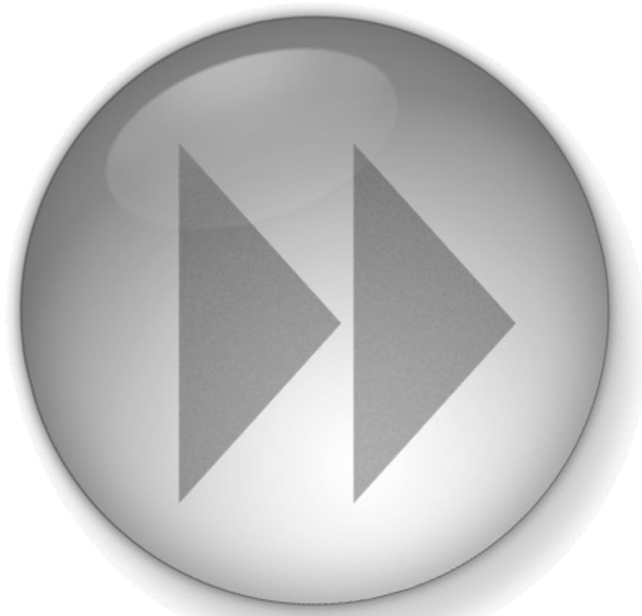


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Supply Chain Strategy What Are The Leaders Doing?

Track 1 Session 9



Supply Chain  **Forward.**

Marc Wulfraat

President

MWPVL International Inc.

(514) 482-3572 x 100

Abstract

- ▶ **A number of pressure points are impacting the supply chain landscape including volatile oil prices, turmoil in the credit & currency markets and a recession.**
- ▶ **Supply chain networks and distribution strategies that were designed during the era of cheap oil are being redesigned by forward thinking companies that are planning and implanting new strategies to improve service levels and reduce reliance on fuel.**
- ▶ **This presentation provides a quick look at what a few of the leaders are doing in the area of supply chain strategy.**

Agenda

- ▶ **Economic drivers shaping supply chain strategy**
- ▶ **Domestic logistics strategies that leading companies are pursuing in the U.S.**
- ▶ **Closing thoughts, questions and discussion**

2009 Economic Landscape



- ▶ **Recession**
- ▶ **Tightly constrained capital market**
- ▶ **Stock market decline**
- ▶ **Energy cost volatility**
- ▶ **Major reduction in demand for domestic and imported goods triggering cash conservation and survival mentality**

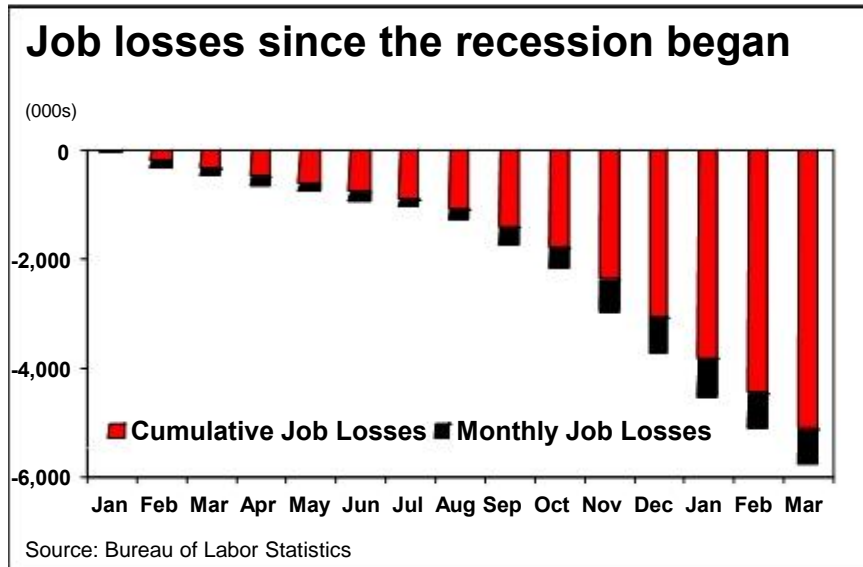
State of Private Industry

▶ Short Term:

- ◆ Delay / cancel major capital expenditures
- ◆ Close non-profitable business units
- ◆ Divest non-productive assets / infrastructure
- ◆ Focus on head count & operating expense reduction
- ◆ Focus on inventory reduction
- ◆ Domestic distribution networks are consolidating in response to market conditions

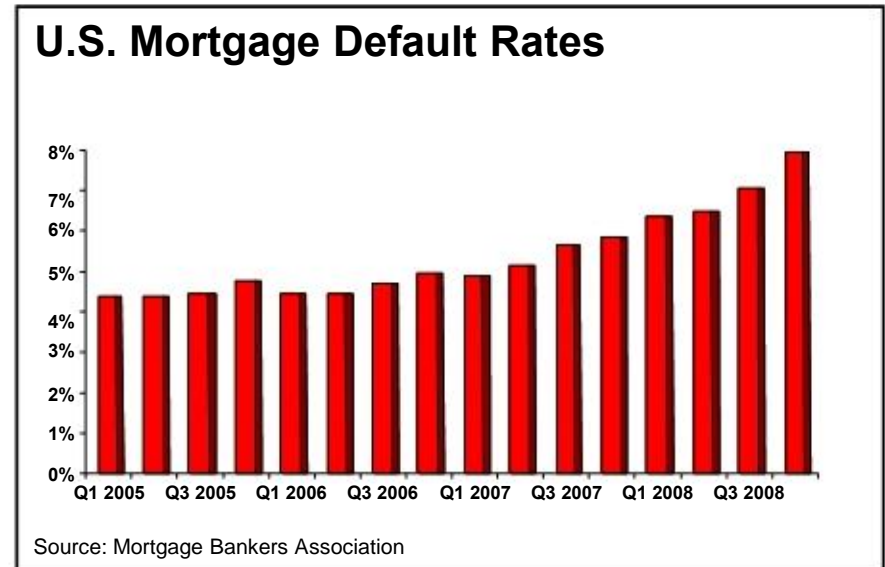
Challenging Business Environment

U.S. Recession Job Losses Top 5 Million in March



“The U.S. has shed more than five million jobs since the recession started.”

U.S. Housing Crisis Driving Mortgage Default Rates



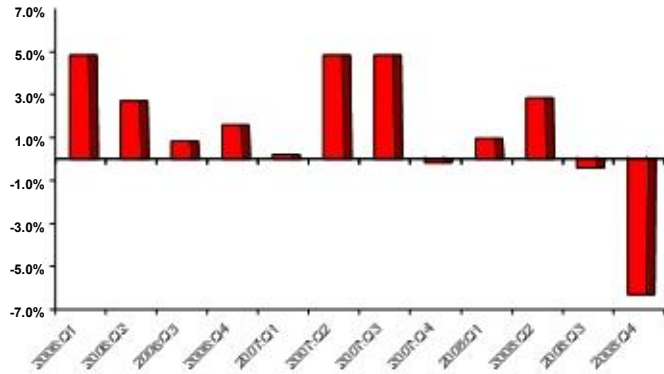
“The U.S. mortgage quarterly default rate has increased by about 210 basis points from one year ago.”

Mortgage Banker's Association of America

U.S. GDP / The Consumer

Gross Domestic Product

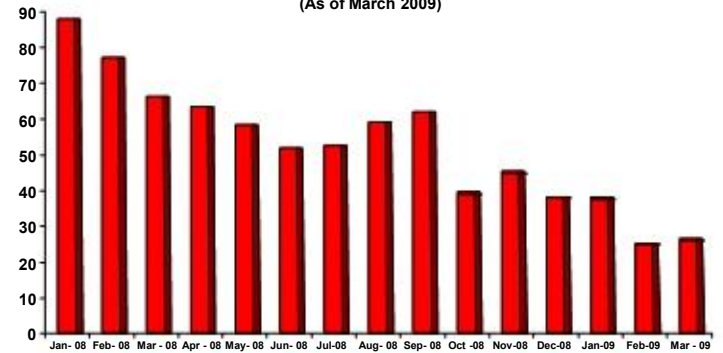
Gross Domestic Product (GDP)



Source: Bureau of Economic Analysis

Consumer Confidence

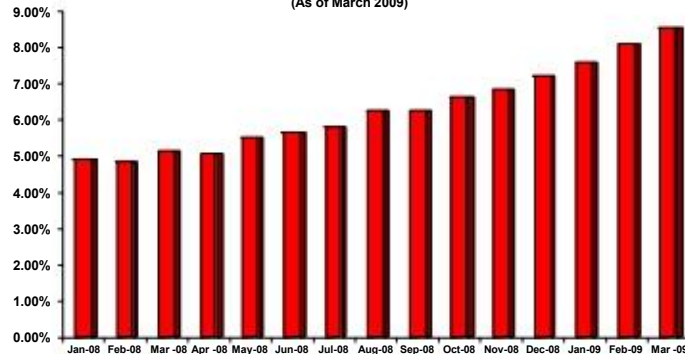
Consumer Confidence
(As of March 2009)



Source: The Conference Board

Unemployment Rate

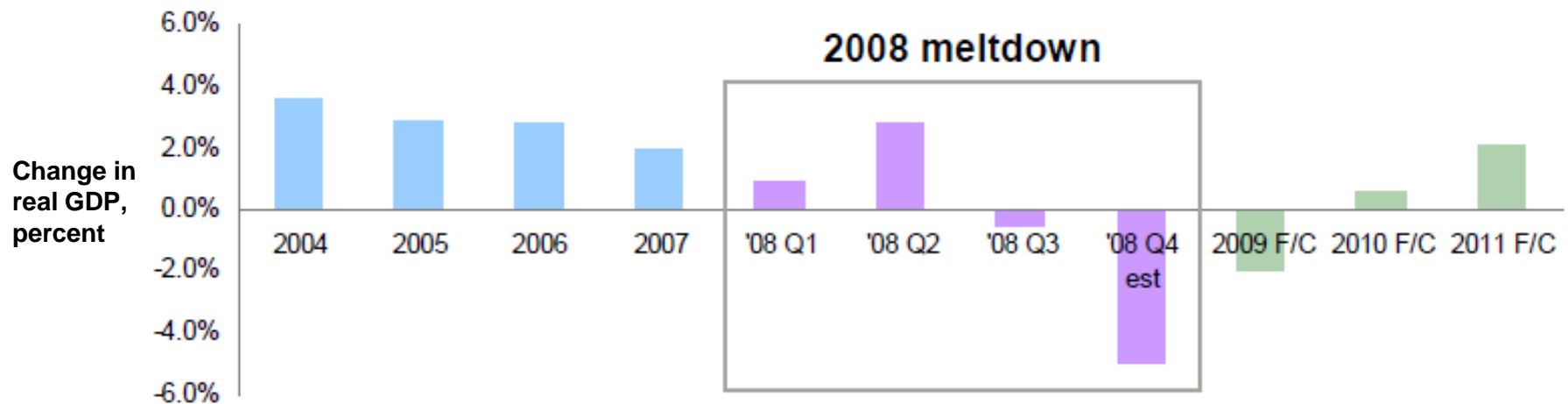
Unemployment Rate
(As of March 2009)



Source: Bureau of Labor Statistics

- U.S. economy shrank 6.2% in Q4'08, exceeding earlier forecasts due to a downturn in exports and a much larger decrease in equipment and software
- U.S. consumer confidence, which had decreased moderately in January, declined in February, reaching yet another all-time low
- U.S. unemployment rose to 8.5% in March 2009. Job losses were large and widespread across nearly all major industry sectors

Economic Downturn and Volatility

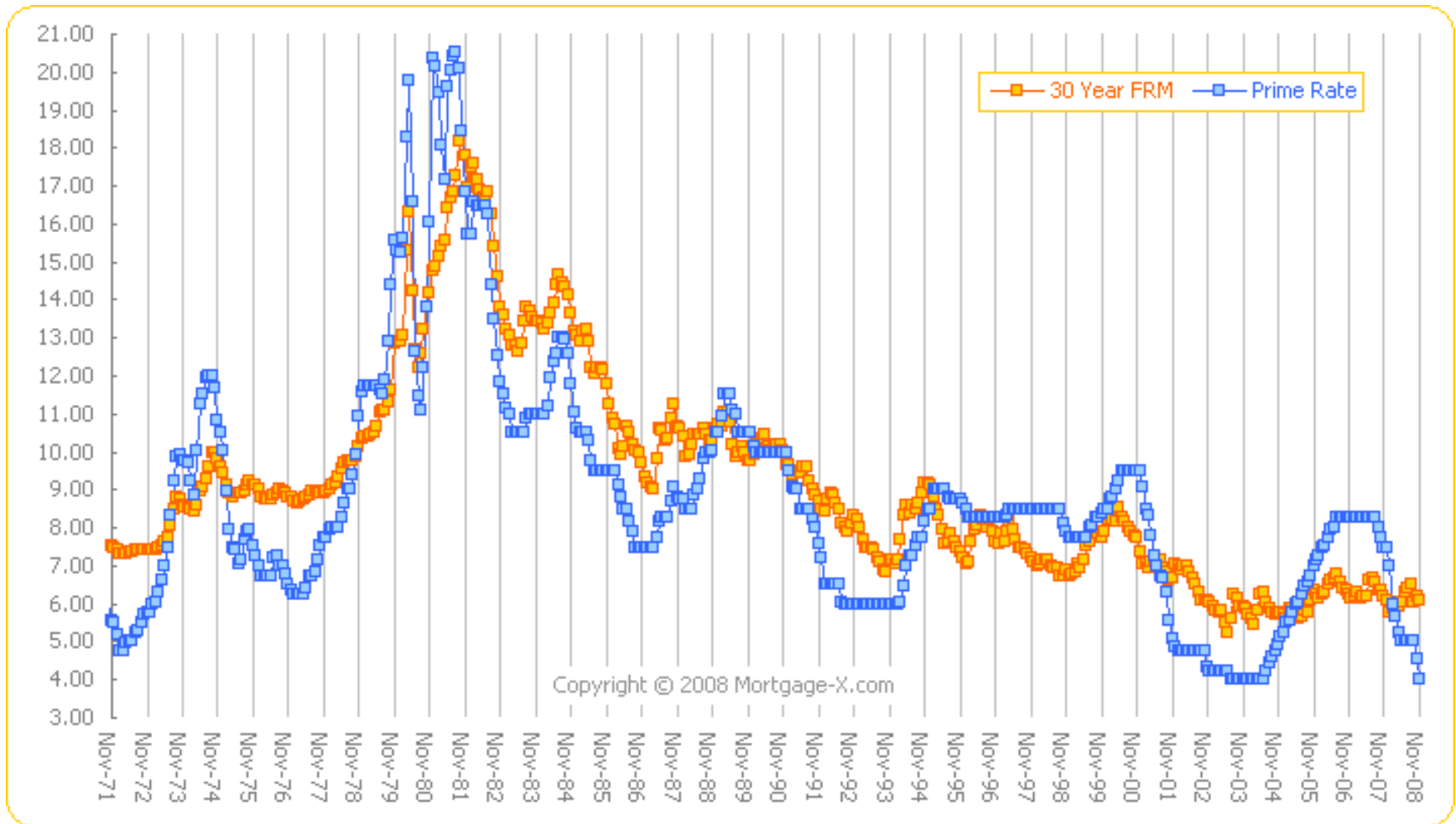


Source: BEA historical data; recent estimates for Q4 '08; EIU forecasts (Dec '08).

► US Recession has spread worldwide...

- ◆ US recession expected to be relatively deep and long
- ◆ Consumption (70% of US GDP) expected to recover slowly
- ◆ Europe and Asia also impacted

Interest Rates: 1963 - 2008

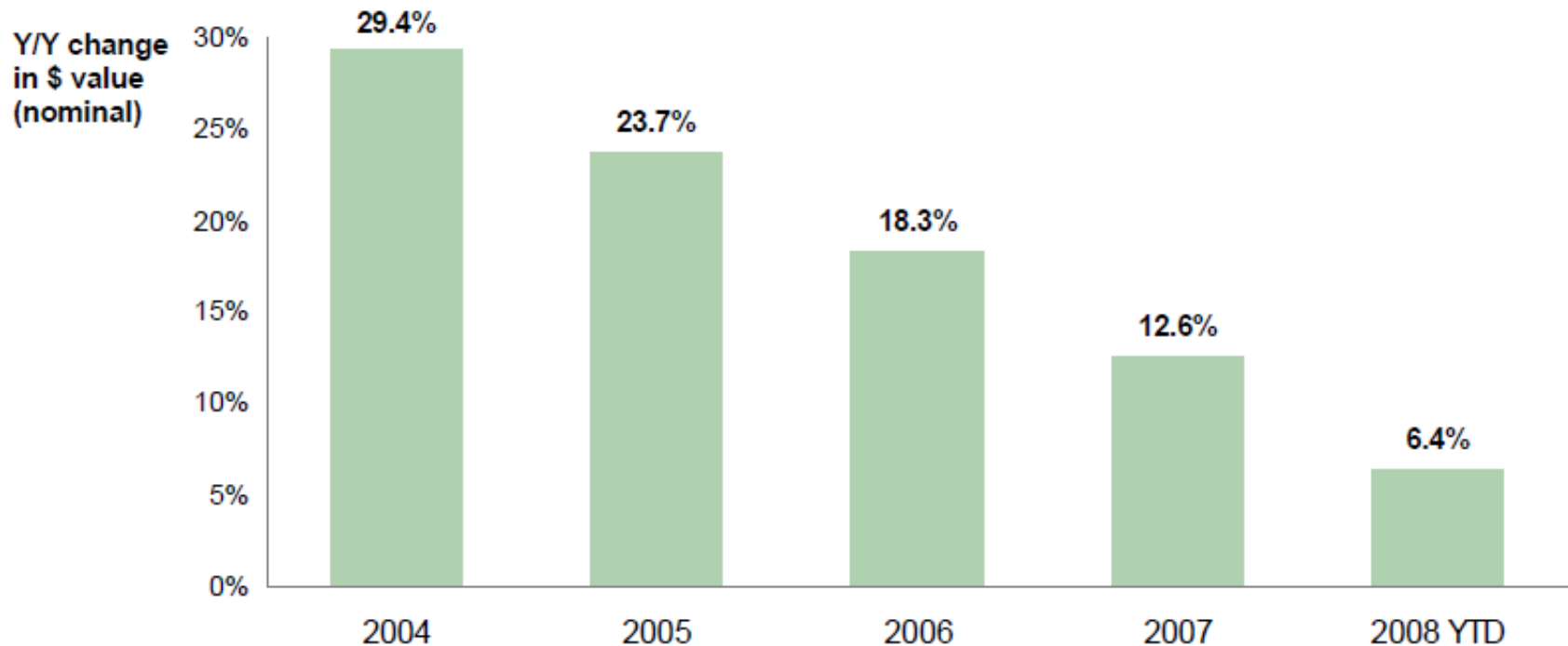


Interest rates bottom out in 2008

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US Imports From China Decelerating

- ▶ US growth in imports from China down sharply mainly due to drop in consumption / demand

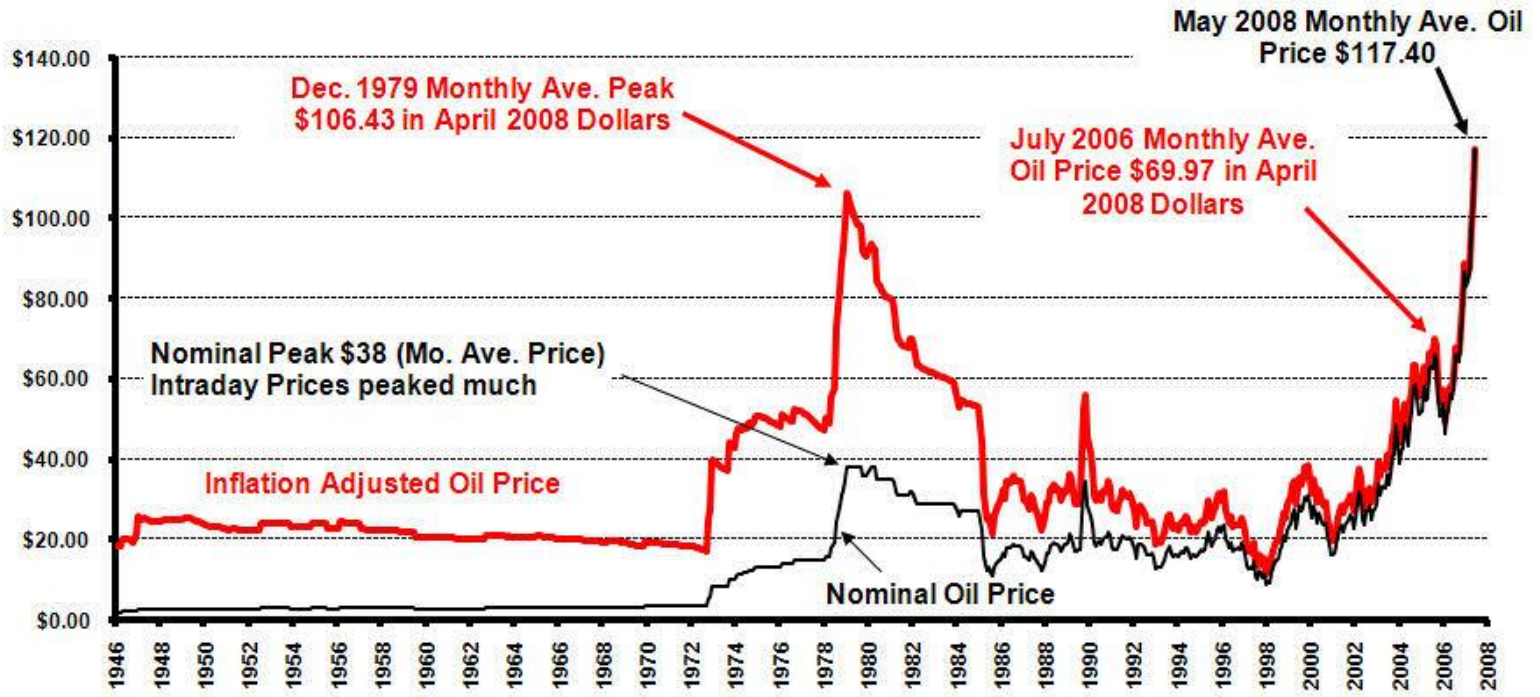


Note: Customs value of U.S. Imports For Consumption. 2008 YTD is through October.
Source: U.S. International Trade Commission.

Inflation Adjusted Oil Prices

1946 - 2008

**Inflation Adjusted
Monthly CRUDE OIL PRICES**
(1946-Present) In April 2008 Dollars
© www.InflationData.com
Updated 6/12/2008



Nominal Monthly Ave. Oil Price
Inflation Adjusted Monthly Average Oil Price

Source of Data:
Oil Prices- www.ioga.com/Special/crudeoil_Hist.htm
CPI-U Inflation index- www.bls.gov

Crude Oil Prices : Last 24 Months



75% Decline in Oil Prices since the July 2008 Peak but prices are rebounding

Short Term Oil Outlook

▶ 2008:

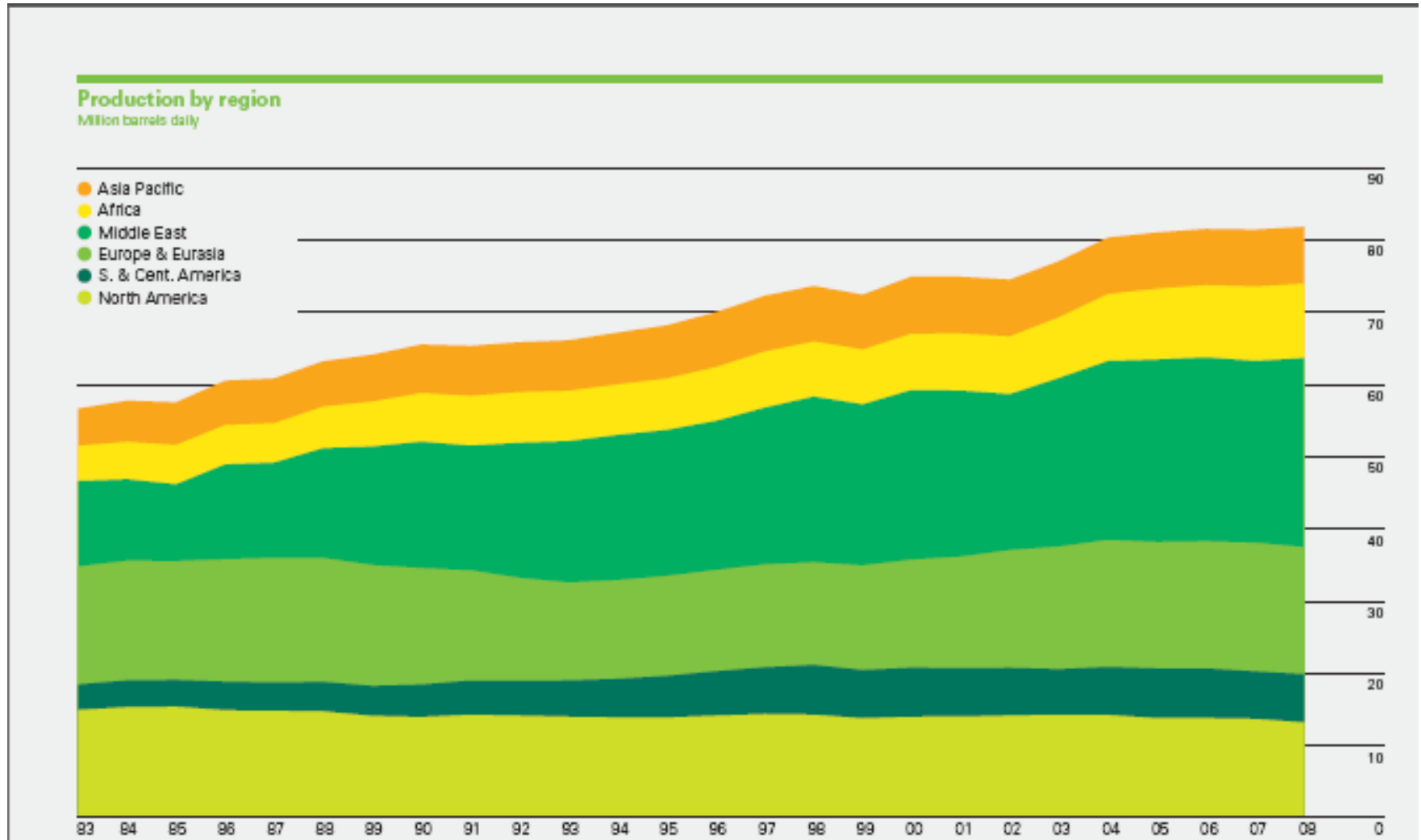
- ◆ When the banking industry collapsed, Hedge Funds had to raise cash so they liquidated their holdings in energy investments causing a 75% reduction in the price of oil.
- ◆ July 2008 record high of \$147 pb went down to \$40pb even though global oil demand declined by < 10%

▶ 2009:

- ◆ China is flush with cash and is currently buying all the oil it can for its strategic reserves
- ◆ In the short term, OPEC countries are willing to sell oil at any price to fund government programs and prevent political instability
- ◆ One constant however is the depletion of major oil fields, worse than predicted in previous years

World Oil Production

Currently at 81.8 Million Barrels/Day



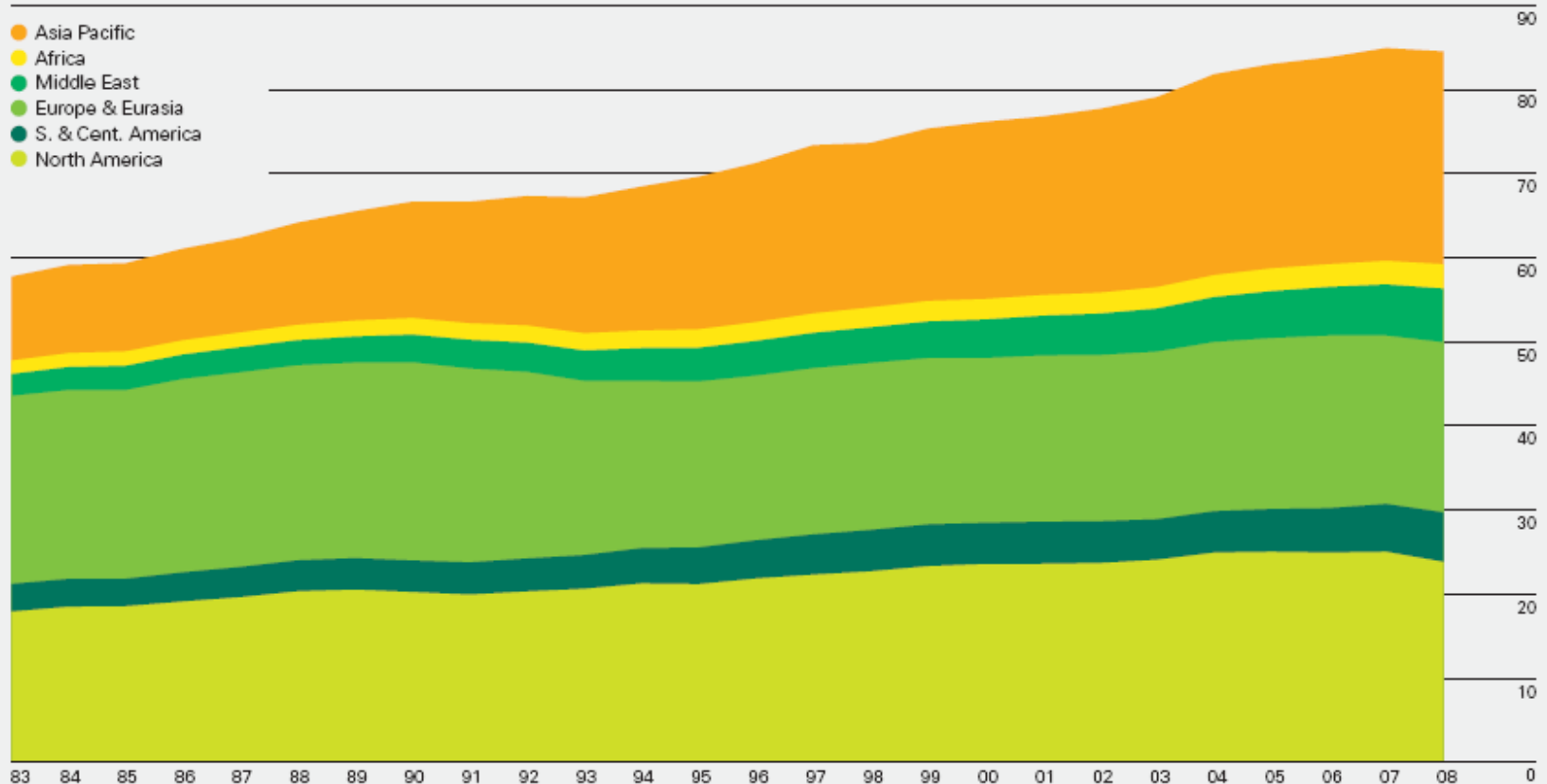
World Oil Consumption

Currently at 84.9 Million Barrels/Day

Consumption by region

Million barrels daily

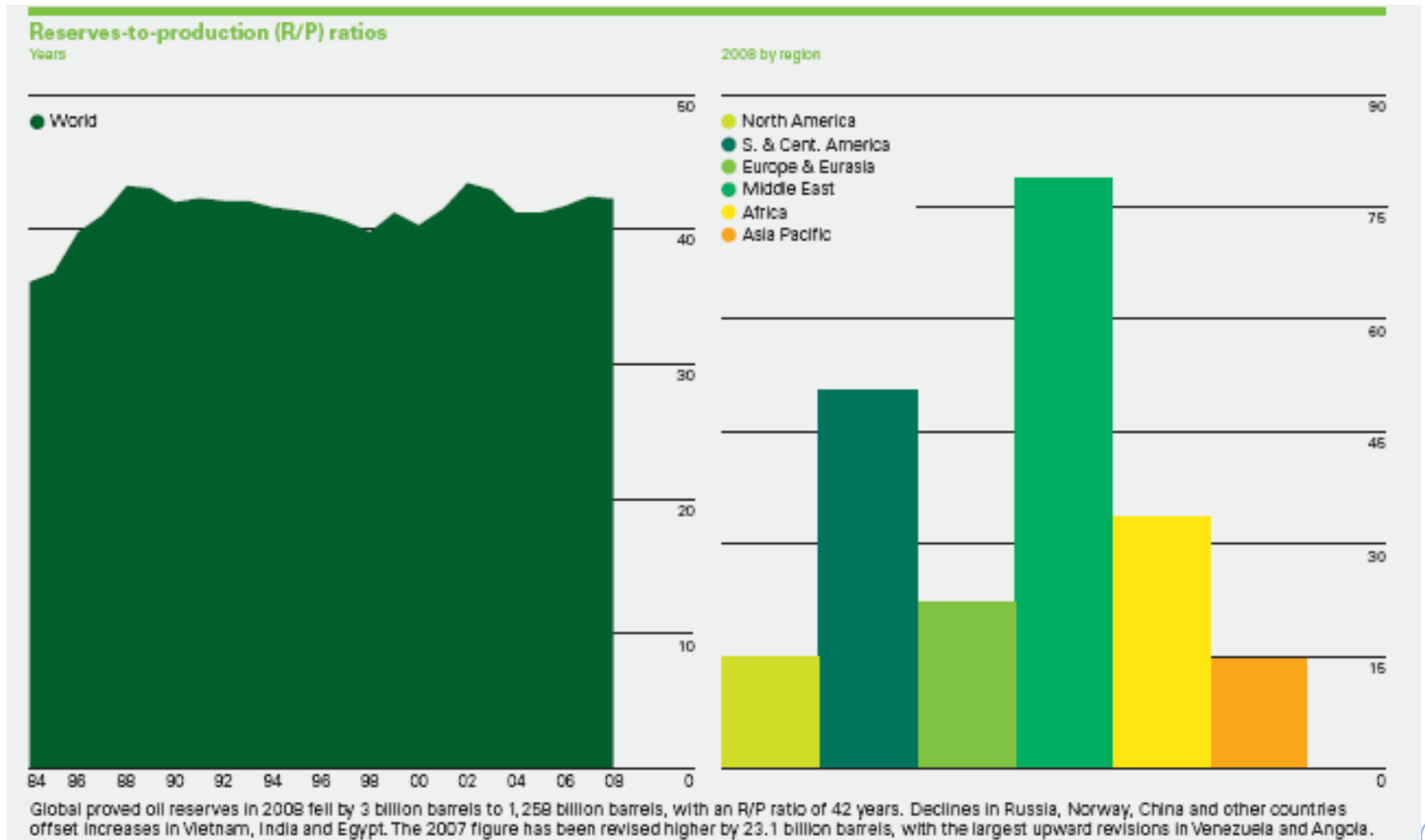
- Asia Pacific
- Africa
- Middle East
- Europe & Eurasia
- S. & Cent. America
- North America



World oil consumption fell by 420,000b/d, the largest decline since 1982. OECD consumption fell by 1.5 million b/d, driven by a decline of nearly 1.3 million b/d in the US. China again recorded the world's largest incremental growth, rising by 260,000b/d. Consumption growth was above the 10-year average in the exporting regions of the Middle East, South and Central America, Africa and the Former Soviet Union.

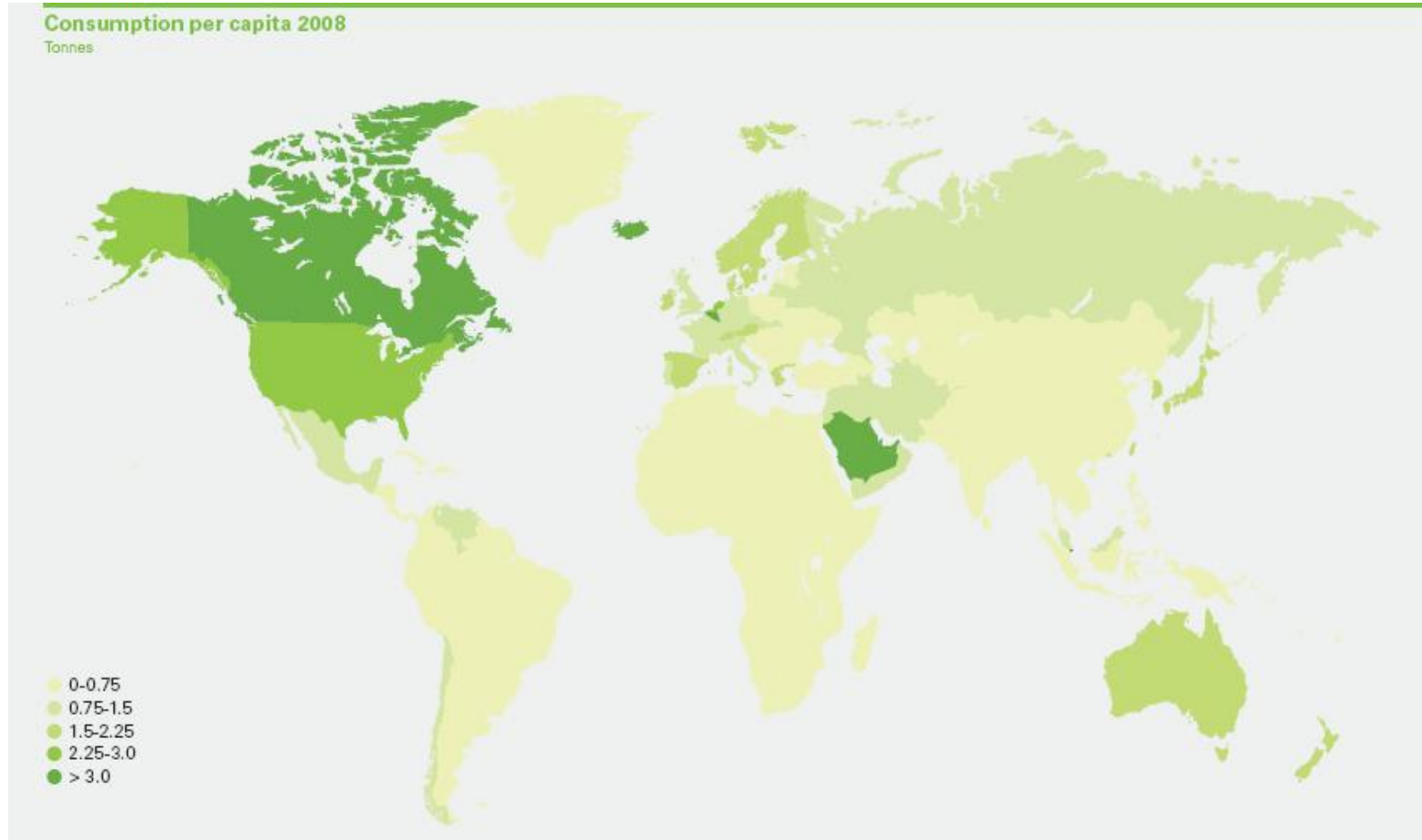
World Oil Reserves

42 Years of Proven World Oil Reserves (1.2 – 1.3 Trillion BB)



Oil Consumption per Capita

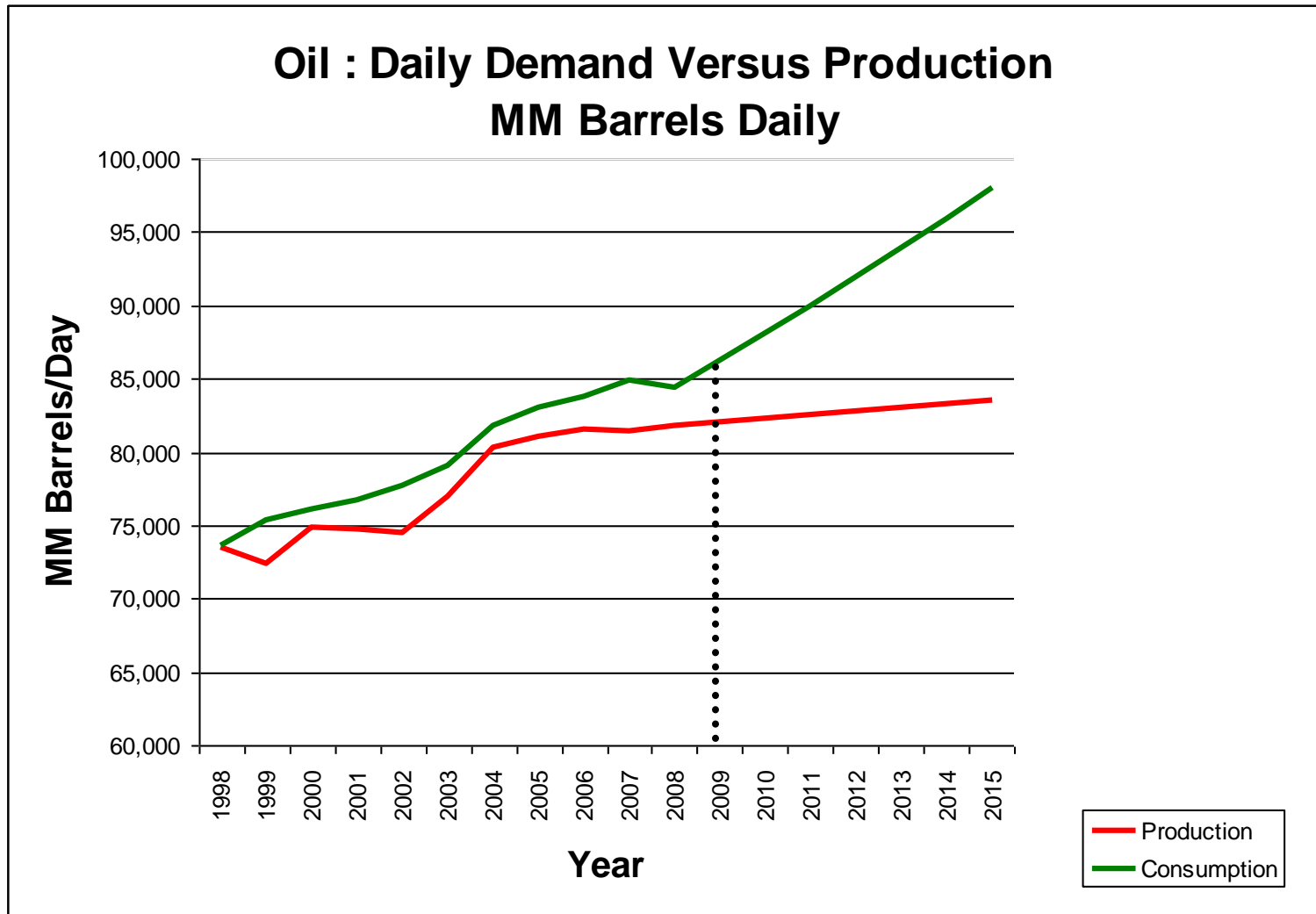
North Americans Continue to Consume the Most Oil per Capita in the World



Long Term Oil Outlook

- ▶ **By 2015, U.S. Energy Administration predicts world demand for oil will reach 98 Million barrels/day up from 85 in 2008**
- ▶ **Transportation consumes 1/3 of all energy**
- ▶ **Movement by Truck and Rail accounts for 20% of total transportation energy consumption**
- ▶ **Supply chain leaders see the handwriting on the wall and are making sizeable investments to reduce their dependence on fuel**

Oil Consumption Vs Production (1998 - 2015)



Key Impacts on Domestic Supply Chain Strategy

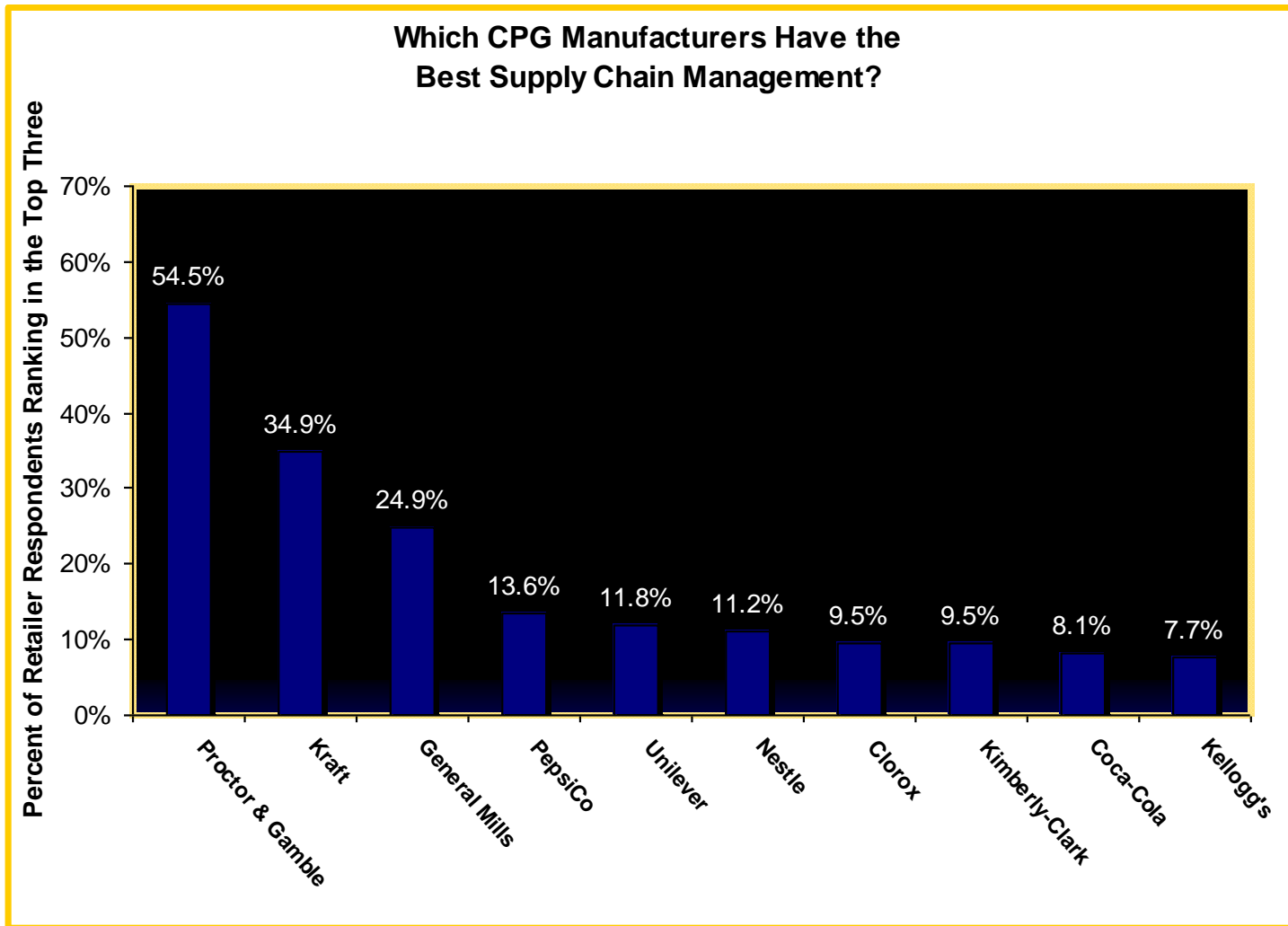
- ◆ **Companies are restructuring their domestic supply chain networks in advance of next major oil shock:**
 - **Manufacturers**
 - Deploying more flexible multi-product line production networks to reduce system-wide miles
 - Logistics networks becoming more customer-facing (e.g. mixing centers) and moving closer to concentrated customer markets to increase service and reduce ton-miles
 - **Importers**
 - Moving facilities closer to major ports to reduce inbound transportation miles
 - **Retailers / Distributors**
 - Increasing control over self-distribution
 - Reducing direct store delivery volume where it makes sense to do so
 - Infrastructure footprint will eventually move closer to market

Agenda

- ▶ **Economic drivers shaping supply chain strategy**
- ▶ **Domestic Logistics strategies that leading companies are pursuing in the U.S.**
- ▶ **Closing thoughts, questions and discussion**

Top Consumer Goods Industry Supply Chains for 2008

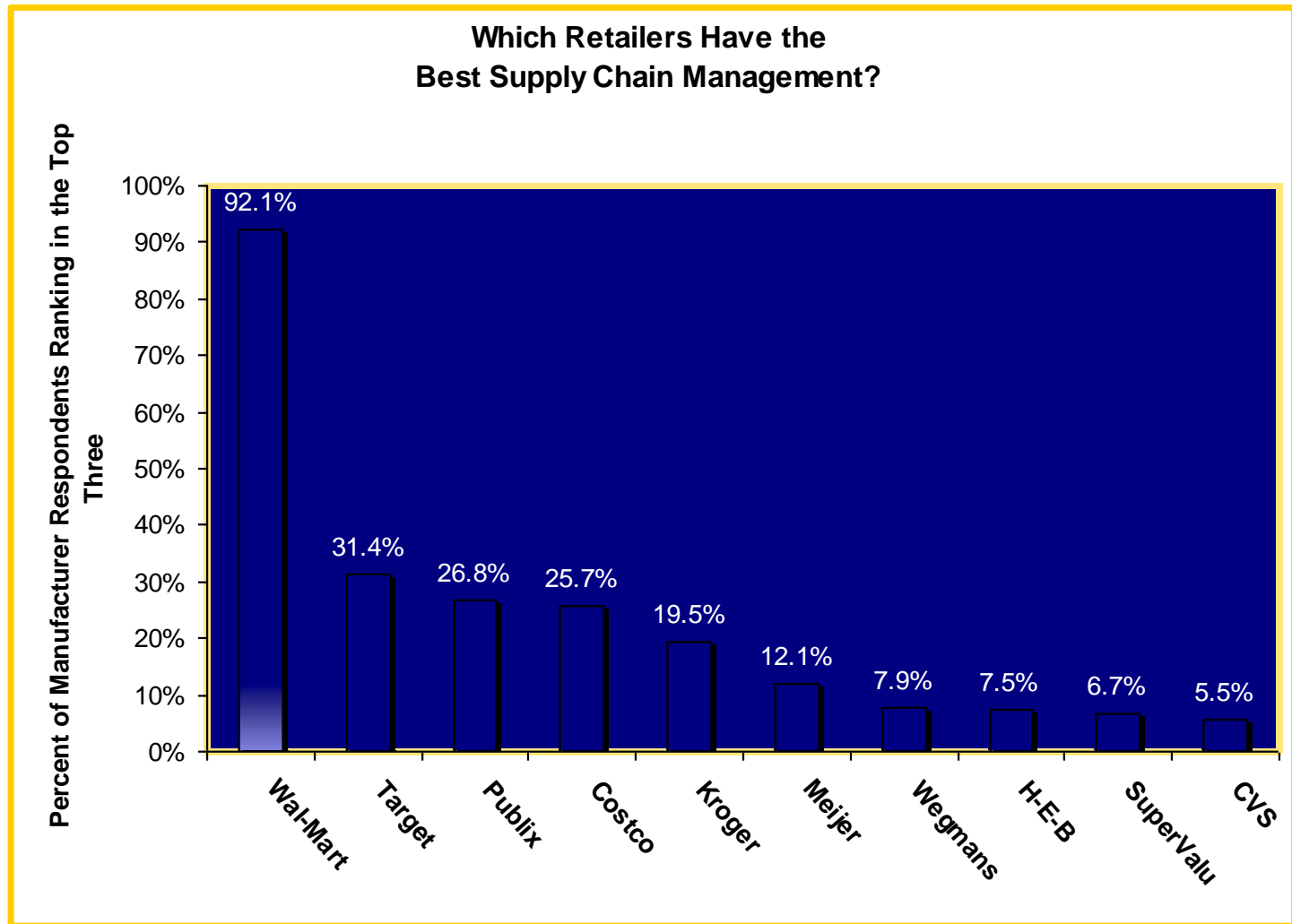
CPG Manufacturers



Copyright © 2008 Source: Cannondale Associates; PowerRanking 2008.

Top Consumer Goods Industry Supply Chains for 2008

Retailers



Copyright © 2008 Source: Cannondale Associates; PowerRanking 2008.

Top 25 Supply Chains in 2008

Source: AMR Research

1	Apple	11	PepsiCo	21	Texas Instruments
2	Nokia	12	Tesco	22	Lockheed Martin
3	Dell	13	The Coca-Cola Co.	23	Johnson Controls
4	Proctor & Gamble	14	Best Buy	24	Royal Ahold
5	IBM	15	Nike	25	Publix Supermarkets
6	Wal-Mart Stores	16	SonyEricsson		
7	Toyota Motor	17	Walt Disney		
8	Cisco Systems	18	Hewlett-Packard		
9	Samsung Electronics	19	Johnson & Johnson		
10	Anheuser-Busch	20	Schlumberger		

AMR Research researched the Top 25 supply chains recognizing companies with that have enjoyed excellent financial performance and superior Return on Assets driven by supply chain initiatives.

The average total return of the Top 25 portfolio for 2007 is **17.89%**, compared with returns of **6.43%** for the Dow Jones Industrial Average (DJIA) and **3.53%** for the S&P 500.

WAL★MART®

2008: \$405.6 Billion

Wal-Mart Logistics –Snapshot

(As at Nov. 2008 Source: Wal-Mart)

- ▶ **Wal-Mart Logistics in the U.S. :**
 - ◆ **88,000 associates**
 - ◆ **117 distribution centers**
 - ◆ **7,200 tractors**
 - ◆ **53,000 trailers**
 - ◆ **8 Million in/out loads/year;**
 - **50% Moved by Private Fleet**
 - ◆ **8,135 drivers who log 115,000 miles annually**
 - **850 million miles per year**



Wal-Mart U.S. Store Network

(As at Jan 31, 2008 Source: Wal-Mart)



2,447
Supercenters

132
Neighborhood
Markets

591
Sam's Clubs

971
Discount Stores



310
Canadian Stores
including 39
Supercenters

Wal-Mart's Evolution into Grocery

- ▶ Wal-Mart started out as a mass merchant
- ▶ At the end of 1990 Wal-Mart entered the retail grocery market with 9 supercenter stores
- ▶ For the next 10 years, they opened 7 new supercenters every month
- ▶ By the end of 2000, 888 supercenters were selling groceries
- ▶ During this time, 31 major regional grocery retailers filed bankruptcy– 27 cited Wal-Mart competition as the main factor
- ▶ Today Wal-Mart operates 2,447 supercenters and is by far the largest grocery retailer in the U.S.

Wal-Mart's Distribution Network

- ▶ **Wal-Mart's distribution network has basically followed the company's evolution as a retailer**
- ▶ **Wal-Mart in fact has multiple distribution networks that are disparate:**
 - ◆ **Import**
 - ◆ **General Merchandise**
 - ◆ **Grocery**

Wal-Mart U.S. Distribution Network

(As at Nov. 2008 Source: Wal-Mart)

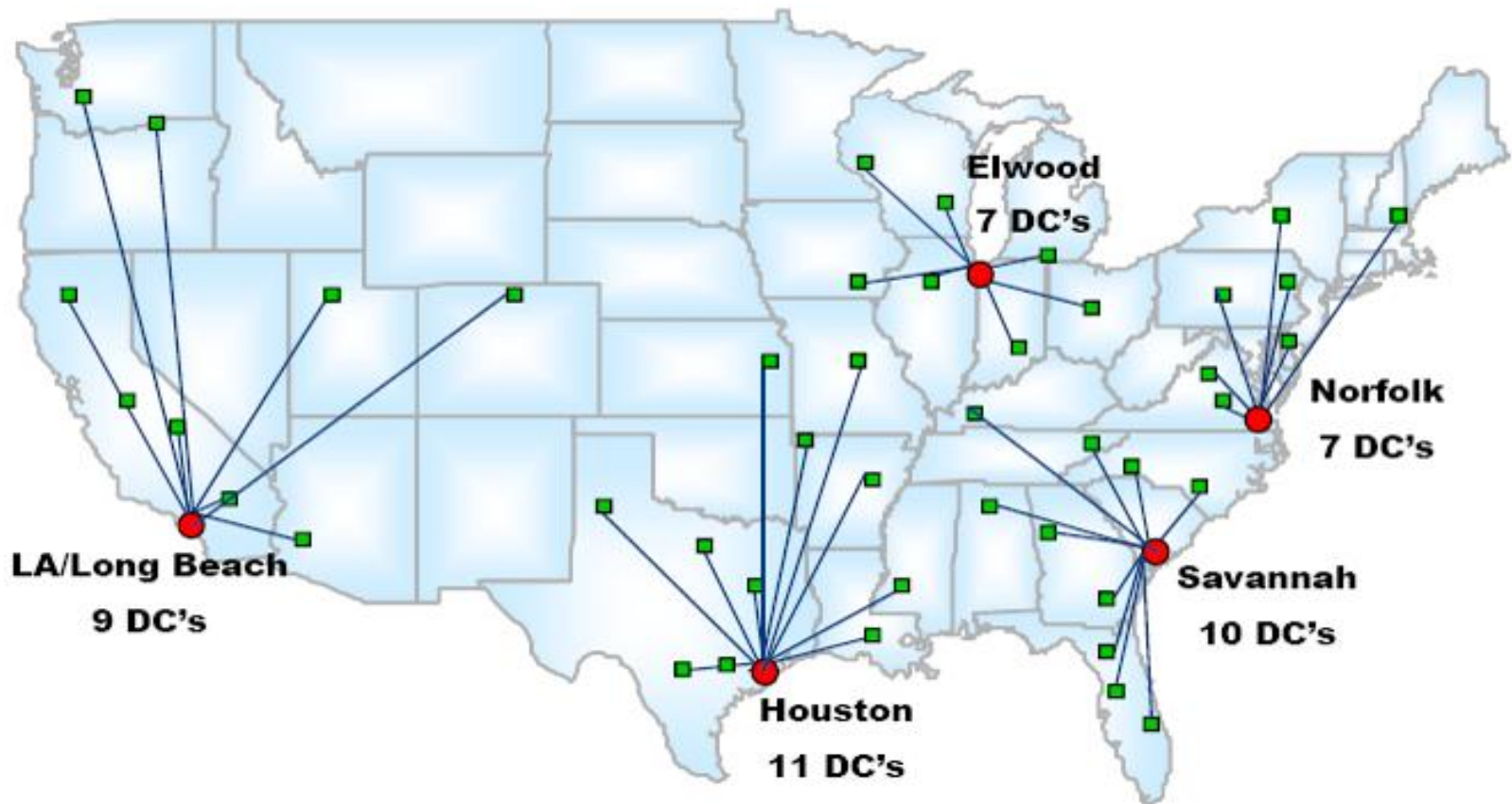


117 Distribution Centers typically servicing 75 – 100 stores within a 250 miles radius. A DC may employ more than 1,000 associates. Many located in rural areas.

Wal-Mart U.S. Import DC Network

(As at Nov. 2008 Source: Wal-Mart)

- 44 Import Distribution Centers
- 5 Major Port / Rail Deconsolidation Hubs



Wal-Mart U.S. General Merchandise DC Network

(As at Nov. 2008 Source: Wal-Mart)

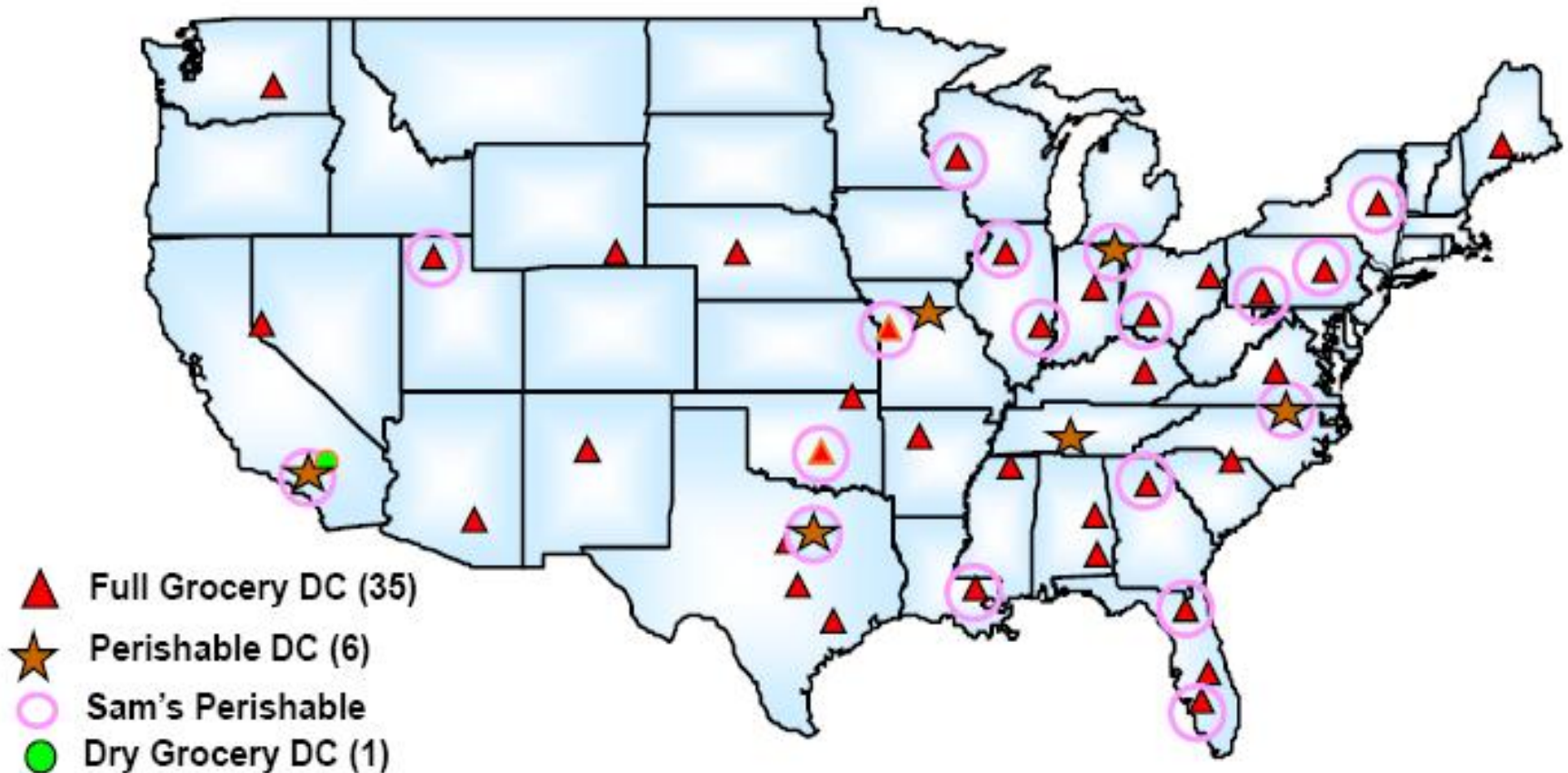
- 42 Regional Distribution Centers
- 7 Fashion Distribution Centers
- Average distance 124 miles



Wal-Mart U.S. Grocery DC Network

(As at Nov. 2008 Source: Wal-Mart)

- 42 Regional Distribution Centers
- Average distance 134 miles



Wal-Mart's Distribution Strengths

- ▶ **A fundamental strength of Wal-Mart's supply chain strategy is based on a very simple concept:**
 - ◆ **Maximize the control over volume going through their own highly efficient hub and spoke distribution network:**
 - **Wal-Mart distributes about 85% of their merchandise \$ through their network and 15% as Direct Store Delivery**
 - **Their competitors average less than 50%**

Wal-Mart U.S. Stirs Up DSD* Battle With Coca-Cola

*DSD = Direct Store Delivery

Wal-Mart Stirs Powerade DSD Battle

By Anonymous

Publication: Food Logistics

Date: Wednesday, March 15 2006

You are viewing page 1

HEADNOTE

Coca-Cola's largest bottler tests warehouse delivery to Wal-Mart DC in Texas.

At the behest of Wal-Mart Stores, Coca-Cola Enterprises (CCE), which is responsible for three-quarters of all the Coca-Cola products bottled, sold and distributed in the United States, began testing a new distribution method last month.

CCE began shipping bottles of Powerade sports drink to a Wal-Mart warehouse in Texas and expects to broaden the process to include other Wal-Mart warehouses.

The move has already drawn lawsuits from independent bottlers who contend that the move violates their contract rights with the Coca-Cola Co.

LAST SUMMER WHEN Wal-Mart Stores Inc. suggested to the Coca-Cola Co. that it had a more efficient way to deliver its Powerade sports drink, independent Coca-Cola bottlers scoffed.

Coca-Cola bottlers had been delivering Coke and the company's other drink brands straight to stores, setting up the merchandise and monitoring inventory for more than a century. Still, the Bentonville retailer said it could double its sales of Powerade, but its plan would require bottlers to ship the drinks directly to Wal-Mart's distribution centers and let the world's largest retailer handle them from there. The independent bottlers still balked and said they had a contract for direct store delivery, or DSD.

The bottlers "didn't believe it would be appropriate to do any warehouse deliveries to Wal-Mart because the contract prohibits it," said the bottlers' spokesman, Bill Marks.

Then in October they learned through a company Web site that Coca-Cola and its bottling entity, Coca-Cola Enterprises Inc., both of Atlanta, were pushing forward with a plan to meet Wal-Mart's request in a test run. The test run is complete, and the shipments were scheduled to be delivered in a rollout to some Wal-Mart distribution centers starting last Saturday.

The independent bottlers haven't taken the change in their business plan lying down. On Valentine's Day, more than 50 of the approximately 75 bottlers—including three from Arkansas—filed a lawsuit in U.S. District Court in Missouri alleging breach of contract by

Wal-Mart Supply Chain Strategy

- ▶ **Major initiatives are underway to reduce fuel consumption through a green campaign called “Sustainability 360”**
 - ◆ **Increase efficiency through improved packaging**
 - ◆ **Reduce truck fuel consumption**
 - ◆ **Improve DC energy efficiency**
 - ◆ **Synergize and integrate the distribution networks to reduce ton-miles and cut lead times in half**

Wal-Mart's Goals

Sustainability 360 Campaign

- ▶ **Wal-Mart's target is to cut greenhouse gas emissions by 20% by 2012 and improve fuel efficiency by 100% by 2015:**
 - ◆ **Goal is to reduce fuel consumption by 67 Million gallons/year**
 - ◆ **Wal-Mart has already improved fuel efficiency of its trucks by 20% by working with closely truck and trailer manufacturers**
 - ◆ **Wal-Mart is focusing not only on its own operations, but its suppliers' operations as well.**
 - **At the beginning of 2008, Wal-Mart started rating supplier performance on an environmental scorecard that includes**
 - Greenhouse gas emission
 - Cube utilization
 - Recycled content
 - Renewable energy

Improving Packaging Efficiency...

Source: Wal-Mart



Improving Packaging Efficiency...

Source: Wal-Mart

Worked with supplier to remove excess packaging from 277 Kid Connection toy SKU's.

***Kid Connection** is a brand used for a variety of products targeted for children, including toys and clothing.



Improving Packaging Efficiency...

Source: Wal-Mart



Used 727 fewer shipping containers. Saved \$3.5 million on transportation costs.



Saved 5,100 trees.



Prevented 1,300 barrels of oil from being used.

Just 277 SKU's. Imagine the possibilities...

Improving Packaging Efficiency...

Source: Wal-Mart

Product Innovation

Plastic Resin Reduction.....	128.9MM lbs
Gallons of Water Saved.....	478.1MM
Gallons of Diesel Saved.....	20.7MM
Reduced # of Trucks.....	2.79MM



Unilever's All brand launched the "Small & Mighty" bottle containing a 3x concentrated version of its popular All detergent. The bottle was designed with input from Wal-Mart with the goal of making the detergent more shelf-friendly and more sustainable. The detergent uses 64% less water in its formulation than their traditional All detergent and the bottle is lighter making it easier and more efficient to ship and also easier to use and handle for consumers. Through a partnership between Unilever and Wal-Mart, Wal-Mart agreed to aggressively push All Small & Mighty in its stores. The idea was to promote the product and eliminate any concerns from consumers. The plan worked All Small & Mighty became popular and grew.

Improving Fuel Efficiency Path

Source: Wal-Mart

Buying diesel-electric and refrigerated trucks with a power unit that could keep cargo cold without the engine running, saved nearly \$75 Million in fuel costs and eliminated an estimated 400,000 tons of CO2 pollution in one year alone.

• Fuel Efficient Tires	6%
• APU	8%
• Fuel Additive	1.6%
• Weight Reduction	0.05%
• Aero Package (Truck)	3%
• Aero Package (Trailer)	6.25%
• <u>New Prostar Truck</u>	<u>4%</u>

Total: 28.9%

Trailer Innovations



- Nitrogen
- Increases tire life
- Improves fuel efficiency

Auxiliary Power Unit



- Reduces emissions
- Saves fuel
- Driver comfort

100% Fuel Efficiency by 2015

Source: Wal-Mart

- ▶ Hybrid Diesel Electric:
 - ◆ Exhaust Energy Recovery
 - ◆ Coolant Energy Recovery
 - ◆ Brake Energy Recovery
 - ◆ Parasitic Load / Electrification
 - ◆ Idle Management
 - ◆ Electric Drive Systems
 - ◆ Battery Storage
- ▶ Aerodynamics:
 - ◆ New Trailer Design
 - ◆ New Truck Platform
- ▶ Other Initiatives:
 - ◆ Regulations: Length / Weight / Speed
 - ◆ Training / Education
 - ◆ Operations: MT Miles / Avg. Distance /
 - ◆ Doubles



Peterbilt, Eaton and Wal-Mart Partner On Hybrid Electric AeroDynamic Model 386 Development - estimated to reduce fuel consumption by 5 – 7% saving about \$9 - \$10,000 per tractor / year

Home Depot



2008: \$71.3 Billion

We are the single-largest less-than-truckload shipper in the United States - A lot of trucks are going to stores that aren't full. It's not efficient."

- CEO Frank Blake. 09-2008

Home Depot Moves Away From DSD

Home Depot Makes Progress on Ambitious Supply Chain Transformation

Supply Chain Digest, 2008-09-39

In the first quarter of 2007, Home Depot announced ambitious plans to transform many elements of its supply chain. Mark Holifield, a respected supply chain executive from Office Depot, was hired in 2006 to lead the effort at Home Depot.

In a presentation to financial industry analysts in February, 2007, Holifield outlined several key elements of the retailer's supply chain strategy. **A key element was a transition from a logistics model that favored direct store delivery from suppliers to a model that moved most products first through Home Depot distribution centers.** In the past, as much as 80% of products went direct to store; the goal is to cut that number to just 25% by 2010.

Home Depot, in fact, is the country's largest Less-than-Truckload (LTL) shipper – a crown not many companies would like to wear, given the relative expense of LTL shipping.

The move to DC/flow through shipment will result in a variety of inventory, transportation and store labor efficiencies, Holifield said, and was necessary in part due to store expansion, which ultimately led to lower sales at each individual store location.

Home Depot Strategy

▶ Goals:

- ◆ Improve product availability (in stock rates)
- ◆ Reduce lead times and optimize inventory management
- ◆ Reduce cost to serve over 2,000 U.S. stores (190 in Canada)
- ◆ Build and operate 20 Rapid Deployment Centers sufficient to supply 40% of US stores, with 30% of COGS flowing through those stores
- ◆ 75% of COGS flowing through DCs to 100% stores

▶ \$260 Million capital investment

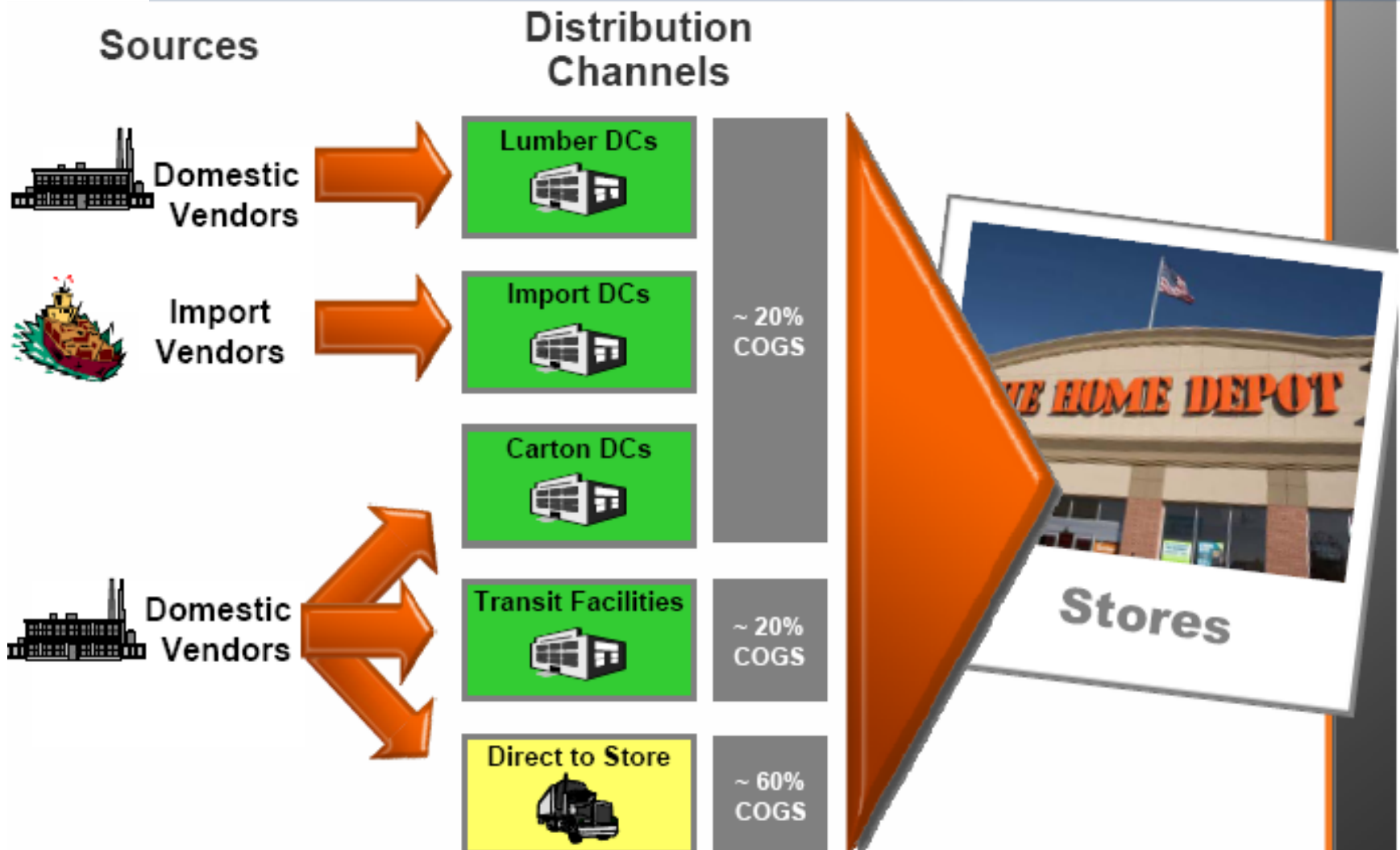
▶ 2008-2009 Plan:

- ◆ 3 RDCs live in GA, IL, TX
- ◆ 5 more planned in Fiscal 2008-09



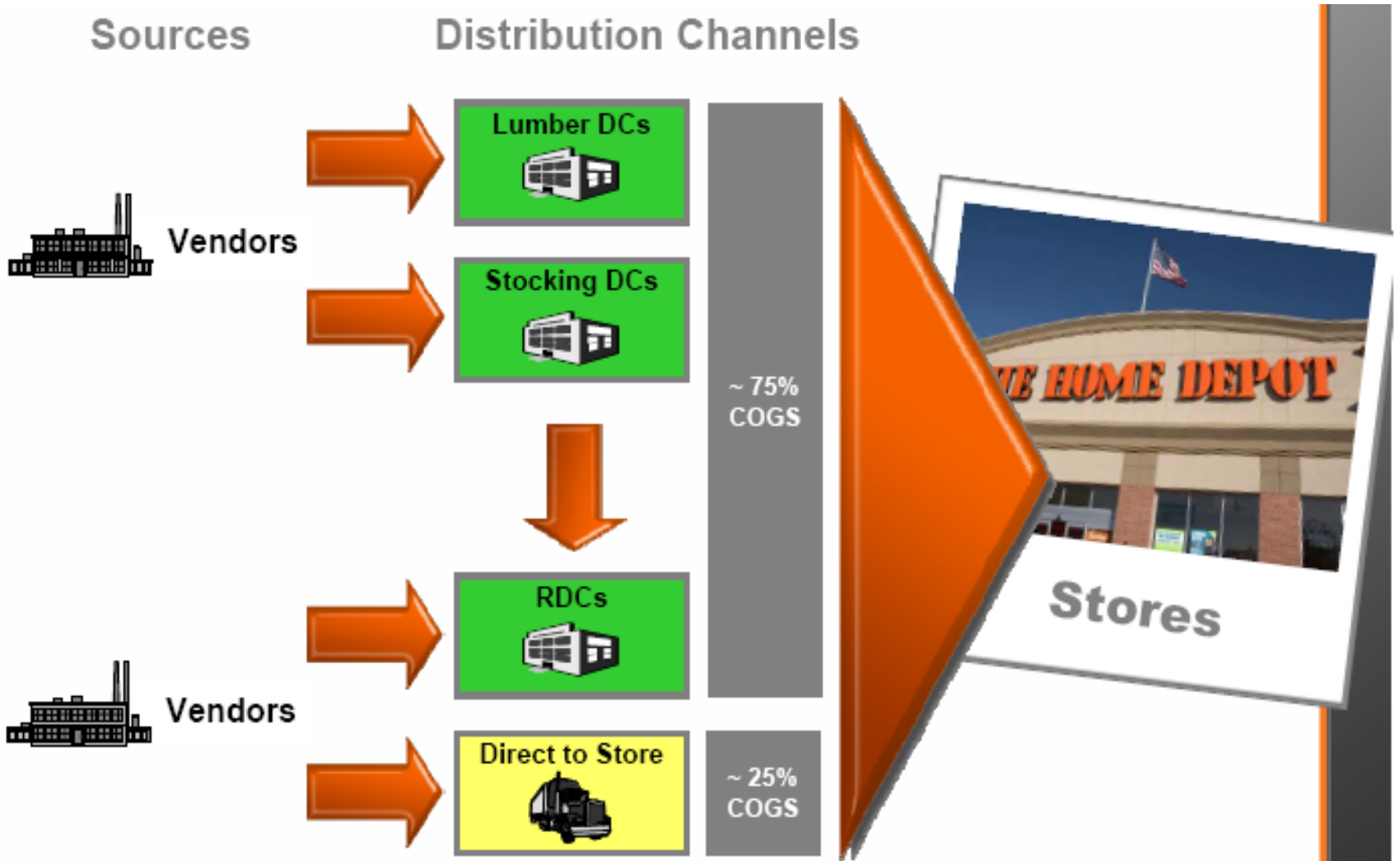
Home Depot in 2007

Source: Home Depot



Home Depot Vision for 2010

Source: Home Depot



Home Depot

Optimal Flow Distribution Network

(Source: Home Depot)

Direct to Store (DSD)

Best Used When?

- Full truckloads
- Manufacturing close to stores
- High volume stores

Why?

- Eliminates additional distribution expense associated with handling at a DC

Rapid Deployment Center

- Less than a full truckload
- Demand and supply is predictable
- Value of product is low to medium

- Aggregates store demand to create full truckloads
- Low handling costs

Area Stocking Center (“Stock & Pick”)

- Less than a full truck load
- Demand and supply is unpredictable
- Value of product is medium to high

- Aggregates store demand to create full truckloads
- Holds buffer inventory at the ASC to allow for rapid replenishment

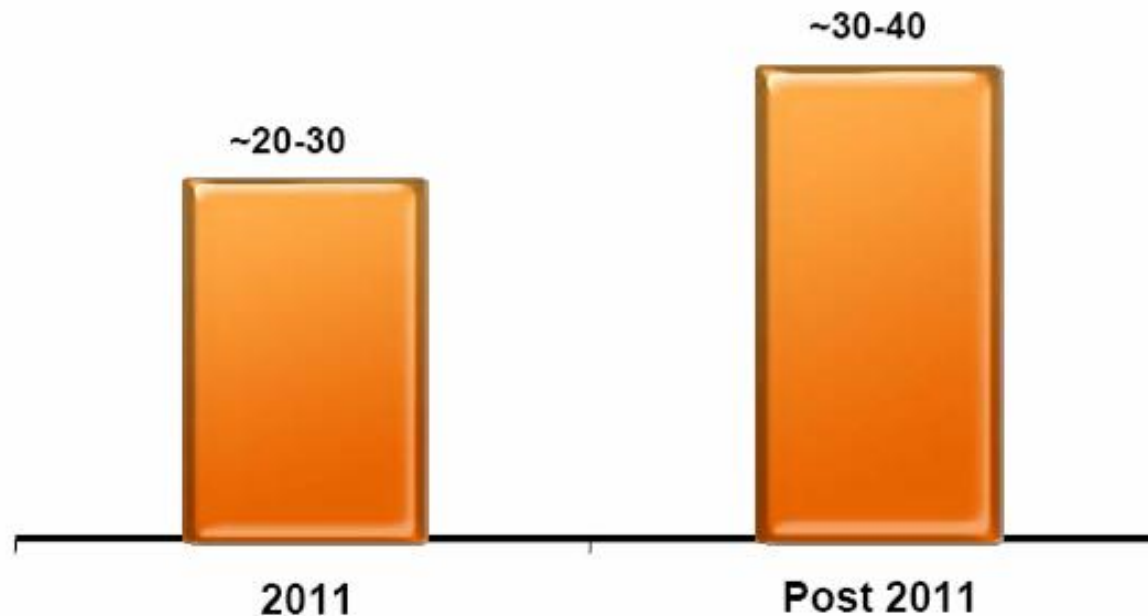
Home Depot RDC Network 2008



Long-Term Benefits From Supply Chain

Source: Home Depot

Gross Margin Benefits (Basis Points)



Expecting 1 Full Inventory Turn = \$1.5 Billion Cash

7-11 Tries to Replace DSD



The DSD Dilemma

Source: Convenience Store News, October 29, 2008

Faced with continued soaring costs for fuel and ingredients, many companies that serve the convenience store channel are searching for ways to cope -- without jeopardizing their positions with retailer customers and their cherished shelf space in the more than 145,000 c-stores nationwide.

No easy trick, but many suppliers are determined not to move away from their direct-store delivery (DSD) method of distribution despite some pressure for change -- **including a call by Joe DePinto, CEO of 7-Eleven, to replace DSD in convenience with a "consolidated" system of distribution.** (See "Grocers Love Their DSD," page 127.)

Speaking at a beverage conference in May and later in an extensive interview for *Convenience Store News'* cover story in July, DePinto called DSD a "fragmented and inefficient" system that clogs c-stores with as many as 50 to 60 deliveries per week. His suggested solution: combining what are now DSD products, such as beer and soft drinks, in a distribution center and delivering them together on the same truck. 7-Eleven is planning to test such a system in southern California later this year.

As diesel fuel approaches \$5 per gallon, and the cost of commodities keeps increasing, some DSD suppliers are searching for ways to preserve their profit margins -- often through overall price increases, fuel surcharges and distribution efficiencies, including making fewer deliveries.

"The frequency of deliveries of some DSD vendors has decreased," acknowledged Tim Tilford, vice president of marketing at Hucks Convenience Stores, a 108-store chain based in Carmi, Ill., which serves Illinois, Indiana, Missouri, Kentucky and Tennessee. "They try to justify it by saying they are being more efficient, but it's all a disguise for trying to cut their costs. We have been fighting this problem for years."

To improve efficiency with some of those DSD products, Hucks opened a centralized warehouse five years ago where it handles dairy, ice, bakery and other products, delivering to the company's stores as needed. Tilford said Interstate Brands, for example, delivers its Dolly Madison line to the company's warehouse for store distribution, although its Hostess products still are delivered via DSD.

Tilford was impressed with DePinto's call for DSD reform in the convenience channel. "He's trying to take costs out of the system. Too many times we have too many big egos in this industry. We need to be open to change."

OfficeMax Eliminates 100% DSD

OfficeMax

OfficeMax Jumps on Anti-DSD Bandwagon

Source: Retail Tech

For years direct-store delivery (DSD)—the rapid replenishment of fast-moving items on store shelves by the vendors of those items—has been a mainstay in the retailing industry, particularly in the grocery channel. But now a growing number of non-food retail chains that had depended on DSD are taking pains to replace it with warehouse-based practices that reduce store labor, inventory and vendor costs associated with DSD. Indeed, these retailers are utilizing the very distribution centers (DCs) that had been bypassed under DSD.

Another ambitious program aimed at reducing DSD costs was launched two years ago by Chicago-based OfficeMax, which is replacing DSD by 1,000 vendors—the only way products got to its 1,000 stores—with deliveries from three "PowerMax" DCs, including two new facilities.

The new strategy is designed to reduce a staggering amount of excess inventory normally kept at the stores—up to \$400 million' worth, says Steve Baisden, spokesman for the office product superstore retailer. On the other side of the coin, the system should ensure that sufficient product is available at stores. "Customers want product available when they reach the store, especially when they see it advertised in an ad or circular," he says. "Out-of-stock items do not bode well with our customer service or our sales." Moreover, he says, the system is designed to eliminate excess inventory kept at stores, saving up to \$400 million all told.

The Sports Authority Eliminates DSD



The Sports Authority: Improved Logistics Process

The Sports Authority is the world's largest full-line sporting goods retailer. Each store features up to 45,000 items. Supplied by more than 850 Electronic Data Interchange (EDI) enabled vendors, The Sports Authority had been using 100 percent Direct Store Delivery (DSD) with no warehouses or distribution centers, placing orders with vendors electronically.

The Sports Authority wanted to improve the speed and reduce the costs of its logistics process while maintaining or improving in-stock position and inventory turns. After exploring more than 50 different supply chain options, **The Sports Authority decided to make a major shift from its current DSD strategy to a flow-through, regional-distribution-center network.**

The transition led to a boost in business performance through decreased transportation costs and cost of goods sold, as vendors now ship to a finite number of distribution centers instead of to more than 160 stores. Sports Authority also benefited from reduced labor costs as many functions that were administered at each store location are now consolidated at the distribution centers. Sports Authority also improved customer service, as sales associates are more focused on selling activities rather than performing back room and administrative tasks.

Kimberly-Clark



Kimberly-Clark

2008: \$19.4 Billion

- ▶ **Historically K-C has shipped directly from manufacturing sites to customers**
- ▶ **In many cases, distribution centers were attached to the manufacturing plants**
- ▶ **Over time, as these plants grew and outstripped their on-site distribution facilities, K-C added satellite shipping centers:**
 - ◆ **Often 20+ miles away from the plant**
 - ◆ **Before re-organization, approximately 70 centers + other overflow facilities for peak periods**
 - ◆ **Many overflow facilities not located near major markets, or in critical customer areas such as the Southwest and Northeast**

▶ Disadvantages of old network:

- ◆ **Frequent transfers from production facilities to 22 third-party Co-packers:**
 - Co-Packers assemble products into customized promotional display units (shippers) and then return them to the distribution center for shipment - adding more truck trips
 - Many Co-Packers far away from K-C's infrastructure
- ◆ **Variable Sourcing network**
 - Orders dynamically reassigned based on inventory availability at Plants/DCs with lowest cost to serve
 - Leads to tremendous variability in demand throughout the network and production planning suffers
- ◆ **Smaller retailers often forced to order excess inventory to hit efficient buying brackets because SKUs are not distributed from a consolidated mixing center**

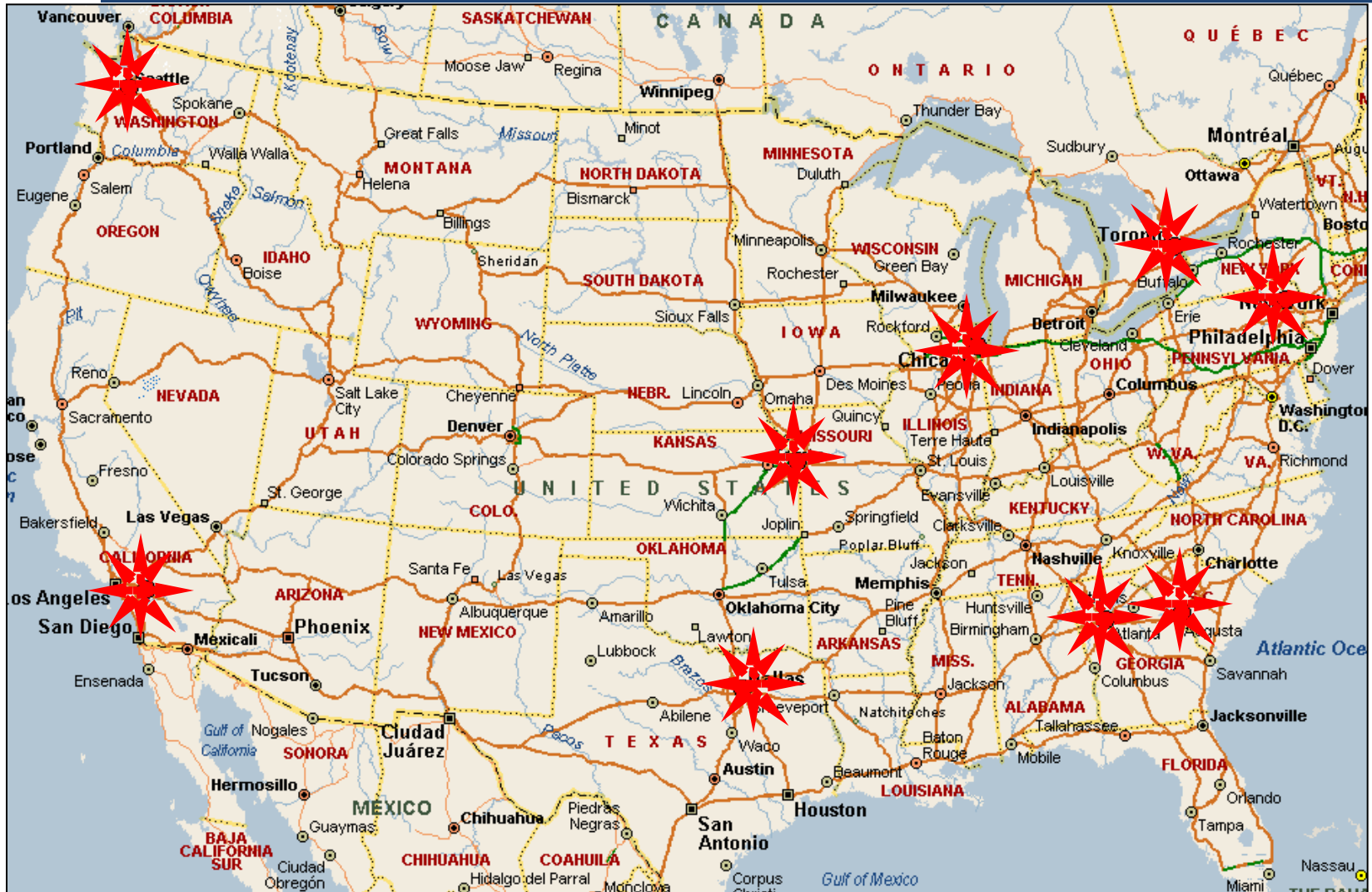
▶ **Goals:**

- ◆ **Become an indispensable partner to retail customers by improving customer service:**
 - **Shift to a pull-based customer-facing supply chain**
 - **Enable customers to order all SKUs from one mixing center**
 - **Reduce out-of-stocks**
 - **Take inventory out**
 - **Reduce order cycle time**
- ◆ **Move from dynamic to a fixed sourcing network**
- ◆ **Improve distribution efficiencies**
- ◆ **Reduce transportation costs & shrink carbon footprint**

Supply Chain Strategy

- ▶ Phase 1:
 - ◆ **Consolidate distribution operations into 9 regional mega-distribution / mixing centers positioned close to key customer markets:**
 - Conventional facilities ranging from 600,000 -1.8 M sq. ft. (average size is 800,000 sq. ft.)
 - In past 18 months, K-C purchased/leased 8 new DC's in Chicago; Scranton, Atlanta; Graniteville, SC; Dallas; Redlands, CA; Kansas City; Toronto, and Seattle and closed dozens of existing sites
- ▶ Phase 2:
 - ◆ **Consolidate critical supply chain distribution functions under one roof including co-packing operations:**
 - K-C is re-locating external co-packing functions into the distribution centers and should complete this by end of 2009
- ▶ Shift to Rail Transportation:
 - ◆ **Send more product shipments via rail transportation**
 - ◆ **K-C is increasing its use of intermodal truck-rail transport with transportation module containers which can be lifted from truck to train and back**

Kimberly-Clark Distribution Network



Results to Date

- ▶ **2007:**
 - ◆ **Reduced 13.2 Million Miles**
 - 2.7 M miles - driven from DC's to customer locations
 - 10.5 M miles - inter-facility miles
 - Reduced fuel consumption by 2.4 Million gallons
- ▶ **From Q1/2006 through Q1/2008:**
 - ◆ **Reduced truck transport by 24 million miles**
 - This reduction in truck transport, coupled with a more than 20% increase in intermodal truck-rail transport has allowed K-C to save more than 22 million gallons of diesel fuel
 - Leveraging rail transport saves K-C approximately 130 gallons of fuel per 1,000 miles
 - These changes equate to taking 24 thousand trucks off the road
- ▶ **K-C's new supply chain network has accelerated its speed-to-market:**
 - ◆ **Products now delivered to 90% of retail consumers in North America within one day's transit time**
 - ◆ **Previously, K-C could only reach 65% of its retail consumers in one day**

P&G - Oil Costs Force Rethinking of Supply Network

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Soaring energy prices are forcing Procter & Gamble to rethink how it distributes its products, with the world's biggest consumer goods company shifting manufacturing sites closer to consumers to cut its transport bill.

Keith Harrison, head of global supply at P&G said the era of high oil prices was forcing P&G to change. **“A lot of our supply chain design work was developed and implemented in the 1980s and 1990s, when our capital spending was fairly high as a cost of capacity and oil was 10 bucks a barrel,”** said Mr. Harrison in an interview with the *Financial Times*. **“I could say that the supply chain design is now upside down. Transportation cost is going to create an even more distributed sourcing network than we would have had otherwise.”**

Earlier this year, P&G launched a comprehensive review of the design of its entire supply operations in response to rising energy costs and its increasingly global expansion. **“We’ve kicked off a study that really asks: what is our business going to look like in 2015?”** he said.

Agenda

- ▶ **Economic drivers shaping supply chain strategy**
- ▶ **Domestic Logistics strategies that leading companies are pursuing in the U.S.**
- ▶ **Closing thoughts, questions and discussion**

Closing Thoughts...

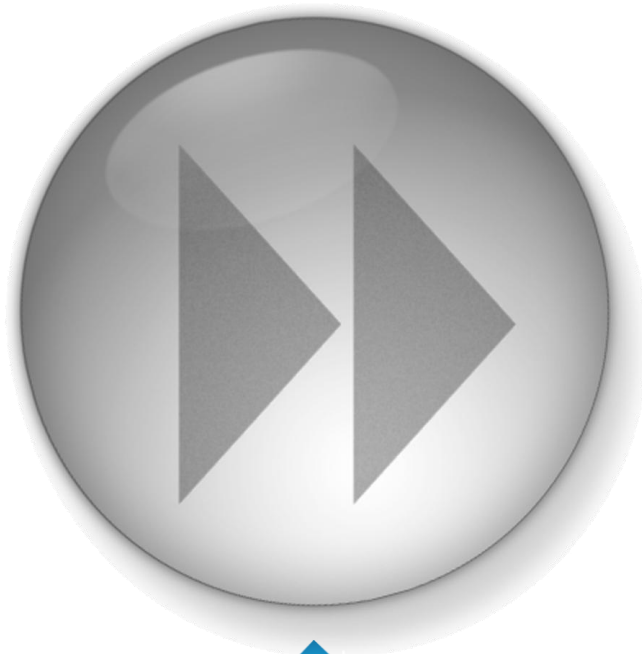
It's a matter of when, *not if*, the economy recovers and when it does, expect a strong bounce back in the price of oil.

Energy industry experts are now stating that the world oil supply is in a permanent decline which will soon end the era of cheap oil.

The threat of a third long term oil shock is the single most powerful force that is shaping supply chain strategy within the North American market place today.

Key Takeaways...

- ▶ **Supply chain leaders are investing significant resources to deploy supply chain strategies that significantly reduce dependence on fuel**
- ▶ **Strategies being deployed include:**
 - ◆ Improving packaging
 - ◆ Increasing control and efficiency of distribution channels
 - ◆ Reducing fuel consumption through shift to rail transport and truck design innovations
 - ◆ Rear / Forward Inventory Deployment Strategies to take out ton-miles



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Questions?

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