

【欧州】 【Common】

Common - ALICE (Alliance for Logistics Innovation through Collaboration in Europe): ALICE White paper identifies reasons for the failure of modal shift in Europe and outlines recommendations for rail and intermodal transport

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【概要 : Summary】

Considering the 2030 and 2050 GHG emission reduction targets in the EU, all transport modes need to become more sustainable to achieve the European Green Deal target of reducing the transport sector's GHG emissions by 90% by 2050. To accelerate the modal shift from road to more sustainable rail transport, by 2030 Europe's high-speed rail traffic should double and also rail freight's capacity should increase by strengthening cross-border coordination between rail infrastructure managers as 50% of freight transport in the EU is cross border transport. The proposals under the "Greening Transport Package" are expected to create a more sustainable, efficient, and harmonised freight transport system. Furthermore, the proposal for a directive on a support framework for intermodal transport of goods also aims to make freight transport more sustainable by improving the competitiveness of intermodal freight to end road-only transport. However, while these various proposals have the aim to achieve a modal shift towards using railways in European freight transport, the White paper presented by the Alliance for Logistics Innovation through

Collaboration in Europe (ALICE) entitled "Increasing the Use of Rail and Intermodal Transport in Europe: Integration of rail freight information with other supply chain solutions" underlines that the reality in the EU's freight transport stands in strong contrast to the Commission's vision of a more sustainable freight transport system based on rail and intermodal freight transport. The ALICE White paper and Eurostat figures underline that there is no modal shift visible in the EU's freight transport in the past decades. The ALICE White paper points out the shortcomings in the EU's rail and intermodal transport including a lack of integration into other supply chain solutions. However, the White paper also offers recommendations towards a more sustainable and integrated intermodal transport in Europe. The railway sector needs to offer more transparency and visibility in the transport management, with a universal open model and a common data language to facilitate data exchange across the entire supply chain, including the shippers as cargo-owners.

【記事 : Article】

1. The EU's vision of intermodal and combined transport

The European transport system is of high importance for the European businesses and global supply chains, but it comes at a cost for society, due to its GHG emissions, which represent about 25% of the EU's total, its air pollutant emissions, noise, road accidents and congestion (European Commission n.d.). The majority of these external costs is caused by the road sector, which also dominates the inland freight transport market (SWD (2023) 352 final). Freight transport is the backbone of the EU's Single Market, but it is also responsible for over 30% of the transport sector's CO₂ emissions and these emissions are expected to further rise as freight transport is expected to grow by around 25% by 2030, and 50% by 2050 (European Commission 2023a).

As part of achieving the European Green Deal target to reduce the transport sector's GHG emissions by 90% by 2050, all transport modes need to become more sustainable. The modal shift in the EU needs to be accelerated and by 2030, high-speed rail traffic should double across Europe (European Commission n.d.).

To make all transport modes more sustainable, sustainable alternatives need to be made widely available and decisive action must be taken to shift more activity towards more sustainable transport modes, including a shift of a substantial amount of freight onto rail, inland waterways, and short sea shipping (European Commission 2021).

Since half of total rail freight in the EU is cross-border, it gives rail freight a strong European dimension, and makes it even more sensitive to a lack of interoperability and cooperation between national rail networks that can affect its competitiveness. According to the Commission's sustainable and smart mobility strategy, rail freight needs to be boosted through an increased capacity and a strengthened

cross-border coordination between rail infrastructure managers, better overall management of the rail network, and the deployment of new technologies such as digital coupling and automation. Therefore, the European Commission proposed the revision of regulations governing Rail Freight Corridors and the TEN-T core network corridors (European Commission 2021). The revision of the TEN-T Regulation and the achievement of the European Green Deal's ambitious climate targets should help to attain a 55% reduction in transport emissions by 2030 and 90% by 2050 (CER 2021). Based on the Commission's Communication on Sustainable and Smart Mobility Strategy (SSMS), the existing framework for intermodal transport to achieve the greening of cargo operations in Europe should be strengthened (COM(2020) 789 final). Intermodal transport means using less-polluting rail and waterborne transport should perform the main part of the transport operations (SWD(2023) 352 final).

Furthermore, greening mobility in Europe should be based on an efficient and interconnected multimodal transport system, for both passengers and freight, enhanced by an affordable high-speed rail network (European Commission 2021).

The European Green Deal calls for a substantial part of the 75% of inland freight carried today by road to shift to rail and inland waterways. Short-sea shipping and efficient zero-emission vehicles can also contribute to greening freight transport in Europe. Urgent action must therefore be taken given the limited progress achieved to date.

The Combined Transport Directive (CTD) was adopted in 1975 and it was last revised in 1992, to target the problem of increasing road congestion, environmental concerns, and road safety. It provides a beneficial regime for eligible intermodal operations called "combined transport". Combined transport is a sort of intermodal transport combining the flexibility

of road transport, which would still be used for the first/last leg of a journey to ensure that any location in the EU can be reached, with the environmental performance of rail, inland waterways, or short sea shipping for the main leg of the journey (European Commission 2023b). Since two attempts to amend the CTD, in 1998 and 2017, were not successful, the approach has been reviewed and a completely new approach is introduced.

Furthermore, a fully operational, multimodal Trans-European Transport Network (TEN-T) for sustainable and smart transport with high-speed connectivity should lead to a modal shift towards rail transport and the EU envisages a greening of freight transport by doubling rail freight traffic by 2050 (European Commission 2021).

The proposals under the “Greening Transport Package” presented on 11 July 2023 are expected to create a more sustainable, efficient, and harmonised freight transport system. Among others, the Commission is planning to revise the Combined Transport Directive (European Commission 2023a).

On 7 November 2023, the European Commission presented the Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Council Directive 92/106/EEC as regards a support framework for intermodal transport of goods and Regulation (EU) 2020/1056 of the European Parliament and the Council as regards calculation of external costs savings and generation of aggregated data (COM(2023) 702 final). This proposal on combined transport aims to make freight transport more sustainable by improving the competitiveness of intermodal freight, and the transportation of goods using two or more transport modes compared to road-only transport (European Commission 2023b). The proposal updates the current Combined Transport Directive and completes the Greening Freight package of July 2023.

2. The Proposal for more efficient use of rail capacity (COM (2023) 443/2)

Current rules on capacity management are decided annually, nationally, and manually. This does not favour cross-border traffic, which in the EU is around 50% of rail freight (COM (2023) 443/2). The fractured approach leads to delays at borders, which, in turn, hinders the functioning of the Single Market. Delays due to congestion caused by uncoordinated maintenance work are also common (COM(2023) 443/2). Rail tracks are expensive to build and, they are also increasingly congested. Therefore, the “Greening Transport Package” aims at creating a more sustainable, efficient, and harmonised freight transport system in the EU (see Antolini 2024, European Commission 2023a).

The proposal for a Regulation on the use of railway infrastructure capacity in the single European railway area, amending Directive 2012/34/EU and repealing Regulation (EU) No 913/2010, (COM(2023) 443/2 final), envisages the improvement of the efficient use of rail capacity, the optimisation of their use, the improvement of cross-border coordination, an increase in punctuality and reliability (COM(2023) 443 final, European Commission 2023a). The changes to the rules on the planning and allocation of railway infrastructure capacity aims at allowing rail capacity and traffic to be managed more efficiently, thereby improving the quality of services, and optimising the use of the railway network, accommodating larger volumes of traffic (COM(2023) 443/2 final, European Commission 2023b). Thereby, ultimately, more freight companies should be attracted to use rail transport and the transport sector should contribute to the overall 2050 decarbonisation target (European Commission 2023a).

The proposal COM (2023) 443/2 for a regulation on the use of railway infrastructure capacity in the single European railway area builds on the industry-led Timetable Redesign Project. The aim

is to better respond to the different needs of the rail sector like flexible train runs adapted to just-in-time supply chains for freight shippers. More specifically, the proposal COM (2023) 443/2 final includes general rules for capacity management including the strategic capacity planning, scheduling and allocation of capacity, and the adaptation and rescheduling of capacity. The proposal COM (2023) 443/2 final also includes the obligations for infrastructure managers to work jointly to develop a European framework for capacity management, with specific provisions for the management of scarce infrastructure capacity. It also includes the obligations concerning traffic management, disruption and crisis management and related cross-border coordination as well as a performance review framework, with monitoring tasks for the European Network of Infrastructure Managers (ENIM), and a new performance review body (COM (2023) 443/2 final). Finally, it includes the deployment of digital tools enabling better capacity and traffic management. (COM(2023) 443/2 final).

The additional capacity resulting from the proposal would be expected to increase railway traffic by 4% (nearly 250 million train kilometres) (COM(2023) 443/2 final). In addition, the proposal would improve cross-border coordination, making rail transport more reliable (COM(2023) 443/2 final). Therefore, the proposal will set out mechanisms for coordination between national infrastructure managers and others involved in running cross-border train services. The proposal will allow rail infrastructure capacity to be allocated more effectively, by introducing flexibility into the process and giving infrastructure managers a greater role in determining transport needs (COM(2023) 443/2 final).

The digitalisation of capacity-related processes will help to make services more efficient and improve their quality (COM(2023) 443/2 final).

Ultimately, the shippers should be given more choice and reliability for their freight transport and therefore make a modal shift towards rail transport more attractive.

While the European Commission presents proposals to realise its vision of a modal shift towards rail and intermodal transport over road transportation, the White paper presented by the Alliance for Logistics Innovation through Collaboration in Europe (ALICE) underlines that the proposed measures might not be sufficient to achieve the envisaged modal shift in European freight transport (ALICE n.d.).

3. ALICE' s White paper identifies problems of rail and intermodal transport and presents recommendations for achieving a sustainable freight transport

In logistics and transport, sustainable and efficient solutions need to be found urgently. Accordingly, the White paper entitled “Increasing the Use of Rail and Intermodal Transport in Europe: Integration of rail freight information with other supply chain solutions” prepared by the Alliance for Logistics Innovation through Collaboration in Europe (ALICE) with the support of TRANSPOREON, the Transportation Management Platform to connect shippers and carriers, points out challenges, but also presents recommendations to drive the integration of rail and intermodal transport in Europe towards a more sustainable, integrated, and efficient future (ALICE n.d.).

ALICE conducted a comprehensive survey and workshops in 2022, involving shippers, rail sector experts, intermediaries, and other stakeholders. A total of 108 respondents, from the ALICE network and beyond, answered the survey (ALICE 2024). The European Commission' s vision of a modal shift emphasises rail and intermodal transport over road transportation, but even after two decades of political efforts, the modal shift has not taken place, yet (ALICE 2024).

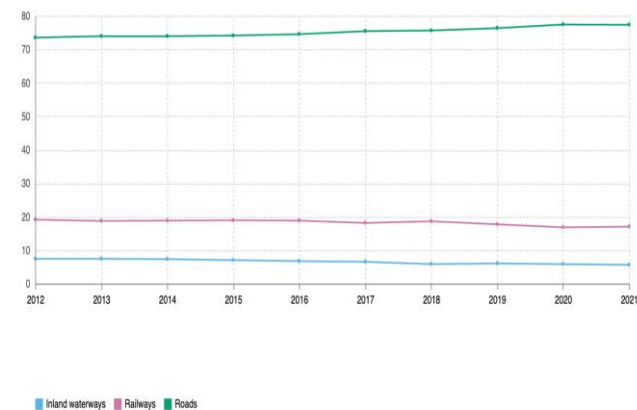
According to the ALICE survey’s results, the rail sector perceives itself as competitive with road transport, but shippers underline the existence of significant shortcomings in rail and intermodal solutions with a “lack of integration into other supply chain solutions” (ALICE 2024).

In fact, the ALICE White paper’s analysis of freight transport in the EU confirms that the modal shift is stagnating at best, and since the COVID-19 pandemic, the railway market share is even slightly declining (ALICE 2024). Also, Eurostat figures on the modal split of inland freight transport in the EU-27 confirm the ALICE survey’s results.

Fig. 1: Modal split of inland freight transport (road, railways, inland waterways) in the EU-27, 2012–2021, in %

Modal split of inland freight transport

Time frequency: Annual Unit of measure: Percentage Geopolitical entity (reporting): European Union - 27 countries (from 2020)



(Source: Eurostat 2023a)

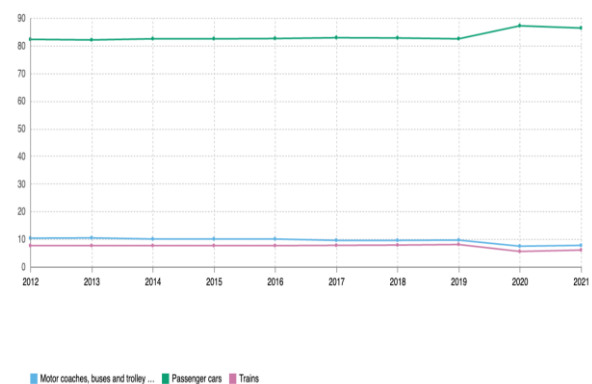
In 2021, the share of railways in inland freight transport was 17.8%, compared to 77.3% for road freight transport and 5.6% inland waterways transport (Eurostat 2023a, ALICE n.d.). Regarding the modal split in inland passenger transport in the EU-27 between 2012 and 2021 shows a similar if not more accentuated development toward an increase of passenger cars and away from a utilisation of the railway as

transport mode (Eurostat 2023b). In particular since 2019, this development is clearly visible, and it can be related to the impact of the COVID-19 pandemic (Eurostat 2024). The share of passenger cars in inland passenger transport has increased to 86.3%, compared to 6.8% for trains and 7.7% coaches and buses (Eurostat 2024).

Fig. 2: Modal split of inland passenger transport in the EU-27, 2012–2021, in %

Modal split of inland passenger transport

Time frequency: Annual Unit of measure: Percentage Geopolitical entity (reporting): European Union - 27 countries (from 2020)



(Source: Eurostat 2023a)

Therefore, although the European Commission is supporting the modal shift in the EU’s passenger and freight transport with a variety of measures, the Eurostat results of the EU-27 modal split as well as the ALICE’s White paper survey results show that there is no such thing as a modal shift towards railway happening in the EU and that the modal shift is stagnating at best, or with the share of railways even declining in recent years. It shows that the Commission’s efforts to support a modal shift towards the use of railway for freight transport, could not stop the decline of the railway’s share in the EU’s modal split since the COVID-19 pandemic’s start in 2020 (Eurostat 2023a).

According to the ALICE White paper, shippers seek comprehensive information on connections, schedules, transit times, reliability, and loading unit details with real-time visibility,

with some even envisioning sensor-based data for enhanced monitoring. Although the rail sector is already equipped with certain tools, it lacks making these solutions accessible and ready for seamless integration into the shippers' data systems. Accordingly, the railway sector needs to offer this transparency and visibility in the transport management to meet the shippers' needs (ALICE n.d.). The ALICE White paper highlights the need for a universal open model and a common data language to facilitate data sharing across the entire supply chain (ALICE n.d.). Shippers demand full transparency and visibility as key elements to take the right decisions during planning and execution of tracking, more precisely, shippers, as primary users of the system, identify the most significant shortcomings in the "lack of integration into other supply chain solutions", revealing the critical need for cohesive collaboration along the entire supply chain (FEPORT 2024). Most importantly shippers need to access this information within their ERP (enterprise resource planning) or TMS (transport management system) and not a stand-alone solution, which is not ready for plug & play integration (ALICE n.d.). Instead, currently existing rail tools are labelled as "island solutions", lacking the required plug-and-play integration to fit perfectly into larger supply chain contexts (FEPORT 2024). The ALICE White paper concludes that while the set of island solutions is partially accessible for the railway undertakings and infrastructure managers, intermodal operators or intermodal forwarders are not integrated with shipper IT tools, which would be needed to improve the shippers' acceptance of a modal shift toward rail freight transport (ALICE n.d.).

Therefore, the continuous improvements of the technical, organisational, and legal framework will not suffice to let rail and intermodal transport take the role it should play, if not

the shippers as the customers' needs are put at the core of the efforts (ALICE n.d.). The ALICE White paper concludes that to make the modal shift or the intermodal transport work, it will need an accessibility of the solutions to all stakeholders, including the shippers, involved in the end-to-end supply chain (ALICE n.d.). Therefore, it can be concluded that the use of rail and intermodal transport by the shipping industry will only increase if the shippers as cargo-owners can gain access to comprehensive real-time information on the rail sector's data systems, offering transport management information including information on connections, schedules, transit times, reliability, and loading unit details with real-time visibility, integrated with shipper IT tools, according to ALICE (ALICE n.d.).

Therefore, if the European Commission wants to increase the use of rail and intermodal transport in Europe, the Commission needs to create the preconditions for this integration of rail freight information and meet the shippers' needs regarding the transparency in transport management.

4. Conclusion

Regarding the European Commission's vision for a modal shift in the EU's freight transport, intermodal and rail transport are expected to play a major role in the decarbonization of the European transport sector. However, in the past decades there has not taken place any improvement of the railway's market share in freight transport. To the contrary, as the ALICE White paper points out, the railways' market share in freight transport as well as passenger transport has been even further declining in recent years. The ALICE survey unfolds a significant gap between the EU's ambitions to achieve a modal shift and the reality in EU's freight transport. Meanwhile, the European Commission continues to present measures and policies to achieve a model

shift in the EU's freight transport like the Greening Freight Package and the Commission's proposal COM (2023) 702 final on a new framework for intermodal transport of goods. However, the continuous improvements of the technical, organisational, and legal framework of EU railways does not suffice to let rail and intermodal transport take a dominant role in European Freight transport. The efforts by the European Commission to achieve the targets for a modal shift will require more radical initiatives at EU and Member State level. As the ALICE White paper shows, the shippers see a "lack of integration into other supply chain solutions" as significant shortcomings in rail and intermodal solutions.

Therefore, to make the modal shift and intermodal transport work, the shippers as customers and their needs need to be put at the core of the efforts and IT solutions for the intermodal operators must be made accessible and integrated with shipper IT tools. The ALICE White paper concludes that to make the modal shift and intermodal transport work, it will need this greater accessibility for all stakeholders, including the shippers, to increase the transparency in the end-to-end supply chain. Otherwise, the improvements on technical, organisational, and legal level in the rail transport will not suffice to let rail and intermodal transport take the role it should play in the EU's freight transport sector and to support the sector's decarbonisation.

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