

MRP

Does Your MRP Software Spell Profit?



Today's consumers expect that the products they order will be delivered in a timely fashion; so timely, in fact, that the demands are far greater than a manufacturer's capabilities. Being unable to meet order request deadlines can be costly for the producer. There is but one solution: a robust Material Requirements Planning software that turns the impossible into the possible thus securing a producer's financial future.

PROFIT

Gaining a financial advantage through a robust ERP solution.



Challenge the impossible.

American food manufacturers today are well beyond making food “the way Grandma used to make it.” Consumers don’t have time to wait for the bread to rise, the soup to simmer, or the chicken to roast. Manufacturers are met with timely demands from their customers to have ready-to-eat foods available on very short notice, sometimes in less time than it takes to manufacture the item requested.

Facing the impossible demand to have finished goods available for consumption in less time than it takes to manufacture the product forces manufacturers to prepare foods in advance of a potential order. This poses significant risks for the manufacturer, all of which have an impact on the profit bottom line.

Manufacturing Risks

Without a stable production plan in place, a company may purchase insufficient quantities of an item, or the wrong item, causing the manufacturer to break contracts with clients. On the other hand, if a company purchases excessive quantities of an item, money is being wasted. Not only does the purchase tie up cash, but the stock may never be used or may expire prior to usage. This issue is especially problematic for manufacturers with very short product life cycles.

Another manufacturing risk pertains to the start time of the item in production. Starting too early may mean that the item will expire before a client wants it; starting too late may mean missing the customer deadline.

Without a doubt, these miscalculations can be costly. There are the obvious losses such as the wasted product and spent cash, but there are also the less obvious losses to consider. A customer whose demands are not met does not stay a customer for long causing the producer to lose future contracts. The employee with nothing to do still costs the employer his/her salary. The employee that has to work overtime to meet last minute deadlines costs the employer even more salary. The residual effects can snowball into a much bigger financial problem.

What is MRP?

Material Requirements Planning is software based production planning and inventory control used to manage manufacturing processes. An effective MRP system will simultaneously meet the following objectives:

- Ensure materials and products are available for production and delivery to customers.
- Maintain the lowest possible level of inventory.
- Plan manufacturing activities, delivery schedules, & purchasing activities.

Essentially, providing a tool that effectively manages material requirements in a manufacturing process, an MRP system provides answers to these simple questions:

- *What* items are required?
- *How* many are required?
- *When* are they required?

How does MRP work?

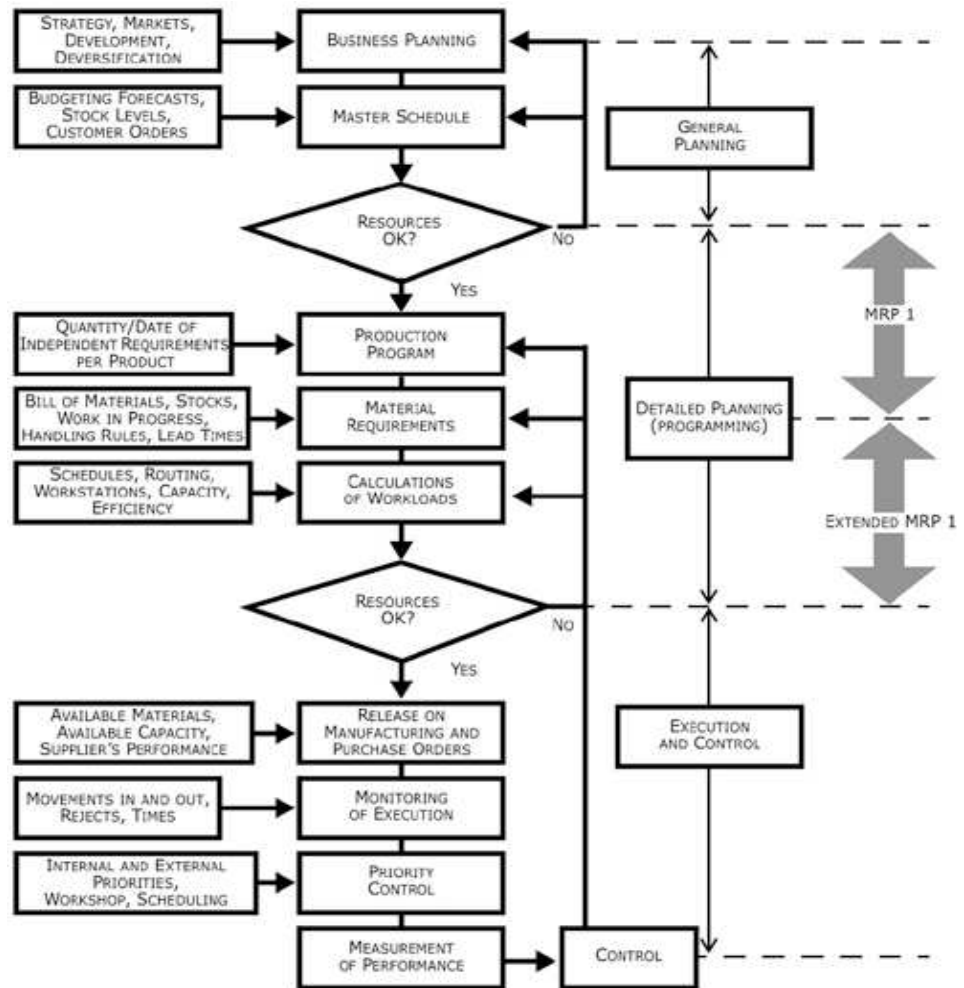
How does MRP work?

The MRP system utilizes the bills of material data, inventory data, sales forecasts, open orders, and the master production schedule to calculate the optimum manufacturing plan. Consideration must be given to the end item(s) being created and how much time is required to produce the item, as well as when the suggested quantities of raw materials are needed, and the determined shelf life of those raw materials.

The planning data that go into an MRP include restraints and directions to produce end items. These comprise components such as: Routings, Quality and Testing Standards, Lot sizing, and others.

After all of the pertinent information is put into the MRP system, the manufacturer receives two outputs: 1) The Recommended Production Schedule and 2) The Recommended Purchasing Schedule. All of the details are laid out for start and completion dates; quantities required, and purchasing and receiving times of materials; and product release schedules that are all consistent with the master production schedule.

If, after all of the data are submitted, an inconsistency occurs with dates or available materials, the manufacturer will receive reschedule notices with recommendations. The recommendations may include cancelling, increasing, delaying, or speeding up existing orders. The conditions in a company are constantly changing, therefore the recommendations need regular review by trained people to authorize or disqualify the system suggestions.



Around 1980, over-frequent changes in sales forecasts, entailing continual readjustments in production, as well as the unsuitability of the parameters fixed by the system, led MRP (Material Requirements Planning) to evolve into a new concept: Material Resource Planning or MRP2. Sources: "CIM: Principles of Computer Integrated Manufacturing", Jean-Baptiste Waldner, John Wiley & Sons, 1992, Reproduced with author's authorization.

An Intimate Look at Kettle Cuisine, Inc.

At Kettle Cuisine, a prominent fresh soup manufacturer in Massachusetts, production managers rely heavily upon their MRP system to run an efficient and profitable manufacturing cycle. The handmade soup they provide to both retail and food service customers is produced with fresh cut meats and vegetables, herbs and spices, and their own flavorful stocks. The chefs honor the traditional craft of making soup, taking no shortcuts or using processed ingredients. Freshness and flexibility are the company's primary goals, thus ensuring customer satisfaction.

Kettle Cuisine's MRP system allows orders to be placed, produced, and shipped as close to the same day as possible. The sales department provides several sales order demand forecasts to accomplish this feat. A weekly baseline forecast is utilized to provide order estimates on materials that can take up to seven days to acquire. A two day forecast is used to bring in the freshest ingredients. A combination of actual make-to-order and make-to-stock orders are utilized for the next days' confirmed production requests.



Kettle Cuisine uses a variety of packaging, labeling, and proprietary ingredients. They have employed a simple two-level finished goods bill of material approach. With the push of a button, the MRP explodes the requirements to bulk recipe and ingredient levels.

MRP for Profitability

When properly implemented, an MRP system will reduce cash flow and minimize inventory. Keeping unnecessary inventory on hand is expensive and wasteful. Conversely, inventory shortages are avoided that lead to cancelled contracts or unproductive employees. An MRP system's advanced scheduling capabilities help keep operations at maximum efficiency by reducing machine and labor downtime.

Utilizing an MRP solution is a pro-active approach to managing production so that all the right materials are in the right place at just the right time. As a result, manufacturers will meet and exceed the demands of their clients, thus securing their future relationships, contracts, and financial stability.

The most effective MRP system is an integral part of a robust ERP (Enterprise Resources Planning) system. With seamless integration of an ERP, the MRP component automatically links to purchase orders, sales orders, and inventory control increasing accuracy and efficiency of the complete beginning to end process.

MRP is the single most powerful tool in consistently guiding inventory planning, purchase management, and production control. Put all of these advantages together, and what do they spell? PROFIT

Purchasing and expediting suggestions are evaluated by the company's purchasing department at each stage of forecasting and production planning of the MRP process. Bulk requirements can span both make-to-order and make-to-stock requests. The MRP system inquiry can easily evaluate sales order requests or production order requests, based upon the method of order. MRP allows for standard vessel batch sizes for consistency, but also alerts the user when a request exceeds the typical standard batch request. These items are evaluated for rescheduling.



A firm'd next days' production plan is generated through the MRP, based upon the final sign-off from Kettle Cuisine's sales department. Certain intermediate components are evaluated at that time for more efficient economies of scale and production. The MRP allows for the fine tuning of these routine instances.

Kettle Cuisine places between 200 and 300 production orders a day that are planned, prepared, cooked, packaged, and shipped with the help of its MRP system. Using an MRP software keeps their business operations organized, timely, and profitable.

"ProcessPro has a real handle on MRP. Not many systems can handle same day orders as well as this." -- Tony Fusco, Kettle Cuisine IT Manager

About the Author

Shanon Odegaard, Quality Systems Manager, ProcessPro® software and Certified ProcessPro® software Implementation Specialist. Shanon is also a Certified Consultant for Sage Pro Series Accounting System with 13 years of experience implementing ERP software and consulting in the process manufacturing industry with focuses in GMP and FDA requirements.

About ProcessPro® software

ProcessPro® software is proud to be the leading ERP software for the highly-regulated process industry. Excelling in the small to mid-sized market, ProcessPro® software provides an affordable solution to those who must adhere to strict QC and government regulations including FDA, cGMP, 21CFR Part11, Bioterrorism, HAACP, and more. ProcessPro® software seamlessly integrates all aspects of plant operations, from beginning order entry through manufacturing, packaging, shipping, and accounting.

This fully-integrated, real-time solution rises above other industry software in production capabilities, financial integration, user interface, system functionality, flexibility and more. ProcessPro® software is available with full source code and can be customized to fit your organization's unique business needs. For more information, visit www.ProcessProMFG.com.

About Kettle Cuisine

Founded in 1986, Kettle Cuisine delivers over 90 varieties of fresh, refrigerated, high quality soups, chilies, and chowders to hundreds of restaurants and retailers in the eastern United States. Kettle Cuisine's soups are made the way soups should be made: with made-from-scratch stocks, fresh vegetables, natural ingredients, and traditional herbs and spices. For more information, visit www.kettlecuisine.com.



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Material Requirements Planning, Wikipedia, February 29, 2008.

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