LET'S BE GENTLE WITH EACH OTHER

The Bullwhip effect was first described in the 1960s

It refers to the amplification of variability as you go up the supply chain, further away from the original demand signal.

The bullwhip effect can easily lead to overstocking by 40-50 percent and more. It is referred to as the bullwhip effect because, with just a flick of the wrist, it can result in a big movement at the other end of the whip.

If it has been known about for so long, why is it that organisations and supply chains continue to exhibit such damaging behaviours and effects? Why have we not learned to avoid this damaging phenomenon? Why have we not worked out how to be gentle with each other?

The damaging effects can include:

- Strategically damaging stock outs. Sure you get the big order from a large wholesaler or an export sale but you could easily wipe out all your stock for months to come, potentially upsetting relationships with many small and loyal customers.
- Significantly increased safety stock levels – these big orders can inject a lot of variability into the demand signal and can require you to carry far more safety stock than would otherwise be necessary.
- Greatly increased costs of handling, production and distribution of these large panic orders. Often you give people a discount for these big orders and then compound the problem by not properly recognising these costs.

The ultimate causes of these bad effects are often that one party in the relationship wants to demonstrate they have the whip hand. It is possible however that they won't even have thought it through. They just want to crack the whip.

Unfortunately network 'bullies' and too much testosterone are all too prevalent. People arrogantly believe that they are so important that suppliers must accept their tough conditions in order to access the markets that they 'own'.

These sorts of attitudes belong in the past as new B2C type relationships demonstrate increasingly that bad behaviours are less a sign of power and more a sign of supply chain weakness.

An Optimisation and Partnership Opportunity

To avoid the bullwhip effect, the most important thing that needs to be done is to stay 'in touch' with the real retail demand. For example, in the auto industry the ultimate demand is almost always inherently stable. You simply cannot do hundreds of radiators or starter motors in one go. People do not break them all at once; so there is no need to make and supply them all at once.

You want to stay in touch with consumer demand, not just customer demand, as your customer might be somewhat removed from the real end use consumption.

Ideally therefore you want to see through the big orders from certain large customers and see the underlying, inherently low variability, retail sales. If you do however, you will still need to confront certain economic and human realities such as:

- It is often far more cost effective to order full containers, causing ordering peaks to be introduced into the supply chain.
- Some suppliers offer purchase incentives or rebates to encourage larger commitments to assist with their fixed costs, setup constraints and promotional objectives. This can be a drug of dependence if you are not very careful.
- Many S&OP, MRP and similar strategies rely on monthly time buckets – these might be convenient for humans to deal with but they can introduce unhelpful rhythms into your supply chain system. You need systems that help you manage your supply chain at the policy level (down to daily cycles if needed) while humans can still deal with comfortable monthly adjustment cycles.

You can deal with these issues in one of two ways, depending on the level of cooperation you have with your customer (and in turn, your suppliers). If your customer is determined to just treat you via an 'I win - you lose' type mentality then you can adopt strategies like:

- Categorise the demand signals so you can recognise very large orders that can wipe out your stock or inject excessive demand signals. Ideally your inventory planning software can help you perform this analysis, under the umbrella of your service level policies.
- If there are rebates or bulk buying incentives on offer from your supplier, ideally you can elect to take them up to an extent that does not unduly expose you to excess inventory risks. You will incur extra carrying costs when you buy up in advance of demand, but you can optimise the position you take relative to the demand, the rewards and the risks. Done well, you can enjoy the benefits without excessive costs. Ideally again, your inventory management and purchasing software can help you make sound policy driven decisions that deliver optimised balanced results. The software should be able to establish how long you can prudently over-stock to take advantage of any discounts or rebates on offer.
- Alerting you if someone's order, attractive as it may appear, will stock you out and impact on multiple other customers. That of course requires your ERP system to recognise when a customer order might potentially have toxic side effects. At the very least your inventory planning software should advise the level of variability it has elected to cover, and help you flag orders that exceed that size.
- You can decide where in your supply chain to manage the risk. Really big orders are probably best managed out of your main DC rather than down at every branch. Adopting policies and strategies like this can significantly reduce inventory levels, without seriously impacting on service levels or client relationships.
- If you keep your stock as components and manufacture or assemble just in time, you can also help manage the risk profile from even fairly volatile customer relationships. Usually you will find that the safety stock requirements at the component level are far lower than the variability you need to handle at the finished goods level.

Ideally however you can go further than this by working together with your customers and suppliers to achieve an overall optimum result across all the supply chain partners. You should be able to 'see' the retail demand and be able to 'see' the effect it will have on triggering the supply chain response.

Ideally you ought to be able to feed your supplier with a view of all the purchase orders you expect to place over say the next twelve months or so. This sort of plan can help your suppliers position stock and components ready for your purchase orders when you are ready to make them.

This can help you take advantage of buy breaks and be aware of transport economics, while still making sure your demand signals can still be very transparent to your vendors. Under such an arrangement everyone can win as you share the risks and rewards from a much improved information exchange.

Sound easy? Well it can be, especially if your inventory planning software can you help you translate your policies into practice, your partners are ready to 'talk' and everyone appreciates that we can all be gentle with each other.

We don't need to inflict pain in order to feel and be on top. We can achieve much more if we constructively exchange information and collaborate on how to achieve the most effective flow of supply.

For further information consult www.horizoninventory.com.au or email info@horizoninventory.com.au