IV. CASES OF THE LEADING PORTS IN DEVELOPING LOGISTICS CENTRES

A. Port of Rotterdam as an European logistics centre

The development of the Netherlands as a logistics centre for international firms was due to its historical strengths, its specialization in trade, and the existence of excellent infrastructure. Since the Middle Ages, the Netherlands has strongly depended on trade and transport related activities in order to overcome its own lack of natural resources and local industry.

From the beginnings of containerization in the early 1960s, the Port of Rotterdam grasped the opportunities this new transportation system offered, investing heavily in handling facilities and equipment for efficient transhipment of containers to inland modes of transport. Another strategic advantage for the Port of Rotterdam has been its ability to accommodate the largest bulk ships, which has enabled large container vessels to call upon the Port of Rotterdam without any difficulties. This superior maritime infrastructure enabled not only the establishment of transhipment points and storage facilities but also the emergence of a chemical cluster around the Port of Rotterdam.

Because of its basic logistics infrastructure and liberalization of transport services and logistics trends, the Port of Rotterdam can be classified as a logistics super hub. The European Logistics Centres (ELCs), though located throughout the Netherlands, are some of the best examples in the world of logistics activities that are linked to a port.

ELC is a major trend in European logistics, not only for multinationals but also for medium-sized enterprises, many of which are setting up their logistics centres in the European market. Nowadays, most of these firms adopt centralization of Europe-wide distribution that brings many logistical and other advantages to the firms involved, including reduction of logistics costs, increased sales, improved control, better product availability, enhanced competitive position, faster market response, as well as savings on workforce and infrastructure investment.

A very specific characteristic related to the ELC is that the goods stored in these ELCs are seen as transit goods from the perspective of customs authorities. Since transit goods are those that have not yet been imported to the Netherlands or Europe, neither imports tariffs nor customs procedures are needed. The possibility of easy re-export of these transit goods by container is an important reason for the spatial nearness of ELCs to ports. In many places the distribution centres have clustered in Distriparks. Distriparks are the Port of Rotterdam’s response to the growing demands on shippers and transport service providers for just-in-time distribution at lower cost.

The Municipal Port Management of Rotterdam encouraged the formation of Distriparks in order to consolidate cargo flows to the port and create port-related employment. Cargo destined for the Rotterdam Distriparks comes in mainly by container. Therefore, the proximity of a container terminal is an advantage for a distribution centre in Rotterdam. The concept of the Rotterdam Distriparks is just-in-time delivery at lower cost. To fulfill this mission, the parks:
• Have facilities for distribution operations
• Are located close to cargo terminals so that the empty container, after stripping, can be taken back into the system. Moreover, transport from terminal to warehouse is cheap
• Are located close to various hinterland transport facilities
• Provide value added services
• Have the latest in communication technology
• Have a highly skilled workforce
• Have Customs on site

Three distriparks have been established in the Port of Rotterdam as shown in table IV.1 and figure IV.1. A Distripark is a large-scale, advanced, value-added logistics complex with comprehensive facilities for distribution operations at a single location, which is connected directly to container terminals and multimodal transport facilities for transit shipment, employing the latest in information and telecommunication technology. Distriparks provide space for warehousing and forwarding facilities, including the storage and transshipment of cargo and the stuffing and stripping of containers. They also provide a comprehensive range of value-added services to fulfill highly heterogeneous customer demand. These value-added services include assembly, labeling, testing/examination, packaging and repackaging, sorting and invoicing.

The Port of Rotterdam and the Europe Combined Terminals jointly developed the Delta 2000-8 Plan, the objective of which is to construct eight Distriparks in the Delta terminal at the Port of Rotterdam by the end of 2000. Delta 2000-8 is the most advanced logistics concept ever developed in the Port of Rotterdam.

A major advantage of the Distripark concept is that the distribution centre is located very close to the cargo terminal, making transport between these two places fast and cheap. In addition, from the distribution centre the client may choose among a variety of transport modes, depending on time pressures, costs and destinations.

Table IV.1. Distriparks in Rotterdam

<table>
<thead>
<tr>
<th>Distriparks</th>
<th>Starting Date of Operations</th>
<th>Land (m²)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eemhaven Distripark</td>
<td>1989</td>
<td>237,000</td>
<td>Close to the home terminal of ECT</td>
</tr>
<tr>
<td>Botlek Distripark</td>
<td>1990</td>
<td>165,000</td>
<td>Close to the Botlek Port area Handles many chemical products</td>
</tr>
<tr>
<td>Maasvalkte Distripark</td>
<td>1st phase: 1998 2nd phase: under construction</td>
<td>848,000 1,017,000</td>
<td>Close to the ECT Delta terminal Most companies are constructing their warehouses</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,267,000</td>
<td></td>
</tr>
</tbody>
</table>

In Rotterdam, there are hundreds of companies specialized in storage and distribution activities, providing logistics services all over Europe and other continents. The first EDCs emerged in the Port of Rotterdam, most of them in the older port basins, next to the existing container terminals in the Eemhaven Region. Construction of the Botlek Distriparks followed. See figure IV.1.
In the 1980s, the container-flows started to grow substantially, and Maasvlakte, a large port basin developed in the late 1960s but still empty because of the stagnation, was devoted to the container trade. In 1984, the Europe Combined Terminal (ECT), the major container-operator in the Port of Rotterdam, developed a completely new terminal in Maasvlakte, capable of accommodating the largest container-vessels and providing the most advanced technologies. See figure IV.2.

**Figure IV.1. Port of Rotterdam’s major distriparks: Eemhaven, Botlek and Maasvlakte**

![Map of Port of Rotterdam showing Eemhaven, Botlek, and Maasvlakte](source: Port of Rotterdam)

**Figure IV.2. Locations of Distripark Maasvlakte and the ECT container terminal**

![Map of Port of Rotterdam showing the location of Maasvlakte and ECT container terminal](source: Port of Rotterdam)
Box IV.1. Distripark Maasvlakte

Distripark Maasvlakte, a logistics centre on the western edge of the port area, is an excellent example of transport infrastructure management by the City of Rotterdam and the Port of Rotterdam Municipality.

Distripark Maasvlakte was completed in 1997. With a logistical park of 125 hectares, it was designed for companies seeking to centralize their distribution activities in order to gain greater control over their European distribution activities.

The Port of Rotterdam designed Distripark Maasvlakte for:

- Companies wishing to set up their own European Distribution Centre;
- Mega-carriers wishing to further penetrate the logistics chain;
- Mega-distributors wishing to set up a maritime hub for their European operations;
- Other (global) logistics service providers; and
- European exporters wishing to create a maritime export hub.

A unique characteristic of the Distripark Maasvlakte is its location close to the ECT container terminals, giving it a special connection with these terminals through a dedicated internal track (see figure IV.2). When a container is transported from an ECT terminal towards the ELC on the Distripark, the containers are not imported into the European economy. This results in time and cost savings, since expensive customs handling is no longer necessary. Distripark Maasvlakte offers immediate access to multimodal facilities for transport by rail, coastal shipping, inland shipping and truck.

ELC investment on Distripark Maasvlakte is growing fast. In the period 1997-2000 five companies had invested, or were in the process of investing, in Distripark Maasvlakte.

In 1992, the growth of the container volume became the spearhead of a new port policy: Havenplan 2010. The goal of this plan was to stimulate employment and create added value in the Port of Rotterdam. It also stated that the port should be developed as a main port, because of the large indirect effects related to the port. This new growth was to be achieved through the following:

- New space for large scale container-terminals: Further development of the Maasvlakte and its extension further into the North Sea, a project known as Second Maasvlakte.
- New infrastructure, in the port and to and from the port.
- New dedicated distriparks in the port aimed at adding value to the cargo transhipped through the port by value-adding logistic activities. The goal is to open the containers in the Port of Rotterdam-region, instead of merely transhipping them as fast as possible towards the hinterland.
- Strengthening industrial functions in the port, since the massive port industry ties good-flows to the port.
Consequently, the majority of investment in the main port has been in “hard” infrastructure: a railway-link, space for distriparks, and internal port infrastructure.

The Port of Rotterdam operates as a landlord port. This means that Rotterdam Municipal Port Management (RMPM) provides the infrastructure such as quays, basins and land. This infrastructure is leased out to private companies against a flat rate lease (generally long term), and is hence not related to cargo throughput at the terminal. The private company has to invest in all superstructures, such as pavement, rail tracks, cranes, sheds, equipment, etc. In addition, all employees, including stevedoring labour, fall under the responsibility of the private company.

The situation is similar when it comes to the building of Distriparks. The infrastructure (land) is provided by the RMPM, and plots are leased out to private companies, which, in turn, must invest in their own buildings and employ the people they need.

Though these parks are not free zones, each company within them can be considered as a free zone, or a “free point,” in and of itself. In the Netherlands there are approximately 1,500 of these free points. The Distriparks can offer freer facilities than a free port. When a company fulfils certain conditions with respect to security, and when it has established an online computer connection meeting certain standards with Customs, it may obtain a license from Customs permitting it to carry out certain basic Customs formalities on itself. Such a system makes the goods flow faster and more efficient.

B. Port of Singapore as an Asian logistics centre

Taking advantage of the growing trend for MNCs to establish central logistics centres (CLCs) in Asia, Singapore has emerged as the logistics leader in Asia, similar to the Netherlands’ position in Europe.

Singapore has all the necessary infrastructure support. It has world-class seaports and airports, excellent infrastructure, an efficient telecommunication network, a pro-business environment, intensive use of information technology, wide-ranging logistics capabilities, as well as a skilled and professional workforce. The combination of these factors has helped Singapore to become a modern hub of international trade and a base of operations for a large number of multinational and regional companies. Over 5,000 MNCs have chosen Singapore as their Southeast Asian logistics/distribution hub. The logistics companies in Singapore, which number over 6,000, provide comprehensive services to the MNCs, including transport, forwarding, warehousing, and distribution. Most of them are located in distriparks.

When manufacturing began to shift from higher-cost countries like Japan to Southeast Asian countries in the 1980s, the Government of Singapore embarked on an active campaign to develop the city-state into a transshipment hub for products originating in Singapore, Malaysia, Indonesia, and Thailand. It also began to actively encourage MNCs and a number of international logistics service providers to locate in Singapore, and to establish their regional or global distribution centres in Singapore through various incentive schemes such as pioneer status, tax exemptions, and so on.
National Semi-Conductors set up a single worldwide distribution centre in Singapore by using FedEx as the third party logistics service provider.\textsuperscript{13} Lucent Technologies opened its Asia/Pacific Logistics Centre in Singapore in 1998, outsourcing its operations to AEI Warehousing and Distribution of Singapore. Fritz Logistics manages Texas Instrument’s Asian Distribution Centre in Singapore. UPS Worldwide Logistics established their regional headquarters in Singapore to design, implement, and manage supply chain solutions for Compaq, Hewlett Packard, IBM, etc. Emery and DHL selected Singapore as its Asia-Pacific headquarters.

Some government agencies in Singapore have been charged with building the nation into a logistics hub and leveraging the existing base of CDCs located in Singapore to provide integrated logistics support for MNCs operating in Asia. Singapore’s role as an international warehousing and distribution centre was promoted intensively by Singapore’s two key drivers: the Economic Development Board and the Trade Development Board. In the mid-1980s, these government agencies established a vision to develop Singapore into Asia’s leading integrated logistics hub by the year 2010.

The Port of Singapore Authority (PSA) has also played an instrumental role by working closely with these government agencies in promoting the growth of the logistics hub in Singapore. As the operator of the world’s largest container terminal, PSA has offered a wide range of ship- and port-related services by developing centralized warehousing and distribution, which mostly offer value-added logistics services. PSA manages four major distriparks totaling 600,000 square metres of warehouse area within the Singapore distribute.

Since the 1970s, PSA has provided much needed warehousing space in the Alexandra Distripark, Pasir Panjang Distripark and Tanjong Pagar Distripark. These three distriparks are located near the container and cargo terminals and Jurong industrial hub, enabling them to facilitate the shipment of cargoes. The also serve as home to many established multinational distribution centre operators, manufacturers, traders, forwarders and others, providing them with reliable, accessible and well-managed distribution centre operations that are synchronized with their supply chain operations.

In July 1987, the London Metal Exchange designated Singapore as its first official delivery port outside of Europe. This action helped to stimulate metal trading in Singapore and led to the establishment of several warehouse operations for metals in Singapore. Additionally, a number of international companies have set up warehousing and distribution operations. In 1988, Nedloyd Districentre established an operation in the Jurong area. In 1989, Singapore-based CWT Distribution Pte Ltd. opened its distribution centre, CWT Distripark, the region’s most advanced distribution centre at the time.

In 1993, PSA completed the Keppel Distripark (KD) within the FTZ to serve as a premier cargo consolidation hub and meet other major logistics needs. A wide range of customer-friendly and value-added services such as KD Net and the seamless transfer of cargo to and from the container terminals are also provided, expediting the consolidation of transshipment cargo out of Singapore to the region (Port of Singapore, 1999).

\textsuperscript{13} Recently, in August 2000, National Semiconductor awarded UPS Logistics a five-year US$150 million contract to manage National Semiconductor’s global supply chain (Fang, 2000). Together, they have opened a new global DC in Singapore dedicated to National Semiconductor operations. The combined operations will enable UPS to manage the movement of National chips from manufacturing plants in Malaysia and Singapore to the new global DC and then on to customers around the world.
But the potential of warehousing and distribution was spotted much earlier. Singapore’s FTZ Advisory Committee considered Singapore as being ideal for storage and the subsequent distribution of goods to the rest of Southeast Asia, because of its strategic location and liberal trading environment. The setting up of free trade zones to facilitate entrepot trade in dutiable and quota-restricted goods also contributed to the success of Singapore as a warehousing and distribution centre.

Currently, Singapore has seven FTZs, six for seaborne cargo and one for air cargo: Keppel Wharves, Tanjong Pagar Terminal, Jurong Port, Sembawang Wharves, Pasir Panjang Wharves, Keppel Distripark and Changi Airport.

Within the FTZs, PSA Corporation Ltd. provides more than 2 million square metres of covered and open storage space, and a wide range of facilities and services for the storage and re-export of dutiable and controlled goods.

**Box IV.2. Keppel Distripark**

Keppel Distripark is an ultra-modern cargo distribution complex that provides extensive warehousing facilities. It is connected to PSA’s world-class container terminals via flyway that allows cargo to be speedily delivered to and from the port. It is located on a 23-hectare site along Singapore’s Southern Seafront within the FTZ. Consequently, all cargoes brought into it are tax exempt. Its location is within easy reach of the three container terminals and the Jurong Industrial Estate.

There are 41 warehousing modules in KD totaling 113,000 square metres, including four blocks of storage space, a five-story office block, and open storage yards. KD has a 14 metre-high ceiling to support high rack automated storage and retrieval systems. The distripark provides not only conventional warehousing services such as storage and regional redistribution of cargo, but also value-added services such as bar-coding, fumigation, sampling, surveying, topping-up of cargo, quality assurance and control, pick-and-pack, and repackaging-and-relabeling of goods to be carried out, without the requirement for customs formalities. Nowadays, it is a home for many major shipping lines, international freight forwarders, and domestic IT firms.

It uses modern technology and a highly integrated computer system, called KDNet, to control the processes and procedures involved in the shipment and delivery of these cargoes. KDNet is manned twenty-four hours a day, seven days a week, and provides the customers with on-line tracking of the container movement from the various points of their operations.

The FTZs at ports facilitate entrepot trade and promote the handling of transshipment cargo. Goods can be stored within the zones without any customs documentation until they are released in the market. They can also be processed and re-exported with minimum customs formalities. The FTZs offer free 72-hour storage for the import/export of conventional and containerized cargo, and 14-day free storage for transshipment/re-export cargo. If the goods are kept in the FTZ, they are not treated as imports; tax is not charged until the goods leave the FTZ for sale in Singapore, while re-exported goods from the FTZ are exempt from all taxes.
Box IV.3. Alexandra Distripark

Alexandra Distripark is the largest complex of its kind in Singapore, comprising three 11-storey blocks of factories-cum-warehouses and two 10-storey blocks of dedicated warehouse and office space. With 210,000 square metres of warehouse space, it has attracted 300 customers who wish to consolidate their warehouse, office and factory requirements. A high-floor loading deck that allows for the multiple stacking of heavy goods, a high ceiling that increases the efficiency of space usage, good vertical transfer via several banks of lifts, and ample parking facilities for container vehicles and lorries, are some of the typical benefits that this Distripark offers.

Box IV.4. Pasir Panjang Distripark

Pasir Panjang Distripark, located next to the main conventional terminal and new container terminal, comprises nine single-storey warehouses, and has a total warehouse area of 144,000 square metres. Its single-storey warehouse offers tenants exclusivity in operations. It is ideal for those dealing in odd-size cargo or cargo with a very fast turnover. The warehouse is supported with an ample open storage yard for heavy machinery storage and heavy lift operations. Also located in the distripark is the new three-storey Pasir Panjang Districentre, which is specially designed for high value goods that require good security, clean environment and facilities for a quick turnover. All in all, Pasir Panjang Distripark provides some 250,000 square metres of warehousing and office space.

Box IV.5. Tanjong Pagar Distripark

Tanjong Pagar Distripark consists of two five-storey blocks providing 65,000 square metres of warehousing and office space. It is in an excellent location, adjoining the container terminals, yet on the fringe of the central business district. It is popular among companies providing regular services to retail outlets and offices in the city. Operationally, it is well-conceived and well-designed. The ground floor has 135 dock-levelers for container operations, while a dedicated platform is provided for lorry operations. Two banks of four- and six-tonne lifts serve the upper floors.
C. Foreign Access Zones in Japanese ports

The concept of Foreign Access Zones

At the request of foreign governments to improve the business climate for foreign-affiliated companies in Japan, the Japanese Government made a significant push to expand foreign investment and to increase import levels. As part of its trade-promotion efforts, the Japanese Government enacted a special law in July 1992 called the Law on Extraordinary Measures for the Promotion of Imports and Facilitation of Inward Investment. The stated purpose of the law was to enhance access to the Japanese market for foreign products and to encourage more foreign companies to export to and/or invest in Japan. The law permitted the establishment of a nationwide network of foreign access zones (FAZs), which numbered 22 locations as of September 2000. See figure IV.3.

Figure IV.3. Approved foreign access zones in Japan

Of the 22 FAZs, 16 are located in port areas, 1 is in a port/airport area, and 5 are in airport areas. As can be seen in figure IV.4, in general, FAZs serve a dual function: promoting the development of import-related infrastructure, and strategically concentrating import-related companies into certain locations. FAZs all across Japan generate their own plans to maximize respective local advantages for the expansion of business opportunities between Japan and other countries.

The facilities of each FAZ are run primarily by quasi-public, or “third-sector,” corporations, which are established through joint investment by local public bodies and private companies. Their roles are to effectively manage the establishment and operation of principal infrastructure in each FAZ, such as facilities for warehousing, sorting, processing, and wholesaling, as well as facilities for business promotion and other import-related activities, to extend support to domestic and foreign companies operating within a FAZ. However, the scope of operation and other particulars of each third sector corporation differ. FAZ provides a variety of incentives in the development of logistics facilities as below.

**Figure IV.4. The concept of foreign access zone**

![Figure IV.4](image)

*Source: JETRO, Foreign Access Zone, September 2000.*

**Low-cost distribution**

Since FAZs are located near seaports and/or airports close to regional markets, they offer the unique advantage of enabling foreign products to be freighted by air or sea directly to any of 22 regional markets in Japan. This helps companies to minimize shipping costs by reducing their reliance on Japan’s often-expensive domestic transportation.
Efficient handling of imported freight

FAZs combine their own logistical-support facilities with additional privately run facilities to handle foreign products with efficiency in every stage of importing, from customs clearance to product sorting, processing and distribution. Importing is especially easy in those FAZs offering full-service bonding for product storage, processing, transportation and exhibition. FAZ facilities include:

- Facilities for cargo handling and storage of goods
- Facilities for processing imports
- Exhibition and fair facilities
- Offices and retail premises for wholesalers and retailers
- Offices and premises for transport companies
- Offices for provision of public service corporation
- Research and technological development facilities
- Training and conference facilities
- Support facilities for import-related business

Business support

FAZs help resident companies expand their import businesses by providing access to space, equipment and other facilities they need to carry out promotional activities, such as exhibitions, fairs and conventions. FAZs also provide furnished offices for fixed periods and at reasonable rates to foreign firms seeking to establish a foothold in Japan.

Financial and tax incentives

Host regions offer a variety of incentives, including preferential taxation, loan guarantees, credit insurance, low-interest financing and bonded services.

Preferential taxation

An area within an FAZ can be officially designated as a special district for preferential taxation, allowing private companies including manufacturers, wholesalers, retailers and shippers to benefit from special tax measures such as: reduced real estate acquisition and property taxes; special depreciation on facilities; and exemptions from special landholding taxes. The Kobe, Ehime, and Kitakyushu FAZs have special districts offering preferential taxation.

Loan guarantees

A loan guarantee system established under the Industrial Structure Improvement Fund is available to import businesses operating in special districts within FAZs. The system provides businesses with loans for acquiring facilities and working capital.

Credit insurance

Small and medium-sized import firms operating in special districts within FAZs can qualify for credit insurance with preferential terms, including increased amounts of insurance and reduced premiums.
**Low-interest financing**

F AZ investors can apply for low-interest financing with relaxed lending requirements through the Japan Development Bank (JDB) and Small Business Finance Corporation (SBFC). JDB provides low-interest financing for acquisition of equipment or facilities by foreign firms setting up in Japan or Japanese businesses that are expanding their imports. SBFC helps to promote imports by providing loans that can be used for working capital or the purchase of equipment by small- and medium-sized retailers and wholesalers. Moreover, SBFC has raised its ceiling on extra-low-interest loan amounts available to import-related wholesalers and retailers either based in a F AZ or dealing directly with an FAZ-resident company.

**Bonded services**

F AZ uses an integrated bonded area system loosely corresponding to free trade zones (FTZs) in other countries, where foreign cargo can be bonded for unloading, sorting, storage and distribution. However, to be designated as an integrated bonded area, a couple of conditions must be met: (i) in each case the land and facilities must be contained in one area; and (ii) facilities must be used for processing, exhibiting and storage. Because of this narrow definition, only four FAZs offer full-service bonded areas: the FAZs in Yokohama, Ehime, Osaka, and Kawasaki.

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**Box IV.6. Yokohama port cargo centre**

Yokohama Port Cargo Centre was opened in August 1996 and has been a symbol of the Port of Yokohama. As a central facility of the Yokohama F AZ, it is one of the largest synthetic logistics centre in Japan with total floor space of 320,000 square metres and extending 634 metres in length. It is able to handle the cargo of 4.25 million tons annually. It has the latest facilities to meet an increasing variety of logistics activities such as cargo sorting, storage, processing, disposal, distribution, and shipping. In particular, a system that combines a ramp with driveways leading to each floor allows container trailers up to 45 feet long to reach each floor. The entire facility is designated as a comprehensive bonded area and includes an office building where the information management for logistics is performed. The centre is expected to further strengthen international logistics function as well as to active economy of Yokohama.