

Out of stocks

Putting the Distribution Centre's role into perspective

By Chris du Preez
The Last 50 Yards

When speaking to Retailers/Manufacturers/Vendors about out of stocks there is one issue that is almost guaranteed to come up – The Distribution Centre (DC). It would seem as if the DC gets blamed for almost all 'out-of-stocks', and that any discussion of out of stocks is therefore, of little or no value, until such time as the DC solves its out-of-stock problem. But is this really true?

Distribution Centre (DC) Management would be the first to admit that DC's contribute to out of stocks at retail shelf level. But is the DC the bigger part of the problem? Worldwide research suggests otherwise.

In a study commissioned by Procter and Gamble, Coca Cola and Walmart that involved 661 retailers in 29 countries, it was found that only 28% of out of stocks were the result of up-stream issues – DC's, suppliers etc. The other 72% fell squarely on the shoulders of in-store practices such as late/no ordering, shelf labels disappearing, faulty SOH numbers, shrinkage, etc.

Of course, one could argue that the research was not done in South Africa and is therefore irrelevant.

But there is another way of looking at the issue, and that is by looking at probabilities. In much the same way that we can calculate the chances of winning a lottery, one can calculate the chances of eliminating out of stocks if only DC's could solve the problem.

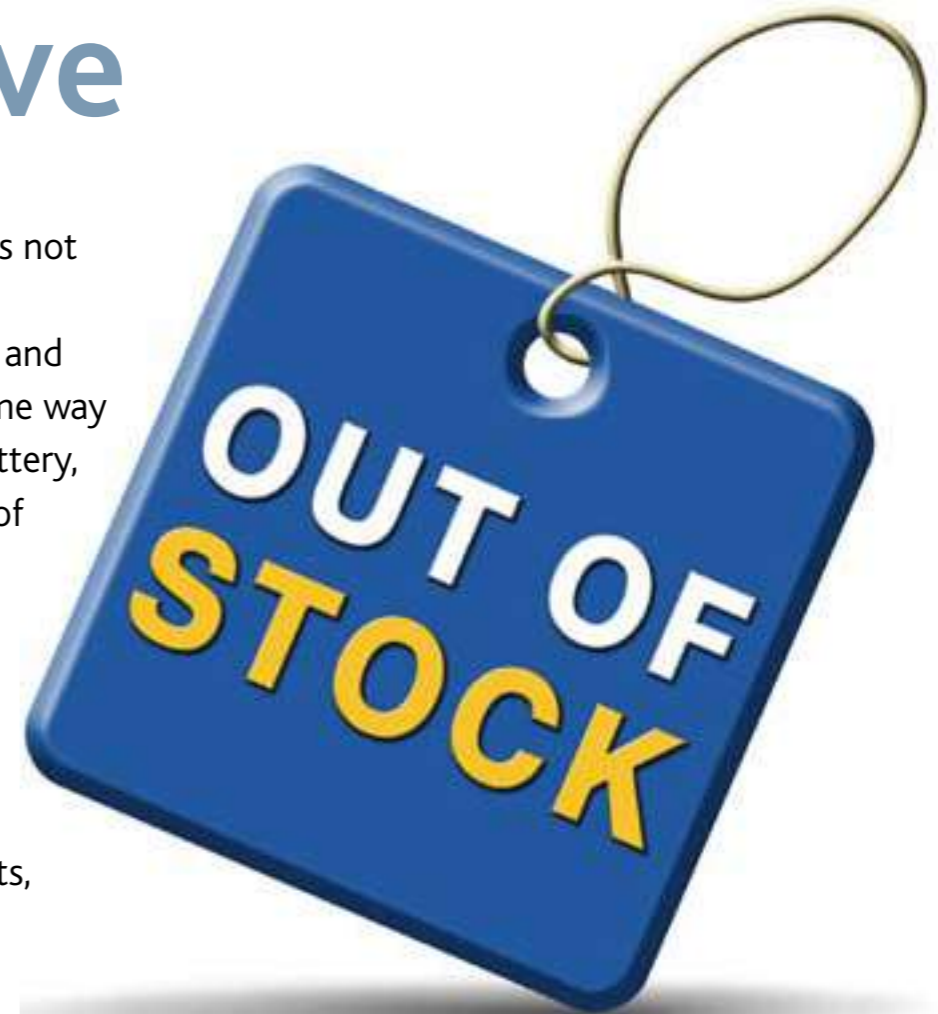
Probabilities and out of stocks.

There seems to be consensus that one of the aggravating factors of out of stocks is that they are so very unpredictable. The blow can fall anytime, anywhere. They are indeed random events, almost like throwing a dice in a board game.

By using this analogy, let's assume that we are playing a game called, *Who is to blame for out of stocks?* We have a dice with six numbers on it.

Each number is labelled as follows:

1. DC's are to blame;
2. Drop shipment suppliers are to blame:
3. Stock was not ordered;
4. Shrinkage
5. SOH numbers are compromised.
6. Shelf edge labels went missing.



Of course, the dice could have more than six sides, but I think a six-number dice will prove the point.

Now if we play the game and our dice consistently comes up with the number one, we would wonder if the game was rigged. As indeed we should.

But wait, you say, the DC supplies 90% of my products, of course the dice should fall on 1 most of the time. And that, is a very reasonable argument.



If we therefore look at what probabilities can tell us about a world in which DC's dramatically reduces its out of stocks and the effect that such a change would have on out of stocks on the retail floor, we would come to a conclusion of who the REAL culprit(s) is/are.

An (almost) perfectly functioning DC – what would it do for out of stocks?

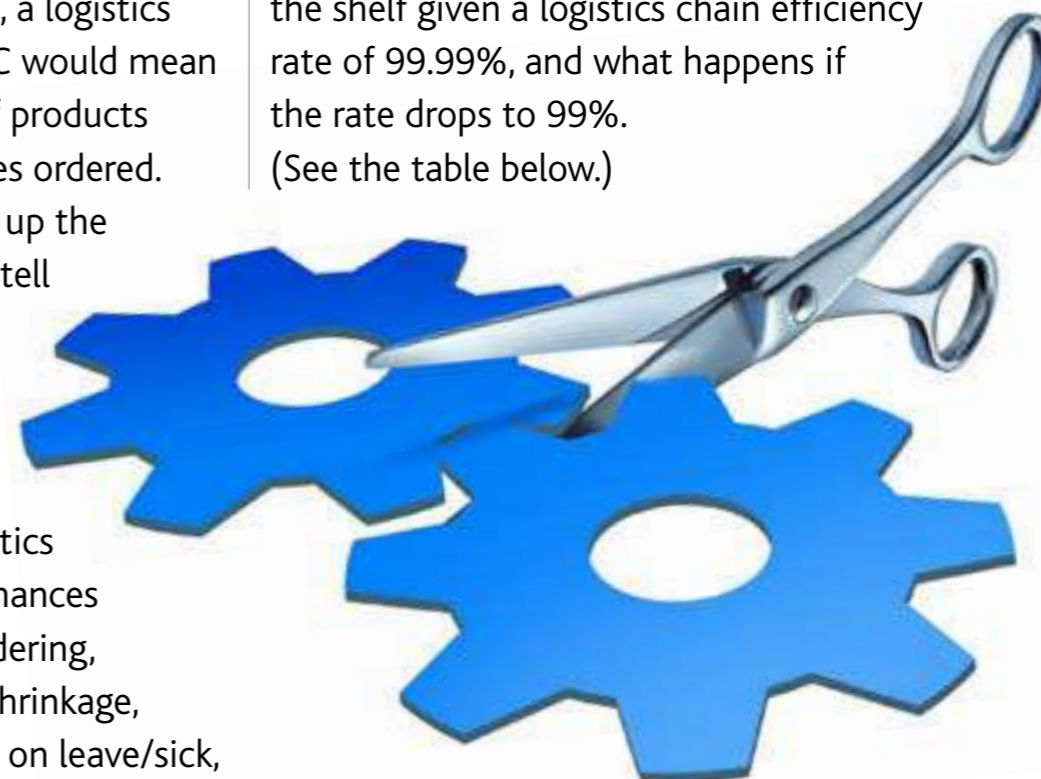
Getting a product through the till is a long and complex process that starts with the placing of an order by the retailer and ends with the product being placed on the shelf. For the sake of our discussion, we will break this chain of events into three players – Supplier, DC and Retailer. The whole chain of events can be referred to as the logistics chain.

The purpose of reducing out of stocks is to ensure that we maximise sales. The ability of the logistics

chain to deliver the product in the correct quantities, and in time, can be referred to as the logistics chain efficiency. Simply put, a logistics chain efficiency rate of 99% by a DC would mean that a retailer would receive 99% of products ordered on time and in the quantities ordered.

For the sake of our discussion, let's up the ante and see what probabilities can tell us about on shelf availability of products if ALL players in the logistics chain (Manufacturer, DC and Retailer) are working at a 99.99% efficiency rate in the logistics chain. This assumption means the chances that something goes wrong with ordering, delivery, quantities, SOH numbers, shrinkage, shelf labels disappearing, staff being on leave/sick, suppliers' issues, are reduced to 0.001%

Let's see how many days in a year stores with different SKU numbers will have all products on the shelf given a logistics chain efficiency rate of 99.99%, and what happens if the rate drops to 99%. (See the table below.)



Logistics chain efficiency	Number of Sku's	Probability factor	1 Year period (days)	All products will be on the shelf (days)
99,99%	5 000	60,65%	365	221
99,99%	10 000	36,79%	365	134
99,99%	15 000	22,31%	365	81
99,99%	20 000	13,53%	365	49
99,99%	25 000	8,21%	365	30
99,99%	30 000	4,98%	365	18
99,00%	5 000	1,49959E-22	365	0
99,00%	10 000	2,24877E-44	365	0
99,00%	15 000	3,37224E-66	365	0
99,00%	20 000	5,05699E-88	365	0
99,00%	25 000	7,5834E-110	365	0
99,00%	30 000	1,1372E-131	365	0

The results indicate the following:

- No single player holds all the out of stock cards. Even at an imaginary logistics chain efficiency of 99.99% a store with 10 000 Sku's will have all products on the shelf less than half of the year. All stakeholders have a role to play.
- The slightest reduction in logistics chain efficiency rates have disastrous consequences for OSA. Note how a drop of .99% in efficiency rates erase all gains made when the rate was 99.99%.
- Product proliferation and the resulting complexity of the logistics chain are the REAL CULPRIT. The more Sku's in store, the worse the chances are of having all products on shelf on a given day.

Where to from here?

As we can now see, the root cause of out of stocks are product proliferation and the complexity of the logistics chain. None of those causes are going to disappear. The only solution is for the process to be managed.

From a managerial point of view managing out of stocks runs a familiar pattern. It is tolerated up to a point where it can no longer be ignored. Then meetings are held, stakeholders commit to solving the problem and things may go better for a while, until the whole process rears its ugly head again.

So why is the process so resistant to solutions?

It needs to be said that eliminating out of stocks completely is not possible. If an up to date out of shelf management system is available, reducing it by 50% is easy, reducing it by 60% takes a small effort, and if all stakeholders are on board a consistent 75% reduction can be achieved. All of this can, and has been achieved without changing DC procedures by a single iota.

A 100% reduction is not possible. In order to achieve the desired reduction four steps, need to be taken.

● A change in perceptions

The only reason why DC's are regarded as the main cause of out of stocks is because retailers and vendors have a blind spot as to what is happening on the retail floor. Not only is this where the real problem lies, this is the source of erroneous information that is fed to DC's and aggravates the problem. If you don't have a tool that exposes the



issues on floor level, you can only see the DCs' contribution, and (erroneously) blame them for the problem.

● Upgrade your tool-kit

There is not a single out of stock management tool that is not compromised by one or more of the following factors – SOH numbers, operator integrity and discipline, ignorance of how much detail is lost if you focus on average sales numbers, the false sense of security that is generated by site visits, the fundamental unreliability of visual aids such as photographs, the workload of merchandisers. Sales reports that tell us when last a product has sold are always interpreted in such a way the alarm is sounded when significant damage has already been done.

● Change the terms

Change the terms of your SLA with your merchandising company. Merchandising Companies exist because they extract an ROI from labour, and this is very bad news for small to medium size manufacturers and suppliers. It is an unpleasant fact that at the end of the day, the most complex, persistent and expensive problem in retail is left in the hands of persons whose only tools are a set of eyes.

● Employ new technology

Heed Professor Einstein's advice...

“ The definition of insanity is doing the same thing over and over again, but expecting different results ”

Out of stocks will remain a persistent, expensive and exhausting problem until such time as purpose built, scientifically designed technology is employed to solve the problem. The old technology has clearly failed, and dismally so, in spite of stake-holders commitment and hard work. It is time to employ new technology. **SR**

The last 50 Yards offers an out of stock managing toolkit that overcomes hurdles to on shelf availability: erroneous SOH numbers, missing shelf edge labels, stock has not been ordered, stock is still in the back-up, and late delivery of stock.

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