

**2001**

**한국물류혁신 컨퍼런스**

*GET THE SPIRIT OF e-LOGISTICS.*

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# 제조업의 물류혁신 방안 및 사례

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SESSION

H-3 제조업의 물류혁신 방안 및 사례

<http://www.kola.or.kr>

**KLA** 사단  
법인 **한국물류협회**

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## **Agenda**

- **New trends in Logistics**
- **Logistics Strategy for the value to Business**
- **Effective Transportation Management**
- **Conclusion**

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## Logistics as a Value Creator

- Logistics has become a value creation vehicle that can earn competitive advantage, increase profitability and facilitate improved margin and growth rates
- Companies are reducing inventories to free up working capital, expanding globally to increase revenue potential, and reducing costs to increase shareholder value.

### Old Paradigm

#### "Cost Focus"

- Cost Center
- Rate & Negotiation
- Load Building /Routing /Freight Payments
- Functional Optimization

### New Thinking

#### "Service Focus"

- Value Creator
- Customer Service
- Logistics Visibility
- Supply Chain Optimization

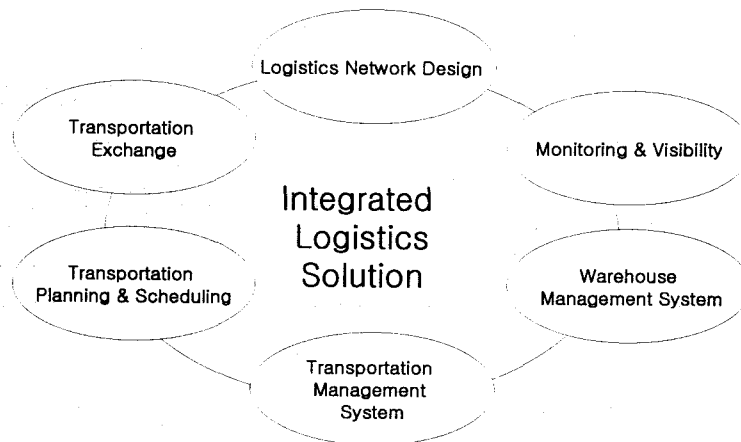
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## Current Trends & Issues

- Rapid growth in B2C Package deliveries
- Higher customer expectations: where is my shipment, when will it ship, and can I change my order?
- High, on-time order fill rate expectations (pressure on inventory levels)
- Products increasingly customized/personalized (both B2B and B2C)
- Collaborative planning between shippers, carriers, brokers, and customers
- Rapid emergence and globalization of new sales and distribution channels
- Reverse logistics (handling of returns)
- Outsourcing (growing use of third party logistics)
- Pipeline visibility (using Web technology to manage inbound and outbound shipments)
- Cost Reduction Pressure

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## Current Solutions in Logistics



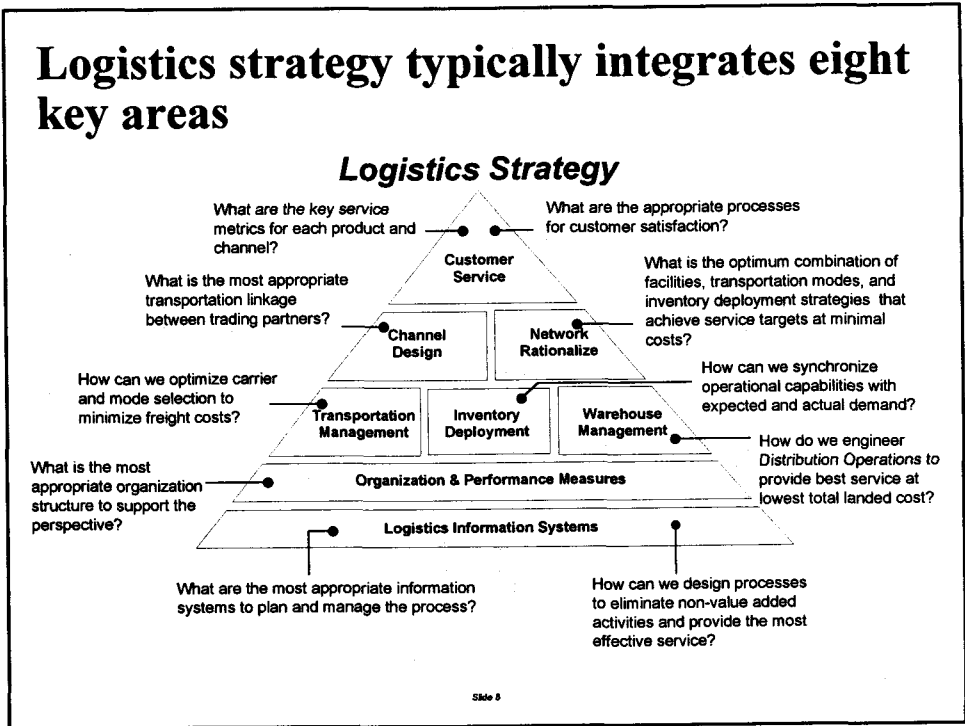
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## Agenda

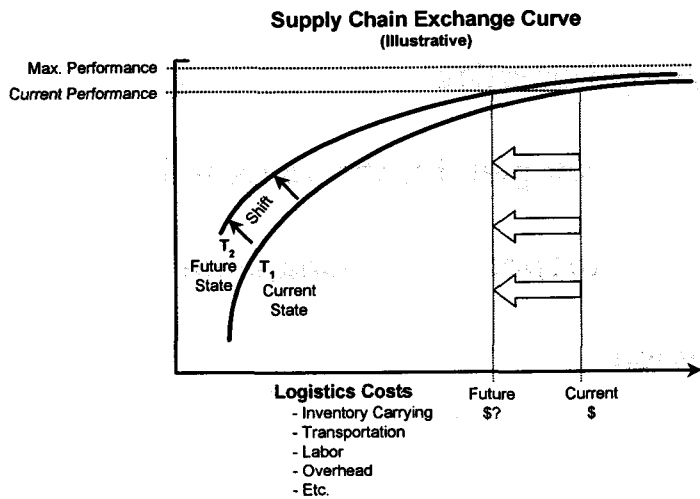
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# Logistics strategy typically integrates eight key areas

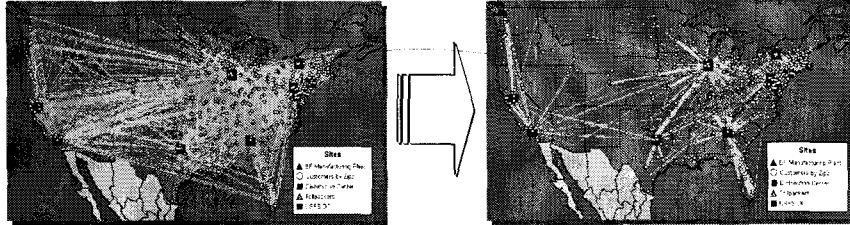


# Logistics Strategy Goal

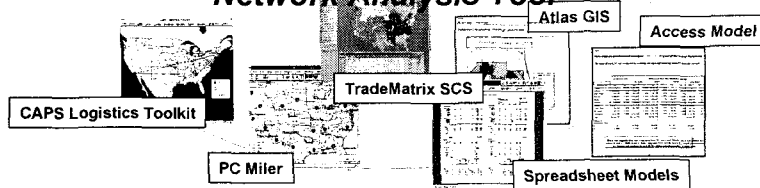


# Network Optimization

Analyzing the cost-service tradeoff among logistics network strategy alternatives is critical in seeking to rationalize facilities while maintaining or improving service



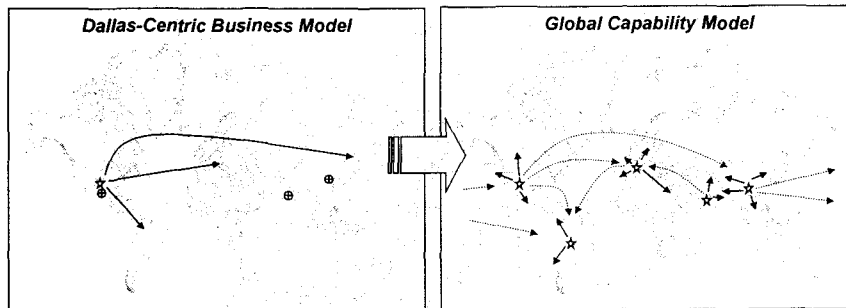
## Network Analysis Tool



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## Client Example

*Industry sector economics, coupled with a shift in customer requirements, are driving X Company away from a Dallas-Centric Business model to a global business model with regional delivery capabilities.*



- As customers' requirements trend towards lower cost and greater responsiveness and service, X Company must create regional infra-structures that can source, manufacture, distribute, service and manage reverse logistics intra- or inter-regionally . . . all with a minimum investment of capital.
- In order to maximize shareholder value and customer services, a global approach to resource management must be undertaken.

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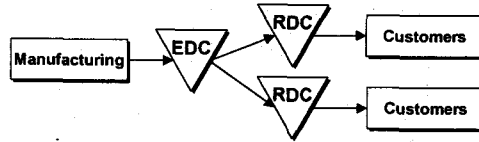
## Client Example

Two alternatives show the possibilities of a X Company network design in Europe...

### Central Distribution



### Regional Distribution



	characteristics
Central	<ul style="list-style-type: none"> <li>• Central stock of all products</li> <li>• Central organization</li> <li>• Complex systems</li> <li>• Stock driven structure</li> <li>• Transit time approximately one day</li> </ul>
Regional	<ul style="list-style-type: none"> <li>• Increase stock</li> <li>• Multiple customer - stock relations</li> <li>• Complex systems</li> <li>• Distribution driven structure</li> <li>• Reduced transit time &lt; one day</li> </ul>

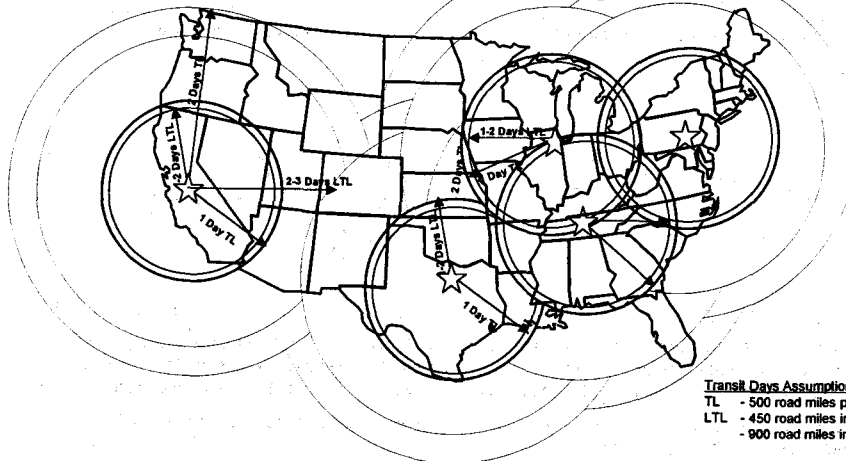
trade-offs Central <-> Regional	
Issue	Regional
Landing costs	Indifferent
Primary transport costs	☐
Warehousing costs	☐
Stock costs	☐
Distribution costs	☐
Service	☐
Flexibility	☐
Complexity	☐
Country specifics	☐

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## Client Example

### Transportation Days Map Analysis

... Transit Days Map for 5 DC's: Fresno, Dallas, Chicago, Nashville, & Harrisburg



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# Logistics Outsourcing Strategy

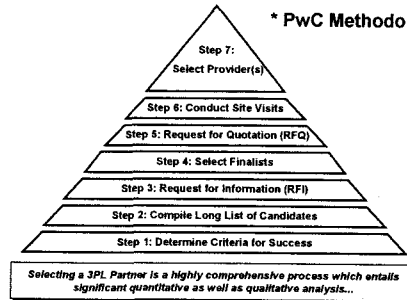
The important principle of B2B e-business evolution is that the trend will evolve from optimization of an individual business to optimization of a network of businesses.

High Customer Satisfaction With Minimum Cost

- Focus On Core Business
- Logistics Efficiency
- Lowest total Logistics Cost
- Providing Value-Adding Services
- Flexibility
- Risk Mitigation

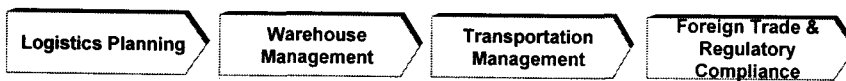
## 3PL Provider selection process

\* PwC Methodology



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# Outsourcing Activity & Function



- All services are carried out by one or more third-party logistics providers.
- Outsourced Logistics require integration of process activities.  
E.g. services like labeling or packaging can be outsourced.



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## Client Example

The benefits at Year 5 is an estimated \$17 million to \$34 million reduction in logistics related costs...

Savings	<u>Opportunities</u>	<u>Savings at Year 5</u>	<u>Rationale</u>
	Outsourcing	\$15-\$30 million	<ul style="list-style-type: none"> <li>• Variable cost avoidance (EMEA) \$5-10</li> <li>• Variable cost reduction (NA) \$10-20</li> <li>• Net headcount decrease / avoidance: 51 (73 Decrease in Dallas/22 Increase Globally)</li> </ul>
	Process Improvements	\$2-\$4 million	<ul style="list-style-type: none"> <li>• Cost avoidance/reduction through improved planning and management of logistics activities</li> </ul>

### The cost savings through the integration of a 3PL Service Provider

Function	Year1	Year2	Year3	Year4	Year5
Warehouse Operations Management	7.5 %	6.0 %	3.0 %	1.8 %	1.5 %
Carrier Selection & Rate Negotiation	7.5 %	6.0 %	3.0 %	1.8 %	1.5 %
Shipment Planning	4.5 %	3.8 %	1.9 %	1.1 %	1.1 %
Packaging	6.8 %	6.8 %	3.4 %	2.0 %	1.9 %

source : the Journal of Business Logistics

Our experience has shown that while these numbers are aggressive, they can be achieved if the outsource contract is established correctly.

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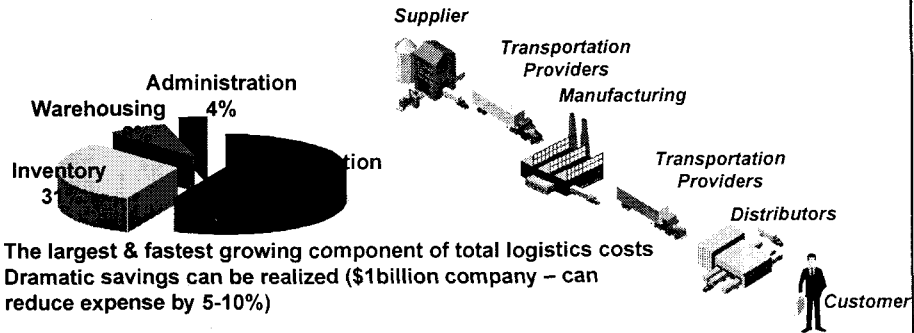
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# Transportation Management

Transportation is the glue that holds the logistics network together and must always be aware of the transportation costs and characteristics



*In today's competitive business environment, world class companies are making significant investments in Transportation improvement programs.*

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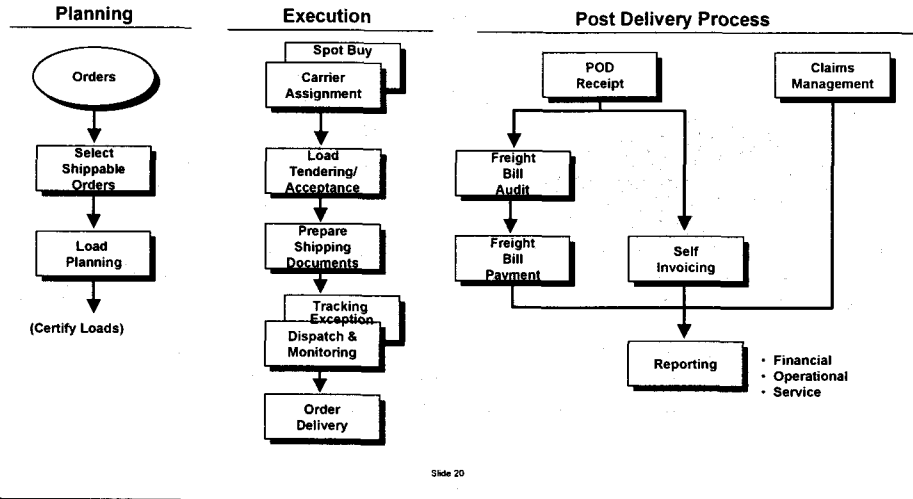
# Transportation impacts Most Areas Within the Supply Chain

PLANNING	PROCUREMENT	MANUFACTURING	DISTRIBUTION	CUSTOMER
Network & Asset Rationalization	Landed Costs	Interplant Movements	Load Plans	Available to Deliver
Lead Times	Inbound In-transit Inventory Management	JIT and Other Specialized Services	Pick Lists	On Time Monitor
Vendor Sourcing	Reduced Raw Material and WIP Inventories		Shipping Documentation Preparation	QA Programs
Economic Order Sizes			Dock Scheduling	Accurate Cost
			Outbound Shipment Management	ASN
			Mode/Carrier Selection	In-transit Track & Trace
			Yard Management	

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# Transportation Management Process

Manage the full lifecycle of the transportation process - from order management through customer service and financial settlement



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## The Cost & Service Tradeoff/ Conflicting Goals

- Customers want**
  - Reduced Cycle Times and Faster Product Availability
  - Smaller Shipment Sizes and Reduced Inventories
  - More Services
  - Increased Reliability
  - Less Risk/Damage
  - Global Reach
  - Reduced Cost
- Management Want**
  - More Cost Information to Support ABC Analysis
  - Ability to Manage In-Transit Inventory
  - 100% On-Time Performance
  - Reduced Cost



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## How Can Savings be Generated?

### ■ Tactical Opportunities

- Understand current rates and leverage lower carriers that provide a consistent level of service
- Ensure that your rates are under contract and that they are competitively priced
- Ensure that you have a core carrier program
- Control your inbound freight
- Monitor carrier performance
- Eliminate your freight bill audit function

### ■ Strategic Opportunities

- Investigate the use of automated load planning tools
- Integrate freight rates and transit times with order entry
- Provide a transportation resource to the procurement function
- Review the business case of maintaining your private fleet
- Identify opportunities where you can work with your carriers to reduce their "cost to serve" you

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## Categorize Transportation Management

- Carrier Bidding using Transportation Exchange
- Cost-Effective Carrier/Service Combination Determination
- Electronic Contract Process

Carrier  
Negotiation & Contract

- Load Building (Shipment Consolidation)
- Route Determination
- Rating
- Optimal Carrier/Service Selection

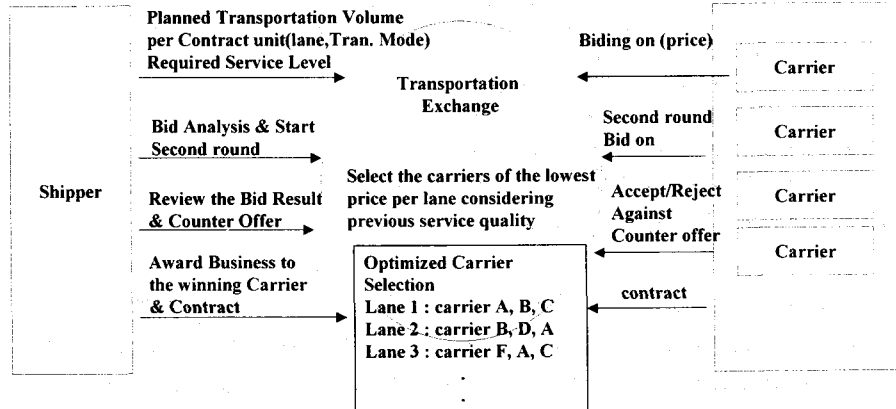
Transportation  
Planning

Transportation  
Execution

- Load Tendering
- Freight Cost Settlement
- Shipment Documentation
- Track & Trace
- Alert/Event Management
- Carrier management
- Fleet Management
- Analysis/Reporting (Strategic/Operational)

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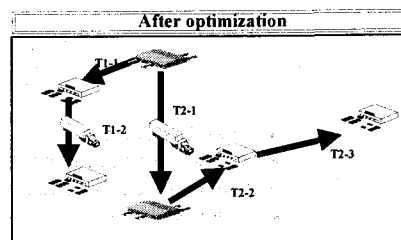
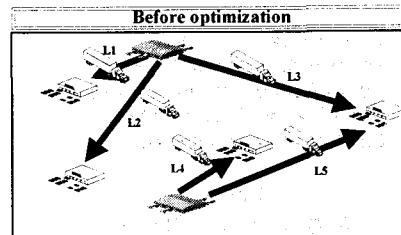
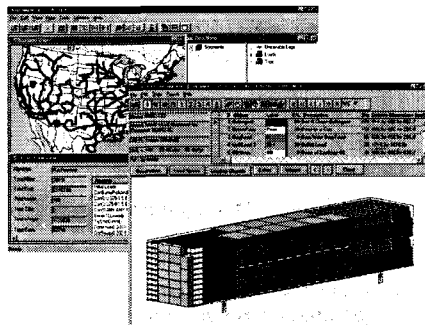
# Carrier Selection Process for Manufacturing Company



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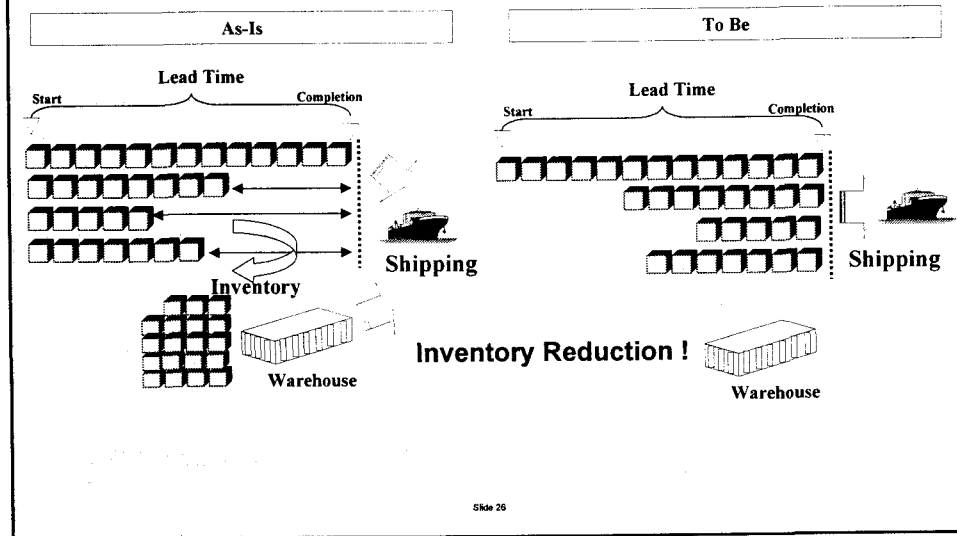
# Transportation Planning

- Load Building
- Rating
- Routing

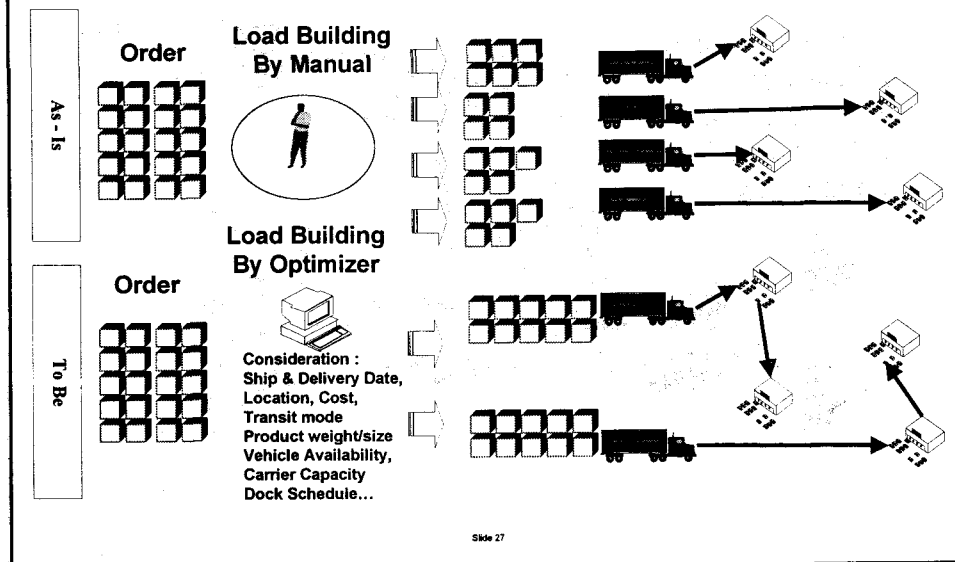


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## Production Plan in consideration of Transportation Plan for MTO Manufacturing Company

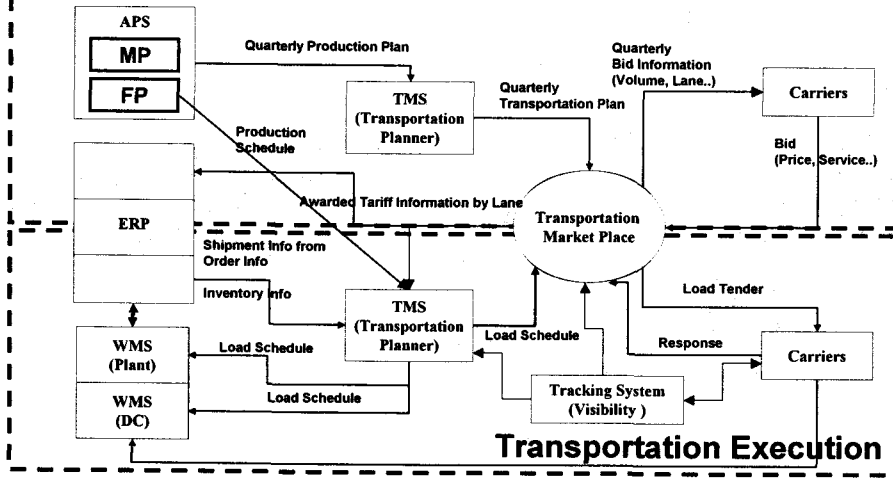


## Efficient Load Building/Routing for Manufacturing Company



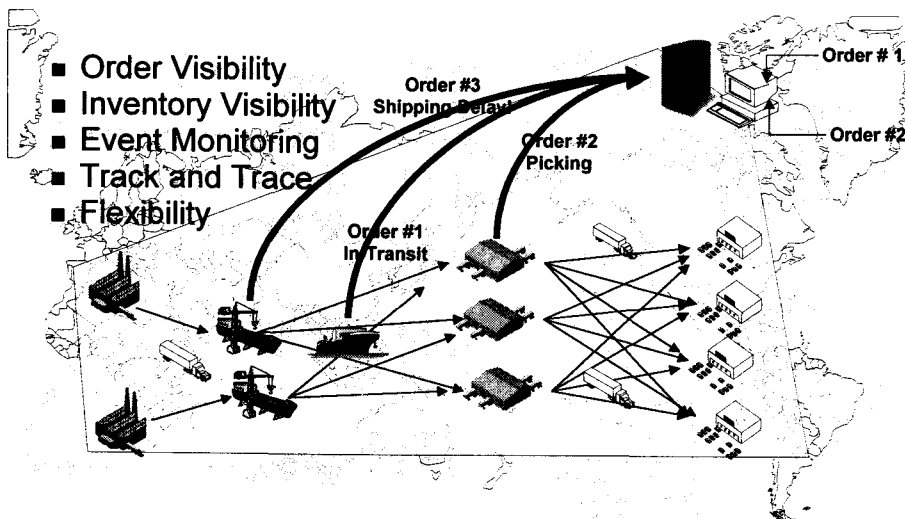
# Architecture for Manufacturing Company

## Transportation Planning/Carrier Bidding



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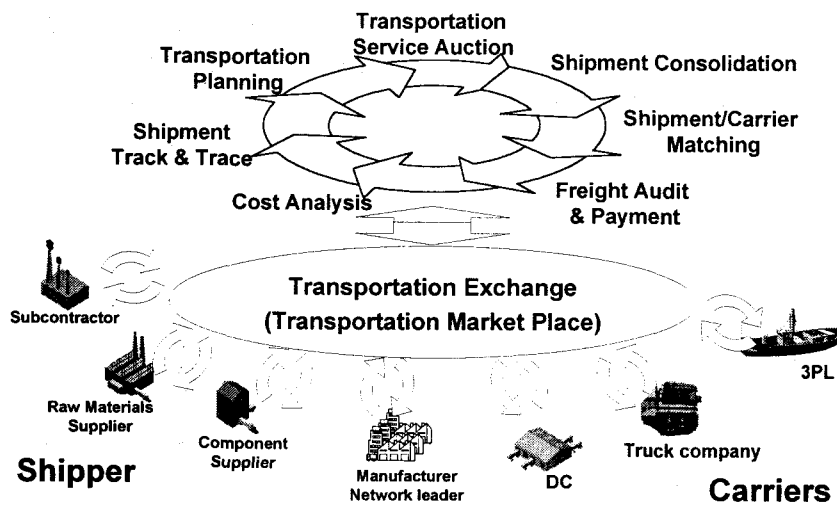
## Global Logistics Visibility for Manufacturing Company



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# Collaborative Transportation



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## Conclusion

- *Logistics is no longer simply a method of moving goods but rather one of the critical elements required to effectively manage and operate the supply chain.*
- *Companies taking advantages of improvement opportunities will undoubtedly enjoy both cost savings and customer service improvements.*
- *Process Improvement is more important than system implementation*
- *By managing the "Shipper's Dilemma", exploring all transportation options, and investing in planning and execution technologies, there can be only one result :  
**Effective transportation management processes provide a strategic and competitive weapon to your company !!***

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