TOCICO 0 to 60
Introduction to Distribution /Supply Chain

Lisa Anne Ferguson, PhD
CEO and founder, Illuminutopia
Dr. Eliyahu M. Goldratt
(1947 – 2011)
The Strategy & Tactic tree

Consumer Goods

Viable Vision implementations
The effect of Order lead time

What is changed when replenishing to demand?
Consumer Goods S&T

1 Viable Vision

Base Growth

2:1 Inventory Turns Comp. edge

Enhanced Growth

2:2 TPS Comp. edge

Build

3:1 Produce to Availability

3:2 Proposal Design

3:3 Inventory Turns Selling

3:4 Expand Client base

3:5 Capacity Elevation

Capitalize

Sustain

Build

3:6 Ensure High TPS

3:7 TPS Selling

3:8 TPS Enhancement

Capitalize

Sustain

3:6 Ensure High TPS

3:7 TPS Selling

3:8 TPS Enhancement
<table>
<thead>
<tr>
<th>Necessary assumptions</th>
<th>When most cash is tied up in inventory and availability is still an issue, improving inventory turns is a client's significant need.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>A decisive competitive edge is gained by providing a &quot;partnership&quot; that delivers superior inventory turns (better availability coupled with substantially reduced inventories), when all other parameters remain the same.</td>
</tr>
<tr>
<td>Parallel assumptions</td>
<td>Switching from a forecast driven mode of operation to a consumption driven mode of operation increases dramatically inventory turns (reduces shortages while reducing inventories).</td>
</tr>
<tr>
<td>Tactic</td>
<td>The Company develops the capabilities to successfully implement with enough clients a “partnership” that is based on supply according to consumption.</td>
</tr>
<tr>
<td>Sufficient assumptions</td>
<td>Building a decisive competitive edge is not easy; building the capabilities to capitalize on it is not less difficult. But, sustaining these two elements is the real challenge.</td>
</tr>
<tr>
<td>Necessary assumptions</td>
<td>Supplying according to consumption requires production and distribution capabilities which most companies do not have (being able to satisfy demand, which is composed mainly of very small quantities, reliably and within a short lead time).</td>
</tr>
<tr>
<td>Strategy</td>
<td>The company always has, in its warehouses, enough inventory to satisfy immediately any reasonable demand.</td>
</tr>
<tr>
<td>Parallel assumptions</td>
<td>When operations is guided by actual daily consumption rather than batched orders, S-DBR with Pull Distribution (accompanied by their respective Buffer Management) enables operations to provide high availability with relatively low finished goods inventories (while exposing substantial excess capacity).</td>
</tr>
</tbody>
</table>
| Tactic | The company implements S-DBR and pull distribution and maintains appropriate inventories in the warehouses. 

*Only when excellent DDP is achieved (on the on-going business), and enough protective capacity is secured, is the green light given to sales to close pilot replenishment deals. Offering replenishment “partnerships” should start much earlier since the lead time to get contracts might be long. Actual delivery should start only when the appropriate warehouses (including plant warehouse) holds the appropriate inventory levels.* |
<p>| Sufficient Assumption | The mentality of eagerly accepting any reasonable order might stand in the way of building a system which is based on a decisive competitive edge. |</p>
<table>
<thead>
<tr>
<th>4:14</th>
<th><strong>Arranging for warehouse(s)</strong></th>
</tr>
</thead>
</table>
| **Necessary assumptions** | The longer the replenishment time to the client, the higher are the inventories that the client has to hold and the higher is the risk for shortages.  
Even when production lead-times are shorten they are still significant.  
Many times, transportation time from the plant to the client is significant. |
| **Strategy** | Warehouse(s) are used to enable the replenishment lead-time, to a “partnership,” to be extremely short. |
| **Parallel assumptions** | Holding the right inventories at a warehouse reduces the replenishment time downstream to be only transportation time from the warehouse.  
(A plant warehouse decouples the production lead-time from the transportation lead-time. A regional warehouse decouples the transportation time to the warehouse from the replenishment time to the client). |
<p>| <strong>Tactic</strong> | The company arranges for proper space for the plant warehouse, and if needed secure warehouse space (and handling) in the appropriate regions. |</p>
<table>
<thead>
<tr>
<th>1</th>
<th>Viable Vision for a For-Profit Organization</th>
</tr>
</thead>
</table>
| **Strategy** | The Organization is an Ever Flourishing company; continuously and significantly increasing value* to all stakeholders – employees (including suppliers), clients and shareholders (while preventing harm to the world due to its actions or lack of action).  
*increasing value: stability on green curve, growth on red curve. |
| **Parallel assumptions** | • Realizing a Viable Vision (VV) - a jump in profitability while increasing sales exponentially year after year - turns a company into an Ever Flourishing Company.  
• For the Company to achieve the VV, its Throughput must grow (and continue to grow) much faster than Operating Expense.  
• Exhausting the Company's resources and/or taking too high risks severely endangers the chance of achieving the VV. |
| **Tactic** | Build a decisive competitive edge (DCE) and the capabilities to capitalize on it, on big enough markets without exhausting the Company's resources and without taking real risks. |
| **Sufficiency assumptions** | • Since the constraint is management attention, the system must operate according to effective robust and long lasting procedures (the clock).  
• The way to achieve a DCE is by meeting a significant need of the consumer to the extent that no significant competitor can. |
The Strategy & Tactic tree

Retailers

Viable Vision implementations
Viable Vision

Base Growth
2:1
- Availability
- Competitive edge

Enhanced Growth
2:2
- Expansion

Build
3:1:1
- Ensure Existing SKU Availability

Sustain
3:1:2
- Protect and Improve Inventory Turns

Build
3:1:3
- Improve TPS (Product Portfolio)
Retailer S&T

1 Viable Vision

Base Growth

2:1 Availability Competitive edge

Build

3:1:1 Ensure Existing SKU Availability

Sustain

3:1:2 Protect and Improve Inventory Turns

Build

3:1:3 Improve TPS (Product Portfolio)

Enhanced Growth

2:2 Expansion

4:11:1 Internal pull distribution

4:11:2 Keeping correct inventory levels

4:11:3 Dealing with suppliers
Key injections

1. Central warehouse
2. Reduce order lead time
3. Replenish frequently
4. Pull replenishment based on consumption, not forecast
5. Buffer management
Top 7 references

TOC Insights into Distribution/Supply Chain

Goldratt Satellite Program session on Distribution/Supply Chain
About the presenter

Lisa A. Ferguson, PhD, is the founder and CEO of Illuminutopia, an organization that is focused on “Illuminating the way to utopia for individuals, organizations and society” (www.illuminutopia.com). Dr. Ferguson is the author of the chapter on Strategy and Tactic trees in the Theory of Constraints Handbook. Professor Ferguson has taught several programs on how to write S&T trees. Until June 2008, Dr. Ferguson spent a year working one-on-one with Dr. Eli Goldratt, the founder of the Theory of Constraints (TOC), as his apprentice while learning how to write.

Lisa Anne Ferguson is planning to publish two books on TOC in 2013. The first one is titled “My Year with Dr. Eli Goldratt.” The second book is focused on teaching you how to write and capitalize on the power of Transformational Strategy and Tactic Trees to enable organizations to become ever-flourishing.

Our web site has a news blog for sharing updates our educational efforts. Or feel free to sign up for free to access our guest portal access, where materials are posted. Providing your e-mail address to register as a guest means we would occasionally send you vital updates about what is happening.