# Chapter 1-2 (17-83)

1. **Logistics subsystems** 
   1. **Introduction to Logistics**
      1. **Military Logistics**
         1. All preparations and actions required to provide troops with goods and supplies in the most efficient manner to have them fighting under the most favourable circumstance.
         2. The art of moving, quartering and supplying troops.
      2. **Modern definition from ELA**
         1. Logistics entails the organization, planning, control and execution of the flow of goods from development and purchasing, through manufacturing and distribution to the consumer (end user), up to and including the reverse flow. The aim is to meet market demand at lowest cost and best use of capital and build long-term relationships with customers.
      3. **Q: Does military definition correspond to the modern one?**
         1. Based on the concept of ‘Customer service is the prime concern’, it’s the same for the first request of troops is to have enough ammunition right on time. The difference we might consider about is that the main customer of military as the general and troops wouldn’t care the cost of triumph, as long as the war wasn’t draining the country up. Yet we nowadays are thinking about saving money in every sector of the chain. So, we can say the biggest difference is that we now do as much money-saving work as we can, but the military one just thinks about money-controlling. Also, we now do this work more delicately, caring the goods and the customers, which is quite hard to be fulfilled in the old times. However, that’s to view it in a lower perspective of practice. If from the core top belief inside, there isn’t much difference.
   2. **Historical development of logistics**
      1. **Challenges:** 
         1. Short delivery times
         2. Customize products as specific requirements
         3. Optimal stock management
      2. **Four parts in business logistics (*integral goods flow control*)**
         1. Purchasing (physical supply)
         2. Production (material management)
         3. Distribution
         4. Reverse logistics.
      3. **Four vitally important interfaces with logistics**
         1. SCM supply chain management
         2. CRM customer relations management
         3. PLM product lifecycle management
         4. APS advanced planning system
   3. **Logistics subsystems** 
      1. **Material management**
         1. **Definition**

**3Rs in inventory:**

1. Risk
2. Rent (interest, opportunity cost)
3. Runout
   * + - 1. all activities undertaken to feed the efficient flow of raw materials and semi-finished products and the accompanying flow of date
         2. to and through the production process
         3. activities performed to achieve the most efficient possible use of production equipment
       1. **Q: Four subsystems within the material management** **system**
          1. purchasing, supply logistics, procurement
          2. -inventory control of raw materials, resources and semi-finished product
          3. production planning and managing the execution of plans
          4. materials handling (*some situation can do maintenance while producing*)
       2. **Do four subsystems equally important to the processing and the assembly industry?**
          1. Purchasing and materials handling seem more important to the assembly industry.
       3. **Production value**
          1. the value of the purchased material, increased by the value added by the production company
       4. **Sales value**
          1. the production value, increased by the added value and profit margin achieved by the sales and marketing sector
       5. **Cost structure of material management**
          1. **Inventory invesments**

raw materials and resources

semi-finished products

work in progress

* + - * 1. **materials handling**

*the storage and internal transport* of raw materials and resources, semi-finished product and work in progress

* + - * 1. **production planning and control**

activities that are needed to manage production, *not production itself*

* + - * 1. **purchasing**

*the logistic and not the commercial aspect* of procurement

* + - * 1. **the other costs**

the provision of information, administration and overhead(间接费用).

* + 1. **Physical distribution management**
       1. **Definition**
          1. the flow of goods and accompanying flow of data that starts at the end of the production process and finishes with the consumer
       2. **Three subsystems within the physical distribution system**
          1. inventory control of finished products
          2. decisions regarding warehouses and depots

difficulty differs in different origins and destinations:

Netherlands - Germany

Singapore - Malaysia

boarder control

infrastructure

landscape

* + - * 1. external transport
      1. **Cost structure of Physical distribution management**
         1. **Inventory cost**

**the interest costs related to the capital tied up in present inventory**

* + - * 1. **External Transport**

**the external transport between manufacturer, wholesaler and retailer**

* + - * 1. **Warehouse costs**

**the available space available for storage.**

* + - * 1. **Material handling costs**

**storing goods in stock and order picking.**

* + - * 1. **Internal transport**

**transport of goods inside the warehouses and depots of both manufacturer and distributor.**

* + - * 1. **Packaging**
        2. **Other**

**Costs of the administration**