow.



## Petty Cash Payment

Petty cash is small amount of cash on hand that is used for paying small amount sowed, rather than writing a cheque. Petty cash is also referred to as a petty cash fund. The person responsible for the petty cash is known as the petty cash custodian.



## Journal

Accounting process starts with the identification of financial transaction of business. There are lots of general transaction are there which will not go in specific voucher type. Such financial transactions are recorded permanently in the book of accounts systematically in different specialized books. The journal form allows the user to keep such transaction. This Voucher type will also have its unique record number to track the records.



## Contra

This Document is prepared by the accountant when fund movement occurring between bank accounts and cash accounts. This document will allow you to select only the accounts in the nature of Cash or bank. These types of voucher will also having it own unique reference number for each enrolled record in this type.



## Cheque Handling

Cheque handling allows the company to use different option for the cheque which received from party.

- a. It will allow changing the cheque with different cheque if party is replacing the given and or bounce cheque
- b. It will allow receiving amount in cash from party if party is giving in case for bounced or given cheque.
- c. It will allow user to credit party's account if cheque is bounced and no cash or other cheque received.



## Debit Note

Debit notes are generally used in business-to-business transactions. Such transactions often involve an extension of credit, meaning that a vendor would send a shipment of goods to accompany before the goods have been paid for. Although real goods are changing hands, until an actual invoice is issued, real money is not. Rather, debits and credits are being logged in an accounting system to keep track of inventories shipped and payments owed.



## Credit Note

A note or memo sent from a business to a customer, informing the customer that money has been added to the customer's account. Credit notes are typically used when products are returned for are fund or in other circumstances where the business must return money to the customer.



## Opening Balance

Opening Balance is the ledger balance at the start of a new financial period. The Opening Balance is always equal to the previous month's Ending Balance.

# HR & PAYROLL MODULE



## Employee Master

This Document will allow keeping record of employee. Whenever any new employee is joining to company that should be enrolling in to this document.



## Leave Entry

Whenever any employee want to go on leave this document will allow providing the leave detail. Before using this document first HR department has to set up the leaves for each employee with specific leave type and available allowed leave. After that system will be able to control the leave for each employee.



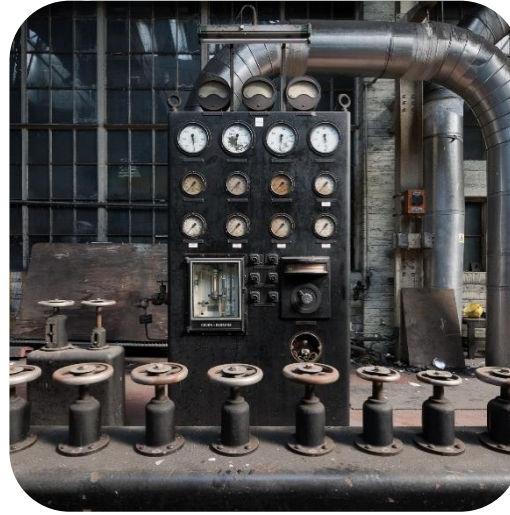
## Staff Payment (Advance Loan)

This module will provide the facility to handle the advance loan given to the employee. Once Advance loan data will provide into the system then system will give option to collect it in periodic installment and system will automatically put this data in to the payroll.



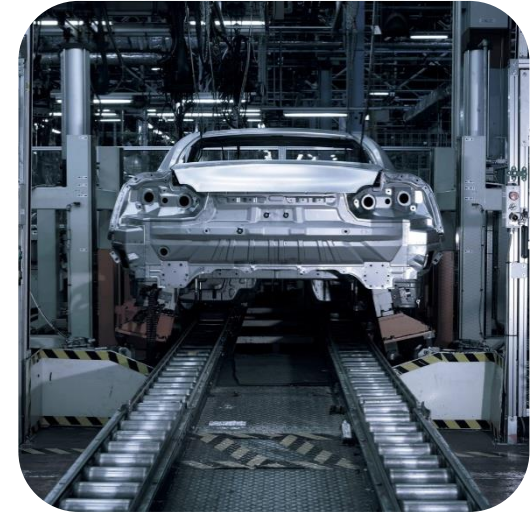
## Staff Receipt (Deduction)

Any kind of other deduction that company has to deduct from the employee's salary will be mentioned here. As this will give impact to the employee's salary it is very important that finance / associate manager should cross check every time for accuracy.



## Time sheet

Time sheet document is used to capture employee's daily attendance that you can load from external source or manual entry



## Payroll Process

This will going to execute the staff periodic salary based on the data received from Timesheet, Employee master for basic salary, Leave Entry for deduction if applicable, Staff Advance Payment if applicable, Staff other deduction if applicable etc... Once this process is executed it will give account effects also accordingly. So Payroll will be live with account department.



## Leave Salary Process

The will allow to process the salary for not deductible leave. Once Leave salary Process has been executed then system can allow paying that amount by this module.



## Leave Salary Payment

Once Leave salary Process has been executed then system can allow paying that amount by this module.



## Benefit Payment

There are a lots of benefits that are going to given to employee from employer. This data will be recorded here. Salary module will use this data for processing the salary. This is master and it is very sensitive as this will give effect to employee's salary, so that authorized person has to maintain this master properly.



## Other Staff Payment

Any other payment regarding to staff which are allowed, approved, and given are mentioned here.

After Completion of all process salary all we need to do is pay require and approved salary. This can be paid by this document. This document will be used by the finance as it is very important and critical.



# APTERP MANUFACTURING



THANKYOU

**APTERP**<sup>®</sup>  
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