



Key Performance Indicators of Rail Freight Corridors

Version 1.0

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1 Glossary/Abbreviations

Glossary/abbreviation	Definition
CID	Corridor Information Document according to Article 18 of Regulation (EU) 913/2010.
Corridor OSS (C-OSS)	A joint body designated or set up by the RFC for applicants to request and to receive answers, in a single place and in a single operation, regarding infrastructure capacity for freight trains crossing at least one border along the RFC (Article 13 of Regulation (EU) 913/2010).
Corridor Organisation	Governance structure of a Rail Freight Corridor according to Article 8 of Regulation (EU) 913/2010.
Contracted Timetable (CTT)	It defines the planned route and planned time of a train run. It is delivered by Message 2090 from the IMs to TIS, and merged into an international timetable by TIS.
Framework for Capacity Allocation (FCA)	Regulation (EU) 913/2010 requires the Executive Board of the Rail Freight Corridor to define the framework for the allocation of the infrastructure capacity on the Rail Freight Corridor. The framework specifies procedures, time limits and any information needed to apply and use a PaP on a Rail Freight Corridor.
Key Performance Indicator (KPI)	A measurable value that demonstrates how effectively a company or an organisation is achieving its key business objectives.
MB	Management Board of a RFC according to Article 8 (2) of Regulation (EU) 913/2010.
Oracle Business Intelligence (OBI)	A tool normally used to conduct data analysis and to create reports; in use at RNE.
Path Coordination System (PCS)	A path coordination and allocation system for international passenger and freight rail transport designed, developed and operated by RNE.
Pre-arranged Path (PaP)	A pre-constructed path on a Rail Freight Corridor according to Regulation (EU) 913/2010. A PaP may be offered either on a whole RFC or on sections of the RFC forming an international path request crossing one or more international borders.
Freight Regulation	Regulation (EU) 913/2010 concerning a European rail network for competitive freight.
Rail Freight Corridor (RFC)	A Corridor organised and set up in accordance with Regulation (EU) 913/2010.
Reserve Capacity (RC)	Jointly defined capacity for international freight trains running on the freight corridors, recognising the need for capacity of other types of transport, including passenger transport; this reserve is kept available within the IMs' final working timetables to allow for a quick and appropriate response to ad hoc requests for capacity (Article 14 (5) of Regulation (EU) 913/2010).
Running Advice (RA)	It delivers the actual time at a specific point or status and the deviation from the planned time at that point. It is delivered by Message 2002 from the IMs to TIS.

<p>Train Information System (TIS)</p>	<p>A web-based application that visualises international trains from origin to destination. It supports international train management by delivering real-time train data concerning international passenger and freight trains. The relevant data is processed directly from the Infrastructure Managers' systems.</p>
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2 Background, scope and target group of this document

2.1 Background

Article 19 (2) of Regulation (EU) 913/2010 (hereinafter: Freight Regulation) requires the Management Board (MB) of the Rail Freight Corridors (hereinafter: RFCs) to *monitor the performance of rail freight services on the freight corridor and publish the results of this monitoring once a year.*

The RFCs are free to choose their own Key Performance Indicators (KPIs) to fulfil this requirement of the Freight Regulation. However, in order to facilitate data processing and data provision for the calculation of the KPIs of the RFCs, as well as to reduce the workload both for the RFCs and RNE, it is advisable to ensure a certain degree of harmonisation of the KPIs. Therefore, RNE launched a project named 'Key Performance Indicators of Rail Freight Corridors', whose aim was to collect information from the RFCs about their currently used and planned KPIs, and to compare them in order to identify the potential for a common approach, harmonisation in this area, which is considered as a proposal for the RFCs. An overall harmonisation of all KPIs would be rather difficult to achieve for the time being. The RNE/RFC High Level Group agreed to this approach; it suggested that a common approach and a set of KPIs applicable to all RFCs should be developed, while allowing the RFCs to develop and monitor any further individual KPIs as well. The project started in October 2014 and ended, with the provision of these guidelines, in December 2015.

2.2 Scope and target group of this document

These guidelines provide recommendations for using a set of KPIs commonly applicable to all RFCs.

These guidelines address all levels of RNE and the corridor organisations.

This document does not deal with the monitoring of other KPIs defined in the RNE Manual for Cooperation in Train Performance Management, which remains valid.

3 Documentation relevant for these Guidelines

- » Regulation (EU) No 913/2010 concerning a European network for competitive freight,
- » Handbook on Regulation concerning a European network for competitive freight (DG MOVE working document),
- » Report on the results of the survey 'Key Performance Indicators of Rail Freight Corridors'.

4 Principles for shared KPIs commonly applicable to all RFCs

4.1 Decision-making body within the KPIs

The RFCs already have their own internal rules for the decision-making procedure concerning the KPIs they intend to apply. These internal rules remain valid. Appointments to this decision-making body shall remain within the sole responsibility of the RFCs, although there should be some coordination among them.

The Executive Boards of RFCs that have signed the Framework for Capacity Allocation (FCA), in accordance with Article 14 of the Freight Regulation, are also decision-making bodies as regards the definition of the KPIs used for monitoring the capacity allocation procedure.

4.2 Selection of KPIs

Selection of the KPIs shall remain within the responsibility of the dedicated decision-making body/bodies of the RFCs; nevertheless, the FCA shall be taken into consideration as well. No overall harmonisation is necessary, however it is recommended to use the set of KPIs applicable to all RFCs, as defined in these Guidelines.

The KPIs of the RFCs may include a set of jointly- agreed KPIs (see Point 4.6) and additional individual KPIs. For RFCs that have signed the FCA, the set of KPIs listed in the FCA is mandatory if it is a legally-binding document. However, the RFCs still have a mandate to define additional KPIs (in addition to those included in the FCA).

4.3 Place of publication of the description of the KPIs

The description of the KPIs (including definition, calculation formula, targets, source of data and data processing tool, publication of the results, etc.) should be published in one place in a single document, if possible, and the other RFC documents should only include reference to this document in terms of the KPIs.

It is recommended to take the Implementation Plan, which is part of the Corridor Information Document (CID), as this single document; the description of the KPIs should be added as an annex to Book 5. The advantage is that the main body of the document will remain stable, while the technical features can be more easily updated in the annex concerned.

4.4 Source of data for the calculation of the KPIs

In order to use the same quality of data and to reduce the overall efforts of the RFCs and RNE, the same IT tools shall be used for the calculation of the commonly applicable KPIs. The data are provided by PCS and TIS (except for the KPIs for Market development) while the data processing tool is OBI.

4.5 Business areas

The KPIs described in Point 4.6 of these Guidelines monitor the performance of the RFCs in the following business areas:

- » Capacity management: meaning the performance of the RFC in constructing, allocating and selling the capacity of the RFC (in line with Articles 13 and 14 of the Freight Regulation), monitored in terms of:
 - Volume of offered capacity
 - Volume of requested capacity
 - Volume of requests
 - Volume of pre-booked capacity
 - Number of conflicts.

The KPIs included in this area correspond to the KPIs listed in the FCA for timetabling year 2017.

- » Operations: meaning the performance of the traffic running along the RFCs monitored in terms of punctuality and volume of traffic, namely:
 - Punctuality at origin
 - Punctuality at destination

- Number of train runs (suggested for RFC internal use).
- » Market development: the capability of the RFC to meet market demands will be monitored in terms of:
 - Traffic volume
 - Relation between capacity allocated by the C-OSS and total traffic.

4.6 Set of KPIs commonly applicable to all RFCs

Business area	KPI	Calculation formula	Source of data	Data processing tool	Time frame	Timing	Comments
Capacity Management	Volume of offered capacity	Km*days offered	PCS	OBI	Timetable year	At X-11 and X-2	<p>Km: PaP km between operation points without feeder and outflow sections</p> <p>X-11: Publication of PaPs</p> <p>X-2: Publication of reserve capacity for ad-hoc traffic</p>
	Volume of requested capacity	Km*days requested	PCS	OBI	Timetable year	At X-8	<p>Km: PaP km between operation points without feeder and outflow sections</p> <p>Length of FlexPaP cannot be predefined</p> <p>X-8: Deadline for submitting path requests in the annual timetabling process</p>
	Volume of requests	Number of PCS dossiers	PCS	OBI	Timetable year	At X-8	X-8: Deadline for submitting path requests in the annual timetabling process

							Requested PaPs are counted, not requests on PaPs
	Volume of capacity (pre-booking phase)	Km*days (pre-booking phase)	PCS	OBI	Timetable year	At X-7.5	<p>Km: PaP km between operation points without feeder and outflow sections</p> <p>Length of FlexPaP cannot be predefined</p> <p>X-7.5: Deadline for treatment of PaP requests for the annual timetable by the C-OSS</p>
	Number of conflicts	Number of PCS dossiers submitted to the C-OSS that conflict with at least one other PCS dossier	PCS	OBI	Timetable year	At X-8	<p>X-8: Deadline for submitting path requests in the annual timetabling process</p> <p>Requests on PaPs are counted, not requested PaPs.</p>
Operations	Punctuality at origin	The calculation formula for this KPI corresponds to that of KPI 2 in the RNE Manual 'Cooperation in Train Performance Management'	TIS	OBI	Timetable year	In January after the timetable year concerned	It is recommended, but not obligatory, to use the same sample of trains as for KPI2 in the RNE Manual 'Cooperation in Train Performance Management'

	Punctuality at destination	The calculation formula for this KPI corresponds to that of KPI 1 in the RNE Manual 'Cooperation in Train Performance Management'	TIS	OBI	Timetable year	In January after the timetable year concerned	It is recommended, but not obligatory, to use the same sample of trains as for KPI2 in the RNE Manual 'Cooperation in Train Performance Management'
	Number of train runs	Total number of train runs having a RA (Running Advice) on selected pairs of border points	TIS	OBI	Timetable year	In January after the timetable year concerned	Train sample: all international freight trains Points: pairs of border points selected by the RFCs Only for trains that have a CTT and 1 or more RA
Market development	Traffic volume	Number of train runs with a RA on selected border points	IMs` national tools	OBI	Timetable year	In January after the timetable year concerned	No locos and service trains should be considered One IM per border point should provide the data to the RFC The RFC should provide the data to RNE

	Relation between capacity allocated by the C-OSS and total traffic	Number of trains allocated by the C-OSS involving selected points/number of train runs having a RA on selected border points	PCS IMs` national tools	OBI	Timetable year	In January after the timetable year concerned	<p>RNE will carry out a pilot comparing the planned PaPs in PCS with the CTT information and the RA in TIS. Based on the international train number and the points (primary location code).</p> <p>1 train = 1 day / PaP</p> <p>One IM per border point should provide the data to the RFC</p> <p>The RFC should provide the data to RNE</p>
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The monitoring of the KPIs for Capacity Management and Operations may start in 2016. The first year of monitoring of the KPI2 (related to market development) will depend on the results of the above-mentioned pilot.

Each RFC may define any other additional KPIs specific to it in all of the three business areas, or in any other business areas.

4.7 Targets/thresholds

For the first year of monitoring, it is not necessary to define commonly applicable targets. The permanent expert group defined in Point 4.9 may consider setting up commonly applicable targets based on the results of the first year's monitoring. However, each RFC is free to define its own targets during the interim period.

4.8 Provision of results

The RFCs shall fill in a form (see Annex 1) in order to inform RNE about the KPIs that they intend to apply (out of the ten KPIs described in Point 4.6) and to provide RNE with the necessary data for the calculation of the KPIs concerned. The relevant data has to be sent to RNE 2 months before the date of calculation of the KPI at the latest.

RNE will calculate all KPIs listed in Point 4.6 for all nine RFCs by default. The results will be available one day after the listed timings (see Point 4.6) in the form of raw data (.xls files), which will be available in OBI for download. In addition, RNE will also calculate the KPIs on a monthly basis; those results will be stored and will be available to the RFCs in OBI as well.

4.9 Publication of the results

The decision on the time and manner of publication of the results of the KPIs in Point 4.6 remains with the RFCs. However, it is advisable to mention them in the Annual Report or in the performance report (under Article 19.2 of the Freight Regulation) of the RFC. The KPI for the number of train runs may only be used for RFC internal purposes.

4.10 Permanent expert group

It is advisable to set up a permanent expert group with a mandate for the following tasks:

- » Coordination of the use of the KPIs commonly applicable to all RFCs (e.g. dissemination of these Guidelines to the relevant experts within the corridor organisation, submission of necessary data to RNE to calculate the KPIs, etc.),
- » Revision of the KPIs described in Point 4.6 in terms of business areas, definition, calculation formula, etc. on an annual basis,
- » Update of these Guidelines when necessary,
- » Provision of an exchange of information between the setting up / amendment of KPIs monitoring capacity management in the FCA and in these Guidelines, so that they are in line with each other in order to avoid work duplication both for the RFCs and for RNE in terms of monitoring and reporting.

This group shall consist of:

- » at least one representative per RFC (it is advisable for this person to have relevant experience in the field of Train Performance Management or capacity management of the RFCs)
- » if required, relevant experts in PCS, TIS and OBI at RNE.

The coordination of this group is under the responsibility of the RNE RFC Senior RFC Manager and Project Manager. The group shall meet at least once a year.

5 Provision of reports for other, individual KPIs

5.1 Requesting reports about other KPIs related to Operations

As far as KPIs related to Train Performance Management are concerned, reports about any KPIs other than those described in Point 4.6 shall be requested from RNE in accordance with the procedure described in the RNE manual for 'Cooperation in Train Performance Management'.

5.2 Requesting reports about other KPIs related to Capacity Management

RNE will try to fulfil any other requests related to KPI reports on capacity management issues. Normally, 'the first come – first served' principle will be applied. However, due to the fact that the number of requests cannot be predicted, in the future conflicts may well occur between certain requests, preventing the delivery of the report in due time.

Therefore, the following prioritisation will be applied in case of conflicts:

Criteria	Scores		
	0	1	2
New KPI (new report)	Yes	No	-
Priority	Low	Medium	High
Complexity of development	Complex	Medium	Easy

Total score = New KPI (or not) + Priority + Complexity of development.

The request with the highest score will be fulfilled earlier. If more than one request have the same score, the request requiring a shorter processing time will get priority over requests with a longer processing time.

In the medium or long-term, a similar and more sophisticated approach – as described in the RNE manual for 'Cooperation in Train Performance Management' – can be developed to improve the procedure for requesting and providing individual reports from PCS. When such a procedure takes effect, the procedure described in this point of the present Guidelines will not be valid anymore.

6 Annex

Annex 1 – Data submission form (available on Projectplace)