MANAGING THE GLOBAL PIPELINE

- THE TREND TOWARDS GLOBALIZATION IN THE SUPPLY CHAIN
- GAINING VISIBILITY IN THE GLOBAL PIPELINE
- ORGANIZING FOR GLOBAL LOGISTICS
- THINKING GLOBAL, ACTING LOCAL
- THE FUTURE OF GLOBAL SOURCING

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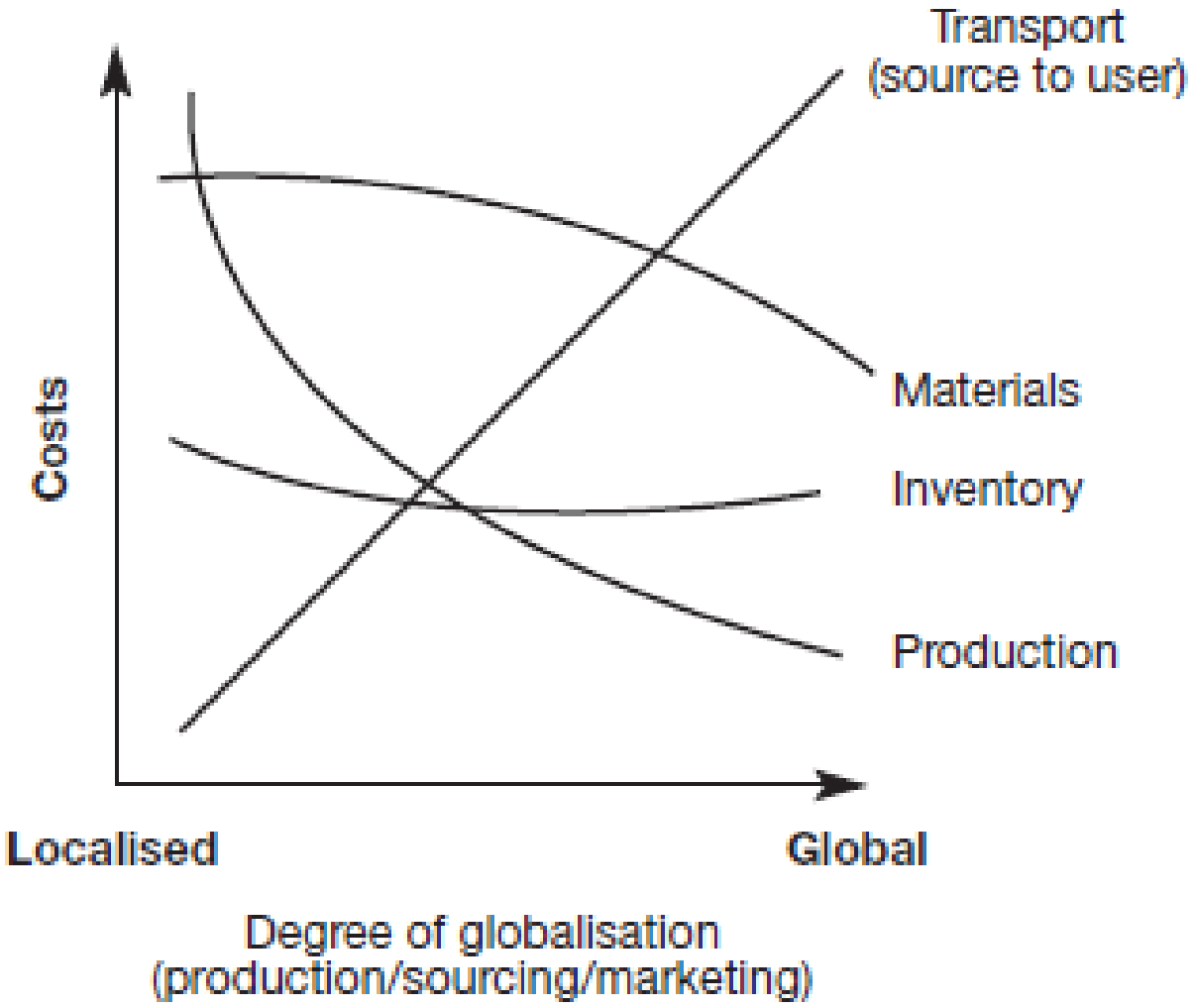
THE TREND TOWARDS GLOBALIZATION IN THE SUPPLY CHAIN

Global brands and companies now dominate most markets. Over the last two decades there has been a steady trend towards the worldwide marketing of products under a common brand umbrella – whether it be Coca-Cola or Marlborough, IBM or Toyota. At the same time the global company has revised its previously localized focus, manufacturing and marketing its products in individual countries, and now instead will typically source on a worldwide basis for global production and distribution. The logic of the global company is clear: it seeks to grow its business by extending its markets whilst at the same time seeking cost reduction through scale economies in purchasing and production and through focused manufacturing and/or assembly operations. However, whilst the logic of globalization is strong, we must recognize that it also presents certain challenges. Firstly, world markets are not homogeneous, there is still a requirement for local variation in many product categories. Secondly, unless there is a high level of co-ordination the complex logistics of managing global supply chains may result in higher costs and extended lead times.

These two challenges are related: on the one hand, how to offer local markets the variety they seek whilst still gaining the advantage of standardised global production and, on the other, how to manage the links in the global chain from sources of supply through to end user. There is a danger that some global companies in their search for cost advantage may take too narrow a view of cost and only see the purchasing or manufacturing cost reduction that may be achieved through. In reality it is a total cost trade-off where the costs of longer supply pipelines may outweigh the production cost saving. Figure 9.1 illustrates some of the potential cost trade-offs to be considered in establishing the extent to which a global strategy for logistics will be cost-justified. Clearly a key component of the decision to go global must be the service needs of the marketplace. There is a danger that companies might run the risk of sacrificing service on the altar of cost reduction through a failure to fully understand the service needs of individual markets.

Figure 9.1 Trade-offs in global logistics



THE TREND TOWARDS GLOBALISATION IN THE SUPPLY CHAIN

The trend towards global organization of both manufacturing and marketing is highlighting the critical importance of logistics and supply chain management as the keys to profitability. The complexity of the logistics task appears to be increasing exponentially, influenced by such factors as the increasing range of products, shorter product life cycles, marketplace growth and the number of supply/market channels. Over the last 50 years or so the growth in world trade has tended to outstrip growth in global gross domestic product. In part this trend is driven by expanding demand in new markets, but the liberalisation of international trade through World Trade Organization (WTO) accords has also had a significant effect. Once, companies established factories in overseas countries to manufacture products to meet local demand. Now, with the reduction of trade barriers and the development of a global transportation infrastructure, fewer factories can produce in larger quantities to meet global, rather than local, demand. Paradoxically, as the barriers to global movement have come down so the sources of global competition have increased. Newly emerging economies are building their own industries with global capabilities. At the same time technological change and production efficiencies mean that most companies in most industries are capable of producing in greater quantity at less cost. The result of all of this is that there is now overcapacity in virtually every industry, meaning that competitive pressure is greater than ever before.

Centralised logistics at Lever Europe

Lever, part of the global corporation Unilever, manufacture and market a wide range of soaps, detergents and cleaners. As part of a drive to implement a European strategy for manufacturing and the supply chain they created a centralised manufacturing and supply chain management structure – Lever Europe. A key part of this strategy involved a rationalisation of other production facilities from a total of 16 across western Europe to 11. The remaining facilities became 'focused factories', each one concentrating on certain product families. So, for example, most bar soaps for Europe are now made at Port Sunlight in England; Mannheim in Germany makes all the Dove soap products, not just for Europe but for much of the rest of the world; France focuses on machine dishwasher products and so on.

Because national markets are now supplied from many different European sources they have retained distribution facilities in each country to act as a local consolidation centre for final delivery to customers.

Whilst some significant production cost savings have been achieved, a certain amount of flexibility has been lost. There is still a high level of variation in requirement by individual market. Many countries sell the same product but under different brand names; the languages are different hence the need for local packs; sometimes too the formulations differ.

A further problem is that as retailers become more demanding in the delivery service they require and as the trend towards just-in-time delivery continues, the loss of flexibility becomes a problem. Even though manufacturing economies of scale are welcome, it has to be recognised that the achievement of these cost benefits may be offset by the loss of flexibility and responsiveness in the supply chain as a whole.

Gaining visibility in the global pipeline

One of the features of global pipelines is that there is often a higher level of *uncertainty* about the status of a shipment whilst in transit. This uncertainty is made worse by the many stages in a typical global pipeline as a product flows from factory to port, from the port to its country of destination, through customs clearance and so on until it finally reaches the point where it is required. Not surprisingly there is a high degree of *variation* in these extended pipelines.

Shipping, consolidation and customs clearance all contribute to delays and variability in the end-to-end lead time of global supply chains. This is highlighted in the example shown in Table 9.1. This can be a major issue for companies as they increasingly go global. It has the consequence that local managers tend to compensate for this unreliability by over-ordering and by building inventory buffers.

Table 9.1 End-to-end lead-time variability (days)

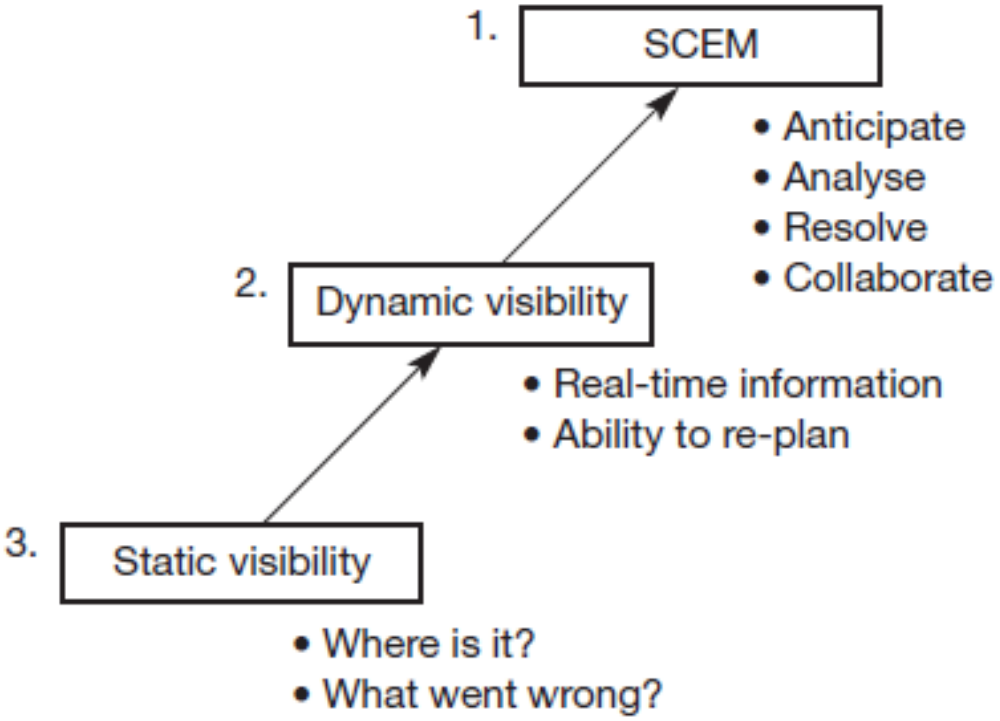
	From point of origin to port	*Freight forwarding/ consolidation*	*Arrive in country of destination*	*Customs clearance*	*Transit to point of use*	*Total elapsed time*
Maximum	5	7	15	5	5	37
Average	4	3	14	2	4	32
Minimum	1	1	12	1	2	17

'The SCEM system should act like an intensive care monitor in a hospital. To use an intensive care monitor, the doctor places probes at strategic points on the patient's body; each measures a discrete and different function – temperature, respiration rate, blood pressure. The monitor is programmed with separate upper and lower control limits for each probe and for each patient. If any of the watched bodily functions go above or below the defined tolerance, the monitor sets off an alarm to the doctor for immediate follow-up and corrective action. The SCEM application should act in the same manner.

'The company determines its unique measurement points along its supply chain and installs probes. The company then programmes the SCEM application to monitor the plan-to-actual supply chain progress, and establishes upper and lower control limits. If any of the control limits are exceeded, or if anomalies occur, the application publishes alerts or alarms so that the functional manager can take appropriate corrective action.'

Source: Styles, Peter, 'Determining supply chain event management', in *Achieving Supply Chain Excellence Through Technology*, Montgomery Research, San Francisco, 2002

Figure 9.2 The progression to supply chain event management



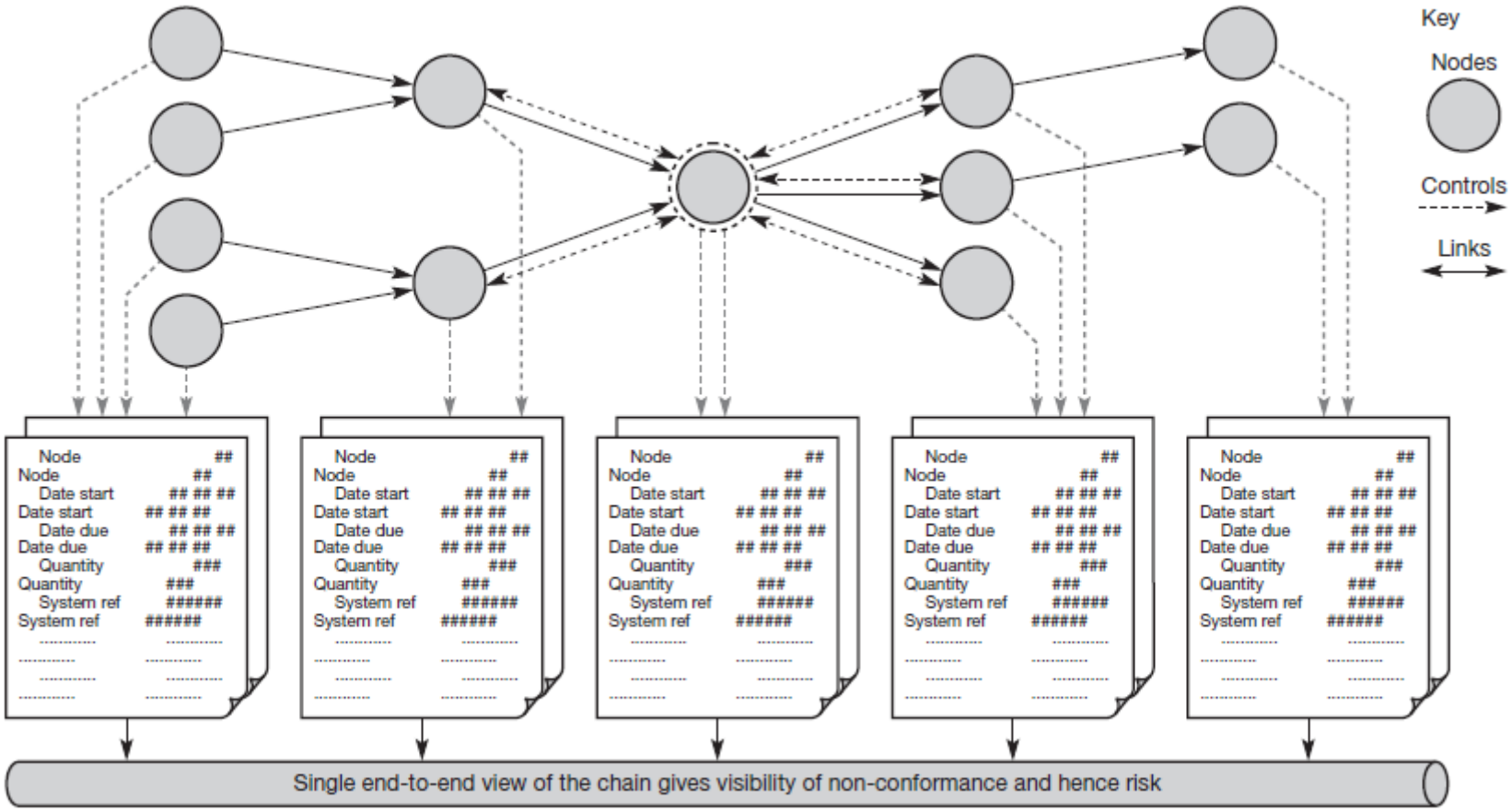
Supply chain event management enables organisations to gain visibility upstream and downstream of their own operations and to assume an *active rather* than a *passive approach to supply chain risk. Figure 9.2 shows the progression* from the traditional, limited scope of supply chain visibility to the intended goal of an 'intelligent' supply chain information system.

ORGANISING FOR GLOBAL LOGISTICS

As companies have extended their supply chains internationally they have been forced to confront the issue of how to structure their global logistics organization. In their different ways these companies have moved towards the same conclusion:

effectiveness in global logistics can only be achieved through a greater element of centralization. This in many respects runs counter to much of the conventional wisdom, which tends to argue that decision-making responsibility should be devolved and decentralized at least to the strategic business unit level. This philosophy has manifested itself in many companies in the form of strong local management, often with autonomous decision making at the country level. Good though this may be for encouraging local initiatives, it tends to be dysfunctional when integrated global strategies are required.

Figure 9.3 Event management across the supply chain



Source: Cranfield School of Management, *Creating Resilient Supply Chains*, Report on behalf of the Department for Transport, 2002

Thinking global, acting local

The implementation of global pipeline control is highly dependent upon the ability of the organisation to find the correct balance between central control and local management. It is unwise to be too prescriptive but the experience that global organisations are gaining every day suggests that certain tasks and functions lend themselves to central control and others to local management. Table 9.2 summarises some of the possibilities.

Table 9.2 Global co-ordination and local management

Global	*Local*
• Network structuring for production and transportation optimisation	• Customer service management
• Information systems development and control	• Gathering market intelligence
• Inventory positioning	• Warehouse management and local delivery
• Sourcing decisions	• Customer profitability analyses
• International transport mode and sourcing decisions	• Liaison with local sales and marketing management
• Trade-off analyses and supply chain cost control	• Human resource management

Much has been learned in the last 20 years or so about the opportunities for cost and service enhancement through better management of logistics at a national level. Now organizations are faced with applying those lessons on a much broader stage. As international competition becomes more intense and as national barriers to trade gradually reduce, the era of the global business has arrived. Increasingly the difference between success and failure in the global marketplace will be determined not by the sophistication of product technology or even of marketing communications, but rather by the way in which we manage and control the global logistics pipeline.

THE FUTURE OF GLOBAL SOURCING

One of the most pronounced trends of recent decades has been the move to offshore sourcing, often motivated by the opportunity to make or buy products or materials at significantly lower prices than could be obtained locally. Companies such as the large British retailer Marks & Spencer, which once made it a point of policy to source the majority of their clothing products in the United Kingdom, moved most of their sourcing to low-cost countries, particularly in the Far East. Manufacturers, too, closed down western European or North American factories and sought out cheaper places to make things – often many thousands of miles away from their major markets.

At the time that many of these offshore sourcing and manufacturing decisions were being made, the cost differential between traditional sources and the new low-cost locations was significant. However, in recent years there has been a growing realisation that the true cost of global sourcing may be greater than originally thought.3 Not only have the costs of transport increased in many cases, but exchange rate fluctuations and the need for higher levels of inventory because of longer and more variable lead times have affected total costs. In short life cycle markets there is the additional risk of obsolescence with consequent mark-downs or write-offs. Other costs that can arise may relate to quality problems and loss of intellectual property. With growing concern for environmental issues, there is also now the emerging issue of ‘carbon footprints’

All of these issues are now causing many companies and organizations to review their offshore sourcing/manufacturing decisions. Whilst there will always be a case for low-cost country sourcing for many products, it will not universally be the case as the following news item suggests.

References

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