

Planning Module

The Planning module within Ross ERP provides you with the capability to develop Production Plans based upon Demand (Sales Orders and/or Sales Forecasts) and current Inventory levels and existing Replenishments. Capacity requirements of resources can be checked. Based upon capacity constraints, the Master Schedule can be adjusted to result in a work-able production plan. Then Material Planning can determine the quantity and required date of ingredients and packaging supplies. Planning Jobs can also be created and firmed, for later transfer to manufacturing Jobs.

It also provides you with the ability to effectively manage your resources to meet sales demands. It enables you to:

- Manage your capacity with comparison to demand, and arrive at a viable production plan that is within your constraints. With this production plan, Ross ERP calculates the materials you need and creates manufacturing jobs for production.
- Review and make adjustments or identify alternatives in production planning.
- Specify both the planning horizon for the planning process. You can perform strategic long-term planning objectives, such as projected sales for the next five years on an annual basis or an annual operating plan for budgeting. And you can do tactical planning based upon actual orders and inventory levels including an intermediate forecast.

Production Planning – Master Scheduling

With Ross ERP you develop a production plan that shows you the products you need to produce and time period in which to produce them in order to meet demand.

Master Scheduling

- You can use actual sales demand, forecast demand or a combination of both to develop your plan. If you use both Sales and Forecasts you can specify a demand fence that lets you consider only sales orders inside the fence, and outside of the fence considers whichever is larger (sales or forecast).
- You have the option to include or exclude current inventory balances and planned replenishments.
- You can do master scheduling for products with dependent demand that are not actually sold (you might have one or more intermediate products that are part of your process).
- The master scheduling function warns you of any expected expiration of both intermediate products and finished goods.
- Dynamic inventory policies can be specified for each product being planned by defining target inventory levels in terms of day of inventory. As demand increases, planned inventory levels increase and as demand decreases, planned inventory levels decrease.

You can use the master schedule to plan based upon future demand and an inventory policy expressed in days of cover stock. If you want four days of cover stock, Ross ERP determines how much you need to produce not only to meet demand but also to maintain the four days of inventory. And if your demand increases, it will automatically calculate how much more inventory you need to stock to maintain the four-day safety margin and how much more you need to produce to meet the new demand.

- The Master Schedule can consider and include items that are typically Make-to-Stock and items that are typically Make-to-Order.
- Exception Reports are available to report any Product Shortages for Sales Demand, so that any potential out of stock situations are known in advance and proactive measures can be taken.
- You can generate multiple master schedule iterations and assign a unique Retrieval Code to each one for viewing later. You can select the Master Schedule that is best for you and use it for Material Planning and creating Planning Jobs.

Rough Cut Capacity Planning

For Rough Cut Capacity Planning (RCCP), Ross ERP translates the master production schedule into resource capacity requirements, and then looks at your current resource allotment to see how much capacity is available and identifies both over-capacity and under-capacity situations.

RCCP considers all of your resources (i.e. labor, equipment, miscellaneous, materials, utilities) and compares them to demand requirements in order to provide you with the most reliable and efficient capacity analysis.

For example, instead of looking at just labor and equipment, it will identify for you situations where water or power or some other raw material might be a constraint in your production planning.

- You define resource capacity in the units of your choice.
- In the case of equipment or labor, you can use time as a common denominator, and the planned quantity will automatically be translated into time requirement based upon the process specification. For materials or miscellaneous resources, you can specify Kgs or liters or any other unit of measure.
- You can evaluate multiple resources as possible constraints.

For each resource you can identify the daily capacity by date range to account for resources that may vary. Using effectivity dates you can then factor the purchase of a new piece of equipment into your planning to show the increased capacity after a certain date.

- You can see exactly where shortages exist if you are over capacity, and if you are under capacity you can see the amount of unused capacity so that you can increase your production utilization. For both over- and under-capacity you will see this information in both production hours and production quantity.

For example, if you are 15 production line hours short of full capacity, you will also see the number of units of product that could be produced in this time period.

- Ross ERP can smooth your production plan by moving the production to match the capacity of the problem resource.
- Your planner can also make manual adjustments to the Production Plan and immediately see the capacity effect of the adjustment.

You can move production from one time period to another, or if you have alternative methods of production you can select an alternative process specification in the same factory or a different factory.

Material Requirements Planning (MRP)

Ross ERP determines the purchases that are required to support your production plan –the materials, the quantities and the required dates– on an item specific basis for each location. After reviewing the purchase recommendation, you can automatically create purchase requisitions for individual or all recommendations.

- MRP considers your current inventory of raw materials and outstanding purchases.
- MRP recommends the materials and the quantities to be purchased with the required dates. It considers lead-time to tell you when the purchase needs to be placed and the receipt date required to support the production plan.
- If there are outstanding purchases that need dates changed, recommended reschedules to existing purchase orders are made.
- It considers the minimum and maximum inventory levels you have established and your replenishment rules (such as the lot size for reorder and the minimum reorder quantity), as well as any order consolidation policies you might have, to recommend order quantities.
- The Order Interval Days is also considered in consolidating requirements over a number of days into 1 purchase recommendation. For example, you may only want to order a product every 2 weeks, by using order interval days the system will consolidate the requirements into 1 purchase recommendation.

- If there is insufficient lead-time to purchase materials to support the production plan, this is noted as a Sales Shortage, and can be used to expedite materials.
- Shelf Life is also considered. It identifies materials that will expire based on actual shelf life, and notifies you if you have any inventory on hand that will expire before the scheduled production date. And it will notify you if your planned or open purchase order amount exceeds what your requirement is during the material's shelf life.

Various Inquires and Reports are included with MRP. Both Summary and Detail Inquires with pegging to the demand is available. MRP Reports for all Recommendations and by type of Recommendation are included.

Your Material Planner can review the MRP Suggestions and Firm any or all suggestions. In firming suggestions, the Planner can adjust the quantity or required date of any purchase, as needed. Either when firming suggestions or later, the suggestions can be converted into Purchase Requisitions and processed as Purchase Orders in the Purchase Order Processing application.

Planning Jobs

Your planner can convert the Master Schedule suggestions into Planning Jobs for a specific time period, with specific product(s) or all planning suggestions. After creating Planning Jobs, your Planner can review and Firm them as desired. By firming Planning Jobs, subsequent planning processes can consider them as planned replenishments and not re-plan or re-suggest the same production.

Planning Jobs, either Firmed or not Firmed can be converted into Manufacturing Jobs and Released to authorize and record production.