An Integrated Approach to Supply Chain Strategy: Combining Lean and Agile Solutions

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• New competitive realities
• Lean and Agile – what’s the difference?
• Attacking complexity and waste
• Improving on-shelf availability
• Building a consumer-driven supply chain
New Competitive Realities
The changing marketplace

- The ‘shift to thrift’ continues
- The rise of the ‘promiscuous’ shopper
- Declining brand loyalty
- The importance of availability
- Meeting the multi-channel challenge
Diminishing brand loyalty

“When I find a brand I like, I tend to stick to it”

% agreeing

Source: BMRB/TGI 2003
“Price premiums have eroded and margins are following suit. Consumers are 50% more price sensitive that then were 25 years ago. In recent surveys of consumer-goods managers, seven out of ten cited pricing pressure and shoppers’ declining loyalty as their primary concerns.”

Source: Leonard M Lodish and Carl F Mella

*Harvard Business Review, July-Aug, 2007*
The importance of availability

In mature markets on-the-shelf availability can transform profitability both for the manufacturer and the retailer.

Two thirds of all shopping decisions are taken at the point-of-purchase.

Availability can overcome brand loyalty where the shopper selects from a ‘portfolio’ of brands.
Increasing pressure from retailers

- Focus on cost reduction in the ‘last 50 metres’
- Demands for shorter order-to-delivery cycles
- On-shelf availability is critical
- Customised solutions are increasingly required
Lean and Agile – what’s the difference?
Dictionary definitions

- **lean**: “having no surplus flesh or bulk”

- **agile**: “quick in movement: nimble”
The origins of ‘lean’

Lean thinking emerged from the Toyota Production System (TPS) developed in the early 1970s. Underpinning TPS was the objective of the reduction or elimination of waste (“muda”).

It came to be associated with ‘just-in-time’ manufacturing and standard processes with a focus on the reduction of process variation through ‘Six Sigma’ methods.
Lean works best when......

- Volume is high
- Variety is low
- Demand variability is low
- Where supply chain risk is low
“Lean” works best in high volume, low variety and predictable environments.

“Agility” is needed in less predictable environments where the demand for variety is high.
Lean

- Forecast at generic level
- Economic batch quantities
- Maximise efficiencies

Agile

- Demand driven
- Localised Configuration
- Maximise effectiveness

The decoupling point

Strategic Inventory
Attacking Complexity and Waste
Complexity – a definition

- “Complex is the opposite of independent whereas complicated is the opposite of simple.”

- “Complex systems theory studies how relationships between parts give rise to the collective behaviours of a system and how the system interacts and forms relationships with its environment.”

• One of the biggest barriers to improving agility in the supply chain is complexity.

• Complexity is also one of the major drivers of cost in the end-to-end supply chain.

• Supply chain managers must become ‘complexity Masters’ if the goal is to enhance agility at less cost.
What is the cost of Variety?

- **'A' Class Items**: 20% of the range, 80% of the revenue, High average rate of sale.
- **'B' Class Items**: 30% of the range, 15% of the revenue, Medium average rate of sale.
- **'C' Class Items**: 50% of the range, 5% of the revenue, Low average rate of sale.

Volatility:
- High / unstable
- Medium / difficult
- Low / manageable

% of Products vs. % of Revenue graph.
UK findings on waste in the supply chain

• It is estimated that around 6.5 million tonnes p.a. of waste arise in the manufacture, distribution and retailing of food and drink

• Much of this waste arises because of a lack of collaboration and information sharing between retailers and their suppliers

• Short shelf life products; those with volatile demand and slow movers were the products with the highest wastage.

Sources: WRAP, 2010
Defra, 2008
Attacking waste in the supply chain

• Establish joint supplier/customer task force

• Walk through the supply chain and map it

• Seek out the 20% of activities that generate 80% of the waste

• Develop collaborative planning and forecasting processes across company boundaries
Marks and Spencer (M&S) collaborated with one of its major suppliers of fresh sandwiches – Uniq Prepared Foods – to explore ways in which it could reduce waste in its supply chain. By creating a map of the supply chain an awareness of the sources of value-leakage was created.

Through improved communication, information sharing and the establishment of collaborative planning and forecasting processes they have reduced waste by 25%
Coping with supply chain complexity

- Deep customer insight to identify the things that customers value - the ‘order winning criteria’.

- Supply chain processes must align with the value proposition.

- Eliminate the complexity that customers will not pay for.

- Exploit the complexity that customers value but seek to minimise the costs involved.

- Use appropriate KPIs to ensure that complexity is a business priority.
Improving On-Shelf Availability
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
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</thead>
<tbody>
<tr>
<td>Sequential supply chain</td>
<td>Collaborative supply chain</td>
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<tr>
<td>Reactive and tactical</td>
<td>Proactive and strategic</td>
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<td>Consumer at end of the chain</td>
<td>Consumer at the start of the chain</td>
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<tr>
<td>Limited information sharing</td>
<td>End-to-end visibility</td>
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<td>DC movement information</td>
<td>Actual consumption/retail</td>
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<tr>
<td>Multiple forecasts, make to stock</td>
<td>sku movement</td>
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<td>Single, shared forecast, consumer</td>
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<td>demand driven</td>
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Traditional supply chain interaction

- Sequential backward action
- Heavy filtering of real demand by inventory
- Significant batching activity
- Considerable “noise” in the demand patterns
- Forecast dependent
Inventory hides demand

- National Distribution Centre
- Regional Distribution Centre
- Stockist
The supply chain fulcrum (i)

Key:
D : Demand
DP: Decision Point
I : Inventory
C : Capacity
Visibility and Velocity enable the fulcrum to be placed nearer to Demand in order to reduce the need for inventory and/or capacity.
Visibility and velocity drive responsiveness

- Postponement
- Bottleneck Management
- Collaborative Planning
- Access to real demand

- Simplification
  - Streamlined processes
    - Reduce batch sizes
  - Velocity
    - Reduce non-value adding time
    - Reduce in-bound lead-times
      - Synchronous Supply
      - Strategic Sourcing
  - Visibility
    - Close to customers
    - Close to suppliers

- Responsive-ness

- Process Management
  - Internal Integration
  - Shared Information

- Collaborative Planning
  - Event Management
Supply chain response... the virtuous circle

AGILITY

Less Retail Inventory

Fewer Out of Stocks

Higher Shelf Profit

More Shelf Space

More Revenue

More Profit for Us

Lower S/C Costs

More Shelf Space

More Revenue

More Profit for Us

Lower S/C Costs

Fewer Out of Stocks

Higher Shelf Profit

Less Retail Inventory

AGILITY

Invest in Innovation
Building a Consumer-Driven Supply Chain
• Traditional supply chains are production driven
  - Designed to optimise production flows
  - Often based on ‘lean’ thinking
  - Functional orientation rather than integrative
  - Cost rather than responsiveness has been the driver
What does it take to become ‘customer driven’?

- There are a number of critical principles underpinning customer-driven supply chains
  - The consumer is the start of the supply chain, not the end
  - Increasingly customers are becoming ‘co-creators’
  - Markets become fragmented; from mass-markets to ‘markets-of-one’
  - Agility and responsiveness are fundamental requirements
The extended enterprise viewpoint

Single company thinking

• Focus on the customer
• Increase own profits
• Consider own costs
• “Spread the business around”
• Guard ideas, information and resources
• Improve internal process efficiency

Extended enterprise thinking

• Focus on the ultimate consumer
• Increase profits for all
• Consider total costs
• Team with the best
• Share ideas, information and resources
• Improve joint process efficiency

Source: A T Kearney
Traditional approach to supply chain management

- **In Store Model Stocks**
  - Static model set for a 'season'
  - Replenishment based on periodic checks of store inventory

- **Retailer DC Inventory**
  - Static minimum and maximum levels in weeks of demand
  - Broadly defined groupings of items for inventory planning

- **Manufacturer DC Inventory**
  - Replenishment based on retailers' aggregate orders
  - Static minimum and maximum levels in weeks of demand
  - Broadly defined groupings of items for inventory planning

- **Raw Material Inventory**
  - Production is reactive when minimum DC inventory level is hit
  - Standardised run lengths for all items

**Key**
- Product flows
- Information flows
Team Hanes’ Integrated Supply Chain Approach

Consumer Demand Forecast

In Store Model Stocks
- Dynamic models reviewed weekly based on forecast consumer demand
- Replenishment based on consumer demand

Team Hanes DC Inventory
- Dynamic inventory targets established weekly based on forecast consumer demand
- Production managed for JIT arrival of product in DC based on forecast consumer demand

Blank Garment Inventory
- Matched to production schedule

Key
- Product flows
- Information flows
Collaboration provides the key

Sharing information enables win-win outcomes

• Reduced ‘bullwhip’ effect
• Less inventory
• Improved availability
• Better asset utilisation
• Enhanced demand management

Supply chains compete, not companies