Leading Edge Concepts in Supply Chain: A Review of Industry Mega Trends

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Sources:

• Interaction with hundreds of Companies by University of Tennessee faculty
• Supply Chain Forum
• Supply chain executive education
• Supply chain audits
1. Supply chain metrics: **KPI’s**
2. **Collaboration**: CPFR/S&OP
3. **Lean/Six Sigma** applied to the supply chain
4. Managing **complexity**: SKU’s, new product introductions
5. Managing out **cost and working capital**
6. Supply chain **systems**
7. **Network optimization**
8. **Global** supply chain implications
1. KPI’s…Visibility

- Event management
- RFID
- Is this the next “big thing”?
One of the earliest successes in the turnaround of Whirlpool’s supply chain was the rollout of a new S&OP process. We soon pushed forecasting capability further by launching an CPFR pilot. Within 30 days of launch, our forecast error was cut in half.”

Fewer than 10% of companies in a recent Capgemini study are actually collaborating with partners.
S&OP: Internal Collaboration

- Multi level
- Executive support….”most important meeting we have”
- Disciplined, defined process
At Whirlpool, better forecasting was leveraged to lead a supply chain turnaround

- Sophisticated multi-level S&OP process implemented
- CPFR implemented with Sears, Lowes, Best Buy
- UT forecast audit done

Every one point improvement in SKUL forecast accuracy yielded $3 million in inventory reduction, as well as availability improvements

HBR, October 2004
3. A Lean/Sigma Application: Lean Lanes

![Individual Measurement of SAP Transit Graph]

**Mean**
- Before: 4.51
- After: 2.93

**Std dev**
- Before: 2.08
- After: 1.24
4. Managing Complexity: SKU’s and New Product Introductions

- **Disciplined processes** are often lacking

- **Date integrity** in product transitions is weak, with metrics missing

- **SKU discipline**: Rigorous cost/benefit analyses are rarely done and post audited.
5. Managing Out Cost and Working Capital
The Income Statement and Balance Sheet
The Gathering Storm

- Fuel
- Environmental regulations
- Tort issues
- Sarbanes Oxley
- Government regulation: HOS
- Driver shortages
- Infrastructure Issues
- Insurance and security issues
6. Systems

• Projects very resource intensive; implementations very difficult

• Strategic inflection point: optimization

• Change management is paramount
7. Network optimization

• Cost
• Working capital
• On time delivery
• In stock percentage
• EVA

PRTM: An optimized network will result in a 75% higher bottom line for the average company.
How Many Distribution Centers?

Industry Benchmarks

- **Pharmaceuticals**...3
  - High margin
  - Easy to ship express
  - Inventory expensive relative to transportation cost

- **Hard Goods**.....8-10

- **Food Companies**.....14

- **Chemicals**.......20
  - Low margin product
  - Service very important
  - Outbound transportation expensive relative to inventory

Has the game been fundamentally changed with fuel cost increases?
Is this a domestic problem or.....

A global one?
8. Global Supply Chain implications

- **Outsourcing** is a mega issue for supply chain people

- Is it consistent with **Lean? Six Sigma**?

- **Why** is it happening?

- How can the supply chain best deal with it?
Why Outsource

- Incredible labor advantage
  - 11 hours per day, 6 days per week
  - $100.00 per month
  - Intense work pace
  - Engineers @ $6,000/year

- In a typical financial analysis, this labor cost savings is balanced against higher inventory and transportation cost

- But, industry is just now realizing that risk is the greatest potential cost
What are the Risks of Global Outsourcing

- **Catastrophic delay** in delivery
  - Terrorism…will C-TPAT work?
- **Quality problems**
- **Safety problems**
- **Forecast error**
- **Economic shifts**
  - Currency fluctuations
  - Yuan/RMB strengthens by 20% can wipe out net savings

What Else?
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How Do You Know If You Are Staying On The Leading Edge?

- Personal development plans for your people
- Benchmarking with other companies (Forums)
- Align with a university
- Hire/reward people who have a passion for self-development
- Use outside experts when appropriate
Questions

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