Chapter 4 Strategic Planning

Book: International Logistics: Global Supply Chain Management by Douglas Long

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Outline

- The planning process
- ISO90000
- Financial issues
- Location theory and network design
- Material requirements planning
- Forecasting
- Benchmarking
- Reverse logistics

1. The Planning Process

- Strategic planning try to answer 3 basic questions
  - Who are we?
  - Where do we want to be?
  - How are we going to get there?
- All enterprises should make strategic planning a basic part of their work
- High performing organizations frequently credit their success to a good plan

1. The Planning Process

- Definition of strategic planning
  - The process of identifying the long-term goals of the entity (where we want to be)
  - and the broad steps necessary to achieve these goals over a long-term horizon (how to get there),
  - incorporating the concerns and future expectations of the major stakeholders

1. The Planning Process

- Definition of logistics strategic planning
  - A unified, comprehensive, and integrated planning process to achieve competitive advantage through increased value and customer service, which results in superior customer satisfaction (where we want to be),
  - by anticipating future demands for logistics services and managing the resources for the entire supply chain (how to get there).
  - This planning is done within the context of the overall corporate goals and plan.

1. The Planning Process

- Planning is done at different levels
- Each level is defined by
  - Time horizon
  - The people doing the planning
  - Activities being planned
- Planning levels
  - Strategic planning
  - Tactical planning
  - Operational planning

1. The Planning Process

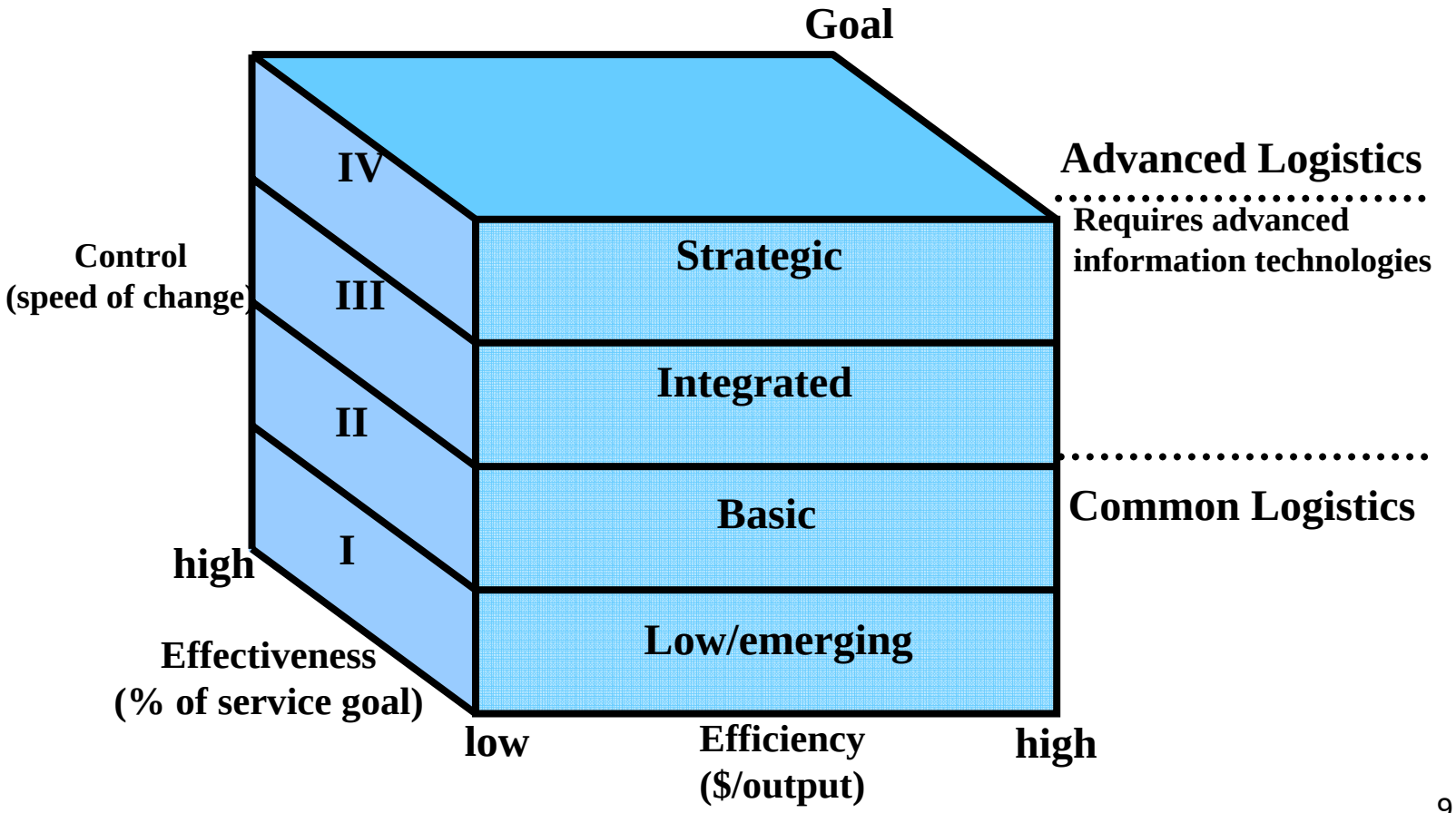
- The differences between logistics planning and other types
  - The number of dimensions involved
  - 4 dimensions of logistics planning
    - Time
    - Functional areas
    - Space
    - Other parties

1. The Planning Process

- Five strategies for logistics
  - Cost minimization
  - Value-added
  - Channel integration
  - Quick response
  - Total enterprise

1. The Planning Process

- Materials logistic performance evaluation



1. The Planning Process

- Planning Authority
  - Authority is the right and power to make certain decisions
  - The basic decision in the distribution of authority is where to give what powers
  - Centralization vs. decentralization
  - For the international transportation industry, because it is inherently distributed across a wide geographic area, the question of how authority is distributed is of great importance

1. The Planning Process

- The ways that multinational enterprises may arrange their operations
  - Globally concentrated production
  - Host-market production
  - Product specialization for a global or regional market
  - Transnational vertical integration

2. ISO9000

- ISO is the International Standards Organization, based in Geneva, Switzerland with local organizations in each country
- ISO9000 is a certification program to improve quality in organizations
- ISO establishes standards, mostly voluntary but many are passed into law
- ISO9000 is certification that organizations can win that shows they adhere to a recognized standard

2. ISO9000

- 3 common misunderstandings of ISO9000
  - It is a guarantee of quality
  - It is a certification that the company has achieved a given result
  - It is legally required

2. ISO9000

- Meaning of ISO9000
  - The company is doing things right, but not that it is doing the right thing
  - The company follows a given set of procedures. These procedures are the well recognized steps that high-performing organizations usually follow. No government laws require IOS9000 certification

3. Financial Issues

- Finance
  - Finance is a language, a way of understanding a given phenomena
  - Logistics is about moving things. Finance seeks to explain this in terms of money.
  - Understanding and managing logistics, particularly in the business world, is best understood in terms of finance, but it is not the only way.

3. Financial Issues

- Prices
  - The first step in understanding finance is to understand prices. When something is bought and sold, there is a price associated with it.
  - As products move through a supply chain, they are not always being sold. The cargo may be transferred from one facility to another, or some other non-commercial transaction.
  - Internal pricing and transfer pricing is an important concept to logistics.

3. Financial Issues

- Transfer pricing
  - Anything transferred must be bought or sold as if the two units were not at all related.
  - Transfer pricing affects logistics
    - In strategic planning, a company often makes decisions such as whether it is worthwhile to import a part from a foreign subsidiary or acquire it locally
    - In documentation, import documentation asks for the cargo value, used to assess customs duties.

3. Financial Issues

- Cost
  - Understanding the true costs of logistics is a critically important and difficult task.
  - Without a clear understanding of costs, it is almost impossible to see the benefits associated with logistics.

3. Financial Issues

- Concept of value-added, two principles of costing
  - Accounting systems should mirror the material flow to identify the cost of servicing customers
  - Accounting systems should be able to analyze costs and revenues by customer type and market segment or distribution channel

3. Financial Issues

- Some problems with conventional accounting applied to logistics
  - Ignorance of the true costs
  - Aggregation is too high
  - Full cost allocation
  - Focus on functions rather than outputs
  - Product costs versus consumer costs

4. Location Theory and Network Design

- Location Theory
  - Explain why things are placed where they are.
  - Done at two levels
    - Firms use certain criteria for deciding where to locate their headquarters, office space, factories, warehouses and so on.
    - Look at the overall pattern of industrial development and seeks to explain why certain places have a lot of factories, while other regions are used for office space.

4. Location Theory and Network Design

- Location theory
  - Classic work: Heinrich von Thunen-Isolated State
    - Land closest to the market will be the most expensive, and land prices fall in relation to their distance from market
  - Alfred Weber (1929), Industrial Location
    - Manufacture location
      - Material-oriented
      - Market-oriented
    - The best location for a manufacturing plant is the place where transportation costs are minimized.

4. Location Theory and Network Design

- Location theory
  - Alfred Weber (1929), Industrial Location
    - Types of raw material depending on transport characteristics
      - Ubiquitous raw materials
      - Localized raw materials
      - Pure raw materials
      - Gross raw materials

4. Location Theory and Network Design

- Location theory
  - Other factors influences firm location
    - Cost of land
    - Cost of labor
    - Cost of living
    - Cost of capital: liquid capital (money), fixed capital (buildings)
    - Professionals
    - International bordres
  - The decision of where to locate a facility is based on the location of suppliers, other resources inputs, competitors and the market.

4. Location Theory and Network Design

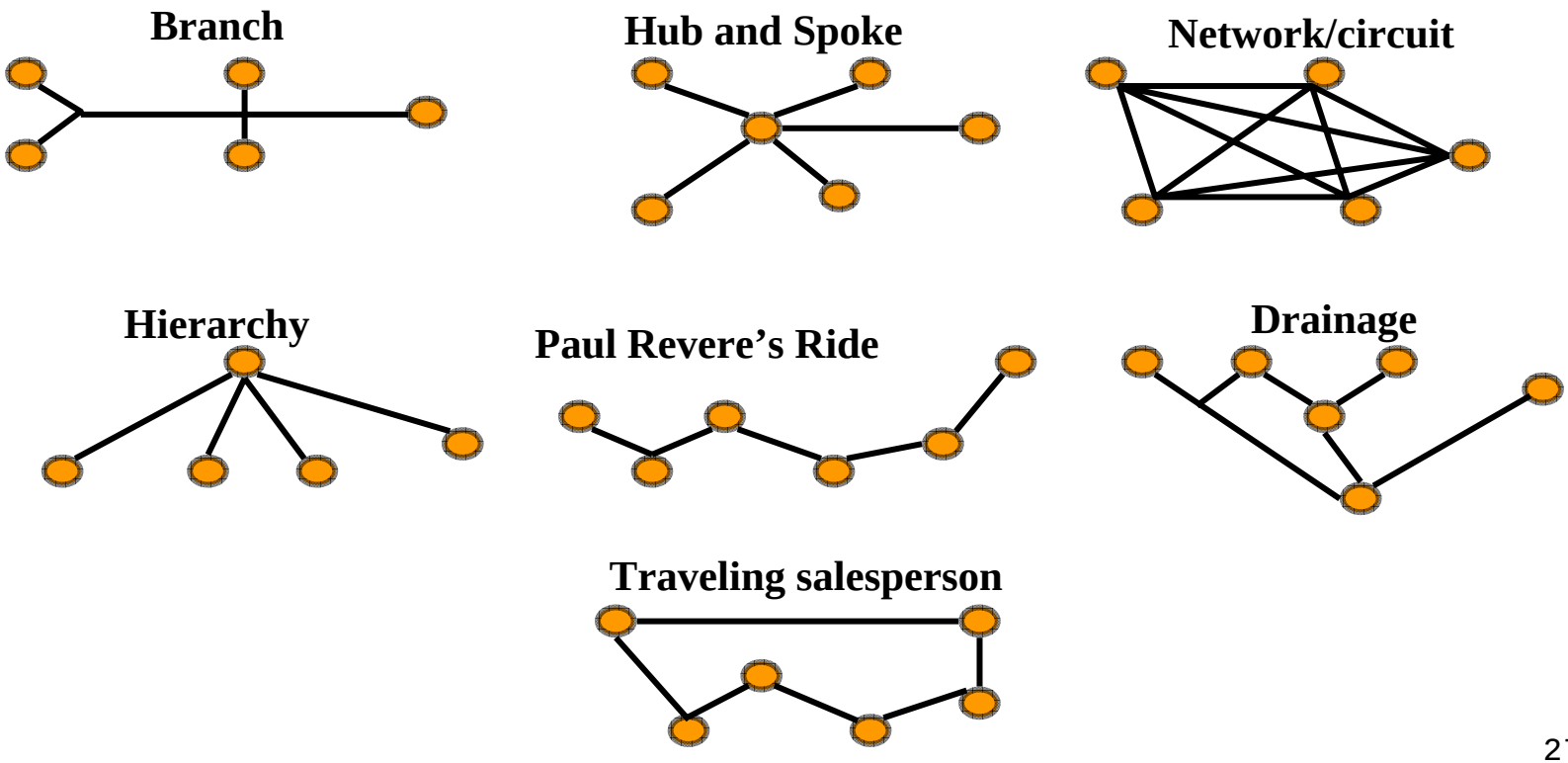
- Network design
  - A highly abstract tool for things like designing distribution routes or a corporate chain of command.
  - The emphasis on networks is not so much the location of any one facility, but how they are all connected with each other.

4. Location Theory and Network Design

- Network design
  - Connectivity in a network refers to the ratio of routes to hubs, and gives us an idea how easy it is to move from one place to another.
  - An area with more connections offers easier and more efficient movement.

4. Location Theory and Network Design

- Network design
  - Some of the most common methods



4. Location Theory and Network Design

- Route design
  - The cargo is sent to a hub, and from there to another hub or the final destination.
  - Line-haul: primary trade land
  - Feeder route: the delivery to the hub, secondary trade land
  - The distinction between primary and secondary trade lanes is important because, when making a decision on where to cut costs, one should look at the largest costs first.

5. Material Requirements Planning

- Material requirements planning
  - Definition: a system of forecasting or projecting component part and material requirements from a company's master production schedule (MPS) and the bill of material (BOM). The time-phased requirements for components and materials are then calculated, taking into account stock in hand as well as scheduled receipts.
  - The right part at the right time to meet the schedules for completed products

5. Material Requirements Planning

- Material requirements planning
  - A major tool of logistics planning
  - MRP systems put together computerization and a manufacturing information system that ties together all the inputs of production.

5. Material Requirements Planning

- Master production schedule (MPS)
  - MPS states what is to be produced and when
  - MPS is based primarily on marketing plans
  - Based on MPS, there will be a bill of materials (BOM), a list of all the inputs needed.
  - MPS says what is going to be produced, BOM is the list of all the parts and other materials needed to produce them. MRP then plans out when each and every piece is needed.

5. Material Requirements Planning

- MRP system has been taken one step further, to include financial, marketing and logistical elements.
- Manufacturing is not a process by itself, but affects the entire enterprise.
- MRP II, known as manufacturing resource planning, takes the basic system and ties it into the other departments.

5. Material Requirements Planning

- Distribution Requirements Planning (DRP)
  - Related to MRP but it looks at the distribution requirements.
  - MRP is based on internal production requirements, whereas DRP is based on external customer demand.
  - DRP systems serve the following purposes:
    - Coordinate inventory replenishment
    - Select transport mode, carrier and shipment size
    - Schedule shipping and labor
    - Develop the master production schedule

6. Forecasting

- In logistics, fulfilling customer needs that remain constant would be extremely easy. The problem is that customer demand is frequently changing. The leaves us with excess inventory, unfulfilled orders, or expensive last minute deliveries. All of these are potentially expensive alternatives.
- Concerned with two types of forecasting
  - The shippers that are forecasting their sales and thus creating the demand for logistics
  - The carriers that are forecasting the shipper's demand and thus their sales demand.

6. Forecasting

- The quantity of forecasted demand is composed of a few different parts:
  - Basic demand
  - Cyclical adjustments
  - Long-term change trend
  - Promotional factor
  - Buffer range

6. Forecasting

- Two approaches for forecasting
  - Top-down: the executives give their forecast and the rest of the organization uses that.
  - Bottom-up: those at the lowest levels of the organization are asked to forecast their anticipated demand, or the sales people are asked to give their expected sales, and this is then aggregated at the higher levels to come up with a forecast.

6. Forecasting

- Criteria for evaluating the applicability of a forecasting technique
  - Accuracy
  - Forecast time horizon
  - Value of forecasting
  - Availability of data
  - Type of data pattern
  - Experience of the forecaster

7. Benchmarking

- Benchmarking is the process of comparing one's operations to a 'model', or benchmark, to judge performance.
- A role model or a standard by which an organization can judge its own performance
- Benchmarking is sometimes done as a singular event, but more often it is an ongoing process

7. Benchmarking

- Different types of benchmarking
  - Internal
  - Competitive
  - Functional
  - Generic process
- A major challenge in benchmarking is to find out what the competitors are doing. Some aspects are easy to see, but other are internal and secret. Competitive benchmarking can be the most difficult for this reason.

7. Benchmarking

- Do not use macroeconomic statistics as your own benchmark. The national or international economy is not a good guideline by which to judge the performance of an individual company.
- Another question is how to decide what to benchmark. It would be very rare to benchmark every aspects of their operations. That would be expensive. Only pick those areas that are most important.
- Document everything, when many changes are being made, it helps to see where they started.

8. Reverse Logistics

- Definition
  - All of which entail materials moving in the reverse direction of the normal supply chain.
  - CLM: Reverse logistics is a broad term referring to logistics management skills and activities involved in reducing, managing, and disposing of hazardous or non-hazardous waste from packaging and products. It includes reverse distribution … which causes goods and information to flow in the opposite direction of normal logistics activities.

8. Reverse Logistics

- Recycling and reuse
  - One of the largest areas of reverse logistics
  - The new emphasis is the result of environmental regulations in many countries.
  - Many companies have realized that, regardless of regulations, reuse and recycling can reduce costs and improve efficiency. Waste management, the job of disposing of waste, has become a huge and expensive industry.

8. Reverse Logistics

- Recycling and reuse
  - Source reduction
    - Used to reduce the aount and toxicity of materials used so that eventually there will be less waste created.

8. Reverse Logistics

- Hazardous materials
  - A particularly important aspect of reverse logistics
  - Safety regulations are so strict in the handling of some materials that manufacturers often find it cheaper and safer to take an active role in its disposal.
  - In many cases the manufacturer is required to take on the job of disposal because they are most knowledgeable in some special, highly dangerous materials.