

## THE RIGHT TO BE WRONG

It is very easy to beat yourself up if you are in the aftermarket inventory game – it is all too easy to be wrong

Let's take an example. One of the things our software does is to evaluate every purchase order and stock movement recommendation and check if there is any excess stock anywhere else in the supply chain that could be used to satisfy the demand.

This happens typically every night so that any pockets of excess can be considered for movement to a warehouse likely to use the stock more productively. The business case considers the demand at the place that needs the stock versus the demand at the possible source warehouse. It considers the relative carrying costs, the costs of processing the orders and stock moves, the cost to transport the stock, and any external purchasing costs. The business case is very comprehensive.

But let's think about these variables. Firstly, the demand at the location requiring the stock might look like:

Any estimate of future demand has a range of possibilities and probabilities. It could be one or even two, maybe at a stretch it could be three, but it could even be none! What about the chosen source for the stock? It may well have a very high probability of no demand for the period in question, but it too could have the remote possibility of needing two or even three units of stock, the very stock you are thinking of moving.

Then what about the transport cost? Do you know that exactly? Well it could be in a half full container or maybe one that is full but includes some dangerous goods. Your factor for carrying costs, your unit cost, your processing and handling costs might all have similar errors in their estimates. Not so they are unusable, but so that the results of any calculation using them needs to be interpreted knowing the precision with which they are calculated.

So, the result of the business case for a possible stock move might look like:

You might have a 70-75 percent probability of making a profit, but you might have a one-in-four chance of making a loss too, albeit perhaps a small one. Overall you can expect a profit

rather than a loss but nothing is absolutely guaranteed.

So how might the uncertainty be handled? Well, let's set a threshold at A so any move that might result in an expected profit less than A will not be considered or recommended. This will of course allow some moves that ultimately prove to be loss-making to happen.

Well, how do we handle that? We could set the threshold at B. The problem then would be that we would reject a lot more possible excess stock moves, even the one illustrated as its expected profit falls below the B threshold. B would certainly translate into very few loss-making moves being recommended, and you would not be wrong that often. However, a lot of moves that should have been enacted would not even be performed, resulting in a lot more excess stock gathering dust and a lot more external purchasing.

In essence then, setting your benchmarks too conservatively (like B) will translate into less criticism on suspect excess moves but in all likelihood, it will lower profit and return on assets. Ultimately, focusing on the wrong benchmarks will damage the overall business performance; and while we have used a business case evaluation of an excess move as an example, we could have equally considered the kinds of calculations used to set min-max values or dynamic supply chain reconfiguration (see our article in the June 2017 edition of *AAA Magazine*).

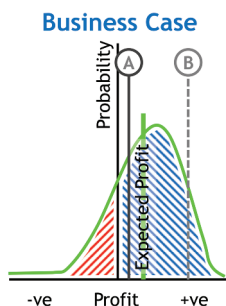
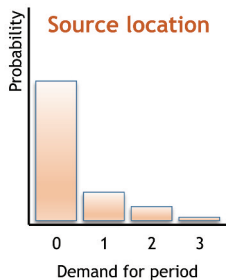
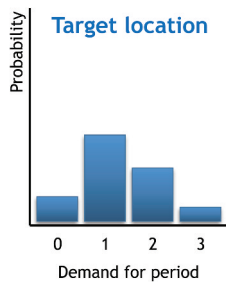
It is therefore particularly important that:

- People understand the uncertainties of data that is used to manage inventory;
- We set our benchmarks so we get the balance right – not too many false positives and not too many false negatives; and
- We give people permission to be wrong – it might well help us produce a better business result.

### But better to be more right than wrong

Of course, a lot of what is illustrated in this article simply is not possible with most inventory management systems and approaches, so what do you need to do to be more right than wrong? Well:

- It helps to start with an Inventory Management system that comprehensively manages every aspect of your inventory planning and purchasing. The more it does, then the less you will have to struggle with, and the easier it



will be to produce the right answers. Without a comprehensive capability, it is all too easy to get bogged down in the trivia and lose sight of the big picture.

- Your master data needs to be right. Imagine if all your lead times were too aggressive. You have simply set yourself up for failure, and you will be out of stock far too often. On the other hand, if you pad all your lead times with an extra few weeks, then you will probably carry too much cycle stock, but you could also carry too little safety stock, as the system will 'know' that stock is typically being received earlier than anticipated. You need to be as accurate as you can, and stay on top of your master data. Investing in having good data will pay off in the long run, but equally getting it absolutely perfect may not be worth it either. Even better would be to have the inventory management system help you maintain the master data for better data at lower cost.
- It is important to understand that ultimately it is a game of chance. Sometimes you will win and sometimes you will lose. As such, there is no point beating yourself up over your losses, although you do need to land more good punches then be on the receiving end of any punishment. That attitude needs to be pervasive across the management team and all the practitioners. If you win more often, then overall you will produce good results. If you discover some issues where you are continually losing, then look at the causes. Maybe it's time to modify a policy, strategy or rule; you might even want to upgrade your planning software. Then the new capabilities can help you well into the future.

Ultimately, beating yourself up over small details and small losses will lead to poor performance. Maybe it's time to step back and look at how you can land more telling blows, more often.

For further information consult  
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