

## **2.5 Bonus-malus incentives for the use of interim storage space**

### **Description**

During the workshops with terminal operators we discussed if incentives would encourage intermodal operators or their customers to use the terminal off peak hours and if so, what incentives would be required. It has been felt that generally it would not be economic for intermodal customers to just pick up or deliver shipments e.g. at midnight to save some 2 to 5 €, which would be about the equivalent of 10 to 25 per cent discount on the transshipment charge. The additional personnel costs incurred by the night shift of the road operator would more than outweigh this advantage.

In contrast to that, the starting position is very different as concerns the management of interim storage space at intermodal terminals. While inland port terminals – or more generally, facilities serving maritime containers - generate a considerable share of their revenues from interim storage and depot services, the majority of “conventional” rail/road terminals rather suffer from loading units remaining on their premises longer than 12 to 24 hours prior to or after the rail journey. This is particularly owing to the fact that these terminals were primarily designed to enable the transshipment of loading units between rail and road. Ideally, the loading units would be directly transferred from wagon to truck and vice versa. In fact, reality prevents operators from optimizing their terminals in this way. Delayed trains, the exchange of trains between transshipment area and parking tracks, the shunting of damaged wagons, and the pick-up and delivery behavior of road operators require the intermediate buffering of loading units. In addition, some terminals experience that their terminals are used for parking loading units according to typical intermodal supply chain.

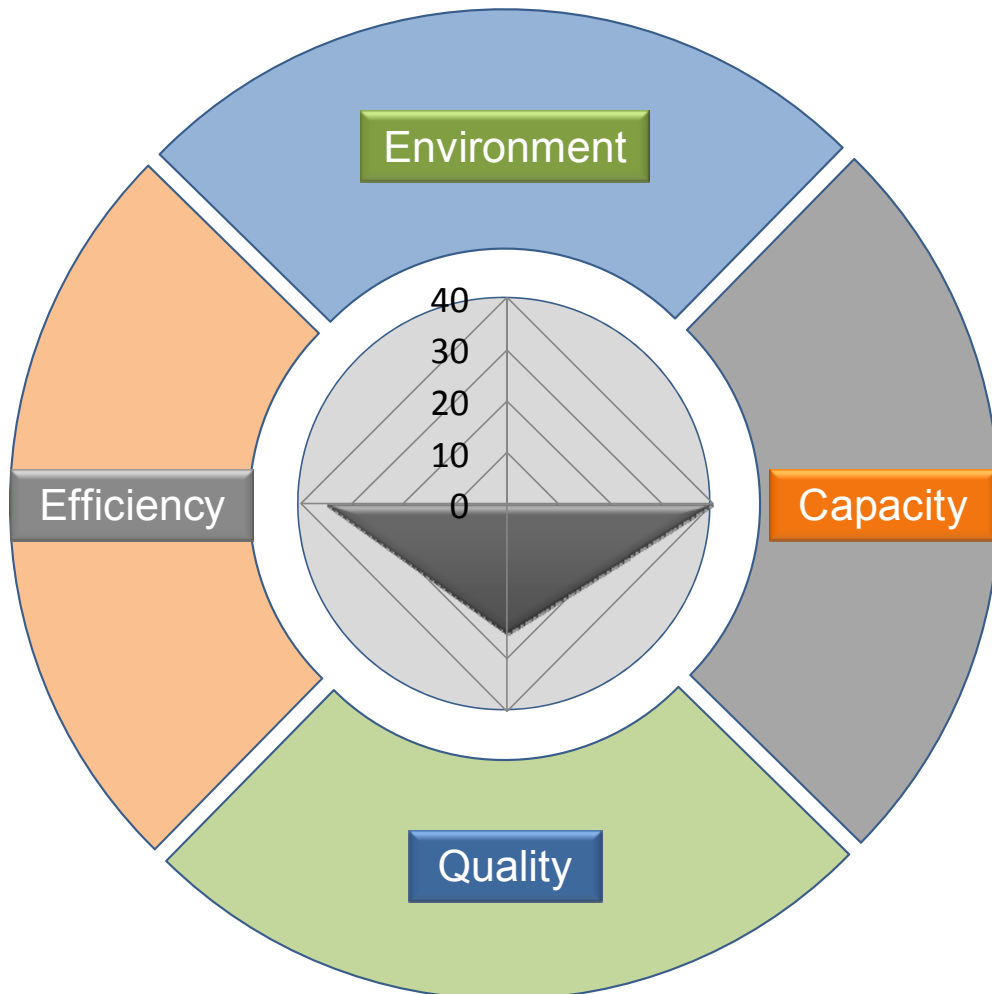
### **Prerequisites and implementation**

It needs to be emphasized that the implementation of such incentive systems basically requires a terminal management system, which makes sure that relevant data and information such as the arrival time of trains, the availability of shipments, the time of pick-up by road vehicles as well as all associated operational handlings are collected properly and could be verified for invoicing purposes.

In order to avoid that they get stuck, an incentive or bonus/malus system aimed at the management of the interim storage space was designed and implemented at terminals such as Busto Arsizio, KTL Ludwigshafen, Duisburg-Ruhrort Hafen and Köln-Eifeltor. The system

foresees a reward (“bonus”) for a customer who picks up his shipment early for example in the first three hours after the time of availability of the train, and a penalty (“malus”) if the shipment is collected e.g. 24 to 48 hours after the arrival. The terminal management and bookkeeping system levels the rewards and penalties per client and generates a monthly invoice.

**Figure 10: Impact of the measure “incentives for the use of interim storage space” on the four main goals**



Source: KombiConsult analysis

**Figure 11: Bonus-malus incentives for the use of interim storage space**

Differentiated pricing system for transshipment rail-road and buffer services, including bonus-malus system for buffer use:

| Pick-up after MAD | BONUS  |
|-------------------|--|
| 0- 3 hours:       | -4-8 € (depending on LU-size / stackability) |
| 3-24 hours:       | -2-4 €                                       |
|                   | MALUS:                                       |
| 24-48 hours:      | +3-6 €                                       |
| 48-72 hours, ...  | +9-15 €, ... 29 €                            |

Source: KombiConsult analysis; LU = Loading unit; MAD = Mis a disposition / availability

### Impacts and Benefits

The experience reported by KTL or Rail Cargo Austria and WienCont that apply similar pricing schemes is very encouraging. Terminal managers estimate that such a measure ensures a total capacity increase effect of about 5 per cent depending on the initial pick-up and delivery behaviour of the customers. The incentive system is also able to take into account the size (space consumption) and the ability to stack loading units and thus allows a further differentiation according to local needs.

It does seem that far-fetched, if we try to catch a link between the impacts of such a bonus-malus incentive system on the environment (cf. Figure 10). The quality of the terminal services should get higher (more space to run the core job – transshipment of loading units), even if the customers will not be enthused.

### Costs

The implementation of bonus-malus incentives will result in increased administrative effort regarding the invoicing. Furthermore, such incentives may call for investments e.g. a terminal management system to provide the relevant data for the invoicing.

### Involved Parties

- Terminal operator
- Intermodal operator
- “Customers” that means forwarders, road hauliers, shipping lines

### Conflicts of goals

Additional expenditures related to the invoicing process should not undo the efficiency benefits and potential capacity increase. The implementation of this measure will most likely encounter resistance by many customers, worried about additional costs and restrictions regarding planning flexibility. On the other hand “learning” on the customers side leads to more efficient supply chains.

### References

- Busto Arsizio
- KTL Ludwigshafen
- Köln-Eifeltor
- Duisburg
- WienCont
- Rail Cargo Austria