UIRR
INTERNATIONAL UNION FOR ROAD-RAIL COMBINED TRANSPORT

POSITION PAPER

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TEN-T Guidelines revision: key to a competitive infrastructure

Railway and transhipment infrastructure for intermodal freight transport

Intermodal rail makes up half of European rail freight performance – this was confirmed in the UIC-UIRR Study on Combined Transport[1]. Freight trains that carry containers, swap bodies and (craneable) semi-trailers criss-cross the continent, passing through from one Member State railway network to another in close to 90% of the time. The intermodal production system of rail freight, the only one delivering dynamic growth, has nearly doubled its share during the past decades. This phenomenon went largely unnoticed as the market share of rail freight stagnated because of the declining conventional traffic.

Combined Transport provides the most efficient link between road and the other sustainable modes of surface transport like electric rail and the waterborne solutions. While the demand to transport conventional cargo is decreasing, the unabated growth of the surface freight transport market is fuelled by processed goods typically carried in trucks. The European Union must reverse the trend under these circumstances and double, even triple the tonne-kilometre performance of non-road modes[2]. The intermodal system of freight transport will need to play a very substantial role in this transformation, which is only possible if transport policymakers ensure that the rail infrastructure is adjusted to the needs to intermodality and its capacity adequately extended.

The revision of the TEN-T Guidelines Regulation offers an ideal opportunity for the European legislator to enact the changes needed on the European Union level, while the upcoming amendment of the Rail Freight Corridor Regulation will enable the completion of the required regulatory transformation with the necessary changes to traffic management and governance rules.

This position paper focuses on the changes deemed necessary to the TEN-T Guidelines Regulation by the European Combined Transport sector.

What does the Combined Transport Sector need?

The fulfilment of the envisioned modal shift[3] to achieve the decarbonisation objectives of the EU transport sector requires the following changes to the TEN-T Guidelines Regulation:

1. **Clarification of the TEN-T technical parameters for the railway infrastructure**
2. **Review of the railway line codification for the 4-meter loading gauge**
3. **Introduction of parameters to guide the upgrading of transhipment terminals**
4. **Introduction of the "*freight preferred railway line*" category**

[1] http://www.uirr.com/en/media-centre/press-releases-and-position-papers/2020/mediacentre/1675-2020-report-on-combined-transport-in-europe.html

[2] http://www.uirr.com/en/media-centre/press-releases-and-position-papers/2020/mediacentre/1430-uirr-press-release-eu-climate-law-proposal-2021-year-of-rail.html

[3] http://www.uirr.com/en/media-centre/press-releases-and-position-papers/2020/mediacentre/1714-uirr-press-release-intermodal-transport-a-pillar-of-eu-transport-policy.html

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TEN-T technical parameters for the railway infrastructure

To better serve the needs of rail freight the technical parameters for railway lines in the TEN-T Regulation 1315/2013 need to be updated as follows – with special consideration to the needs of intermodal rail.

- **Unchanged technical parameters**: ERTMS signalling, 1435mm track gauge, 22,5t axle load, 740-meter train length[4]
- **Technical parameters to upgrade**:
  - **Electrification**: the current requirement of "full electrification as necessary for electric train operations" (Para 2 (a) (i) in Article 14) should be updated to "*provision of electric traction power needed to run consecutive 740-meter-long 2000t gross weight freight trains*".
  - **Core Network Corridor (CNC) terminals**: the current requirement for intermodal terminals is "an annual non-bulk freight volume over 800.000t" (Article 27) is difficult to measure as the cargo volume is not monitored and recorded by terminals; their unit of performance measurement is the number of units transhipped, which should be set at 40.000 for a CNC terminal.
- **Additional technical parameters to add to the Regulation:**
  - **Loading gauge**: the loading gauge should enable the passage of intermodal trains carrying 4-meter-high and 2,60-metre-wide refrigerated (craneable) semi-trailers[5] (see picture)
  - **Track speed for freight** should be 120 km/h.
  - **Double or multiple track lines** should be a requirement on every TEN-T section that reaches a traffic volume of more than 24 trains a day, multiple track lines should have freight prioritised tracks.

  - **Gross weight**: the operation of at least 2000t freight trains should be possible between TEN-T terminals.

Review of railway line codification for the 4-meter loading gauge

The profile gauge measurement and the loading gauge calculation behind the codification of most European railway lines for the maximum width and height of the train that can pass may be several decades old. In some cases, the actual codification occurred well before 2,60m wide and 4m high (refrigerated) semi-trailers were permitted to circulate on European roads.

Semi-trailers form a very important and rapidly growing segment of Combined Transport as these loading units are the prime choice of shippers for modal shift. In several instances, rail infrastructure managers deny train path applications of Combined Transport Operators/authorised applicants for intermodal trains that are foreseen to carry refrigerated semi-trailers or require a 'special transport permit' implying a surcharge just because the line codification does not nominally allow for the circulation of standard intermodal wagons loaded with these kinds of semi-trailers.

In parallel with introducing a TEN-T loading gauge parameter (see above), the legislator should mandate infrastructure managers to regularly confirm the profile gauge of TEN-T lines using the empirical measurement method followed by the calculation of the loading gauge to reconfirm the codification of the lines. The frequency of such an exercise should be no longer than every 10 years.

The method of codification of railway lines, including the techniques for the physical measurement of the profile gauge and the algorithm used for the calculation of the available loading gauge should be standardised on a European level. These shall be included in the Technical Specifications for Interoperability on Infrastructure (TSI INFRA).

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[4] A 740-meter-long intermodal train may consist of 27 articulated flat wagons or 21 articulated pocket wagons designed to carry semi-trailers; the former has capacity for 54 pieces of 45-foot containers or 108 20-foot containers, while the latter for 42 (craneable) semi-trailers – with a total useful carrying capacity up to 1170t in case of a 2000t gross train weight.

[5] Non-refrigerated semi-trailers have a narrower width of 2,55 meters

Parameters to guide the upgrading of transhipment terminals

The Core Network Corridor (CNC) status of an intermodal terminal is determined by three factors:

1. **The geographic proximity of the terminal to the TEN-T network**

   CNC Terminals are aligned with a TEN-T Corridor and therefore must lie near to a TEN-T line.

2. **The annual non-bulk freight volume of 800.000 tonnes**

   Intermodal terminals in most cases do not obtain or record information concerning the weight of the cargo that they tranship. This data is rather reported in the number of intermodal loading units (TEU) transhipped. Under the present Regulation if a terminal reaches this traffic volume the Commission should designate it a CNC terminal, whereas in case the traffic volume declines the Commission should withdraw such designation - under delegated acts.

   The CNC Terminal status should be automatically acquired by any terminal if the annual traffic/transhipment performance reaches 40.000 units. Such status should only be lost if the 40.000-unit threshold is not achieved in 3 years in a row.

3. **A listing of terminals in the Annex of Regulation 1315/2013**

   A table in Annex II (2) of Regulation 1315/2013 lists the road-rail terminals of the core and comprehensive network by name, which is an improper method since no new terminal may be added or deleted without legislative action.

   The listing of terminals should not be contained in the Regulation – rather the CNC Terminal status should be automatically acquired upon achieving a certain traffic threshold contained in the legislation.

The TEN-T Guidelines Regulation 1315/2013 designates that "freight terminals shall be equipped with cranes and other devices for moving freight between transport modes and for the positioning and storage of freight" (Para 2 in Article 28). It is imperative that freight terminals are not only equipped with transhipment technologies, but *all other technologies required for the safe and efficient operation of a terminal* such as photogates with optical character recognition (OCR) capability. This is especially important to mention in the revised Regulation as only this way will these kinds of investments qualify for financial assistance from the CEF Transport Programme.

Freight preferred railway lines

The "freight (railway) line" designation contained in Para 2 (a) (ii) of Article 39 in Regulation[6] is practically not in use. Rather, most conventional railway lines are designated for dual use – theoretically accessible both for passenger and freight trains. Conventional railway lines are typically expected to be reconstructed to a line speed of 160 km/h, which may be a standard for passenger trains, but is a speed considerably higher than a typical freight train would travel at. Moreover, with longer and heavier freight trains, the top speed of a freight train in general will not exceed 120 km/h. On certain sections the uninterrupted advance of a freight train with a speed of 80-100 km/h would also be sufficient from a competitiveness perspective.

Whereas in real life there are several railway lines where train paths are available only for passenger trains, there is no category to designate those railway lines that cater to freight train not in an exclusive, but in a prioritised way. The *freight preferred railway line* designation should be therefore created to indicate those railway lines on which more than 50% of the train paths is allocated to freight trains, and on which the traffic priority/right of way should be granted to freight trains. These lines would not need to be upgraded to a higher line speed than 120 km/h, with some limited sections allowed to offer a line speed of only 80-100 km/h.

Establishing a consecutive network of *freight preferred railway lines* should be aimed for to ensure the quantity and quality of train paths needed for freight trains that deliver the modal shift objectives specified in the European Green Deal.

The provision whereby "at the request of a Member State, as regards railway transport infrastructure, exemptions may be granted by the Commission in duly justified cases in relation to the train length, ERTMS, axle load, electrification and line speed" (Para 3 in Article 39) should be amended to allow such derogation only in case of a designated very low level of freight train traffic (e.g. fewer than 50 trains annually), or on low traffic sidings.

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[6] "freight lines of the core network as indicated in Annex I: at least 22,5 t axle load, 100 km/h line speed and the possibility of running trains with a length of 740 m;"

The revision of the TEN-T Guidelines Regulation with needs of freight in mind

The TEN-T railway network should equally aim to satisfy the needs of passenger and freight transport. Rail freight is ideal for the safe and efficient carriage of heavy loads. It is not only capable of removing many hundreds of thousands of trucks from Europe's roads, but through this modal shift freight trains can deliver on the ambitious decarbonisation objectives of the European Green Deal.

The European legislator should enable through the revision of the TEN-T Guidelines Regulation for rail freight, and intermodal rail in particular, to fulfil its mission by enacting the following changes:

1. Upgraded requirement for electrification of railway lines.
2. Upgraded threshold for CNC Terminal designation.
3. Automatic designation of CNC Terminals instead of an explicit listing in the Annex of the Regulation, which is to be removed.
4. Addition of a railway technical requirement for a 4-meter loading gauge on every TEN-T line used by freight trains.
5. Specification that line speed for rail freight should be 120 km/h.
6. Addition of a technical requirement for double or multiple track lines in case it is justified by the traffic demand.
7. Specification that the permitted gross weight of a freight train should be at least 2000 tonnes.
8. Requirement of the regular confirmation of the codification of railway lines by physical measurement of the profile gauge and the re-calculation of the profile gauge. The regularity should be at least once in 10 years.
9. Requirement of the inclusion of line codification into the applicable interoperability standard, TSI INFRA.
10. Specification that CNC Terminals have not only transhipment equipment for the positioning and storage of freight, but that they also need other technologies for the safe and efficient operation expected from a contemporary terminal. This is needed to qualify the upgrades of these terminal assets for financial assistance from the Connecting Europe Facility.
11. Establishment of the *freight preferred railway line* designation to encourage the cheaper and faster modernisation of conventional railway lines that predominantly cater to the needs of freight trains. This can guarantee a competitive track access charge for freight trains.
12. Limitation of the possibility for Member States to ask for derogations to the established TEN-T parameters.

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