

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

© Eliyahu M. Goldratt 2006

BIGBRAND RETAIL STORY

Few weeks ago I spent a morning with a group of middle level managers from a major brand name in apparel; we will call them, BigBrand. It is a long time since I had the pleasure to talk with middle level managers trying to inspire them to realize that their area of influence spread much beyond their restricted area of responsibility. Since, right now, you all are struggling with mastering the art of logical communication – facing the non-trivial challenge of delivering successful 2 hours meetings – I thought that you'll find the following report interesting and maybe of some help.

My second reason, to write and sent this document, is my annoying feeling that somehow you think that Viable Vision is possible for small and maybe medium size companies but when it comes to very large companies, the billions of dollars companies, then thinking that we can bring their net profit to be equal to their current sales, is really beyond realistic possibility.

APPAREL INDUSTRY BigBrand is one of the best companies that exist. There are very few people who haven't heard about BigBrand, and when you examine their financial performance you see their reputation is founded. Total sales is in the billions of US Dollars and their NP is about 10% per year. To do about 10% NP on sales in apparel industry is very, very good. My first question was how much do you think you can increase your NP, what will be your NP in 5 years from now? Their answer was that in five years they would increase their NP to be 1 billion USD / year. This is quite an ambitious target; and they know it is not going to be easy. Nevertheless, as a company they are determined that yes, they can make it.

Rather than starting to explore *how* they are going to achieve this ambitious target, I preferred to ask if they think that in 5 years they can reach 4 billions/yr NP. Not surprising, they regarded this number as totally, utterly unrealistic. Is it?

The first thing was to ask how much sales are lost at the shops due to unavailability of products. Not like in many other retail environments, where the standard answer is that lost sales are minimal, around 2 –3% their answer was that it is close to 30%. I'm sure that if this question was asked before their pilot started I would have gotten the conventional answer but what they have already done is to check how many of the SKUs the shop is supposed to hold are really available at a given point in time. They found out that about

Science of Business ♦ Goldratt Implementation Group US

303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

30% of the SKU's are missing from the shop. Their conclusion was that the lost sales are less than this percentage. Simply because, sometimes (many times) a client who cannot find one product will still buy an alternative product, therefore they regarded the 30% as some realistic upper limit.

I did not agree. Yes, I do acknowledge that some clients do buy an alternative product, but there is another factor that caused me to believe that the lost sales are much higher than the percentage of SKU's which are missing. To prove it I drew their attention to their central warehouse. Products of BigBrand, like so many fashion products, have a life time in the market of 6 months. Their business is based on two seasons a year, therefore, every 6 months they launch a new collection. They order, produce and buy in batches of 6 months -for the whole season. My question was, if one enters their central warehouse in a given region three weeks after the beginning of the season, will he find that some SKU's are already missing from the warehouse? Their answer was, "Yes, definitely." How can it be that these articles, that at the beginning of the season there was a quantity stored which was anticipated to last 6 months, are already missing from the central warehouse after 3 weeks?

The answer is that these are the real high runners, the hot ones, the ones that the demand for them was much higher than forecasted. How much sales were lost of these items? If an item was depleted in one month, we should evaluate the lost sales of that item to be 5 times the amount that we sold (I made the sound assumption that the demand for the item was not just a peak at the beginning of the season but was an indicator of genuine market demand). How many items are depleted after 3 weeks? How many after 6 weeks? How many after 3 months? We don't have numerical answers, but the impression is that the number of items depleted within the first 3 months of the season is very significant. I would not be surprised if it is equal to 1/3 of all SKU's. If so, the amount of lost sales due to unavailability might approach the total amount that is sold.

Now let's take this understanding and apply it to the items missing in the shop. The items missing in the shop have a high chance to be a high runner and this means the effect on sales of the 30% missing items should not be viewed as just 30% of sales because the demand for the items missing are not at the average level of demand, but much higher.

Science of Business ♦ Goldratt Implementation Group US

303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

Combining the effect of missing items in the shop¹ with the missing items in the central warehouse, we understand we are dealing here with a phenomenon which is probably equal to the total amount of sales. Bearing in mind that total variable cost out of the selling price for BigBrand is somewhere in the vicinity of 20%, this effect alone has an impact which is probably bigger than 4 billion USD on the NP.

How come that they do not fully realize it? I think that it stems from their particular environment. The culture in that industry is dominated by the fact that for several generations they have been dealing with an environment in which the life time of the products in the market (6 months) is shorter than the time to supply (1.5 years -for example, the fabric is selected in Jan or Feb for the NEXT year's summer season). This is an extremely difficult environment to deal with as more and more industries that are drifting into such an environment are starting to painfully realize. No wonder that with time this industry developed a protective mechanism, a culture of accepting the big problems as given. It came to the extent that camouflaging the real problems is the norm. For example, how does the industry relate to the phenomena of huge lost sales of items that are no longer available much before the end of the season? They do not title it with a name that clearly shows the negative impact, rather they camouflage it with a positive title: they call it Sold Out -and the fact that an item is sold out is regarded as something positive.

In the same way the industry hides from itself the phenomenon which is the other side of the same coin. The term obsolescence or obsolete products does not exist in this industry. How do they hide the obsolescence? At the BigBrand level it is hidden under the title: Outlet Sales. What is the reduction in price given in the outlet? It is never in the range of 5 – 10%. It is minimum 30% and 70% reduction is quite common. This merchandise is merchandise that BigBrand is stuck with and is unable to push into the retail. On top of that, there is the obsolescence in the inventory the retail is holding. Once again it is not called obsolescence, it is called end-of-the-season clearance sale. Again, the reduction of price offered at an end-of-the-season

¹ items missing from the central warehouse are erased from the list of items that the shop should hold, so the two effects are cumulative

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

sale is not in the range of 5 – 10%. And this sale starts at least a month if not 2 or more before the end of the season. The amount of obsolescence in the system is probably equal to 30% or more of total items produced. This is not a small phenomenon.

What we must bear in mind is that these two phenomena co-exist. From one extent for huge numbers of SKU's there are considerable shortages, while at the same time, for not a smaller number of SKU's there are enormous surpluses. How come?

The answer is obvious to anybody in the trade. When do we decide on the quantities to be produced of each SKU? Before the beginning of the season. Do we at that stage know what will be the actual demand per SKU? Of course not. Everybody in the trade will tell you how ridiculous is the notion that we can forecast 6 months in advance the demand on an SKU level. The forecast is not even considered to be an educated guess. No wonder that for about half the items the forecast is too low, leading to shortages, and for the other half the forecast is too high, leading to obsolescence. The whole system is run based on a detailed forecast (at the SKU level) which is determined more than six months in advance.

Our colleague, who had invited us to this meeting, had constructed the skeleton of the resulting current reality tree. He explained it clearly and they all fully agree with it.

The next step is to realize that the good companies are close to the optimum in terms of what can be done within the existence of that horrible tree; that currently people are already doing the best they can. Suggest to anybody in this system that 50% of his/her time is devoted to putting out fires and the usual reaction is: “wrong – it is over 90%.” When you ask them to view the fires they have been dealing with in the last few months and check if all those fires are all stemming from this horrible tree, you get full confirmation. That means that for a company that is already doing well, to think they can further increase NP from hundreds of millions to 1 billion in 5 years is ambitious. One needs vision and determination to even put such a

Science of Business ♦ Goldratt Implementation Group US

303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

target.

As long as this tree exists the 1 billion NP / yr. is maybe too ambitious. But as we said this entire tree is based on the assumption that the system must be driven by a detailed forecast put 6 months in advance. Here I explained the standard TOC solution for distribution. I used Mickey's excellent sawtooth diagram to demonstrate the magnitude of the order lead time and I used the relevant section of the INSIGHTS to demonstrate the impact of aggregation.

I concluded that once we implement the TOC replenishment mechanism we should start the season with just one month of inventory and use the first 2 or 3 weeks to get real knowledge of what is moving and what is not and based on that we will replenish to the central warehouse. Of course we will have to teach the suppliers to work with much smaller batches (not a problem because set-up is not a factor) and with reasonable lead times (an item that takes less than 30 minutes touch time should not be subject to a production LT of two months but rather to a production LT of 1 week).

Of course, for the high runners that we reveal in the first two weeks, we have to prepare ourselves for flying inventory the next few weeks in parallel with shipping by ship another quantity. Overall it should be expected that about 20% of all quantity will be sent by air rather than sea. Air is much more expensive than sea, but relative to the selling price (or even worse, relative to not selling) it is negligible.

In this way we will reduce the shortages to a mere fraction of what they are today and almost eliminate all the obsolescence.

This by itself is probably enough to reach the realistic target of 4 billion USD/yr NP. But we just started.

Let's see if we can agree on the next guiding concept: as long as the end consumer hasn't bought, nobody in the supply chain has sold. If we agree on that, BigBrand should not consider a situation where they have sold to the

Science of Business ♦ Goldratt Implementation Group US
303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

retail as if they have finished to do their job. The retail buys from BigBrand also in very large quantities. This is also based on a 6 month forecast. It is no wonder that about third of the products they buy are slow movers. Now do you agree that in retail what is not displayed is not sold? When the retailer starts to realize that he is holding a lot of relatively slow movers, he also realizes that unless he does something these slow movers will only be sold at the year end sale for a loss – so what are they doing? These slow movers are now getting a visual display which is better than what they deserve. And they get the attention of the sales force more than they deserve -at the expense of the attention and display that the high runners should get. How much sales are lost due to this? I don't think anybody knows – but there is one thing everybody knows, it is significant.

What will happen if BigBrand will offer to their retailers to accept back any merchandise for a full refund? Don't panic, since we already implemented the replenishment system we no longer deal here with huge quantities. The idea here is: let's make sure that the best display and the attention of the sales force is devoted to the best products. Overall sales will grow. But now, since our solution provides us already with the information we didn't have before, which SKU has sold in which shop every day, BigBrand should take the active role telling the retail which items are not moving in their store – send them back -and these items are moving nicely in your region – take them instead. If this is done, how much will sales go up? Nobody knows, but it is not just a small percent. As long as we believe that display and gentle push from the sales force are important it must be huge.

That brought me to the real issue. A store knows that the fresh collection attracts clients to the store. This is the reason chains and shops are putting a lot of pressure on BigBrand to switch from two collections per year to four collections per year. Considering the amount of efforts and cost required, the mere fact that BigBrand considers this request shows that everyone recognizes that such a move will have a major impact on total sales. But do we need to put the mammoth effort needed to switch to 4 collections per year?

Science of Business ♦ Goldratt Implementation Group US
303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com

Brought to you by www.ScienceofBusiness.com, the site with all your Goldratt Theory of Constraints information – books, self learning materials, [Dr Lisa](#) products, speaker information

Science of Business Goldratt Implementation Group US

How many variations per season does BigBrand design, produce and store in their central warehouses? The surprising answer is around the vicinity of 80,000 variations per season (variation does NOT include size, so the number of SKU's produced and stored is by far larger). Why such a huge number? It is due to the need to convince the clients, the retail chains, to buy from BigBrand. Different clients have different tastes and predictions about the market; BigBrand has to design, produce and store an enormous variety of variations if they want to be a major supplier to so many different chains. Now ask yourself, how many variations does a store hold, even a large store? Less than 1000.

That means that in almost any given store the variety the end consumer sees is just 1% of what is actually available. Now that we do have a mechanism of replenishing every few days to the store, the mechanism that enables us to take back items from the stores, the way is paved to make sure that stores will have a new collection every month – without increasing at all the amount of items that BigBrand currently designs, produces and warehouses.

This will dramatically enlarge the overall sales.
According to all the above, reaching 4 billion USD per year starts to look conservative.

Science of Business ♦ Goldratt Implementation Group US
303.909.3343 phone ♦ 303.362.7353 fax

♦ www.ScienceofBusiness.com ♦ www.Viable-Vision.com ♦ Info@ScienceofBusiness.com