Role of Terminals and Logistic Centres for Intermodal Transport

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U.N.E.C.E Transport Division
Logistics Centre

Operation and Maintenance of facilities/buildings

Development and Implementation of new facilities/activities

Independent Business Units
- General cargo terminal
- Distribution centre
- Storage hotel
- Container terminal
- Cold store terminal
- Combi terminal
- Technical equipment
- Service centre
- IT & communication centre
- Transport research & training
- Hazardous goods store
- Assembly & packaging

Transport Companies
- Carters
- Forwarders
- Shipping firms
- Shipbrokers
- Hauliers
- Rail operators
- Ship-owners
- Air freight
- Terminal operator

Added value services
- Customs
- Port
- Post service
- Veterinary authorities
- Weights & measures
- Insurance & legal
- Bank
- Trailer rental
- Filing station
- Repair facilities
- Welfare facilities
The concept is based on a synergy effect (win/win situations), where a clustering of different operators/actors can supplement each other - even with the paradox of full competition in the market and off course within the Logistics Centre. The synergy effect is illustrated below:
Collaborative freight management

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<table>
<thead>
<tr>
<th>Types of Terminals/Characteristics</th>
<th>City Terminal</th>
<th>Freight Village</th>
<th>Industrial and Logistics Park</th>
<th>Special Logistics Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modes Used</strong></td>
<td>Road-road / road-rail</td>
<td>Road-rail (barge)</td>
<td>Road-road / road-rail</td>
<td>Road-sea/air, road-rail-sea/air</td>
</tr>
<tr>
<td><strong>Main aims</strong></td>
<td>Traffic reduction in the city</td>
<td>Modal shift and urban traffic reduction</td>
<td>Regional economic growth and modal shift</td>
<td>Regional economic growth</td>
</tr>
<tr>
<td><strong>Operator</strong></td>
<td>Large forwarder or retailer</td>
<td>Operating company (public influence)</td>
<td>No single operator</td>
<td>Airport or harbour authorities</td>
</tr>
<tr>
<td><strong>Company structure</strong></td>
<td>Huge forwarder or retailer</td>
<td>Small companies, also large transport companies</td>
<td>Large industrial companies and transport companies</td>
<td>Large companies</td>
</tr>
<tr>
<td><strong>Land use</strong></td>
<td>Small areas in the city</td>
<td>Large areas in the outskirts</td>
<td>Large areas in the outskirts or at old industrial areas</td>
<td>Extension to existing sites in the city or in the outskirts</td>
</tr>
<tr>
<td><strong>Land price</strong></td>
<td>Very high price</td>
<td>Relatively low</td>
<td>Relatively low</td>
<td>High</td>
</tr>
<tr>
<td><strong>Quality of infrastructure</strong></td>
<td>Good access to the city</td>
<td>Direct links to main infrastructure and access to the city</td>
<td>Direct connections to main infrastructure</td>
<td>Very good access to the international infrastructure</td>
</tr>
<tr>
<td><strong>Orientation</strong></td>
<td>city</td>
<td>Regional / Interregional</td>
<td>Regional / interregional</td>
<td>International / intercontinental</td>
</tr>
</tbody>
</table>
Model of a terminal module

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## Location of terminals and logistics centres

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<th>Location’s prioritization factors</th>
<th>Parameters</th>
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</table>
| 1. Freight flows                 | • Existing flows in terminal catchments area;  
• Existing freight flows (road/rail ratio)  
• Potential freight flows (road / rail ratio)  
• Economic sector in the region  
• Seasonality |
| 2. Location                      | • Distance from major industrial zones (km)  
• Distance from ports;  
• Distance from airports;  
• Distance from transport and transhipment companies;  
• Distance from urban and commercial centres;  
• Distance from agricultural centres; |
| 3. Infrastructure – General      | • Connection to the international / national motorway network;  
• Connection to the international / national railway network;  
• Connection to maritime terminals;  
• Connection to hub airports; |
## Location of terminals and logistics centres

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| 4. Infrastructure – Railway network | • Railway infrastructure;  
• Railway connection to other terminals;  
• Interoperability of the railway systems;  
• Non-physical obstacles; |
| 5. Terminal Equipment/services (influence size of the property and determines type of the terminal) | • Warehouses  
• Other facilities (parking, restaurants etc) |