

# Outdated Strategies and Systems Cannot Support World Class Performance

*By R. Michael Donovan*

Running a manufacturing company today with old, conventional MRP II logic won't keep a company very competitive. The old systems just don't fit anymore with imprecise information and a reaction time which is too slow for companies striving to become a World Class manufacturing enterprise. The old logic can't show you where your manufacturing operation is actually headed in the near-term, when you really need to know. There is little or no predictive scheduling, so outcomes tend to just happen, rather than being managed to happen just as planned. The results are bottlenecks, long cycle times, bloated inventories, lower throughput, higher costs, poor deliveries, and unhappy customers.

Many of the systems in use today burden companies with obsolete scheduling logic which can aimlessly drive operations. These systems can also be way behind business reality with schedules and material requirements that are uncoordinated and too infrequently updated. Although many transactions might be real time, systems are often too far behind in providing information for mission critical decision-making. By the time many systems actually replan to the latest conditions, reality has significantly changed. Manufacturers need something much better to stay up with today's need for a short cycle order-to-delivery process.

While many software vendors are introducing much improved ERP solutions that overcome some of MRP II's shortcomings, manufacturers need to be fully aware of how best to achieve their business goals before committing to a system investment for the long-term. Any vendor can call their system Enterprise Resource Planning (ERP) or Advanced Planning and Scheduling (APS) but the system must contain all the necessary elements to fully support a

fast order-to-delivery cycle in your specific environment or it just isn't worth the investment. For some companies, the system's scope and functionality must totally integrate the supply chain and truly connect customers and suppliers. For others, it can be the need to precisely manage capacity through real-time scheduling and rescheduling. Others need logic and system support for demand/continuous flow production. Companies need to know that there are significant differences among many of the systems. The differences range from minor aspects of functionality to total differences in philosophy and manufacturing strategy. The need to define an evolving manufacturing strategy is a critical part of system selection. It is important for a company that is transitioning from lot production to demand/continuous flow production, for example, to not get locked into a transaction-laden system that is designed for lot production rather than short-cycle, demand/continuous flow production.

### **Advanced Planning and Scheduling Systems**

As with ERP systems, there are significant differences in the various APS systems and the manufacturing strategies they best support. Regardless of your current and future manufacturing strategy the better APS systems will provide the overall ability to rapidly and simultaneously plan and schedule customer demand while considering material and capacity constraints. Some business environments have or will have a strategy imperative that requires the capability to perform real-time, interactive planning and scheduling from one cell or flow line to the entire supply chain. And, this rescheduling process will need to be accomplished in a very short period of time with a high degree of precision. The result of this process will give management a much

improved view of the significance and consequences of today's decisions. The potential to increase business performance as a result of higher quality decision-making that impacts "tomorrow's" events is tremendous.

APS systems are still evolving, and at the same time are becoming better understood and more widely used. As a result, we will experience the inevitable departure from the old scheduling logic as it becomes more and more apparent that there really is a better way. However, management must remember that APS and ERP systems are not a "one size fits all" selection. Your current and future manufacturing strategy must drive your requirements. Companies who have made bad system purchases almost always live with those systems for a long time rather than scrapping them and starting over. As a result, these companies lose, in terms of business performance, over the long haul.

#### **Software Is Not A Silver Bullet**

Systems are often sold through an aura of credibility and purchased on a perception of how processes will perform with the new system. Manufacturing companies can not rely on software vendors to deliver the 'silver bullet' that will solve all their problems. If your business processes were never designed for optimal performance in the first place, then the computerized process will only entrench a bad process and worse, probably for a long period of time. Ultimately, the cost of doing it wrong is absolutely enormous. Software systems, however good, are not the place to start. Management must take charge of defining a strategy and redesigning business and production processes to structure operations in a manner that will best meet what their customers want and need. The strategic operational objectives that manufacturers must improve to increase market share and overall business performance while on the road to World Class have not changed:

- Very short cycle times
- Absolute on-time performance

- Highest quality
- Minimum inventories
- Low operating costs
- Timely supply chain communication

Clearly, companies need to move away from a *push* oriented production operation - - one that is based on mythical forecasts, infinite production capacity and large lots -- to a *flow/pull* oriented environment, based on customer demand, short cycle scheduling and maximum flexibility.

#### **Minimizing Risk**

It's true that information technology has been used to facilitate business process change for the better, however, it's a risky approach you shouldn't bank on. It's a much less risky business proposition to define your strategy and business processes first. The following three suggestions will help you to manage risk and increase the return from your overall investment.

1. **Know that there's no magic in new software.** Unfortunately, in some cases executives have mistakenly expected the "new system" to be the fix. The benefits come from a well-defined strategy, effective processes, and system use. This sounds like a confirmation of the obvious, but, the facts are that 9 out of 10 companies don't get it right.

2. **Know what you need from your business processes to satisfy your strategy first,** and then implement the information technology and tools that will best support those processes. For example, order-to-delivery is a highly variable, complex process that requires answers to many questions including:

- How can we best use lean/flow production techniques to improve business performance?
- How much product will my customers need, and how much inventory and capacity should we deploy?
- How do we quickly and precisely answer questions such as:
  - ...What's the best schedule we can execute?
  - ...When will each order ship?

...What will my service performance be?

- How can we utilize information technology to help predict what performance will be, considering variables such as product mix, capacity, people skills, vendor performance, material availability, and customer priority preferences?

3. **Acquire information technology that is flexible** enough for configuring and reconfiguring as future business conditions dictate.

World class manufacturers have many positive characteristics. One common characteristic is the consistent execution of a defined strategy through well-designed processes. This, coupled with the rejection of stagnation and dogged pursuit of perfection, is their silver bullet.

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