

Big Brand – Engagement Results

1.0 The Client

The client is an apparel company with global brand recognition and products available in virtually every country in the world. To keep their competitors in the dark, we will call the client Big Brand. Big Brand has been delivering sports apparel and accessories to customers for most of a century. Big Brand has a simple strategy – to continuously strengthen brands and products to improve their competitive position and financial performance. The client had annual sales of € 7 billion with ½ billion in annual net profit. Six billion of the annual sales are to Retail Partners and 1 billion comes from Big Brand’s own retail stores.

They have two seasons annually. To remain competitive, manufacturing moved to third world countries to take advantage of low cost labor. Manufacturing lead time is between 2 and 4 months and transportation lead time is between 4 and 6 weeks. Today Big Brand orders inventory 5 to 9 months before the inventory is introduced to the public.

1.1 Retail Business Challenges

Here are some operational facts that Big Brand was facing in its European retail segment:

1. Big Brand has over 200,000 SKUs overall, when size and color are considered. In any given store, 3,000 to 6,000 SKUs are present at a given time, depending on the size of the store.
2. In-store shortages of about 30% – customers were often not finding what they were looking for.
3. 2.2 inventory turns per year in retail segment stores – this inventory was just what was in the stores, not including stock in the distribution centers or on the way from suppliers.
4. They suffered from too much inventory:
 - a. Stores shelves were clogged with slow movers – blocking potential sales from faster movers.



- b. Old season's inventory was sold at discounts directly effecting Big Brand's margin.
 - c. Inventory not sold was returned to distribution centers for aging so its subsequent sale in rural factory outlets would not undermine the sales of wholesale customers – another hit to Big Brand's margin.
 - d. Finally, remaining non-salable goods were shipped to third world countries where Big Brand's products were not marketed – the final blow to margins and the brand's caché.
5. Forecasts developed 6 months to a year previously proved anything but accurate.
 6. New season roll outs were hampered by improper inventory levels at the DCs, caused by shipments which were late or in the wrong quantity. This occurred despite orders being placed 5 to 9 months in advance.
 7. They experienced the expense of stock transfers between various DC's around Europe – the inventory was often in the wrong area and had to be moved to where the goods were selling.
 8. At the retail level, reordering occurred once every week or two, based on the availability of the store manager's time. Buyers monitored thousands of SKUs in multiple stores in several markets and manually replenished. With so much to look at daily, it was a challenge for Big Brand's buyers to help the stores keep even hot sellers on shelves.

Like many other companies, the client was caught in a conflict. On one hand, to protect and grow sales Big Brand wanted more inventory to eliminate shortages. On the other hand, they needed to control costs and cash, which required Big Brand to reduce inventory to avoid carrying costs and obsolescence. Of course, this did not seem like a conflict to the client; it was just the difficulties associated with ordinary, every day business. How could there be a problem? After all, hadn't Big Brand been profitable and briskly growing for decades? It was scary to contemplate a change. What if they stopped producing the current ½ a billion Euros per year?

1.2 A New Approach

IDEA, LLC suggested to Big Brand that any good approach toward improvement should meet certain criteria – criteria that can be used generically to evaluate any potential change. Together, IDEA and Big Brand came up with the following criteria that the perfect improvement would meet:



- improve product availability while reducing overall inventory
- increase sales
- reduce operating costs
- have low risk
- be sustainable over the long term
- get quick results through ease of use

In order to meet all the above criteria, IDEA had to address the conflict between the competing actions: raise inventory vs. lower inventory. If sales could be protected with less inventory, this was an obvious preference. Yet three powerful obstacles stood in the way, each a rational argument for more inventory.

1. Replenishment time was significant
2. The reliability of re-supply was poor and
3. Forecasts were not accurate enough

IDEA's proposal was to move from a Push to a Pull supply chain including the following actions:

- Reduce lead time by replenishing with greater frequency according to actual consumption rather than forecasted demand
- Establish inventory safety buffers and constantly monitor availability in order to rapidly and dynamically adjust these buffers
- To reduce shortages and surpluses, hold most inventory where consumption varies least

1.3 Initial Rollout

Big Brand and IDEA agreed to test the approach on a small scale. The initial rollout covered all replenishment between a local DC and 4 retail segment stores. The first order of business was to get daily point of sale data. Every evening the stores would go through their usual closing process and then send IDEA sales and receipts for the day, as well as ending on hand inventory. From that information, IDEA produced replenishment orders for the local DC to be picked and shipped back to the stores.

Should the DC run out of inventory, IDEA would deactivate replenishment of the SKU, removing it from the system. With such long response time from the factories, there was no opportunity to get more to the DC.



IDEA monitored inventory buffers for all SKUs in each store every day. If protective inventories went unused for some items for too long, IDEA adjusted the ordering targets down. Conversely, when inventories were low enough for long enough to risk shortages, IDEA adjusted the targets up. The result was many fewer store shortages and less surpluses too. Sales went up and discounting was curtailed.

With daily replenishment systematically processed by IDEA, Big Brand's merchandisers had more time to work on other issues that effected sales, such as expediting the now small number of stock outs, activating new products in the store, setting up visual displays to drive more sales and removing slow sellers from the store or to less strategic locations in the stores.

Big Brand, however, still needed a tool to help staffers prioritize their work. IDEA's Elucidate reporting systems provided tools personalized to a staff member's responsibilities. The information that was provided effectively focused and prioritized employees' time and efforts on tasks that are most important to the entire company – tasks which bring money into Big Brand, now and in the future.

The first and the most important tool is Throughput Value Days (TVD). This tool indicates the impact due to stock out. A TVD report shows priority by multiplying the margin the product produces by the number of days out of stock. A second tool is Risk Value Days (RVD). RVD works in a similar fashion but identifies inventory buffers which are too low where there is a greater risk of future stock out.

The third tool, IVD, is also important but less so. IVD stands for Inventory Value Days (the length of time a product has been on hand in a particular inventory buffer multiplied by the value of the inventory). It is more important to avoid stock outs than to reduce inventory, hence its secondary importance. Using IVD reports, products that deliver relatively poor return on inventory can be pulled out of the stores and returned to the DC.

Next, IDEA recommended picking a central DC for the retail stores. The demand for a particular SKU at the DC is smoother than the demand at individual stores. Demand spikes in one store are averaged in and often offset by lower demand in other stores. The smoother aggregated demand at the single DC allowed Big Brand to hold less safety stock, significantly lowering inventory system wide.

A number of other benefits of consolidating to one DC accrued:

- a better picture was seen of what should be replenished from manufacturing.
- costs incurred transferring inventory between locations were reduced



- replenishment was reduced
- more inventory was held at the DC and less at the store level
- overall inventory dropped – inventory turns increased
- merchandisers had the ability to increase supply to areas that were selling and restrict replenishment where sales were slow or nonexistent
- better availability allowed sales to rise

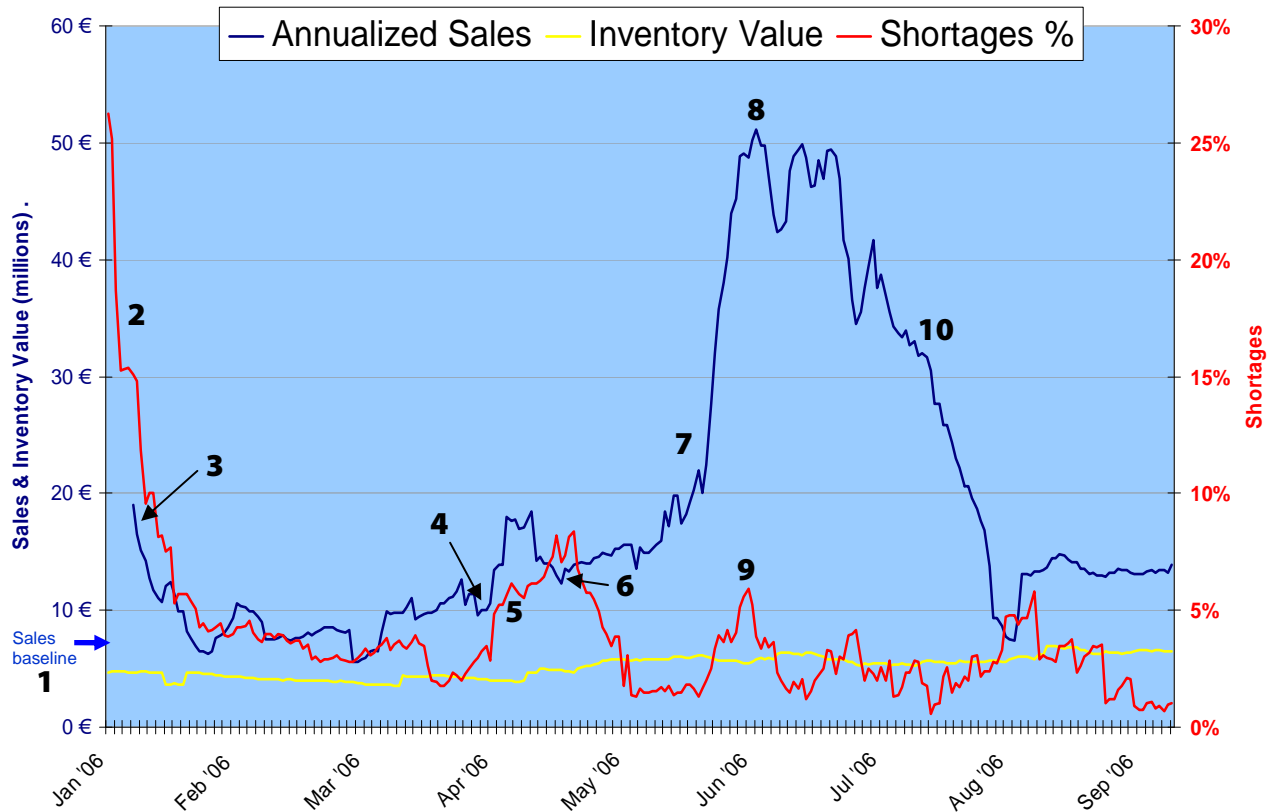
Pulling orders which had smaller quantities and more SKUs caused some increased workloads at the DC. The extra operating effort and expense was trivial, however, compared to the profits from additional sales. IDEA organized a trip to the DC to show its management staff how the DC could have a positive effect on the company's profitability. The demonstration showed that smaller, more frequent deliveries increased profitability by reducing lead time, consequential stock outs, and lost sales. They realized that incremental labor increases were insignificant in comparison. DC management made several changes to improve the situation and suggested SOP changes to upper management to further improve responsiveness to the retail segment. Had we not educated the DC staff they might have resisted the initiative.

1.4 Results

The performance results from the initial rollout are presented graphically on the following page. The graph shows annualized sales (blue line), inventory value (yellow line), and the percentage of shortages (red line). A number of points of interest are reflected numerically on the graph to provide additional information.



Real Results



Points of interest on the graph:

1. Sales base line for the previous year for the same stores
2. Shortages immediately began to decline when daily consumption and stock outs were automatically replenished
3. Spring line rollout over a 4 week period
4. An additional store is added
5. DC system failure, client lost all DC visibility
 - a. IT systems reported no inventory with which to replenish stores
 - b. Phantom shortages persist for 6 weeks



6. Sales declined to the extent that the contribution of the new store is erased
 - a. When shortages dropped back to 1 ½ %, sales made new highs
7. An external event temporarily boosts sales
8. Peak sales are 12 times baseline
9. Shortages increased for 5 days
 - a. IDEA's system, Elucidate, automatically adjusts inventory buffers to handle additional demand
 - b. Shortages resolved in 5 days
10. Fall line rollout over a 4 week period – External event ends
 - a. Sales are greater than normal
 - b. High volume sales persist for longer than normal

1.5 Summary

As you can see from the Real Results graphic, the results speak for themselves. Same store sales doubled, excluding the sales impact of the external event during June and July. Inventory levels were ½ of what was typical. Note the remarkable stability of the inventory, even during the external event. Inventory shortages were reduced to 1.5% which is 20 times less than the beginning benchmark. The initial rollout alone resulted in a € 4 million profit increase. Net profits increased to 30% of sales, a level previously regarded as impossible.

