

Europe looking for the right signals on rail

-- By Joshua Posaner

Not a single train operating in the EU is able to navigate all of the almost 30 track signal systems currently in use across the bloc, and that mishmash of sometimes outdated technology can cost lives.

That's why the European Commission this week [unveiled](#) an updated plan to stitch together national networks and get more trains running across borders.

The European Railway Traffic Management System ([ERTMS](#)) is made up of communication systems installed both onboard trains and at track-side. It keeps carriages within maximum speed limits and standardizes the signalling process. The management system allows trains to operate safely at closer distances, which lets more trains run on a given section of track.

Under the Commission plan, rail managers will need to get 50 percent of the EU's core corridors upgraded by 2023. The final goal is to have 56,000 kilometres hooked up by 2030; as of 2014, just 5,800 kilometres of track were installed with the technology.

The corridors include crisscrossing [passenger](#) and freight routes across the bloc, running from Scandinavia through to the Mediterranean and from the Baltic coast to Belgium's port at Antwerp.

Bloody delays

The Commission has been promoting the system since [2009](#) — this week's communication was a result of the recognition that earlier targets were unrealistic. But delays in upgrading rail management systems can have tragic consequences.

The 2013 Alvia train crash in the Spanish region of Galicia that killed 79 people and the 2010 collision between two trains at Buizingen in Belgium that killed 18 happened on tracks without the system. Both countries have since moved forward on installing the technology.

But the scale of the program poses a challenge.

"We are not just saying that it's a matter of deploying this system overnight in one country. It requires heavy investment from the infrastructure managers and the operators," said Lea Paties, who covers ERTMS at rail supplier association [UNIFE](#).

Since getting the first route running in 2009 to the Dutch border, the [Belgian government](#) has earmarked €2 billion to get 3,500 kilometres of rail updated. Denmark has been one early adopter, and should have ERTMS installed on its entire national network by 2023 rather than just

the EU's designated corridors. Italy was also planning track overhauls anyway and has raced ahead since 2009.

But other countries are much slower off the mark, especially in Central and Eastern Europe.

Germany and France are still working on their own deployment plans, with the former's track manager DB Netz focusing on getting track around border areas upgraded before developing a national system.

Planning documents show that much of the work in Germany will come after 2023 instead of being part of the latest deployment. But a source at national rail operator Deutsche Bahn says they've quickened the pace in the last decade. DB Netz says it will install the latest signalling systems on a further 2,750 kilometres in the years ahead.

In France, two high-speed routes are already installed with ERTMS, with authorities understood to be reviewing prospects for the stretch between Paris and Lyon. The slow pace of upgrading the management system causes difficulties for operators. On the high-speed route between Paris and Brussels, for example, trains need to deal with up to seven different signalling systems — increasing the complexity and chance of a malfunction that can cause delays.

The benefits of a unified rail management system are attracting interest from operators outside the EU. "It is a clear objective to export this technology," Paties at UNIFE said, noting that freight lines in Saudi Arabia already have the technology and a growing system of regional trains will run on ERTMS too.

Transport Commissioner Violeta Bulc heads to the Middle East this weekend and the agenda includes talks on ERTMS in Saudi Arabia and the Gulf countries. Elsewhere, the system has been deployed on track in North Africa, East Asia and Mexico.