

THE KISS PRINCIPLE

KISS, as everyone knows, stands for "Keep it Simple, Stupid"

It is a maxim you have probably heard many times and may have even had addressed to you on occasion. Some of the virtues of the phrase include:

- Avoiding the unnecessarily complex – which adds risk and cost for no good effect. This was the original meaning when the phrase was coined in the 1960s by the US military.
- Ensuring you boil down your message to the key points that everyone can grasp and take on board.

However, you can be too simple

Unfortunately, KISS also can be used on occasion to avoid confronting the real issues with an inventory management process, or the real causes of why you continue to have excess stock.

Inevitably, KISS is spat out with a focus on the Stupid. People think it is just too hard to dig into the details and discover the underlying fundamentals behind a problem.

It is all too easy to cite the work that it is necessary to pull the data together. The data is dirty, and in any event, why bother because the system is not sophisticated enough to handle the full complexity of the inventory management challenges.

Rather than working smarter, people are forced to work harder, and normally this will be accompanied by the old refrain: "we need more headcount."

Unfortunately, many inventory management systems embedded in ERP systems simply do not help by adopting overly simplistic approaches to inventory management planning. We are sure, for example, you have come across approaches which allow you to specify how many days or weeks of stock to hold in order to set stock reorder points.

While simple to perhaps say, the inevitable result in many cases is that such simple approaches lead to some major shortfalls such as:

- With seasonal products, all too often you have too much or too little stock, or
- If you have products being sold commonly in quantities other than one (one of our clients has roughly a third of its order lines sold in a common quantity other than one), then inevitably there will be many times when you stock one too many or one too few, leaving you with poor inventory utilisation and higher emergency stock transfers.

Better solutions that consider common quantities, matched items, seasonally varying demand (and automatically adjusted inventory levels), consideration of lead time reliability and proactive management of stock builds and product transitions are all possible, and eminently doable. Is it time to perhaps look at how you can work smarter rather than harder?

Similarly, one of the classic formulae for safety stock is $k \sigma \sqrt{t}$ which translates to k : a constant related to the service level you wish to achieve; σ : the standard deviation; and t : the lead time.

Now as much as some people like to defer to theoretical equations like this, unfortunately this sort of simple equation leaves a lot to be desired. When you try to apply it to typical low volume aftermarket products that we are mostly trying to manage, it has some significant shortcomings including:

- It assumes that the lead time is constant, which would be lovely if that were true, but unfortunately the lead time almost always varies in some way and is often skewed with some orders being received much later than normal. So, to handle things better, you will need to account for lead time variability.
- The factor k relates to service level, but wouldn't it be wise to perhaps also consider your profitability and return on assets objectives too? For example, if you make a high gross margin then perhaps you should stock more as losing a sale will cost you more. Well maybe then you ought to add a consideration for profitability into the equation, but then of course that would make it less simple, but maybe more useful too.
- and σ measures the level of demand variability during a time period like a day, week or month. However, what happens if during the lead time you only ever sold zero, one or two units? Perhaps the formula needs to be adjusted in such a case to consider the probability of these levels of sales rather than using a formula more suited to planning inventory levels for faster moving products.

The simple fact is that when you try to adopt techniques that are too simple to do comprehensive planning, you usually then have to have a whole series of work arounds and manual interventions simply because your inventory planning techniques are letting you down.

Why do you let that happen? Well, sometimes it is because we blindly adopt the solutions from our ERP systems provider, who might make a good ERP system, but not deliver a first rate planning capability. Sometimes it might be that our staff cannot cope with the level of analytics and optimisation rules that drive more sophisticated planning methods. And sometimes, our data is not maintained well enough so that we and the planning system we use can rely on it.

So, do we admit defeat and continue using the old ways? Or do we try a new approach?



Let's KISS

Let's keep it simple. We don't have to fall back on demeaning words like stupid. We can be smart, safe and sensible if we...

- **Understand** what needs to be done. What are the challenges faced by your business, and where can better supply chain and inventory management make key differences?
- Start with a **vision** – what are you trying to do and why?
- Have a **smart inventory planning** and purchasing system to free you and your staff to manage the strategies, policies and processes rather than being bogged down in the details.
- Develop and **align your team**. Have people who know how to tweak the system to make the high volume products flow as smoothly and efficiently as possible, and have others with the product and customer knowledge to help you make the best possible decisions for the real slow movers.
- Recognise that with tens of thousands of SKUs you simply cannot personally handle all the details for every item. It is important to let go and **let the system take care of the optimisation details**, like dynamic supply chain reconfiguration, cross dock optimisation and excess stock identification and movement.
- Ensure the system **supports you to handle the exceptions** like recommending expediting of existing purchase orders where needed.
- Know that while you must continuously strive to improve, that with statistics and optimisation from time to time the solutions will not be quite right. Accept this as a small price to pay for the 90-95 percent of times that the system will get it right and implement the big picture policies and strategies that you need.

And most importantly, it all starts with leadership – knowing that you can do far better, and doing it!

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