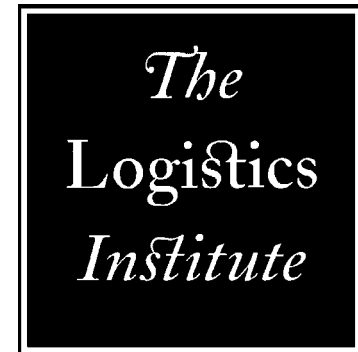


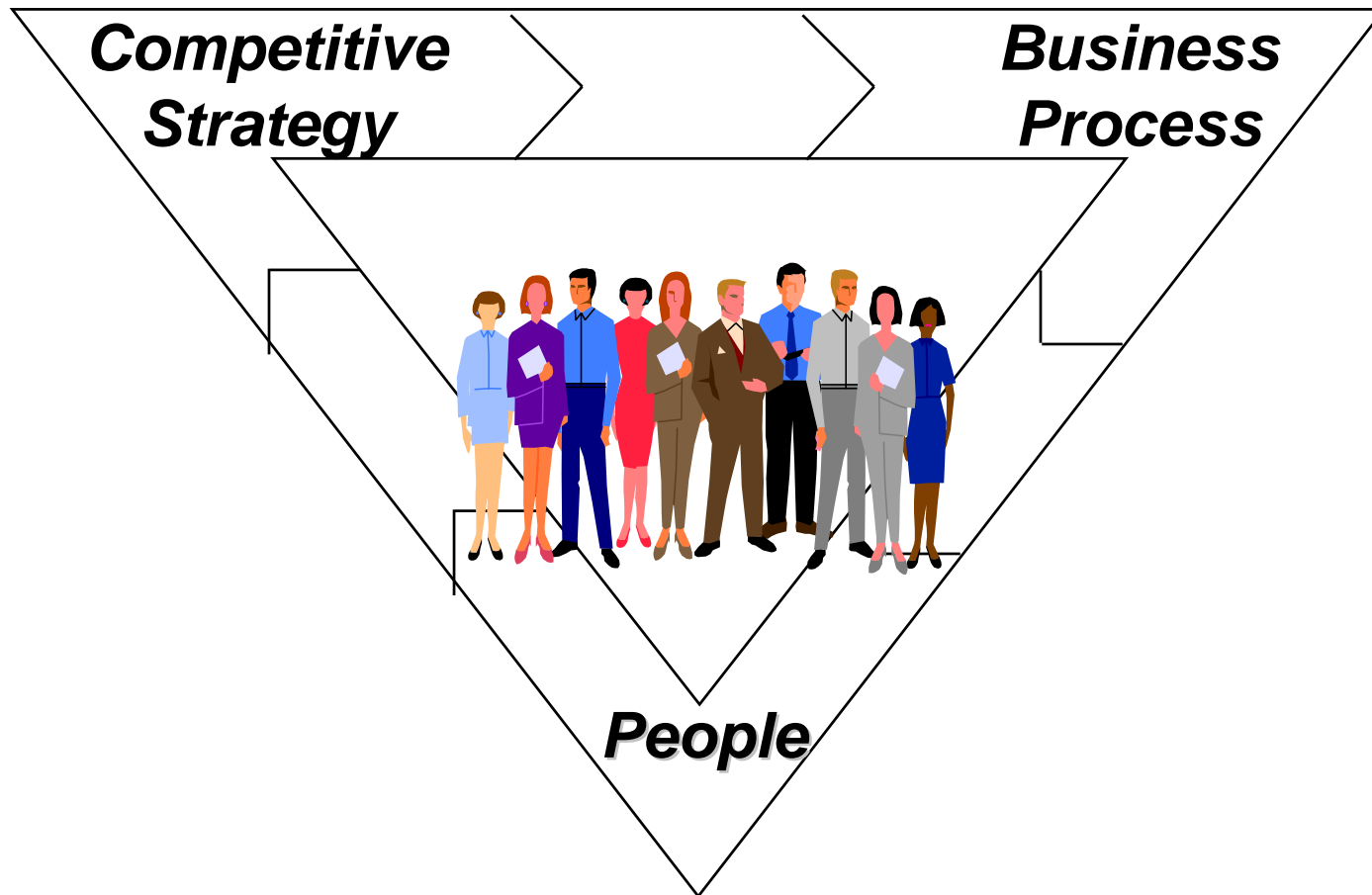
Supply Chain Logistics: Dynamics in a Global Market

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Critical Success Factors



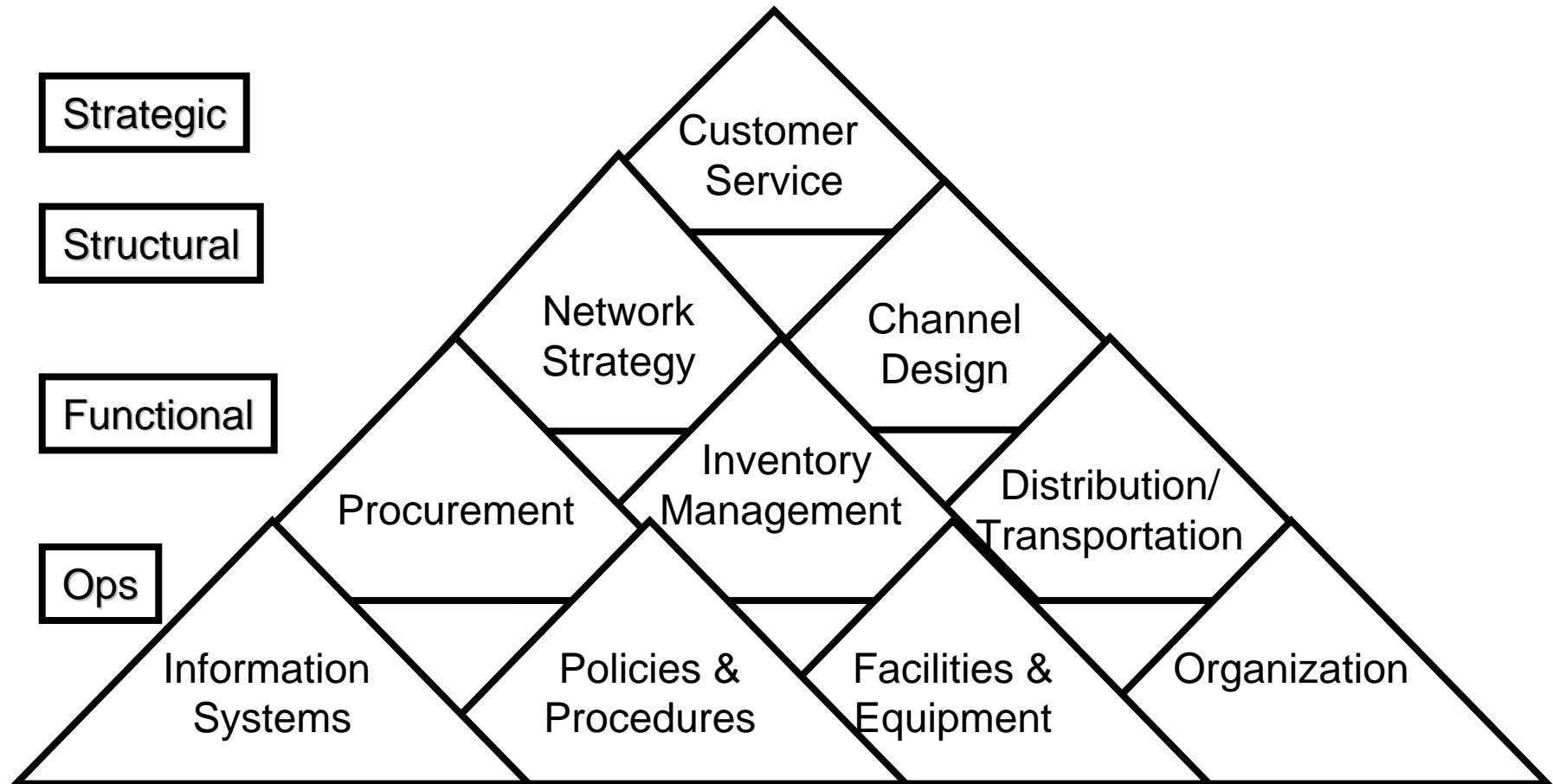
Global Strategy: Supply Chain Logistics

Think of supply chain management as nothing less than the re-engineering of the entire economy -- one convoluted chain at a time. Once you start re-conceptualizing your company as a collection of business processes, it becomes dauntingly clear that those processes extend beyond the portals of any one building, the boundaries of any one corporation, and the borders of any one country...

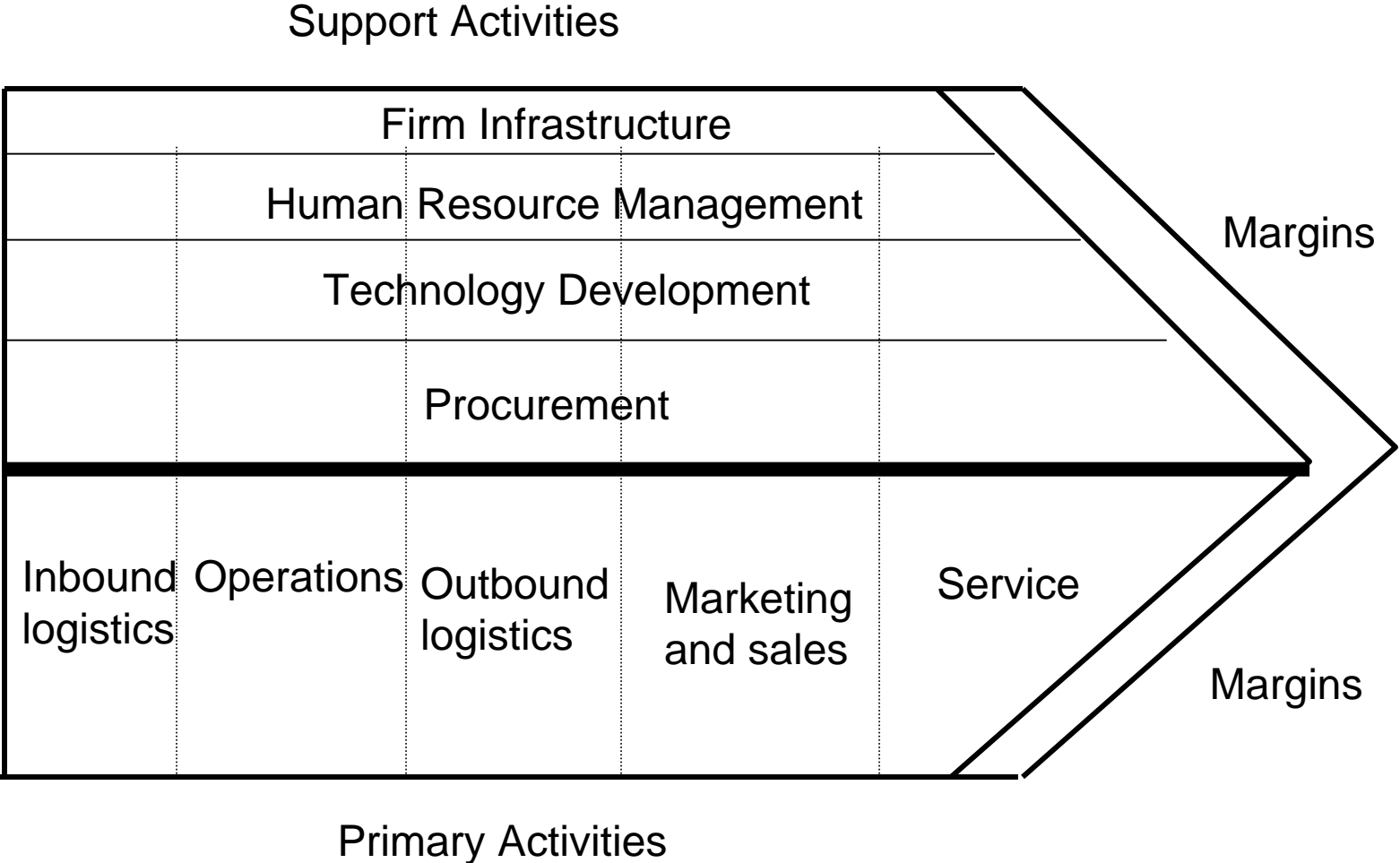
As the economy changes, as competition becomes more global, it's no longer Company vs. Company but Supply Chain vs. Supply Chain.

FORTUNE, NOVEMBER 28, 1994

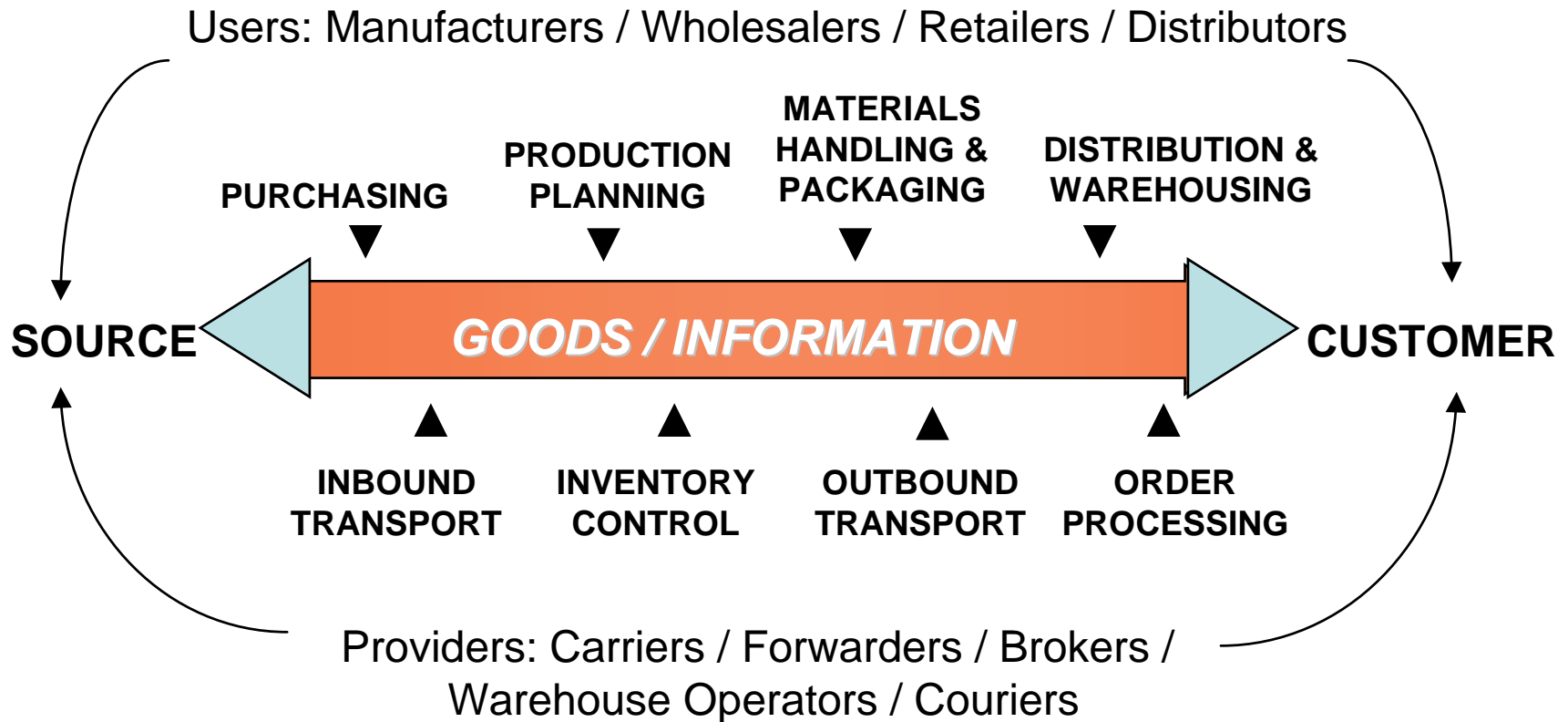
Strategic Dynamics: Supply Chain Logistics



Strategic Dynamics: Value Creation



Process Dynamics: Supply Chain Logistics



Process Dynamics: Management

OBJECTIVES: Manage the sequence of all supplier-to-customer material flow activities that add value to the final product

FOCUS: Strategic: Customer Value Creation
Internal/External Relationships
Product/Market Development
Vendor/Supplier Alliances [services and goods]

DRIVERS: Customer Demand
Asset/Inventory Productivity
Organizational Change: Supply Chain Co-ordination
External Relations
Internal Processes
Information Technology

Process Dynamics: Operations 1

Business Factor	Traditional	Supply Chain
Inventory management	Firm focused	Pipeline coordination
Inventory Flows	Interrupted	Seamless/visible
Cost	Firm minimized	Landed cost
Information	Firm controlled	Shared
Risk	Firm focused	Shared
Planning	Firm Oriented	Supply chain team approach
Interorganizational relationships	Firm focused on low cost	Partnerships focused on landed cost

Ellram and Cooper, "Characteristics of Supply Chain Management and the Implications for Purchasing and Logistics Strategy," *International Journal of Logistics Management*.

Process Dynamics: Operations 2

Business Factor	Traditional	Supply Chain
1. Inventory Safety stock	Asset Yes	Liability No
2. Production runs Setup times Lot sizes	Long Amortize EOQ	Short Minimize I-for-I
3. Queues	Eliminate	Necessary
4. Lead times	Tolerate	Shorter
5. Quality inspection	Important parts	100% process
6. Suppliers/customers Supply sources Employees	Adversaries Multiple Instruct	Partners Single Involve

William M. Boyst Jr. III. "JIT American Style." Proceedings of the *Conference of the American Production & Inventory Control Society*.

Process Dynamics: Operations 3

Success = Balancing the 5 V's:

- Value for customers by controlling total landed cost while delivering quality and post sales support
- Velocity by reducing product storage times, increasing inventory turns, reducing transit times and border delays
- Variability by eliminating unexpected changes in flow patterns and reducing the need for buffer inventories
- Visibility regarding where products are, when they will arrive, and levels of inventory in transit
- Vulnerability of channel and product exposure to terrorist infiltration, both visible and invisible

People – Tasks to be Done

Work Requirements	Process Requirements	Extended Requirements
<p>What goods and services need to be purchased? The need to source, locate and negotiate with suppliers, and purchase/buy goods and services balancing cost of goods/services with quantity, time and place requirements.</p>	<p>Purchasing/Procurement</p> <ul style="list-style-type: none"> • Define product/service specifications • Identify and locate key suppliers • Negotiate and contract with suppliers • Purchase/buy goods/services • Monitor compliance 	<ul style="list-style-type: none"> • Develop purchasing policies • Establish quality standards • Develop payment procedures • Implement IT applications
<p>How much [quantity of goods; quality of services] needs to be purchased, stored on hand, and delivered? The need to supply, inventory, and replenish goods in sufficient quantities, and services of sufficient quality, as and when needed.</p>	<p>Inventory/Supply</p> <ul style="list-style-type: none"> • Establish goods inventory levels • Determine goods replenishment cycles • Determine service input requirements 	<ul style="list-style-type: none"> • Establish inventory cycle standards [demand forecasts] • Implement IT applications
<p>Where the goods/services are located and deployed for distribution? The need to deploy and locate goods, and provide support services in terms of receiving-labeling-storing as well as picking-packing-shipping, for distribution in sufficient quantities as and when needed</p>	<p>Distribution/Warehousing</p> <ul style="list-style-type: none"> • Locate facilities and design layouts • Design/manage flow through process • Locate and allocate goods/products • Manage service input requirements 	<ul style="list-style-type: none"> • Operate/maintain distribution facilities • Develop/implement flow through processes • Implement IT applications
<p>How and when the goods/services are to be transported and delivered? The need to transport and deliver the right goods in the right quantities, to the right destinations, in the condition and for the right price</p>	<p>Traffic/Transportation and Transport</p> <ul style="list-style-type: none"> • Define transport/delivery requirements • Identify/locate key transport suppliers • Negotiate/contract for transport/delivery • Prepare goods for shipment/transport • Monitor compliance 	<ul style="list-style-type: none"> • Develop distribution channel and transport strategies [hub and spoke, or alternatives] • Establish delivery cycle requirements [schedules and routes] • Implement IT applications

People: Strategic Requirements

Logistics Focus	Logistics Decisions					
	Forecasting	Network Design	Process Demand	Material Planning	Scheduling	Distribution
Supply Chain Management focused on Customer Value Creation	<ul style="list-style-type: none"> •Long range •New products and services •Market shifts •globalization 	<ul style="list-style-type: none"> •Capital asset deployment •Supply channel alternatives •Global networks 	<ul style="list-style-type: none"> •Product/service business mix •Capital and asset investment •Asset location and deployment 	<ul style="list-style-type: none"> •Economic analysis of resource alternatives •Technology alternatives 	<ul style="list-style-type: none"> •Economic analysis of systems operations •Process design alternatives 	<ul style="list-style-type: none"> •Distribution channel development •Capital equipment requirements
Business Focus	Business Decisions					
	Account for	Ability to	Know	Driven by		
	<ul style="list-style-type: none"> •Company business objectives •Market strategies •Service demands •Integration strategies •Recruiting and retaining HR 	<ul style="list-style-type: none"> •Develop markets •Develop inter-organizational processes •Initiate/manage change •Develop system strategies 	<ul style="list-style-type: none"> • Global Supply Demand Chan •Logistics Information Requirements •Supplier and Vendor Strategies •Demand and Market Strategies 	<ul style="list-style-type: none"> •Macro visioning •Strategic HR issues •Capacity creation [developing a learning culture] •Leadership capabilities •Professionalism 		

People: Management Requirements

Logistics Focus	Logistics Decisions					
	Forecasting	Network Design	Process Demand	Material Planning	Scheduling	Distribution
Integrated Logistics Management focused on system efficiencies and customer service effectiveness	<ul style="list-style-type: none"> •Developing forecasts •Accounting for seasonality and marketing campaigns •Supplier links 	<ul style="list-style-type: none"> •“Make or Buy” decisions •Vendor sourcing •Inventory positioning 	<ul style="list-style-type: none"> •Product/service mix •Inventory and scheduling issues •Crew/HR planning and scheduling 	<ul style="list-style-type: none"> •Replenishment and stocking plans •Shortage analysis •Allocation planning 	<ul style="list-style-type: none"> •Developing product/service schedules •Developing HR deployment schedules 	<ul style="list-style-type: none"> •Developing carrier contracts •Equipment allocation and use
Business Focus	Business Decisions					
	Account for	Ability to	Know	Driven by		
	<ul style="list-style-type: none"> •Facility locations •Distribution channels •Transport systems •Technology systems •Organizational and work processes 	<ul style="list-style-type: none"> •Manage cross functional work processes •Integrate systems [It] •Plan operations, including process design flow •Model the business 	<ul style="list-style-type: none"> •Integrated Logistics Management •Asset Management •Distribution Management •Transport Management •Information Management 	<ul style="list-style-type: none"> •Integration visioning •Systems thinking •Process thinking •Project development •Team leadership •Quality commitment 		

People: Process Requirements

Logistics Focus	Logistics Decisions					
	Forecasting	Network Design	Process Demand	Material Planning	Scheduling	Distribution
Departmental Expertise: <ul style="list-style-type: none"> •Procurement •Inventory Management •Distribution and Transportation 	<ul style="list-style-type: none"> •Promotions and sales •Market trends 	<ul style="list-style-type: none"> •Vendor selection and management •Vendor contingency planning •Customer re-assigns 	<ul style="list-style-type: none"> •Internal contingency planning •Inventory deployment •Systems capabilities 	<ul style="list-style-type: none"> •Inventory replenishment analysis up channel to vendors •Material releases down channel to customers •Purchasing requirements 	<ul style="list-style-type: none"> •Daily and weekly scheduling of goods •Daily and weekly scheduling of HR 	<ul style="list-style-type: none"> •Loading plans •Routing and delivery plans •Billing and documentation management •Carrier selection and management
Business Focus	Business Decisions					
	Account for	Ability to	Know	Driven by		
	<ul style="list-style-type: none"> •Site selection •Inventory deployment •Carrier selection •Systems applications 	<ul style="list-style-type: none"> •Integrate functions •Apply technologies •Monitor performance •Deliver customer service 	<ul style="list-style-type: none"> •Purchasing Management Systems •Inventory Planning Processes •Distribution Systems •Transport Systems 	<ul style="list-style-type: none"> •Micro visioning •Multi-tasking •Activity based analysis •Collaborative work •Problem solving 		

People: Frontline Requirements

Logistics Focus	Logistics Decisions					
	Forecasting	Network Design	Process Demand	Material Planning	Scheduling	Distribution
Tactical Operations: •Purchasing •Inventory Control •Order Processing •Transportation	•Buying and purchasing •Scheduling delivery and receiving	•Receiving operations •Cross dock operations •Inventory identification and processing •Inventory location	•Order processing •Picking and packing •Dangerous goods location and handling	•Fork lift operations •Material handling equipment •Packaging supplies •Dangerous goods classification	•Operating equipment deployment, use, maintenance •Dangerous goods handling and shipment preparation	•Load preparations •Transport documentation •Dangerous goods documentation •Freight shipment and transport
Business Focus	Business Decisions					
	<u>Account for</u>	Ability to	Know	Driven by		
	•Doing the work on time and successfully •Completing tasks as required	•Schedule resources •Implement good logistics practices •Schedule carriers/transport •Control inventory •Control operating budgets	•Operate shipping and receiving areas •Process orders •Handle, store and ship dangerous goods •Work material handling equipment •Select and manage carriers	•Implement standard operating procedures •Work in a safe/healthy work environment •Need to meet customer service objectives •Prevent product damage/loss		