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Intermodal Freight Transport: Market Potential & Challenges

By Dr Carsten Wiebers, Global Head of Aviation, Mobility & Transport, Torsten Osterloh, Team Leader Rail Transport at KfW IPEX-Bank, and Wolfram Bahle, Managing Partner / CSO at the Swiss start-up MFD Rail

The federal government of Germany has been supporting the expansion and revitalisation of the intermodal transport system in Germany and Europe for more than 20 years.

During this time, the transport of goods, commodities and machine parts using at least two different modes of transport in the supply chain has developed into a segment with dynamic growth – the “moving average mid-term prognosis” of the German Federal Ministry for Goods Transport (BAG) currently estimates that the volume of rail freight transport will increase to 390 million metric tonnes by 2024. This is not only due to capacity that is much easier to scale, but also due to the role that intermodal freight transport plays in achieving the climate targets formulated in political discourse. It will not be possible to successfully transform



transport without including railways in the supply chain. This is why KfW IPEX-Bank and MFD Rail, together with the majority shareholder of MFD Rail,

a fund advised by Oaktree Capital Management, L.P., are involved in CO2-efficient rail freight transport and are thus contributing to the success of the transport transition.



Grasshopper, 6-axle 90 ft container carrier, Sggmrss, produced by Tatrávagonka a.s., Slovak Republic

The Development of Intermodal Freight Transport

The networking of global markets in the course of globalisation and the success of online retail have swept global goods transport along with them over recent decades; goods transport has grown by around 75 percent in the last 30 years – but rail transport has only played a very small part in this.

This disparity has tangible repercussions, two of which we will briefly discuss here. On the one hand, existing infrastructure is used unevenly. On the other hand, lorries produce significantly higher emissions per kilometre when compared to rail-based solutions and thus cause more damage to the climate. From an economic perspective, this creates a need for investments – the state, investors and even financial institutions will play a central role here, including KfW IPEX-Bank as a financing partner with a great deal of expertise in financing passenger and freight transport projects. It has been continually expanding its financing in the railway sector for years.

At the same time, the market potential for MFD Rail is rising as many railway companies are currently replacing their own rail vehicles with leased rail wagons.

The leasing rate in the European rail sector is still comparatively low – at 30 percent of the total fleet, compared to a leasing rate of considerably over 50 percent for lorries, aircraft or container ships. Due to the high efficiency gains through leasing, it can be assumed that this trend will also continue in the rail sector.

However, even if rail freight transport is catching up, there are several hurdles standing in the way of increasing demand, particularly concerning the use of intermodal approaches; when switching from road to rail or vice versa, it is not always easy to reload shipments – why?

Cranability of transport units for road transport is not always ensured and cannot necessarily be implemented without additional measures. Combining road and rail freight transport currently requires technical solutions to facilitate seamless and, above all, cost-effective transport.

How Can These Challenges Be Overcome?

Various solutions begin to become clear when reflecting on these structural challenges. The importance of ensuring general cranability for all transport units in goods transport is obvious. As such, the German Federal Ministry of Transport and Digital Infrastructure is planning a study to prepare a relevant legislative initiative. But modern transshipment stations also need to be created as part of integrated infrastructure to expedite loading processes and compensate for possible demand increases. Last, but not least: the number of available freight cars needs to increase considerably. In full knowledge of these developments, MFD Rail has specialised in procurement, leasing and maintenance of intermodal cars. The goal in the process is primarily to significantly increase the share of railway transport in freight transport. To this end, by the end of 2023, MFD Rail will set up a fleet of around 3,000 wagons which will only be used for intermodal goods transport. Meanwhile, KfW IPEX-Bank will be financing modern equipment in railway transport

to promote the advancement of intermodal transport as part of the transport transformation. The availability of more CO2-efficient or neutral railway vehicles is the focus of both companies' commitments.

Digital Rail Freight Transport

To provide additional support for the railways in the area of digitalisation, MFD Rail also set itself the goal of mining immense amounts of data. To do this, the company is investing in innovative technologies for environmentally friendly, efficient and digital freight transport. MFD Rail wagons and their cargo are seamlessly tracked throughout the entire transport chain. The result? Disposition occurs more accurately and in real time, which can speed up logistics processes and facilitate more efficient infrastructure capacity management.

Intermodality Becomes the Goal: Transport Transformation and an Economic Logistics Chain

CO2-emissions can be significantly reduced by choosing

environmentally friendly means of transport for longer routes. One freight train requires around 20 percent of the energy of a lorry and only generates around 15 percent of its climate-damaging emissions.

If the current modal split of 75 percent road freight transport, 18 percent rail freight transport and 7 percent inland waterway transport remains as it is, annual CO2 emissions will increase by 80 million metric tonnes by 2030. This, in turn, would seriously jeopardise the ability to achieve the Paris Agreement goals by 2030.

The overview shows that there is no alternative to shifting goods transport to the railways.

By 2030, the share of railway use in goods transport is expected to rise in parallel from today's figure of 19 percent to 25 percent. This increase in rail freight transport was defined in the Rail Transport Masterplan in 2017 and was once again confirmed in 2020.

Within the context of a railway package from the Zukunftsbündnis Schiene (Alliance for the Future of Rail), 200 million euros in support will be available from the federal government between 2020 and 2025 for individual railway companies.

KfW IPEX-Bank and MFD Rail: Together for a Sustainable Transport Sector

Combining transport modes also needs to be simplified. Both KfW IPEX-Bank and MFD Rail support the European Rail Freight Vision 2030 from the Rail Freight Forward Initiative, which set itself the goal of increasing the share of European railway freight transport to 30 percent by 2030.

The co-operation between KfW IPEX-Bank and MFD Rail combines two partners whose names stand for sustainability, progress and expertise. By working together, these two companies prove not only their commitment to focusing on the future, environmental awareness, energy efficiency and carbon neutrality, they are also considered pioneers who will play a part in a successful transport transformation by expanding intermodal transport systems in Germany and Europe.

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