Retail the TOC way

Introduction

Rami Goldratt

Goldratt Consulting Group
The Retail Paradox

- Stores are packed with inventory, yet there is continuous pressure for more products
The Fundamental Challenge

- We want to have:
  - The right inventory
  - At the right time
  - In the right place

- But in reality we have too much of the wrong inventory

Why?
The 1st Element: Our Bias

- You can’t sell what you don’t have
- To protect sales we prefer to error on the safe side and have safety stock
- Simple formula: Complete Product Width X Safe Product Depth = too much inventory
Example: Over-Depth (Apparel)

- When filling up a store every style come in a set of sizes (1x38, 2x40, 2x42, 1x44)
- Minimum initial store fill 2 sets per style
- But...
  - Best sellers are selling at an average rate of 1 piece per week
  - However, most SKUs (Style & Size) do not sell even at a rate of 1 piece a month
  - A non negligible chunk does not get to sell until the EOSS
Example: Over-Width (Sport Retail)

- Just look at the speed at which we increase our range offering over the years...

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Range</td>
<td>11K</td>
<td>14.5K</td>
<td>17.7K</td>
<td>22.9K</td>
</tr>
</tbody>
</table>

- The range is becoming far larger than the store’s ability to represent and sell
Our Bias *(You can't sell what you don't have)*

- Loss of sales potential
  - Limited range, shortages
  - Aged stock, low freshness, shortages

- Level of Inventory
  - Starvation
  - Saturation
The Vicious Cycle

- Limited Freshness
- Low walk-ins / low conversion
- Too much “wrong” inventory
- Loss of Sales

Our safety works against us!
The Fundamental Challenge

- We want to have:
  - The right inventory
  - At the right time
  - In the right place

- But in reality we have too much of the wrong inventory and too little from the right inventory

Why?
Lack of synchronization is a major contributor to our inability to have the right inventory
Different Functions - Different Needs

- There is a need to maintain high product availability *(Supply Chain)*
- There is a need to introduce new products/collections *(Merchandising, Design)*
- There is a need to get rid of aged stock *(Retail)*
- There is a need to broaden our product/category range *(Merchandising)*

Our processes are not synchronized towards the global optima
Consider the following:

- 30% of the stock takes more than 6M to sell
- 30% of the stock are best seller products

What do we expect the new products to substitute? A best seller or a non-mover?

What are the ramifications on the category level?
The Fundamental Challenge

- We want to have:
  - The right inventory
  - At the right time
  - In the right place

- But in reality we have too much of the wrong inventory and too little from the right inventory

Why?
We buy, produce and allocate inventory based on forecast

Forecasts are never accurate

The longer our lead time the poorer the forecast accuracy
Forecast (Garment Fashion Example)

- Cycle time (concept to garments): 9-13M
- Season time: 6M
- Forecast method: Forecast the entire SKU range and depth 9-13M before season starts
- Performance:
  - 85%-90% alignment to forecast, but...
  - 50% shortages of the best sellers 2 months into the season
  - 50% of sales are at full fare price, 30% on (50% off...) discount
  - 20% returns post season
The Bottom Line

- Unsatisfactory financial performance (Sales, Margins, Inventory turns, ROI)

- Conflicts and tension between the key functions: Brand – Merchandising – Supply Chain - Retail
Back to the Fundamental Challenge

We want to have:

- The right inventory
- At the right time
- In the right place

How?
Step 1
PREVENT SATURATION
Step 1: Prevent Saturation

We have less “wrong” inventory, but how do we know that we have the “right” inventory?
Not All Products are Equal

“Head”

“Belly”

“Tail”
Example (Consumer Electronics)

What is the likely outcome if we treat all products as if they are the same?
Apparel, The most selling category: Ladies, L-heavy apparel

Wrong stock: 55%
Tail: 85%
Sales
Stock

Head

APTOP1 レディス L 重衣料1
Household furniture, The most selling category: Bed

Sales

Wrong stock: 65%

Stock

Tail: ~90%

Head
Different products behave differently

To increase Sales, Margins and Inventory turns each group of products must be rapidly identified and need to be addressed differently

Sales Driver  Variety Driver  Stock Driver

“Head”    “Belly”    “Tail”
Step 2
SYNCHRONIZE PROCESSES
Step 2: Synchronize Key Processes

- **Our wish list:** How can we capture all the sales opportunities...
  - By introducing enough new products, but without packing the store with inventory
  - By offering adequate products range and sufficient availability for our product, but without aging inventory
  - By doing attractive Sales promotions, but without aging inventory
How do we ensure we have high success rate of NPI, but without packing the store with inventory (and without caniblaizing best sellers)?
Jewelry Example: Old Process

- **Old Process:**
  - ~6500 new products introduced yearly in two major events
  - Stores were called to a NPIM event to evaluate the new designs and select the bulk of new products they desire

- **Yet...**
  - Very few new products became best sellers
  - Large amount of the new products ended up in the Tail
### Jewelry Example: Process Scope Change

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Old NPIM process</th>
<th>New Core Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly scope of NPI (Plain &amp; Studded)</td>
<td>10000 (FY 09-10)</td>
<td>2364 (FY 11-12)</td>
</tr>
</tbody>
</table>
We divided our stores to three equal groups:

- Each group is getting a unique set of New products for 4 months.
- During the 4 months the New Products are on replenishment.
- After 4 months the sets are rotated between stores.
Jewelry Example: The Outcome

Process Outcomes

- **Newness** - Store have high level of newness throughout the year (level of newness is controlled centrally)

- **Head** – 38% of the yearly introduction were identified as newly emerged Best Sellers

- **Tail** - Only 12% of the NPI ended up in pure Tail (got deactivated after 6 months)
Step 3
RESPOND FAST
(TO ACTUAL DEMAND)
Step 3: Respond Fast to Actual Demand

We need to develop the capabilities to respond fast to actual demand

1. Identify actual demand
   - Rapidly, immediately when going into a new season, NPI, new store
   - Ongoing monitoring of demand

2. Respond quickly
   - Re-Supply, Product de-activation, Liquidation
   - Stock Norm alignment, Range alignment
Our Supply Chain is fine-tuned to deliver the forecast

We can re-configure our supply chain from forecast driven to demand driven by adopting the three rules below:

- **Frequent Re-Supply**
- **Aggregarting Inventory**
- **Demand Based Norms**

By holding most of our inventory upstream (in aggregation points) rather than downstream (close to the stores) we can significantly shorten our response time to market.

Re-aligning our inventory norms frequently with actual demand ensures our inventory is in-line with demand.
Supply Chain Re-Configuration (Illustration)

Forecast Mode of Operations

- Most of the inventory is downstream, closer to the customer
- Infrequent delivery to based on forecast

- Raw Materials
- WIP
- Central WH
- Regional WH
- Stores

© 2013 TOCICO. All rights reserved.
Supply Chain Re-Configuration (Illustration)

Demand driven mode of Operations

Inventory is balanced across aggregation points

Frequent Re-Supply to demand based norms

Total inventory in the supply chain is reduced
Watch Example (Before)

Re-Supply time = ~90D

Watch Assembly

1st level components other than cases

60D-120D

7D

60D-75D

RM

Tools

Press Machining Polishing Plating Case Plant Assembly

CFA

RS LFS EBO CFA
Watch Example (After)

Re-Supply time = ~17D

Monthly to Weekly Re-Supply

1st level components other than cases

Watch Assembly → CWH

Aggregation of Demand, daily Re-Supply

Buffers in aggregation Points, daily Re-Supply

© 2013 TOCICO. All rights reserved.
Summary: The Three Concepts

1. Prevent Saturation
2. Synchronize Key processes
3. Respond Fast to Actual Demand
Summary: The Three Concepts

1. Viable Vision for Retailer
   - 2.1 Effective Merchandise Management
     - 3.1.1 Preventing Saturation
     - 3.1.2 High Availability of Head
     - 3.1.3 Synchronizing NPI with Tail Liquidation
     - 3.1.4 Ongoing Category Range Management
   - 2.2 Effective Point-of-Sale Management
     - 3.2.1 Reduce Time to Market
     - 3.2.2 Dynamic learning process from the market
     - 3.2.3 KPI
   - 2.3 Expansion (Store, Channel, Product)
GOOD LUCK!

“Good luck means preparation meets opportunity”

Lucius Annaeus Seneca (4 BCE – 65 CE)