

Dynamic Supply Chain Management in the 21st Century and its Impact on Asia



OPINION

Paul Bradley, managing director of iSCM Asia, the supply chain management arm of Li & Fung Distribution Group, writes for Lloyd's ftb Asia on the development of the art of logistics into advanced supply chain management.

As we enter the new millennium, new business models are evolving that are significantly altering business strategies and redefining the consumer market.

This trend has been further impacted by an equilibrium shift between southeast Asia and northern Asia directly linked to the upcoming rise of China in the post-WTO era.

As a consequence, global competitive forces are placing increased pressure on the need to rapidly shift strategic locations of production centres while tangibly leveraging efficient distribution chains as vital tools that can translate to increased sales and profitability.

The inherent power of the Internet is further propelling these trends at enormous speed, thus creating unique supply chain opportunities to be exploited.

In response to the dramatic shift in technology, relocation of production centres, and continually developing infrastructure, a new model is evolving called "Advanced Supply Chain Management" which extends the supply chain beyond the scope of logistics into new areas combining flow and inventory management with core and virtual manufacturing.

The SCM solution is defined to meet each company's specific business needs in satisfying the consumer, and includes the ability to dynamically shift supply chains in response to a continually changing business environment.

The evolution of logistics towards a new supply chain management model

Logistics has evolved dramatically during the past two decades, and today there is a diverse separation in terms of how individual companies can leverage core logistics services or dynamic supply chain solutions depending on their needs and understanding of the unique services available in the marketplace.

Traditional logistics

Logistics is the process of efficiently moving product between two points. The art of logistics reflects the skill in co-ordinating the movement of physical product between a specific origin and destination point, while efficiently executing the entire shipping process.

The core components of logistics include: warehousing, drayage, freight forwarding, customs clearance, ocean and air transport. The ability to move products and supplies across wide geographic areas is the cornerstone of the power of logistics.

Industry representatives can be placed into three broad

categories: Freight Forwarders and Warehouse Operators, Shipping Lines and Air Carriers, and "Total Logistics" companies who consist of a small number of logistics companies from the above categories.

"Total Logistics" companies are trying to transcend from their current position to a more proactive role by linking technology and infrastructure to their core shipping services, allowing them better control of shipments and closer interaction with their customers.

While logistics improves the way a product is moved between two points, the new trend towards supply chain management extends far beyond this realm, encompassing a much wider breadth and depth across the entire lifecycle of a product, requiring a different perspective and wider concept.

Supply chain management

Supply chain management assumes the logistics role (either directly or through integration with strategic alliances), and creatively extends its services into the corporate customer's domain, including links to the manufacturing entities, and any relevant areas where the value chain can be tangibly measured and enhanced.

By viewing the entire product supply chain from a holistic perspective, and utilising information technology to seamlessly link all parties across the entire supply chain, a more dynamic consumer responsive delivery system can be created. The supply chain manager serves the role of a conductor, ensuring every piece within the chain performs flawlessly, while compressing time and maximising cost savings opportunities.

The most important component in the Supply Chain Management concept is to directly identify, and positively impact, the direct relationship between time and costs throughout the entire product life cycle. As a direct result of information visibility and single point of contact management control of the supply chain, inventory velocity can be enhanced, capital costs reduced, and waste and inefficiency eliminated.

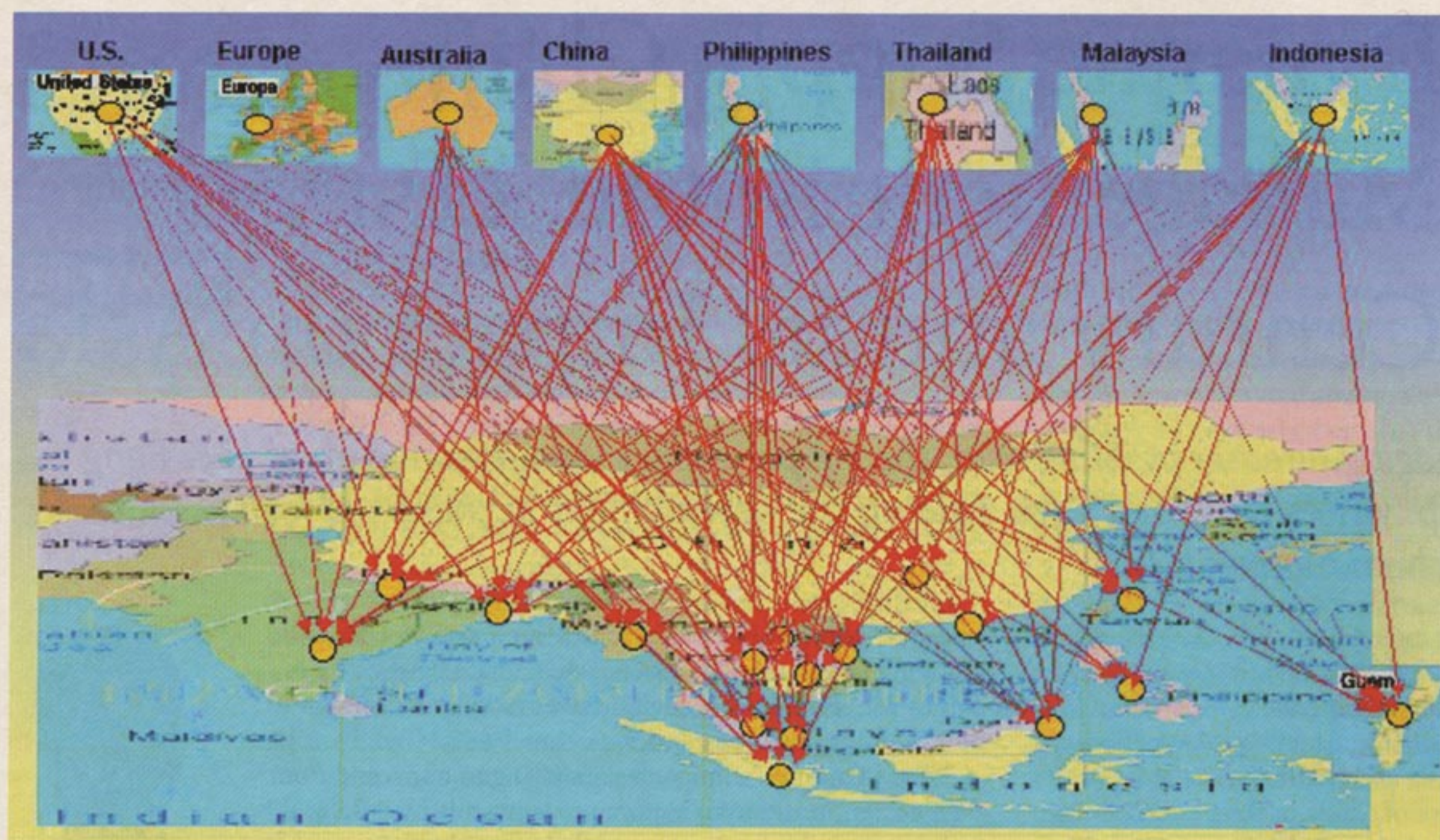
Creative opportunities for customer outsourcing can also be exploited, converting fixed costs to variable costs and providing enhanced competitive advantage.

The supply chain manager must also provide unique solutions, which often incorporate creative initiatives into an existing business process.

A necessity in co-ordinating the multitude of supply chain activities is the information technology required to integrate all parties across the entire supply chain into a sin-



"The supply chain manager is an agent for strategic change management."



Inefficient supply chains

source: iSCM

terms on a global basis. To achieve this objective, flexibility in manufacturing locations, distribution source points, and sales force deployments must be adaptable to continuous change in order to rapidly exploit new business opportunities cost effectively.

Selective outsourcing of certain internal competencies can be justified if the outsourcing result maintains the high quality of product and service standards, but on a variable cost basis.

At the same time, the principal can focus more effort on brand building, sales and

gle network community in order to provide a common window for information visibility.

A key to the success of supply chain management is the speed with which solutions can be implemented in meeting the changing needs of the customer in a dynamic market environment.

The supply chain manager is also an agent for "strategic change management". Effective SCM integration, and the substantial benefits derived as a result, will require changes in business processes, a redefinition of certain job responsibilities, communication protocols, and new measurement tools to ensure customer satisfaction.

Within one existing corporate customer, a multitude of different supply chains may exist. For major consumer goods retailers, as an example, thousands of supply chains may exist with unique characteristics and varying shipping patterns. The SCM role is to ensure that each supply chain is optimised.

In summary, there are tangible benefits to unifying the entire process into a single structure where all supply chain information is sourced through one point of contact, and the various components of the supply chain can be synergised into a virtually seamless and transparent network of activity.

In reality, each activity remains under the organisation with the most expertise, but the co-ordination control and information network is centralised. The concept of Supply Chain Management has been derived in order to create dynamic new opportunities to enhance the distribution process and provide tangible financial savings, while ultimately creating more value for the customer.

Advanced Supply Chain Management

"Advanced supply chain management" assumes the complete supply chain management role, and further extends itself into "virtual services" which can be seamlessly orchestrated through one centre of management control, with the ability to provide visibility through an integrated information system.

The key benefit is constructing dynamic supply chains which can quickly adapt to different consumer demand pat-

marketing efforts, and core product manufacturing expertise. This can only be achieved with a fully integrated supply chain management capability.

Implementation of "Advanced Supply Chain Management" solutions can create a "virtual warehouse presence", "virtual inventories", "virtual manufacturing/sourcing", and "virtual sales support". As an example, through micro visibility of product while in transit, ocean vessels can become "floating warehouses" reducing product at the source and at the destination distribution centre, while providing flexibility in delivery.

In contrast, "Virtual Manufacturing/Sourcing" allows the principal to focus on their own unique areas of manufacturing expertise, while being able to leverage global contract manufacturing options which can produce on a variable cost basis, yet with quality control standards and visibility as if it was their own production plant.

As a minimum, this allows for fixed plant capacity to be increased beyond 100% capacity by leveraging virtual manufacturing during peak product demand periods. On a wider basis, it can also be selectively leveraged to shift production capability closer to key markets, or to leverage a global production centre such as China, while converting from fixed to variable cost production, gaining significant competitive advantage.

The globalisation of manufacturing and the logistics process

With the changes in labour costs between countries, currency exchange exposure, and rapid changes in the deployment of information technology solutions, many manufactured products have moved to a logistics process of multiple sourcing points.

The complexity of this evolutionary process encompasses new materials being sourced from different continents focused to various geographical hubs, and finally concluding in assembly of the manufactured components into the final end product. The product is then shipped to various global destinations depending on market demand.

Within the past few decades, the dynamism of the Asian

economies, combined with extremely competitive labour costs and growing consumer demand resulted in a major shift of manufacturing resources to the Asia-Pacific region.

Starting initially with Japan and the four Tiger economies, this trend has expanded to cover most of the countries throughout Asia, and this process is now evolving once more in response to growing sophistication in consumer expectations in key Asian countries, and the advent of China's entry into the WTO both as a major consumer market and an export powerhouse.

As the trend in manufacturing continues to disperse production facilities over a wider area, and the concept of regional distribution centres expands in the market, a growing challenge for senior management will be how to maintain control of inventory at various locations as well as in transit. This is especially true of complex markets such as China and India, which cover a vast geographic range and complex infrastructure.

Maintaining information control will prove to be a great challenge as changes in the distribution channel disperse products over a wider geographic area, while simultaneously requiring "just-in-time" shipment information to be available to production planners and more quality conscious consumers.

Within this framework, weaknesses in the logistics process become far more visible to the customer. In contrast, supply chain enhancements will make the logistics process transparent and the tangible savings visible to the corporate budget.

The combination of global and regional economic developments have created a significant change in Asia's manufacturing strategy, including the advent of virtual manufacturing as a flexible tool to shift production sourcing to meet changing consumer demand patterns on a variable cost basis.

Core manufacturing combined with virtual manufacturing provide a scenario where regionalisation and localisation of production can be strategically positioned, while also responding to reduction in tariffs as part of the WTO agreements.

Regional SCM hubbing and sub-hubbing

As time compression in product delivery becomes more critical, companies supplying the Asian consumers from production plants in Europe, the United States, or multiple Asian countries require longer lead-times.

However, a growing trend is to neutralise the transit time factor by establishing a "Regional SCM Hub" into which product can be centralised and rapidly dispersed across the region. This minimises the risk of placing excessive product in individual countries and paying duties prematurely.

If sales change in one market, then product can quickly be shifted into other markets transparently. In addition, if a plant is located in Europe as an example, a regional hub in Singapore would allow product to be forward deployed in Asia and then dispersed to each market, creating a "virtual presence" and shorter lead time.

In contrast, if product is manufactured in China, southern China could serve as the "SCM Hub", and a southeast Asian point such as Singapore could serve as a "sub hub" to further shorten lead time to the ASEAN region during peak demand periods.

This concept requires inventory visibility at all stages, and emphasises inventory velocity so product moves rapidly through the hub. The SCM hubbing strategy can be utilised as a powerful tool to further streamline the supply chain in diverse geographic regions, while minimising the risk of excess stock and duty payments in each country and dramatically shortening lead time to market.

Towards a dynamic supply chain management model

The evolution of supply chain management towards an advanced model is based on the fundamental objective of creating a dynamic supply chain that can rapidly adapt to geographically dispersed production centres and changing consumer demand patterns.

The value added services must creatively adapt to the unique requirements of each principal's business strategy, the characteristics of each product category, and ultimately to the consumer's expectation.

The Li & Fung Group of Companies has already moved toward defining and successfully implementing this new area of "Advanced Supply Chain Management" by leveraging on the unique infrastructure and expertise of its core companies linked to an integrated information system.

Li & Fung assists multinational companies in successfully extending their value chains across this entire frontier by providing regional supply chain management integration services in Asia, leveraging on an extensive distribution centre network (including "SCM Hubbing" and local distribution centres). The Group provides both contract manufacturing capabilities and sourcing/virtual manufacturing options across the Asia Pacific region.

Supply Chain Management is continually evolving, but the ultimate objective is to provide flexible value added services that can adapt to a dynamic business environment.

ftb



Supply chain management efficiencies

source: ISCM