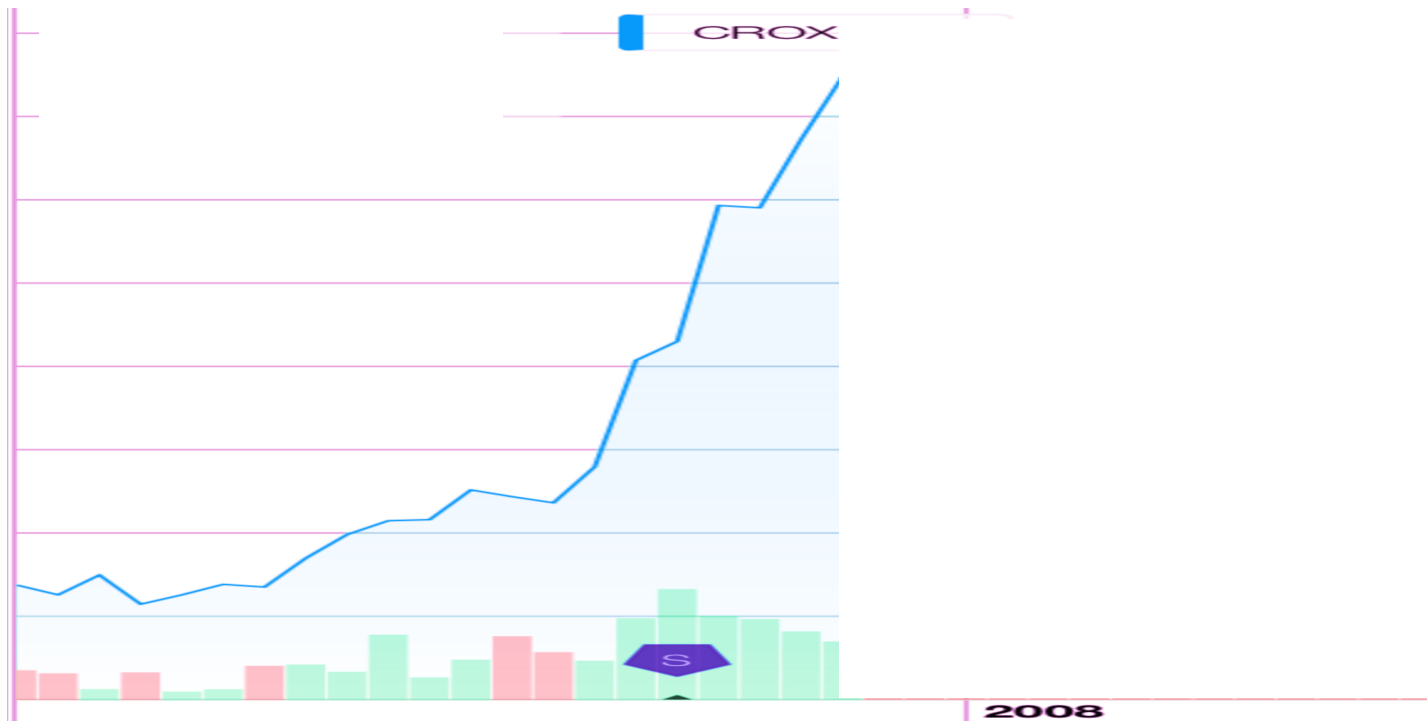


Week 2:

**MIS 3537: Internet-Enabled Supply Chains**

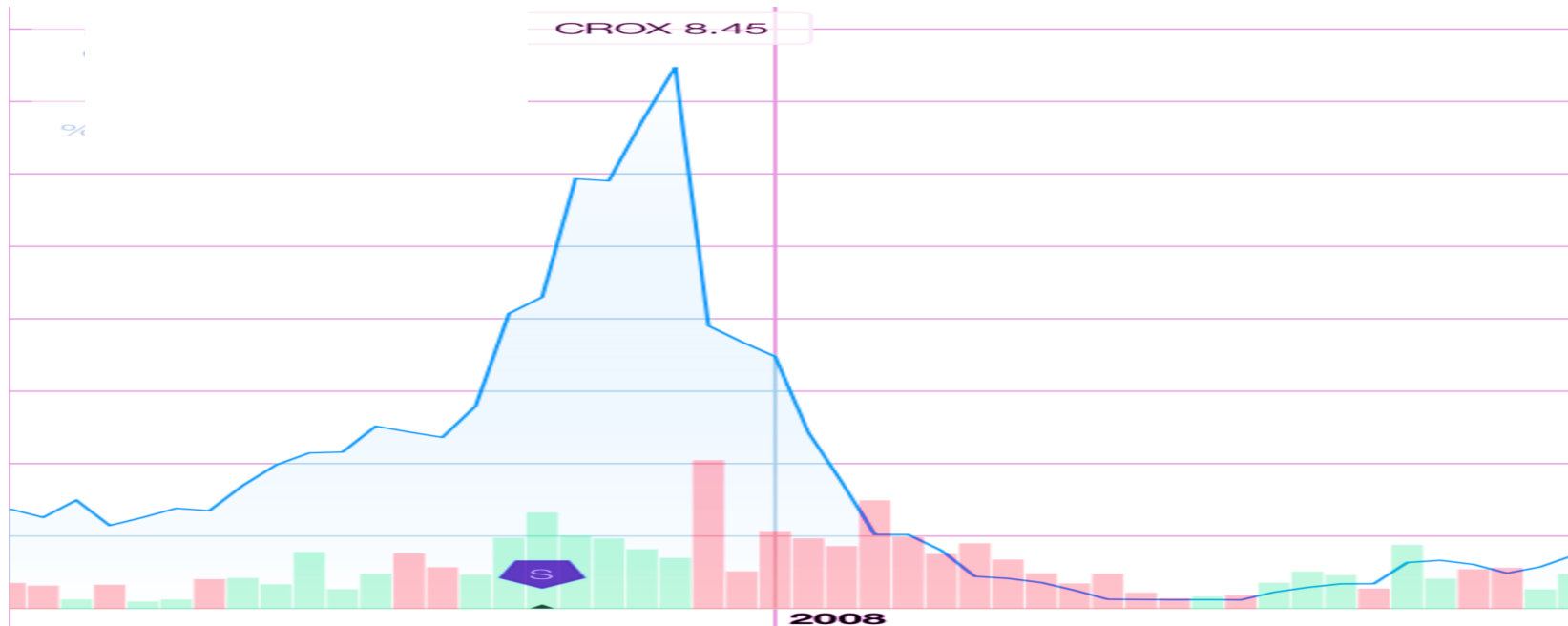
**crocs<sup>™</sup> Case**

# crocs™ At Time of Case



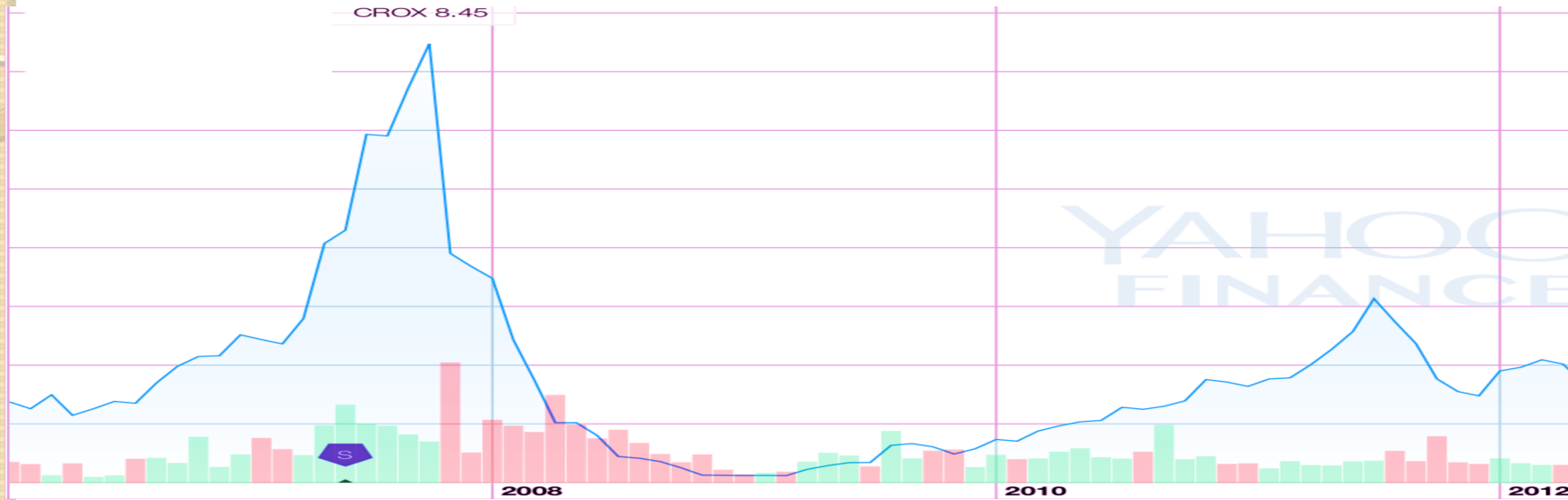
- What happened in 2008?
- What happened to Crocs?

# crocs™ 2008 - 2009



- Losses in 2008, 2009
- Recession – market ‘increasingly challenging’
  - Supply Chain restructuring (closed Canada, Brazil factory) \$8.6mm
  - Inventory writedowns (\$65.4 mm)
  - Asset impairment (goodwill, excess equipment & tooling) \$45.8 mm

# crocs™ 2010+



- Back from the 'dead'
- Survived because of:
  - Strong Brand
  - Distribution
  - Diversity – Geographic, Product Line

# crocs™ Today



- Stores including:
  - Online Store
  - Local outlets
- Key Supply Chain Concepts

- Current Product Line
- Key Supply Chain Concepts

	women	men	girls	boys	jibbitz™	shop by	sale
<b>activity</b>							
+	nursing						
👨‍🍳	chef						
☀️	summer						
🌴	beach						
🚶	walking						
💧	water						
🌱	gardening						
🏕️	camping						
🚿	shower						
<b>style</b>							
👞	clogs						
👡	flip flops						
👠	sandals						
👟	flats						
👠	heels & wedges						
👞	loafers						
👢	boots						
👟	sneakers						
👜	accessories						
<b>featured</b>							
👞	work shoes						
👞	crocsRx™						
👞	classic crocs™						
👞	fuzz & lined						
👞	kids' character clogs						
💡	crocslights						
👞	citilane						
👞	realtree®						
+	scrubs						

# crocs™ Today



- Reduced revenue & profit guidance last 3 quarters
- Operating losses some quarters
- Challenge to sustain a business for the long term

# Break Time



Week 2:

## MIS 3537: Internet-Enabled Supply Chains

From the first click to the last mile



CLICK  
CLICK





# Last week...

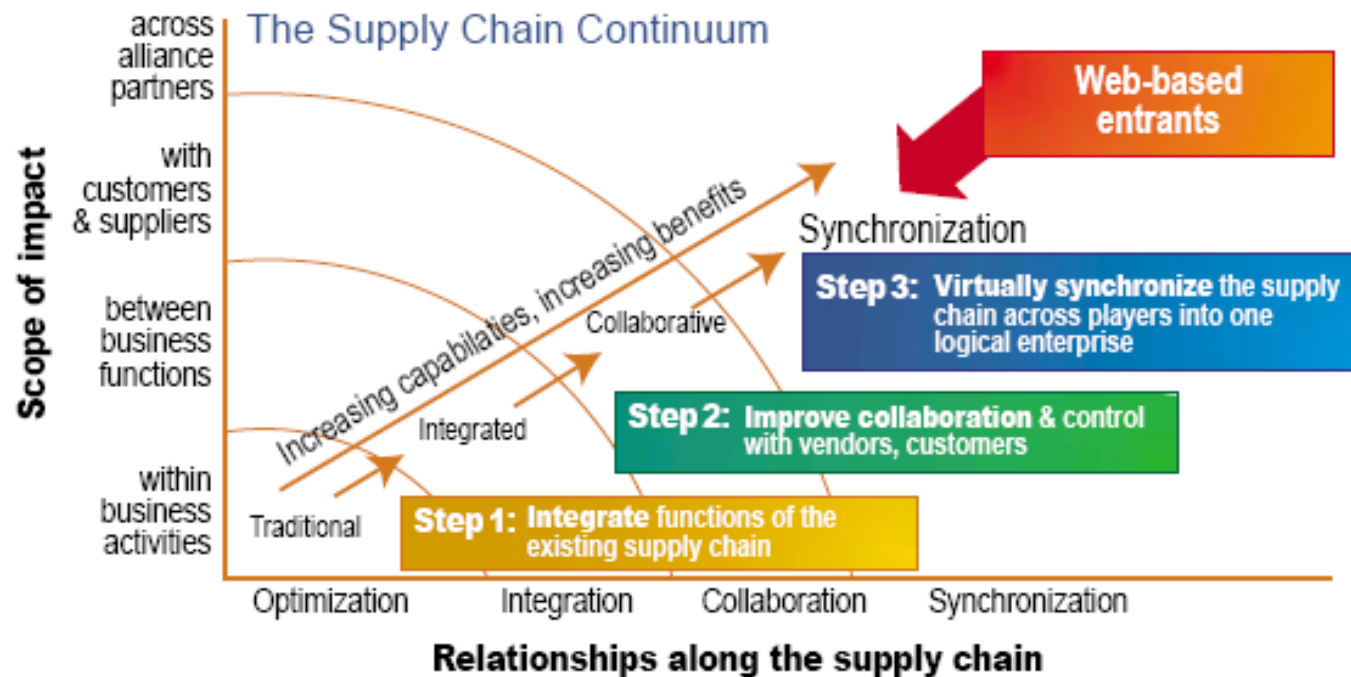
- Importance of Supply Chains
- Key Supply Chain Concepts

# Learning objectives for today

- How the Internet changes supply chain dynamics
- What has not changed because of e-business?

# The impact of the Internet

## Web-Based Entrants are Making Synchronization and the Associated Benefits Achievable



# The four key impact areas

- eDesign
- eMediaries
- Web-based collaborative planning
- eFulfillment

# eDesign

**E- Design Facilitates Real-time, Cross-Company Collaboration and the Design of "Friendly" Products.**



- **Minimize design complexities that later drive supply chain inefficiencies and costs**
- **Avoid downstream issues in production, logistics and service parts**

# What is Design?

- eDesign = Product innovation on the Web
- Traditional design: Leverage internal capabilities (different teams from same company)
- New-age design: Bring different ideas from different companies together

# Why Design ?

- Shrink product lifecycles through integration and rapid flow of information
- Integrated product design also enables customization of product depending on supplier feedback (more alternatives)
- Fast, cost effective iteration of prototypes for feedback



# eDesign at Hewlett Packard



- Traditional approach: Dedicated teams focus on launch dates, features and functionality
- eDesign approach: Multiple internal and external design teams for laser printers
- Modular parts and differentiating components can be assembled at regional distribution centers, **not** production facilities



# More Design

-  *National Semiconductor* launched product design portals: customers and suppliers can collaborate on early stage design of circuits
- [Yet2.com](http://Yet2.com) allows companies to trade intellectual properties 
- DuPont R&D produces 400 patents a year; not all are useful to DuPont
- Yet2 matches appropriate companies, netting DuPont millions in licensing fees 

# eMediaries

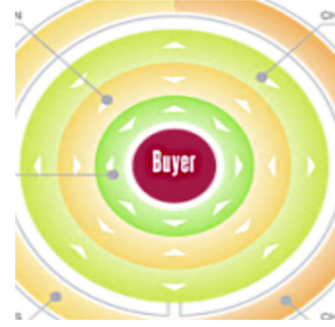
- eMediary = a type of online market or exchange
  
- Three models of eMediation
  - Supplier-centric model
  - Buyer-centric model
  - Hybrid marketplaces

# Supplier-centric model

- Sellers provide catalogs online
- Prospective buyers can access these catalogs online and strike deals
- W.W. Grainger is a leading example of a supplier-centric eMarketplace



# Buyer-centric model

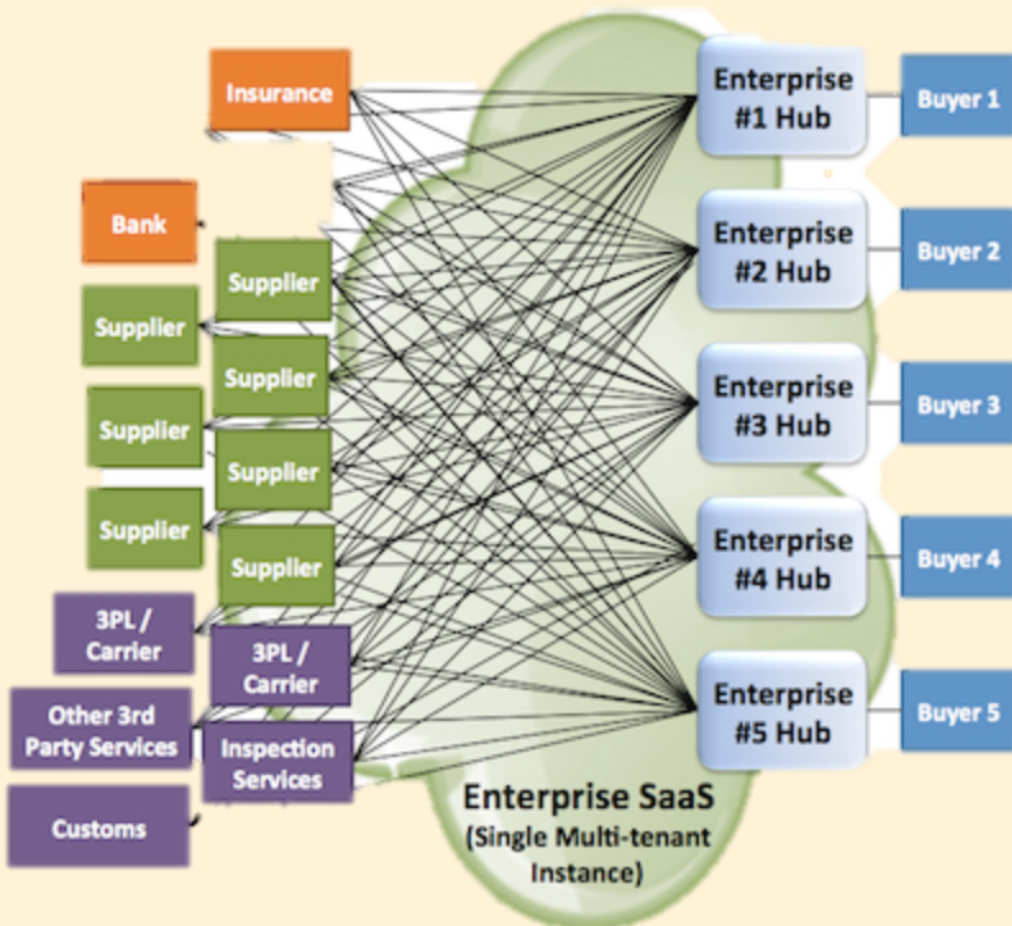


- Large companies can display their needs online
- Prospective vendors can access these requirements and make bids
- ***BP Amoco*** uses the buyer-centric model

# Hybrid marketplace

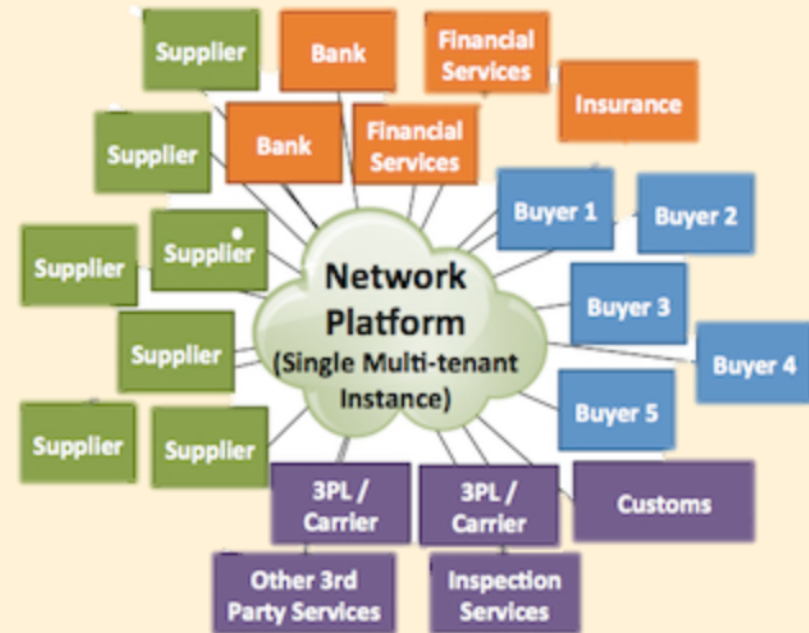
- This is the true eMarketplace
- Similar to eBay, but focused on B2B
- Both suppliers and buyers can display their catalogs and requirements online, and deals are made through bids

# Comparison



One-to-Many  
Buyer or Supplier  
Centric

Many-to-Many  
Network of all,  
Hybrid



# Benefits

- Lower product acquisition costs
  - Competitive bidding process
  - Multiple vendors implies better deals
- Lower procurement transaction costs
  - No paper-based process
- Vendors can be selected from across the globe
- A means to dispose of unused excess inventory



# Agentrics -> **NeoGrid** Your Product On-Demand

- Retail Exchange (esp. Private Label Goods)
- Backbone of Walmart's 'Great Value' brands
- Retailers: fashion, electronics, pharmacy, DIY/ Home centers
- Other players: suppliers, manufacturers, distributors
- Functions: Supply chain collaboration / Sync, Data exchange, Transaction Execution, etc.

◦ Global partners, Brazilian owned





# World Chemical Exchange



- Setup by **ChemConnect**<sup>®</sup>
- Global-neutral market for chemical and plastics manufacturers and buyers
- Partners with more than 9000 companies from 150 countries
- Clients include 20 of the world top 25 chemical companies

# Others

-  **EXOSTAR**<sup>®</sup>
  - Aerospace and defense partners
  - Strong Security
-  **PARTS.com**<sup>™</sup>  
For Every Part of Your Life
  - Automotive industry focused eMarketplace
  - 180 million in inventory (21m unique parts)
  - 34 warehouses; 41 brands
-  **PlasticsNet**<sup>SM</sup>  
A VeriMarkets Marketplace for Industry Professionals
  - eMarketplace for the plastics industry
-  **FREE MARKETS** ECO products

# Collaborative Planning



- Traditional approach
  - Plan the activities inside the company
  - Do not share any details with suppliers or vendors
  - Data owned and manipulated only by the company and its employees
  - Sharing data = Loss of profitability
  - Multiple forecasts up and down the supply chain: different entities operate with different forecast numbers!

# Why collaborate?



- Planning done in conjunction with:
  - Suppliers
  - Customers
  - Channel partners
- Share crucial information
  - Relevant sales data
  - Material availability
- Benefits
  - Single forecast shared by all participants
  - Increased **trust** levels
  - Broader Optimization

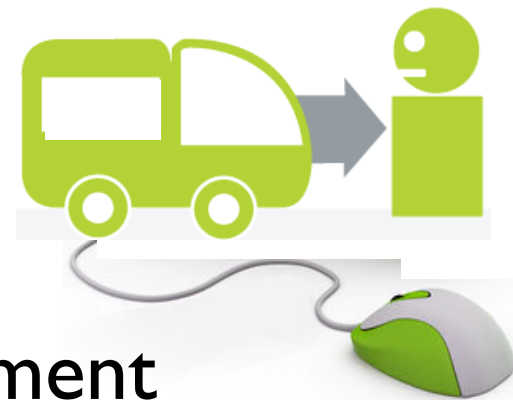
# Other key factors & benefits

- Open standards for the web (e.g. XML)
  - Everybody talks the same language
- Broader information sharing
  - Expand from supplier and customer to supplier's supplier and customer's customer
  - Broader optimization
- Internet becomes a shared data repository
  - Easy for third-party to manage data in SC
  - Single version of the 'truth'

# FREIGHTWISE

- Online marketplace for buyers and sellers of transportation services
- Trading partners able to share, view and execute decisions based on real-time information: collaborative (c-) commerce
- 2001: Closed
  - Good exchange but nobody came
  - Reality: B2B c-commerce must start with enterprise's relationships with partners - **trust**

# eFulfillment



- Contrary to its name, eFulfillment does not reside on the Web
- It refers to the ability to match the physical on-the-ground capability of the company to match the speed of the data on the virtual supply chain

# As a Customer What do you Expect from a Supply Chain?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

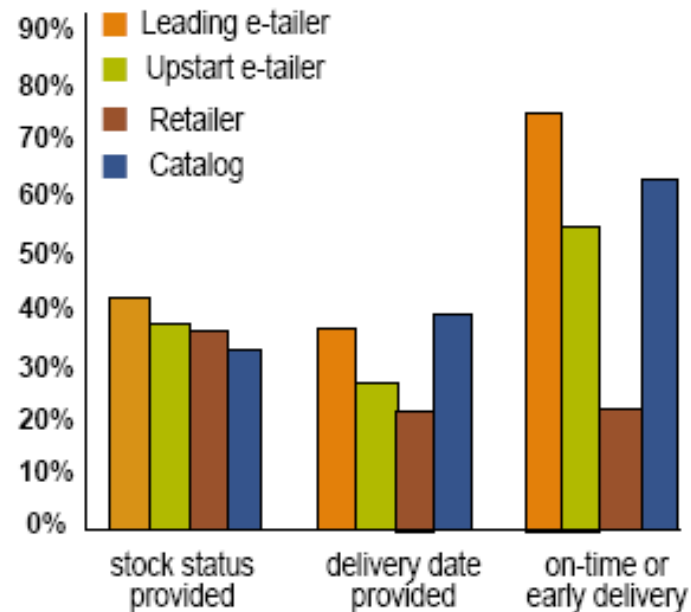




# Why is it crucial?

## Gaps in Supply Chain Infrastructure are Resulting in Poor Performance and Disappointed Customers

Andersen Consulting Online Retailer Study



# Why is it crucial? (contd.)

- Study of 100 online retailers
  - 25% of orders could not be completed online
  - 75% of retailers did not meet delivery commitment!
- More importantly
  - E-tailers (online-only) were able to meet delivery commitments 75% of the time (average)
  - Traditional retailers with online presence could meet only 25% of delivery commitments
  - What causes this disparity?

# Possible answers



- “We cannot solve our problems with the same thinking we used when we created them.” – Albert Einstein
- Traditional retailers with online operations were probably not organized to deal with online operations
- Online retailers had integrated their entire chain much better, thus leading to better levels of service



# Learning objectives for today

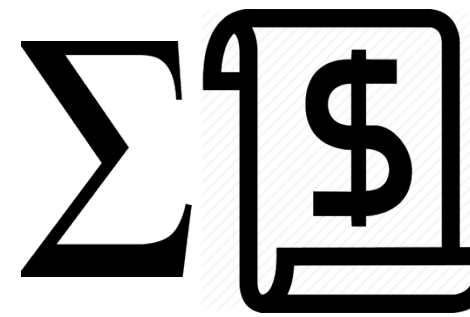
- How the Internet changes supply chain dynamics
- What has not changed because of e-business?

# What has not changed?



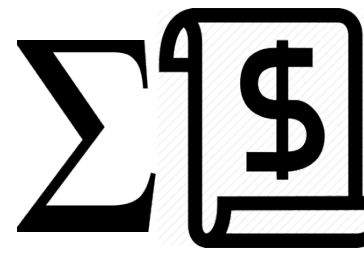
- Radical? transformation, yes! But certain principles still hold
  - Only “total cost” matters
  - Trade-offs are forever
  - Uncertainty will remain
  - Continuous Change a Necessity

# “Total cost”



- Recall from lecture 1
  - Material costs (e.g. raw materials)
  - Manufacturing costs (e.g. labor, machine costs)
  - Warehouse costs (e.g. storage, depreciation)
  - Transportation costs
  - Planning costs (e.g. labor, I/T)
  - ...
- **Total cost** = sum of **all** costs incurred in the supply chain

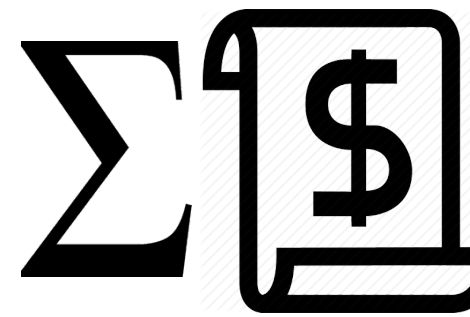
# Only “total cost” matters



- In any supply chain
  - You cannot minimize just one cost without adversely affecting other costs
- The customer pays for the final product!
- The goal, therefore, is to minimize the total cost, by optimizing across the chain, and not just at one point



# “Total cost”



- Common stumbling block: Sub-optimization
  - Outcome less than best possible (Optimal)
  - Result of different groups / segments / departments of Supply Chain each attempting to reach a solution that is optimal for them





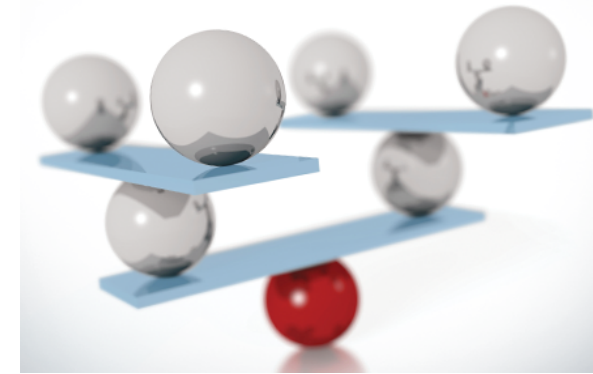
# Tradeoffs are forever



- You cannot have “fast response” with “zero inventory”
- In fact, if you can do both, you are probably not managing efficiently, i.e. you’re off the “efficient frontier”
- Most often, a tradeoff will involve multiple terms, not just two

# Managing tradeoffs

- When a tradeoff occurs, consider
  - The fixed cost of production
  - Inventory levels
  - Speed of service
  - Reliability of service
  - Number of options offered
- By varying one or more of the above, the total cost can be minimized



# Uncertainty will remain

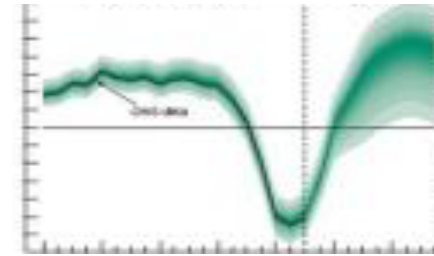


- Main benefit of an integrated supply chain
  - information moves faster
    - Faster information = Shorter period of uncertainty
    - POS data, inventory status, and production schedules are shared quickly
- Long Term decisions made with uncertain, often limited or conflicting information



# Some buffers will be needed

- Faster information sharing does not eliminate all uncertainty



- To manage uncertainty, some buffers are still required: inventory, excess capacity and wait time
- Remember: information can travel rapidly; physical flow is not as fast

**DANGER**

**STUFF  
HAPPENS  
HERE**

# Continuous Change

- Required / Not an Option
  - Competition
  - Technology
- Is a Process
  - Never a straight line
- Needs to be managed
  - Define the Goal
  - People



# Next week...

- Zappos.com Case



- Electronic Markets



# GM' s TradeXchange

- Partnered with CommerceOne to develop its own online marketplace – TradeXchange
- Suppliers can use custom-designed, Web-enabled applications to conduct real-time processing
- Simultaneous interactions with multiple entities – purchasing, finance, production control, engineering, logistics
- Expected savings for GM: \$400 million/year

**Launched 2000 – disbanded by 2004**



# TradeMatrix TradeMatrix™

- Open digital community developed by i2 Technologies
- Customers, partners, suppliers and service providers gather to make decisions about
  - Dynamic trading
  - Electronic procurement
  - Spot buying
  - Order fulfillment
  - Logistics services
  - Product design

**2016: I2 now part of JDA / Red Prairie. No sign this service still active.**