




WHITEPAPER


Two Phase Supply Chain

**A New Outsourced Supply Chain Strategy
to Reduce Distribution Assets and Costs**

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Abstract

Logistics outsourcing has become an important supply chain strategy for many industries including apparel, shoes, home goods, high technology, and automotive. As more sourcing moves overseas, IES has developed a new software solution that allows you to offer your customers an advanced supply chain strategy, delivering the next level of flexibility and cost savings.

Combining the IES software solution and your network your customers get the local expertise and assets of a Lead Logistics Manager in-country with the reliability and scale of a Package Delivery Service (PDS) like FedEx or UPS for North American distribution. The opportunity is two fold: reduce supply chain costs and asset intensity to make a significant contribution to shareholder value.

“We expect to save over \$1mn per year by implementing a two phase supply chain”

*VP Logistics
Major Shoe Importer*

With the IES software your customer can select the integrated supply chain components that they need to enable a two phase supply chain. IES components have been designed to integrate with and extend the value of existing order management and supply chain management systems using flexible XML and EDI adapters. With easy-to-use web-based interfaces your customer can quickly deploy new capabilities to their suppliers in Asia and enable you as the Lead Logistics Managers.

IES has provided integrated software and services to the freight forwarding and global 3PL markets for fifteen years. Proven to meet the specialized needs of industry players, IES solutions are best positioned to deliver the value of the Two Phase Supply Chain.

Definition: The Lead Logistics Manager (LLM) is the single point of contact to provide all required logistics services in a given geographical region. The LLM will have its own assets as well as partner with other logistics service providers to provide a complete end-to-end solution.

Two Phase Supply Chain At-A-Glance

Target Industries: Specialty Retail, Apparel, Shoes, Home Goods, Automotive, and Consumer Electronics.

Characteristics: The IES Two Phase Supply Chain as a distribution strategy is well suited for:

- High proportion of goods sourced internationally
- Hundreds of final (store-level) destinations
- Expensive domestic distribution network
- Total supply chain cycle time > 30 days

Opportunity: The IES Two Phase Supply Chain delivers financial and operational benefits:

- In the company's existing distribution network to substantially reduce:
 - PP&E assets
 - Inventory holding costs
 - DC-level costs
 - Mark-downs
- Reduce total supply chain cycle time < 30 days
- Simplify vendor management
- Improve delivery reliability
- Increase store-level sales by reducing stock-outs

Investment: The IES Two Phase Supply Chain is an outsourcing strategy that leverages the expertise and assets of a Lead Logistics Manager (LLM) and a Package Delivery Service (PDS).

- **LLM:** Vendor management, warehousing, packing, consolidation and shipping
- **LLM:** International freight forwarding of containerized cargo and airfreight
- **PDS:** Domestic transportation via truck, rail, and air

Business Case: The business case for the IES Two Phase Supply Chain is fairly straightforward:

- **Reduce by 80% distribution network assets** including property, plant, and equipment.
- **Outsource at \$0.10 on the dollar** all DC and inbound transportation management costs
- **Eliminate 1 - 2 weeks of inventory** by shipping direct from the port of entry
- **Manage forecast error** using international air freight and Fast Response Inventory

Technology: The IES Two Phase Supply Chain processes are enabled by lightweight supply chain components that not only provide a foundation for LLM services, but extend the capabilities of the company's existing systems:

- XML, EDI integration
- Purchase order management
- Warehouse management
- Inventory allocation and shipment
- International freight forwarding (booking, documentation and customs clearance)
- Purchase order / job-cost accounting
- Web tracking

The Trend to Outsourcing

Over the past fifteen years, outsourced logistics has grown from an idea to a \$155.8bn industry in 2002. According to IDC, the industry is forecasted to grow at 12% per annum to \$276.5bn in 2007.

“This year’s study highlights more demanding customer expectations of 3PL services and increasingly sophisticated requirements for technology-based and strategic supply chain services.”

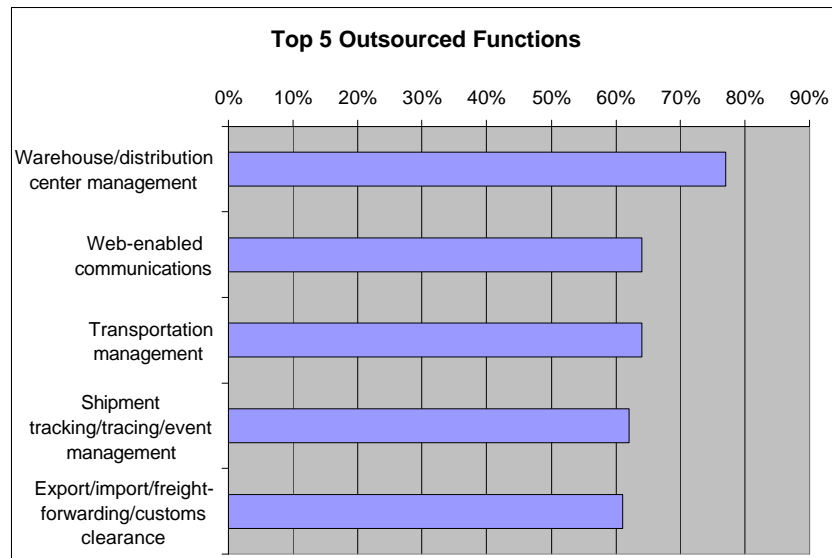
C. John Langley Jr.
Professor of supply chain management
Georgia Tech

The widespread adoption of logistics outsourcing was confirmed by a recent study conducted by Cap Gemini Ernst & Young US LLC and the Georgia Institute of Technology. They found that more than 75% of respondents (90 percent in Europe and Asia) currently outsource a portion of their logistics needs to logistics service providers. The top quantifiable benefits cited by those that outsource include:

- Lower logistics costs,
- Reduced average order cycle time,
- Lower inventory levels and
- Improved service

In North America, respondents currently spend about 43% of their budget on outsourced logistics services and 89% view their relationships with logistics service providers as successful.

Respondents are looking to their logistics service providers to manage best-in-class processes. With the smart application of information technology new processes are enabled that can be measured and better controlled, providing a higher level of control. The top 5 outsourced functions cited include:



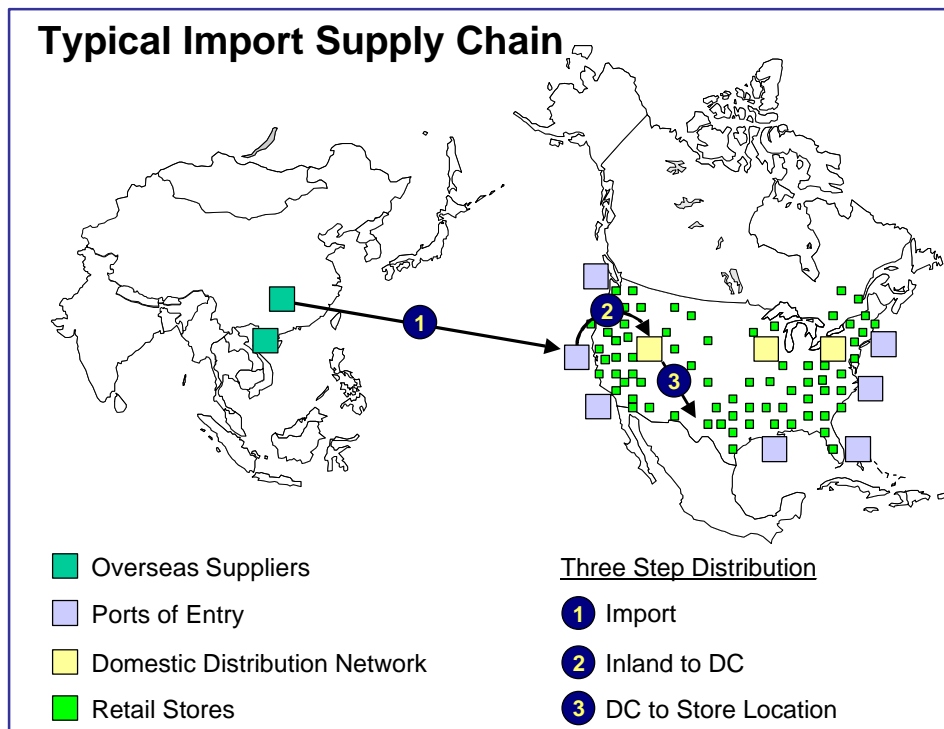
The IES Two Phase Supply Chain builds upon this outsourcing trend by combining the top 5 most outsourced functions into a *virtual distribution network* run by a Lead Logistics Manger (LLM).

New Supply Chain Strategy: Two Phase Supply Chain

The IES Two Phase Supply Chain is an evolution of globally accepted outsourcing approaches into a unified supply chain strategy for industries that predominately source internationally and fulfill to hundreds of retail store locations.

The concept is to replace the domestic distribution network with the expertise and low cost labor of a Lead Logistics Manager overseas and the existing distribution capabilities of a domestic Package Delivery Service.

For example, a typical importer may source from multiple locations in Asia, consolidate and ship via ocean to several US ports that feed one or multiple regional DCs. Each DC supports hundreds of retail locations. In sum, a three step distribution network.



In this model, total supply chain cycle time is often 40 – 50 days with up to 1 – 2 weeks spent in the domestic distribution network. Each distribution center holds a regional inventory allocation and fulfills to retail locations in region with full pick, pack, and ship operational costs using a mix of less than truckload and package delivery service to each retail location.

In the IES Two Phase Supply Chain, sophisticated e-commerce integration collects purchase orders from the system of record and makes them available through a web-based interface. These orders can be managed by a sourcing agent, the LLM, or directly by the supplier. To start the process, the supplier reviews and accepts assigned orders by committing to a Ready Date. E-mail alerts are generated for any variance based on Need Date or quantity for immediate resolution by the corporate sourcing team.

Using self-service tools, the supplier continually updates the production status which improves control for the corporate sourcing team and also helps the LLM plan shipments in advance. Upon completion of the order, the supplier can pre-ship the inventory based on a first, preliminary store-level allocation. Using scanners and high-speed printers, certified air waybills are applied to each carton for final store delivery. The supplier is also responsible for managing inventory underage and overage, as well as creating a booking for LLM warehouse receipt.

As the LLM receives goods at their local warehouse, on-hand quantities are scanned and staged based on final regional allocations. Since all information is scanned and never re-keyed, errors are drastically reduced. Within hours of the on-hand inventory update, final store-level decisions are made and each unallocated carton is assigned a retail ship-to location. In the warehouse, LLM employees use scanners and high-speed printers to produce certified air waybills that originate from the assigned port of entry and will be accepted with no further processing from the package delivery service.

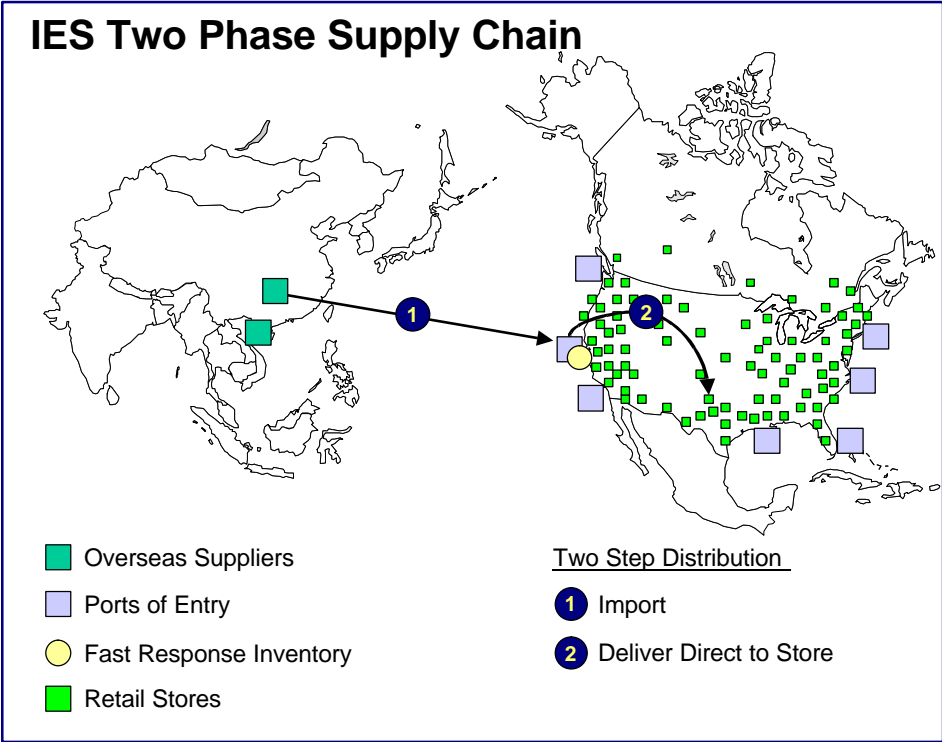
Two Phase Supply Chain Inventory

Pre-allocated
Store-level inventory assignments ready for the Supplier to pre-ship

Allocated
Store-level inventory assignments for the LLM to finalize shipments in the Flow Warehouse

Fast Response
Unassigned inventory held in a central pooling location for volatile SKUs

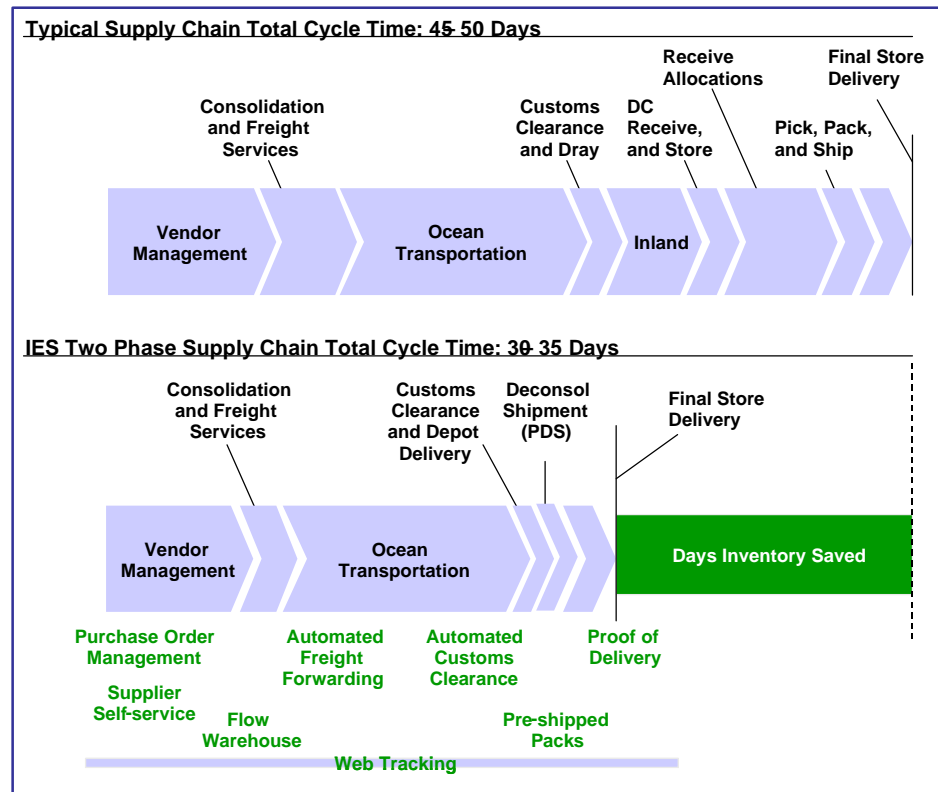
Air / Ocean Mode
Depending on need date, LLM may select appropriate mode



In North America, the container is arrived through customs and dropped at the package delivery service depot for deconsolidation. Since each package is already labeled for store delivery, this process is fully automated and inventory is ready to ship that evening. Using airbill tracking numbers, the order can be tracked to the final store delivery.

In this model, no investment in a domestic distribution network, inventory, or material handling is required. Status from purchase order to final delivery is communicated electronically back to the corporate logistics team for performance management.

Depending on the level of forecast accuracy, Fast Response Inventory may be staged at a central pooling location. Typically located on the West Coast (although sometimes located at the origin overseas) this downsized facility receives an allocation of SKUs with high levels of demand variance. With appropriate min/max levels set, inventory is available with a 24-hour turnaround to minimize stock-outs of items that are most difficult to forecast. The net result is lower costs, lower asset-intensity, and better delivery performance, all with improved visibility and control.



The IES Two Phase Supply Chain leverages the expertise and assets of a Lead Logistics Manager in-country combined with the reliability and scale of a package delivery service like FedEx or UPS to deliver the following benefits:

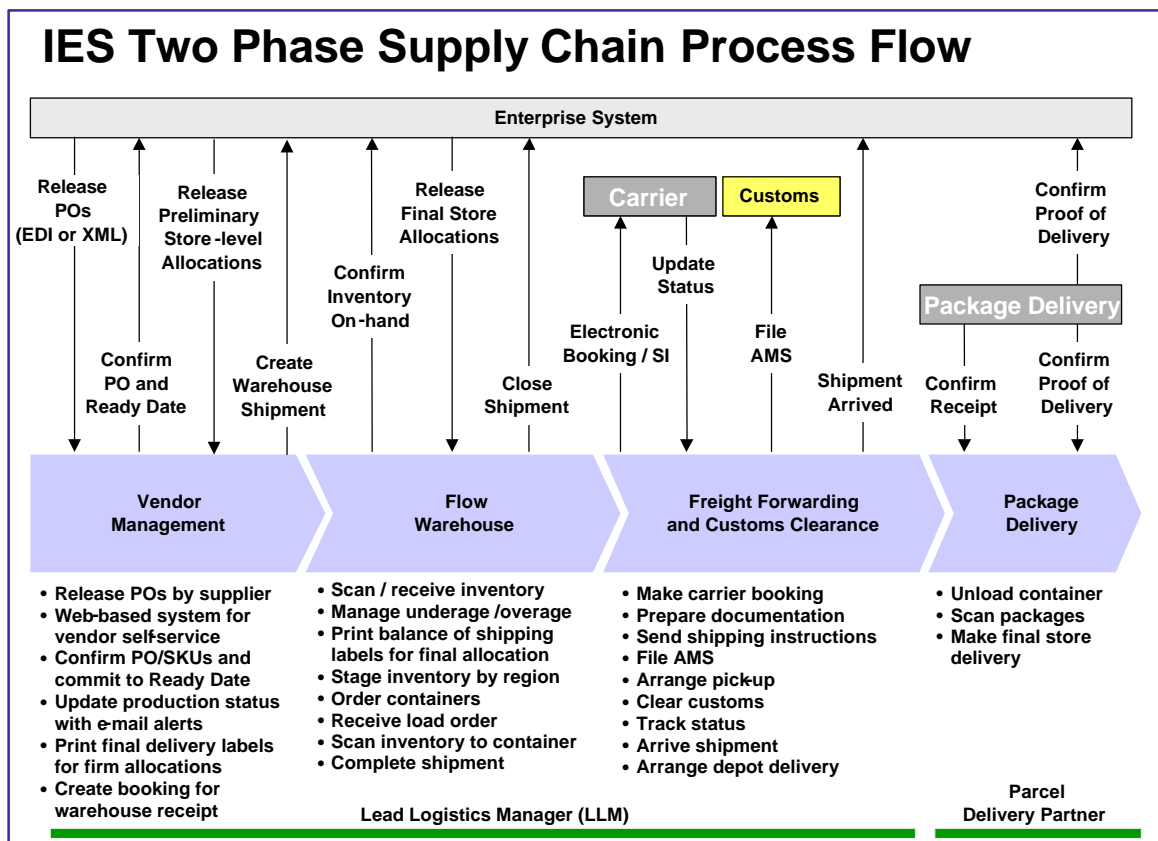
- Retire existing distribution network:
 - Eliminate the PP&E assets
 - Eliminate 15 days of inventory
- Reduce distribution costs by 80% or more by outsourcing and performing the work overseas
- Simplify vendor management
- Improve delivery reliability
- Increase sales by reducing stock-outs and mark-downs

By reducing costs, increasing same-store sales, and reducing asset intensity, companies realize significant gains in shareholder value.

The Technology Behind the IES Two Phase Supply Chain

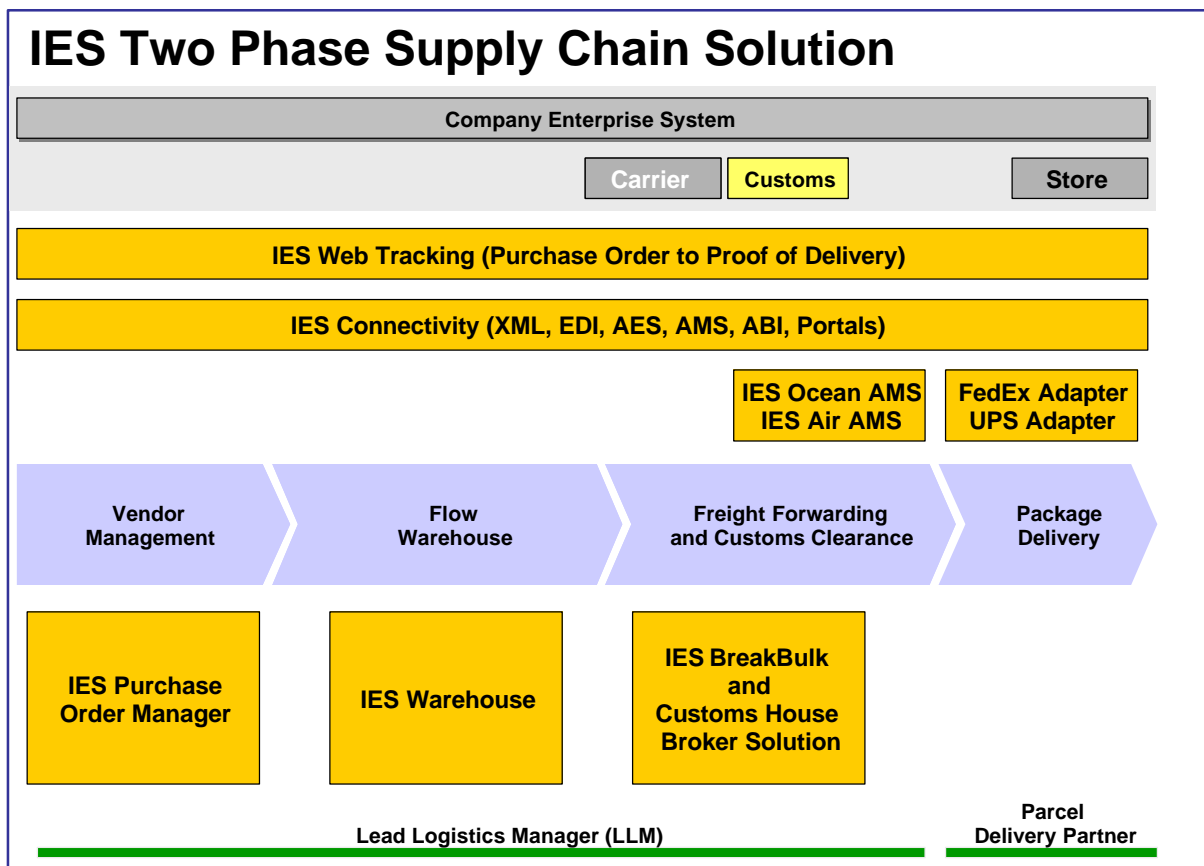
The IES Two Phase Supply Chain is a re-engineered supply chain process that extends the capabilities of existing enterprise systems with new, state-of-the-art web-based components. Distributed among outsourcing partners, the following process is enabled:

1. Company releases purchase orders
2. Supplier manages POs with Ready Date and production status
3. Supplier prints shipment labels based on preliminary allocation
4. LLM manages receipt at the flow warehouse
5. LLM stages inventory for Least Cost Route
6. Company finalizes store-level inventory allocation
7. LLM prints remaining shipment labels
8. LLM consolidates load and ships container
9. LLM ensures delivery to destination and manages arrival and transfer to package delivery service
10. Package delivery service delivers to final store location
11. Company enterprise systems are continuously updated with supply chain status and ultimate proof-of-delivery



IES' supply chain components and services make the two phase supply chain possible. Proven at several leading Lead Logistics Managers, IES is ready to integrate and extend the capabilities of your current sourcing systems.

- XML and EDI integration
- Purchase order management
- Warehouse management
- Inventory allocation and shipment
- International freight forwarding (booking, documentation and customs clearance)
- Purchase order / job-cost accounting
- Web tracking



Summary

The IES Two Phase Supply Chain offers a powerful business case for importers that are looking to capitalize on the logistics-outsourcing trend to improve the return on supply chain investment by:

- **Reduce by 80% all distribution network assets** including property, plant, and equipment.
- **Outsourcing at \$0.10 on the dollar** all DC-level operational costs
- **Eliminating 1 - 2 weeks of inventory** by shipping direct from the port of entry
- **Increasing same-store sales** with increased flexibility and speed of response

"Business complexity is driving the outsourcing of logistics functions, yet the demand for more comprehensive, integrated services is in turn driving the complexity of delivering these services. In this environment, it will be critical for logistics vendors to hone in on their strengths and focus on what they do best, rather than trying to be everything to everyone."

*Romala Ravi, manager for Supply Chain
and Logistics Services research at IDC.*

IES is the leader in integrated international transportation solutions. Available and in production today at several leading retailers, a Two phase supply chain program can be implemented in less than six with a payback within the first year.

To find out how IES and our partners can expertly re-engineer your supply chain, please visit us at www.iestltd.com or call 201-639-5000.

About IES Ltd.

IES Ltd., based in Midland Park, NJ, is a leading provider of international transportation software since 1989. The IES suite of import and export solutions target freight forwarders, NVOCCs, and other transportation intermediaries who look for advanced systems to manage growth, differentiate their service and improve profitability.

IES solutions are available as both a managed service and packaged software that can be fully deployed in a few short weeks. With thousands of customers and millions of daily transactions IES is the proven solution for the most demanding, mission-critical logistics automation needs.