

## 2.2 Control of shunting services by the terminal operator

### Description

The railway undertaking charged by the intermodal operator with the main rail haul is also responsible for taking the train in and out of the intermodal terminal yard. This can be performed by own locomotives and staff, or by a local service provider. The selection depends on technical accessibility of the terminal tracks by long distance locomotives, availability of shunting service, quantity of trains and their timing over the day and the expected quantity of shunting operations on wagon.

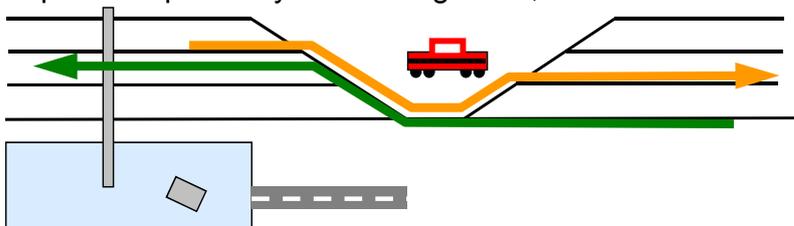
Usually, the main rail haul railway also performs the shunting of train or wagon sets between the terminal yard and parking tracks, removes damaged wagons or brings additional wagons.

If more than one railway undertaking is served at the terminal and the handling tracks are used in flow factor  $> 1$  thus requires a coordination of different companies resources (loco, driver, shunter, wagon inspector, handling agent). In case of a highly frequented terminal the delay of one single of these resources (for whatever reason) may cause a serious delay in the entire transport chain, may lower the efficiency and capacity of the terminal.

In some European intermodal terminals the shunting service is therefore managed by the terminal operator entirely on its own or in co-ordination with the railway undertaking or a local shunting service provider (cf. Figure 4).

### Figure 4: Control of shunting services

Disposition of shunting service, e.g. for flow factor, but also for damaged and optional wagon by terminal operator according to transshipment and pick-up and delivery needs  
Requires disponibility of shunting locos, - tracks and visitors



Source: KombiConsult analysis

## Prerequisites and implementation

This decision, however, requires some boundary conditions:

- To ensure a high performance of these logistics tasks i.e. that an appropriate shunting loco and personnel are available at the right time
- In regards to infrastructure, a sufficient number of siding and shunting tracks must be available.
- In case of involvement of an external shunting provider (“make or buy” decision) a good coordination and synchronization of this interface and the works between the terminal and shunting service operator is required.
- In advance, it needs to be decided how far the responsibility of the shunting operator should reach (who order when and from whom?).

Regarding the practical implementation of the measure, the operation processes must be defined very carefully as regards:

- Contact persons at railway undertaking and intermodal operator (involved parties)
- Technical access conditions to the terminal and eventual parking tracks
- Monitoring of the shunting operations by managing clerks
- Setting up train driver and staff plans.

## Impact and benefit

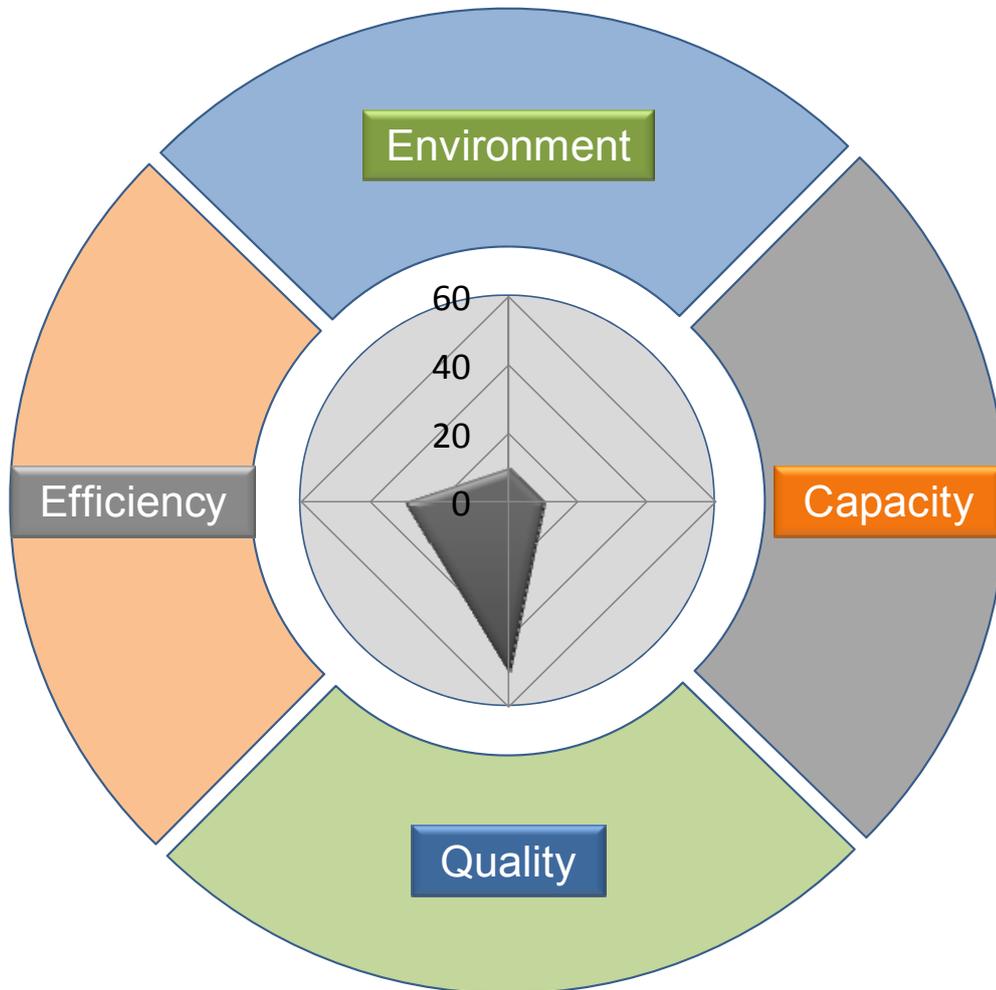
Control of shunting services by the terminal operator can have several positive effects:

- It simplifies processes and reduces frictional losses, e.g. communication errors, waiting for decisions, between the actors involved.
- It enables the terminal operator to reduce “follow-up” train delays.
- It raises the operational flexibility of the terminal management, e.g. because a completed train can already leave the terminal, and the next train can be hauled in.
- It facilitates the prioritization of shipments and train.
- A neutral shunting service managed by the terminal operator would thus not only improve the use of the terminal capacity but also facilitate railways to serve terminals without providing their own equipment and personnel in every terminal.

All this leads to better utilization of technical capacity, increased efficiency and improved quality in terms of shunting services, and last but not least a positive impact on the environ-

ment. The terminal operators reported a capacity effect of 5 to 10 per cent resulting in particular from a reduction of delays and the reasonable prioritization of shipments.

**Figure 5: Impact of the measure “control shunting services” on the four main goals**



Source: KombiConsult analysis

### Costs

The action will result in following costs/investments:

- Loco (procurement, maintenance and repair, fuel costs)
- Personnel cost (loco driver, shunter, managing clerk, wagon inspectors...)
- Co-ordination costs

### **Involved Parties**

- Railway undertakings who have to accept that the control is carried out by the “critical resource” – the terminal
- Terminal operator who have to take over responsibility and provide for the resources on their own or by a local shunting service
- Intermodal operators

### **Conflicts of goals**

The time savings in the processes and the increased flexibility in the terminal operation should be set against the risk of the capacity utilization of its own equipment as well as their related costs (fixed costs, operational costs).

### **References**

Positive experiences were reported from DUSS terminals, the Interporto Bologna, the HUPAC terminal Busto Arsizio, the CEMAT terminal Verona Quadrante Europe and the German private terminals of KTL Kombiterminal Ludwigshafen and Baltic Rail Gate (Lübeck).

At Verona Quadrante Europa shunting operations are carried out by Quadrante Servizio, a subsidiary of the Interporto operator and the railways that serves the various rail traction service providers. Also in other terminals, there are positive experiences with local railway undertakings, which are responsible for the local shunting operations and provide for the wagon inspection for different long-haul railway undertakings, which are calling at the terminal.