



FROM TRUCKS TO TRAINS

HOW ERTMS HELPS MAKING RAIL FREIGHT MORE COMPETITIVE

Rail transport offers very significant advantages in environmental terms but road freight still dominates the inland freight transport market with a market share of more than 70% in the European Union against a figure of 17% for rail. By ensuring interoperability on the European rail network, ERTMS helps the railway sector to position itself as a true competitor to roads by enabling significant line traffic capacity increase and promoting cost reduction which will subsequently introduce significant environmental benefits.

How can a unique signalling system increase the European railway's competitiveness?

Today, trucks may run from Barcelona to Bucharest without any administrative or operational concerns. Vehicles are accepted to cross borders, whilst there are little differences in terms of driving rules between countries and little control or regulation with respect to the driving skills of the drivers and the adherence to driving times.

Considering rail freight, several factors arising from the inherent nature of rail transport hamper the competitiveness of the sector by making cross-border traffic complex and difficult to manage. Among these are, for example, the differences in terms of gauges, the different electrification systems or the different administrative procedures in Europe, which in many cases can be overcome.

The existence of more than 20 signalling systems in Europe, inherited from the past, is viewed as a critical factor. Indeed, each train used by a national rail company has to be equipped with at least one system, but sometimes more, just to be able to run safely within that one country. This is costly and significantly increases the technical and operational complexity of train sets. Removing these barriers thanks to ERTMS will help to increase the performance of rail transport by levelling the playing field between road and rail transport.



How can ERTMS ease cross-border freight operations?

As a unique and innovative signalling system, ERTMS considerably facilitates cross-border traffic movements. Trains equipped with ERTMS systems and components manufactured by any qualified supplier are able to run on tracks equipped with ERTMS of any other supplier. This enables the easy and seamless coordination of domestic and international train services and it also encourages competition.

For this reason, the European Commission, in cooperation with the Member States and the railway sector, has identified six priority ERTMS corridors, on which international rail freight traffic offers a strong growth potential. Equipping these corridors and other international freight lines with ERTMS will considerably increase the competitiveness of cross-border railway operations.



Can ERTMS help increasing capacity on the railway network?

The ability to absorb the demand for greater capacity is a major element for rail transport's competitiveness vis-à-vis roads. As a high performance signalling system, ERTMS enables significant increases of traffic along the railway networks, and proves to be a cost-efficient solution to absorb freight and passenger demand. Experience has shown that a continuous communication-based signalling system, such as ERTMS, reduces the headway between trains enabling up to 40% more capacity on currently existing infrastructure. It therefore offers considerable advantages to both infrastructure managers and operators wishing to run competitive freight operations: more capacity means more trains moving, thus more benefits. This "capacity advantage" partly explains why some countries which are outside Europe and isolated by the sea, like Taiwan, have opted for ERTMS as the signalling system of choice.



Does ERTMS bring any advantages in terms of costs for freight operators?

Today, rail freight operators strongly suffer from the lack of a unified signalling system in Europe. Locomotives may need to be changed at each border or may need to be equipped with the appropriate signalling systems. This is costly and significantly increases the technical and operational complexity of train sets, not to mention their availability. In addition, drivers and maintenance staff have to be trained and totally familiar with each installed system making their jobs more complicated and increasing potential risks.

When ERTMS is installed along a given corridor in Europe, rail freight operators need to purchase only ETCS as the onboard equipment, as opposed to the several legacy systems running in the different countries. This significantly reduces the costs of the global signalling equipment whilst allowing for maintenance costs reductions and makes drivers more flexible in their working routines.

Does ERTMS provide a solution to all cross-border traffic problems?

As it ensures interoperability, ERTMS enables seamless traffic between countries. However, other obstacles may slow down cross-border traffic, such as operational rules or train certifications, which diverge from one country to the other. The European Railway Agency (ERA), the European railways and the rail industry are all working together on these issues which need to be further examined to allow the smooth and free movement of traffic between countries.



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