Supply Chain Challenges and Opportunities

“Innovate, Collaborate, Integrate”
Objectives

- Review current industry trends
- Share insights on their impact on the CPG supply chain
- Discuss perspectives on supply chain opportunities
- Review implications and opportunities for Flexible Packaging Companies
Today's Discussion

- **CPG Trends and Their Impact**
- CPG Supply Chain Challenges and Opportunities
- FPC Opportunities
Markets have undergone remarkable shifts...

### Retailer Consolidation

- **Share of Grocery Retail for Top 10 Players**
  - % Grocery Sales
  - 1987: 22%
  - 2001: 55%

- **Share of Drug Store Sales for Top 5 Players**
  - % Drug Store Sales
  - 1987: 31%
  - 2001: 75%

### Trade Channel Complexity

- **Trends in CPG Marketing Mix**
  - Total Marketing Spend as % of Sales
  - 1978:
    - Trade Promotion: 15%
    - Consumer Promotion: 6%
    - Advertising/Media: 6%
  - 2000:
    - Trade Promotion: 11%
    - Consumer Promotion: 4%
    - Advertising/Media: 6%
Markets have undergone remarkable shifts (continued)...

**More SKUs**

% of New SKUs

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>2003</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKUs%</td>
<td>21%</td>
<td>29%</td>
<td>35%</td>
</tr>
</tbody>
</table>

**Shorter Product Lifecycles**

# of Months

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2003</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months</td>
<td>18</td>
<td>16</td>
<td>13</td>
</tr>
</tbody>
</table>

*Expected Trend*
CPG supply chains have become more complex with greater demand for flexibility and speed.

**Modern Supply Network**
“The new reality…”

- Owned Plant
- Retail Chain Store
- Consumer
- Mass Merchandiser
- Drug Store
- Co-packer
- JV / Alliance
- Cross-dock
- Distributor
- Customer Warehouse
- Owned DC

**Traditional Supply Chain**
“Those were the days…”

- Raw Materials Vendor
- Manufacturing Plant
- Distribution Center
- Customer Warehouse
- Chain Store
- Consumer

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Supply chain thinking continues to evolve – the trend is to maximize total value over the extended enterprise.

Evolution of Supply Chain Approaches

- **Industry Chains**
  - Total Value Added
- **Extended Enterprise**
  - Total Cost-To-Serve
- **Supply Chain Management**
  - Cost-To-Serve
- **Internal Integration**
- **Extended Supply Chain**
- **Functional**
  - Cost of Goods

**Best Practices**

- Traditional
- Today
- Emerging
Most CPG companies have effective account segmentation to drive sales...

Who to target? (External Growth and Profitability)

Who needs focus? (External vs. Internal Growth)
...and some understanding around cost-to-serve...

Variability Among Retailers in Cost to Serve

Customer Costs as Percent of Sales Dollars:
- Costco: 36%
- Sam's: 37%
- Home Depot: 29%
- Safeway: 25%
- Albertsons: 24%
- Safeway: 26%
- SuperValu: 22%
- Kroger: 22%
- Meijers: 21%
- HE Butt: 22%
- Target: 18%
- Walgreens: 15%
- Walmart: 19%
- Publix: 17%
- Family Dollar: 15%
- Dollar General: 15%

Retailers:
- Costco
- Sam's
- Home Depot
- Safeway
- Albertsons
- SuperValu
- Kroger
- Meijers
- HE Butt
- Target
- Walgreens
- Walmart
- Publix
- Family Dollar
- Dollar General

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...and are beginning to develop an understanding of what channels and individual accounts truly value

### Importance Level of Customization Areas

<table>
<thead>
<tr>
<th></th>
<th>Consumer Value / Differentiation</th>
<th>Merchandising Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unique Product / Formulation</td>
<td>Large Bottle Sizes</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Target</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sam’s</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Costco</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Dollar Channel</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Kroger</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Safeway</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Albertson’s</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Home Hardware</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

**Level of Strategic Importance**

- **4** Critical
- **3** High
- **2** Moderate
- **1** Low
- **0** None

*Booz Allen Hamilton*
However, basic questions around the fight for value remain:

- What is driving value in the supply chain? How is that impacting customer behavior? How is that changing? How much does it vary by channel and customer?

- Where is the value creation opportunity in the supply chain? What is it worth? How should it be shared?

- Does seizing these opportunities allow for a sustained advantaged competitive position?
Evidence of change is growing – but no one has yet defined a holistic advantaged solution

**Evolving Supply Networks**

<table>
<thead>
<tr>
<th>CPG Companies</th>
<th>Retailers</th>
</tr>
</thead>
</table>
| **Kelloggs**  | ‣ Supplier conference looking for collaboration to deliver total cost and value across supply chain  
| ‣ Actively working to provide more demand driven supply capabilities  
| ‣ Provide custom pallet orders in two weeks, no charge  
| ‣ Piloting rapid replenishment  | ‣ Want to get closer to demand, efficient picking & conveying, lower inventory & store costs, 24/7 operations, store level orders  |
| **Proponent of rapid replenishment**  
| **KRAFT**  
| ‣ Proponent of rapid replenishment  
| ‣ Producing and shipping close to demand  
| ‣ Willingness to build store specific pallets  
| ‣ Willingness to ship direct to store  | ‣ Linking demand to shelf through collaborative planning  
| ‣ Segmenting products and approaches by high flow, low flow  
| ‣ Looking for CPG capabilities to provide DSD linked to in-store merchandising to create rapid flow through to shelf  |
| **TESCO**  
| ‣ Adopting fresh food concepts with rest of grocery stores  
| ‣ Rapid replenishment  
| ‣ Daily inventory turn  
| ‣ Empty warehouse model  
| ‣ Not clear the model is scalable with geographic density  |
At the same time, product cost, environmental concerns and security of supply are at the forefront.
Today's Discussion

- CPG Trends and Their Impact
- CPG Supply Chain Challenges and Opportunities
- FPC Opportunities
Themes for Advantaged Supply Chain Solutions

**Business Requirements**

- Customization & Differentiation
- Increased Speed & Flexibility
- Reduced Costs
- Environmental Consciousness
- Supply Certainty
- Revenue & Margin Capture

**Lead Themes**

1. Tailored Business Streams
   - Demand Driven Supply Networks
   - Flow Through Logistics
   - Rapid Replenishment / Tailored Replenishment

2. Right at Retail
   - Total Value Chain View
   - Speed and Flow to Shelf
   - Shelf Efficiency
   - Localization

3. Enhanced Customization
   - Differentiated Services / Solutions
   - Late Stage Differentiation
   - Proactive Customized Product & Packaging

4. Reduced end-to-end Costs
   - Enhanced supplier partnerships (innovation, cost, teaming)
   - Integrated/collaborative planning
   - Low cost country sourcing (LCC)

5. Enhanced Security of Supply
   - Traceability
   - Resiliency
   - Safety

6. Incorporation of “Green”
   - Carbon footprint management
   - Material reduction, elimination, substitution

**Major Concepts**

- Incorporation of “Green” strategies
- Enhanced security measures
- Reduced end-to-end costs
- Right at Retail strategies
- Tailored business streams

**Business Requirements**

- Increased Speed & Flexibility
- Reduced Costs
- Environmental Consciousness
- Supply Certainty
- Revenue & Margin Capture

**“SHELF-CENTERED COLLABORATION”**
Achieving new levels of performance requires alignment across all value chain partners to win at the shelf

**Shelf-Centered Collaboration – A Winning Value Chain Strategy**

- **Collaborate to grow consumer-focused value chains**
- **Think shelf-forward and shelf-back together**
- **Align incentives around end-to-end economics and value**

**Benefits**

- Growth and Service
- Profit Margins
- Asset Efficiency

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**Shelf-Back Levers**

- Product Design
- Demand Planning
- Replenishment
- Manufacturing
- Sourcing

**Shelf-Forward Levers**

- DDSN
- "Right @ Retail"
- Consumer Experience
- Assortment
- Pricing
- Promotion
- Display

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An advantaged solution: segmenting the supply chain into Tailored Business Streams – service & cost

Tailored Business Streams (TBS)

Key Principles

- **Product/ customer architecture**
  - Underlying cost drivers
  - Desired service levels

- **Tailored business streams**
  - Standardize & focus stable work
  - Segment and manage remaining variability

- **Supply chain policies & capabilities**

- **Product/ customer architecture** designed around product & service flows which most drive value and cost

- **TBS** operated to align policies, organization, processes & systems to product flow architectures to reduce costs

- **Product flows** segmented based on demand & supply
  - Stable, predictable flow (base load)
  - Dynamic, customized flow (promotions, new products)

- **Policies and capabilities** created to serve different customers needs with the appropriate economics across the architecture
  - Dedicated physical flows
  - Dedicated capabilities to manage each flow
  - Tailored organizations
  - Specific performance measures
  - Policies addressing service levels & risk management
Tailored Business Streams: An example

Tailored Business Stream Framework

Top 10-15 Accounts

- Wal-Mart
- Costco
- Sams
- Kroger
- Safeway
- Albertsons
- CVS
- Walgreens
- McClane
- Fleming

- Optimize supply chain structure for key customers (S)
- Leverage economies of scale (S)
- Offer “menu pricing” to encourage optimal behavior (C)

- Employ advanced forecasting methodologies (C)
- Link trade promotion system with supply chain management (C)
- Collaborate with retailers (VMR, CPFR, S&OP) (C)

- Aggressively develop and launch new products (C)
- Forecast new product demand (C)
- Build distribution for new product launch (VMR, S&OP) (C)

20 to 60% of Business

All Other

- Small Direct
- Other Distributors

- Develop cost-to-serve economic models (C)
- Review service policies for unprofitable accounts (C)

- Perform SKU rationalization (C)
- Adjust pricing or eliminate SKUs (C)
- Explore make-to-order (C)

- Leverage new product introductions to drive sales across all accounts (C)

40 to 80% of Business

(S) Supply Chain Structural Changes
(C) Capabilities Required
TBS requires: a detailed understanding of the nature of demand...

**Today’s Supply Chain View of Demand**

**Brand A: Total Shipments**

- **Service Level:** 98.5%
- **Days of inventory:** 4-6
- **Order to Ship:** 3 Days

**Planned Surge**

**Event Volume Make to Order View**

**Efficient Replenishment**

**Stable Base Volume Demand**

**Brand A: Event Shipments**

**Brand A: Non-Event Shipments**
TBS requires: a restructuring of the “Pipes” and flows

### Multiple Supply Chain Flow Models / Tailored Business Streams (TBS)

<table>
<thead>
<tr>
<th>Demand Characteristics</th>
<th>Sales Planning</th>
<th>Supply Chain Planning</th>
<th>Supplier Effects</th>
<th>Manufacturing</th>
<th>Warehousing</th>
<th>Product Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>New product intros</td>
<td>Made to order</td>
<td>Advanced lead time in orders</td>
<td>Streamlined customization</td>
<td>Little to no case picking</td>
<td>Plant</td>
<td></td>
</tr>
<tr>
<td>Planned events</td>
<td>Supply chain decisions based on total cost</td>
<td>Reduced safety stock</td>
<td>Modularity</td>
<td>Minimize holding</td>
<td>Customer Warehouse</td>
<td></td>
</tr>
<tr>
<td>Planned customer inventory builds</td>
<td>Collaborative demand planning</td>
<td>Supplier relationships management</td>
<td>Common components</td>
<td>Cross-docking</td>
<td>Store</td>
<td></td>
</tr>
<tr>
<td>In and out products</td>
<td>Orders &amp; service commitments 6-8 weeks out</td>
<td>Collaborative planning</td>
<td>Little to no case picking</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Planned Surge 30%**

- 5% Shared risk with “good customers”
- Staged R&P & finished goods
- Hold inventory at DC or reserve capacity
- 3-4 days in customer DC (value-added service) perfect order

**Potential capture event incremental volume**

- 65% Incent efficient behavior
- Made to stock based on forecast
- Supply chain decisions based on total costs
- Optimize capacity planning
- Reduced variability in orders
- Smoothing the variability
- Demand pull

**Efficient Replenishment 60%**

- All repeatable items (includes repeatable custom SKUs for Club, Dollar, etc.)
- Made to stock based on forecast
- Supply chain decisions based on total costs
- Optimize capacity planning
- Reduced variability in orders
- Smoothing the variability
- Demand pull

**Supply the Unplanned 10%**

- Replenishment items
- Motivate customers toward effective behavior
- Made to stock with inventory of likely stock out SKUs
- Clear response process / decision tools
- Staged production of raw and pack
- Pre-positioned inventory of selected of SKUs

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Supply chains – and CPG companies --must reach from factories to shelf…

**FLOW THROUGH TO SHELF**
- Minimize in-store handling costs (truck to aisle to shelf)
- Increase efficiency of in-store merchandising (stocking, facing, display/signage execution)
- Eliminate “dead” stock (no back room, case to holding power match, etc.)
- Eliminate in-store damage
- Improve treatment of difficult to handle products (big bags, ¼ Pallet Displays, etc.)

**LOCALIZATION & SHELF EFFICIENCY**
- Position for Growth
  - Review consumer insights & category trends
  - Understand implications of Promotional Trends, New Item Categories, Customized Products
- Improve Shelf ROIC
  - Improve shoppable experience (center store, location, mega blocks, signage)
  - Right assortment – mix
  - Shelf efficiency – holding/facing/location
  - Match product mix & characteristics to local store
...and focus on ‘localization’ more than assortment

“Store of the Community”

Format Evolution

- **Evolution of store formats**
  - Original Mass Format → Super Centers
  - Urban Stores → “Store of Community”

- **“Store of the Community” concept**
  - Localized assortment & execution by store
  - Variable category floor space to maximize all category profit by store

- **Retailer implications**
  - Near real time store sales data visibility
  - Daily ordering and delivery
  - Multiple supply paths with different performance needs

<table>
<thead>
<tr>
<th>Implications for CPG Supply Chains</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Localization is growing everywhere</strong></td>
</tr>
<tr>
<td>- Understand tradeoffs involved</td>
</tr>
<tr>
<td>- Apply them to all product categories</td>
</tr>
<tr>
<td><strong>Flexible supply networks needed</strong></td>
</tr>
<tr>
<td>- Minimize assortment complexity cost</td>
</tr>
<tr>
<td>- Increase case picking and customized mixed pallets</td>
</tr>
<tr>
<td><strong>CPG Companies must adapt in-store</strong></td>
</tr>
<tr>
<td>- Provide “Store Appropriate Packaging” and total merchandising solutions</td>
</tr>
<tr>
<td>- Prioritize merchandising efficiency to eliminate Out-of-Stock (OOS)</td>
</tr>
</tbody>
</table>
A proactive approach to customization translates into growth and profits…

“Smart Customized” Companies Outperform Industry Peers
(Statistically Significant at 99% Level)

Note: Smart Customized companies are those with a score of more than 50 out of 100 on Booz Allen’s Smart Customization index. The index is based on a cross-industry benchmarking study of 50 firms conducted in 2003 (including 5 CPG companies)
...if built on an understanding of the total “value” of product customization by retail business models

- Speed
- Efficiency
- Flexibility

- Consumer preferences
- Premium extensions
- Willingness to pay for value proposition

- Preferred suppliers
- Enhanced distribution throughout channels
- SKU efficiency

- Decision-making speed
- Optimized trade-offs
- Strategic alignment with resource focus
Companies improve performance through “Smart Customization” along three dimensions

**Sources of Improved Performance**

1. Access Additional Value Through Increased Variety
2. Focus on the “Right” Variety, Not Just More Offerings
3. Tailor Business Streams to Provide Value at Least Cost
CPG companies are going beyond the **incremental** to achieve **transformational** supply chain change

### Retail Value Chain

- **Manufacturing**
  - Classic sourcing of raw materials
  - Collaborative forecasting

- **Purchasing**
  - Negotiate pricing through demand aggregation
  - Increase labor utilization

- **Distribution**
  - Increase truck utilization
  - Reduce safety stock

- **Inventory Management**
  - Reduce stock obsolescence

- **Retail Operations**
  - Reduce merchandising expenditure
  - Reduce store operating costs

- **Marketing & Consumer Understanding**
  - Use POS data to improve forecasts
  - Improve in-store product comparisons

- **Customer Care**
  - Link failure rates and returns directly to suppliers

### Incremental Value Chain Improvement Opportunities

- **Do it Better**
  - Outsource components
  - Collaborate with suppliers on design
  - Integrate backwards
  - Respond quickly to changes in SKU sales rates
  - Share with other operators
  - Optimize product routes
  - Make low volume items supply-to-order
  - Link consumer demand to product design, range review & purchasing
  - Consolidate call center activity
  - Move after-sale service and returns under direct supplier management

### Transformational Value Chain Restructuring Opportunities

- **Do it Differently**
  - Redesign packaging to lower cost
  - Collaborate with suppliers on design
  - Outsource or insource merchandising
  - Reposition goods based on purchase bundles
  - Make low volume items supply-to-order
  - Optimize product routes
  - Link consumer demand to product design, range review & purchasing
  - Consolidate call center activity
  - Move after-sale service and returns under direct supplier management

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**Reduced End-to-End Costs**

- **Do it Better**
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  - Collaborate with suppliers on design
  - Integrate backwards
  - Respond quickly to changes in SKU sales rates
  - Share with other operators
  - Optimize product routes
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**Do it Differently**

- Redesign packaging to lower cost
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- Consolidate call center activity
- Move after-sale service and returns under direct supplier management
Opportunities across the entire value chain are under the microscope

Value Chain Baseline

Reduced End-to-End Costs

Typical focus areas for cost savings

XX % of costs

X % of costs

Manufacturers sales

Ordering, price mgmt

Delivery to stores

Retail outlet purchasing

Customer services

Act before shelf filling

Shelf filling

Check out

Other work

Outsourced serv

Price discounts

Net margin

Retail sales
Integration of suppliers is critical to optimizing choices for the extended value chain.

Extended knowledge-sensing capabilities
Increased innovation performance
Optimized product cost and time-to-market

Market Understanding/Ideation → Technology Management → Product Planning → Product Development

Customer Service & Support ← Product Assembly & Test ← Sourcing & Parts Manufacturing ← Sales & Order Processing

Reduced technical costs
Lowered operating costs
Improved sales & marketing

Reduced End-to-End Costs
Today’s highly interdependent supply chains are exposed to a range of risks

<table>
<thead>
<tr>
<th>Natural Disasters</th>
<th>External Events</th>
<th>Internal Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples…</td>
<td>Examples…</td>
<td>Examples…</td>
</tr>
<tr>
<td>• Earthquakes</td>
<td>• Labor strikes</td>
<td>• Facility interruptions</td>
</tr>
<tr>
<td>• Tsunamis</td>
<td>• Competitors’ actions</td>
<td>• Cash flow changes</td>
</tr>
<tr>
<td>• Hurricanes</td>
<td>• Technology shifts</td>
<td>• Key personnel turnover</td>
</tr>
<tr>
<td>• Disease</td>
<td>• Globalization trends</td>
<td>• Management decisions</td>
</tr>
<tr>
<td>• Contamination</td>
<td>• Regulations</td>
<td></td>
</tr>
</tbody>
</table>

- **US Gulf Hurricanes, Sept 2005**
  - Continental Airlines
  - Loses approx. $25 MM in third quarter profit

- **Plant Shutdown, 2004**
  - CHIRON
  - Contributed to approx. 46% sales reduction, & $91 MM inventory write off

- **Planning System Perplexity, 2001**
  - Nike
  - $100 MM quarterly revenue shortfall & 20% stock drop

- **US E. Coli Outbreak, Fall 2006**
  - Taco Bell
  - Taco Bell stores’ quarter sales decline by 5%

- **Supplier’s Labor Strike, 2005**
  - British Airways
  - Daily loss of £30 MM

- **Inventory Mismanagement, 2001**
  - Cisco Systems
  - Stock drops 50%, and $2.2 BN inventory write off
Supply Chain Resilience: disruptions from key suppliers to pose the greatest risks

Which of the following do you perceive to be the two greatest supply chain risks to your organization?

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Perception Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical damage to owned facility</td>
<td>35%</td>
</tr>
<tr>
<td>IT breakdown / information security breach</td>
<td>31%</td>
</tr>
<tr>
<td>Large scale natural catastrophe in area of operations</td>
<td>30%</td>
</tr>
<tr>
<td>Loss of key people</td>
<td>17%</td>
</tr>
<tr>
<td>Non physical disruptions to owned facility</td>
<td>13%</td>
</tr>
</tbody>
</table>

How well are you prepared for each of the following types of risks?

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Preparedness Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical damage to owned facility</td>
<td>68%</td>
</tr>
<tr>
<td>IT breakdown / information security breach</td>
<td>36%</td>
</tr>
<tr>
<td>Large scale natural catastrophe in area of operations</td>
<td>43%</td>
</tr>
<tr>
<td>Loss of key people</td>
<td>34%</td>
</tr>
<tr>
<td>Non physical disruptions to owned facility</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: BAH Supply Chain Resilience Survey, 2006
Improving supply chain’s resilience: face potential risks through better understanding and preparedness

The Resilience Equation = \( f \) (Exposure to Risk, Reliability)

### Resilience
- Characteristics of a highly resilient supply chain include:
  - Protects the right assets, people, and processes
  - Fosters a culture of information sharing
  - Quickly and smoothly implements changes

### Exposure to Risk
- Companies decide how to handle risks (e.g., labor strikes), generally through three options:
  - Should I accept it?
  - Should I manage it?
  - Should I insure against it?

### Reliability
- Companies develop and test their operations, through methods such as:
  - Crisis management
  - Continuity planning
  - Safety engineering
## Enhanced Security of Supply

**CPG companies have introduced various technologies and strategies to manage Supply Chain Risk**

<table>
<thead>
<tr>
<th>Primary Competitors</th>
<th>Supply Chain Risk Management Strategies</th>
</tr>
</thead>
</table>
| P&G                 | - Established Global Analytics Department to manage supply chain risks  
                      - Retooled transportation systems to achieve greater freight redundancy  
                      - Improved purchasing system to allow for instantaneous emergency ordering |
| Johnson & Johnson   | - Launched Global Transportation Organization (GTO) as one-stop-shop for supplier sourcing, performance management, export services, hazmat, and customs issues  
                      - Developed advanced inventory monitoring system to keep safety-stock on-hand |
| Unilever            | - Managed single-sourcing risks by increasing customer inventory carrying levels  
                      - Implemented advanced transport management tools to guard against risk of transportation disruption |
| The Gillette Company | - Restructured management to achieve single-point, end-to-end accountability in crisis situations  
                      - Realigned value-chain and integrated its organization for improved supply chain communication |
| GlaxoSmithKline     | - Uses internal supply-chain consulting groups to manage supply chain risk  
                      - Introduced digital pedigree system to ensure product authenticity in logistics transactions |
| All of the Above Competitors | - Continued testing and partial implementation of RFID and “Smart Shelf” technology in cooperation with major retailers |
### Green is no longer an option

**Example Commercial Company Green Purchasing Initiatives**

<table>
<thead>
<tr>
<th>Company</th>
<th>Initiative</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starbucks</td>
<td>Reduced the plastic sent to landfills by 750K lbs/yr by switching to thinner trash bags</td>
<td></td>
</tr>
<tr>
<td>Clif Bar</td>
<td>Purchases 100% of its power from an American Indian owned renewable energy wind farm</td>
<td></td>
</tr>
<tr>
<td>SC Johnson</td>
<td>Developed a tool, GreenListTM, which screens for environmentally preferred raw materials</td>
<td></td>
</tr>
<tr>
<td>PepsiCo</td>
<td>Made beverage containers consist of at least 10% recycled material</td>
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<tr>
<td>UPS</td>
<td>Reduced consumption of virgin plastic by 347M tons/yr or 22% by increasing recycled content in Plastic Packs</td>
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<tr>
<td>(Anheuser-Busch)</td>
<td>Evaluates the environmental attributes of competing products under a “green” procurement policy</td>
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<tr>
<td>United Technologies</td>
<td>Ordered 24,000 new computers from Dell without a box for recent upgrade</td>
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<tr>
<td>(Marks &amp; Spencer)</td>
<td>Launched an initiative to reduce “food miles” by sourcing products from nearby suppliers</td>
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<tr>
<td>Booz Allen Hamilton</td>
<td>Working with local farmers to increase the growing season</td>
<td></td>
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</tbody>
</table>
## Driving value from “Green”

<table>
<thead>
<tr>
<th>Key Elements</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Value Chain Perspective</strong></td>
<td>- Develop full value chain perspective on product and service costs</td>
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<td>- Understand key cost drivers and leverage points</td>
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<td>- Assess impact through chain and across life cycle of product or service</td>
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<tr>
<td><strong>Total Cost of Ownership (TCO)</strong></td>
<td>- Base business case on total cost reduction potential</td>
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<td>- Draw out hidden costs of “unsustainable” alternatives by assessing cradle to grave costs of products and services</td>
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<td>- Level the playing field for “sustainable” products and services that may have higher initial costs and where overall cost savings manifest over time</td>
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<tr>
<td><strong>Supplier Collaboration</strong></td>
<td>- Work with suppliers to identify innovate demand-side and process-side opportunities</td>
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<td></td>
<td>- Evaluate and select suppliers based on their environmental footprint, e.g., FSC membership</td>
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<td>- Establish performance-based or incentivized contracts to mutually align goals</td>
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<tr>
<td><strong>Triple-Bottom Line View</strong></td>
<td>- Assess not only economic benefits but environmental and social impact as well</td>
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<td>- Create transparency into trade-offs and value proposition of options</td>
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</tbody>
</table>
Example: A total value chain approach

Example of Supply Chain Map: Carbonated Drinks Manufacturer

- **Raw Materials**: Water, CO2, Sugar, Additives / flavourings etc, Plastic, Paper, Cardboard
- **Manufacture**: Pre-form production, Transport, Bottling, Blending / processing, Plastic, Paper, Cardboard
- **Distribution**: Transport, Bottles, Label, Pack
- **Use**: Carbonate, Blended water, Bottles, Label, Package
- **Disposal**: Landfill, Transport, RDC, Wholesaler warehousing, Retailer, Vending machine, Refrigerate, Waste packaging, Recycling

Incorporation of “Green”

Booz | Allen | Hamilton
Themes for Advantaged Supply Chain Solutions

Business Requirements

- Customization & Differentiation
- Increased Speed & Flexibility
- Reduced Costs
- Environmental Consciousness
- Supply Certainty
- Revenue & Margin Capture

“Lead Themes”

1. Tailored Business Streams
   - Demand Driven Supply Networks
   - Flow Through Logistics
   - Rapid Replenishment / Tailored Replenishment

2. Right at Retail
   - Total Value Chain View
   - Speed and Flow to Shelf
   - Shelf Efficiency
   - Localization

3. Enhanced Customization
   - Differentiated Services / Solutions
   - Late Stage Differentiation
   - Proactive Customized Product & Packaging

4. Reduced end-to-end Costs
   - Enhanced supplier partnerships (innovation, cost, teaming)
   - Integrated/collaborative planning
   - Low cost country sourcing (LCC)

5. Enhanced Security of Supply
   - Traceability
   - Resiliency
   - Safety

6. Incorporation of “Green”
   - Carbon footprint management
   - Material reduction, elimination, substitution

“SHELF-CENTERED COLLABORATION”

Booz Allen Hamilton
Today's Discussion

- CPG Trends and Their Impact
- CPG Supply Chain Challenges and Opportunities
- FPC Opportunities
So how should Flexible Packaging Companies seize on these challenges to create Opportunity?

**FPC Opportunities**

- **“Smart” Innovation**
  - Smart customization
  - Shelf differentiation not proliferation
  - Cost (total value chain perspective)
  - “Green”

- **Enhanced Collaboration**
  - Client-level agendas
  - Value differentiators (CPG – Retailer – Customer)
  - Planning & Design processes

- **Supply Chain Integration**
  - “Federated” planning
  - Tailored supply structures, policies and processes
  - Enhanced demand planning

**Key Elements**

- Tailored, Complimentary Partnerships with CPGs to Maximize Value