factsheet # 11

RAIL FREIGHT ON THE RIGHT TRACK

ERTMS BUSINESS CASE FOR FREIGHT OPERATORS

Today, cross-border operations account for a major share of rail freight operators' activities. ERTMS, the European Rail Traffic Management System, facilitates cross-border traffic whilst enhancing the reliability, quality and competitiveness of rail freight services. Investing in ERTMS today is a rational choice for freight operators that take into account the evolution of the European rail network. This evolution is more and more characterized by impact of digital technology. The digital transformation of the railways takes place and ERTMS is the solid basis for this development. It provides them with the guarantee of using a reliable high performance signalling system in the long term as the current legacy systems are being replaced by the common ERTMS standard.

What are the advantages of a common European signalling system for freight operators?

Due to the existence of many different signalling systems across Europe today, freight locomotives have to be equipped with the appropriate signalling systems - As a standardised and interoperable signalling system, ERTMS provides the solution to the lack of interoperability of the existing rail networks in Europe.

Indeed, once a common European signalling system is installed along a given international freight route, rail freight operators will only need to purchase ERTMS as the on-board system, as opposed to having the several legacy systems required for operations in the different countries. This represents a significant cost reduction for freight operators. This will, in the end, benefit consumers, the economy and society as a whole because economic exchanges will increase and become cheaper. Moreover, a common European signalling system leads to a reduction of maintenance costs and facilitates staff's training, as drivers will only have to be familiar with 1 signalling system.

Besides interoperability, ERTMS offers advantages in terms of capacity, speed and reliability – three key components for successful rail operations. These advantages explain why the system is being recognised worldwide as best in class. Up to 40% of all ERTMS equipped vehicles and 50% of all ERTMS equipped trackside were deployed outside of Europe.

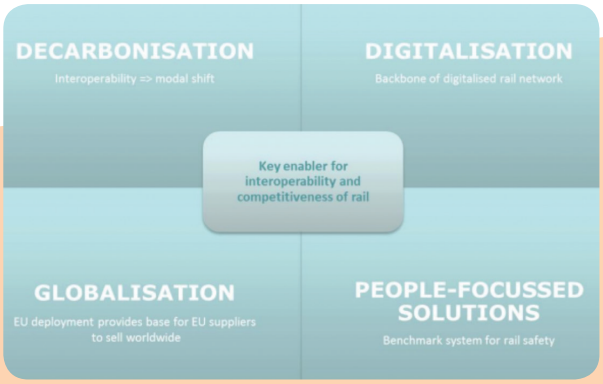
Why is ERTMS becoming a "must" for freight operators?

Already today ERTMS is used as a unique system on some crucial European freight routes such as the Betuweroute or the Lötschberg tunnel. Increasingly, passenger-lines equipped with ERTMS will be used for freight operations – for instance, in Italy, the use of High Speed lines for freight operations at night/off peak times is foreseen. In total, an estimated 30,000 km of route are already contracted to work with ERTMS in Europe. In addition, infrastructure managers opt increasingly for a removal of legacy systems on ERTMS-equipped lines in order to increase their cost savings, in particular in terms of maintenance. Some countries, for example Denmark, Norway and Switzerland, are even planning a full removal of legacy systems in the medium term. As a consequence, ERTMS will be the only signalling system on those routes. The rollout of ETCS L1 Limited Supervision has been finished in 2017 in Switzerland. Denmark is rolling out ERTMS for the whole network and in 2018 Norway has awarded the renewal of the whole railway network with ERTMS Level 2 only. Another example of such clear ERTMS strategy is the UK. The national infrastructure provider has started a program to equip the whole existing fleet of cargo locomotives with ERTMS.

Digital transformation of the Railways is based on ERTMS

Digital technology is changing the world and also impacts the railway business. Digitalization is recognized as the key of improving the competitiveness of railway against other modes of transportations. Especially freight operators are benefiting from the potential of digital technology because digitalization will allow new level of automation and control of transportation of goods. Most of the European infrastructure managers have launched very ambitious digital innovation programs with ERTMS as the pillar for further automation, performance increase, reduction of risks and energy savings to name only the key targets. United Kingdom, Switzerland, Austria, the Netherland, Norway, Denmark and Germany are driving the digital transformation of their railways.

It is accepted that ERTMS is the base for further innovation and modernisation of the railways because it provides the standardized connectivity and functional basis for interoperable digital improved transportation services. So it is logical that investments in ERTMS are more beneficial than spending the budgets into legacy systems.

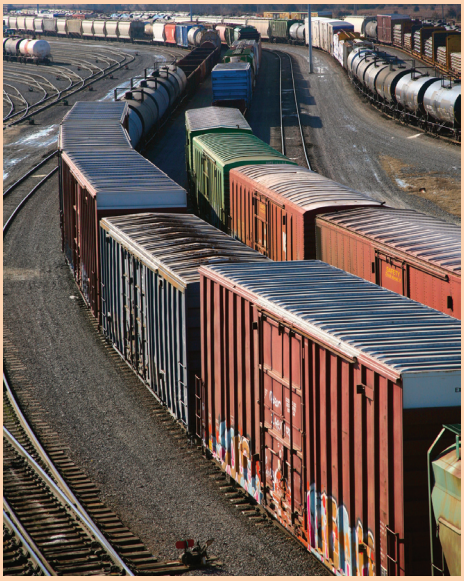


Source: https://ec.europa.eu/transport/sites/transport/files/swd20170375-ertms-the-way-ahead.pdf

Are ERTMS investments made now safeguarded in the long term?

As the European Deployment Plan has made the implementation of ERTMS mandatory, freight operators have the guarantee that their investments are "future-proof". Moreover, ERTMS as a standard is now stable and with a clear migration path that preserves its business case.

Indeed, Baseline 3, which was adopted in 2012, is fully backwards compatible – this means that trains equipped with baseline 3 are able to operate on 2.3.0d tracks. This principle was also safeguarded in subsequent updates, in the first maintenance release of Baseline 3 (3.4.0) and the Second Release of Baseline 3 (3.6.0) which entered into force in 2016. Freight operators can take advantage of version 2.3.0d whilst safeguarding their investment, for example by including "upgrade clauses" in contracts in order to guarantee that their rolling stock will be equipped with the baseline 3 of ERTMS.



Large parts of the EU rail freight network are not yet equipped. When will this be the case?

Besides the existing investments mentioned above, rail freight operators have now the guarantee that the European rail network will be equipped with the ERTMS technology in the short and medium term. Indeed, in July 2009, the European Commission adopted the European ERTMS Deployment Plan that provides strong guarantees for freight operators wishing to equip their locomotives with ERTMS. In 2010, the alignment between the Rail Freight Corridors and the ERTMS corridors was made official via the publication of the Rail Freight Corridor Regulation (Regulation 913/2010). ERTMS thus became a horizontal priority of the 9 Rail Freight Corridors. However, despite strong legislative measures, the deployment of ERTMS is currently behind schedule. EC has implemented actions which drives the deployment of ERTMS massively in order to further benefit from system deployment.

In 2017 the European Commission adopted an implementing regulation on the new ERTMS EDP (Commission Implementing Regulation (EU) 2017/6). It sets targets dates until 2023 by which time about 30-40% of the Core Network Corridors shall be equipped. In 2023, the ERTMS EDP will be updated again setting out the precise implementation dates for the remaining part of the Corridors between 2024 and 2030. This will increase the dynamic of ERTMS implementation in Europe. In parallel, an increasing number of European countries have planned to go beyond their obligations defined by the European ERTMS Deployment Plan and equip their entire network. More and more countries are implementing this approach as for example Denmark, Switzerland, the Netherlands, Belgium or even Norway. Other countries have committed to an ERTMS implementation strategy. Germany has published its ambitious ERTMS rollout plan as part of the digitalization strategy.

Focus on the European Transport Corridors

What are the Core Network Corridors?

The European Commission has established a list of nine Core Network Corridors (CNC).They bring together public and private resources, including support from Connecting Europe Facility (CEF). They aim at removing bottlenecks, building cross-border connections and promoting interoperability.

- The Scandinavian-Mediterranean Corridor
- The North Sea-Baltic Corridor
- The North Sea-Mediterranean Corridor
- The Baltic-Adriatic Corridor
- The Orient/East-Med Corridor
- The Rhine-Alpine Corridor
- The Atlantic Corridor
- The Rhine-Danube Corridor
- The Mediterranean Corridor

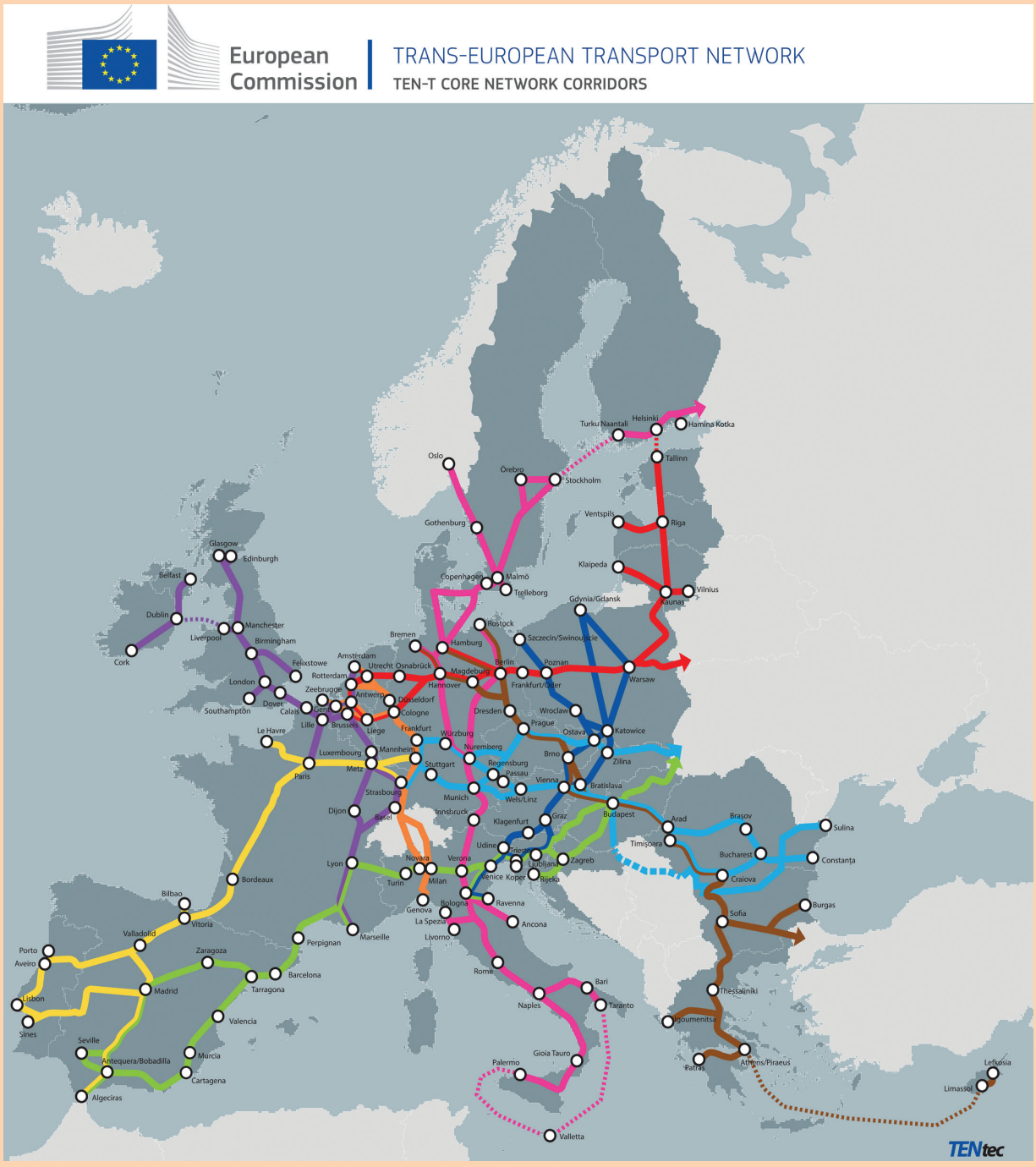
Each corridor is managed by a European Coordinator, in charge of ensuring completion of the agreed work plan for the agreed sections.

Will ERTMS be installed only on these Corridors?

No – all EU countries are free to install ERTMS on the rest of their network if they so wish and a large number of them have already done so. However, the Corridors are of specific importance when it comes to international freight traffic. This therefore requires a degree of cooperation between the different EU Member States.

Are ERTMS investments mandatory along these Corridors?

Yes – whilst originally, ERTMS deployment was made on a "voluntary" basis, equipping the ERTMS Corridors became a legal obligation in July 2009, with the adoption of the European ERTMS Deployment Plan and subsequent issues of the Control Command and Signaling TSI. Due to the delays in implementation, the European Commission is currently preparing the revision of the European ERTMS Deployment plan which set a binding deadline for 2030 for completion of the deployment on the CNC. From 2019 on all new rolling stock operating on international routes shall be equipped with ERTMS.



Source: European Commission

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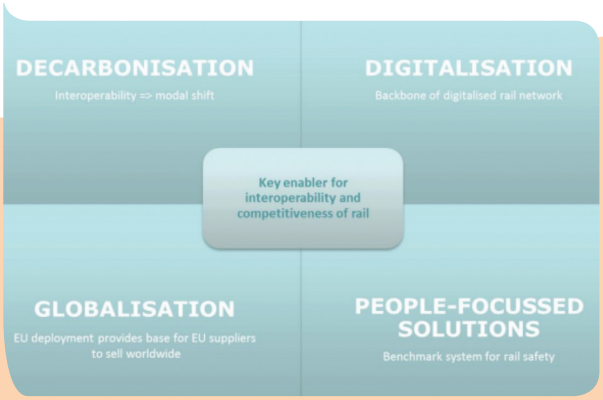

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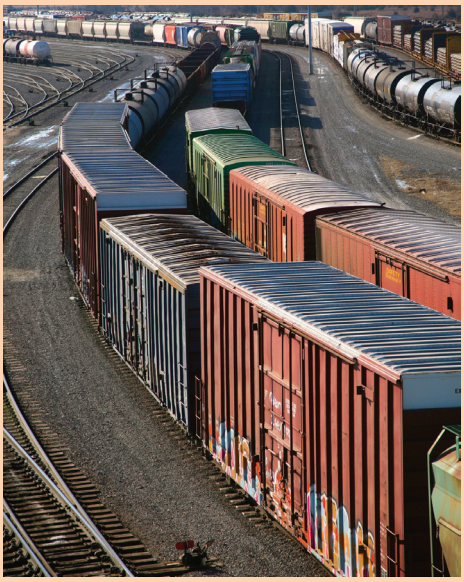

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Want to know more about ERTMS? lease check www.ertms.net or contact UNIFE at ertms@unife.org