UNIT – II	9 hours
Planning the Supply Chain: Logistics strategy- strategy options, designing a logistics strategy, Implementation - Relating Strategy to Lower Decisions - Areas for Decisions in Implementation - Managing Change	

AIMS OF THE CHAPTER

After reading this chapter you should be able to:

■ SEE how a logistics strategy fits into an organisation's broader decisions
■ OUTLINE the strategic importance of logistics
■ DEFINE a logistics strategy and DISCUSS its focus
■ DISCUSS alternative logistics strategies
■ APPROACH the design of a logistics strategy

STRATEGIC DECISIONS

Types of decision

Some decisions are very important to an organisation, with consequences felt over many years. Other decisions are less important, with consequences felt over days or even hours. We can use their importance to classify decisions as:

● ***Strategic decisions*** are most important and set the overall direction of the organisation; they have effects over the long term, involve many resources and are the most risky
● ***Tactical decisions*** are concerned with implementing the strategies over the medium term; they look at more detail, involve fewer resources and some risk
● ***Operational decisions*** are the most detailed and concern activities over the short term; they involve few resources and little risk

A traditional view has senior managers making the strategic decisions that set their organization on its course. These strategic decisions give the objectives, constraints and context for the tactical decisions made by middle managers. These, in turn, give the objectives, constraints and context for operational decisions made by junior managers. This is still the usual approach to decisions, but new styles of management and improved technology have encouraged changes. Now you rarely see such a strict hierarchy, even among conventionally rigid organisations like the armed forces. Most decisions are discussed, negotiated and agreed rather than simply passed down. There is also a growing recognition that the best person to make a decision is the person most closely involved – and this is often a **junior manager** who is on the spot rather than a remote, senior manager. You can see this effect with empowerment (which devolves decisions to the lowest possible level) 'delayering' (to remove unnecessary layers of management) and lean organisations (which remove all unnecessary activities).

There are several types of strategic decision (as shown in Figure 3.1). People use different names for these, but the most common are:

● ***mission*** – a statement to give the overall aims of the organisation;
● ***corporate strategy*** – which shows how a diversified corporation will achieve its mission;
● ***business strategy*** – which shows how each business within a diversified corporation will contribute to the corporate strategy;
● ***functional strategies*** – which describe the strategic direction of each function, including logistics.

Essentially the higher strategies set the goals and general direction of the organisation, and the functional strategies show how to achieve these. So the business strategy shows what has to be done,

and the logistics strategy shows how the supply chain will help achieve this. If an organization has a business strategy of being the lowest cost provider of some product, the logistics strategy shows how it will reduce logistics costs to a minimum; if the organisation is working to get fast deliveries to customers, the logistics strategy defines policies for achieving this. This assumes, of course, that logistics really has a strategic role. Perhaps we should review the evidence to support this.

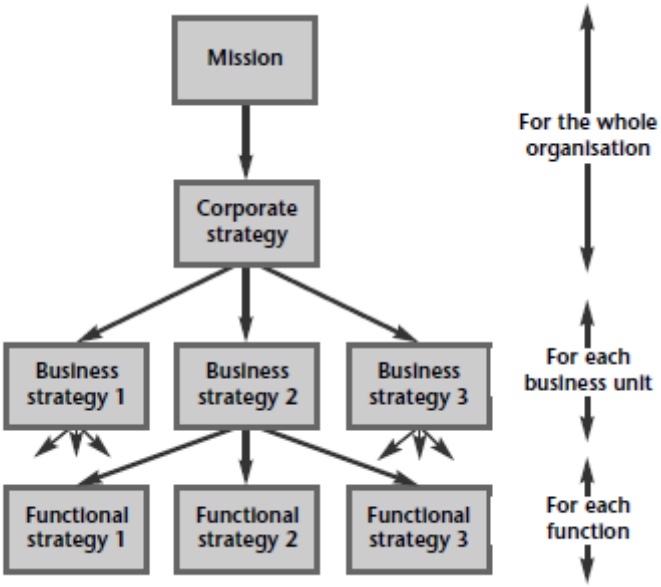


Figure 3.1 Types of strategic decision

LOGISTICS STRATEGY

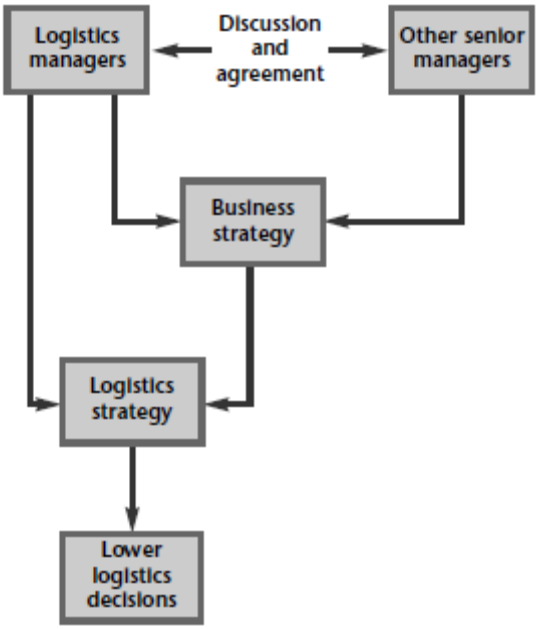
Definition

All the long-term decisions about logistics form a logistics strategy.

The **LOGISTICS STRATEGY** of an organisation consists of all the strategic decisions, policies, plans and culture relating to the management of its supply chains.

The logistics strategy forms a link between the more abstract, higher strategies and the detailed operations of the supply chain. While the **corporate and business strategies** describe general aims, the logistics strategy concerns the actual movement of materials needed to support these aims. The **business strategy of a company calling for 'outstanding service'** to its customers, translates into a **logistics strategy of organising a very fast parcel** delivery service to almost any point in the world.

The higher strategies set the context for the logistics strategy. However, logistics managers do not simply respond to this context, they **actively contribute to its formulation**. Their views on what levels of performance are actually achievable by logistics form one of the inputs for the design of higher strategies (as shown in Figure 3.2). For UPS the recognition that it really can achieve efficient logistics allows it to have a business strategy of aiming at outstanding service.



There are, of course, many factors other than logistics to consider in designing a business strategy. But the amount that logistics contributes to the formulation of higher strategies can have a significant effect on operations.

At one end of a spectrum (shown in Figure 3.3) are organisations where logistics contributes hardly anything to the higher strategies. Logistics managers simply accept the higher strategies designed by others, and design operation to make sure these can be achieved. At the other end of the spectrum are organisations whose logistics really dictate the higher strategies. The Channel Tunnel, for example, offers a unique logistics service, and all its higher strategies are based on its logistics operations.

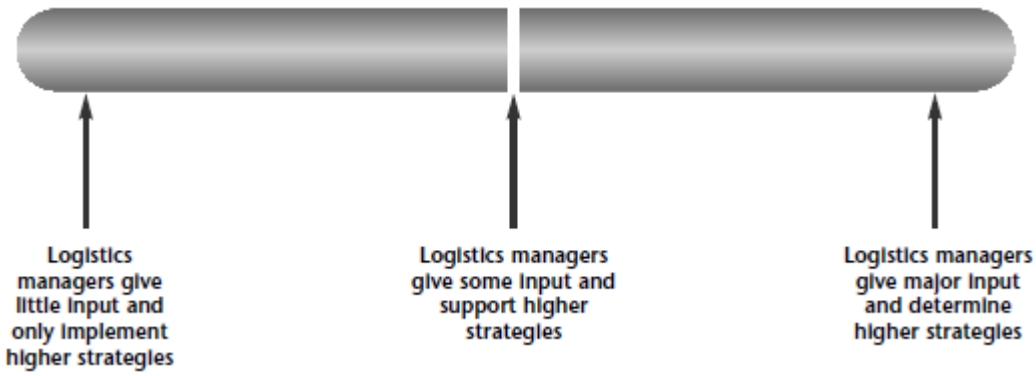


Figure 3.3 Different amounts of input from logistics managers

Focus of the logistics strategy

Organisations can only survive by supplying products that customers view as somehow better than those from competitors. Logistics affects the lead time, availability, cost, customer support, damage, and so on – and hence the customers' view of a product. In this sense, logistics actually contributes to the design, quality, perceived value and success of a product. But which factors are most important for this contribution and should be emphasised in a logistics strategy? We can start to answer this by taking a traditional view from marketing which says that organisations compete by concentrating on the '**four Ps' – product, place, promotion and price.** Here logistics has a role in

the ‘product’ (through its contribution to the overall product package), ‘place’ (through its delivery of materials) and ‘price’ (through its effect on operating costs). A logistics strategy could usefully emphasise these features.

A broader view says that customers are concerned with and a whole range of other things. These all depend on different aspects of logistics. In different circumstances, therefore, almost any facet of logistics can be important for customer satisfaction, and could be emphasised by the logistics strategy. In practice, a logistics strategy is most likely to emphasised the following: their logistics costs. This leads to higher profits for the organisation and lower prices for customers.

● ***Customer service:*** Logistics controls stock levels, delivery times, speed of response, and other measures of customer service. By concentrating the logistics strategy on customer service, organisations can get a long-term competitive advantage.
● ***Timing****:* Customers generally want products as soon as possible, so a common logistics strategy guarantees fast deliveries. Timing can also mean rapid supply of new products, or delivering at the time specified by a customer.
● ***Quality****:* Customers demand higher quality in all products. A common logistics strategy guarantees high quality service, even though it can be difficult to say exactly what we mean by ‘high quality logistics’ (we return to this question in Chapter 12).
● ***Product flexibility:*** This is the ability of an organisation to customise products to individual specifications. One logistics strategy is based on a specialised or customised service, such as Pickfords’ removals.
● ***Volume flexibility:*** Changing levels of business can cause severe problems for logistics, as you can see during the morning rush hour in any major city. Volume flexibility allows an organisation to respond quickly to changing levels of demand.
● ***Technology****:* Logistics uses a wide range of technologies for communications, tracking loads, sorting parcels, identifying products, recording stock movements, and so on. Some organisations have a strategy of developing and using the latest technologies.
● ***Location****:* Customers generally want products to be delivered as close to them as possible. This might mean that a book club delivers directly to your door, a shop has a convenient location in a town centre, or a wholesaler has a regional logistics centre near to major cities. One logistics strategy is to provide a service in the best possible location, such as bus stations in town centres.

In principle, organisations should do everything well, giving low cost, good customer service, fast delivery, flexibility, using high technology, and so on.

In practice, this is unrealistic. Organisations have to compromise, perhaps balancing the level of service with the cost of providing it. Effectively they choose a **specific focus** for their logistics strategy, showing which factor they consider to be most important. Some organisations, such as **Ryanair (airline), focus on cost**, giving a cheap service; others, such as **FedEx, focus on delivery speed**; others focus on reliability; or a customised service, and so on. One of the key decisions for logistics managers is choosing the strategic focus.

STRATEGY OPTIONS

Each organisation designs its own logistics strategy, but they often move along similar lines. The logistics strategies of Ford and Volkswagen, for example, are broadly similar, as are the strategies of Lufthansa and Air France. This allows us to describe a few generic strategies.

Michael Porter[6] suggested that there are two basic strategies:
- ***cost leadership*****,** makes the same, or comparable, products more cheaply;
- ***product differentiation*****,** makes products that customers cannot get from other suppliers.

Lyons Bakeries compete by cost leadership, selling standard cakes at low prices; La Patisserie Française competes by product differentiation, selling cakes that are not available anywhere else. Similarly, easyJet compete by cost leadership, offering the cheapest fares; Execujet compete by offering a uniquely luxurious service.

In logistics, these two approaches are usually phrased in terms of **lean** and **agile** strategies.
Organisations with a focus on lean logistics are aiming at low costs;
those with a focus on agile logistics are aiming at high customer satisfaction.

Lean strategies

No organisation can completely avoid the cost of logistics, so the next best option is to make it as cheap as possible. Then a reasonable objective is to minimise the total cost of logistics, while ensuring acceptable levels of customer service. This approach is generalised into **lean logistics**.

The aims of a **LEAN STRATEGY** are to do every operation using less of each resource – people, space, stock, equipment, time, and so on. It organises the efficient flow of materials to eliminate waste, give the shortest lead time, minimum stocks and minimum total cost.

Early work on lean operations was done in the motor industry, led by Toyota [7,8]. This work concentrated on 'lean production' but the methods got such good results that they spread into other areas, eventually developing a 'lean enterprise'. The approach is summarised in five main principles:
- *value* – designing a product that has value from a customer's perspective
- *value stream* – designing the best process to make the product
- *value flow* – managing the flow of materials through the supply chain
- *pull* – only making products when there is customer demand
- *aim of perfection* – looking for continuous improvements to get closer to the aim of perfect operations.

The first of these principles, **'value', sets the target** for the organisation, seeing how to add value for the final customer of the product. The second principle, **'value stream', designs a means of making this product**, and effectively sets the requirements of the supply chain. The last three principles refer directly to the supply chain. The third, **'value flow', gets an efficient flow of materials,** eliminating waste, interruptions, waiting and detours. The fourth principle, **'pull', shows how to control the flow** of materials by pulling them through. The fifth principle, **'aim of perfection', describes a continuing search** for improvement. This is a common theme for management initiatives which often say that areas of waste should be continually identified and eliminated.

Robert Townsend says that, 'All organisations are at least 50% waste – waste people, waste effort, waste space and waste time'. During their development work, Toyota identified the following areas of the supply chain where this waste is most likely to occur:

- *Quality* – that is too poor to satisfy customers (either external or internal).
- *Wrong production level or capacity* – making products, or having capacity, that is not currently needed.
- *Poor process* – having unnecessary, too complicated or time-consuming operations.
- *Waiting* – for operations to start or finish, for materials to arrive, for equipment to be repaired, and so on.
- *Movement* – with products making unnecessary, long, or inconvenient movements during operations.
- *Stock* – holding too much stock, increasing complexity and raising costs.

A lean strategy looks for ways of eliminating this waste. The typical approach does a detailed analysis of current operations, and then removes operations that add no value, eliminates delays, simplifies movements, reduces complexity, uses higher technology to increase efficiency, looks for economies of scale, locates near to customers to save travel, and removes unnecessary links from the supply chain.

One warning is that low costs do not automatically mean lean operations. Lean operations maintain customer service while using fewer resources – they do not just minimise costs. A greengrocer could minimise its inventory costs by having no stock, but it would not generate much customer satisfaction. Some people also suggest that lean operations might work in the mass production car industry, but lessons do not necessarily transfer to other supply chains. In particular, lean operations might not work when there are variable and uncertain conditions.

An alternative is a more flexible strategy based on **agility**.

Agile strategy

An agile strategy concentrates on the other side of the '**efficient versus responsive'** – or lean versus agile – debate. Its supporters say that lean operations put too much emphasis on costs, and cannot deal with changing conditions, increasing competition, or more sophisticated and demanding customers. If demand for a product is steady at 100 units a week, lean logistics will remove all the waste and have enough capacity to deliver these 100 units. Unfortunately, if demand suddenly rises to 110 units, lean operations cannot cope. As markets are demanding more variety and customisation, logistics should be more flexible.

The aim of an **AGILE STRATEGY** is to give a high customer service by responding quickly to different or changing circumstances.

There are two aspects of agility. First, there is the speed of reaction; agile organisations keep a close check on customer demands and react quickly to changes. Second, is the ability to tailor logistics to demands from individual customers. These are, of course, different aspects of customer service, and the implication is that end-customer satisfaction is a prime concern, even if this comes at somewhat higher price.

Organisations that put a lot of emphasis on customer satisfaction are said to have a **customer focus**. The justification for this strategy comes from the obvious importance of customers. Without customers an organisation has no sales, no income, no profit, no business – and soon no organisation. As Michael Perry of Unilever says,12 'To sustain competitive advantage requires a total commitment to your customer'. Organisations with a customer focus will typically:

● aim for complete customer satisfaction
● allow customers easy access to the organisation
● find exactly what they want
● design logistics to meet, or exceed, these demands
● be flexible and respond quickly to changing customer demands
● get a reputation for outstanding quality and value
● do after-sales checks to make sure the customers remain satisfied
● look outwards so that they are always in touch with customers, potential customers, competitors, and so on.

Organisations with satisfied customers have the obvious benefit of bringing them back with repeat business – remembering the rule of thumb that it costs five times as much to attract a new customer as it does to retain an existing one. Satisfied customers also attract new business, as they recommend a good service to four or five other people – compared with dissatisfied customers who warn a dozen potential customers about a bad experience.

Lean versus agile

At first sight the aims of lean and agile operations seem contradictory. One looks to minimize costs, and sees customer service as a constraint; the other looks to maximise customer service, and sees costs as a constraint. This seems to lead to important differences.

Factor	**Lean logistics**	**Agile logistics**
Objective	Efficient operations	Flexibility to meet demands
Method	Remove all waste	Customer satisfaction
Constraint	Customer	service Cost
Rate of change	Long-term stability	Fast reaction to changing circumstances
Measures of performance	Productivity, utilisation	Lead time, service level
Work Control	Uniform, standardized Formal planning cycles	Variable, more local control, Less structured by empowered staff

In practice, of course, there is not such a clear divide between the two strategies. If a supplier improves EDI links with its customers, it can both reduce costs and increase customer service – becoming both leaner and more agile. Similarly, a manufacturer selling materials through a website and a wholesaler introducing cross-docking become both leaner and more agile. Both strategies accept that customer satisfaction and low costs are dominant themes, but they use different descriptions of the process to achieve them. Organisations need not choose one strategy at the expense of the other. Evans and Powell13 discuss the use of both strategies and conclude that ‘lean and agile are not mutually exclusive, they both have their merits, but also limitations, especially if an individual aspect is taken, in isolation, to the extreme’.

Strategic alliances

A **third strategy** develops **the ideas of integration**. An organization can put so much emphasis on close co-operation with other parts of the supply chain that it has a strategy of **forming alliances with suppliers and customers**. The purpose of this strategy is to get efficient supply chains, with all members working together and sharing the benefits of long-term co-operation.

Usual reasons for a strategy of forming partnerships include better customer service, increased flexibility, reduced costs, avoidance of investment in facilities, and lack of expertise within the

organisation. In Europe over a quarter of all logistics expenditure uses specialized contract suppliers, usually in some form of long-term partnership. The most common area for partnerships is transport, where around three quarters of companies use contract providers.

Other areas for collaboration include warehousing, import/export services, materials storage and information processing.

Other strategies
We have described three general strategies based on leanness, agility and alliances. There are several other general strategies, where organisations emphasise other aspects of performance.
Here we will mention a few of the more common.

● *Time-based strategies*
In the simplest view, time-based strategies aim for a **guaranteed faster delivery of products**. Benefits from these strategies include lower costs (by having less stock in the supply chain, less expediting, and so on), improved cash flow (by not having to wait so long for payment), less risk (by reducing changes to orders, obsolete stock, and so on) and simpler operations (by eliminating delays and unnecessary stores). The main assumption, though, is that **faster delivery gives better customer service. This is not necessarily true**, and you can find many examples of faster logistics reducing the quality. A delivery company might speed-up order processing, but increase the number of mistakes; an airline might rush passengers and make them feel uncomfortable; a shipping line might reduce delays by stopping in fewer ports. One important strategy based on time is **time compression**. This is similar to the lean strategy, but concentrates on wasted time in the supply chain. Its aim is to eliminate all the non-value-adding time.

Beesley[14,15] says that 'In typical UK manufacturing supply chains at least 95% of the process time is accounted as non-value adding'.

There is clearly scope for reducing the time materials spend in the supply chain and getting the associated benefits. Carter et al.16 discuss seven ways of doing this:
1. *simplification* – making operations simpler
2. *integration* – improving information and material flows
3. *standardisation* – using standard procedures and materials
4. *concurrent operations* – moving away from serial operations and towards parallel working
5. *variance control* – ensuring high quality and avoiding waste
6. *automation* – to improve effectiveness and efficiency
7. *resource planning* – to remove bottlenecks and ensure a smooth flow of materials.

As you can see, most of these are general suggestions for improvement rather than specific features of time compression. You would, of course, expect this. A strategy that focuses on one aspect of performance cannot ignore all the others; it still has to achieve performance that is acceptable when judged by a range of different criteria.

● *Environmental protection strategies*
A small, but increasing, number of organisations are developing strategies based around **environmental protection.** The Body Shop (is a British cosmetics, skin care and perfume company), for example, designs products with natural ingredients and based on sustainable development. It uses the same principles in its logistics, with reusable containers and recycling of materials. There are good reasons for other organizations to adopt similar policies of environmental protection.

In 1993 a survey of UK companies suggested that most were aware of environmental pressures – mainly from EU and government regulations – but they only changed their practices when there were significant cost benefits[17] The major environmental concerns were waste and packaging disposal (25% of respondents), noise and emission (23%), public perception of HGVs (15%), fuel use (12%) and road congestion (11%). **Only 19% of companies reported a logistics environmental policy.** Despite huge amounts of discussion in the area, there have been relatively few changes since this survey.

Most organisations assume that 'going green' raises costs. There may be some benefits from customer approval, but in a competitive environment it is difficult to justify the higher overheads.

The reality, though, is that many programmes for environmental protection actually reduce costs. **Better insulation** of warehouses, for example, gives lower heating bills. In the same way, **regular maintenance of road vehicles** reduces both fuel consumption and emissions, as does minimising the distance travelled, avoiding congestion, travelling outside peak hours and avoiding built-up areas. Packaging is another area with large potential savings. You may be surprised when a pack of chocolate biscuits has three layers of wrapping – but this is only the consumer wrapping, and you do not see the three layers of industrial packaging that protects goods during transport. Careful design and reusable containers can save much of this packaging and considerably reduce costs.

● *Increased productivity strategies*
These strategies use **available resources as fully as possible.** Facilities, such as warehouses, have high fixed costs and using them at full capacity spreads these costs over more units. It follows that increasing the utilisation of resources reduces the delivered cost of products. This is really a variation of a lean strategy, but there are important differences. Imagine a facility that is working at 60% of capacity. Obviously, there is spare capacity that is raising unit costs. The lean approach would look for ways of removing the 40% spare capacity – and then continue looking for further reductions over time. **A high productivity strategy is more likely to accept the present capacity, and start looking for alternative uses for the excess.** An office or warehouse might rent out space, while a vehicle fleet might carry materials for other organisations.

● *Value-added strategies*
The supply chain consists of a series of activities, each of which **adds value to the final product**. Then a reasonable strategy has an organisation adding as much value as possible. This value is, of course, taken from the customer's perspective. Organisations can also add value by adding **time and place utility**, or doing more work on the product. **Imagine a company that delivers washing machines to customers' houses**. It adds value by delivering to the place and at the time preferred by customers, or by doing more work such as installing the machines, testing them, giving instructions on their use, removing old machines, offering service contracts, and so on.

● *Diversification or specialisation strategies*
These strategies look at the range of services offered by logistics. Some organisations have strategies of diversification, **offering the widest range of services** and satisfying as many customers as possible. This is the approach of a department store which sells every product you can imagine. Other organisations have a strategy of specialising in a very narrow range of services, but being the best provider in their chosen area. They target a few customers and provide a service that cannot be found anywhere else – like a bespoke tailor. Some transport companies, for example, have a strategy

of diversification and move every kind of load from letters through to oversize loads. Others have a **strategy of specialisation in, say, small packages, high security or tanker deliveries.**

● *Growth strategies*

Many aspects of logistics get **economies of scale, and larger operations can give both lower costs and better service.** One common strategy, then, is based on growth. There are several ways of achieving growth, **perhaps taking over competitors, expanding the geographical area covered, diversifying into more logistics activities, moving different types of materials**, or simply increasing market share.

DESIGNING A LOGISTICS STRATEGY

Setting the scene

The important point about a logistics strategy is that it does not happen by chance, but needs careful decisions. So we can ask, **'How do organisations make these decisions?'** Why should a company base its logistics strategy on flexibility rather than cost? Why does one company choose to specialise, while a similar one chooses to diversify?

The starting point for designing a logistics strategy examines the higher strategies and sees how logistics can contribute to these. Then we can summarise the results in a **logistics mission**. This gives a simple statement of the aims for **supply chain management, like the following example.**

> Our mission in logistics is to contribute to corporate aims by moving the materials needed by production into the company, moving work in progress through the company, and moving finished products out to customers. We aim to give a flexible, reliable and cost effective service that completely satisfies our customers, both internal and external.

Logistics missions are useful for setting the scene, and showing the overall direction and priorities.

They are much less common than mission statements for the whole organisation, but they can suffer from the same weaknesses. Organisations tend to be ambitious and include aims of being 'acknowledged leaders', 'the best', 'world class', and so on. **Smith19 says that such flowery statements fail in three ways.** First, they are over-ambitious, setting targets that the organisations cannot realistically achieve. Second, they are so vague that no one can tell whether the mission is actually being achieved or not. Third, they miss the opportunity of using a powerful tool that can really help manage the logistics.

It is useful to start designing a strategy with a logistics mission, but the next steps are less clear. There is certainly no single best strategy for any particular circumstance, and there is no standard procedure for designing a good strategy. Gooderham20 says:

> No one 'right' way to develop and implement strategy exists. The key to successful planning is to get the best fit between the chosen tools and techniques, the organisation's current culture capabilities and business environment and the desired outcome.

This leads to the usual advice of finding the best balance between the organisation's internal strengths and the external constraints – matching what the organisation is good at to what customers want. So now we have three factors that managers must consider when designing a logistics strategy – the higher strategies, the business environment and the organisation's distinctive competence (shown in Figure 3.4).

1. *Higher strategies* set the organisation's goals and the context for all logistics decisions. The mission sets the overall aims, and the corporate and business strategies show how these aims will be achieved. The logistics strategy must support these higher strategies. If, for example, the business strategy calls for high customer service, the logistics strategy must show how logistics will achieve this.

2. The *business environment* consists of the factors that affect logistics, but over which it has no control. These include:

- *customers* – their expectations, attitudes, demographics
- *market conditions* – size, location, stability
- *technology* – current availability, likely developments, rate of innovation
- *economic climate* – gross domestic product, rate of growth, inflation
- *legal restraints* – trade restrictions, liability and employment laws
- *competitors* – number, ease of entry to the market, strengths
- *shareholders* – their target return on investments, objectives, profit needed
- *interest groups* – their objectives, strengths, amount of support
- *social conditions* – customers' lifestyles, changing demands, significant trends
- *political conditions* – stability, amount of governmental control, external relations.

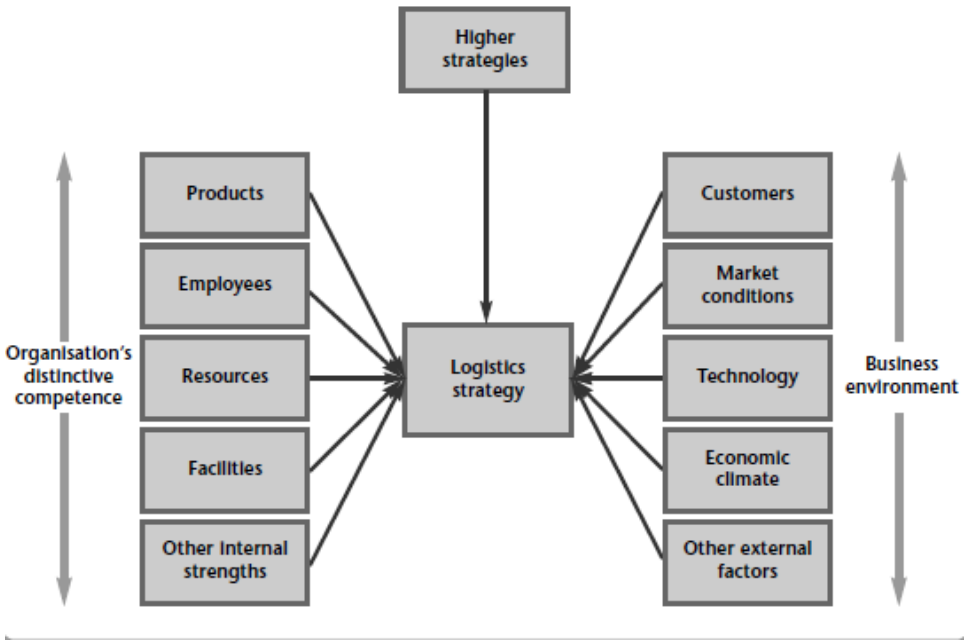


Figure 3.4 Factors in the design of a logistics strategy

3. All competing organisations work in a similar business environment. Each can only succeed if it has a *distinctive competence* that sets it apart from competitors. This is defined by the factors that are under the organisation's control, and which it uses to distinguish itself.

A distinctive competence stems from an organisation's assets, which include:
- *customers* – their demands, loyalty, relationships
- *employees* – skills, expertise, loyalty
- *finances* – capital, debt, cash flow
- *organisation* – structure, relationships, flexibility
- *products* – quality, reputation, innovations
- *facilities* – capacity, age, reliability
- *technology* – currently used, plans, special types

- *processes* – structures, technology used, flexibility
- *marketing* – experience, reputation
- *suppliers* – service, flexibility, partnerships
- *other assets* – knowledge, innovation, patents

In essence, the business environment and distinctive competence show where an organization is now, and the higher strategies show where it wants to be in the future. The logistics strategy shows how to move from one to the other.

Logistics audit

We can get a clear idea of current operations by doing a **logistics audit**. This describes the details of all current logistics activities.

The purpose of a **LOGISTICS AUDIT** is to collect relevant information about existing practices and performance of logistics. It gives a systematic review of current operations, describing the procedures, costs, resources, utilisation, performance, products, and all other relevant details.

There are two main parts to a logistics audit, essentially getting information about the business environment and distinctive competence. First, an external audit looks at the environment in which logistics work. This reviews the nature of customers, types of demand, accepted service levels, locations, competitors and their operations, benchmarks and comparisons, services available, trends in the industry, economic conditions, geographical and political constraints, and any other relevant external information. Second, an internal audit looks at the way things are done within the organisation and identifies areas for improvement. It reviews the structure of the supply chain, warehouse locations and size, stock holdings, methods of materials handling, achieved service levels, lead times, transport arrangements, order processing, damage, productivity, and any other relevant internal information.

You can see that this approach is similar in principle to a **SWOT analysis**, which lists an organisation's:

- ***S****trengths* – what the organisation does well, features it should build on
- ***W****eaknesses* – problems the organisation has, areas it should improve
- ***O****pportunities* – openings that can help the organisation
- ***T****hreats* – hazards that can damage it.

Strengths and weaknesses concern the organisation's internal operations and show its distinctive competence. Opportunities and threats relate to external features, concentrating on the business environment. A SWOT analysis by Synergistic Logistical Services listed their strengths as expertise, innovation and local contacts; weaknesses as small size, local operations and gaps in experience; opportunities from the increasing use of information technology, growing interest in logistics, and service-based local economy; threats from larger competitors, high overheads and a possible take-over.

By this stage we have the aims of logistics set out in a logistics mission. We also have details of current performance from the audit. We know where we want to go, and where we are at the moment. The next stage is to identify gaps between these two and show how to bridge the gaps.

Developing the strategy

Usually, the single most important factor for a logistics strategy is the type of demand. A lean strategy, for example, works best when demand is stable – or at least predictable. It is most successful when there are few changes to customers, products, or logistics, and when price is an important factor for competition. This is typical of commodities or staple food items, where the lowest cost is the main determinant of success. On the other hand, an agile strategy works best for organisations offering a wider range of products, where demand varies and is less predictable.

It is most successful for organisations that do not really know demand until customers place orders, with make-to-order operations or mass-customisation, such as the fashion industry. It would be useful to have some formal procedure that considers factors such as the type of demand, and then

suggests the best logistics strategy. Unfortunately, we have already said that there is no single 'best' strategy, and no method that always gives a good solution. The best that we can do is use some guidelines. Novich,21 for example, recommends four steps for designing a strategy – understand and measure customer needs, find the weaknesses of current logistics, benchmark, and simplify the whole logistic system.

A more systematic approach builds on the analyses we have already mentioned, and has the following eight steps:

1. **Do a logistics audit.** The **external audit** gives an analysis of the business environment in which logistics work. It shows the factors that lead to success in this environment, and the importance of each one.
2. The **internal audit** analyses higher strategies from a logistics viewpoint, giving the context and overall aims for logistics, its strategic focus and perhaps includes a logistics mission.
3. Design the general features of supply chains that can best deliver the desired services. This includes the design of the network, location of facilities, capacity, technology used, and so on.
4. Set specific goals to show what each logistics activity must achieve. The internal audit shows how well the current logistics achieve these goals, and identifies areas that need improving.
5. Design the best organisational structure, controls and systems to support the logistics network.
6. Benchmark logistics, looking at the performance of leading organisations, defining measures to compare actual performance with planned, optimal and competitors' performances.
7. Implement the strategy, setting the conditions for lower levels of logistics decisions.
8. Monitor actual performance, continually look for improvements, keep the strategies up to date, and give feedback.

These steps give a guideline for designing and implementing a logistics strategy.

The first two points focus on **current circumstances**, and are based on a logistics audit. Steps 3 to 5 **design the logistics strategy**, describing the general features of the supply chain, goals and supporting structures. Remember that the strategy only deals with broad principles over the long term, and does not get involved with the tactical and operational detail. Step 6 looks at operations in the best competitors and sees if there are any lessons to learn. The last two steps are concerned with implementation, and adjustments to keep the strategy up to date.

We discuss some issues of implementation in the next chapter. Before we go there, however, we should mention the presentation of the logistics strategy. This might seem a minor concern, but the way the strategy is presented can be an important factor in its ultimate success.

A logistics strategy consists of a set of aims, procedures, structures, facilities, beliefs, systems, and so on. These are typically presented in a **logistics plan**. This plan might contain many parts, with the following list including the most common.

- a broad summary, giving an overview of the logistics strategy and how this relates to other parts of the organisation
- the aims of logistics within the organisation, what performance levels are needed and how these can be measured
- a description of the way that logistics as a whole will achieve these aims, what changes are involved and how these will be managed
- a description of how the separate functions of logistics (procurement, transport, inventory control, materials handling, and so on) will contribute to the plan, the changes involved and how operations can be integrated
- projections to show the resources needed by the strategy

● projections of the costs and financial performance
● a description of the way that this strategy affects the rest of the business, particularly in terms of performance achieved and contribution to customer value and satisfaction.

Review:

Key Issues in Logistics Planning:

Customer Service Demand for improved service quality a major element in competitive advantage Logistics costs Physical distribution , up to 30% of sales value External pressures Regulatory change pressures, competitive pressures of globalisation Trade offs Response to change requires complex adjustment. Organisational conflicts Often no clear responsibility for logistics

What is Logistics Strategy?:

When a company creates a logistics strategy it is defining the service levels at which its logistics organization is at its most cost effective . As supply chains are constantly changing and evolving, a company may develop a number of logistics strategies for specific product lines, specific countries, or specific customers. The ultimate goal of any logistics strategy is to deliver what customers want, when they want it - and getting that done by spending as little money as possible.

Objectives of Logistics Strategy:

The objectives of logistics strategy are: Minimize cost Minimize investment Maximize customer service Levels of logistical planning: Strategic Tactical Operational Problem areas of logistics planning Customer service levels Facility location Inventory decisions Transportation decisions

Why Implement a Logistics Strategy?:

The supply chain constantly changes and that will affect any logistics organization. To adapt to the flexibility of the supply chain, companies should develop and implement a formal logistics strategy. This will allow a company to identify the impact of imminent changes and make organizational or functional changes to ensure service levels are not reduced.

What Is Involved in Developing a Logistic Strategy?:

A company can start to develop a logistics strategy by looking at four distinct levels of their logistics organization:

Strategic : By examining the company's objectives and strategic supply chain decisions, the logistics strategy should review how the logistics organization contributes to those high-level objectives.

Structural : The logistics strategy should examine the structural issues of the logistics organization, such as, the optimum number of warehouses and distribution centres , or what products should be produced at a specific manufacturing plant.

What Is Involved in Developing a Logistic Strategy? (Contd.):

Functional : Any strategy should review how each separate function in the logistics organization is to achieve functional excellence.

Implementation : The key to developing a successful logistics strategy is how it is to be implemented across the organization. The plan for implementation will include development or configuration of an information system, introduction of new policies, and procedures and the development of change management plan.

When examining four levels of logistics organization, the following components of the operation should be examined:

Transportation : Whether current transportation strategies help service levels?

Outsourcing : What outsourcing is used in logistics function, would a partnership with a third party logistics company improve service levels? Components to Examine When Developing a Logistics Strategy

Logistics Systems : Do the current logistics systems provide the level of data that is required to successfully implement a logistics strategy?
Competitors : Review what the competitors offer, can changes to the company's customer service improve service levels?
Information : Is the information that drives the logistics organization real-time and accurate ?
Strategy
Review : Are the objectives of the logistics organization in line with company objectives and strategies?

Corporate Strategy:
Corporate Strategy Corporate Strategy is the process whereby plans are formulated for positioning the firm to meet its objectives.
Corporate strategy formulation begins with defining the following:
a) Assessing needs, strengths, and weaknesses of the 4 major components: customers suppliers competitors the company itself
b) "Visioning" where counter -intuitive, unheard of, and unconventional strategies are considered. Corporate strategies are converted to more specific strategies for the various functional areas of the firm, such as, logistics.

Corporate to Functional Strategic Planning :
External Factors Social Regulatory Competitive Technological Economic Organisational Strategic Plan Manufacturing Physical Distribution Logistics Marketing Functional Strategic Plans Finance

Flow of Logistics Planning:
Quality of Individual link of logistics system
Facility location Operations strategy Inventory management
Information systems Material handling Traffic & transportation Planning & control Organisation
Business goals & strategies Customer service requirements Integrating logistics plg
Design of integrated logistics management system Overall performance

DISCUSSION QUESTIONS
1. To what extent is logistics a strategic function? Does it really have a long-term effect on an organisation? Is it possible to be 'essential' but not 'strategic'?
2. When customers judge products, they include factors like availability, lead time and aftersales service – and these are part of logistics. Is it reasonable to say, therefore, that logistics plays a role in the design of a product?
3. What are the main options for a logistics strategy?
4. What factors affect the choice of logistics strategy? Take an organisation that you are familiar with, and say exactly how you would set about designing a logistics strategy.
5. There is only one 'best' logistics strategy in any circumstances, and managers should look for this. Do you think this is true?

IMPLEMENTING THE LOGISTICS STRATEGY
RELATING STRATEGY TO LOWER DECISIONS

Links with lower decisions

In the last section we looked at the design of a logistics strategy. This contains all an organisation's long-term decisions, policies, plans and culture relating to logistics. Senior managers design the logistics strategy, and then the remaining managers have to see how the strategy affects their work. They have to answer questions such as:

- How does the strategy affect the logistics network?
- Should we change our warehouse and transport operations?
- Will our approach to planning and scheduling change?
- Do we have, or can we get, the necessary resources?
- Do we have, or can we train, people with the necessary skills?
- How will the strategy affect present and potential customers?
- What are the impacts on staff, facilities, organisation, technology, and so on?

As you can see, these are not strategic questions, but they are concerned with more detailed **tactical and operational decisions**. So the logistics strategy leads to more detailed, lower level decisions. A **strategic decision to sell products through a website** leads to medium-term tactical decisions about warehousing, investment in stock, transport, materials handling, recruiting and training, customer service, and so on. These tactical decisions, in turn, lead to short-term operational decisions about resource scheduling, inventory control, expediting, vehicle routes, and so on.

The **distinctions between strategic, tactical and operational decisions are not really this clear.** Inventory, for example, is a strategic issue for decisions about building a warehouse for finished goods or shipping directly to customers, a tactical issue when deciding how much to invest in stock, and an operational issue when deciding how much to order this week. Customer service is a strategic issue when designing the supply chain, a tactical issue when organising transport for delivery, and an operational issue when scheduling the next delivery. The important point is to recognise that the strategy leads to a whole series of related decisions at different levels. What you call these levels and where you draw the boundaries is a matter of convenience.

When we talk about 'implementing a logistics strategy' we mean making the lower decisions, and translating the general aims of the strategy into positive actions. We actually **do** what is necessary to achieve the aims of the strategy. So implementation takes us from the fairly vague aspirations of the strategy to the nuts-and-bolts of how to move materials.

> Strategies only become effective when they are **IMPLEMENTED**. This means that the long-term aims are translated into lower decisions, and the work is carried out to achieve them.

Difficulties with implementation

It can be difficult to translate a logistics strategy into lower decisions. This is obviously true when the strategy is poorly designed, and lower managers have to translate vague concepts like 'global leadership' into actual operations. It can also be true when there is a good strategy that has been properly designed. A strategy based on good customer service, for example, seems sensible and might be translated into a target of delivering all orders within two working days. Now managers have to design the detailed logistics procedures to achieve this, and this is where the difficulties appear.

It **might simply be impossible to achieve this target,** or it might be achievable, but only at very high cost or with too much strain on the supply chain. There are two options at this point. **First, managers can say that the strategy has been carefully designed**, and everyone must work harder or find new, innovative ways of achieving the targets. This might seem too rigid, but managers may believe that goals should be demanding enough to stretch the organisation. **Second, managers can say that the practical difficulties are too great,** and that there was a mistake in setting unrealistic targets. This is more worrying, as it means that the logistics strategy was badly designed and all the work has been wasted. It also suggests that the strategy designers do not have a clear enough view of operations.

An obvious point **when designing a logistics strategy, is to make sure that it can be implemented**, and that the long-term plans lead to realistic tactical and operational decisions. Ideally the strategy should set goals that are **demanding** (forcing the organisation to perform as well as it can) but **achievable** (so that it can actually be implemented).

Unfortunately, there is a **common problem here, especially with organisations that are rigid hierarchies**. Then one group of senior managers designs the strategies, while a different group of more junior managers implements them. The two groups have different objectives, goals, information, experience and skills. Even with good communications, senior managers become remote from operations – they see the financial ratios, but have little idea how the logistics are really implemented. On the other hand, people working with the details of day-to-day operations, have little time for corporate ideals. Lofty aims such as '**being acknowledged leaders'** have no relevance for someone who is rushing to make an overdue delivery.

The following list gives some common problems with implementing logistics strategies:

- people who design the strategies are not responsible for their implementation
- strategies are badly designed, perhaps with the wrong aims or focus
- it is impossible, or very difficult, to implement them properly
- they do not take enough account of actual operations, perhaps because there were not broad enough discussions
- they are over-ambitious, or somehow not realistic
- they ignore key factors, or emphasise the wrong features
- people only pay lip-service to supporting the strategies
- enthusiasm for the strategies declines over time.

One surprisingly common mistake is to design a logistics strategy and then think about implementing it. The obvious way to avoid this is to think about implementation

all the way through the design, and always consider the practical effects of any policies. This needs wide- spread participation in the design process, particularly from those most closely involved with implementation.

Some other factors that help devise a strategy that can be used are:

- an organisational structure that is flexible and allows innovation
- formal procedures for translating the strategy into reasonable decisions at lower levels
- effective systems to distribute information and support management decisions
- open communications which encourage the free exchange of ideas
- acceptance that strategies are not fixed, but continue to evolve over time
- control systems to monitor progress
- convincing everyone that the strategy is beneficial, so they conscientiously play their part in implementation
- developing an organisational culture that supports the strategy.

AREAS FOR DECISIONS IN IMPLEMENTATION

Types of decision

When looking at implementation, it is convenient to describe **two types of strategic decision.** The first type sets out the **principles we work with,** and the second type shows **how the organisation will achieve these principles**.

So 'rapid delivery of customer orders' is a principle that the organisation is adopting, while 'building warehouses close to customers' is a practical way of achieving this: 'easy customer access' is a principle, while 'using websites to collect orders' is one means of doing this.

All these decisions are strategic, as they clearly have long-term consequences. However, the first type is more concerned with aims and designs, and the second type is more concerned with practicalities and implementation. In the last chapter we looked more at the aims and designs; here we will look at the practicalities of implementing these (as illustrated in Figure 4.1).

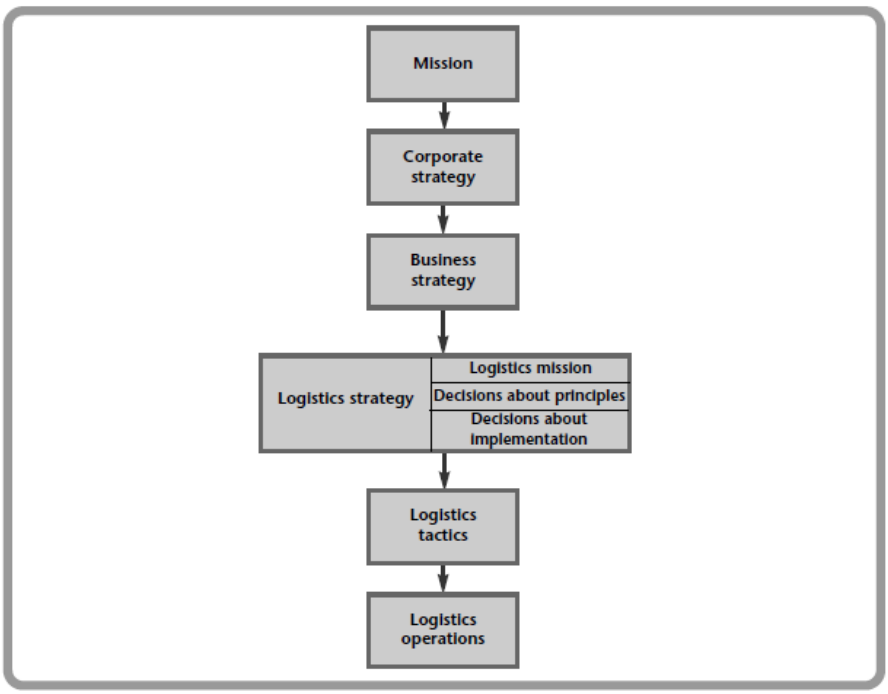


Figure 4.1 Levels of decision in logistics

A traditional view is summarised by Ballou1 who says that when moving to the implementation of a strategy, we need to concentrate on four areas; **customer service, facility location, inventory policy and transport**. This is a fairly restricted view, and only considers a few of the functions of logistics. A more inclusive view is given by Helming and Zonnenberg,2 who suggest decisions in five areas: **supply chain configuration, enabling practices, strategic relationships, organisation and application of information technology.** They also emphasise the importance of implementation by saying, 'Companies hurl staggering sums of money and human resources at their supply chain infrastructure, only to fail at implementing their supply chain strategy'.

An even **broader view** of implementation says that we should consider **decisions in every function of logistics** from procurement through to final delivery. Here, we will consider some general features that set the overall structure of the supply chain. **In particular, we will look at the location of facilities, ownership and outsourcing, enabling practices and capacity.**

Structure of the supply chain

From an organisation's point of view, the supply chain for a product consists of tiers of suppliers feeding materials from original sources into its operations, and then tiers of customers moving materials out to the final customers (as shown in Figure 4.2).

In practice, there are **many variations on this basic model.** Some supply chains have few tiers of customers and suppliers, while others have many; some chains have very simple flows of materials, while others have complex and convoluted networks. **Different types of products clearly need different structures** in their supply chain, and building sand needs a far different chain to DVD players.

Important factors are the product's value, bulk, perishability, availability, profitability, and so on. Sand has low value, is bulky and is readily available, so it is best to have a short supply chain with the suppliers as close as possible to the final customer.

DVD players are small, have high value, and are made in specialised factories, so they have a longer chain.

Different strategies also lead to different types of supply chain, so a company focusing on fast delivery will build a different chain to one focusing on low costs. **Other factors that affect the structure** of the supply chain are the type of customer demand, economic climate, availability of logistics services, culture, rate of innovation, competition, market and financial arrangements.

Organisations should consider all such factors, and then design an appropriate structure for their supply chains. In other words, **they decide the types of intermediary** (who form the suppliers and customers in the chain), numbers of these intermediaries, warehousing arrange-ments, work done in logistics centres, customers served from each centre, modes of transport, delivery speed, and so on. Perhaps the key questions here concern the supply chain's length and breadth (illustrated in Figure 4.3).

Figure 4.2 Structure of a supply chain

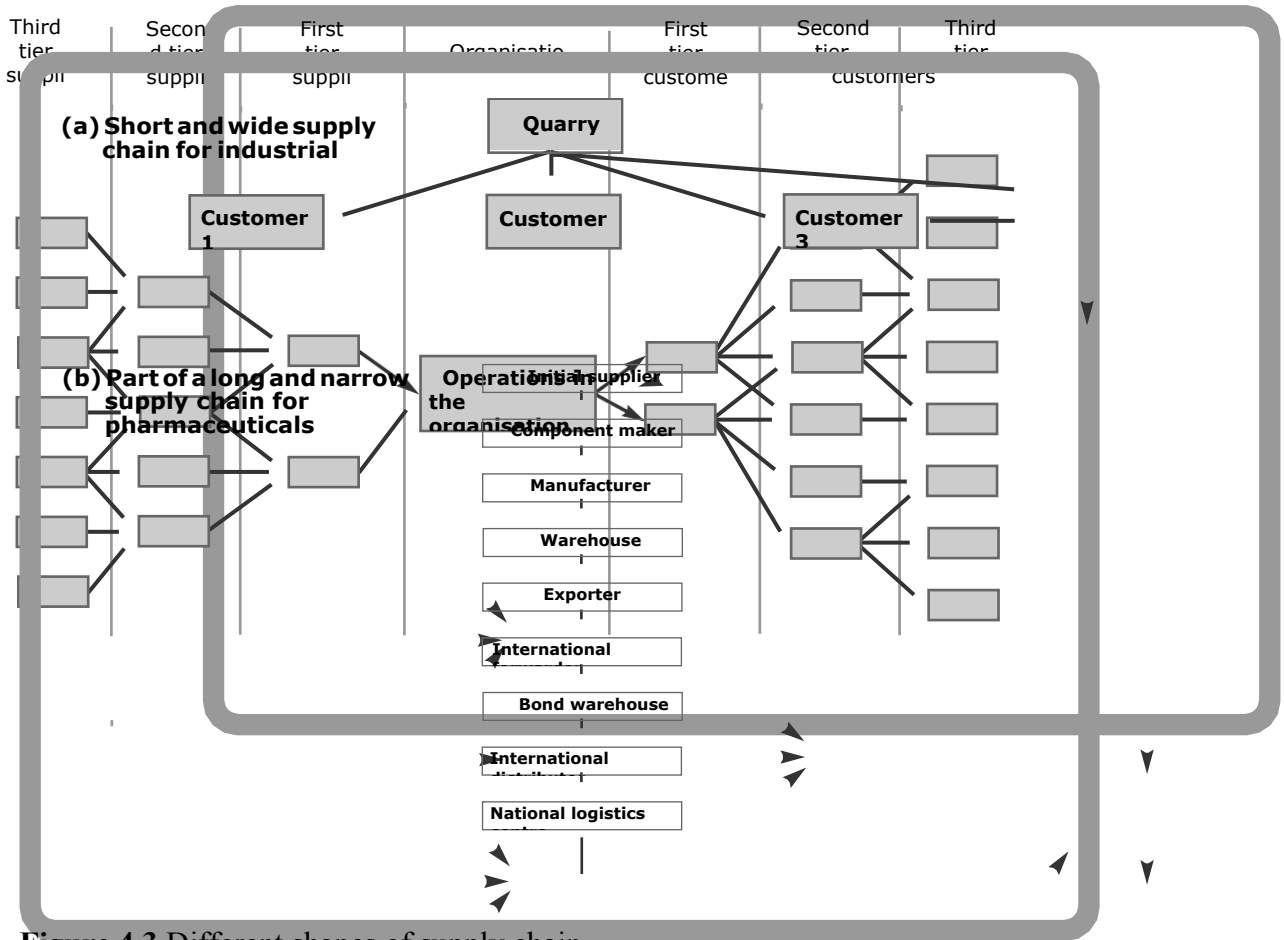


Figure 4.3 Different shapes of supply chain

- ***Supply chain length*** is the number of tiers, or intermediaries, that materials flow through between source and destination. We might think of a supply chain in terms of suppliers, wholesalers and retailers. In reality, **some supply chains are shorter than this when, for example, producers sell directly to final customers**. On the other hand, supply chains are often longer with many intermediaries, perhaps including several stages of manufacturing each of which is connected through intermediaries. Similarly, **exporters might use a series of logistics centres,** transport operators, agents, freight forwarders, brokers and agents to move materials

through different parts of their journey.

- ***Supply chain breadth*** is the **number of parallel routes that materials can flow through.** You can imagine this in terms of the number of routes out to final customers. **Cadbury's has a broad supply chain**, which means that you can buy their chocolate in a huge number of retailers; **Thornton's** has a narrower chain, and most of their chocolate sells through their own shops; **Pigalle et Fils has a very narrow chain** and they only sell their chocolate in two shops in Belgium.

The best choice of length and breadth depends on many factors, with three of the most important being the **amount of control that an organisation wants over its logistics, the quality of the service and the cost.** A manufacturer delivering directly to customers has a short, narrow supply chain. This gives a lot of control over logistics, but it may be difficult to achieve either high customer service or low costs. **Broadening the chain gives higher customer service,** but it increases costs and reduces the manufacturer's control. Making the supply chain long and narrow can use intermediaries to reduce costs, but the manufacturer loses some control and the customer service does not improve. **Making the supply chain both long and broad** removes most control from the manufacturer, but customers get good service.

We can illustrate some of the options for a supply chain with a basic product, such as shoes. Figure 4.4 gives a simplified view of some options, assuming that final customer demand is met by either direct sales (mail order, websites or factory shops) or retailers (specialised shoe shops, clothes shops, supermarkets, large multiple retailers, small multiple retailers or mixed retailers). Then we can add other types of retailer, such as shopping clubs, discount stores, retail ware- houses, and door-to-door sales. We can also add different types of intermediaries, such as manufacturers' wholesalers, retailers' wholesalers, buying groups, agents, brokers, co-operatives, and so on. Then there are specialised services such as transport, warehousing, finance, freight forwarders, and so on. The whole picture soon becomes very complicated.

A series of analyses can help managers with their design of a supply chain. The obvious ones estimate the **total cost** of delivery to final customers, and the **time** needed to satisfy an order. They might include **less tangible factors**, such as the efficiency of the supply chains, or customer satisfaction. Unfortunately, there is **never a single 'best' solution** and ultimately they have to choose the compromise that comes closest to achieving the aims of the logistics strategy.

One clear trend, though, is towards shorter supply chains. Organisations of every type are realising that they can reduce costs and increase customer service by moving materials quickly through a short supply chain. This usually means removing layers of intermediaries, and concentrating logistics in fewer facilities. Manufacturers increasingly deal directly with their final customers, removing many of the traditional tiers of intermediaries.

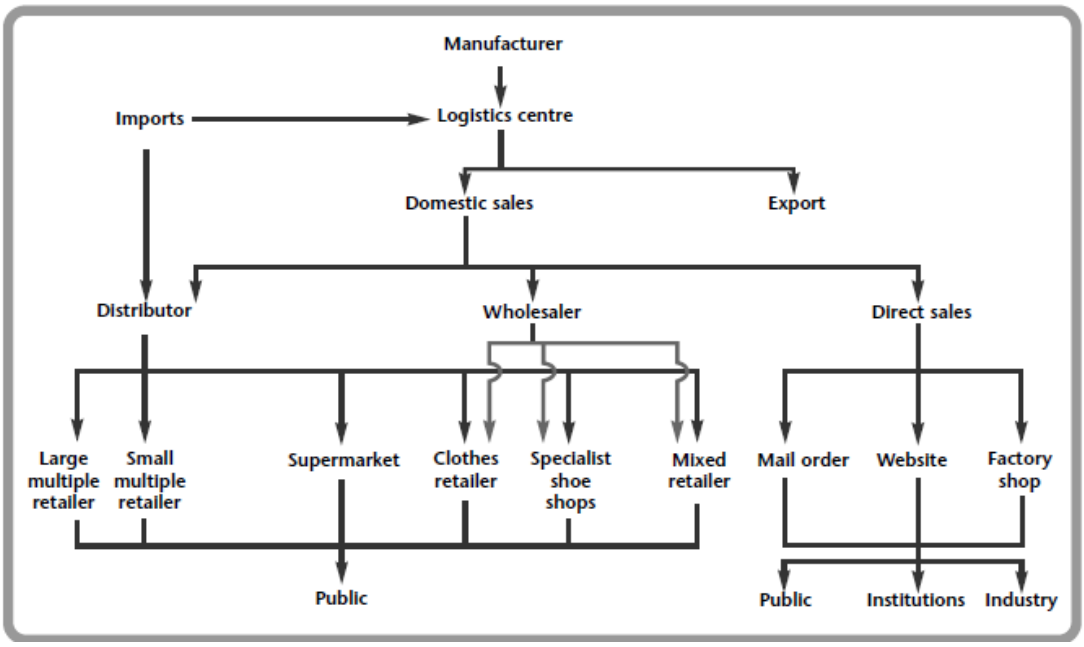


Figure 4.4 Simplified supply chain for distributing shoes

Within the European Union the free movement of materials means that companies can replace national warehouses by a single European logistics centre. Similarly, efficient transport within the United States allows companies to work from one major centre.

Location of facilities

The structure of the supply chain sets the number of participants, including wholesalers, warehouses, logistics centres, and so on. The next question concerns the best location for each of these.

The **best location for facilities depends on many factors.** A **warehouse**, for example, might be near to factories, customers, transport or areas with development grants. The location clearly has an effect on logistics performance. If an organisation wants **fast delivery,** it will use local warehouses that are physically close to final customers; **if it wants low costs,** it will concentrate stocks in large, centralised warehouses that are inevitably some distance away from customers; if it **imports and exports** a lot of materials it might use warehouses near to ports or rail terminals; **if it manufactures goods,** it will have a stock of finished products near the factory.

Questions of location should be tackled very carefully, as they have a considerable impact over the long term. **Once a facility is open it is difficult to close it down or move it.** An important point, though, is that location is not an isolated decision. It leads to a series of related decisions about the work done in each location, size of each facility, level of technology used, layout of resources, customers to serve from each location, and so on.

Ownership and outsourcing

One organisation does not have to own a supply chain to get the benefits of integration. Suppliers and customers can get mutual benefits by working together, typically in a **strategic alliance.** We have concentrated on supplier–customer partnerships, as these are easiest to imagine and they have most effect on the supply chain. However, a similar arrangement can cover a whole range of services, such as electricity supply, banking service,

and office cleaning. A **common form of partnership for logistics has a specialised company looking after all of an organisation's transport.** This arrangement has the advantages of an efficient and experienced specialist to look after the transport, while the organisation can concentrate on its core operations. But why stop at transport? An organisation can form partnerships with other companies to **look after warehousing,** purchase of materials, materials handling, and many of the other functions of logistics. When one company uses other companies to run its logistics, it is called **third party** or **contract logistics**.

In essence, though, the use of third party logistics is a **special type of 'make-or-buy'** decision. Sometimes it is better to keep logistics within the organisation, and at other times it is better to use a specialist. Rowley summarises the benefits by saying that 'The results of successful outsourcing are service improvement, cost reduction and quality enhance- ment'.3 A fuller list of potential benefits includes:

- lower fixed costs, with customers only paying for services they use
- specialist suppliers who have expertise and use the best systems and practices
- suppliers can combine work from several customers to get economies of scale
- guaranteed high, and agreed, levels of customer service
- flexible capacity, dealing effectively with peaks and troughs in demand
- lower exposure to risk from, say, varying demand
- increased geographical coverage and local knowledge
- a convenient way of entering new markets.

Of course, there are **disadvantages** to be set against this, such as reduced control, inability to respond to unusual circumstances, more complicated communications, conflicting objectives, less control over costs, and so on. Nonetheless, the advantages of third party are becoming clearer, with more organisations moving in this direction. Surveys4 put the value of the European logistics market at over $150 billion, with contract logistics accounting for $40 billion and rising by 8% a year.

Enabling practices

Enabling practices are the activities associated with the supply chain that allow it to work efficiently. We might, for example, say that reliable information processing is an enabling practice that allows logistics to function properly.

After an organisation has designed the structure of its supply chain, and found the best locations for facilities, there are many **ways of managing the flow of materials through the chain.** It could, for example, use just-in-time methods to reduce stocks, EDI to link with partners, or procurement via websites. These activities are not necessarily part of the supply chain itself, or they may not be considered core activities. They do, however, ensure a smooth flow of materials to help the supply chain work as planned. In a bus company, the maintenance of vehicles does not contribute directly to the movement of people, but it is an enabling practice that helps the company work properly.

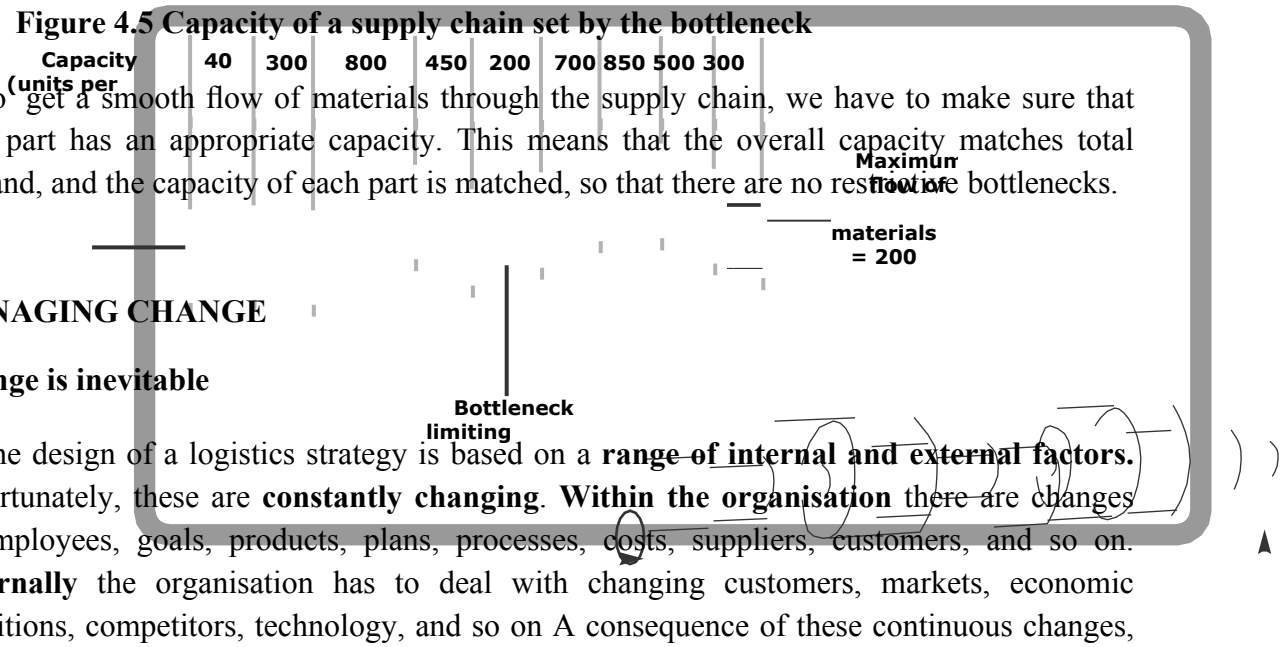
The idea of the enabling practices as supporters of logistics can be important. If you look at a series of organisations in the same business, it is likely that they will have evolved in

similar ways, and have similar structures for their supply chains. **Most whisky distillers or detergent manufacturers have supply chains with the same general shape.** They cannot, therefore, compete by having a better supply chain structure, but they can **use enabling practices to get a competitive advantage**. These allow different methods and procedures to improve performance.

Capacity

The capacity of a supply chain is the largest amount of materials that can flow through it in a given time. A lorry might have a capacity of 25 tonnes that it can carry on a journey, while an airline has a capacity of 450 passengers on a flight, a warehouse can unload 210 lorries a week, or a retail shop can serve 120 customers an hour. **Not all parts of a chain have the same capacity,** so the overall capacity is set by the part with the smallest individual capacity. This forms the **bottleneck**. **If wholesaling forms the bottleneck with a capacity of 200 units of a product an hour, this sets the capacity of the whole supply chain** – even if other parts have a much higher capacity (as shown in Figure 4.5). The only way of increasing the capacity of the supply chain is to **increase the capacity of the bottleneck;** adding more resources elsewhere has no effect, it only increases the amount of spare facilities and reduces the utilisation. This seems an obvious point, but you can often see companies spending money on the wrong areas – for example an **airline buying more planes, when its passenger numbers are limited by its landing slots at an airport.**

Figure 4.5 Capacity of a supply chain set by the bottleneck



To get a smooth flow of materials through the supply chain, we have to make sure that each part has an appropriate capacity. This means that the overall capacity matches total demand, and the capacity of each part is matched, so that there are no restrictive bottlenecks.

MANAGING CHANGE

Change is inevitable

The design of a logistics strategy is based on a **range of internal and external factors.** Unfortunately, these are **constantly changing**. **Within the organisation** there are changes to employees, goals, products, plans, processes, costs, suppliers, customers, and so on. **Externally** the organisation has to deal with changing customers, markets, economic conditions, competitors, technology, and so on A consequence of these continuous changes, is that the logistics strategy also has to evolve over time. Managers cannot design a strategy and then just work on its implementation – they also have to keep adjusting strategy.

As the strategy evolves, the operations of the whole logistics function must adjust and move forward. **New practices affect everyone.** Unfortunately, this presents a problem, as most of us do not really like changes. We might claim to welcome change, as it stops us from stagnating and getting bored. The truth, however, is that changes need a lot of effort, forcing us to abandon old and familiar practices, to learn new skills, new ways of doing things, new procedures, and to form new relationships. **Change moves us away from a reasonably**

predictable future to one with uncertainty and risk.

Many organisations prefer to stick to their old practices. Unfortunately, this allows more flexible competitors to gain an advantage, and their performance inevitably declines. Some signs that an organisation is not changing to meet new circumstances include:

- low sales and falling market share, as old products are overtaken by competitors
- many customer complaints, particularly about quality and delivery dates
- reliance on a few customers, especially with long-term, fixed-price contracts
- old-fashioned attitudes and operations
- poor industrial relations, with low employee morale and high staff turnover
- poor communications within the organisation and with trading partners
- too much inflexible top management with no new appointments
- inward-looking managers who are out of touch with operations or customers.

Change is a normal part of business and if we do not respond we will fall behind competitors. To be more positive, we should welcome change as it creates opportunities, improves work conditions, gives better practices and performance, and more interesting, better-paid and more secure jobs. This new attitude does not happen by chance, but it needs careful management.

One suggestion is that organisations need a **champion**, or **change manager**, who leads them away from their present position. This manager has the vision to see how an organisation can improve, and the ability to move it in the right direction. Unfortunately, this can be a traumatic journey, and organisations typically move through a series of stages:5,6

1. *Denial* – where employees deny that there is a need for change
2. *Defence* – defending the current way of doing things and criticising new proposals
3. *Discarding* – beginning to move away from the old ways and towards the new ones
4. *Adoption* – using the new ways and accepting that they are beneficial
5. *Integration* – assuming the new ways are normal and using them naturally.

The key point is that change must be managed. People have to do things differently, and they must be convinced that changes are both essential and beneficial. Getting this message across is the difficult part of change management.

Rate of change

One important feature of change is the rate at which it occurs. Some organisations **change very quickly, such as Intel** which works at the frontiers of technology and is continually developing new products. Others change very slowly, and even make a virtue out of stability, such as **Morgan sports cars** whose basic design originated in the 1930s.

Major changes can be very disruptive, so organisations generally prefer a series of small adjustments. This iterative approach gives **continuous improvement** which is known by the Japanese name of ***kaizen***. A stream of relatively minor changes can be absorbed by the organisation without major interruptions. There is also little risk, as any of the 'improvements' that do not work can easily be reversed. Over time, this incremental approach builds a momentum for improvement, and makes sure that the logistics system is

always getting better.

Suggestions for iterative improvements come from many sources, such as customers, competitors or suggestion boxes. Sometimes there is a more formal arrangement, such as the **plan–do–check–act cycle**, or **Deming wheel** (shown in Figure 4.7).

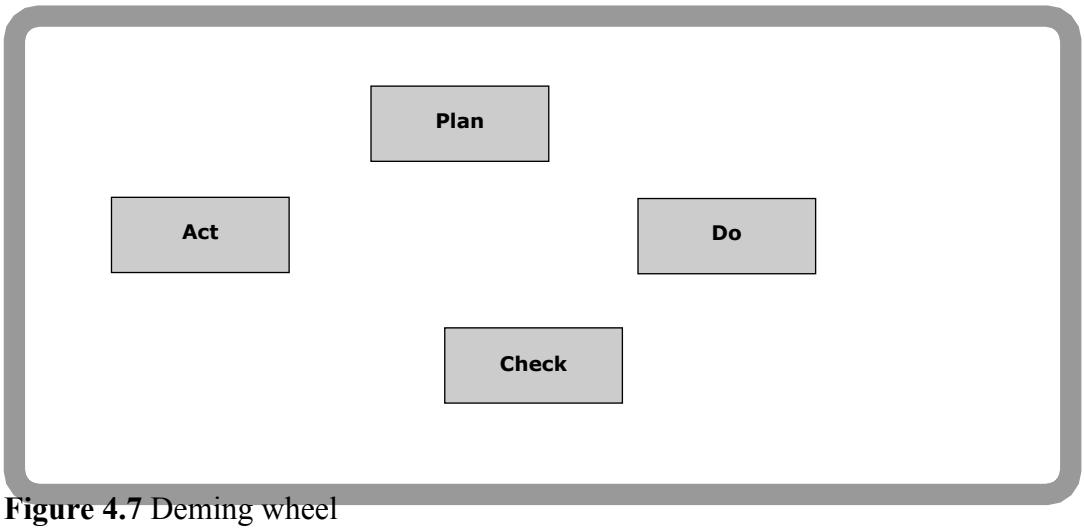


Figure 4.7 Deming wheel

This uses a team of people who positively look for improvements to logistics using the cycle:

- *plan* – looking at the existing logistics, collecting information, discussing alternatives, and suggesting a plan for improvement
- *do* – where the plan is implemented, and data is collected on subsequent performance
- *check* – which analyses the performance data to see if the expected improvements actually appeared
- *act* – if there are real improvements the new arrangements are made permanent, but if there are no improvements, lessons are learnt and the new arrangements are not adopted.

The team is continuously looking for improvements, so at this point they return to the begin- ning of the cycle, and consider more changes.

Business Process Re-engineering

Some people say that small continuous improvements to operations are not the best approach. They suggest that small adjustments only tinker with details and make no real difference. If you have a poor logistics system, the way of improving it is not to tinker with the details, but to take a broad stroke and look for dramatic improvements. The best-known approach of this kind is **business process re-engineering** (BPR). Hammer and Champy7 define this as follows:

> **BUSINESS PROCESS RE-ENGINEERING** is the fundamental rethinking and radical redesign of business processes to

achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed.

The idea **behind** re-engineering is that you do not look for improvements in your current operations, but you start with a blank sheet of paper and design a new process from scratch. This is rather like running an old car. You can tinker with it and keep it going a bit longer, but the re-engineering solution is to buy a new car. If you have a poor logistics system, you should not waste time tinkering to find small improvements, but should throw away the whole system and design a new one from scratch. Ford of America gave one classic example of this approach.

BPR does not give new methods, but it consolidates several related ideas. Some of its main principles for the supply chain are:

- a supply chain should be designed across functions and allow work to flow naturally, concentrating on the whole supply chain rather than the separate parts
- managers should strive for dramatic improvements in performance by radically rethinking and redesigning the supply chain
- improved information technology is fundamental to re-engineering as it allows radical new solutions
- all activities that do not add value should be eliminated
- activities should be carried out where they make most sense – information processing, for example, becomes a part of logistics rather than a separate function
- decisions should be made where the work is done, and by those doing the work
- you do not have to be an expert to help redesign a supply chain, and being an outsider without preconceived ideas often helps
- always see things from the customer's point of view.

One important point is that BPR does not replace continuous improvement. It is possible to have a series of radical improvements, and still introduce smaller continuous improvements (as shown in Figure 4.8).

BPR is a **general approach to change rather than a formal procedure,** so we cannot say, 'this is how to re-engineer a process'. Perhaps because of this, organisations have mixed experiences with its use. Some have reported outstanding results – like the early work in the IBM Credit Corporation which increased output by a factor of 100. But around three-quarters of organ-isations fail to get the improvements they hoped for.8

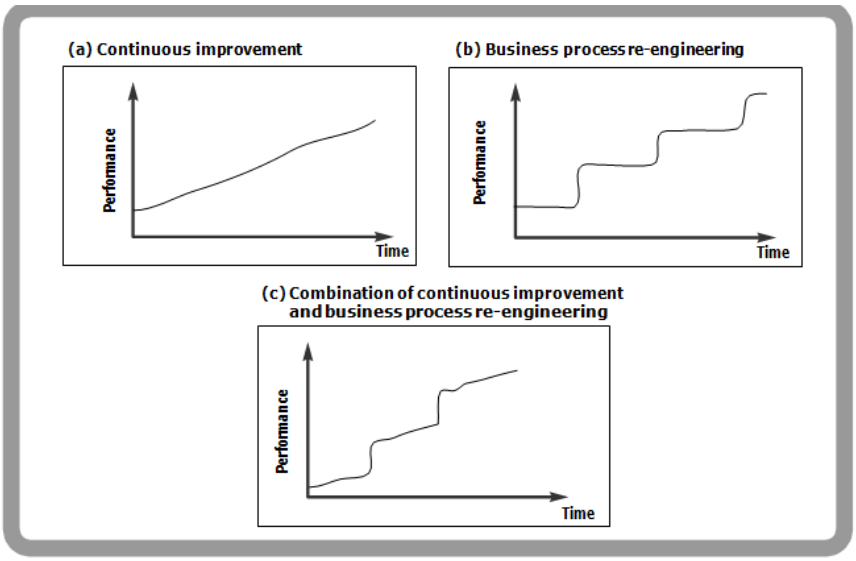


Figure 4.8 Rate of performance improvement

REVIEW:

- **The logistics strategy sets the overall direction for logistics. Implementing the strategy translates this into a series of lower decisions and actions.**
- Unless the strategy is designed properly, implementation can be difficult or impossible. To avoid these problems, managers should consider implementation during the design of the strategy, they should involve those involved in implementation, and so on.
- Some strategic decisions are concerned with principles, while others are more concerned with achieving the principles. The first of these are considered more in the design of a strategy, while the second are considered more in the implementation.
- Important decisions for implementing the logistics strategy include the structure of the supply chain (length, breadth, number of tiers, type of intermediaries, and so on), location of facilities, outsourcing, enabling practices and capacity.
- The supply chain must continually evolve to keep up with changing conditions. These changes can be difficult, and need careful management.
- An important question concerns the rate of change. Continuous improvement uses a series of small adjustments to build up a momentum for change-over time. Business process re-engineering looks for more radical changes.

PROJECT

Supply chain

Have a look at the supply chain for a familiar product, such as a brand of lager or a CD. Describe the structure of this chain, emphasising its length and breadth. Why does it have this particular structure? Discuss the alternative structures and point out their benefits and disadvantages.

DISCUSSION QUESTIONS

1. What exactly is meant by 'implementing the logistics strategy'?
2. We suggested a difference between strategic decisions that set the principles for logistics, and those concerned with the practicalities of implementation. Do you think that this is a real difference? What kind of decisions fit into each category?
3. It is often more difficult to implement a logistics strategy than to design one. This is why most logistics plans fail in the practice rather than the theory. Do you think that this is necessarily true? What can organisations do to improve the implementation?
4. What are the main areas for strategic decisions in logistics?
5. Supply chains are not usually designed from scratch, but evolve over time. What problems does this create? Can you suggest a better approach?

6. Can you find any examples of good logistics strategies that have given poor results because of poor implementation? What could have been done better?

REFERENCES

1. Ballou R.H. (1981) Reformulating a logistics strategy, *International Journal of Physical Distribution and Materials Management*, **11**(8), 71–83.
2. Helming W. and Zonnenberg J.P. (2000) The five fulcrum points of a supply chain strategy, *Supply Chain and Logistics Journal*, Winter.
3. Rowley J. (2001) Outsourcing across borders in Europe, *Logistics and Transport Focus*, **3**(1), 54–6.
4. Datamonitor (2000) *European Logistics 2000*, Datamonitor, London.
5. Cubitt B. (2000) Change: the final frontier? *Logistics and Transport Focus*, **2**(3), 39–42.
6. Carnall C. (1991) *Managing Change*, Routledge, London.
7. Hammer M. and Champy J. (1993) *Reengineering the Corporation*, HarperCollins, New York.
8. Hammer M. (1996) *Beyond Reengineering*, HarperCollins, New York.