

RAIL FREIGHT ORIENTED NETWORK

STRATEGIC GROUP OF EXPERTS

REPORT OF THE GROUP

JUNE 2008

The transport policy of the European Community aims at building an efficient and sustainable system of transport for the Union. To achieve this goal, the Community promotes the development of co-modality, the creation of an internal market for transport services and the revitalisation of clean modes of transport, such as inland waterways and railways.

The revitalisation of rail freight transport implies improvements in its performance, competitiveness and capacity. Rail freight transport, which is in comodality with road transport, has to be more competitive in terms of price (i.e. cost). It also faces some difficulties related to the level of quality of its services, in particular on international routes (international services represent 50 % of the total market of rail freight).

To improve the quality of rail freight transport and ensure it has sufficient capacity, the European Commission considers that two main elements should be developed and/or improved:

- fair competition in the provision of rail services;
- good (at the requested times), reliable (certain to meet the scheduled arrival times) and adequate (consistent with the demand) paths available for freight transport.

With regard to competition, many initiatives and actions have been taken and some others are under preparation. With regard to the quality of paths used by freight trains, the Commission considers it necessary to improve the existing situation/practices. It plans to do so by providing for better coordination between infrastructure managers and Member States on investments, management of infrastructure and ancillary services, and by ensuring that freight traffic is given an appropriate level of priority. The intentions of the Commission regarding these challenges were presented in its Communication of 18 October 2007 entitled "Towards a rail network giving priority to freight". In this Communication, the European Commission explained the rationale for developing a rail network giving priority to freight.

Given that the development of such a rail network should be gradual, measures should first target several strategic international corridors. These should function in an exemplary way providing, in particular, transparent information and non discriminatory access to the users of their infrastructure.

To carry out an in-depth analysis of the rail infrastructure problems that freight transport faces (especially international traffic) the European Commission's services set up a strategic group of experts composed of representatives from Member States (MS), Infrastructure Managers (IM), Railway Undertakings (RU), forwarders, ports and Regulatory Bodies (RB). This group also had the task of assessing Commission proposals regarding the creation of a European Rail Freight Oriented Network based on freight corridors (hereinafter corridors).

The corridor approach was recognised by experience (ERTMS corridors) and expert judgement as the suitable foundation for a Rail Freight Oriented Network. It is therefore appropriate to define its concept and the requirements for its implementation. This should lead to a common and agreed process for the selection of EU freight corridors, a sort of formalised labelling of the key components of the Rail Freight Oriented Network.

This document presents a stepped approach to the creation of corridors, based on the analysis of problems and needs identified by the group of experts. It is organised in four parts:

- the procedure and criteria for the selection of the corridors;
- the format and competencies of the governance structures of corridors;
- the measures that they will have to implement;
- the possible ways to implement this approach.

The notion of corridors refers to a network of one or several rail lines connecting one point (or two) to another. A corridor can comprise a main route, alternative routes and the connections to them. It also includes infrastructure related to ancillary services (terminals, marshalling yards, etc.) and feeder lines. Its functioning is such that a significant share of freight traffic running along the corridor has its origin and destination within the geographical scope of the corridor.

1. Identification of Corridors

a. Existing networks

As part of its work, the expert group considered existing corridors and networks. These serve as a useful reference tool to develop criteria that might be applied in evaluating candidate corridors for a European freight-oriented network.

An analysis of 8 corridor schemes/networks¹ identifies the broad criteria used in defining each of them. An overview of the actual routes of corridors/networks shows strong similarities, notably in comparison to the ERTMS corridors (A-F).

The analysis reveals differing methodologies that include criteria ranging from quantitative analysis and traffic projection to politically-defined objectives.

Overall, some common criteria in the definition of corridors/networks can be observed:

- Analysis of current flow/volume/capacity;
- Analysis of potential growth in flow/volume/capacity;

¹ The document in annex includes the following "case studies":

- ERTMS Corridors
- ERIM (European Rail Infrastructure Masterplan)
- TEN-T (Van Miert Priority Projects)
- CER Report: Business Cases for a Primary European Rail Freight Network (2007)
- TREND Study
- NEW OPERA's Network Perspective Report
- RNE Corridors
- EUFNET (Improving Competitiveness of Rail Freight Services)

- Cost-benefit analysis of investments (upgrading or bottleneck relief);
- Consistency and alignment with existing networks (TEN-T, ETCS-net, ERTMS Corridors).

b. Criteria for freight-oriented corridors

Based on past and current experiences, a number of basic criteria can be derived to drive the process of selection of corridors. These criteria relate to the general objectives linked to the establishment of a rail freight oriented network: intermodality, interoperability, cooperation and an appropriate level of priority for freight.

Enhancing cooperation

- **participation of a minimum of 3 MS (or minimum 2 MS and a length of at least 500km);**
- **existence of a letter of intent from MS that confirms their intention to create the corridor;**
- **pre-existing forms of cooperation can be an advantage;**
- **coherence with other freight-oriented corridors (thereby moving towards a freight-oriented network).**

Enabling/increasing priority for freight

- **existence of significant flow/volume/capacity and/or good potential flow/volume/capacity (business case);**
- **demonstration of economic feasibility/socio-economic benefit.**

Promoting/Deploying interoperability

- **part of the existing EU-network (e.g TEN-T network; European Deployment Plan on ETCS)**
- **good connection with other transport modes.**

The definition of corridors should take into account existing initiatives such as ERTMS and RNE corridors. The ERTMS corridors should be considered as priority corridors on which proposed measures should be implemented in the short term. As a second step, other corridors (new ones) could be defined and measures implemented over a longer term.

On the one hand, the pattern of rail traffic flows on major corridors have not really changed in the last 10 to 20 years and existing forecasts indicate that in the coming years the pattern of traffic will not change, but that traffic will significantly increase. We could therefore expect that today's main routes will become even more important until at least 2020. On the other hand, the identification of corridors should not be fixed and should be capable of reacting to changes in markets. The reality of traffic flows can indeed change over the years. There is therefore a need for flexibility and sufficient capacity for adaptation to changes.

c. Corridor selection process

The process for defining corridors could be as follows:

Ideally every MS² should be part of at least one freight-oriented corridor. However, the criteria "one corridor per MS" should not be a predominant criterion. It is more important to identify corridors according to "economical and geographical reality" rather than to political considerations.

There will be two stages:

a) First, a voluntary approach. Member States may submit, as soon as possible, under an appropriate procedure to be defined, a proposal of 'freight-oriented corridor' for the corridors, where some coordination already exists.

b) Secondly, a binding approach. Proposals for other corridors, are to be submitted under an appropriate procedure to be defined, with final agreement on all corridors to be reached by a target date, such as end 2011.

Each proposal will consist of a Corridor Development Plan that describes the proposed corridor in terms of compliance with the selection criteria and sets out how and when the measures presented in chapter 3 would be implemented.

Selection criteria will be applied in evaluating whether the proposed corridor can be given the designation of "freight-oriented corridor," thus becoming part of the European Freight-Oriented Network.

When a MS has not been part of any corridor proposal, the Commission will take a decision on the definition of a corridor for the Member State(s) in question. Exemptions could be possible with regards to geographical situation. All corridors should implement all the measures presented in chapter 3 within a fixed time period.

The definition of deadlines for the selection and implementation of the corridors should take into account the amount of time needed to implement the measures necessary for its effective functioning once the political decision has been taken to create a corridor.

Member States should not wait for EU legislation only. They are invited to pursue the on-going actions within the existing/already identified corridors and to start already the set-up of new corridors.

2. The governance body of the corridor

a. Existing Governance structures

Corridors must have an effective governance structure if they are to facilitate the cooperation necessary to ensure interoperability and competitiveness. Such a structure should bring together different bodies: ministries, infrastructure managers, rail undertakings, safety authorities, regulatory bodies, notified bodies, system suppliers, testing centres or laboratories etc.

A good example of corridor governance structure can be seen in the ERTMS Corridors. Each corridor initially receives full commitment from Member States concerned and this is

² Some derogations could be allowed

formalised in a letter of intent. A governance structure, which includes an Executive Committee (Ministry representatives as members and Infrastructure Managers in attendance) and a Management Committee (Infrastructure Managers' representatives as members), is established. The legal structure for IM organising the work on each corridor is an EEIG³. A permanent working group, which includes members of the Management Committee and railway undertaking representatives, must also be set up.

Each ERTMS corridor must formulate and implement a business plan and develop proposals to optimise the corridor including of its approach to ERTMS deployment, investment coordination, harmonisation of operational rules and bottle-neck reduction. For each corridor, precise objectives have been defined in terms of the regularity, reliability and quality of service and corridor capacity. We consider that the ERTMS corridor structure is a good model.

b. Corridor competencies

We anticipate that, when establishing a freight oriented corridor, IM and MS will set up a governance structure to monitor the implementation of the Corridor Development Plan.

c. Proposed structure for corridors

The governance structure will be composed of MS and IM, and will be created by an inter-governmental agreement. It will preferably include an EEIG of the IMs, but also strategic terminal managers; it will regularly consult all users of the corridor. For this purpose, the governance structure will set up a permanent group of customers (forwarders, railway undertakings, ports, etc.) that will be closely consulted in all stages of elaborating and developing the Corridor Development Plan. In case of the ERTMS corridors there could be no need for new structures. The already existing corridor EEIG can take on additional tasks related to the rail freight network.

It is critical that all of the corridor's customers and other stakeholders are adequately involved in the definition of the strategic positions taken on investment and operational matters. A good dialogue between customers and IM is indeed a key factor for the success of the corridor. However the decision-making shall remain in the hands of IM and MS.

There is also a need for a clear attribution of competencies to each corridor governance structure which should have a binding basis. The management of the governance structure should be placed under the leadership of one individual (e.g. coordinator, general secretary, executive director, etc.).

The leader could be appointed and empowered by the members of the corridor structure. The competencies of this leader would be determined by the Member States of the corridor according to a minimum set of binding rules.

This leader could also be an European Coordinator, like for the TEN-corridors coordinators, designated by the European Commission, in agreement with the Member States. In this case this manager should be independent of IM members of the corridors. His or her tasks would be specified by the European Commission.

³ European Economical Interest Group

3. Measures implemented on a rail freight corridor

The first task of the governance structure will be to identify the needs of all existing and potential users of the corridor, in terms of the volume and nature of the paths they might need. It will also identify problems that impede the competitiveness of international rail freight transport along the corridor. For identifying the needs, the governance structure will be advised by a permanent group of customers. The identification of needs and problems should include the definition of realistic and measurable objectives and key performance indicators corresponding to them. The existing Business Plans and the studies already available on these items (e.g. McKinsey, ERIM, DIOMIS, TEMA) should be taken into consideration to avoid duplication of work and additional costs.

These elements related to "market needs" will contribute to the development of the Corridor Development Plan into a business plan for the development of rail freight transport on the corridor. It will primarily include measures for a better use of the existing capacity.

While some needs/problems will be corridor-specific, others are common to all corridors. They are listed below. Concrete proposals for measures that an international freight corridor should implement have also been formulated in response.

a. Investment and heavy maintenance planning

The main needs in the field of investment and heavy maintenance planning are:

- identification of infrastructure capacity needs and sections to be renewed;
- planning of works;
- transparency as regards real-time capacity.

To improve the involvement of IM and MS in this field, progress is required in terms of:

- coordination of investments;
- coordination of heavy maintenance works;
- information to users of the corridor regarding engineering work.

To do so, IM and MS will develop and publish:

- **a long-term investment plan (at least at 10 years) based on traffic forecasts for the corridor;**
- **a medium-term plan (at least 2 years ahead) for improvements and heavy maintenance works based on the traffic forecasts for the corridor and renewal needs;**
- **an annual schedule of heavy engineering works.**

The different plans will be prepared by both IM and MS. Every year, the medium-term plan will be revised. The long-term plan will also be reviewed regularly, having regard to changes in demand for capacity, in available financial resources, and in the need for engineering work. These matters will be identified with the assistance of the permanent group of customers.

The long term strategy would be indicative. However, the medium term plan and the annual schedule of heavy works should be binding. But it is a precondition that sustainable financing of these measures is ensured by an agreement between MS and IM within a MAC.

b. Technical harmonisation

In this field, three areas can be considered:

- the deployment of interoperable systems on infrastructure (especially signalling and energy);
- the increase of the capacity of trains which will run on the corridor (especially by increasing their length);
- the adoption of a common strategy for these two areas so that every intervention for interoperability and train capacity will have a greater impact.

Based on market analysis and a cost-benefit assessment, the corridor's governance structure will adopt strategies on:

- **interoperability deployment. This will initially concern ERTMS and may also concern other interoperable systems;**
- **train capacity increase (this should primarily concern train length).**

Both strategies will include clear common objectives, technical choices and a programme and calendar for the interventions on superstructure and/or infrastructure.

National authorities of the concerned MS will conclude agreements for mutual recognition of rolling stock and staff qualifications.

Contradiction with general implementation strategies and double work should be avoided.

Since the deployment of interoperable systems and infrastructural interventions involves financial resources, both IM and MS will contribute to the development of these strategies, ensuring coherence with relevant obligations set out – or to be set out – in appropriate agreements (such as MACs) and will adopt them. The conclusion of agreements on mutual recognition of rolling stock and staff qualifications will involve NSA.

The customers of the corridor, as in the case of proposals for larger investments, should be involved in the definition of these strategies. There should also be a statutory basis for the deployment of interoperability and the characteristics of the infrastructure concerning train length (and or train weight). Otherwise there is a major risk that the measures will not be effective. Finally, the interoperability of rolling stock and engine drivers is critical for the better performance of international rail freight.

c. Path allocation process

To make the path allocation process easier for international applicants, it would be useful to have a single point of entry for these types of applications.

The 1st railway package enables MS and IM to allow authorised applicants (non licensed railway undertakings) to apply for path allocation. The differences regarding the implementation of this provision between MS can create difficulties for some applicants.

To tackle these two difficulties, IM will develop a One Stop Shop (OSS) service for all procedures relating to planned and ad hoc international path allocation. The use of the OSS service should be mandatory.

The ability to apply for path allocation will be given to authorised applicants along the corridor for all available paths.

The setup of OSS should take into account the existing experience of RNE.

The OSS coordinates requests for paths but there are still individual contracts with each IM whose network is used. OSS does not contract with customers. It is only an entry point to IM. It should be noted that, for several reasons, OSS set up by RNE have not been as successful as hoped. We expect to learn from this experience.

d. Path allocation rules

Two main needs have been identified:

- good and reliable paths for international freight trains along the corridor. This includes sufficient and good quality infrastructure capacity allocated to freight trains, coordinated management and distribution of this capacity;
- adequate flexibility for ad hoc requests for freight trains.

The priority for freight is more important in terms of path allocation and reservation than in terms of traffic management. A reliable path is first and foremost a path that cannot be cancelled. The quality of paths can be differentiated according to the following features:

- journey time
- risk of delay (some consider that the differentiation of journey time is sufficient and that no differentiation of possible delay should be allowed).

To ensure the delivery of good and reliable paths, some of the following measures should be implemented at the corridor level :

-- IM will reserve a pre-defined amount of good paths reflecting current needs after having carried out a needs assessment by way of a market study;

- **It will be mandatory for IM to balance capacity share, and track possession constraints, between freight and passenger traffic;**
- **IM will set up a catalogue of good ad hoc paths;**
- **It will not be possible for IM to cancel paths allocated to identified freight trains to serve passenger traffic unless this cancellation is agreed by the holder of the path;**

- **To guarantee the stability of path reservation over years and medium-term visibility for the RUs, RUs should be protected against the risk of losing paths to passengers services from one year to the other. The use of an existing 'framework agreement' as specified in the directive 2001/14, would prevent this from happening.**
- **IM will revise their timetabling procedure so that requests for freight paths can be better satisfied;**
- **IM will propose differentiated paths in terms of quality, i.e. in terms of journey time and/or risk of delay and attach commitments, for both contractors (operator and IM), to these different quality levels;**
- **IM will set up procedures and processes to ensure the consistency of the capacity distributed to freight applicants for cross-border trains composed of paths from different IM.**

e. Traffic management

Two main needs have been identified:

- the need for an appropriate level of priority for freight trains when traffic regulation is required (for example, to deal with ad hoc network problems). Performance schemes are mandatory and should incentivise IM to provide more reliable train paths. Unfortunately such schemes are not in force in many MS. When they exist, they are often not sufficiently effective and there is a high risk that this will continue to be the case. Furthermore, binding financial compensation schemes exist for passenger train operators but not for freight train operators. In cases of mixed traffic, where traffic regulation is necessary, this may lead to a form of discrimination against freight trains;
- good coordination between national/regional operational centres for international traffic.

MS currently have rules for traffic management – in some MS these are explicit, in others not. Traffic management is complex, and signalmen have to make quick decisions. Traffic regulation statements are therefore needed which are simple to apply, and provide generic rules for the priority of traffic according to its requirement and value, rather than simply according to whether it is passenger or freight traffic.

To ensure sufficient priority and good coordination, corridors will also set up procedures, processes and systems that will ensure a consistent coordination of traffic management along the corridor; dispatching centres on both sides of the borders will thus coordinate their action on cross-border traffic.

Corridors should :

- **publish priority rules for traffic management in the reference document of the corridor.**

These rules can

- **either include 2 or 3 levels of priority that will be set according to socio-economic value of trains;**
- **or be "a train on time remains on time";**
- **or be 'the fastest possible restoration of scheduled operations' respectively minimise impact on overall punctuality while maximising capacity utilisation.**

IM will be responsible for these measures. If needed, MS will have to change some legislative provisions.

f. Transparency

Users of corridors need:

- clear, complete and consistent information on the conditions and modalities of use of all facilities (infrastructure and ancillary services);
- real-time information on the temporary constraints on facilities (works or other types of constraints);
- a single source of information for the whole corridor.

To give an appropriate response to these needs, IM and terminal managers will publish a "reference document of the corridor" that includes:

- **all information published in the national network statements that concern the corridor;**
- **all information concerning the conditions and modalities for access to ancillary services (notably terminals);**
- **a link to a regularly updated (at least every month) publication of temporary constraints/works.**

IM and terminal managers will be in charge of this task.

g. Terminals

Concerning terminals, problems can be split into two types:

- structural needs : capacity of terminals, adequacy for the needs;
- operational needs: fair access to terminals and consistency and synergy between traffic management on the infrastructure and management of terminals' operations and services (i.e.: shunting) to achieve a better integration of capacity.

To respond to these needs, IM and terminal managers will:

- **identify the needs in terms of terminals (intermodal and marshalling yards) along the corridor;**
- **define a network of strategic terminals;**
- **plan and stimulate the development of the strategic terminals;**
- **set up procedures and systems to coordinate traffic management of the infrastructure and management of the operations in strategic terminals.**

IM and terminal managers will be in charge of these measures.

The strategic terminals should be terminals accessible to all stakeholders, according to the Community legislation in force.

The coordination between terminals and rail infrastructure is a crucial issue. This shall be improved in terms of investment planning and in terms of management. The ability to obtain fair access to ancillary services remains also a sensitive issue in some MS. This is critical to the success of a freight corridor and should be the subject of legislation.

h. Quality of service

To ensure that paths allocated are in practice reliable and correspond to the needs of freight operators, infrastructure managers should make commitments regarding the service they provide to their customers. The 1st railway package stipulates that MS shall put in place a performance scheme. This provision is still not applied in all MS and, where it is in force, national performance schemes can differ significantly.

There is, moreover, a lack of public data on the quality delivered by freight trains, even for major routes.

Associated IM, RU will implement and harmonise, as far as possible, the performance schemes along the corridor.

They will set up processes and systems to monitor the quality (at least in terms of delays) along the corridor and publish data on the level of performance delivered.

The full harmonisation of performance regimes seems difficult. However it should at least be possible to harmonise the approach to delay attribution. So far as consistency between performance regimes along the corridor is concerned, the basic objective shall be to avoid distortions and contradictions. Terminal operations should also be subject to performance regimes.

IM and RUs will have to work together on the harmonisation of performance schemes and providing data to customers in a consistent manner.

The key performance indicators should be monitored and published regularly. Terminals should also be included in this exercise.

IM will be responsible for the monitoring of quality.

i. Regulatory bodies (RB)/ National Safety authorities (NSA)

The competent authorities (e.g. RB and NSA should work together to supervise the international activities of IM and RU. They shall be efficient and cooperate.

To supervise efficiently the international activities of IM and RU on the corridor, RB and NSA shall cooperate. They will exchange information, consult other competent RB or NSA and provide sufficient information if they are consulted.

To facilitate their cooperation, RB will create a working group attached to the governance structure of the corridor. NSA will also create such a group.

RB and NSA will be in charge of these tasks.

The essential requirement should be that the transmission of information between RB is mandatory.

4. Implementation of the proposed measures

Two possible approaches for the implementation of proposed measures have been identified by the Members of the Group:

- the "voluntary" approach : MS and IM agree on the creation of international rail freight oriented corridors. They start from the creation of "ERTMS" corridors, extend their cooperation to all the items mentioned above. MS commit both politically and financially to ensure the success of the corridor (this will imply cooperation at national level between transport ministries and other ministries such as finance and may be facilitated in cases where budgets are planned multi-annually). They have the political encouragement from European authorities and some Community funds contribute to the financing of the creation of the corridor. The "corridor label" will be politically granted.
- the "legislative" approach : the Community adopts legislative provisions related to the creation of such corridors. These provisions would concern all the aspects mentioned in the previous chapters (selection of corridors, governance, characteristics), impose some obligations to MS and IM and provide a legal "label" to these corridors.

At this stage, the Commission considers that a legislative initiative is necessary to ensure that the described actions in the previous chapters will be implemented by MS, IM and other stakeholders. It will therefore make a legislative proposal by November 2008, foreseeing the submission of proposals for the creation of the new corridors by 1st January 2012, the creation of corridor structures by 1 January 2013 and the implementation of different measures (except long term major investments) by 1st January 2015 at the latest. The deadline for the creation of corridors will coincide with the start of the next European financial period.

The proposal of new legislative measures should be consistent with the ongoing development of corridors driven by the market.

The Commission should also take political contact at the appropriate political level within Member States to promote the creation of the corridors and their financing.

In conclusion, three different statements concerning implementation have been put forward by the Group:

- no legislative initiative but a political and financial one;
- setting a deadline for voluntary action and proposing a legislative initiative after;
- legislative initiative is necessary. Sufficient time has already been left for voluntary interventions which have not delivered results.