

### Article 3: Logistics location characteristics

#### 1. With respect to this article series

This is the third article in a Logistics Community of Inquiry series in the following four linkedIn groups:



Logistics Network



● Global Logistics & Supply Chain Professional Group



● Logistics Executive



● LinkedIn Pulse

For a more comprehensive explanation of this CoIs (Community of Inquiry) purposes and objectives, please read the first article in this series. The first article dealt with investment considerations from an institutional investor's perspective, looking at macro-economic figures and analysis, logistics location characteristics, a technical due diligence data set, and an assessment of important legal and tax issues. The second article discussed risk mitigation in supply chain networks and the possibilities for the landlord to (partly) aid in this mitigation.

In this third article we will look at logistics location choices in more detail. Here we will examine location choices from both points of view: that of the logistics service provider (LSP) and the institutional investor. The final goal is to understand why an institutional investor purchases a building on a certain location. Ultimately, I think we will find that there is not much difference between the two parties' site selection criteria, as the institutional investor's choice will tend to depend on the LSP's specific predilection for certain locations.

#### 2. Identifying main logistics site characteristics

Since 2000, the supply of logistics stock has grown exponentially. LSPs have changed the way they operate in response to e-commerce growth and changing security requirements. This, in turn, has led to changing needs for logistics real estate. In addition, consolidation within the sector has led to a strong upscaling trend (Jones Lang LaSalle, 2015). In the table below, Jones Lang LaSalle analyses the main criteria for location selection by need (assumptions) and major influencing factors (measurement methods). The table examines this criteria from both the investor's and the LSP's perspectives.

Because there is no clear-cut global rating system for evaluating logistics locations, institutional investors tend to create their own ranking and scoring tools. Deka, for instance, has a very intricate scoring system called *DIRI Logistik* (*Deka Immobilien Regionen Indikator*, freely translated as "Deka Property -Region Indicator). This tool combines economic ratios with data such as population density, the status of trade and industry in a certain region and gross value added changes and forecasting.

As Mr. Wellstein of DekaBank (Münchow et al., 2012) states, a tool like DIRI Logistik is helpful to enhance location appraisal, but it will never be able to substitute the expert-knowledge of logistics specialists.

	<b>Main criteria</b>	<b>Assumption</b>	<b>Measurement method</b>
1	<b>Infrastructure</b>	Capacity to move freight access to transport modes, adequate multimodal transfer systems. Adequate cargo and container handling facilities	Identify highways, railroads, waterways, airports, and intermodal terminals. Available rail and road links with local consumer and industrial areas. Proximity to economic networks
2	<b>Proximity to market</b>	Market reach, one-day market reach, proximity to customers and suppliers	Find population within 600 mile radius of alternative region
3	<b>Land availability</b>	Land available for transportation logistics development	Identify vacant land, buildings/land available for redevelopment, etc. Evaluate your supply chain network and alternative operating strategies and their associated impact, find out if there's enough land available for all scenarios
4	<b>Government and industry support</b>	Government support of transportation developments and size of regional transportation/distribution industry	Identify regional economic development councils, especially those with transportation emphasis. Find the number and size (by revenue or employment) of local industry
5	<b>Labour supply</b>	Industrial labour supply able to meet expanding transportation developments	Identify the proportion of a region's workers that have the skills for transportation jobs. Investigating the costs of labour
6	<b>Road and port infrastructure</b>	Avoiding road density and congestion, low or no vehicle taxes, short distance to highways, absence of traffic lights.	Locating turnpikes in the road network and assessing road taxes. Investigate on road and bridge condition
7	<b>Impact of zoning plan</b>	Awareness of certain difficulties that go with mixed zoning plans, such as a specific timeframes that trucks can be loaded/unloaded, sustainability requirements, etc.	Is location on a satisfying distance from residential zones. Is it allowed to handle all kinds of commodities (including dangerous goods). Thorough legal check on zoning plan and possible future alterations
8	<b>Real estate</b>	Availability of modern warehouses and magnitude of the real estate costs. Layout, size, cubic capacity, truck access, trailer storage, turning lanes	Assessing the costs of warehousing and transportation, benchmarking with other, similar, locations. Usage of internal data, understand site requirements and throughput volumes
9	<b>Financial and economic considerations</b>	Taxes and customs duties and reasonable port charges. Goods trade (imports/exports), (retail) industry turn over, release-for-production indicators, goods flow etc.	Checking with local (port) authorities, the customs office and if necessary with the tax department. Perhaps a possibility to get tax advantages. Thoroughly examine the region's economic stability.
10	<b>IT (Information Technology)</b>	Good telecommunication systems, presence of fiber optic cables, IT consultants/manufacturers in the vicinity	Check with local authorities, survey expansion possibilities, data transfer speed, charges for installation, etc.

Table 1: Critical characteristics logistics location choice (sources: Alam 2013, Botha & Ittmann 2008, Jones Lang LaSalle 2015, Lipscomb 2010, Münchow et al. 2012, O'Healy 2005, Ruriani 2007, Sosef & Nassiri 2013, adapted by the author)

As another example, here is a ranking system Bulwiengesa AG (2015, pp. 142-145) uses to analyze the attractiveness of regional logistics markets.

Scoring system attractiveness logistics region		Significance Ratio
Score category	Analysis of parameters in the logistics region	
Supply score	- Supply of existing logistics housing and possibilities to multi-tenant use of buildings - Magnitude and dynamics of the development market - Influence and importance of the newly build housing regarding existing stock	10%
Demand Score	- Turnover volume, turn-over rate and dynamic range of stock - Importance of the leasing market in comparison to the total turnover volume - Evenness and stability of stock demand by LSPs	20%
Lease price score	- Level, dynamic range and prognosis of top lease prices in the best part of the region - Level, dynamic range and prognoses of average lease prices in the whole region	10%
Investment demand score	- Level, dynamic range and market importance of the demand on square metres - Level, dynamic range and stability of investment demands in Euro	20%
Return on Capital / Yield score	- Level, dynamic range and stability of net top yields in the best parts of the region - Level, dynamic range and stability of net average yields in the whole region	10%
Plot score	- Level, dynamic range and stability of top purchase prices for industrial plots in the best parts of the region - Level, dynamic range and stability of average purchase prices for industrial plots in the whole the region	10%
Region score No. 1	- Level, dynamic range and stability of the population - Level and dynamic range of gross value added as absolute figures and the quota of trade and transportation involved	10%
Region score No. 1	- Level and dynamic range of the labour force and the quota of trade and transportation - Level and dynamic range of special labour forces such as disabled people, and the quota of trade and transportation involved	10%

Table 2: Sustainable attractiveness factors of logistics regions (Bulwiengesa AG 2015, adapted by the author)

Veres-Homm et al. (2015) found another thesis on ranking the attractiveness of logistics locations, called the *Attraktivitätsindex*, which starts with three main categories Supply, Demand, and Management and breaks down the various influencing elements within each.

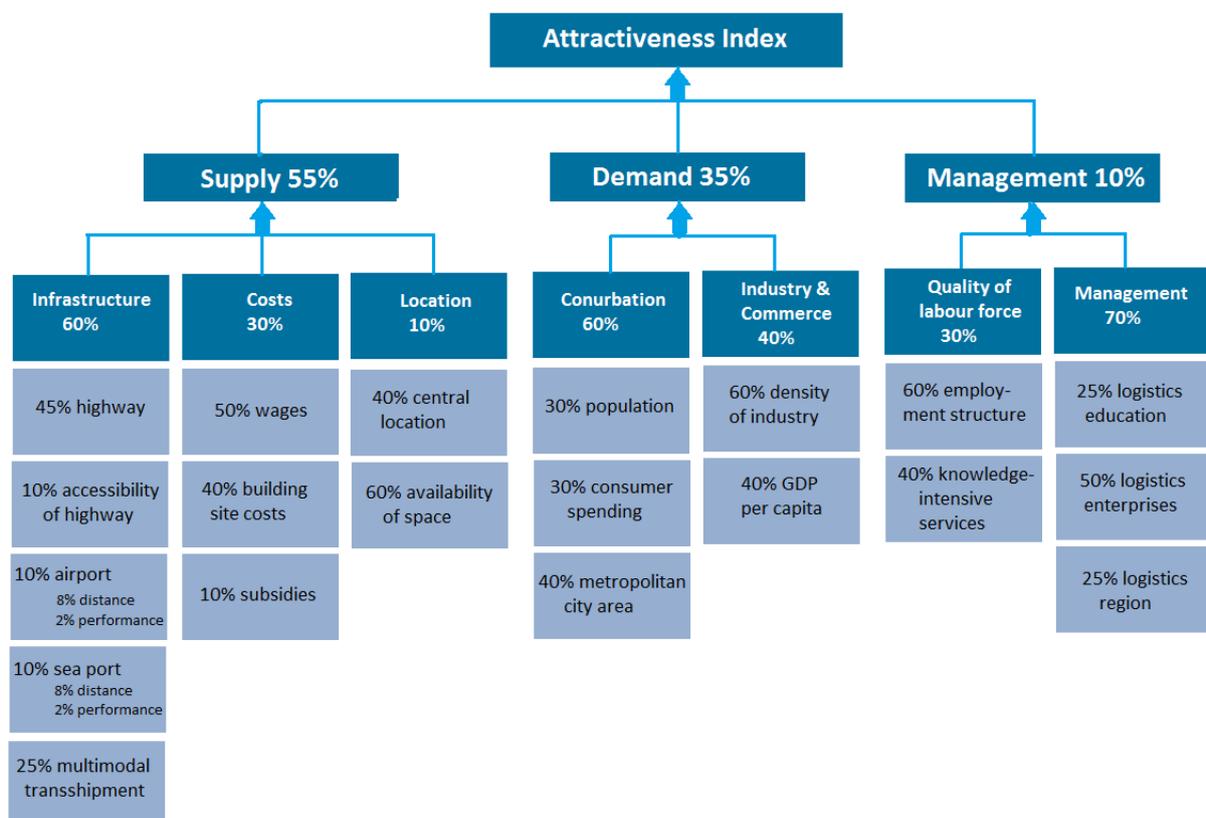


Figure 1: Attractiveness Index according to Fraunhofer Institute (Veres-Homm et al., 2015, adapted by author)

Veres-Homm et al. (2015) also compiled a so-called *Intensitätsindex* (intensity index) that mirrors the actual concentration of logistics activities in a certain region. Again Veres-Homm et al. breaks their analysis into three main categories that make up the current logistics activity situation.

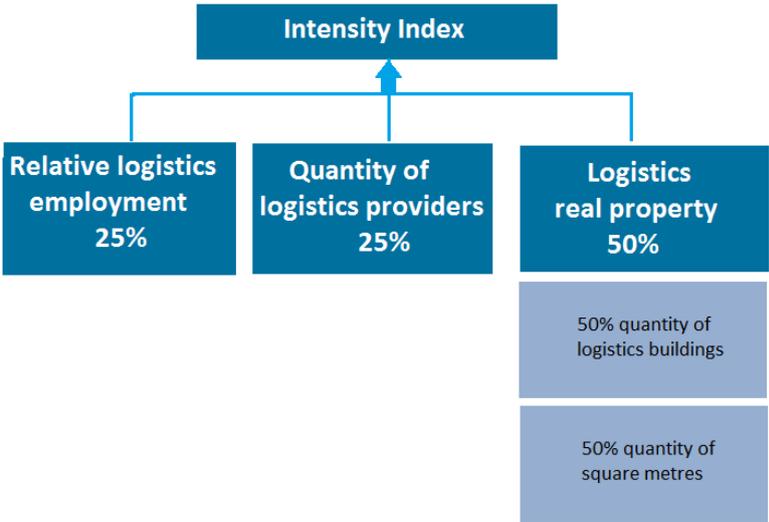


Figure 2: Intensity Index according to Fraunhofer Institute (Veres-Homm et al., 2015, adapted by author)

Finally, Veres-Homm et al. (2015) creates a method of forecasting the future development, opportunities, and possibilities in a logistics region, called the *Potentialindex* (Potential Index). Figure 3 represents the elements that are considered important for this ranking.

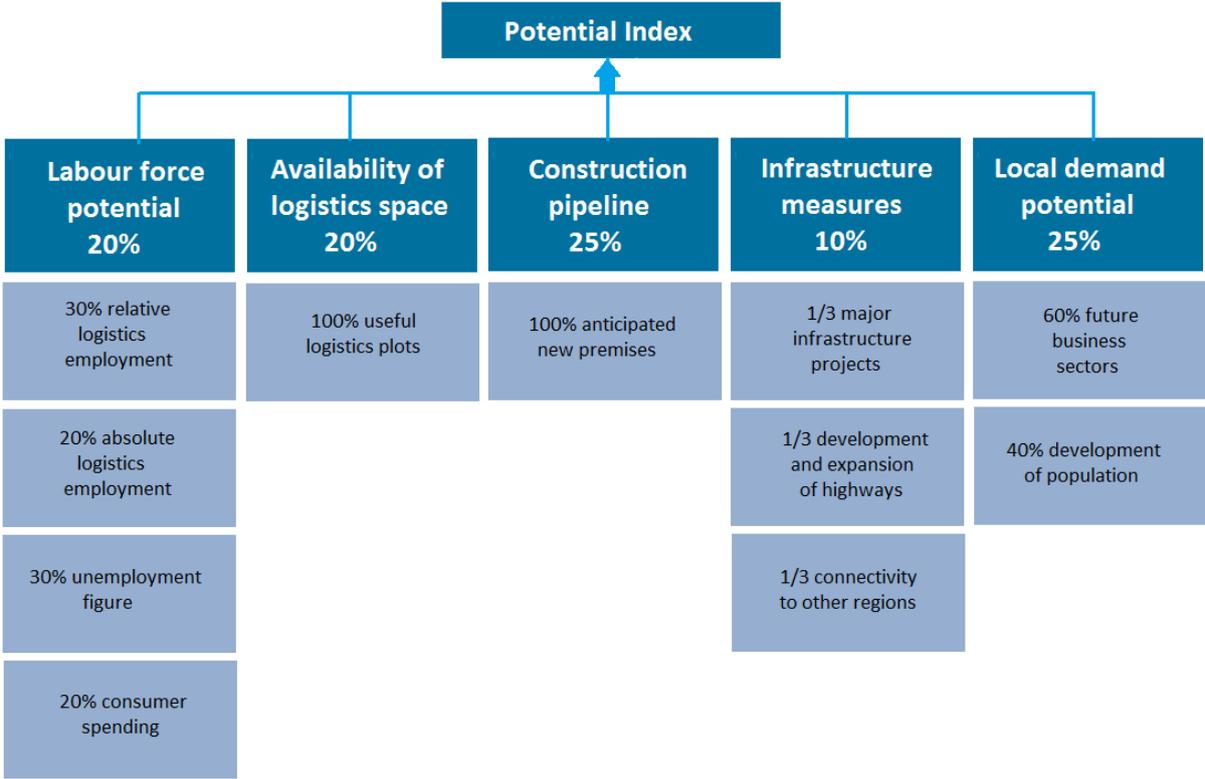


Figure 3: Potential Index for future forecasting of logistics area development (Veres-Homm et al., 2015, adapted by author)

Upon analysis of the aforementioned tools, however, there are still a number of elements that still need to be considered, such as:

- The image problem of the logistics industry: big grey boxes that take up too much space, have a negative impact on the total landscape, provide comparatively little employment, create highway congestion with trucks, etc. This has a negative impact on (governmental) authorities when analyzing whether or not to make plots available to logistics investors and LSPs.
- Social issues such as the sustainability of buildings

- Air pollution and traffic noise due to the growing amount of trucks, decarbonization of the logistics industry
- The relatively short lifecycle of logistics buildings induces undesirable side-effects as vacancy, continuing future refurbishment measures (environmental impact), empty logistics parks, etc.

### 3. Strategic considerations rank choice

Where to place a distribution center or warehouse is one of the most important strategic components of any supply chain, or for any 3PL, and thus this question also impacts the investor. The main issues concern balancing the proximity to the customers with cost, access, speed, available labor, and available space. Often, there are specific logistics areas where clusters of more or less the same type of 3PL are assembled. In best case scenarios, the specific ancillary industries for the 3PL are also there, and most of the time the infrastructure is adapted to the logistics processes that take place.

Logistics settlements can be considered heterogeneous and depend heavily on the specific logistics tasks being performed: it can be necessary to start an operation in the vicinity of an airport, or next to production plants and other manufacturing activities, the e-commerce LSP can be anywhere with his mega distribution centers, and the human nutrition LSP needs to be close to city boundaries.

Another important factor in choosing the right logistics location is one that the institutional investor cannot influence: The application of logistics systems, such as Material Requirement Planning (MRP) / Distribution Resource Planning (DRP), Quick-Response System (QR), Make-to-Order/-Commerce etc. (Li, 2007).

The combination of all these variables leads to five different types of logistics regions. Regardless, the main functions of the logistics enterprise stay the same: transportation, storage, distribution processing, packaging, loading, unloading, and information transmission (Golinska, 2014).

#### Industrial logistics locations

The most important factor for a LSP to decide on an industrial logistics location is the density of production and manufacturing suppliers in the area. This guarantees the industrial-oriented LSP the best chances to get new servicing contracts after termination of other contracts. A huge density of industrial-oriented LSP also offers the suppliers enough options to find a LSP that suits their needs. Due to the nature of their business, suppliers demand a lot of quality control, reliability, and user specific layout and fittings. Costs for this kind of logistics housing are often very high. Because of the very specific utilization, institutional investors are not very willing to make an investment in industrial logistics.

#### Central logistics locations

These kinds of logistics facilities have distribution operations on a very large geographic scale and are customer oriented. Within their area of coverage, the LSP should be as centrally located as possible, with highways or, even better, multimodal shipment facilities in close proximity. An important factor for this kind of DC is the cost of purchasing property. E-commerce and spare parts distribution centers have a need for spaces as large as 100,000 sq m or more.

Institutional investors are willing to invest in these kinds of logistics facilities provided there is a long term lease agreement in place. Otherwise, these space requirements would make it difficult to find a tenant in the future. Restructuring a space of this dimension can be an expensive investment for the landlord.

#### Regional logistics locations

Regional DCs typically serve metropolitan city areas, making this the decisive criterion for the LSP. The most important factor here is the demand of consumers and industrial suppliers. The typical distribution radius for LSPs of this nature is approx. 40 km, as they have time-critical goods, e.g. same day delivery.

Because DCs in regional logistics locations have a very standardized construction concept (which can be built for relatively low costs), it is often easy for the landlord to convert the building into a multi-tenant facility when a lease agreement runs out, and refurbishment costs are on an acceptable level. Given the average space requirements of these DC (approx. 25., 000 sq m) and their utilization, vacancy risks are calculable and vacancy periods are relative limited.

### **Gateway logistics locations**

LSPs in the gateway logistics industry process bundled deliveries of goods from foreign countries (mostly oversea territories), and distribute them in their own country, mostly by means of a complex distribution network. Locations are chosen based on the source of the commodities. Goods produced overseas need to be imported in the most efficient manner possible, which can either be via air transport (very expensive), or with seaports. Gateway logistics locations often harbor manufacturers (assembling services), wholesalers, retailers, technology, electronics and capital goods LSPs. A flexible and effective infrastructure is one of the most important factors, as is the proximity of multimodal transport infrastructure, such as airport, container seaports and trans-shipment train stations. As with regional logistics locations, we have space requirements with an average of approx. 25,000 sq m and a lot of the logistics premises have a standardized construction, making this another attractive product for institutional investors.

### **Network logistics locations**

All transport networks are made to connect the customer and production on the one hand and main operation on the other.

New locations function as an extension of already existing stores and depots, with the collection and distribution routes being a major cost factor. Thus, ensuring depot locations are appropriately connected to the customer and key junctions is of great importance.

Depending on what the LSP client wants, soft location factors such as available qualified manpower, funding and building regulations can also influence location choice.

These LSPs are typically LCL (Less than Container Load) providers, meaning they transport small ocean freight shipments not requiring the full capacity of an ocean container.

This sector may also include trans-shipment warehouses, which service courier, express and small packages delivery.

The average surface area is approx. 20,000 sq m and a lot of these warehouses have multi-faceted docking areas for cross-docking logistics, etc. This means that there should be a lot of outside area available that can be used as marshalling yard.

This type of logistics location is also favored by institutional investors because of a high market demand.

Table 3 gives the reader an overview of the various location types as discussed before, along with a listing of criteria important to choosing the right area. In the third column we have indicated if this type of product could be of investment interest to an institutional investor.

<b>Location type</b>	<b>Main utilisation criteria</b>	<b>In favour of inst. Investors</b>
<b>Industrial</b>	<ul style="list-style-type: none"> <li>- Density of industrial suppliers (manufacturers, assembling plants etc.)</li> <li>- Availability of housing and plots for new developments</li> <li>- Logistics network in the direct proximity of the LSP suppliers</li> </ul>	
<b>Central</b>	<ul style="list-style-type: none"> <li>- Fast and efficient connections to highways and junctions</li> <li>- Multimodal shipment possibilities</li> <li>- Centralised location</li> <li>- Availability of housing and reasonably priced plots for new developments</li> <li>- Fine-grained logistics network</li> </ul>	✓
<b>Regional</b>	<ul style="list-style-type: none"> <li>- Fast and efficient connections to highways and junctions</li> <li>- Metropolitan city area with very much inhabitants</li> <li>- Demand of consumers with a buying power</li> <li>- No overrated wages for logistics employees</li> <li>- Reasonably priced plots</li> </ul>	✓
<b>Gateway</b>	<ul style="list-style-type: none"> <li>- Multimodal trans-shipment facilities: road, rail, airport and seaport</li> <li>- Reasonably priced plots</li> <li>- Availability of housing</li> </ul>	✓
<b>Network</b>	<ul style="list-style-type: none"> <li>- Multimodal trans-shipment facilities: road, rail, airport and seaport</li> <li>- Fast and efficient connections to highways and junctions</li> <li>- Availability of a logistics network</li> <li>- Central position in a dedicated logistics area</li> <li>- Support from local authorities and economic development e.g. by means of subsidies</li> </ul>	✓

Table 3: Overview of strategic rank considerations for logistics (source: Jan van den Hogen, author)

#### 4. The clustering approach

In his book *The Geography of Transport Systems* Dr. Jean-Paul Rodrigue chooses a somewhat different approach by introducing the concept of logistics zones or Freight Distribution Clusters. Dr. Rodrigue is of the opinion that “logistics tend to agglomerate (cluster) at specific locations, mainly because of the accessibility they confer, the availability of land as well as the benefits logistics activities derive from being close to one another. There is a wide array of benefits to be derived from improved logistics capabilities. The development of logistics zones has been an important component of globalization since the growth in international trade and the related material flows requires activities supporting their consolidation, deconsolidation, transloading and light transformation” (Rodrigue, 2013).

A logistics zone is defined as a grouping of entities involved in freight distribution such as distribution centres (warehousing, storage, light transformation), transportation (freight forwarders, shippers, transport operators, customs brokers) and supporting services (human resources, maintenance and repair) within a defined and often planned area.

Following the above definition, we can conclude that there are a lot of different functions connected with a logistics zone, varying from simple cargo consolidation to very advanced logistics services. This means that logistics zones need to provide space for both the pure logistics companies and the supportive companies such as shipping agents, trucking companies, forwarders, container repair facilities and packing firms. The emergence of logistics zones has been driven by two factors:

- The developing complexity of freight distribution.  
Supply chain management is often done over long distances, which implies that intermodal and distribution strategies must be applied at strategic locations. This is also necessary when cargo loads are in transit. Often, due to the complexity of supply chain practices, additional operations need to be performed to have smooth distribution along the whole chain.
- Massive amount of cargo (the “massification” effect)

The emergence of large logistics zone complexes at strategic locations is driven by two things: 1) the amount of cargo being handled, and 2) the concentration of commodities at specific gateways and along distribution corridors. These strategic locations must provide the necessary infrastructure for large-scale operations as well as future traffic expectations.

Logistics zones can be classified according to their modal orientation, their geographical scope or their function. A classification of logistic zones suggests four major forms; port-centric logistics zones, inland ports, logistics zones and freight villages.

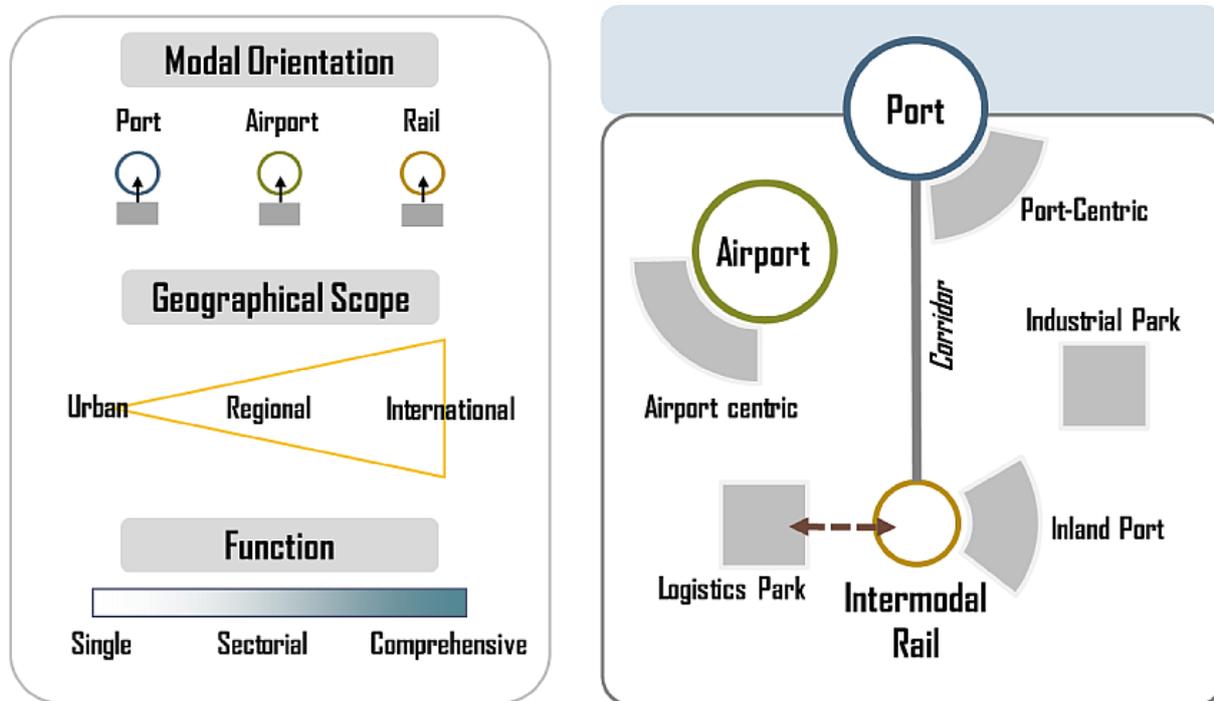


Figure 4: A taxonomy of logistics clusters (adapted by Rodrigue from Sheffi, 2012)

The following definitions of logistics clusters are taken out of the book from Dr. Rodrigue (2013).

### Port-centric logistics zone

This is a logistic zone that has been planned in co-location or in proximity to a port terminal facility. It supports freight distribution activities directly related to maritime shipping and thus has a dominant international trade orientation. The common value proposition of port-centric logistics zones is the availability of land next to a port terminal which also has the convenience to tap the labor pool that is generally available in a port-city. For a freight distribution perspective, inventory management tends to be facilitated since the containers can be easily picked up or dropped at the terminal facility. Empties can immediately be brought back at the terminal, improving container utilization levels. Container weights are not bound to national road restrictions, implying higher container load factors and their related shipping economies. The added security a port-centric logistics zone offers is also a positive factor, particularly in developing countries.

Port-centric logistics zones also have some drawbacks, particularly since they involve higher land costs with potentially more restrictive labor regulations if they are within the jurisdiction of dock workers. They also lock the shipping options of its customers to the port, which may not be the most suitable. Airport-centric logistics zones work on a similar principle where logistics activities are co-located and often directly accessible to runways.

### Inland port

This is an intermodal terminal (commonly rail) built or updated concomitantly with the development of adjacent logistical and service activities. An inland port can also be serviced by trucks, which often takes place in developing countries, but this does not represent an efficient strategy as massification of cargo cannot be implemented. The inland terminal is directly integrated to co-located distribution

activities, which is one of the main advantages of such facilities as they appeal to their respective customers. The term “dry port” is often used to label them since it refers to a facility that performs a similar intermodal function to a port but is not directly serviced by deep-sea maritime services (with the exception of fluvial ports). The inland port is conceivably the most advanced form of a logistics zone since it links co-located freight distribution activities to a gateway through a rail (or fluvial) corridor.

### **Logistics park**

This is a planned zone composed of distribution centers and light manufacturing activities. It provides geographical advantages in terms of accessibility, land availability and infrastructures as well as operational advantages in terms of favorable regulations and economies of agglomeration. However, the degree of accessibility varies depending on the array of intermodal terminals available in vicinity. Logistics parks in proximity to an intermodal rail terminal are often labeled as intermodal logistics parks.

Logistics parks are often independently planned and it is common to see them emerge after the construction of an intermodal terminal (or other logistics zones) as a promoter seizes an opportunity to provide land for logistics. Commonly, logistics parks are only serviced by road and do not require significant planning, but simply a change in zoning and some basic amenities (e.g. road access to the lot and utilities).

### **Freight village**

A freight village is an integrated cluster of support activities for freight distribution such as office space, fueling stations, hotels and restaurants. A freight village mostly focuses on the service and transactional dimensions of freight distribution and could exist in a context where limited freight distribution is taking place. It does not require an adjacent intermodal terminal, but this terminal is commonly in the vicinity.

A freight village can also be linked with an airport terminal since this type of high value freight is intensive in transactions. The definition of a freight village is subject to different interpretations, but the term should be applied where a high intensity of freight related services have clustered within a logistics zone. It can be said that a freight village is a cluster of supporting service activities within a distribution cluster.

It may be clear, logistics zones have a lot of criteria to fulfill regarding whether the location is suitable for logistics. In his clustering approach, Dr. Rodrigue distinguishes two different sets of advantages. In the site selection process these advantages function as selection criteria: if one of the advantage factors is not met, the attractiveness for LSPs to start operations in that specific location is reduced.

The table on the following page shows the location factors as determined by Dr. Rodrigue. Here, one could argue that there are three forms of important logistics zones in place.

### **Gateway logistics zone**

Logistics zones consisting of large warehousing parks in a suburban setting near ring roads. Proximity to a main container port is necessary due to the usage of port-centric logistics zones and satellite terminals. Integration of multimodal transportation (e.g. linking ports and warehousing parks directly to the national railway system, or creating direct connections with airports) is a huge advantage for gateway logistics zones.

Development and expansion of these zones is often supported by land-use incentives that attracts investors, domestic or international, as is the case with policy incentives for infrastructure, transport and logistics services (Hall et al., 2011).

<b>Geographical site selection criteria</b>	
<b>Advantage factor</b>	<b>Important requirements</b>
<b>Labour</b>	<ul style="list-style-type: none"> <li>- Large pool of low skilled labour necessary (DCS are labour intensive)</li> <li>- Pool of skilled workforce necessary due to managerial and IT tasks</li> <li>- Manageability of labour costs</li> </ul>
<b>Accessibility</b>	<ul style="list-style-type: none"> <li>- To get a grip on transportation costs (dominant in logistics costs), easy and fast accessibility to terminals (rail and port) and customers is necessary</li> <li>- If the logistics zone functions as an inland port, co-location with an intermodal rail terminal is important</li> <li>- The region must be in itself an important market, both from a production and consumption perspective</li> <li>- The logistics zone itself should be, without any limitations, open around the clock</li> <li>- If the logistics zone is import oriented it should consist of intermediary locations along corridors towards the main consumption markets</li> <li>- If the logistics zone is export oriented they should be located in the proximity of major transport terminals, mainly (sea) ports.</li> </ul>
<b>Land</b>	<ul style="list-style-type: none"> <li>- Availability of land already zoned for a managed distribution cluster</li> <li>- Due to consuming a large amount of space the prime costs of land is a sensitive subject</li> <li>- Possibility to a mix of functional parcel sizes reflecting the needs of the industry</li> <li>- Local and regional governments need to establish a logistics-friendly environment in the logistics zone</li> <li>- Regional development policies should facilitate extension possibilities of both the logistics housing and the logistics zone</li> </ul>
<b>Infrastructures</b>	<ul style="list-style-type: none"> <li>- Sufficient provision of utilities (electricity, water, sewage, etc.)</li> <li>- Adequate presence of roads, highways, junctions , as well as dedicated highway ramps, being a locational incentive</li> <li>- Environmental/energetic certification is meanwhile mandatory for logistics building (LEED, BREEAM), implying that logistics zones should be compliant with present-day environmental standards</li> <li>- In the buildings a provision of equipment supporting the logistics and distribution activities should be in place</li> </ul>
<b>Anchor tenants</b>	<ul style="list-style-type: none"> <li>- Presence or the distribution branch of a large firm such as a retailer is fundamental. These firms bring with it substantial capital investment, expertise and cargo volume. It shows to other potential users the commitment of an industry leader and that the logistic zone thus has a value proposition.</li> </ul>

<b>Operational site selection criteria</b>	
<b>Planning and Regulations</b>	<ul style="list-style-type: none"> <li>- Possibility to provide a “fast track” process for the construction and operation of freight distribution activities</li> <li>- Support from various levels of government where procedures granting permits are already in place</li> <li>- Authorities should insure compliance to safety, security and environmental regulations</li> <li>- Provisions for expansions and additional infrastructures as the logistics zone develops and expands</li> <li>- If the logistics zone is a foreign trade zone (FTZ) custom clearance and flexibility for importers and exporters is a necessity</li> </ul>
<b>Economies of agglomeration</b>	<ul style="list-style-type: none"> <li>- Possibilities to a variety of cost reduction because a critical mass is attained</li> <li>- Because of the freight volume there’s a potential of consolidation of loads from a variety of LSP into shuttles to e.g. major transport terminals</li> <li>- The logistics zone becomes a logistical market in itself with a variety of service providers bidding for contracts that are outsourced</li> <li>- Establishing shared services such as labour, trans-shipment or telecommunications and IT</li> </ul>
<b>Internal multiplying effects</b>	<ul style="list-style-type: none"> <li>- The proximity effect involving several logistical firms leads to the diffusion of best practices related to management, information technologies (e.g. software) and efficient compliances to rules and regulations</li> <li>- Promoting the training of a pool of labour leading to an array of productivity gains</li> </ul>

Table 5: Geographical and operational site selection criteria (source: Jan van den Hogen, author, partly derived from Rodrigue, 2013)

### Inland (rail) terminal logistics zones

The nodes in the hinterland have been referred to as dry ports, inland terminals, inland ports, inland hubs, inland logistics centres, inland freight villages, etc. Bimodal and trimodal inland terminals have become an intrinsic part of the transport system, particularly in regions having a high reliance on trade. Nowadays inland terminals are incorporated within co-located freight distribution activities, commonly labelled as logistical parks. Inland terminals (particularly rail) have always been present since they are locations from which specific market coverage is achieved (Notteboom & Rodrigue, 2009).

### Highway corridor logistics zones

These logistics zones service a large metropolitan area or a group of metropolitan areas. Due to their operational requirements, which are space intensive, distribution centres in these zones have migrated to more affordable locations at the periphery of metropolitan areas. Market accessibility is the main driving force of this process. Logistics clusters emerged in suburban (or exurban) settings to accommodate two market accessibility factors and their distribution requirements. The first requirement is the proximity to customers and major transport terminals. The second requirement is intermediacy where a DC must find a location within corridors of freight circulation that enables a reliable and constant supply (Rodrigue, 2013).

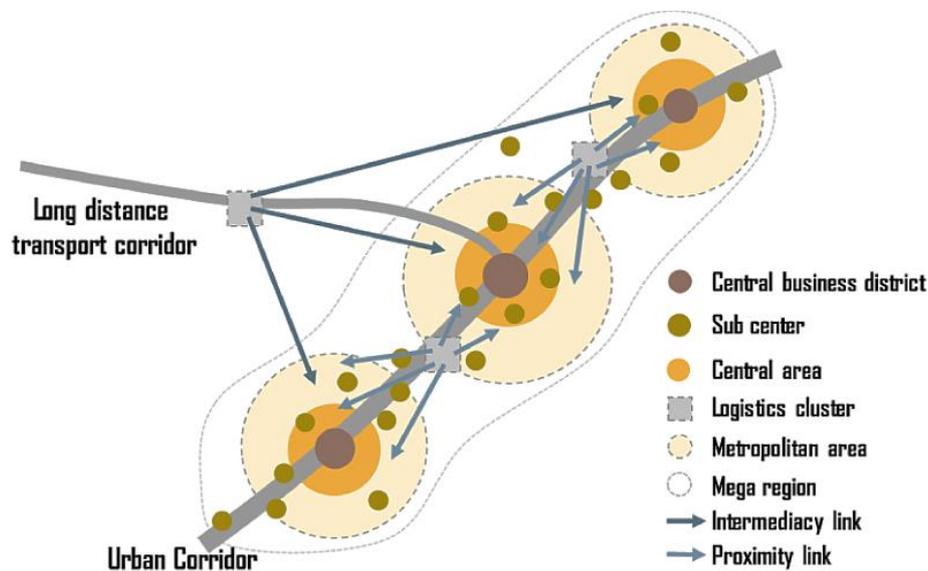


Figure 5: Proximity and intermediacy for distribution clusters (Rodrigue, 2013)

## 5. In conclusion

Looking at the various theories about the origin, development and future of logistics locations one can conclude that, regardless the different academic viewpoints, it is possible for an institutional investor to identify main logistics location characteristics. Based on these criteria the investor is capable of making a rational decision to buy logistics housing in a certain area (or zone if you want).

Whether you are looking from the point of view of an LSP or an institutional investor, the criteria largely overlap. The differences occur with the interpretation of the criteria.

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## The questions to the Community of Inquiry

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1. Is this a thorough analysis of the logistics regions, zones, areas? Are there other theories that could deliver a better understanding of a logistics service provider's movements?
2. In the text, a lot of criteria are mentioned that support the LSP decision-making processes for location search and location choice. Is there any additional criteria that could also support the site selection analysis?
3. In the final conclusion on p.11 it is stated that location criteria are the same for an institutional investor and the logistics provider, where the only differentiation is the importance of some criteria in the decision-making process. Do you agree on this way of thinking or is this an over-simplification?

### About the author



Jan van den Hogen is an inspiring senior real estate professional with a strong affinity towards logistics and light industrial real property. The necessary management skills are present and currently Mr. van den Hogen heads the Tenant Relationship Management Logistics department for Deka Immobilien GmbH, a subsidiary of DekaBank, one of world's largest institutional investment banks.

Through continuous education Mr. van den Hogen constantly extends his body of knowledge in the field of activity.

To share knowledge, professional aptitude, market insights and managerial expertise, he is a part-time lecturer of MSc (Master of Science) students in the field of FREM (Facility and Real Estate Management) at various universities.

His professional network ranges from facility-, property-, asset- and portfolio managers to political decision makers, CEOs of private, public and institutional real estate investment companies, agents of globally represented companies and worldwide operating location and expansion managers from all kinds of branches.

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Many thanks go out to Mr. Locke McKenzie, who is always willing to help me with the English language and grammar in my articles. As a journalist, proofreader and translator, he works tirelessly to ensure my content is clear, readable, and refined.

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