



factsheet #7

SEPTEMBER 2017



ERTMS DEPLOYMENT OUTSIDE EUROPE ERTMS AS A GLOBAL STANDARD

Originally designed as a unique signalling system to ensure interoperability on the European railway network, ERTMS has rapidly become a global standard and is now being embraced by a growing number of countries worldwide. Besides interoperability, ERTMS as a high-performance signalling system offers some significant advantages which makes it a showcase of European technological excellence worldwide.

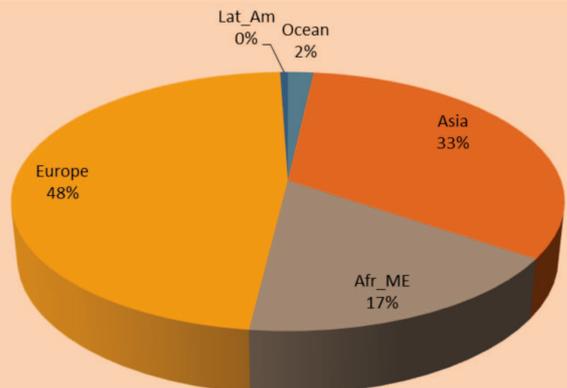
From its name, ERTMS very much appears as a "European" system. Does this prevent its installation in non-European countries?

Not at all – whilst one of the key objectives of ERTMS is to achieve interoperability on the European railway network, the standard has also been designed and is fit for use by the railways worldwide.

What countries are investing into ERTMS technology worldwide?

ERTMS investments outside Europe represent more than 50% of the global ERTMS investment worldwide.

Countries such as diverse as South Korea, Saudi Arabia, the United Arab Emirates, China, Taiwan, Libya, Indonesia, Malaysia, New Zealand, Australia, Kazakhstan, Turkey, Algeria, Morocco, Brazil, Mexico, Chile and India have all launched major investments program to install ERTMS on their railway networks. Other major countries such as Argentina and even the USA are also showing an interest in this technology, with several pilot lines planned in different countries.



ERTMS investments worldwide, by geographical area (in route/km), September 2016 – Source: UNIFE

Is ERTMS already in service in some countries outside Europe?

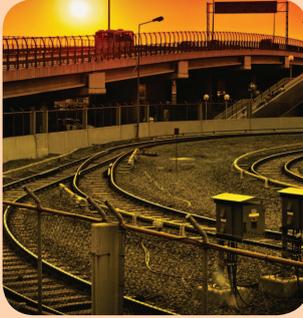
Yes, ERTMS is already in service in a large number of projects outside Europe. In particular, major parts of the Taiwanese (1200km of tracks equipped with ERTMS) and South Korean (1500km) networks are operating with ERTMS.

GCC countries are also heavily investing in ERTMS with several over 3,000 km of lines being built or already in operation, even for freight purposes such as the 1,600 km long North South line in Saudi Arabia or the mixed traffic Etihad rail line in the United Arab Emirates.

In India, the Chennai-Gummidipundi line and a second line, Delhi-Agra (leading to the Taj Mahal!) are in commercial operation. The suburban Cuautitlan – Buenavista line (70km) in Mexico is also running using ERTMS.



ERTMS connects New Dehli and Agra, a city adjacent to the Taj Mahal



Why are so many countries worldwide opting for ERTMS?

For countries outside Europe, which are in some cases isolated by the sea like Taiwan or Australia, interoperability is obviously not the main reason behind ERTMS investments. Rather, the high-performance of ERTMS, and the significant advantages it brings to railways, have made it the signalling system of choice for these countries.

Indeed, regardless of interoperability, ERTMS brings considerable advantages to the railways worldwide:

- Increased capacity on existing lines and a greater ability to respond to growing transport demands: as a continuous communication-based signalling system, ERTMS reduces the headway between trains enabling up to 40% more capacity on currently existing infrastructure (see also factsheet #10, "increasing infrastructure capacity");
- Higher speeds: ERTMS allows for a maximum speed up to 500 km/h and is considered in several countries as the system of choice for the construction of high-speed lines;
- Higher reliability rates: ERTMS may significantly increase reliability and punctuality, which are crucial for both passenger and freight transport;
- Reduced maintenance costs with ERTMS level 2, where trackside signalling is no longer required;
- An opened supply market: trackside and onboard equipment may be supplied by any of the ERTMS suppliers as the equipment is fully interoperable, which makes the supply market more competitive;
- Having a worldwide accepted standard brings significant economies of scale and competitive life cycle costs;
- Improved safety for passengers, employees and freight transport, which is a key issue in many developing countries in the world.



Are we evolving towards a unique worldwide signalling system?

Thanks to the above-mentioned benefits, ERTMS is indeed being implemented in a growing number of countries worldwide, being used in a total of 45 countries around the globe. As one of the key advantages of ERTMS is that it "opens" the supply market (the product may be delivered by different suppliers) and that the ERTMS suppliers represent the largest part of the global signalling market, it is indeed expected that ERTMS will gradually become the standard of choice for an ever growing number of railway companies worldwide.

ERTMS investments outside Europe, trackside (in tracks km), September 2016 – Source: UNIFE

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