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**SWP 49/89 TYING IT ALL TOGETHER:  
THE LOGISTICS CHAIN AS  
THE LINKING MECHANISM**

**MARTIN CHRISTOPHER  
Professor of Marketing & Logistics Systems  
Cranfield School of Management  
Cranfield Institute of Technology  
Cranfield, Bedford MK43 OAL  
UK**

**(TEL: 0234 - 751122)**

For many years Marketing and Manufacturing have been seen as largely separate activities within the organisation. At best they have co-existed, at worst there has been open warfare. Manufacturing priorities and objectives have typically been focussed on operating efficiency, achieved through long production runs, minimised set-ups and change-overs and product standardisation. On the other hand Marketing has sought to achieve competitive advantage through variety, high service levels and frequent product changes.

In today's more turbulent environment there is no longer any possibility of manufacturing and marketing acting independently of each other. The inter-ecine disputes between the 'barons' of production and marketing are clearly counter-productive to the achievement of overall corporate goals.

It is no coincidence that in recent years both marketing and manufacturing have become the focus of renewed attention. Marketing as a concept and a philosophy of customer orientation now enjoys a wider acceptance than ever in the Western World. It is now generally accepted that the need to understand and meet customer requirements is a pre-requisite for survival. At the same time, in the search for improved cost competitiveness, manufacturing has been the subject of a massive renaissance. The last decade has seen the rapid introduction of flexible manufacturing systems, of new approaches to inventory based on MRP and JIT, and, perhaps most important of all, a sustained emphasis on quality.

The work of Michael Porter and others has done much to alert managers to the fact that success in the market place can only come through cost leadership or product differentiation or a combination of the two. Manufacturing and Marketing between them hold the key to the achievement of these twin goals. To become a cost leader requires not only low cost production but also efficient marketing and distribution systems usually, but not always, achieved through high relative market share. Thus, marketing and manufacturing strategies that work together to achieve low cost, volume based positions can provide a major source of competitive advantage. Similarly, manufacturing strategies that can support differentiated marketing through the provision of unique customer values can also provide the basis for competitive success.

To combine both cost leadership and product differentiation through parallel manufacturing and marketing strategies should be the ultimate goal of any organisation that is intent upon sustained, long-term profitability.

### **THE ROLE OF LOGISTICS MANAGEMENT**

The response of organisations to the challenges posed by these new competitive pressures has been varied. However one emerging trend is apparent and that is the growing emphasis that is being placed upon logistics management as a means of achieving a closer integration between marketing and manufacturing.

The mission of logistics management is to plan and co-ordinate all those activities necessary to achieve desired levels of delivered service and quality - Logistics is therefore the link between the market place and the operating activities of the business. The scope of logistics spans the organisation, from the management of raw materials through to the delivery of the final production. However, in addition to the operational aspects of logistics there is a strategic dimension which is of even greater importance to the achievement of competitive advantage.

Of the many strategic issues that confront the business organisation today, perhaps the most challenging are in the arena of logistics.

I have selected just five which I believe are increasingly going to occupy the thoughts of senior executives in the 1990's:

- (a) The Customer Service Explosion
- (b) Strategic Lead-Time Management
- (c) Organisational Integration
- (d) Throughput Management
- (e) Globalisation

(a) The Customer Service Explosion

So much has been written and talked about service, quality and excellence that there is a danger of these vital issues becoming clichés. However there is no escaping the fact that the customer in today's market place is more demanding, not just of product quality, but also of service.

As more and more markets become in effect 'commodity' markets, where the customer perceives little technical difference between competing offers, the need is for the creation of differential advantage through added-value. Increasingly a prime source of this added value is through customer service.

Let us explore the nature of the service dimension and examine the implications for marketing and manufacturing.

Customer service may be defined as the consistent provision of time and place utility. In other words products don't have value until they are in the hands of the customer at the time and place required. There are clearly many facets of customer service, ranging from on-time delivery through to after-sales support. Essentially the role of customer service should be to enhance 'value-in-use', meaning that the product becomes worth more in the eyes of the customer because service has added value to the core product. In this way significant differentiations of the total 'offer' (that is the core product plus the service package) can be achieved.

Those companies that have achieved recognition for service excellence, and thus have been able to establish a differential advantage over their competition are typically also those companies where logistics management is a high priority. Companies like Rank Xerox, B.M.W, Bennetton and I.B.M. are typical of such organisations. The achievement of competitive advantage through service comes not from slogans or expensive so-called customer care programmes, but rather from a combination of a carefully thought out strategy for service, the development of appropriate delivery systems and commitment from people, from the Chief Executive down.

The attainment of service excellence in this broad sense can only be achieved through a closely integrated manufacturing and marketing strategy. In reality, the ability to become a world class supplier depends as much upon the effectiveness of our operating systems as it does upon the presentation of the product, the creation of images and the influencing of consumer perceptions. In other words, the success of McDonald's, British Airways, or any of the other frequently cited paragons of service excellence, is not due to their choice of advertising agency, but rather to their recognition that the logistics of service delivery on a consistent basis is the crucial source of differential advantage.

(b) Strategic Lead-Time Management

A recent international report on new product introductions found that the elapsed time from the drawing board to the market place was actually getting longer, yet at the same time, more and more companies are facing volatile markets where product and technology life cycles are getting shorter.

This paradox is forcing management to re-appraise the traditional structures and strategies whereby innovation is brought to the market. Similarly the ability to respond to market changes by modifying the existing product portfolio is now a pre-requisite for success in many industries.

Clearly there are many implications for management resulting from this reduction of the time 'window' in which profits may be made. Many commentators have focussed upon the need to seek out novel forms of managing the new product development process; venture teams along the lines pioneered by DuPont and 3M being one such approach. Others have highlighted the need to improve the quality of the feedback from the market place and to link this more directly into the firm's R & D effort.

All of these initiatives are indeed necessary if the business is to stay alive into the next century. However, amidst all the concern with the process of creating and managing innovation, there is one issue which perhaps is only now being given the attention it demands.

That issue is the problem of extended logistics lead-times.

The concept of logistics lead-time is simple: How long does it take to convert an order into cash? Whilst management has long recognised the competitive impact of shorter order cycles, this is only a part of the total process whereby working capital and resources are committed to an order.

From the moment when decisions are taken on the sourcing and procurement of materials and components through the manufacturing and assembly process to the final distribution and after-market support, there are a myriad of complex activities that must be managed if markets are to be gained and retained. This is the true scope of logistics lead-time management.

One of the basic functions of marketing is the provision of 'time and place utility' - more commonly expressed as 'the right product, at the right time, in the right place'. However, in practice, what is so often the case is that the integration of marketing and manufacturing planning that is necessary to achieve this competitive requirement is lacking. Further problems are caused by limited co-ordination of supply decisions with the changing requirements of the market place and limited visibility that purchasing and manufacturing have of final demand, because of extended supply and distribution 'pipelines'.

To overcome these problems and to establish enduring competitive advantage by ensuring timely response to volatile demand a new and fundamentally different approach to the management of lead-times is required.

### (c) Organisational Integration

Whilst the logic of taking a systems view of the business might be apparent, the reality of implementation is something else. The classical business organisation is based upon strict functional divisions and hierarchies. It is difficult to achieve a closely integrated, customer focussed, materials flow whilst the traditional territorial boundaries are jealously guarded by entrenched management with its out-moded priorities.

In these conventional organisations, Materials Managers manage materials, whilst Production Managers manage production and Marketing Managers manage marketing. Yet these functions are components of a system that needs some overall plan or guidance to fit together. Managing the organisation under the traditional model is just like trying to complete a complex jigsaw puzzle without having the picture on the box cover in front of you.

The challenges that face the manufacturing organisation in the environment of the eighties and nineties are quite different from those of the past. To achieve a position of sustainable competitive advantage, tomorrow's organisation will be faced with the need to dispense with out-moded labels like "Marketing Manager", "Manufacturing Manager", or "Purchasing Manager". Instead, we will need broad-based "integrators" who are oriented towards the achievement of market place success based upon managing systems and people that deliver service. The clarion call that will increasingly be heard in the last decade that separates us from the 21st century is service superiority. The ultimate role of the organisation therefore is to facilitate the provision of cost-effective service. How else can any of us justify our place on the payroll if we do not have a role in the process of either winning or keeping customers?

Generalists rather than narrow specialists will increasingly be required to integrate materials management with operations management and delivery. Knowledge of systems theory and behaviour will become a pre-requisite for this new type manager. As important will be the orientation of these managers: they will be market-oriented with a sharp focus upon customer service as the primary source of competitive advantage.

There is a very close analogy between the logistics management concept and this flow-oriented notion of integration. Indeed, I would suggest that the logistics model is the appropriate framework which seeks to optimise decisions concerning materials flow across the firm. The goal of logistics management is the achievement of cost effective service, which, as we have argued, should be the ultimate objective of any organisation. Thus the logistics manager has to balance materials requirements with production schedules and with distribution plans.

Many companies who have adopted the logistics concept have also recognised the advantage of extending the philosophy of integration beyond the confines of the organisation. This is the idea of supply chain management.

Supply chain management requires the various parties in the supplier/manufacturer/distributor chain to co-operate in the development of schedules and in the sharing of information. The rapid growth of JIT facilitated by the revolution in Electronic Data Interchange (EDI) has made many organisations aware of the great benefits to be obtained by this wider extension of the logistics concept. There is no longer any justification, if indeed there ever was, for the old adversarial buyer/supplier relationship. Co-makership and joint marketing are the parallel trends of the future.

A major justification for such co-operation is the simple fact that the output efficiency of the supplier will be reflected in the customer's costs. Because material costs represent such a large proportion of the sales Pound, perhaps as much as 40% for a typical manufacturer, anything that can be done to reduce those costs should be explored. A point that is sometimes neglected is that the costs of materials to the buyer will include all of the supplier's overheads, which themselves are influenced in part by their logistics costs. Since the supplier's overheads might be as high as 50% of their costs - of which perhaps a third are logistics costs, anything the buyer can do to reduce those costs will be to the advantage of both parties.

The most significant impact that the buyer can have upon the supplier's logistics costs is through the integration of planning systems to provide the supplier with improved visibility of the buyer's materials requirements and through schedule stability to enable suppliers to optimise their own production schedules and hence minimise their inventory and working capital investment.

(d) Throughput Management

One of the major implications of the three issues already identified (i.e. the Customer Service Explosion, Strategic Lead-Time Management and Organisation Integration) is that the task of throughput management becomes of the highest priority.

Throughput management is the process whereby manufacturing and procurement lead-times are linked to the needs of the market place. At the same time, throughput management seeks to meet the competitive challenge of increasing the speed of response to those market needs.

The goals of throughput management are:

- \* Lower Costs
- \* Higher Quality
- \* Greater Variety
- \* More Flexibility
- \* Faster Response-Times

The achievement of these goals is dependent upon managing the supply chain as a pipeline and seeking to reduce the pipeline length and/or to speed up the flow through that pipeline. In examining the efficiency of supply chains it is often found that many of the activities that take place add more cost than they add value. For example moving a pallet into a warehouse, re-positioning it, storing it and then moving it out in all likelihood has added no value but has added considerably to the total cost. In looking at its total order cycle from order to delivery, one firm found that only 10% of the time was spent in value-adding activities - the other 90% actually only added cost.

Throughput management is concerned to remove the blockages and the fractures that occur in the pipeline which lead to inventory build-ups and lengthened response times. The sources of these blockages and fractures are such things as extended set-up and change-over times, bottlenecks, excessive inventory, sequential order processing and inadequate pipeline visibility.

To achieve improvement in the throughput process requires a focus upon the lead-time as a whole, rather than the individual components of that lead-time. In particular the interfaces between the components must be examined in detail.

The greatest opportunity for throughput improvement will generally come from a better use of information regarding demand. Too often data on demand is obscured from view because the order penetration point is too far down the chain. In other words when an order hits the system it is passed sequentially from one node in the chain to another, its very existence being hidden by the presence of intermediate stock-holdings. Thus in a traditional system, inventory held by a distributor will hide demand until that distributor's re-order point is reached.

A classic example of a company that has gained competitive advantage through its management of total throughput time is Benetton, the Italian company that has built a global fashion business.

Benetton utilises direct feedback from its franchised outlets to monitor sales trends. Linking this information into its CAD/CAM system and making use of its highly flexible manufacturing processes, it can rapidly produce very small quantities to order. The time from order to delivery is less than four weeks - a performance that is almost unheard of in the fashion business.

By focussing upon reducing throughput times, Benetton has not only increased its responsiveness to market trends, but also has minimised the investment in inventory across its global network.

#### (e) Globalisation

The fifth of the strategic issues that provide a challenge for logistics management is the trend towards globalisation.

Benetton, once again, provides an example of an organisation that is truly global. A global company is more than a multi-national company. In the global business materials and components are sourced world-wide, manufactured off-shore and sold in many different countries perhaps with local customisation.

Such is the trend towards globalisation that it is probably safe to forecast that by the year 2000 most markets will be dominated by global corporations. The only role left for national companies will be to cater for specific and unique local demands, for example in the food industry.

For global companies like Digital, Philips and Caterpillar, the management of the logistics process has become an issue of central concern. The difference between profit and loss on an individual product can hinge upon the extent to which the global pipeline can be optimised.

The global corporation seeks to achieve competitive advantage by identifying world markets for its products and then to develop a manufacturing and distribution strategy to support its marketing strategy. So a company like Caterpillar, for example, has dispersed assembly facilities to key overseas markets, it uses global logistics channels to supply parts to off-shore assembly plants and after-markets. Where appropriate, Caterpillar will use third party companies to manage distribution and even final finishing. So for example in the U.S. a third party company, Leaseway Transportation, in addition to providing parts inspection and warehousing, actually attaches options to fork lift trucks. Wheels, counterweights, forks and masts are installed as specified by Caterpillar. Thus local market needs can be catered for from a standardised production process.

Even in a geographically compact area like the EEC we find that there is still a significant need for local customisation. A frequently cited example is the different preferences for washing machines. The French prefer top-loading machines, the British go for front-loaders, the West Germans prefer high-speed spins, the Italians prefer a lower speed! In addition there are differences in electrical standards and differences in distribution channels. In the U.K. most washing machines are sold through national chains specialising in white goods. In Italy, white goods are sold through a profusion of small retailers and customers bargain over price.

The challenge to a global company like Electrolux therefore is how to achieve the cost advantage of standardisation whilst still catering for the local demand for variety. Electrolux is responding to that challenge by seeking to standardise on parts, components and modules and then through flexible manufacturing and logistics to provide the specific products demanded by each market.

### Conclusion

I believe the corporate theme of the '90s will be integration. Integration between different functions of the business, integration in the marketing channel and, in particular, integration of customer requirements with the capabilities of the firm.

This paper has identified a number of challenges that must be addressed if this integration is to be achieved.

Specifically I have suggested that the logistics management process can provide the framework for bringing marketing and manufacturing more closely together and for achieving a common focus. Already leading companies across a wide spectrum of industry are recognising the impact that superior logistics management can have upon the achievement of competitive advantage.

The ground rules to success in the 21st century are already being laid down by these companies and the price of non-conformance will be high!