Preventing the demise of a store

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How come a retail store (displaying and selling regularly required essential items such as a food and household products) opened by a retail company with due knowledge of the potential sales in an area close down after some time?

(The burden of the inventory of a few closed stores can bring the retail company to its knees)

The root cause

Many store incharges often blame it on the competition giving out higher discounts / schemes/ lower prices, or increased costs or lower 'demand'.

With the extent of knowledge of potential market available , the probability of the estimation of the potential footfalls / sales (market share) for a store in an area being way off the mark is low. Nor do the initial estimation of the costs (rent, manpower, electricity, etc) increase dramatically, to wipe out the initial estimation of the profits. It is also fair to assume that the shopping experience was not compromised. Nearly all the leading chains make it equally attractive for customers through value offers, discounts etc. So the only reason to be analysed remains – lower 'demand'.

What is demand for a store? One of the most weighted factor determining demand is the potential flow of people into the store.

When the store is operational for considerable time, the flow of customers into the store is quite deterministic. Discounting a few external factors such as a new difficulty in approach to the store, social risks etc, can the demand in the store decrease?
So the key question to answer is: All other external factors remaining unchanged, why does the flow of people into the store decrease? One of the primary reasons is the inconsistent availability of all the items that she wants (her whole shopping list). In such hyper stores the customer would like to complete her shopping in a single visit.

Unavailability of even a few items of her shopping list is viewed as huge inconvenience as the customer has to make additional trips to another store. If the unavailability, even if it is of different items at different times, is experienced regularly, and if there is a nearby option, the chances that she will try another store is very high. Most importantly visit to such stores being a frequent topic of discussion amongst women, not so favourable word of mouth can urge a few more customers to reinforce their experience and reduce their visits to this store. As the number of such customers increase, the loss of customers for the store increases exponentially (and not linearly).
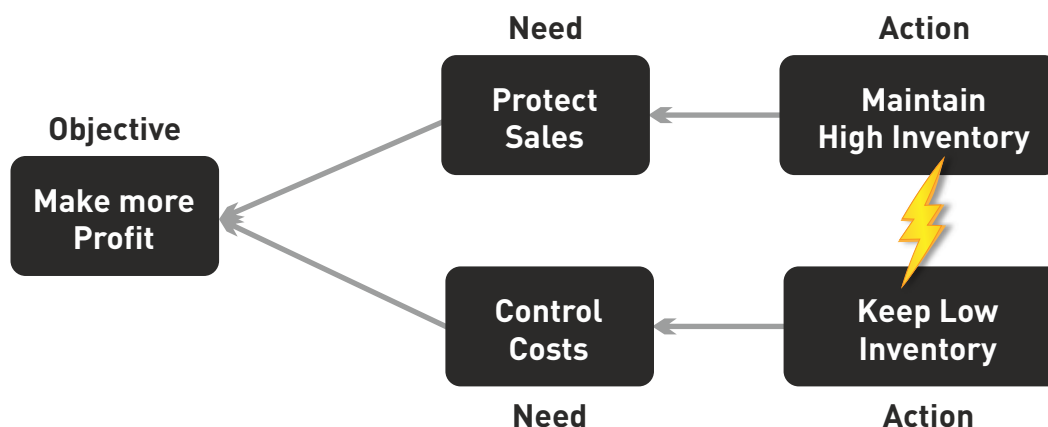
As the customer flow decreases, the inventory turns decrease as the inventory held is the same as before and the sales has decreased. Lower inventory turns locks up the cash of the store. As inventory is not flowing as was expected, the limited capital/ budget (for a category) gets tied up in items not selling immediately. As forecasts are not accurate (suppliers compete with each other for higher visibility and customer preferences change), some items get stocked out and some items become surplus. To provide better prices to customers category managers buy in high volumes to avail discounts. And if these now turn into slow movers, a huge chunk of capital is now locked.

(Study a few stores and warehouses and you will realise how prevalent this situation is. A store will have 15 days of inventory, though the supplying warehouse is 1 day away, and even in these 15 days there will be some stocked out and some well above the 30 day level).

With his limited budget now being stuck in not immediately selling items, there is a high probability that the category manager will postpone the buying of the stocked out items, or will compromise on another selling item. Eventually this forced action leads to further unavailability. To release capital he has to get rid of the existing stock, and hence has to display the available range (some of which is not so popular anymore) in precious shelf space. Soon the volume of slow movers occupying the shelves increases giving the store an old, non vibrant look. This further dissuades customers from visiting. This vicious cycle can lead to the demise of the store.

On the other hand, 100% availability of the potential / full range can increase sales significantly (with the effect being exactly opposite to that of the vicious cycle described).

Unavailability of moving items, from time to time, is at the root of this vicious circle. The easiest option to avoid unavailability is to have higher inventories. But higher inventory locks limited capital leading to postponement of buying of stocked out items. Also, higher inventory increases costs due to increase in cost of capital, obsolescence, forced discounts, damages, delay in promos, etc. This is the conflict that has been harassing the stores/ category managers continuously.

Need   **Action**

Objective

	Protect Sales	←	**Maintain High Inventory**
Make more Profit			⚡
	Control Costs	←	**Keep Low Inventory**

Need   **Action**

Usually companies manage this conflict by moving from one side to the other as per the pressure of costs (finance dept) and unavailability (sales pressure). You must have realised that optimisation is a compromise and is not sustainable as the first instance of pressure from sales or costs will result in shifting to one of the actions. And soon the oscillations will start again. It is now evident that the non resolution of this conflict results in reduced realisation of potential profits.

The way out

100% availability at lower inventory (higher inventory turns). This will surely prevent the commencement of the dreaded vicious cycle described above. Most importantly availability will increase sales. More sales from existing operating expenses will significantly increase profits, as the entire gross contribution of the additional sales adds to the bottom line. A retail company with a gross contribution of 20%, by increasing sales by 20% through 100% availability, will double its profits (assuming current profit is at 3-4%).

Many experienced managers think this is easier said than done. The 'Theory of Constraints' Replenishment and Buffer Management solution coupled with correct implementation can ensure this state.
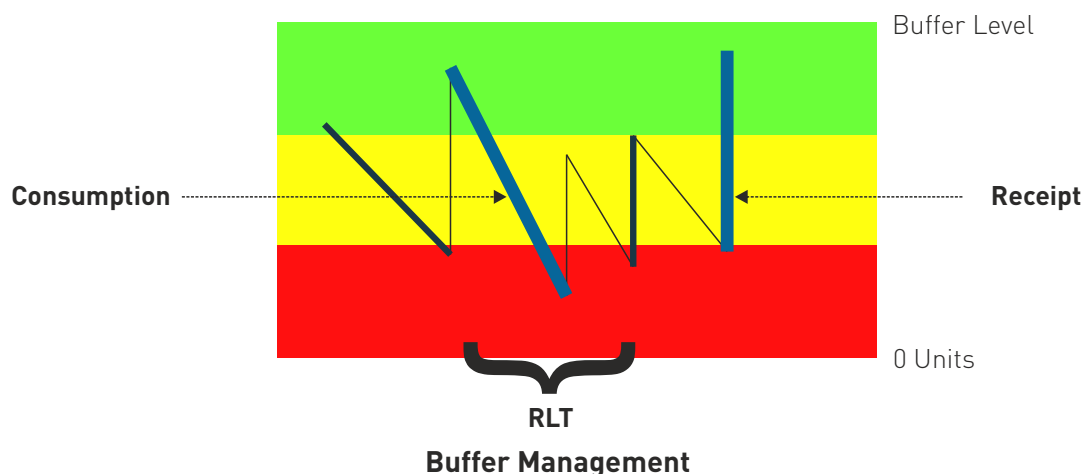
The elements of the solution

If the store is supplied only what it has sold and if the supplying warehouse does not have unavailability, the store will have 100% availability. Even with this process the store can experience stockouts if the initial inventory was not adequate to service the demand in the lead time of the supply. Hence a safe starting inventory for each item is maximum sales /day x replenishment lead time. The Replenishment Lead Time (RLT) is composed of the Ordering Lead Time (OLT) and the Transportation Lead Time. The OLT is the time between the consumption of the piece till it is ordered. Due to batching and administration cost considerations, the ordering is batched for a period of time. If orders are released once a week, the OLT is 1 week. The TLT is time taken for actual transit and the waiting time for the incoming orders to be sufficient to fill the trucks (again batching). These considerations in OLT and TLT will mean a high inventory to be kept in the store, which does not serve the objective of the solution being described here.

If the store provides daily sales data, every day , the OLT is reduced to 1 day. Orders (daily sales) of all SKUs collected every day can suffice to fill the truck in a day or two. Usually stores are supplied from a nearby warehouse, which is not farther than 1 day transportation time away. Considering these factors, the RLT is now 2-3 days. The store can start with a safe inventory of 4-5 days. With due consideration to weekends and merchandising considerations, the safe starting inventory can be increased to 5-6 days of sales. It is now possible to claim that the store will have 100% availability at low inventory of 5-6 days.

To summarise: The store provides daily sales data to the supplying warehouse and the warehouse supplies immediately as soon as the truckload is reached. (Order daily replenish frequently). The daily sales data can be provided through IT modules.
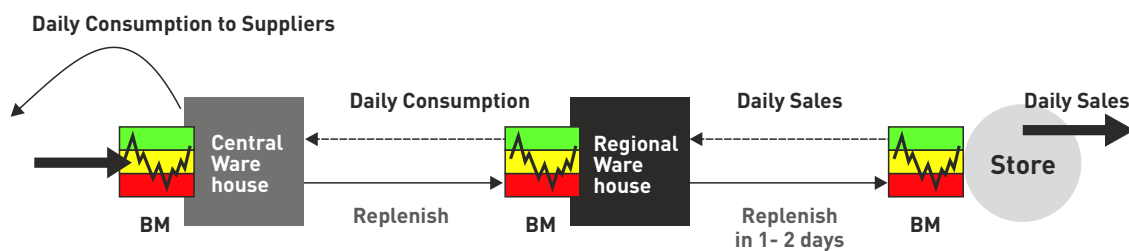
Buffer Management: Over a period of time, sales trends are bound to change. Rate of sales of some items will increase while for some it will decrease. The stock decided to be maintained (Buffer) in the store is divided into three equal zones of 33% each. The bottom most from 0% to 33% is red, the next 33% yellow and the last 33% green.

Consumption   Buffer Level   Receipt   0 Units

RLT

Buffer Management

If the items remains in red for one full replenishment lead time, due to increase in sales, the stock level or buffer is increased by 1/3rd. Similarly if the stock level is in green for over 2 replenishment cycles, the buffer is reduced by 1/3rd. This buffer level changing can be automated using a software tool. The buffer levels and their penetration (current stock level with reference to the 100% level) is visible to supplying warehouse. The items in red are expedited as they are in danger of getting stocked out.

For the dispatcher in the supplying warehouse life is simple – look at the buffer reports of various stores everyday morning (which comes sorted on penetration in to the buffer) and prioritise the dispatches as red, then yellow and green items.

The same solution is applied for the central warehouse and regional warehouse link. The key element for these links is that the material is not pushed to the next link, but replenished as per sales / dispatches to the next link / consumer. The central warehouse should follow the same with suppliers ie the suppliers should supply based on the daily sales data provided by the central warehouse.

Holding the inventory at the source/ central warehouse (and replenishing only what is sold to the next link) ensures that the material is held at the point which has the highest accuracy of forecast. As by the principal of aggregation, the variations in demand from the various stores is averaged out at the central warehouse,. Also allows prevention the situation of having stockout in one store and surplus in another (of an SKU).

It is evident that this solution eliminates the need for a forecast. A fairly approximate starting inventory level (for each SKU) is good enough to start with. The Buffer Management system will correct this level based on sales trends. Phase in phase out of the SKUs for season/ promos is managed by reducing or increasing the buffers a lead time ahead of the event.

In summary- using the Theory of Constraints Replenishment and Buffer Management solution it is not difficult to achieve near 100% availability at very low inventories.

The solution ensures 100% availability in a dynamic environment, while preventing locking of precious capital in not immediately selling stock. The released capital should be used to increase the range of the shop within existing category or adding new category. It is proven fact that the footfalls in a shop with higher range and variety are much higher than in a smaller shop.

The result- increase in sales and as the increase has come without increase in fixed costs, the profits increase dramatically.

1st ELEMENT OF THE SOLUTION
Holding most inventory closer to the source

2ⁿᵈ ELEMENT OF THE SOLUTION
Basic formula to determine inventory levels:
"Maximum" consumption within the replenishment time

3ʳᵈ ELEMENT OF THE SOLUTION
Replenish only what is sold

4ᵗʰ ELEMENT OF THE SOLUTION
Order daily, replenish frequently

5ᵗʰ ELEMENT OF THE SOLUTION
The stock levels will be constantly monitored using Buffer Management to adjust the buffer levels.

TOC Supply Chain Solution - Solution Elements

(The counter argument is that the same result can be achieved with Min Max supply systems, and is a popular supply management system used in quite a few companies. Not true. If the sales increase rapidly, though the order is released when the stock level reaches the min level, the material may not reach in time before the remaining stock is sold out. For a fast selling item this effect is compounded across the supply chain. This can be avoided by having a higher level of Min order point. This does not serve the requirement of 100% availability at very low inventory).

Ofcourse there is a sequence and methodology of implementing this change. Is it difficult?