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Railway Undertakings' Handbook for International Contingency Management

ECCO: Efficient Cross Corridor Organisation

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Railway Undertakings' Handbook for International Contingency Management

1 Introduction

Railway Undertakings' (RUs) contingency plans are an essential element of an RU's risk management and business strategy.

RUs currently have internal processes for contingency planning in place to deal with day to day disruptions of their services and to manage potential disruptions of a larger nature.

An additional, harmonized international process is needed in the event of large incidents with significant international impact (in this document referred to as an international disruption), which both in duration and scale, jeopardise major trade flows and risk undermining customer confidence in rail's resilience as a transport mode.

This Railway Undertakings' Handbook for International Contingency Management ("the Handbook") outlines the following:

1) RU risk management preparatory measures that should be taken and that can be drawn upon in the event of an international disruption.
2) The essential steps to be taken by RUs during an international disruption to minimise disruption to trade flows.
3) In detail processes and procedures that RUs should take in communication with other RUs, Infrastructure Managers (IMs) and end customers.
4) The definition of scenarios for the pooling of resources of RUs and the identification of ad-hoc risk mitigation measures that would allow such pooling in case of an officially declared "contingency case".

The Handbook also recognises the helpful role that the Rail Freight Corridors (RFCs) can play in setting up the communication process along which the International Contingency Management (ICM) can be handled best. However, operational issues have to be managed by the dedicated production staff of involved parties.

2 Enhanced RU contingency management preparatory measures

The three main elements of RU contingency plans that are a starting point for minimising the impact of large-scale disruptions, should be:

2.1 Optimisation of rerouting options

2.1.1 Optimise rerouting options

Based on the re-routing overviews and traffic management scenarios provided by the Infrastructure Managers (IM) (3.1 of the Rail network Europe (RNE) Handbook for ICM) RUs shall take these into account when planning their risk management strategies.

2.1.2 Identify measures to enhance contingency planning

The technical parameters, other operational requirements and the rough indication of capacity (volume) alongside the traffic management scenarios provided by the RFCs are to serve as a basis for identifying measures by RUs to enhance their contingency planning.

2.1.3 Identify potential diversionary routes

RUs can use the rerouting catalogue to identify potential diversionary routes, including access to service facilities, terminals etc.

2.1.4 Give feedback to RFCs on rerouting options

RUs also should give a feedback to the RFCs if they are not able to use specific rerouting options or if that is very difficult even with cooperation partners

2.1.5 Balance investments with competitiveness

Any decisions to invest in additional rail equipment, drivers, route knowledge, will be balanced with the need for rail to stay cost competitive and therefore attractive for customers.

2.2 RU Contingency Task Force

Every RU should establish its own internal Contingency Task Force that can be activated in case of disruptions as defined in the RNE Handbook for International Contingency Management (ICM).

2.2.1 Task Force requirements

The RU Contingency Task Force should facilitate the following four points:

2.2.1.1 Division of responsibilities

The RU Contingency Task Force should facilitate the clear division of responsibilities within RUs.

2.2.1.2 Contact persons for external communication

The RU Contingency Task Force should facilitate the identification of contact persons within the RU for external communication.

2.2.1.3 Reduction reaction times

The RU Contingency Task Force should facilitate faster reaction times.

2.2.1.4 Simulations

The RU Contingency Task Force should carry out simulations with IMs and/or Allocation Bodies once per year.

2.2.2 Mandated Leader

Every RU shall identify one mandated leader position and the people who can hold this position(Task Force Leader) who represents the company within the contingency management activities triggered by the leading IM.

2.2.2.1 Requirements

The leader should meet the following minimum requirements:

2.2.2.1.1 Availability

The leader should be available 24/7 all year round.

2.2.2.1.2 Language

The leader should be fluent in English.

2.2.2.2 Mandate

The leader should be able to coordinate internally the following functions:

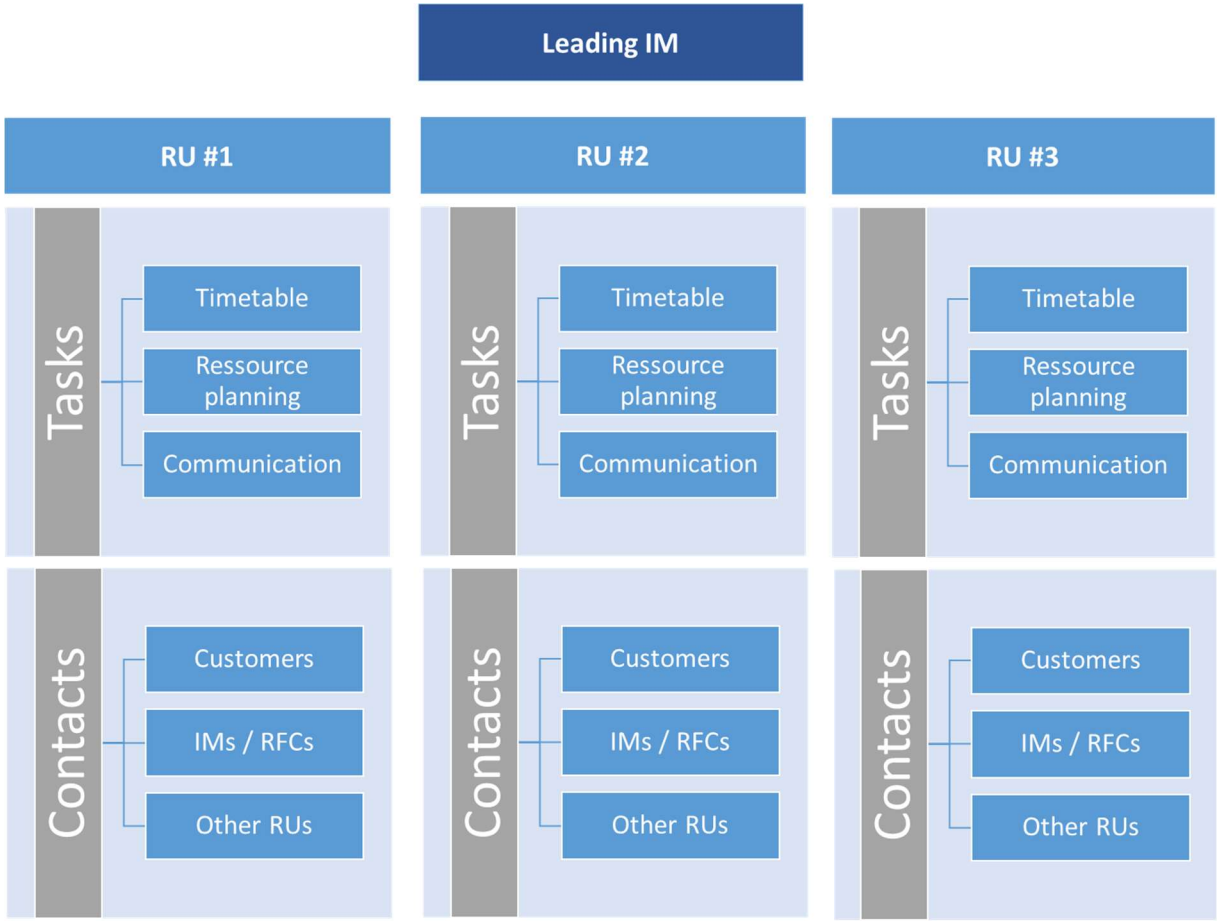
2.2.2.2.1 Timetabling (railway infrastructure/service facilities)

2.2.2.2.2 Resource planning / deployment (capacity, staff, rolling stock)

2.2.2.2.3 Communication with other parties: IMs, customers, other RUs and partners.

2.2.3 Communication and mandate figure

The figure below reflects the RU Contingency Task Force requirements and position.



2.3 Additional measures

In addition to point 2.1 and 2.2, RUs commit to fulfil the following tasks to prepare for ICM:

2.3.1 Training and information

Information and training of the task force regarding the provisions of the IMs Handbook for International Contingency Management and regarding the rerouting scenarios proposed by the RFCs.

2.3.2 Customer communication

Pre-defined measures to be developed for communication with customers

2.3.3 Prepare intra-RU relations

Preparation and if necessary, concluding of cooperation contracts with other RUs (e.g. sharing of train drivers, wagon inspectors and other necessary staff, locomotives, additional locomotives, push service, diesel traction, , resources for shunting on diversionary routes)

2.3.4 Safeguard route knowledge

Concluding of cooperation contracts for route knowledge (in the case of emergency) e. g. with local passenger services

2.3.5 Cancellations

Authority to agree to cancellation of trains where there are no available paths/insufficient resources/capability

2.3.6 Joint trainings and simulations

Organisation of joint trainings and exercises with other RUs and participation in ICM simulations with IMs

2.3.7 Update RU Handbook

The current RU Handbook for International Contingency Management will be updated by UIC and ERFA and endorsed by the RU Dialogue once a year. This update will be synchronised with the RNE Handbook.

3 Actions in the event of an international disruption

Objective: To minimise disruption of rail trade flows, particularly on international level.

3.1 Application of Handbook

When does this handbook apply? In the event of a major disruption of > 3 days (see the definition of an international disruption in Chapter 2 of IMs Handbook for ICM)

3.2 Internal tasks for each RU Task Force during an international disruption:

3.2.1 Coordination of planning

The capacity available for re-routing (remaining capacity) will be allocated between annual timetable traffic and ad-hoc traffic according to the shares of these two segments in the previous year. And the share for ad-hoc traffic will be allocated based on the concept of "first come, first serve".

To avoid this as it may not reflect the real needs of the market in case of disruption, RUs shall enhance the communication in the field of planning.

The RUs shall ask their planners to coordinate and to decide "on the spot" how to use the paths made available by the IMs.

The planners will then give a coordinated information to the expected number of paths they need, and they will also rank the priorities to the leading IM.

3.2.2 The tasks for the RUs will then be:

1) Analyse the situation and the impact identify its impacts for RUs and their customers
2) Identify the affected rail freight trains
3) Evaluate the customers' needs and prioritise measures
4) Estimate the potential volumes that can be re-routed on the pre-identified diversionary routes:
    4.1 Identify the possible restrictions given by the parameters on the deviation routes offered by IMs
    4.2 Quantify impact on available resources?
5) Revise production planning (timetable, staff, rolling stock)
6) Provide information about the usage of the contingency capacity (preferably via path catalogue) to the leading IM
7) Explore potential resource sharing between RUs.
8) Participate in telephone conferences with IM and other RUs
9) To react fast and in a coordinated manner to maintain train operations (-> disruption management process), RUs commit to stick to the process described in Chapter 4 of the RNE Handbook for ICM
10) Coordinate with the other RUs, possible options, production, concepts

3.3 RU-IM coordination - in detail

Once the international disruption is declared, RUs designate their Task Force Leaders for activities undertaken by the leading IM within one hour.

Within four to six hours of an international disruption taking place, RUs are ready to take part in a conference call organised by the IMs in order to support the Infrastructure Manager in allocating remaining capacity/ capacity on alternative routes the RUs:

1) Provide information about the expected number of paths needed per re-routing line.
2) Send train lists to IM including train parameters for IM to assess if rerouting is possible

3.4 RU communication with customers – in detail

Communication with RU customers: RUs to update customers with information regarding the contingency measures being taken and their impact on customer agreements/service level fulfilment.

4 Additional options

4.1 Guide to chapter 4

4.1.1 Five pooling options

Considering the four main resources needed in the running of a train (driver, loco, path and train/wagons), a total of sixteen variants of pooling is possible. Five main options have been kept, from a simple to a complex level.

4.1.2 Pooling and mitigation of rules

Of the five principle pooling options identified, four can only be used when a simultaneous (temporary) reduction is authorised in legal requirements on vehicle authorisation, language, safety, route knowledge etc. These mitigation measures are described in full in chapter 4.4.

4.1.3 Current applicability of pooling options

Only option 1 can currently be directly implemented by RUs. Therefore the 4 other options have been put in a grey field, to distinguish them from those measures that are immediately applicable.

4.2 Mutual sharing of RUs' resources in order to optimise transport flows

Pooling (mutual sharing of RUs' resources) is the grouping together of resources such as assets, equipment, personnel, effort, etc. for the purposes of maximizing advantage and/or minimizing risk to the users (here the RUs).

As RUs work in a competitive environment, the participation of RUs to the pooling system and the system itself remain optional and aim to utilise the best practises in cooperation currently used and leave sufficient flexibility for future developments.

4.3 Principles of pooling

Pooling of resources should be based on the following principles.

4.3.1 Available resources

Pooling of resources should be based on all available resources (loco, driver, staff for train preparation, possibly planers, etc.) needed to maximize the transport capacity on the given re-routing stretch

4.3.2 Mutual rules

Pooling of resources would be easier in case the mutual acceptance of the rules for braking calculation, dangerous goods treatment and cooperation contracting could be achieved.

4.3.3 Compensation

Pooling of resources would require adequate commercial compensation rules for companies providing their resources for the benefit of the sector. The creation of a model for financial compensation beforehand could boost fair division of limited resources. This model for financial compensation needs to be further elaborated. Compensation has to be considerable as adequate incentives will be key to push RUs to cooperate.

4.3.4 Inform IMs about RU cooperation

In the case of disturbances: coordination and information of the IM of the cooperation agreements involved

4.3.5 Use of communication and Task Force measures

RUs shall optimise the form of cooperation based on this handbook through publishing and keeping updated an EU wide contact-list, setting up a network of contingency task forces, developing communication with IMs and customers as described in chapters 2 and 3.

4.4 Mutual business agreements

RUs operating on a Rail Freight Corridor and other international lines should prepare mutual and multilateral business agreements with appropriate partners to optimise overall available resources and jointly manage them in the event of an international disruption. All the 5 options need a mutual business agreement to be prepared beforehand between RUs.

4.4.1 Consist of mutual business agreements

The main elements of these mutual business agreements should be the following:

1) The resource-pooling should be defined in terms of geography
2) The resource pooling should be limited to the bottleneck stretch, a route between two clearly defined points on rerouting-lines (ski-lift like system). This is deemed necessary to reduce the complexity of the adjustments in planning (by ensuring both: the best possible use of the available paths and by minimizing the need for additional resources)

4.4.2 Possible IT solutions

The available resources (staff and rolling stock) could be put at the disposal of a centralised system. This is to be further defined but will be hardly possible to solve without an IT-supported solution. **See annex.**

4.5 Description of pooling options

4.5.1 Level 1: Load pooling, or “share a ride”

4.5.1.1 Description

The Load Pooling concept is where a group of shipments that are bound for the same region and that normally would have been shipped via multiple RUs, are "pooled" together, or consolidated onto a block train, shipped to a yard below the international disruption, and then deconsolidated to make the final leg of the delivery. The shipments “share a ride” to bypass the disruption. The concept can be applied at both the origin and the destination of the disrupted line.

4.5.1.2 Preconditions

No changes to the current regulation are required and RUs face a minimum investment of resources with this option#1. The regulatory framework motivates the choice for that level in order to circumvent the restrictions it imposes. This level is therefore the only form of pooling RUs can attain by agreeing amongst themselves without help from third parties.

The next levels from two to five are more difficult to implement because they imply regulatory framework changes and organizational changes within and between RUs. Legislation and/or regulatory framework changes (harmonization and simplification) are also the great potential benefits of pooling, with positive effects beyond ICM.

4.5.2 Level 2: Pooling of loco, RU keeps its own path

4.5.2.1 Description

An RU uses its own path and driver (allocated by leading IM), with a loco from another RU. The train preparation, technical inspection, shunting, breaking, papers will have to be performed within a process that still has to be finetuned.

4.5.2.2 Preconditions

Some of the regulations that need to be changed: **Driver certification, vehicle authorisation.**

4.5.3 Level 3: Pooling of loco with path

4.5.3.1 Description

The first RU provides the driver, the second RU provides the path and the loco.

The driver must be allowed to drive the loco, must know the diversionary route and the language used on this route. The train preparation, technical inspection, shunting, breaking, papers will have to be performed within a process that still has to be finetuned.

4.5.3.2 Preconditions

Some of the regulations that need to be changed: **Driver certification, route knowledge, language.**

4.5.4 Level 4: Pooling of loco and driver on RU's own path

4.5.4.1 Description

The first RU uses its own path and asks the second RU to provide a loco and a driver.

4.5.4.2 Preconditions

Some of the regulations that need to be changed: **Route knowledge, driver certification, language, safety certificate, vehicle authorisation.**

4.5.5 Level 5: Pooling of loco, third party path

4.5.5.1 Description

All resources are mixed: The first RU uses its driver on loco of the second RU, with the path of a third RU. This might be the most flexible option in terms of operations, but regulations make it the most difficult to operate.

4.5.5.2 Preconditions

Some of the regulations that need to be changed: **Route knowledge, driver certification, language, safety certificate, vehicle authorisation, data requirements.**

4.6 Further work to be done

For all of the options mentioned here, the Railway Undertakings will have to carry out additional works on the mitigation measures of the regulatory framework, the pooling options, how to involve the third parties and carry out these works in synergy with other initiatives.

In a further step, it will be a matter of convincing the institutions (IMs, NSAs, Ministries) to make the regulatory framework evolving. RFCs may be asked for their support.

4.7 Requisite mitigation measures during international incidents

RUs commit to work together with IMs/National Safety Authorities (NSAs)/Ministries supported by the European Commission and European Railway Agency (ERA) in order to adopt a catalogue of risk mitigation measures that could be considered for application by RUs during international disruptions in order to have the requirements for the following aspects reduced.

Aspect	Reduction of requisite (target)	Possible mitigation measure (examples)
Vehicle Authorisation	temporary authorisation for vehicles to enter the neighbouring country up to the technical border without the necessity of a full vehicle authorisation	- Publication of a list of relevant infrastructural parameters for which the IM commits to keep them compatible with the neighbouring country's vehicles ("similar network characteristics" as defined in TSI OPE) - Train running on temporarily interrupted track in case of noncompliance of safety aspects (e.g. harmonics, no track circuit occupation, etc.)
Safety Certificates	Simplified emission of a safety certificate for a limited section of the neighbouring country's network	
Data requirement	…	
Route knowledge	Permission to run on lines without specific route knowledge if knowledge of signalling and operations management. Systems are given	- emission of leaflets with instructions for drivers' correct behaviour along the route - speed reduction
Language)	Permission to run on the neighbouring country's network without the full knowledge of the country's language	- language knowledge requirement reduced to a minimum set of predefined terms and messages - use of glossaries and/or translation tools
Drivers' certification	Permission for drivers to access a limited portion of the neighbouring country's network without a full certification for that country's network	- instruction of drivers limited to the specific equipment and behaviours expected on the neighbouring country's network segment. Instruction provided through the driver's home country's organisation and certified by his employer's Safety Management System (SMS)

ANNEX: IT solutions for pooling of resources

1. An IT supported solution could possibly be financed by the RFCs who receive support through the “Programme Support Action” Funding of the European Commission.
2. This IT tool aims at facilitating the use of the pooled resources as well as allow documentation of their use (-> legal obligations, billing etc.)
3. The centralised system would rather be managed by an independent body to ensure non-discriminatory behaviour and thus trigger maximum efficiency in the use of the available path in combination with the available pooled resources.
4. As there is no such capable body in the sector yet, RUs may ask RFCs to start case studies in which possible solutions can be developed by the sector as a whole and later be discussed and decided upon. This can possibly be done in the framework of the re-routing plans proposed by each RFC.