EUROPEAN
COMMISSION

Brussels, 2.6.2021
SWD(2021) 134 final

PART 5/5

COMMISSION STAFF WORKING DOCUMENT

EVALUATION

of

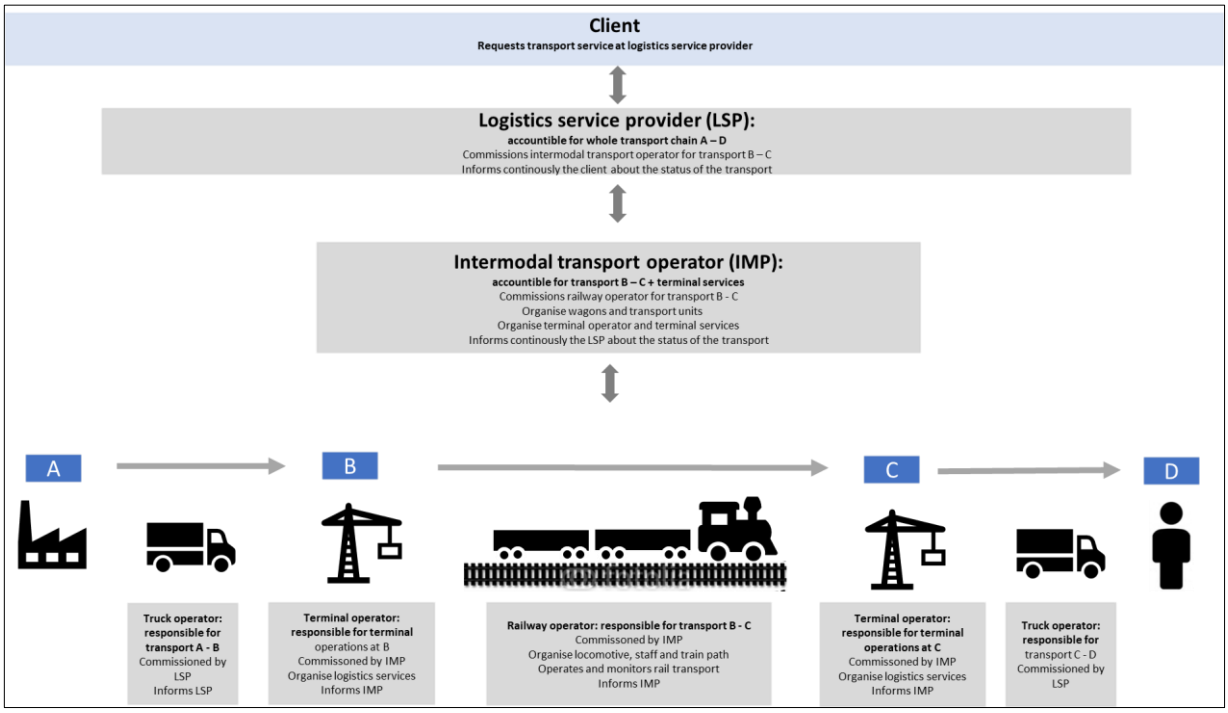
Regulation (EU) No 913/2010

concerning a European rail network for competitive freight

{SWD(2021) 135 final}

11 INTERMODAL TRANSPORT SERVICES INVOLVING RAIL FREIGHT: PLAYERS, PROCESSES AND INTERFACES INVOLVED

11.1 Overview of players involved



Source: evaluation support study

11.2 Activities to deliver an intermodal transport service involving rail freight across the entire lifecycle (organisation and implementation phases)

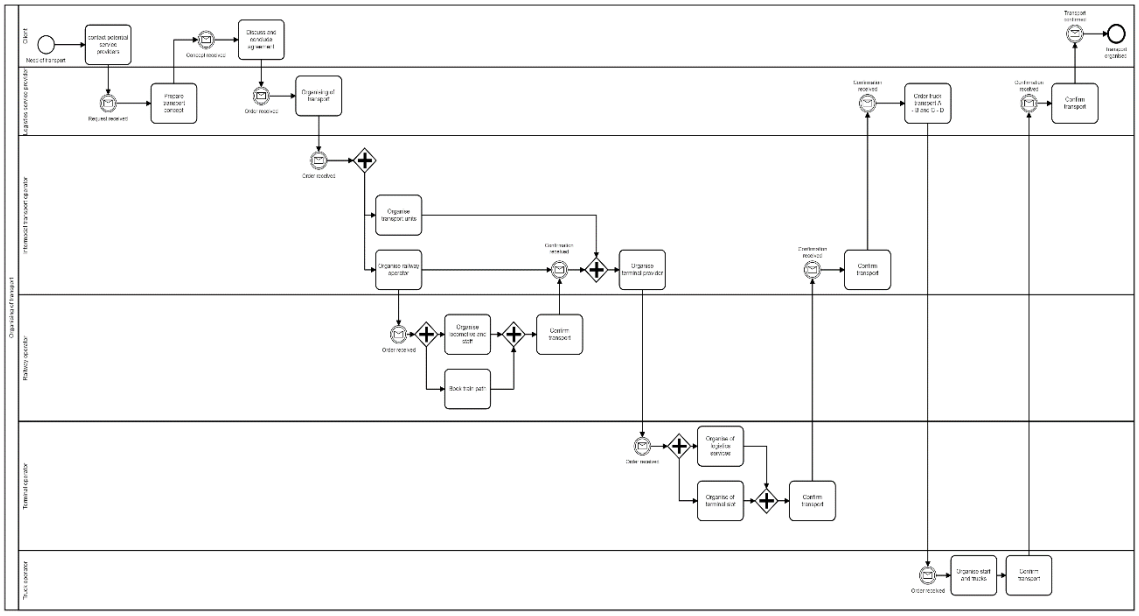
Phase	Activity	Description of the activity
Organisation of transport	Placing of order	Shipper places transport order with logistics service provider to pick up goods at production plant and deliver it to customer. Shipper requires specific transport unit according to type of goods.
	Defining of transport concept	Logistics service provider prepares transport concept for whole chain of transport. Definition of number of transport units, pick up from plant (A), transport to terminal (B) by truck, unloading/loading to rail at terminal, transport by rail from terminal (B) to destination (C) by rail, unloading/loading at terminal, transport from terminal to customer (D), definition of communication concept, price indication
	Organising of transport units (container)	Logistics service provider owns or leases the transport units

Phase	Activity	Description of the activity
	Organising of rail transport	Logistics service provider contacts intermodal transport operator and places order for rail transport B-C, intermodal transport operator prepares offer with first route and price indication and contacts railway undertaking for operation including information of departure/arrival time, goods, number of wagons. Railway undertaking prepares transport concept including specific route, departure and arrival time. After agreement railway undertaking books train path with infrastructure manager.
	Organising of wagons	Intermodal transport operator owns wagons or leases them on market. It is also common that railway undertaking provides wagons.
	Organising of train loading slots for the train service	Intermodal transport operator contacts terminal operator for loading/unloading slots.
	Organising of transport from A-B by truck	Logistics service provider organises truck transport, using own resources or via subcontractors (truck operator).
	Information of the shipper	Logistics service provider informs shipper about transport concept.
Transport implementation	First mile: Operation of transport A-B	Truck operator loads goods at plants and transports them to terminal. Informs logistics service provider about status, who informs shipper and intermodal transport operator. Intermodal transport operator informs terminal operator.
	Invoicing (truck operator)	Truck operator invoices services provided to the logistics service provider.
	Provision of wagons at the terminal	Railway undertaking operates and monitors train movement, informs intermodal transport operator about status, who informs terminal operator. Infrastructure manager is in charge for traffic management.
	(Un)loading at terminal	Terminal operator unloads/loads goods on rail. Chain of information: terminal operator → intermodal transport operator → logistics service provider → shipper. Railway undertaking is informed by intermodal transport operator about status.
	Operation of rail transport B-C	Railway undertaking operates and monitors train movement. Infrastructure manager is in charge for traffic management. In case of disruptions or delays, infrastructure manager gets in contact with railway undertaking. Chain of information: railway undertaking → intermodal transport operator → logistics service provider → shipper. Terminal operator is informed by intermodal transport operator, truck operator by logistics service provider about status of transport.
	Provision of trucks at the terminal	Truck operator provides trucks, informs logistics service provider, who informs intermodal transport operator. Terminal operator is informed by intermodal transport operator about arrival of trucks.
	Arrival of trucks at the terminal	Terminal operator informs intermodal transport operator about truck arrival. Truck operator informs logistics service provider, who informs intermodal transport operator.
	Train arrival at terminal	Railway undertaking operates and monitors train movement, is in ongoing contact with infrastructure manager, informs intermodal transport operator about status. Infrastructure manager informs railway undertaking in case of any delay/disruption. Chain of information: railway undertaking → intermodal transport operator → logistics service provider → shipper. Terminal operator and truck operator are informed by intermodal transport operator.
	(Un)loading at terminal	Terminal operator unloads/loads goods on trucks and informs intermodal transport operator. Railway undertaking informs intermodal transport operator. Chain of information: intermodal transport operator → logistics service provider → shipper.

Phase	Activity	Description of the activity
	Invoicing	Railway undertaking and terminal operator invoice services provided to intermodal transport operator. Intermodal transport operator invoices services to logistics service provider.
	Last mile transport C-D	Truck operator transports goods and informs logistics service provider about status and arrival. Logistics service provider informs shipper.
	Invoicing	Truck operator invoices services provided to logistics service provider, logistics service provider invoices to shipper.

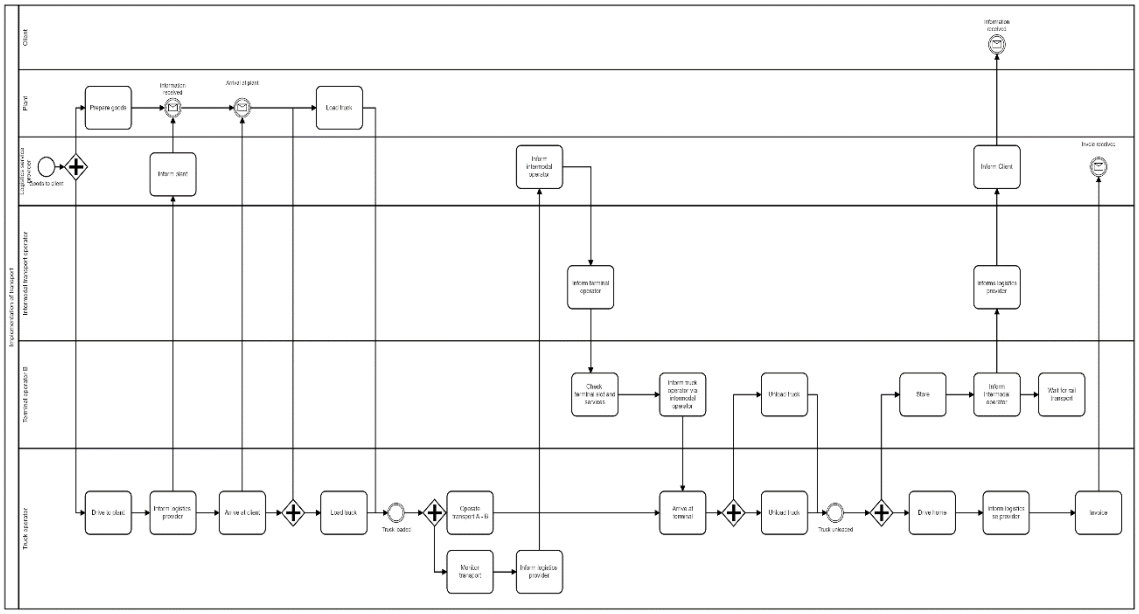
Source: evaluation support study

11.3 Processes in the organisation phase



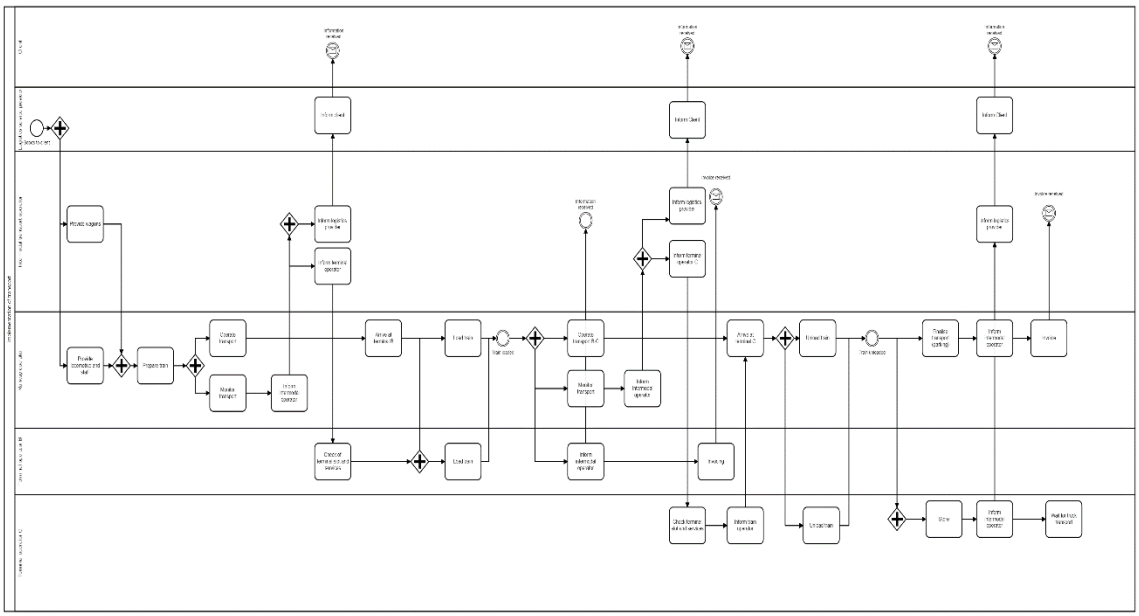
Source: evaluation support study

11.4 Processes in the implementation phase: transport from A to B



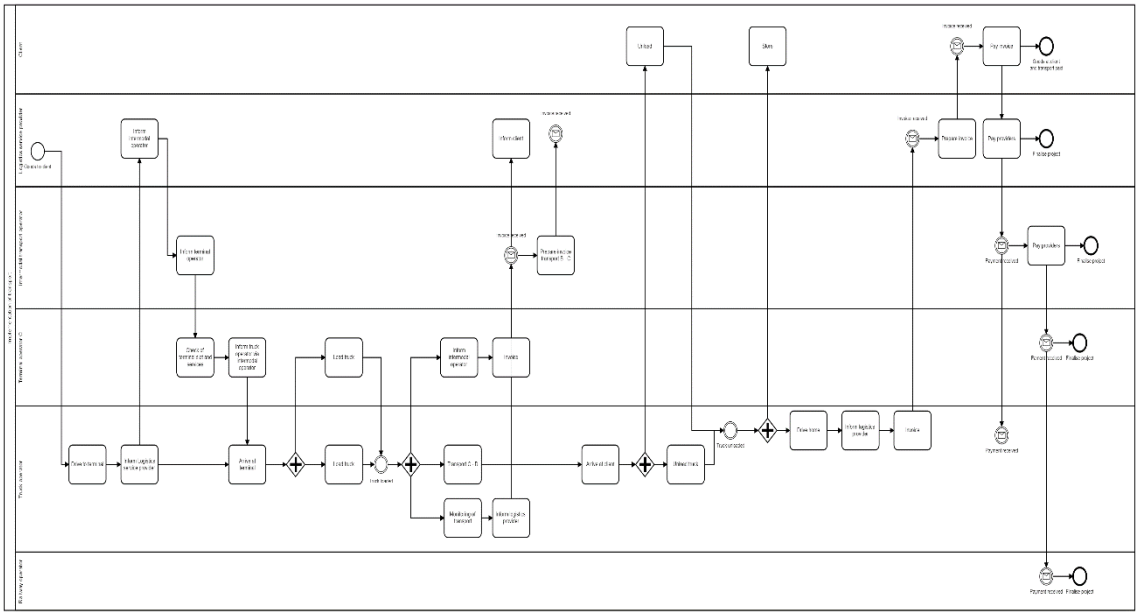
Source: evaluation support study

11.5 Processes in the implementation phase: transport from B to C



Source: evaluation support study

11.6 Processes in the implementation phase: transport from C to D



Source: evaluation support study

12 SITUATION OF INTERNATIONAL RAIL FREIGHT TRAFFIC DURING THE COVID-19 PANDEMIC

The first wave of the COVID-19 pandemic in spring of year 2020 led to a sharp decrease of passenger traffic within the EU (Figure 21) but only a small decrease of freight traffic (Figure 22). At the same time as freight traffic operated with normal or close to normal volumes, the punctuality of rail freight services on Rail Freight Corridors drastically improved. In Figure 23, the change in total delay is shown. The Figure shows that the amount of minutes delay in April and May decreased substantially on most corridors.

The decrease of passenger traffic led to an increase of capacity in the railway network, which is the probable reason to the increased punctuality of the freight traffic. However, it is safe to assume that the decrease of passenger traffic is more limited than shown in Figure 21, if changes in traffic were measured in rail kilometres instead of passenger kilometres. The changes can be assumed to be smaller for rail kilometres since both number of trains in operation and the occupancy rate are affected, i.e. some passenger traffic is in operation but with very few passengers. For example, data from the French Infrastructure Manager SNCF RÉSEAU shows that circulation varied greatly between different type of passenger trains in April 2020: while high-speed traffic being only around 6% of normal number of trains still around 30% of the regional traffic in Île-de-France was running. At the same time, around 60% of the freight traffic was running[161]. Nonetheless, the sharp decline in passenger rail-traffic indicate a large increase in available capacity in the railway network.

[161] FLASH COVID-19 SNCF RÉSEAU 2020, April 1st, 4th, 5th, 13th, 14th, 15th, 23rd, 25th and 26th.

Figure 21 Effects of Covid-19 pandemic on million-rail passenger-km in EU 27 (excluding Austria, Cyprus and Malta) and the UK.

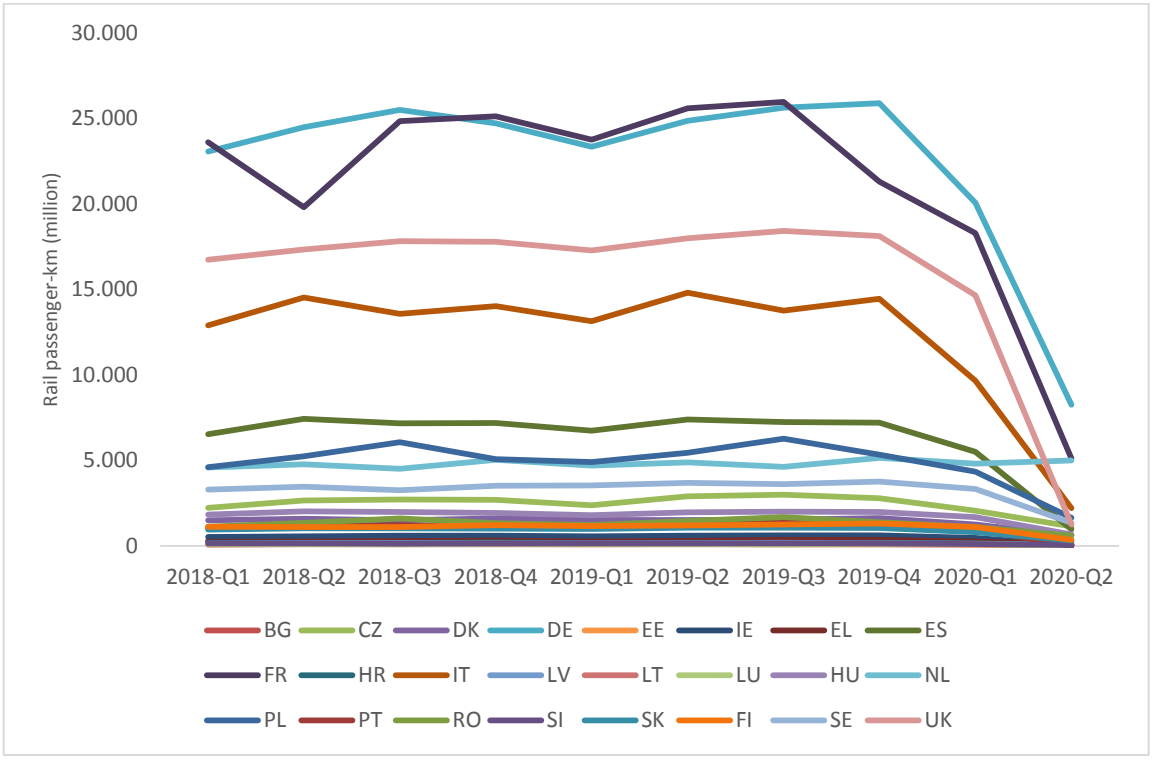


Figure 22 Effects of Covid-19 pandemic on million-rail tonne-km in EU 27 (excluding Belgium, Cyprus and Malta) and the UK.

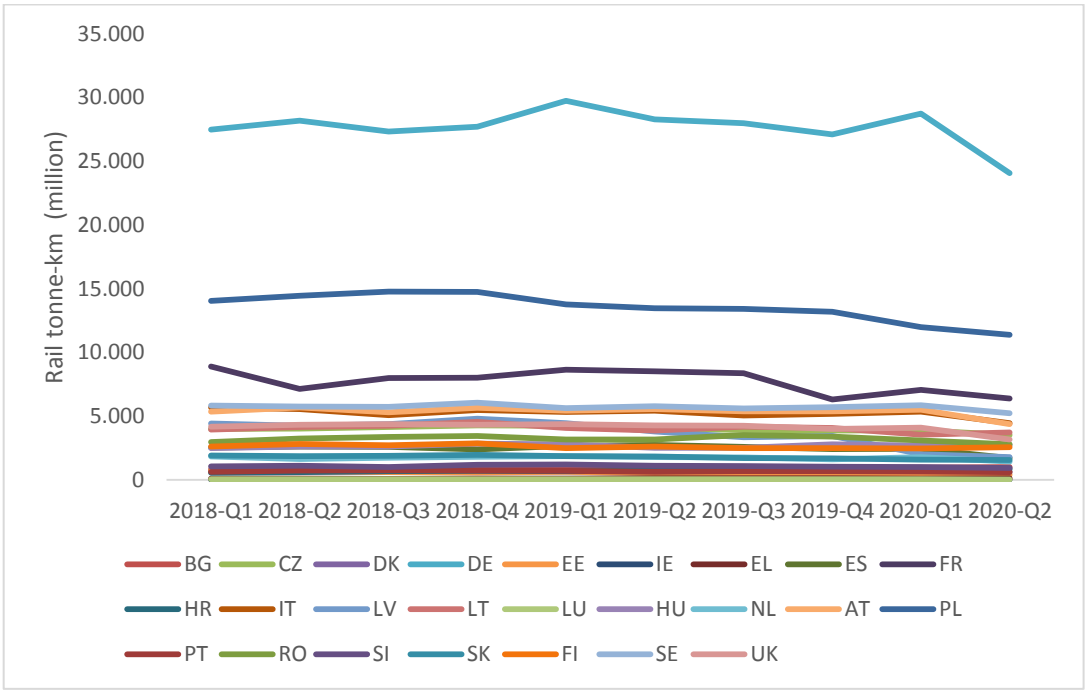
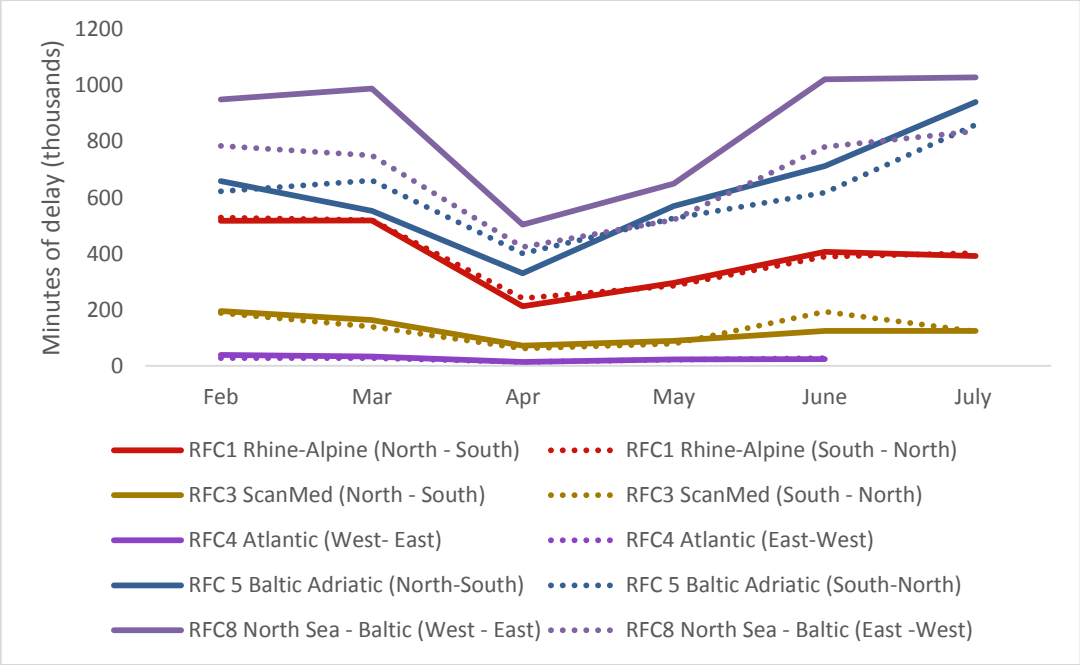


Figure 23 Total amount of delay minutes (thousands) on a selection of Rail Freight Corridors (RFCs).



13 RELEVANCE ANALYSIS OF INVESTMENT PLANNING, COORDINATION OF WORKS AND DESIGNATION OF CORRIDORS

Investment planning (Article 11)

After the Regulation was adopted, the Union set up the core network corridors as essential element of the 2013 TEN-T Guidelines[162], which focus on investments in transport infrastructure, including rail. The rail freight corridor lines are largely overlapping with the rail infrastructure included in the nine core network corridors. As a result, investment planning in the rail freight corridors reflects the investment planning already agreed in the core network corridors. The core network corridors have their own tools for coordinating and monitoring investments in infrastructure. Furthermore, Article 48 of the TEN-T Regulation requires an adequate coordination between core network corridors and freight corridors in order to avoid any duplication of activity.

Investment planning in the context of the rail freight corridors remains relevant for lines which are not part of the core network, notably diversionary lines used during disruptions. Furthermore, the rail freight corridors benefit from a close cooperation with key stakeholders via the advisory groups of the railway undertakings and the terminal operators. They can provide useful feedback on investment planning, including for the core network corridors. However, the relevance of investment planning is seriously undermined by the fact that the management boards (implementation of Article 11 of the Regulation) focus on collecting information on national investment plans, rather than on coordination of investments. The coordination was clearly a goal of the Regulation (as stated in its recital 16).

Coordination of works (Article 12)

This is another example where new legislation puts into question the relevance of the Regulation. Annex VII of Directive 2012/34/EU, which – following its revision by Commission Delegated Decision (EU) 2017/2075[163] – is directly applicable in all Member States, imposes very detailed requirements as regards the planning of temporary capacity restrictions and consultation of applicants. The Regulation (Article 12) remains relevant in so far as it has the additional requirement for the management board of the rail freight corridor to coordinate the schedule for works. However, the open public and stakeholder consultations and the targeted interviews carried out during the evaluation support study reveal that the users (in particular the railway undertakings and the terminal managers and owners) still criticise that infrastructure works are announced too late.

[162] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013, p. 1).

[163] OJ L 295, 14.11.2017, p. 69.

At the same time, the study also found that the schedule is published on time. This means that works are not really coordinated. The bottom line is that coordination of works remains a needed measure, but the lack of detailed rules governing such coordination would undermine the relevance of the Regulation.

Designation of corridors (Articles 3 to 7)

The geographic definition of the corridors is decisive for the effectiveness of the Regulation and its implementation as the specific rules defined in the Regulation only apply to lines designated to the corridors.

The Regulation leaves a leeway to stakeholders to modify both (i) the strategic definition of the network formed by the rail freight corridors – via a possibility to create new and modify existing corridors – and (ii) to select the specific lines designated to individual corridors.

The network formed by the eleven rail freight corridors established at the time of this evaluation seems to cover in a comprehensive manner the key trade relations and transport axes both within the EU and with relevant EU third countries. Two additional corridors have been established based on proposals by the Member States concerned. These corridors have usefully complemented the network defined in the Annex of the Regulation by covering trade relations, by adding lines providing additional capacities to the network – also as potential diversionary lines – and by covering additional regions of the EU and Serbia as a candidate country. However the lack of sufficiently detailed criteria and clear obligations for the geographic definition of corridors – and for modifying this definition – in the Regulation undermine the freight corridors' ability to a capture all the main rail freight transport and traffic flows in the EU.

From an EU policy perspective, the geographic definition of the corridors also affects coherence with TEN-T policy. Ideally, there should be a good match between the lines included in the TEN-T core and comprehensive network (and the core network corridors as a subset of the core network) and the rail freight corridors. This would support the effective cooperation in areas such as investment planning, identification and removal of infrastructure and operational bottlenecks etc. Currently, there are some discrepancies in alignment between the two network concepts both on the level of the 'general' alignment – the most notable difference being that the two rail freight corridors established on proposal by Member States[164] do not have a counterpart among the core network corridors – and as regards the nodes and the specific lines dedicated to the networks. Geographical coherence can only be strengthened through a legislative initiative as the networks and corridors are defined in primary legislation.

[164] These are Alpine-Western Balkan rail freight corridor (AT / SI / HR / BG and Serbia) and Amber rail freight corridor (SI / HU / SK / PL).

In order to maintain geographical coherence over time, the rules governing modifications of the network definition would need to be harmonised: currently, the Regulation enables changes to the alignment of rail freight corridors via relatively 'light' procedures[165] while the TEN-T Guidelines require a change of primary legislation.[166] This introduces the possibility that geographic coherence is lost over time due to changes to the network of rail freight corridors which is not reflected in the TEN-T network, even if a legislative initiative would establish perfect congruence at one point in time.

Secondly, even though on a macroscopic level, the corridors cover the main trade relations, the geographic dispersion of freight transport demand implies that a major share of international trains (between 80 and 90 %) leave the lines included in the corridors on the first and/or the last mile. The facilitation effect of the Regulation is incomplete in such cases as national infrastructure managers remain in charge of allocating capacity on the first and/or last mile.

Lastly, the Rastatt incident in 2017 and recurrent high-impact disruptions of the network have shown that the availability of adequate diversionary lines is of crucial importance for the reliability of rail freight transport. Infrastructure managers have been relatively restrictive in formally designating diversionary routes to the corridors. The diversionary routes designated to corridors does not seem to comprehensively cover even the most important lines used during interruptions of the main network.

In addition, work on addressing major international disruptions has created a dual regime: diversionary lines formally designated to the corridors differ from the lines considered in the coordination on the basis of the Handbook for International Contingency Management[167]. Therefore, the Handbook does not use the special tools provided by the Regulation (e.g., the framework for capacity allocation or the one-stop shop). Instead, it is forced to work within the broader framework of the Recast Directive. This puts into question the relevance of the Regulation.

[165] The establishment of new corridors or significant modifications of existing corridors (addition of nodes outside the existing route) are subject to comitology procedure. For modifications of the concrete lines designated to the corridors, agreement by infrastructure managers and Member States concerned is sufficient.

[166] The core network corridors are defined in an Annex to Regulation (EU) No 1316/2013.

[167] RailNetEurope and Platform of Rail Infrastructure Managers in Europe. 2018. Handbook for International Contingency Management (https://rne.eu/blog/news/international-contingency-management/)

14 COHERENCE ANALYSIS OF INVESTMENT PLANNING, COORDINATION OF WORKS AND THE FRAMEWORK OF CAPACITY ALLOCATION

Implementation plan

The Regulation (Article 9(1)) defines the implementation plan as an instrument to make the rail freight corridor operational requiring a 'programme of measures necessary for creating the freight corridor'. It also requires (Article 9(2)) the management board to 'periodically review' the plan. The plan contains also a description of the characteristics of the freight corridor, including bottlenecks and essential elements of the transport market study. These elements can clearly be subject to updates. However, the measures necessary for creating the corridor do not appear to be in need of regular updates.

Overall, even if the provisions are not outright contradictory, they are not sufficiently clear and in discussions with the Commission services, stakeholders have raised the issue of the implementation plan review creating unnecessary administrative burden.

Link between capacity allocation and coordination of works

The Regulation (Article 14(2)) requires the management board to evaluate the need for capacity to be allocated to freight trains running on the freight corridor and to take into account the transport market study, the requests for infrastructure capacity relating to the past and present working timetables and the framework agreements. However it does not refer to the coordination of works (Article 12), which clearly affect the availability of capacity. In some cases, works take place during the night in order to minimise disturbance for rail commuter traffic, therefore affecting more heavily freight, which often receives capacity outside peak traffic hours.

Failure to clearly link capacity allocation with the restrictions resulting from works and also link the coordination of works to improving capacity have made the objective of coordination of works unclear. Even though the two provisions mentioned above are not contradictory, they do not appear to be sufficiently linked.

Framework for infrastructure capacity allocation

The Regulation (Article 14(1)) requires the executive board to define the framework for the allocation of the infrastructure capacity on the freight corridor. The Regulation refers to Directive 2001/14/EC (Article 14(1)), which was replaced by Directive 2012/34/EU. The Directive provides the option for Member States to lay down such a framework for the capacity allocation, without restricting it to the rail freight corridor lines.

The provision was not present in the Commission proposal, which introduced the concept of 'priority freight', which is not in the final text of the Regulation. Instead, the legislators introduced possibility to define a framework for capacity allocation on the corridors, a concept borrowed from Directive 2001/14/EC. However, the concept of such a framework is geared towards implementation at Member State level, via national legislative or

national administrative acts. Whereas, the Regulation provided this option for the executive boards.

The duplication of the concept of the framework for capacity allocation in the Regulation raises the issue of the legal status of the framework, which is adopted by the executive board, but not by the Member State, resulted in ambiguity about its legal status. The lack of clarity triggered a request for a preliminary ruling to the Court of Justice of the EU: Case *DB Netz*, C-12/20 (pending).

15 ANALYSIS OF THE COHERENCE OF THE RAIL FREIGHT CORRIDORS REGULATION WITH OTHER LEGAL ACTS

Coherence with the Single European Railway Area Directive

Directive 2012/34/EU represents a recast of the First Railway Package and establishes the single European railway area. The Directive provides general rules on a variety of rail issues, many of which are also addressed in the Regulation.

The provisions relevant for the purpose of the evaluation are the following:

Cooperation between infrastructure managers for capacity allocation

Both the Regulation and Directive 2012/34/EU cover this issue (respectively in Articles 13 and 14 for the former and Article 40 for the latter). This situation in itself is not evidence of incoherence, as the Regulation is *lex specialis*, where the Directive has a much wider scope. However, even with the Regulation referring to specific provisions in the Directive, there are some situation, which remain unclear.

The two acts contain rules on who is responsible for providing capacity and in particular pre-arranged train paths for international rail freight. The Regulation provides a tool - the corridor one-stop shop. However, the Directive also refers to pre-arranged train paths for international freight (and passenger traffic), but for ad hoc requests, which can be provided directly by any of the participating infrastructure managers.

The Directive (Article 40(2)) assigns mandatory observer role to the Commission in the cooperation of infrastructure managers, whereas the Regulation does not, even though the activities taking place in the governance of the rail freight corridors very much focus on cooperation.

Coordination of works

The Regulation (Article 12) requires the management boards to '… coordinate and ensure the publication in one place, in an appropriate manner and timeframe, of their schedule for carrying out all the works on the infrastructure and its equipment that would restrict available capacity on the freight corridor.'

As already explained in Section 5.1, Annex VII of Directive 2012/34/EU imposes very detailed requirements as regards the planning of temporary capacity restrictions and consultation of applicants and it is directly applicable.

The Annex introduced detailed requirements as regards publication and consultation on capacity restrictions resulting from infrastructure works than those in the Regulation. In particular, the Annex requires infrastructure managers to publish '… all capacity restrictions and the preliminary results of a consultation with the applicants for a first time

at least 24 months, to the extent they are known, and, in an updated form, for a second time at least 12 months before the change of the working timetable concerned.'

The existence of two modes of coordination at corridor level (as per Article 12 of the Regulation) by the management board or in a limited format, by the concerned individual infrastructure managers (as per Annex VII, point 11) leaves the choice to infrastructure managers.

Capacity analysis

The Recast Directive (Articles 50 and 51 and former Articles 25 and 26 of Directive 2001/14/EC) lay down obligations for infrastructure managers to carry out capacity analysis and implement a capacity enhancement plan. The Regulation also addresses the need to improve performance on the rail freight corridors, by addressing, *inter alia*, bottlenecks, or in other words railway infrastructure.

Coherence with the TEN-T Guidelines[168] and the CEF Regulation[169]

The TEN-T Guidelines are the basis for the EU's Trans-European Transport Network policy. The policy addresses the implementation and development of a Europe-wide network of railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals. Its focus is on infrastructure.

The TEN-T Guidelines establish a network concept based on two layers: a core network to be completed by 2030 and a comprehensive network to be completed by 2050. The core network corridors were introduced as tools to facilitate the coordinated implementation of the core network, under the leadership of European Coordinators. They bring together public and private resources and concentrate EU support from CEF. There are 9 core network corridors, which are mirrored by the 9 'initial' rail freight corridors.

The Connecting Europe Facility (CEF) is the EU funding instrument for strategic investment in transport, energy and digital infrastructure. CEF is supporting the implementation of TEN-T.

The Rail Freight Corridors Regulation focuses on capacity allocation and traffic management, but it contains provisions addressing infrastructure development. It is clear that these three acts follow the same overall objectives, complement each other and are closely intertwined.

[168] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013, p. 1).

[169] Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 (OJ L 348, 20.12.2013, p. 129).

There is no coherence issue between the TEN-T Guidelines and the Regulation in a formal sense. However, practical implementation of both Regulations poses coherence challenges.

Two corridor concepts

The rail freight corridors predate the core network corridors. The former include sections, which are not included in the core network (or in the core network corridors), which was not the original idea. The Commission proposal required that the rail freight corridors be part of TEN-T. The final text of the RFC Regulation stipulates that the rail freight corridors must only be consistent with TEN-T. In 2013, the TEN-T Guidelines amended the RFC Regulation and partially aligned geographically the rail freight to the core network corridors. However the possibility to extend existing rail freight corridors and create new ones remained, as well as the possibility to designate different lines in the framework of the common rail freight corridor and core network corridor general alignment. The TEN-T Guidelines still acknowledged in the preamble that the two corridor concepts have a different purpose and the alignment was only done 'where appropriate'.

Investment planning

This issue is covered also in Section 5.1. As outlined there, the scope of investment planning is not identical in the two corridor types. Full coherence between the two planning processes could have been achieved, if the Regulation would have been amended[170] to take into account the planning activities in the core network corridors. However, in practice the corridor pairs (rail freight and core network) do work together on investment planning. The rail freight corridors used the advisory groups to collect feedback on bottlenecks, which was then provided to the coordinators of the core network corridors. This process is not defined in the Regulation, but it can serve as an example of how to improve the coherence of the two acts. In addition, the stakeholders of the rail freight corridors (in particular the members of the executive boards and management boards) are at the centre of the TEN-T policy, therefore regularly involved. The members of the executive boards (the Member states) are approving the work plans of the core network corridors.

Governance of the two type of corridors

The TEN-T Guidelines tried to align geographically the freight corridors to the core network by aligning them to the core network corridors. However, this principle of geographical alignment of both corridor concepts has its limit. This was demonstrated by the establishment of the rail freight corridors Alpine-Western Balkan and Amber. Therefore, the rationale for the Regulation to allow extensions and establishment of freight corridors

[170] The Regulation was amended in 2013 by the CEF Regulation, which was adopted together with the TEN-T Guidelines.

with lines not part of TEN-T is not entirely clear. It does not follow the original Commission proposal to align the rail freight corridors to the TEN-T, be it the core or the comprehensive network, even though the preamble mentions the TEN-T. The Regulation requires the freight corridor to be consistent with TEN-T, without explicitly preventing extensions to lines which are not covered by the core or the comprehensive network. The rail freight corridors focus on the transport market demand when defining their scope and selecting the corridor lines.

The TEN-T Regulation (Article 48) requires a close coordination of investment and interoperability planning with the freight corridors in order to avoid any duplication of activity. However, it does not clearly allocate responsibilities. Given that the TEN-T scope of responsibilities is much wider in that it comprises all modes, all transport branches (passenger and freight) and all kinds of investment (including rail-road terminals), this implies that the international rail freight issues are a special part of the overall TEN-T planning.

This would require the boards of the freight corridors to specify the investment needs and to discuss them with the TEN-T coordinators with a view to their integration into TEN-T investment planning. Furthermore, a coordination with national transport investment master planning is necessary as the Member States still have the competence on infrastructure planning and implementation.

The governance cooperation between the corridor pairs should be given further consideration to outline clearly the responsibilities and increase the synergies of the two concepts. Clarifying the obligations on cooperation for the two corridor concepts would also need to address the issue of geographical misalignment and the existence of additional rail freight corridors (Alpine-Western Balkan and Amber).

The Directive on Combined Transport[171], which was adopted in 1992:

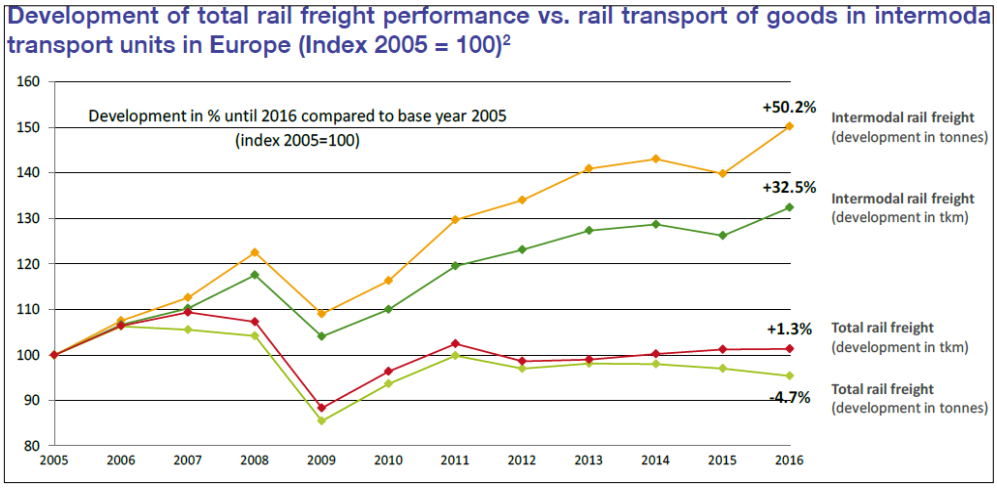
- gives a definition of combined transport;
- guarantees the freedom to provide cross-border services;
- protects combined transport from national restrictions;
- sets road cabotage limitations;
- allows vehicles used on combined transport road legs to carry heavier loads and
- partly exempts road vehicles for combined transport from road taxation.

The focus of the Combined Transport Directive is on the road part of combined transport. Nevertheless, the subject matter addressed in the Directive is of great relevance to rail

[171] Council Directive 92/106/EEC of 7 December 1992 on the establishment of common rules for certain types of combined transport of goods between Member States (OJ L 368, 17.12.1992, p. 38).

freight, as the intermodal segment of rail freight is growing above average and in line with the general trend of the economy.

Figure 24 Total rail freight performance and intermodal rail freight transport



Source: Evaluation support study, UIC Report on Combined Transport in Europe (2018)

The evaluation could not identify any lack of coherence between the two acts. The issue of improving cooperation with terminals in intermodal transport could be a field where further synergies can be studied. The Rail Freight Corridors Regulation addresses the issue of coordinating capacity allocation on the railway network with terminals and this coordination can go further to the road, or even the maritime, leg of intermodal transport. The need for any EU intervention on this would need to be assessed, but at present rail freight commercial speed records show that there is room for improving coordination at terminals.

Coherence with the Railway Interoperability Directive[172] and related implementing acts

Interoperability is a very important issue for the fragmented European railway technology. The Fourth Railway Package allocates the main responsibility for the technical implementation of interoperable rail systems to the European Union Agency for Railways (ERA).

The Railway Interoperability Directive sets out the conditions to be met to achieve interoperability within the European Union (EU) rail system. The directive applies to the rail system in EU countries, including:

- vehicles and infrastructure;

[172] Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (OJ L 138, 26.5.2016, p. 44).

- energy;
- signalling systems and telematics applications for freight and passengers;
- accessibility for persons with reduced mobility;
- noise issues.

The Regulation (Article 11 covering investment planning) requires that the management boards set up deployment plans for interoperability and evaluate them on the basis of a cost-benefit analysis. As indicated above, the two corridor networks do not fully align, which indicates that the scope of the work on interoperability of the management boards differs from the one of the core network corridors. The Regulation requires the management boards to set up deployment plans, and perform cost-benefit analysis. This is closely related to the tasks of the management boards on addressing bottlenecks for rail freight. The Scandinavian–Mediterranean freight corridor, for instance, is treating interoperability issues in this way.

In practice some of the work in the rail freight corridors on ERTMS is linked to the deployment planning. The rail freight corridors do additional work on interoperability, which differs considerably, due to the different challenges in the different rail freight corridors. In some cases, such as the work on reducing dwelling times at the borders carried out by the Orient/East-Med freight corridor, work focuses on implementing interoperability rules, such as removing redundant national rules.

It is clear that the scope of the work on interoperability of the rail freight corridors is wider than ERTMS and hence it is coherent with interoperability legislation.

Coherence with the Governance Directive

The Fourth Railway Package (2016, transposed in 2019) includes legislation addressing both the technical and the market pillar for rail. The technical pillar is addressed above.

The package's market pillar includes provisions for non-discriminatory access to infrastructure and separates the competences of infrastructure managers from those of railway undertakings (while still allowing for vertically integrated holding companies). It contains provisions for the international cooperation of infrastructure managers, the facilitation of freight train operations following ad hoc requests for capacity and the international cooperation of regulatory bodies.

The issue of coherence is largely covered in the section on the Recast Directive above. More attention should be given to Article 7e, which the Fourth Railway Package added to the Recast Directive, which create some overlap with activities envisaged by the Regulation.

The Directive introduces a coordination mechanism similar to the governance of the rail freight corridors with its advisory groups. The coordination mechanism in the Directive is broader, in some aspects: stakeholder groups (involving local authorities and regulatory bodies, e.g.) and covering the whole network of the infrastructure managers.

Coherence with EU funding facilities

There are several EU funding instruments supporting or supplementing national rail transport investments. The Marco Polo programme was a dedicated instrument for supporting modal shift actions. The Connecting Europe Facility (CEF) funding is dedicated to TEN-T projects and supports railway projects without particular dedication to passenger or freight transport. There is a number of further funding instruments[173], which – in contrast to the Connecting Europe Facility funding – do not give priority to railway investments[174].

Big part of national and EU funding is dedicated to rail infrastructure, including on improving interoperability (in particular ERTMS). Whereas, infrastructure planning is part of the tasks attributed to the governance of the rail freight corridors, their main focus is on operations: market studies, capacity allocation, traffic management, coordination of works, etc. CEF is the primary EU source for funding the governance of the rail freight corridors.

The priorities of CEF are to remove bottlenecks or bridge missing links in various sections of the Core Network and on the Comprehensive Network, as well as horizontal priorities such as traffic management systems. Again, these priorities are focused more on infrastructure and interoperability and not on improving capacity management.

Digitalisation is another important area where EU funding is available through the Horizon 2020 Framework Programme and in particular the project Shift2Rail, a public-private partnership with a volume of about EUR 1 billion, 50% of which is co-funded by the EU. The research activities supported aim at a drastic cost reduction for rail transport, capacity increase, increase of punctuality and reliability, full interoperability and reduction of negative externalities.

The Regulation is coherent with the broad goals of EU funding instruments for transport with CEF being the most relevant one. Each of the 11 rail freight corridors has signed a grant agreement and receives funding for a wide range of activities, which is a proof that the Regulation is coherent with the goals of EU's funding facilities.

[173] These are: the European Regional Development Fund, the Cohesion Fund and the European Structural and Investment Funds.

[174] See Doll, C., et al, *The Results and Efficiency of Railway Infrastructure Financing within the EU*, European Parliament, 2015.

16 DWELLING TIMES OF FREIGHT TRAINS AT RFC BORDER CROSSINGS

The information on dwelling time of freight trains on cross-border sections provided in this section and in the main part of the report were prepared by RailNetEurope with collaboration of experts of infrastructure managers and RFC bodies following a request by DG MOVE in May 2020.

The focus of the measurement was to capture the dwell time related to the procedures needed for crossing the border, such as e.g. change of locomotives. As these procedures do not always have to take place in the border point, for each border section the measuring points were carefully chosen. For some borders, the measuring was done in single point, for some borders the dwell times in more points was considered. The main principles for calculations were:

- Calculations are done based on the data from old TIS database
- All international freight trains running between defined point and pair point are considered (RFC trains are not specifically considered)
- Only trains, that were having timetable and running information available for both arrival and departure within the measuring point are considered. Trains starting or ending in measuring point are excluded.

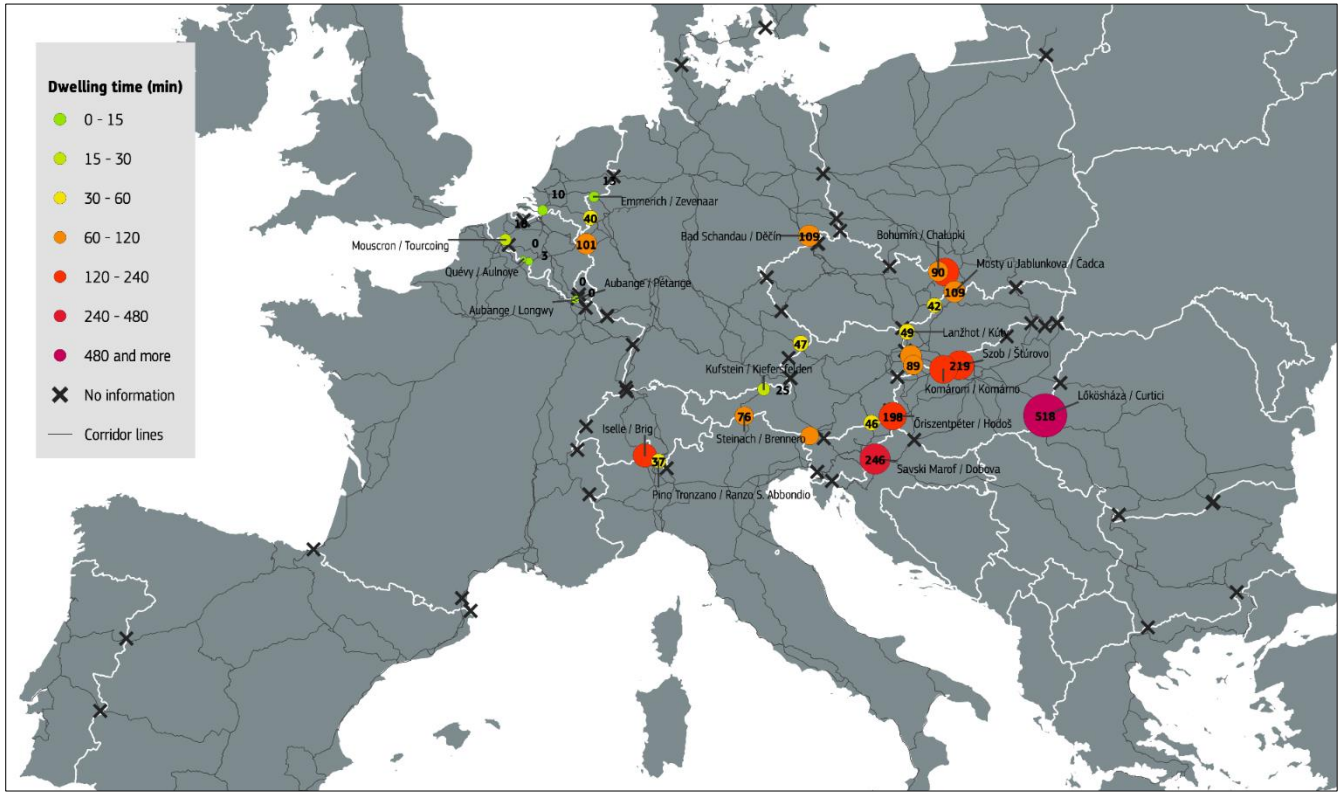
The reliability of the information differs between border crossings. This indicated in the table in section 16.2.

The dwelling time of freight trains on cross-border sections depends on technical and operational procedures and unpredictable contingencies. In most cases, a significant share of the dwelling times are often included in path requests placed by the RU, i.e. they are planned taking into account RUs' needs, mainly related to the optimization of locomotive and/or drivers' rosters. In this sense, such extended stops (often more than one hour) could also be considered as a service – part of the timetable – provided by infrastructure managers to railway undertakings. From an infrastructure manager perspective, clearing tracks (scarce infrastructure) would often be preferable.

As the information reported here includes dwelling times requested by RUs, the dwelling times are not only caused by the duration of the operational border procedures. The information are therefore to be interpreted as an indication of the order of magnitude of border dwelling times. The experience of some rail freight corridors has shown that a sound analysis of the root causes requires a case-by-case approach as the situation can differ significantly between border crossings.

16.1 Map of dwelling times of freight trains at cross-border sections in 2019

See the comments in section 16.2 as regards the reliability of the information.



16.2 Table of dwelling times of freight trains at cross-border station

The reliability of the information provided differs between the different cross-border sections; this is indicated in the column titled 'data reliability' as follows:

- 'High': results are reflecting the real situation and complete data set is provided.
- 'Fair': results should be considered as indicative only because dwell time calculation does cover the complete traffic and thus real figures might be slightly different from the provided data set.
- 'Low': results can significantly differ from the real situation because dwell time calculation does not cover the complete traffic and thus instead of complete data set only indicative information is provided

Overall, data are available for 29 cross-border sections

Data considered: January 2017 to October 2020 (monthly averages)

	Cross-border section		**Member States**	**RFCs**	**Data reliability**	**Average dwelling time per train in 2019 (min)**		**Share of trains**					
	RINF code	**Stations**				**Planned**	**Actual**	**0 to 30 min**	**31 to 60 mins**	**61 to 120 mins**	**121 to 240 mins**	**241 min to 24h**	**More than 24h**
1	EU00004	Emmerich / Zevenaar	DE / NL	RFC 1, RFC 8	High	6	13	65%	16%	10%	5%	3%	0%
2	EU00005	Kaldenkirchen / Venlo	DE / NL	RFC 1	High	28	40	61%	21%	12%	4%	2%	0%
3	EU00007	Montzen / Aachen West	BE / DE	RFC 1, RFC 8	Fair	77	101	13%	35%	27%	15%	9%	1%
4	EU00032	Kufstein / Kiefersfelden	AT / DE	RFC 3	High	24	25	54%	26%	14%	4%	2%	0%
5	EU00035	Passau / Wernstein	AT / DE	RFC 9	Fair	35	47	55%	20%	14%	8%	3%	0%

	Cross-border section		Member States	RFCs	Data reliability	Average dwelling time per train in 2019 (min)		Share of trains					
	RINF code	Stations				Planned	Actual	0 to 30 min	31 to 60 mins	61 to 120 mins	121 to 240 mins	241 min to 24h	More than 24h
6	EU00043	Bad Schandau / Děčín	DE / CZ	RFC 7, RFC 8	High	73	109	29%	12%	20%	21%	16%	1%
7	EU00072	Bohumín-Vrbice / Chałupki	CZ / PL	RFC 5	Fair	72	90	48%	14%	15%	15%	7%	2%
8	EU00074	Petrovice u Karviné / Zebrzydowice	CZ / PL	RFC 5	High	106	200	16%	8%	17%	28%	29%	2%
9	EU00081	Lanžhot / Kúty	CZ / SK	RFC 7	High	43	49	77%	6%	6%	5%	5%	1%
10	EU00082	Mosty u Jablunkova / Čad-ca	CZ / SK	RFC 5, RFC 9	High	50	109	38%	16%	17%	14%	12%	3%
11	EU00084	Mouscron / Tourcoing	BE / FR	RFC 2	Fair	5	18	79%	12%	1%	2%	7%	0%
12	EU00086	Quévy / Aulnoye	BE / FR	RFC 2	Fair	0	0	100%	0%	0%	0%	0%	0%
13	EU00087	Erquelines / Jeumont	BE / FR	RFC 2	High	0	3	83%	14%	2%	0%	0%	0%
14	EU00088	Aubange / Longwy	BE / FR	RFC 2	High	0	0	92%	0%	8%	0%	0%	0%
15	EU00090	Essen / Roosendaal	BE / NL	RFC 2, RFC 8	High	10	10	79%	14%	5%	1%	0%	0%
16	EU00097	Aubange / Pétange	BE / LU	RFC 2	High	0	0	100%	0%	0%	0%	0%	0%
17	EU00109	Kittsee / Bratislava-Petržalka	AT / SK	RFC 5, RFC 7, RFC 9	High	41	107	16%	29%	25%	20%	9%	0%

	Cross-border section		Member States	RFCs	Data reliability	Average dwelling time per train in 2019 (min)		Share of trains					
	RINF code	Stations				Planned	Actual	0 to 30 min	31 to 60 mins	61 to 120 mins	121 to 240 mins	241 min to 24h	More than 24h
18	EU00113	Spielfeld-Straß / Šentilj	AT / SI	RFC 5	Fair	33	46	47%	28%	18%	6%	1%	0%
19	EU00115	Steinach in Tirol / Brennero	AT / IT	RFC 3	High	55	76	10%	40%	35%	13%	2%	0%
20	EU00116	Thörl-Maglern / Tarvisio Boscoverde	AT / IT	RFC 5	High	48	71	12%	38%	37%	12%	0%	0%
21	EU00153	Domodossola	CH / IT	RFC 1	Fair	138	137	3%	15%	35%	37%	10%	0%
22	EU00170	Szob / Štúrovo	HU / SK	RFC 7, RFC 11	Fair	108	219	28%	9%	15%	18%	22%	7%
23	EU00185	Őriszentpéter / Hodoš	HU / SI	RFC 6, RFC 11	High	98	198	9%	16%	27%	24%	22%	3%
24	EU00216	Savski Marof / Dobova	HR / SI	RFC 6, RFC 10	High	134	246	4%	17%	27%	21%	25%	5%
25	EU00152	Pino Tronzano / Ranzo	CH / IT	RFC 1	Fair	31	37	56%	27%	14%	2%	0%	0%
26	EU00196	Lőkösháza / Curtici	HU / RO	RFC 7, RFC 9	Low		518						
27	EU00105	Nickelsdorf / Hegyeshalom	AT / HU	RFC 7, RFC 9	Low		89						
28	EU00171	Komárom / Komárno	HU / SK	RFC 7, RFC 11	Low		203						

	Cross-border section		Member States	RFCs	Data reliability	Average dwelling time per train in 2019 (min)		Share of trains					
	RINF code	Stations				Planned	Actual	0 to 30 min	31 to 60 mins	61 to 120 mins	121 to 240 mins	241 min to 24h	More than 24h
29	EU00076	Horní Lideč / Lúky pod Makytou	CZ / SK	RFC 9	High	6	42						

Source: RailNetEurope

Annex VIII *Overview of costs – benefits identified in the evaluation*											
		Citizens/Consumers		Railway undertakings and terminal managers and owners		Infrastructure managers		Rail freight corridors		European Union	
		Qualitative	Quantitative / monetary	Qualitative	Quantitative / monetary	Qualitative	Quantitative / monetary	Qualitative	Quantitative / monetary	Qualitative	Quantitative / monetary
Cost	**Direct compliance costs (related to labour, overheads, equipment, material and external services)**	N/A	N/A	N/A	Annual ongoing costs to attain the advisory groups: Railway undertakings EUR 130 000 Terminal managers and owners EUR 106 000	N/A	Total annual costs for membership fees: EUR 5.5 million per year (see also the column referring to the freight	2 N/A	Total annual costs for the permanent management offices of the freight corridors: EUR 8.5	N/A	Average annual EU contribution EUR 3.0 million (period 2010-2020)

					Total for the period (2013-2019) EUR 1,7 million (estimation based on desk research, on the number of meetings and number of attendants)		corridors) (estimation based on the information gathered from the field research)		million per year (of which EUR 3.0 million of EU contributions and EUR 5.5 million of membership fees for the infrastructure managers)		
Benefit	**Direct regulatory benefits (related to market effi-**	N/A	N/A	N/A	Internal analysis of a major railway undertaking suggests that	Increased level of cooperation and coordina-	N/A	Increased level of cooperation and coordina-	N/A	N/A	N/A

	ciency)				the costs in a scenario without the freight corridors, time and travel costs would have been approximately at the same level (i.e., most costs would have happened even without the freight corridors being established). Overall, the costs of planning and operating international freight ser-	tion between actors; Creation of a platform for discussion, where information, experiences and best practices are be exchanged and problems shared and solved; Improvements in the knowledge of the		tion between actors; Creation of a platform for discussion, where information, experiences and best practices are be exchanged and problems shared and solved; Improvements in the knowledge of the market			

					vices have not changed.	market and the possibility of bench-marking; Greater clarity in the rail freight industry; Progress in coordi-nating capacity allocation along the rail infra-structure and in terminal facilities; Improve-ments in the level		and the possibility of bench-marking; Greater clarity in the rail freight industry; Progress in coordi-nating capacity allocation along the rail infra-structure and in terminal facilities; Improve-ments in the level of coordi-			

						of coordination between infrastructure managers when searching for alternative routes or constructing new train paths; and Simplification of the process of solving problems along the corridors and analysing		nation between infrastructure managers when searching for alternative routes or constructing new train paths; and Simplification of the process of solving problems along the corridors and analysing recurring			

						recurring delays. (infor-mation gathered from the desk and field re-search)		delays. (infor-mation gathered from the desk and field re-search)			