factsheet # 7

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.

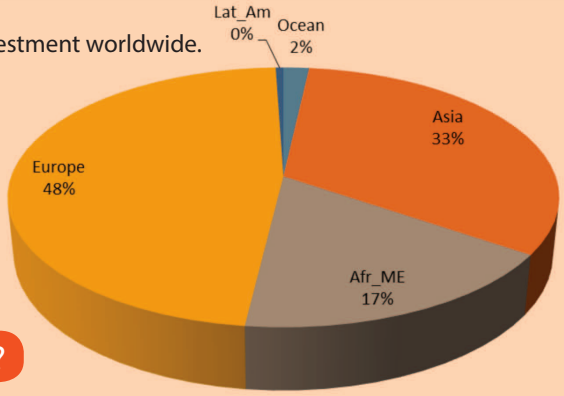
From its name, ERTMS very much appears as a "European" system. Does this prevent its installation in non-European countries?

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, Mongolia, New Zealand, Australia, Kazakhstan, Turkey, Algeria, Morocco, Zambia, Ethiopia, Nigeria, Brazil, Mexico, Chile and India have all launched major investments program to install ERTMS on their railway networks.



ERTMS investments worldwide, by geographical area (in route/km), October 2020 – 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 (1900km of tracks) and South Korean (1542km of tracks) networks are operating with ERTMS. GCC countries are also heavily investing in ERTMS by equipping lines being built or already in operation, even for freight purposes such as the North South line in Saudi Arabia or the mixed traffic Etihad rail line in the United Arab Emirates. In particular Saudi Arabia has 2884km of route and 4519km of track km equipped with ERTMS already in operation.

In India, the Madras-Gummidipundi line (104 km of tracks) and a second line, Delhi-Agra leading to the Taj Mahal (384 km of tracks) are in commercial operation. The suburban Cuautitlan – Buenavista line (70km of tracks) 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?

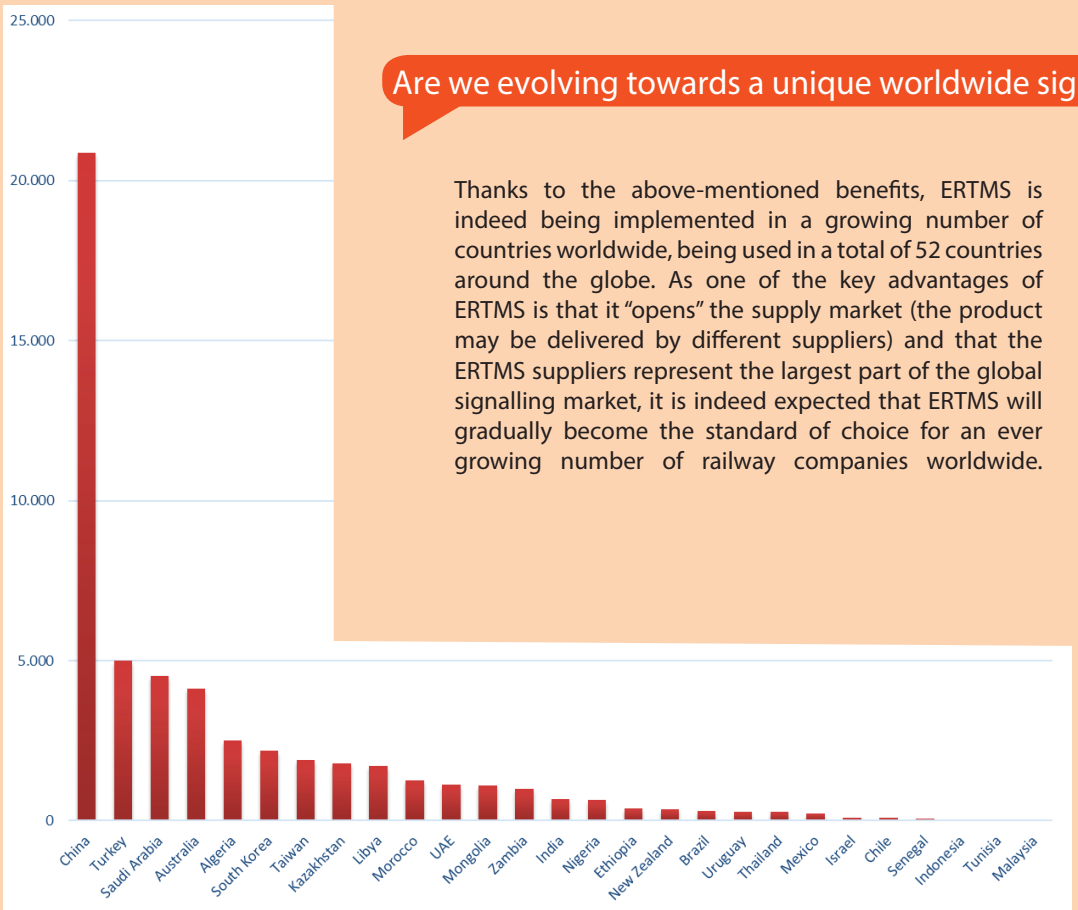
For countries outside Europe, which are in some cases isolated by the sea like Taiwan or Australia, interoperability is obviously not the main reason behind ERTMS investments. Rather, the high-performance of ERTMS, and the significant advantages it brings to railways, have made it the signalling system 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 if 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 52 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), October 2020 – Source: UNIFE

SUPPLIERS

ALSTOM · AŽD PRAHA · CAF · HITACHI Inspire the Next · mermec AN ANGEL COMPANY · THALES · SIEMENS · CM Part of the Signal Division of Progress Rail, A Caterpillar Company · mermecste AN ANGEL COMPANY