

Development of customer oriented supply chains and service level agreements





Asociación Petroquímica y Química Latinoamericana

Presentation to APLA Viñas del Mar, June 2007



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ATKEARNEY

A.T. Kearney is a leading consulting firm with strong experience in logistics and *Supply Chain* strategy

Joint work with dedicated Wide range of **Dedicated organization** organizations competencies Over 500 professionals with Examples Strategy definition (marketing, - Council of Logistics Manalong experience in logistics M&A. business gement (CLM) — USA and supply chain development...) One of the first consulting - European Logistic Assoc. Organization (restructuring, firms to structure a logistics (ELA) — Europe privatization, IT...) - Canadian Assoc. of service offering **Operations strategy** Logistics Management (optimization, cost reduction, (CALM) — Canada sourcing...)

A. T. Kearney qualifications in logistics and Supply Chain

Market recognition

- Over 300 logistics projects per year
- More than 700 projects in Supply Chain in the last 5 years
- Work with 40 of the 50 largest global transport companies in the world

Contribution to policy definition

- Active role in the first USA government study for development of a national intermodal network
- Development of a intermodal system in Europe
- Acted as a facilitator to the National Commission of Intermodal Transportation, USA

We have a local presence in Latin America with 2 offices fully integrated to our global network



Global integration

- Regional and cross-regional integration across industry (process industries, oil and gas, etc) and consulting practices (operations, strategy, etc)
- Participation of senior consultants with relevant experience from other regions in local projects
- Participation in global initiatives for development of intellectual capital (e.g., Assessment of Excellence in Procurement, Global Excellence in Operations, etc)

This presentation is based on A.T. Kearney's supply chain assessment for a leading player in the petrochemical industry

- The objective of the project was to create a supply chain solution customized to the specific needs of each market segment
- The solution was based on supply chain "building blocks" that could be assembled according to each customer segment needs
- The starting point was the development of a value curve for each market segment identifying the service level elements of greater impact on the client's operations
- Service level indicators were divided into structural performance indicators and service differentiators
- A series of standardized questions and scoring grids were developed in order to structure and determine the best supply chain building block element that would deliver the desired service level

In the last years, most companies started to look at supply chain as a strategic element that could enhance value

Change in supply chain's perceived role

Traditional

- Managed through costs, but still responsible for inefficiencies created by other areas
- Informed of changes in commercial, logistics and market strategies without power to influence or evaluate inconsistencies
- Nevertheless responsible for the client's perception and satisfaction on service levels

New strategic vision

- In cooperation with the commercial area understands customers' perceived value
- Helps in the development of customer product and service offerings
- Helps assessing the profitability, competitiveness and perceived value in relation to logistics policies

Therefore in order to optimize profitability, service levels must be customized to different market segments according to perceived value and costs



Such customization is possible through the differentiation of supply chain building blocks to best fit each customer segments' specific characteristics

From uniform Manage & Control Lean Type 1: Efficient Focus Plan Make efficiencv Distri-Pro- Make Store cure bute dominated Order Manage & Control Complex Manage & Control product **Plan & Procure** Type 2: Dis- Collaborative Focus Pro-Make Plan Make Store triintegration Store Districure Plan bute bute dominated Order Manage & Control Flexible Type 3: Effective Dis-Focus tri-Pro-Make bute Make flexibility Demand cure Plan Store dominated

... to differentiated supply chains

Order

The differentiation of supply chains must be grounded on market requirements for supply chain services



Supply Chain Service Level Agreement by Segment

Segment	Supply Chain	Lead time	Delivery Reliability	Supply Chain Strategy
1. Runner	Commodity	1 Week	95%	Make-to-stock (MTS)
2. Filler	Specialty	2 Weeks	97%	Make-to-stock (MTS)
3. Noise-Maker	Specialty	5 Weeks	99%	Make-to-order (MTO)

The first step is to identify the relevant service level elements that make up these requirements

Example of supply chain structure and service level elements



Structural Performance

Structural performance is generated by the overall supply chain setup Therefore, it is similar for all customers

7 structural supply chain service level elements were identified as most relevant to the petrochemical industry:

- Delivery Capability
- Delivery Reliability
- Delivery Flexibility
- Order Communication
- Complaint Reaction
- Physical Execution
- Safety

Service Differentiators

Special supply chain services tend to be customer specific

Therefore, good knowledge of costs is required for cost-to-serve analyses and pricing

The most prominent industry specific services were identified. examples include:

- VMI
- Bulk offerings
- Customer tank
- Consignment stock
- Etc

Source: SC model project team, A.T. Kearney

Each service level element affects different supply chain levers and cost drivers

Service level elements and corresponding levers and cost drivers

Service level element	Definition	Supply chain lever
Delivery Capability	 Ability to deliver at desired date: minimum order lead time Ability to deliver desired volume: minimum and maximum order size 	 Demand management Manufacturing scale Supply management Inventory management (safety stock) S&OP process
Delivery Reliability	 Delivery reliability (date): difference between actual and first confirmed delivery date of customer in % of confirmed arrivals Delivery reliability (volume): difference between actual and first confirmed delivery amount 	 Supply management Internal order handling Inventory management Carrier management Maintenance management
Delivery Flexibility	 Delivery Flexibility (date): ability to change confirmed delivery dates (mainly to earlier date) Delivery Flexibility (volume): accepted changes to order quantity without change in delivery date 	 Planned overcapacity Manufacturing technology and management Inventory management
Quality of execution	 Reliable execution of the physical transport (meets agreed requirements availability of special equipment, qualification of drivers, etc.) Product attributes: Percent of undamaged packages on delivery, availability of special packaging requirements, Documentation: Percent of deliveries including all necessary documents 	 Internal Order Handling Quality management Carrier management Packaging requirements
Order Transparency	 Order reception: media for placement of orders, confirmation response time, information necessary for order placement, reliability and accuracy Order information: media for communicating order and shipping confirmation, advanced shipping notice 	Integrated systemsCollaboration
Safety	 Product attributes: Undamaged package on delivery, inclusion all relevant information (e.g. handling and safety information) Carrier Performance: Integrity of transport equipment, knowledge and training of drivers and handlers 	 Quality and environmental management (sustainability)
Complaint Reaction	• Complaint reaction: Time to confirmation of complaint, time to presentation of solution, adequateness of proposed solution, manpower (quality and quantity) and process dedicated to the solution of complaints	 Non Conformance Management: System Systematic problem solving & process improvement

The next step is to understand how different customer segments value these elements and what is the current performance level and that of competitors

ວແ	structural Performance & Special Services					
	Performance/ Services	Customer Requirement	Importance	Competitors' Performance	Current Performance	
	Delivery Capability	95%	High	95%	90%	
al	Delivery Reliability					
Jar	Delivery Flexibility					
P L L	Physical Execution					
ř.	Order Transparency					
°°∎	Safety					
	Complaint Reaction					
	E-Commerce ¹⁾ : Elemica, EDI					
	World Account, IOP ¹⁾					
	VMI					
	Consignment Stock					
	Barcode					
l se	RFID					
<u> </u>	Special Packaging					
Ser 1	Packaging recovery/ disposal					
	Bulk offerings					
Cia	Tank/ Silo Consulting/ Financ.					
be	Spec. Distr. Concept (e.g. JIT)					
ပ	Cust. sp. Tr. e.g. intermodal					
	Cust. sp. WH					
	Pre-sampling					
	Special CoA					
	Tracking information					
	Total Chemical Management					
	Collaboration					

The supply chain value curve can be defined based on the ranking of these elements against customer requirements

Value curve for structural performance and special services



The fulfillment of these requirements must be made in the light of the segment's profit to serve



% clients

Service level agreements become part of the marketing mix that should enhance customer segments' profit to serve



	Example			
Comments				
 The expected gain in profit to serve is based on the market research on supply chain service level elements 				
 Segment 6 can be improved by reducing costly service level elements that are not valued and implementing a new service level that is greatly valued 				
 Segments 1 and 3 are expected to agree to higher prices and/or if the service level is brought to the desired level 				
 These increments (including both conceptions and revenue gains) increases profitability by 5-10% 	st ased			
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The key for this is a tailored supply chain solution to each customer segment

Selected Building Blocks per customer segment



Example

Final considerations

- In the last years, supply chain management has been viewed more and more as a strategic element in a company's positioning
 - Moving away from the notion of "cost center"...
 - ... and getting closer to "revenue enabler"
- The definition of service levels and the corresponding necessary supply chain solution are made at the same time and should involve both supply chain and commercial
 - The most valued service elements must be identified for each customer segment
 - The total supply chain solution should be customized to each customer segment needs
- This exercise, although not focusing on costs, must not be exempt from using it as a metric for determining profitability of each customer segment and supply chain solution
- On the other hand, this approach can lead to significant revenue improvements



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