

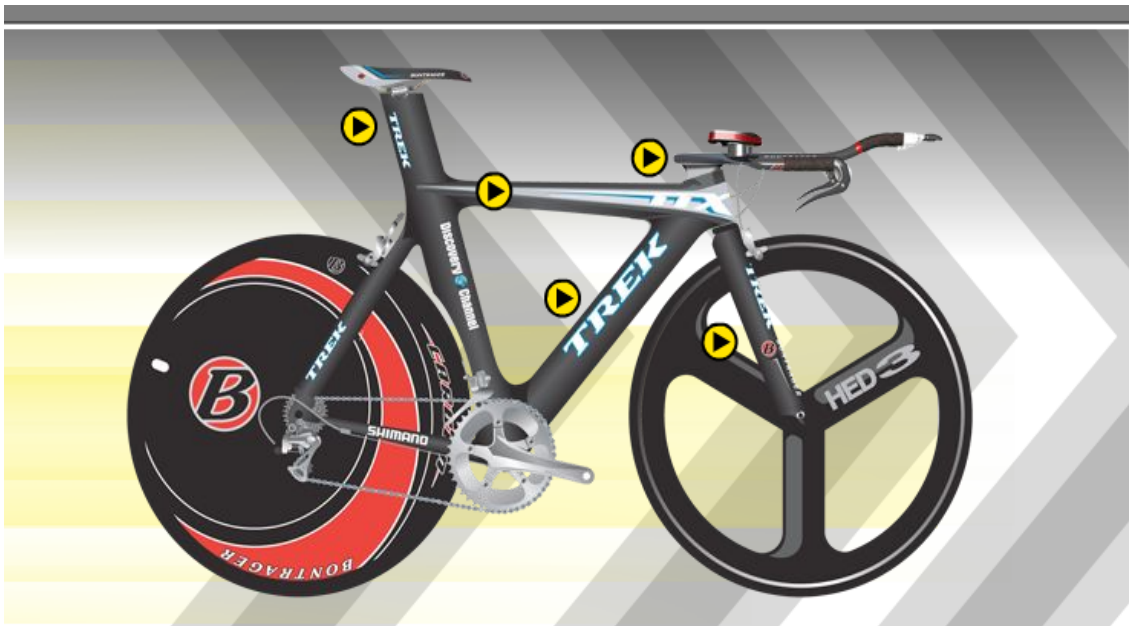
Global Trends in Supply Management 2012



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Former Chair, ISM Manufacturing Report on Business





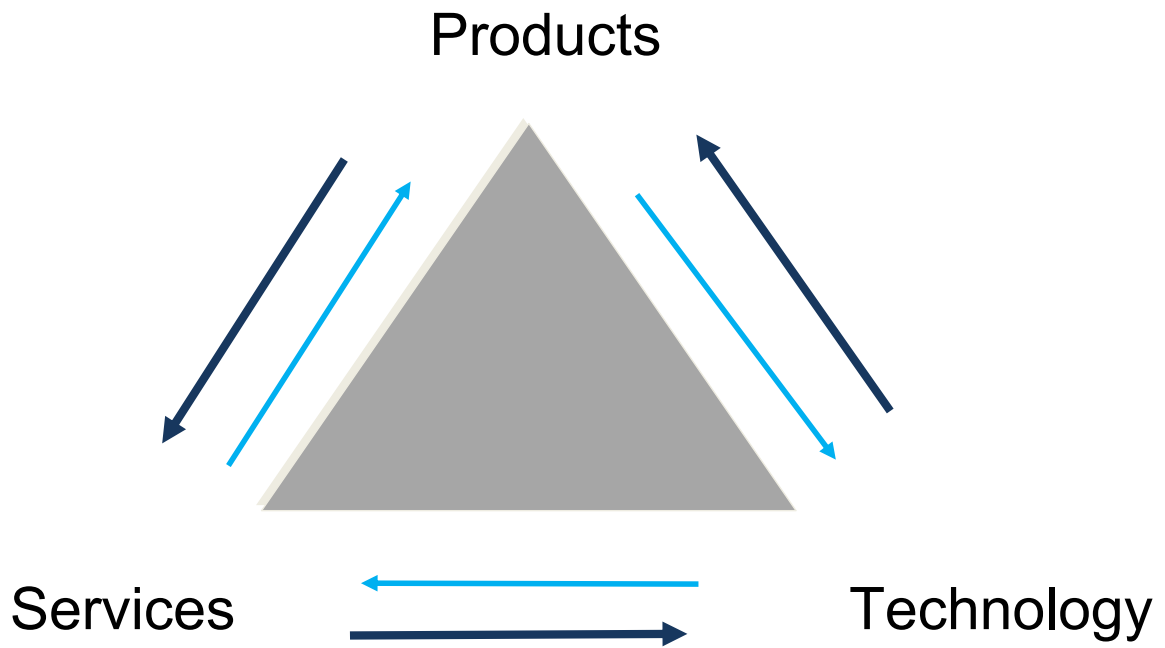
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Supply Chain Forces

- New Technology
- Global Supply Chains
- Open Markets
- Open Communications
- Knowledge

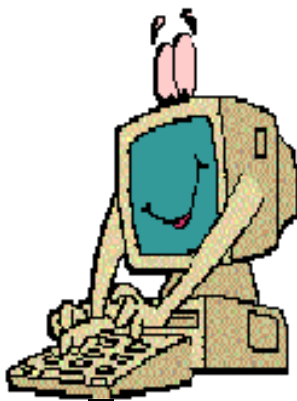
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Sellers Must Complete the Triangle



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Technology



Graphical Order Configurators

Help the customer describe what they want and then translate accurately to manufacturing or distribution

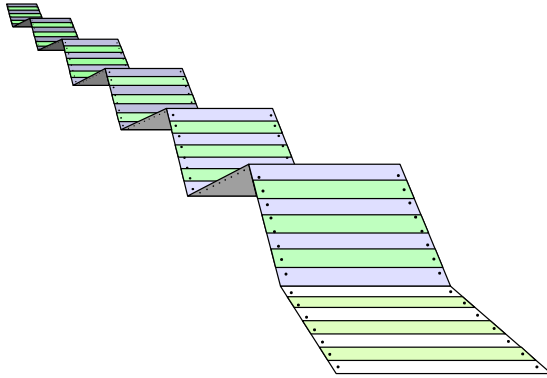
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Technology

Real Time Scheduling

Once you have a batch of orders, you need a way to schedule manufacturing to optimize production

Object oriented, memory resident programs that model manufacturing processes and their constraints that quickly produce an optimized manufacturing schedules



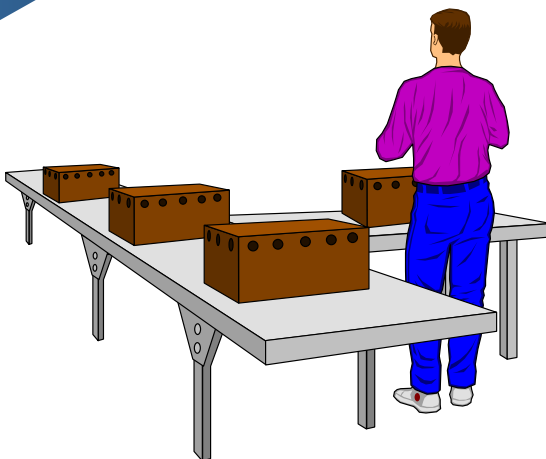
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Technology

Shop Floor Flexibility

Combine real time production with modular product designs and small, flexible assembly teams

A networked client-server product that controls the sequences of operations and queues of materials on the shop floor and links with ERP systems



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Technology



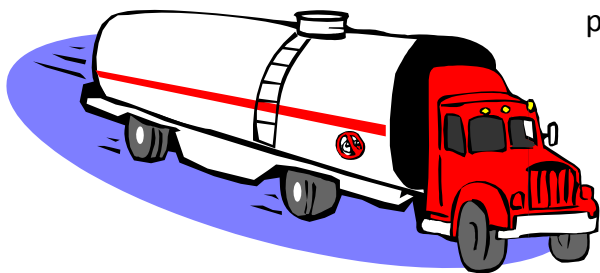
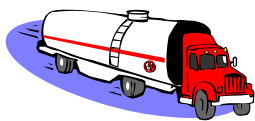
Customized Engineering

A custom design change can force a quick product engineering change

Sits between MRP and CAD systems to manage changes real time

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Technology



Demand- Driven Logistics

Logistics - getting the right quantity of product to the right customer in the right form at the right time

Create customer specific profiles and track the flow of product

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Technology

Linking to Suppliers



EDI

Bar Coding

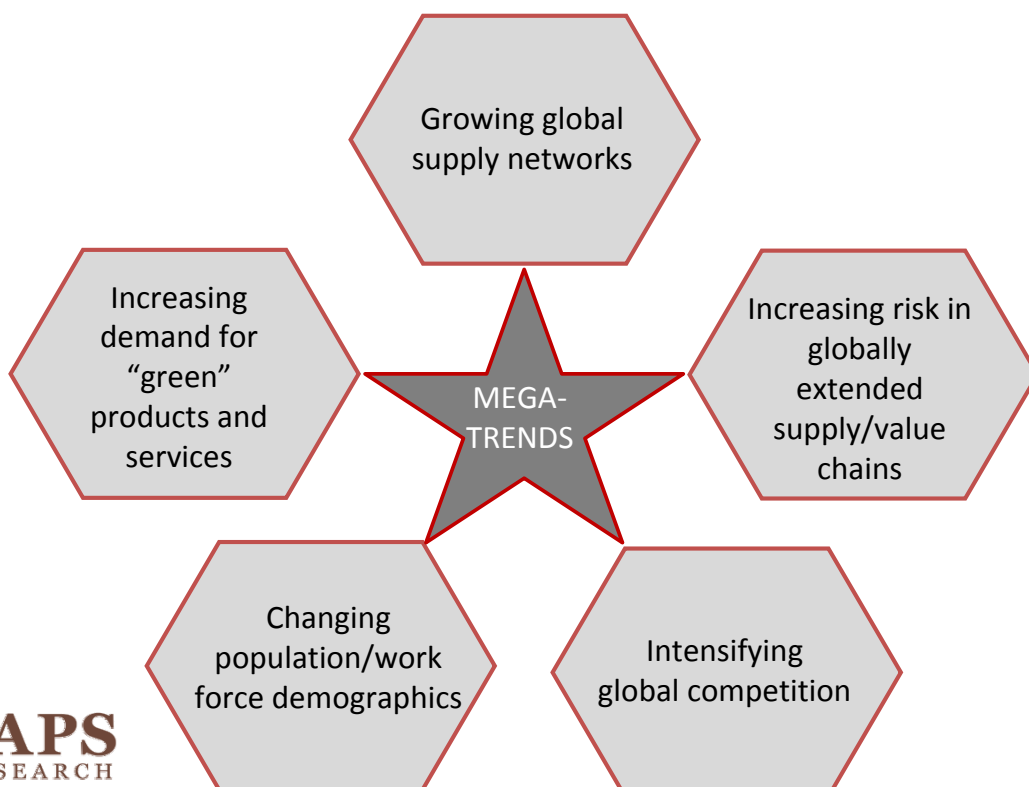
E-Mail / The Internet

EFT

Seamless integration of customers, distributors, manufacturers. The opportunities for service improvement will be tremendous.

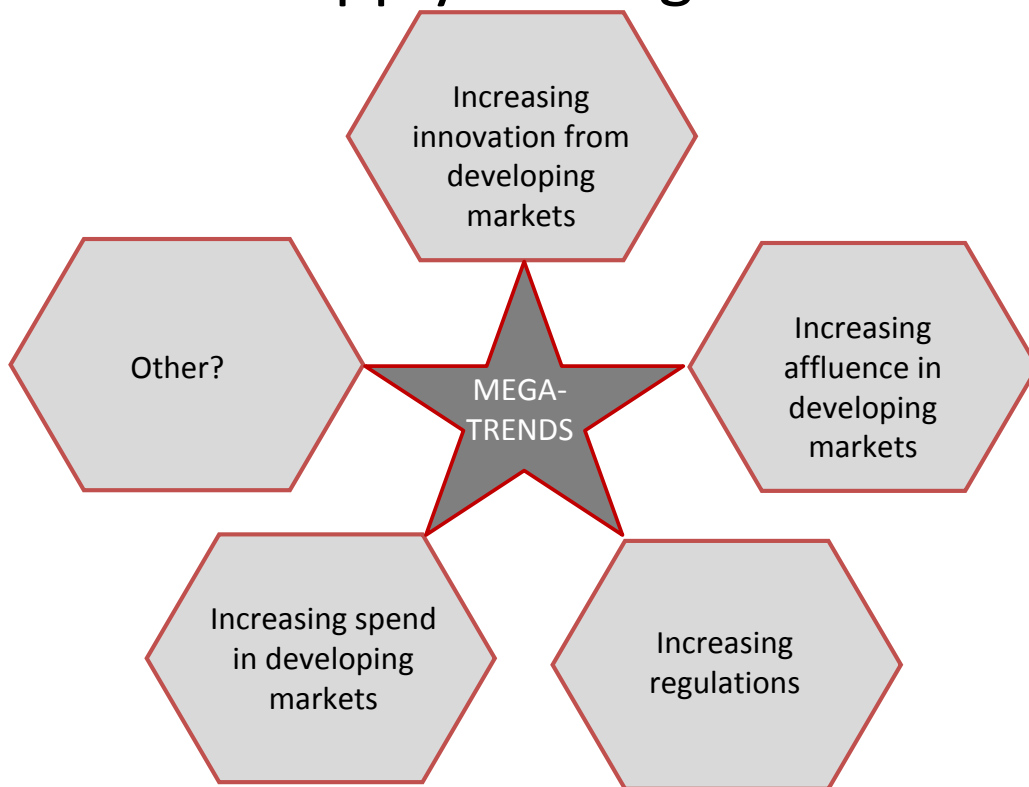
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Mega Trends Impacting Global Supply Strategies



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Mega Trends Impacting Global Supply Strategies



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Networks

- Firms are lagging on plans to have fully integrated and coordinated global supply across functions
- Product, service and process innovation across supply networks is critical to competitive success
- Design/development – manufacturing/operations – distribution/customer footprints are still under development, especially in developing economies
- Need for “correct” insourcing/outsourcing patterns continues
- Significant opportunity for improvement

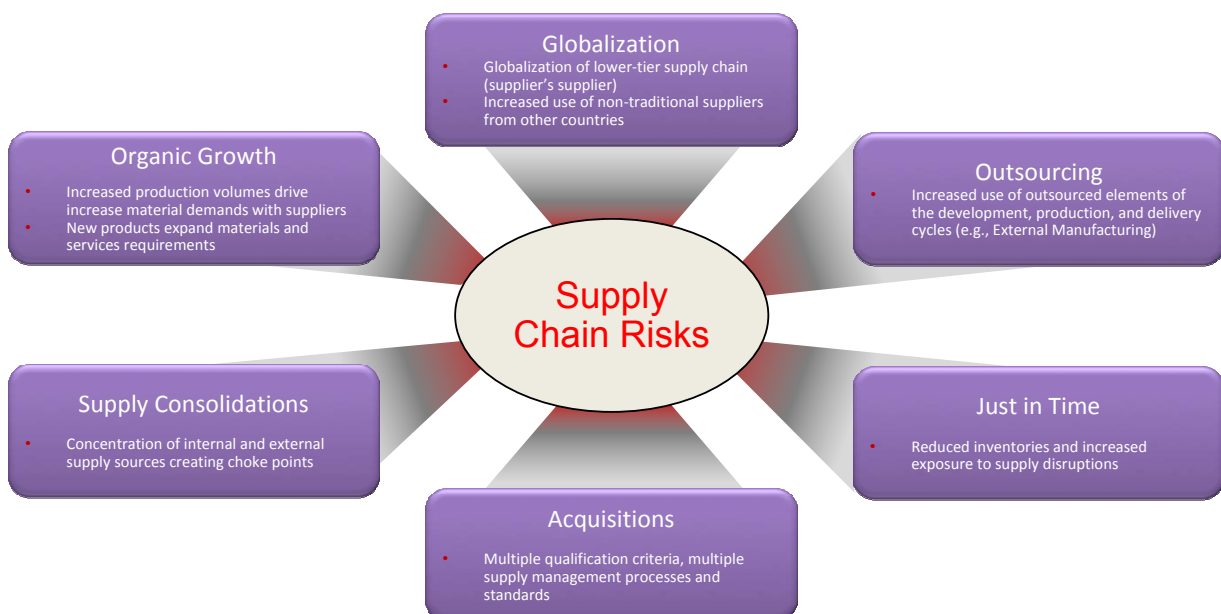
High Probability – High Consequence??



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Recent trends have increased the risk from natural and man-made disasters

Traditional Supply Chain Risks



Risk



Cruise ship, cargo ship collide in Danube channel



Argentina to seize control of oil firm



Escalation in piracy places supply chain under pressure



Political unrest means re-evaluation of risk exposure



Thailand floods impact semiconductor test and assembly operations



Risk

Known Factors

To Determine Risk Adjustment Factor, apply Probability % and \$ amount of Impact if event occurs. From the previous slide (Alternative B), let's assume our purchase price is \$85 landed price (equalized for transport)

Potential Event	If Occurs \$ Impact	Probability of Risk (%)	\$/Unit Risk Adjustment
Quality	\$20	10%	\$2.00
Transportation/logistics	\$15	30%	\$4.50
Political	\$10	8%	\$0.80
Country regulations	\$16	25%	\$4.00
Unforeseen Taxes (VAT)	\$15	20%	\$3.00
Material availability	\$18	40%	\$7.20
Supplier commitment	\$20	15%	\$3.00
Need for increased inventory	\$30	40%	\$12.00
Need for additional expediting	\$5	50%	\$2.50
Customer service	\$7	30%	\$2.10
Other issues	TBD	TBD	\$3.90
TOTAL RISK ADJUSTMENT			\$45.00

Source: Resources Global Professionals

Mitigation

What does this mean ?????

- *Ensures that Risk Evaluation is part of the sourcing decision process*
- *Sourcing decisions should be based on Total Cost of Ownership—not just the price you pay*
- *The trend in today's economic climate is to ensure that all "Risks" are properly taking into consideration as well. This involves:*
 1. Identifying all the Risk elements
 2. Identifying & Prioritizing the HIGH Risk elements
 3. Determining the probability of the Risk occurring
 4. Assessing the monetary impact associated with each **Risk, if they occur.**

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Cisco: Building a Resilient Supply Chain

- 700 suppliers; 5 manufacturing partners at 30 locations
- Centralized risk management team responsible for end to end supply chain business continuity – became a focus in 2008-2009
- Preparedness and resiliency

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Key Features

- **Product Resiliency**
Early involvement in development examining risk trade-off
- **Supply Chain Resiliency**
Identify and mitigate circumstances that could limit certain products recovering from a major disruption within a specified time frame
- **Business Continuity Planning**
Web based tool to compile more than 30 resilience data points regularly refreshed
- **Supply Chain Incident Management**
 - Alert system to monitor worldwide events for any potential disruption that could impact supply chain
 - Robust set of crisis playbooks that detail processes for reacting to and mitigating incidents

Source: INSIDE SUPPLY MANAGEMENT
April 2012, pp 24-25, Mary Siegfried

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Earthquake in Japan

- Received early warning from alert service
- Initial assessment was “impactful event”
- Notified senior management
- Called in key supply management personnel
- Used BCP tool to identify suppliers and manufacturers in earthquake area
- Next day escalated to highest level for potential \$billion impact
- More than 1100 unique components across 65 suppliers requiring 900 new sources

Source: INSIDE SUPPLY MANAGEMENT
April 2012, pp 24-25, Mary Siegfried

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Business Continuity / COOP

Continuity Alert System



Overview	Services > Business Continuity / COOP > Continuity Alert System
Continuity Alert System	TCS Continuity Alert System
Information Hotline	Alert thousands immediately during an emergency or other time-sensitive situation. The TCS Continuity Alert System, powered by TCS' Send Word Now™, provides on-demand alerting and response services for effective communication to ensure continuity during critical events.
Planning and Management	The TCS Continuity Alert System, previously marketed as the TCS COOP Alerts System, simplifies the complexity of communication and continuity in times of crisis. This simple yet functionally rich, multi-modal emergency communications technology provides Web-based services that deliver messages quickly and efficiently in seconds.
Wireless Text Messaging and E9-1-1	Functional Highlights Easy use: Designed with the chaotic nature of emergency circumstances in mind, keeping it simple and easy to use is a top priority. In a crises situation, you'll never have to worry about who is trained to use the system.

Contact TCS
1-800-557-5869

Contact Information

Connections that Matter®

Dick Young, Executive VP & COO narrates video about TCS' offerings and markets.

http://www.disasterrecoveryworld.com/ Business Continuity Planni... x

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Disaster Recovery World

Directory of business continuity planning and disaster recovery planning software and services
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The Business Continuity Planning & Disaster Recovery Planning Directory

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It is now generally recognized that Business continuity planning and disaster recovery planning are vital activities. However, the creation of (and maintenance of) a sound business continuity and disaster recovery plan, is a complex undertaking, involving a series of steps.

Prior to creation of the plan itself, it is essential to consider the potential impacts of disaster and to understand the underlying risks: these are the foundations upon which a sound business continuity plan or disaster recovery plan should be built. Following these activities the plan itself must be constructed - no small task. This itself must then be maintained, tested and audited to ensure that it remains appropriate to the needs of the organization. And what about the support infrastructure and services?

Business Continuity Planning & Disaster Recovery World is designed to consider all these issues and to catalog some of the most highly acclaimed products and services. Here you will find software to assist with BIA and risk analysis, as well as links to tools/services to help you create, maintain and audit the plan itself. Whether you are entirely new to business continuity and disaster recovery planning, or whether you already have a proven and established plan, the directory should hopefully prove to be of real value.

BUSINESS IMPACT AND RISK ANALYSIS

The first step in a sensible business continuity process is to consider the potential impacts of each type of disaster or event. This is critical - how can you properly plan for a disaster if you have little idea of the likely impacts on your business/organization of the different scenarios?

http://www.disasterrecoveryworld.com/plan.htm is now equally important to which could result in these

CREATING A DISASTER RECOVERY PLAN

A sound disaster recovery / business continuity plan is essential to protect the well being of an organization. This cannot really be over emphasized... yet many enterprises still side step the issue or hold plans which are clearly out of date or inadequate.

Part of the reason for this is the complexity of the task. This is not helped by some vendors selling planning products which are themselves extremely difficult to master

Supply chains of all automobile makers were severely impacted



2013 – Lexus GS 350

- Tsunami caused Lexus to surrender its decade-long status as best-selling luxury brand in the U.S.
- Short of new models
- Needed to compete with sportier BMW in a re-entry into the market



- Sized between BMW 3 series and 5 series
- 0-60 in 5.7 seconds
- 28 mpg
- Gas-electric hybrid

Source: New York Times

One year later.. Toyota is fully prepared to face the future



Toyota Preparedness

- Toyota aims to restore its manufacturing operations in Japan in just two weeks even if a big earthquake were to damage suppliers - Shinichi Sasaki, Executive Vice President
- After the earthquake, Japan's biggest car maker by volume asked about 500 suppliers to its domestic factories to disclose details of their supply chain. About half revealed sourcing network information, and Toyota found that some 300 production locations could be at risk and is trying to address it
- As a result, Toyota asked these suppliers to hammer out counter measures like diversifying purchasing, securing alternate plants or piling up stocks of parts. Similar measures will be taken in supply chains in the U.S. and Europe, Mr. Sasaki said.
- These measures, of course, will increase some operating costs, the vice president said. But they can be offset, he believes: Toyota, for instance, is trying to reduce the number of the type of parts it uses so it can order larger volumes of parts from each supplier. As a result, **within four years Toyota is looking to make half of the 4,000-5,000 parts used in making a car common parts that can be shared among different models, he added.**

Source: Wall St. Journal

Supply Management Trends

- Increase inventories
- Dual/multiple sourcing
- Geographical dispersion of suppliers
- Increased visibility up the supply chain
- Sophisticated analytics
- Rapid response plans
- Corporate and SM organization changes

The Seven Knows of Commodity Buying

1. **Know the Commodity**
 - Obtain knowledge of the commodity
 - Application, usage, capacity
 - Upstream and downstream
2. **Know the Industry**
 - Lumber is a commodity within the wood products industry
3. **Know the Company**
 - Use many resources to learn about the company financials, credit, etc.
 - Is it sustainable
4. **Know the Competition**
 - Who are the competitors (Porter's Five Forces)
5. **Know the Trend**
 - You have to know the past, present, future
6. **Know the Buzz**
 - Twitter, LinkedIn, Yahoo Blog are now all tools available to the Supply Manager
7. **Know the Market**
 - Who are the buyers and sellers; what drives the market
 - Who controls pricing; Indexes with impact
 - Commodity Indexes – Energy, Metals, Minerals, Agriculture

Green

Operational Challenges

- Reduce costs and create “green” benefits
 - Reduce energy
 - Reduce water usage and effluents
 - Reduce greenhouse gases
 - Reduce other emissions
 - Reduce landfill

Green

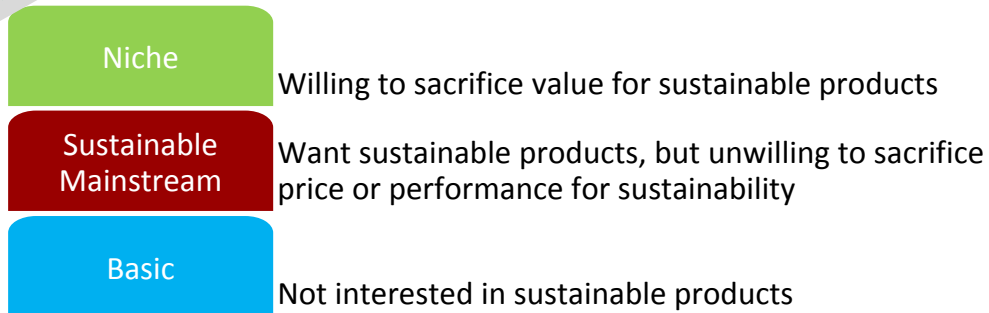
Product Challenges

- Must be good for the consumer and the world
- Must be neutral to good for the bottom line
- Unclear science
- Total life-cycle assessment must be considered
- Consumer demand is varied

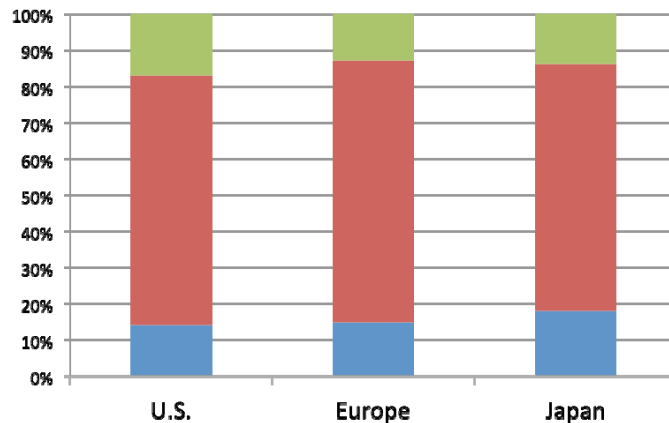
Reputation Challenges

"Green" Consumer Types by Country*

Green



*Source:www.pg.com



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Green

Supply Management Trends

- A comprehensive environmental policy linked to company goals
- An environmental strategy that goes beyond compliance
- Recognize the environment as a source of competitive advantage

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Green

Supply Management Trends

- Lead in environmental practices
- Reward environmental performance
- Engage in cross-enterprise environmental partnerships
- Positive executive engagement and communication *



* *Supply Management's Strategic Role in Environmental Practices*, CAPS Research, 2008

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Source: www.nike.com

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Source: www.nike.com

Consultants say actually manufacturing athletic shoes in the U.S. would still be more expensive than Asia, but the cost difference could be made up by spending less on shipping and being faster at filling demand or jumping on a hot trend in Nike's largest market.

Nike typically expands innovations across its lines. Flyknit, which allows for more cables to increase support, was released in 2008 and is now a staple in Nike's footwear. And Air is included in some dress shoes. Nike has similar plans for Flyknit.

The flexibility of the computerized process allows a person to customize a shoe for a customer. That's for the product. This is a standard



Automated shoemaking allows customers to have their foot scanned and the shoe by color and style down to a single thread. This is allowed by NIKEiD, the company's Web-ordering system for specific colors and fabrics. Says Denson: "Because this is so comfortable, this one is going to hit from a revenue standpoint. What it gives us the ability to do is almost unlimited."



The bottom line: Nike's new computerized knitting process weaves an entire shoe upper in one piece. That's 35 fewer pieces to sew than similar shoes.

Source: www.nike.com

<http://Nike FlyKnit>

How is Supply Chain Measured in Today's Economic Environment?

- Cost Reduction vs Cost Avoidance
- How well do we execute the process?
- How do we measure risk?
- Measurement of Supplier Sustainability
- Scorecards: Customer Satisfaction, On-time Delivery, Defective Parts, Quality of Service, \$ under contract
- Benchmarking

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Outlook for 2013 and Beyond

- Growth – cyclical vs structural
- Inflation – commodities (PPI) vs services (CPI, EPI)
- Interest Rates – normalization of deviation
- Global Currencies vs Gold
- Corporate Profits – are they sustainable?
- Housing – interest rates; credit standards; income growth; demographics; inventory
- Financial Market Regulation – uncertainty vs risk
- Jobs – 3 year recovery = 8.3%

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