

A POOR MAN'S APS

Sam Graham, FIOM, Fifth Dimension Systems

Not many of us were around at the birth of MRP but I, at least, remember when it was the preserve of the large company with money to burn.

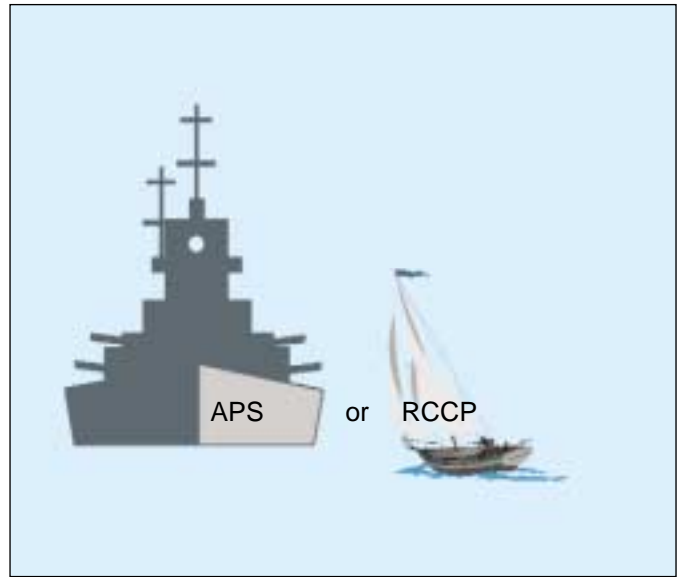
I was around, though, at the birth of APS (Advanced Planning and Scheduling systems) and, yes, they are currently the preserve of the large company with money to burn. My definition of APS is a system that simultaneously recognises both material and capacity restraints and recommends an optimal solution accordingly. By this definition, admittedly, not all systems sold as APS are APS.

The price of genuine APS systems will inevitably fall, just as MRP became affordable for even the smallest company. But, in the meantime, what can those of us on tight budgets do? The answer is to take old solutions to new problems.

Firstly, let's recognise what APS is doing. It is recognising resource constraints, both material and capacity. In reality, Pareto's Rule kicks in and eighty percent of our problems are caused by twenty percent of our resources. Only machines and departments that are heavily loaded are a problem. Only materials that are expensive or on extended lead time are a problem.

So what can we do? Well, most ERP/MRP systems have a Rough Cut Capacity Planning module. We can set up our critical resources, and only our critical resources, in RCCP and blow our MPS, order book, or whatever through it. As with genuine APS systems, the problem is to know what our constraint limits actually are. Unless we have real influence over our suppliers, for example, the quantities that we can draw from them are dependant upon demand from other, perhaps more powerful, customers. This is an issue that cannot be covered in a short article and will be addressed subsequently.

The other problem, with some RCCP systems at least, is how to express constraint limits. Many systems, for example, express capacities in RCCP in hours only. Some imagination will have to be used in deciding how to express constraints such as tonnage, or number of pieces from a sub-contractor; contact the author for suggestions.



This approach will not come up with an optimal solution to your conflicts. Only true APS can do that (and, even then, APS only optimises the model on which it is based. This in turn only approximates to the real situation and the differences can be significant. I invite our APS gurus to comment.) But RCCP will tell you where your problems are and it will enable you to quickly test possible solutions. Give it a try and let us know, via a letter to the Editor of Control or a short article, how you got on.

About the author

Sam Graham, FIOM is a Fellow of the Institute and serves on several national committees, including Council. Having worked on ERP/MRP systems implementations in a number of industries and countries, his primary interest lies in making such systems work. He is currently charged with ensuring that companies gain maximum value and advantage from their investment in these systems.