

# Future Supply Chain

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## **Dr. Pierre Kayoun, Session Chairman**

This paper deals with the move from logistics to supply chain and it will be given by Peter Bromley from UPS. Peter has a logistics, accounting and commerce educational background. He worked for Price Waterhouse Coopers and joined UPS back in 1994. He has held various positions in North America and Europe working with different types of products from health care to high-tech consumer products. He is currently director of the distribution logistics services of UPS Europe based in Dublin. So, Peter I leave the floor to you.

## **Peter Bromley**

Indeed it is my pleasure to speak to you, particularly on the topic of strategic initiatives. Not so long ago, the words strategic initiatives and supply chain would not have been mentioned in the same sentence.

## UPS Enables Global Commerce

### UPS:

World's largest package delivery company and a global leader in supply chain services

- > Revenue of \$49.7 billion in 2007
- > Moves 6% of U.S. gross domestic product
- > Serves more than 200 countries and territories around the world
- > 7.9 million customers daily
- > 93,637 ground vehicles
- > 268 aircraft - World's 9<sup>th</sup> largest airline
- > 101 years of experience

### UPS Supply Chain Solutions:

- > A global provider of integrated logistics and supply chain solutions
- > Revenue of \$8.4 billion
- > Operations in 120 countries with over 1,033 facilities and 38 million square feet of warehouse space
- > Customs brokerage services in all major international trade locations
- > Global air and ocean freight forwarder and a leading Non-Vessel Operating Common Carrier
- > Proven solutions in key industries, including Healthcare, High Tech, Automotive, Industrial Manufacturing, Retail and Consumer Goods

I will give you a little background on UPS. UPS as a company has been innovating for a number of years. It is over a 100 year old company with almost \$50 billion in global revenue. You do not become a company of that size and status without being innovative over time. Indeed the supply chain solutions, part of our company, is all about innovation. Many people identify with UPS' traditional business of small packages and brown trucks around the world. But there is a lot more to UPS now. UPS is actually a freight forwarder. UPS has over 30 million square feet of warehousing and distribution space around the globe. UPS is a non-vessel operating common carrier. We are the ninth largest airline in the world. Those are all innovations which happened in the last years. The supply chain business is a significant growth segment for our company. It is a little bit like the tail wagging the dog, when you have only \$8 billion of revenue out of almost \$50 billion in total So that is a bit about the innovation in our company and where I come from in terms of the supply chain perspective..

I will group my thoughts today under 3 major headings:

- Changing Landscape & Globalization
- Supply Chain Challenges
- Creating Supply Chain Advantage

## Changing Landscape of International Trade

Automation	Standards	Security	Integrated Data	Global Trade
<ul style="list-style-type: none"> <li>Automation of import and export submissions to government agencies</li> <li>Harmonized Tariff Schedule adopted by WTO (120 countries)</li> <li>Expedited Customs procedures to facilitate express consignment operators and brokers</li> </ul>	<ul style="list-style-type: none"> <li>Customs Modernization Act of 1993 and the Informed Compliance and Reasonable Care standards</li> <li>Preferential duty programs (NAFTA)</li> <li>Automated Export System</li> <li>Movement by WTO and WCO to develop uniform data standards</li> </ul>	<ul style="list-style-type: none"> <li>Customs &amp; Border Protection develops new strategies to assess risk and combat terrorist threats (<i>C-TPAT</i>)</li> <li>WTO and WCO endorse global security initiatives</li> <li>CBP builds new Automated Commercial Environment</li> <li>Internet applications prominent in globalized trade</li> <li>30% of world's GDP is sold across int'l borders</li> </ul>	<ul style="list-style-type: none"> <li>Export data being used as import data</li> <li>Point of Sale trends driving demand based 'pull' replenishment.</li> <li>Adoption of concept of Unified Carrier Registration and Transport Reference</li> </ul>	<ul style="list-style-type: none"> <li>McKinsey estimates 80% of world's GDP will be sold across int'l borders</li> </ul>
<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>

More than 30 years ago there were a lot of barriers to international trade. Slowly those barriers are coming down. All of us in our working careers have lived through increasing global trade and taking those barriers to trade down. This was achieved by things like the Harmonized Tariff Schedule back in the 80s. If that hadn't have happened there would be a lot of resistance to exporting and importing goods around the globe. Using information systems to feed information into Customs systems rather than the old way of walking up to the Custom House Broker with your invoice and getting your stamps for clearance into the country. Standards have been developed. We have seen legislations like the North American Free Trade Act (NAFTA) come into play.

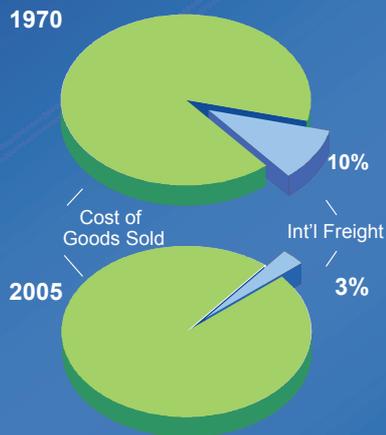
When we get into the 2000s there are some compelling events like 9/11 that have caused the need for a lot more security, and in some cases new barriers to trade went up.

What would we do without the internet? The amount of cross-border trade is incredible, that has been generated by the internet. But where are we right now? About 30% of the world's gross domestic products is sold across international borders. As we look into the future, there is an estimate, that this will grow to about 80%. In order to come to that, it will require much more integration and i.e. more improvement in the flow of information, goods, and funds within the supply chain.

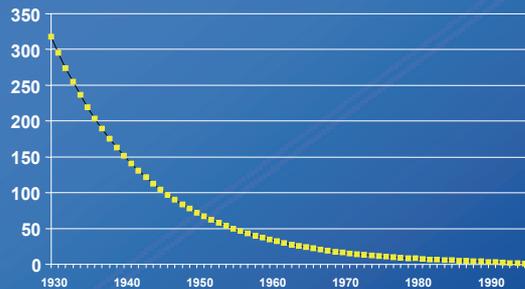
## Globalization Driving Business Growth

The globalization of the cable and wire industry has been driven by reduction in the embedded costs of moving both material and data.

### Avg. Freight Cost Evolution



### Data Transmission Cost Evolution



Sources: Global Insight and United Nations analysis

If you look at your current invoice for shipping your products to your customers internationally, you might be shocked by the cost of that transaction. But if you look at the international freight cost as a percentage of the cost of goods sold over the last 30 years, on the average there has been a significant decrease relative to the costs of doing business internationally. Or consider data transmission, 75 years ago, it cost an awful lot to send information, whereas the incremental cost now of an EDI transaction or an email is effectively nothing. So, the information exchange and the ability to move physical products around the world easier and cheaper is really making the world smaller. The smaller and more accessible the world becomes, the more everybody is doing business globally.

## Supply Chain Management Has Gained Prominence

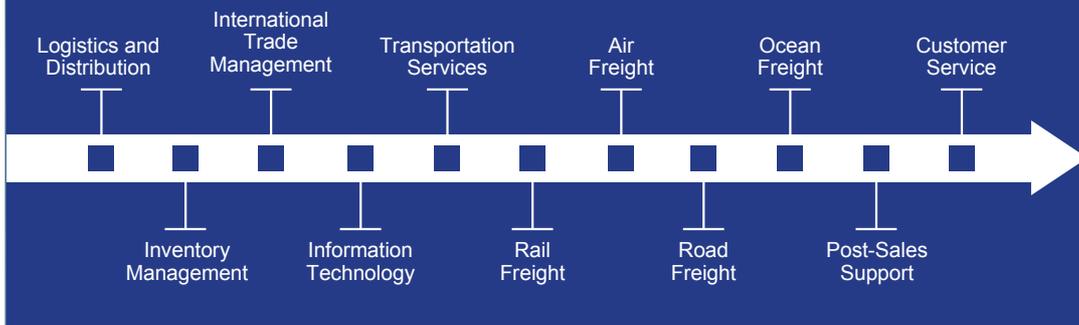
- Significant gains made in the 1980s and 1990s
- 34% reduction in ratio of inventory to sales
- Yielding an estimated reduction of over \$4.6 trillion in total business inventories
- Order to cash cycle time improved 10% in last 5 years
- Gains came from:
  - Information technology investments
  - Improved information visibility
  - Adoption of just-in-time processes
  - Industry deregulation
- “C-suite” involvement (CFO, COO, CIO, CEO)

There has been a huge amount of change in supply chain management through the 80s and 90s. Inventories have come down dramatically because of improvements in supply chain. \$4.6 trillion of assets have been taken off companies' balance sheets.

Those improvements are coming from information technology, from better visibility of data which accompanies international transactions. All of you are in the just-in-time business. Many in the automotive sector or other industrial sectors have profited from deregulation in industries. To the many C-level people in this audience today the supply chain is not just about the traffic manager sitting in a dark office in a warehouse somewhere. There are numerous interrelated activities that fall under all the C-suite realms of responsibility.

## Elements of the Cable & Wire Supply Chain

The global supply chain is comprised of numerous individual elements and all must work together for advantage to be created and sustained.

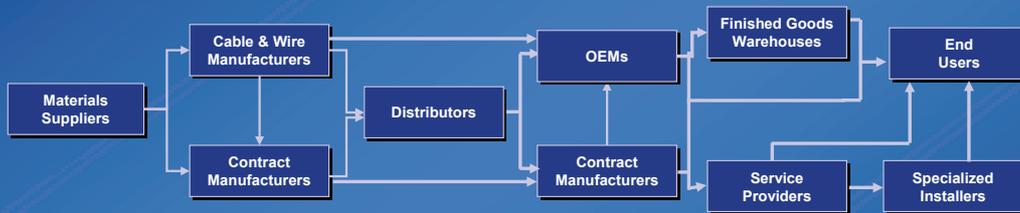


Managing these functional elements as separate disconnected silos leads to ballooning total distribution cost, and increased propensity for loss, damage, delay, and flow disruption.

Let us look at all these different activities that form a company's supply chain. Here you can see the many parts of the supply chain, including all the different types of transportation and international regulations. If you manage all these things in silos, you will not have an efficient supply chain. That would make the cost of doing business globally skyrocket.

## A Typical Supply Chain

Companies must coordinate a complex network of suppliers and customers, ensure that finished goods are delivered effectively and efficiently, provide consistently high quality product, and comply with changing product and trade regulations.



In practice the cable and wire supply chains for power transmission, telecommunications, and industrial applications each have highly disparate needs and specialized flows of material, funds, and information

This is a typical supply chain. It is not the most complex supply chain in the world, but it gives you a sense for all the different elements between a company's material supplier and an end user. This is only, what we call, forward logistics. It doesn't look at the reverse flow.

## Global Cable and Wire Supply Chain Challenges

Cable and wire producers are impacted by trends and business shifts occurring in the industry

	Power Transmission	Telecom	Industrial Application
Increasing raw material costs (copper and primary metals)	○	○	○
Growing competition from low-cost country commodity producers		●	○
Accelerating usage of wireless alternatives by core customers		○	●
Economic slowdown in key end-user geographies impacting sales	●	●	○
Market rationalization and consolidation	○	○	○
Increasing pressure on margin	○	○	○

In different companies, in different sectors of the industry, there are different issues. In the cable industry, if I look at those companies that deal with power transmission versus telecom or industrial applications, there are varying degrees of these elements that impact your business. Certainly, raw material cost plays a role in all your businesses. The blue dots are the ones indicating significant impact and the white ones show, that it has an impact but not a significant one.

For industrial applications, competition is a big deal but not for power transmission companies.

Obviously, the chart shows that industry and market rationalization, as well as the focus on costs, affects all of our companies in the supply chain.

I will now talk about 5 issues that are a real challenge in the supply chain.

## Broader Supply Chain Challenges Impacting All Sectors

Cable and wire producers are also impacted by recent developments in the global trade environment.



**Rising Energy Costs** – Fuel prices have increased over 70% YoY, with limited ability for carriers to establish new hedges. Every 1-cent increase in Jet-A adds \$195m to global air carrier operating costs. In 2000 fuel averaged 15%-20% of a freight carrier's operating costs – today it exceeds 50%.



**Transportation Infrastructure** – Transportation infrastructure in both North America and Europe is lagging growth in freight volume, resulting in increased instances of delay and diversion. ASCE reports that \$1 trillion in infrastructure investment is needed in the next 5 years.



**Security and Regulatory Compliance** – More than 26 new international freight security regulations have come into effect in the past six years. Research shows that 9.2% of international orders have compliance errors, 3.4% of shipments are held at customs, and 2.4% of customs license applications are initially rejected.

## Broader Supply Chain Challenges Impacting All Sectors

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**Global Credit Crunch** – Traders are finding it harder to get letters of credit that guarantee payments for goods. Crude oil, industrial metals and grains have all slumped since reaching records in July on concern the worst financial crisis since the 1930s will cause a global recession<sup>1</sup>.



**Green Supply Chain** – “An Inconvenient Truth” (former US Vice-President Al Gore). Whether from a cost, a regulatory, or an environmental sustainability perspective, companies are realizing the imperative of solid handling of environmental issues throughout their supply chain<sup>2</sup>.

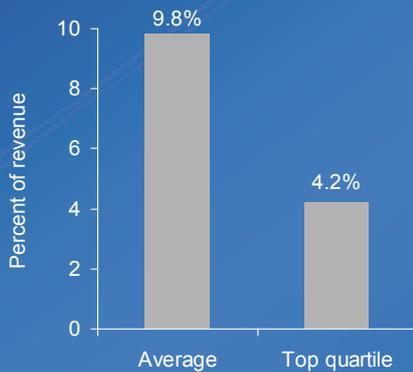
<sup>1</sup> Bloomberg.com – Oct 15, 2008; “Ship Rates Plunge as Credit Freeze Strands Cargo, Demand Slumps

<sup>2</sup> Global Supply Chain Instruments – 2007; “Greening the Global Supply Chain”, Russel Beron

## Supply Chain Opportunity

Supply chain leaders outperform their average competitors by a factor of two to one.

### Total supply chain cost

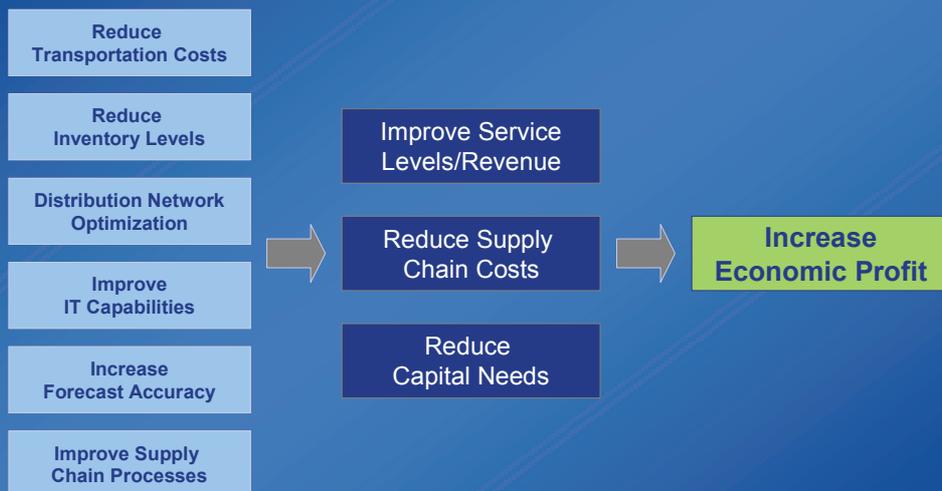


- The global supply chain directly impacts, on average, 75% of a business' operating results.
- Corporations with best-in-class freight and logistics competencies benchmark operational costs that are less than half of those of their direct competitors.
- They also manifest market capitalization growth 7%-26% above industry average.
- This will be an increasingly critical market advantage to possess.

Sources: CFO research and benchmarking

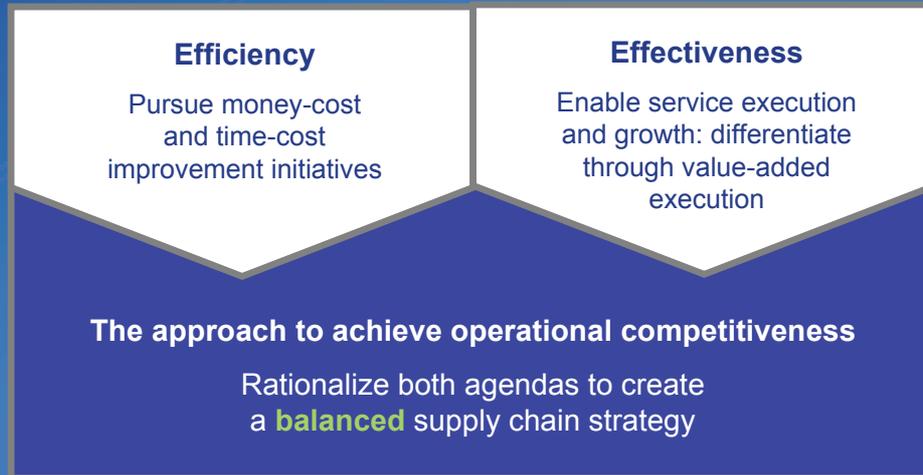
## Creating Supply Chain Advantage

The global supply chain must be actively managed to increase coverage, manage costs, and provide business continuity.



## Advantage Requires Efficiency and Effectiveness

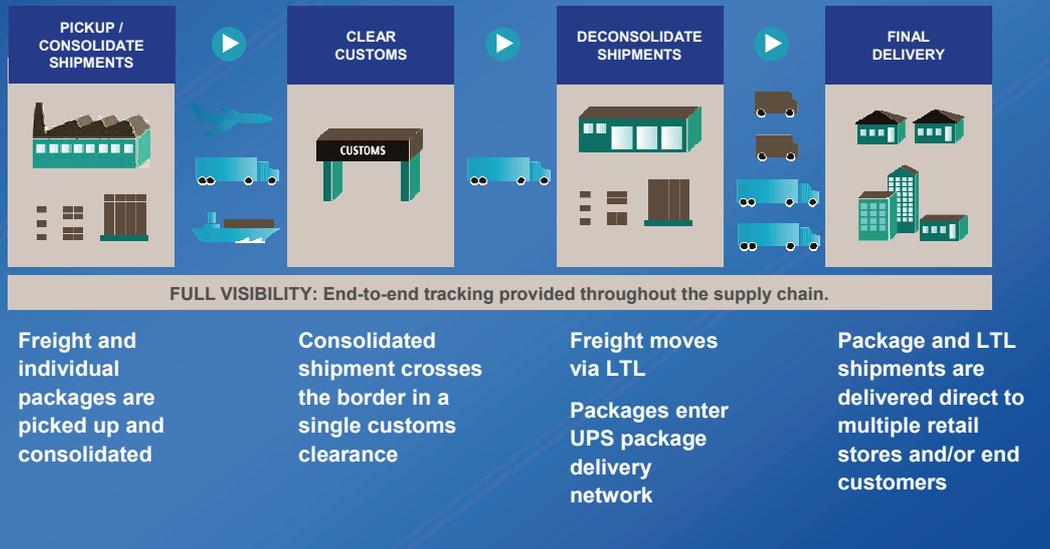
Many have focused solely on the cost side of the equation. It is equally important to grow value through enhanced coverage and capabilities.



The value of your company is not just about the P/L or taking costs out. There is also effectiveness that needs to be evaluated. Things, which may be intangibles or which may be measurable, but are not directly financial, like service execution and differentiating your business through value-added execution.

# Integrated Supply Chain Example: Trade Direct

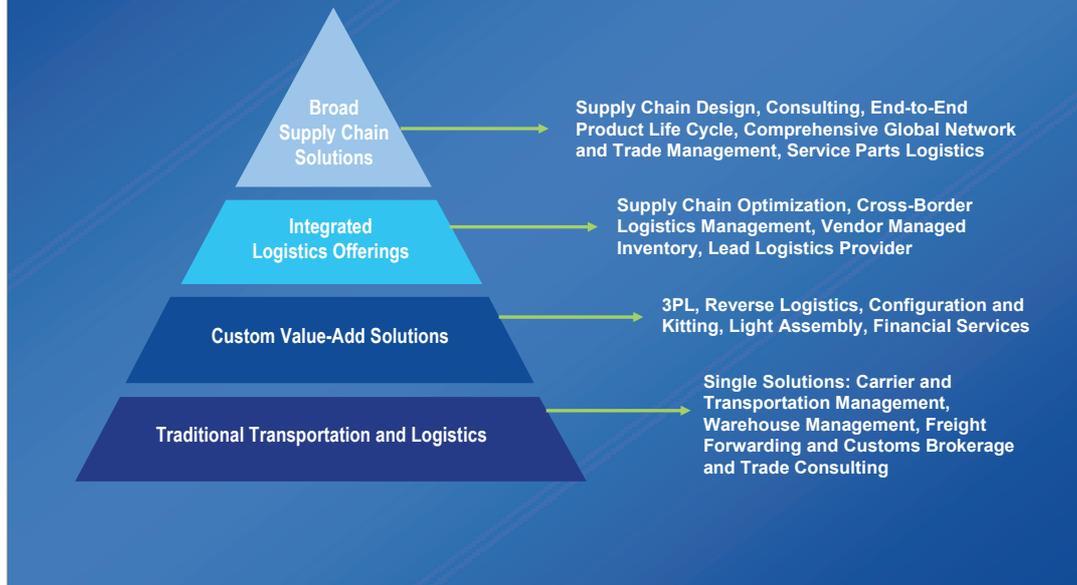
## A complete, integrated, multi-modal solution



This is an example of a supply chain that a lot of companies are acting out now. It is a global supply chain. It could be tires manufactured in Asia which are shipped to retail stores or garage shops in Europe.

It could be something like cross-border, such as a snowboard company selling snowboards from Canada into the United States across the border. If there were a company selling snowboards over the web, every time a customer would order a snowboard, the shipment would be prepared and export documentation would go on the shipment one-to-one. But if you could change that supply chain and have a one-to-many, where you actually cross the border once in a consolidated shipment and then move snowboards into a facility where you break down a bulk shipment into all the end user shipments, you would take considerable costs out of the system.

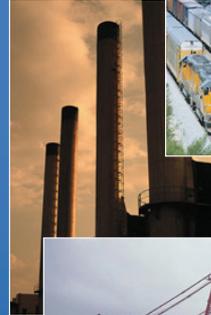
## Supply Chain Management Evolution



At the bottom of this pyramid is the transactional business, the point-to-point shipment. Going up the supply chain, at the apex companies act more globally. They look at end-to-end product life cycles and global trade management.

## Key Supply Chain Design Focus Areas

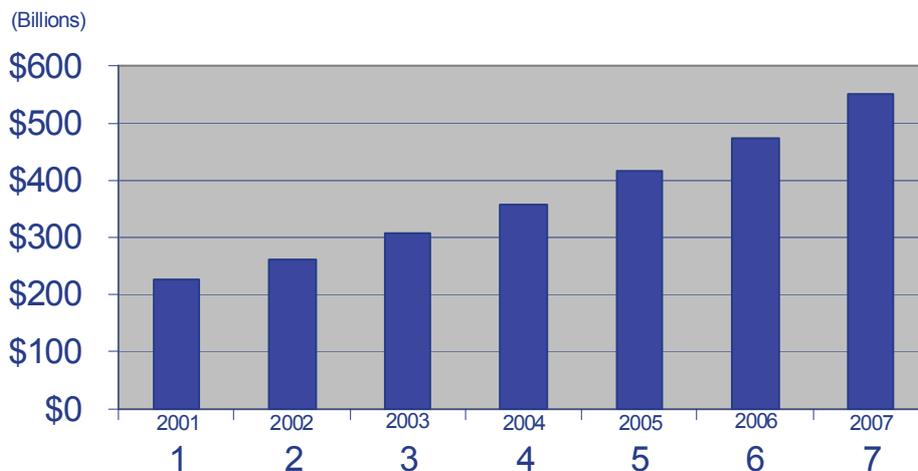
- Site Location / Facility Sizing
  - Where should facilities be located? how many? how large?
- Facility Sourcing
  - Which facilities should service which customers (and/or other facilities)?
- Product Positioning
  - Which product groups should be sourced stored where?
- Mode Selection
  - Which transportation modes to use?



## The Growth of Global Logistics Outsourcing

To attain competitive global supply chain advantage an increasing number of corporations are benefiting from outsourced logistics expertise.

Outsourced Spend



## Third Party Logistics Selection Criteria

While several leading consultant's proffer differing selection criteria, they do have some common elements:

- **Scope and Breadth of Network** – Where is coverage provided, and how does this align to your existing business and growth strategies?
- **Single Source Accountability** – Are end-to-end solutions available, and to what degree are disparate services cohesively integrated?
- **Economies of Scale** – Are cost efficiencies enabled by the provider's volume, and can true end-cost savings be realized?
- **Commitment to Service** – Can they demonstrably enhance your brand through high quality service delivery? Are they known for service?
- **Single Integrated Visibility** – How will command, control, and communication be exercised internally and externally?
- **Financial Footing** – Is the provider positioned for reliable continuous operation? Do they mitigate risk, or add to it?

To truly attain a best-in-class supply chain and all of the corresponding competitive advantages it is important to leverage the strengths, capabilities, and assets of best-in-class third party logistics providers.

These are the basic elements that create supply chain advantage. The company that has them will rise to a leadership position in its industry. The company that does not can attain them through retaining the services of a leading supply chain solutions provider.

## The Quantified Advantages of Supply Chain Alignment

Effective end-to-end management of the global supply chain and ancillary functions can reduce total distribution cost by up to 5%, with the same impact on profit as a 30% increase in sales.

### Mfg Improvement Through End-to-End Supply Chain Mgmt

Lower Inventory Levels	10%-40% improvement
Faster Replenishment Cycles	12%-30% improvement
Higher Sales	2%-10% improvement
Better Customer Service	5%-10% improvement

Sources: Benchmark analysis, AMR survey

The advantages of driving an efficient supply chain can be measured in lower inventory levels, faster replenishment cycles, higher sales and better customer service.

At the end, when it comes down to value, a good supply chain will increase your revenue and it will show up positively in your income statement and your balance sheet.

Thank you!