

Fact sheet of bottlenecks related to intermodal transport terminals

Management / operational problems:

Analysis:

Unsuitable form of terminal organisation	Publicly owned terminals tend to have a lower flexibility in decision making and administration. For example, future investment decisions are normally bound to budgets or 5-year plans. At the same time public authorities tend to influence fee structures that are not market driven and that lead to price distortions.
Inefficient internal administrative processes	This problem includes all document handling, customs clearance and checks, all of which result in higher costs for labour and a suboptimal usage of the terminal.
Lack of cooperation between terminal operators and logistic service providers	The involved parties in intermodal transport chains try to optimise their own business operation. Lack of cooperation results in inefficiencies in operational processes as well as in information and communication flows.
Delays in trains/vessel arrival and departure	The delays of trains/vessel will directly be passed on to the transport operators who then cannot deliver just in time anymore.
Restricted terminal opening times	Opening times are often limited by public administration and leading often to too short or unsuitable opening times, which might not comply with the consignor's logistics concept.
Insufficient management of incoming trucks	The terminal transfer time of a truck is very long due to the lack of a clear and direct guidance of an incoming truck to its position on the loading lane.
Insufficient security management systems	The demand to protect transport units against theft, sabotage and terrorist activities continuously increases. However, the security systems and operations provided by terminals are often lagging behind.
Inefficient communication	Direct, reliable, real-time information between the involved actors is often lacking which is due to fact the communication is mainly manual/paper communication. Transport operators receive no reliable information regarding transfer times, delays or other operational incidents.
Poor inspection of loading units	Loading units are not properly checked upon arrival because of various reasons such as: lack of man-power, lack of technical control equipment, missing documentation or time constraints. Without proper inspection, however, liability questions for damaged loading units can lead to arbitrary decisions.
Poor real-time monitoring of operations	In case of operational incidents, reaction times are too long. A breakdown of a gantry crane might paralyse the whole terminal. However, those types of problems often stay unrecognized for too long, leading to delays in goods transfers.

Lack of added value services at terminals	Added value services such as container repair, hiring and selling of containers, energy for refrigerated units etc. enhance customer value but are not offered.
Terminal Access Cards	Every terminal tends to invent its own, expensive terminal access card which aims to improve terminal security. However, all these cards are not interoperable with each other. In addition, personal data protection is not guaranteed.
Low awareness of terminal operators for environmental concerns	As measures for a better protection of the environment such as air quality, soil protection, energy consumption, noise and light emission are often connected with additional costs, the terminal operators only show limited interest.
Unsuitable terminal locations	Due to the geographic change of economic developing areas, the current locations of terminals are not always suitable or become less suitable over time. From a logistical point of view the development of good flows may come to a point where a terminal location becomes inefficient and has to be changed.

Infrastructure related problems:**Analysis:**

Lack of space for storage	Some terminals have to cope with growth rates of up to 10%. Due to infrastructure limitations and few options for extending the terminals, the storage space for transported goods becomes a pertinent limitation.
Lack of exclusive parking area	Terminals are parts of the public infrastructure. Due to limited public infrastructure budgets, investments in parking spaces are not considered a priority. This has lead to generally insufficient parking spaces for trucks at the gate and within the terminal area.
Insufficient road "hinterland" connection	The public authorities often consider intermodal terminals as an independent unit and any problem of combined transport should be solved within the terminal. Therefore, adequate "hinterland" road connections are not considered a necessity.
Inefficient transfer techniques	Inefficient and time consuming vertical transfer techniques are still widely used in terminals.
Crane/handling capacity	Insufficient crane/handling capacity might lead to considerable delays. A complete breakdown or failure of terminal equipment and might even paralyse the whole terminal.
Inflexible shunting equipment	Following market demands transport operators use a variety of loading units. However, the transfer equipment in terminals often do not have the technical flexibility to comply with the market demands and in conclusion loading units become incompatible.

Insufficient equipment for handling of dangerous goods	Dangerous goods are an increasingly important market for combined transport. These goods often require special transfer equipment and storage space for which availability is often insufficient.
Limited access to loading tracks	Additional shunting processes are required due to the fact that loading tracks are only accessible from one side.
Loading tracks where length is not corresponding with train length	A rail/road terminal that was initially designed to be served with wagon groups is now served with full trains. However, the train length often does not correspond with the loading track length. The shortening of trains, which becomes necessary through this, is aligned to additional time loss and costs. As a solution the terminal's function is extended towards a gateway, which will result into additional infrastructure adjustments.

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