



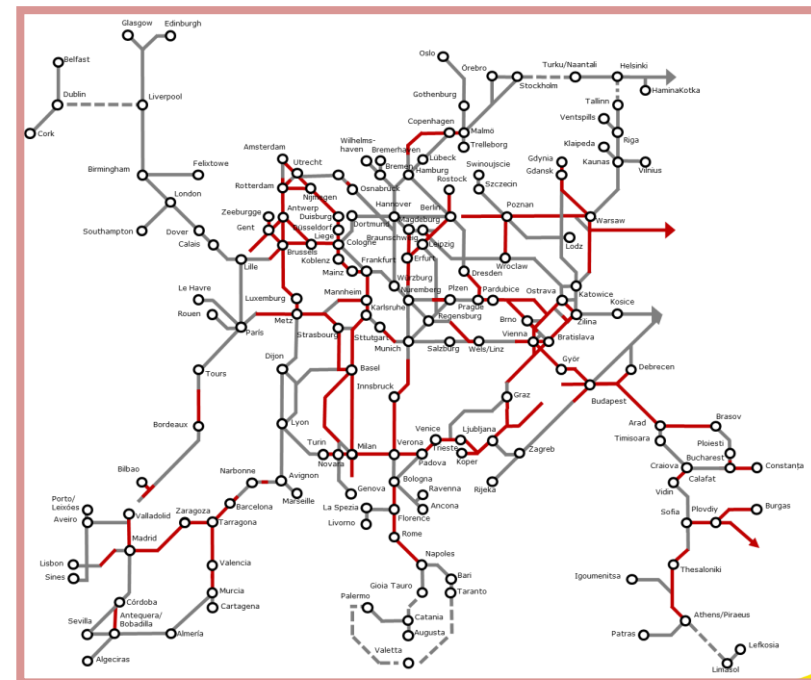
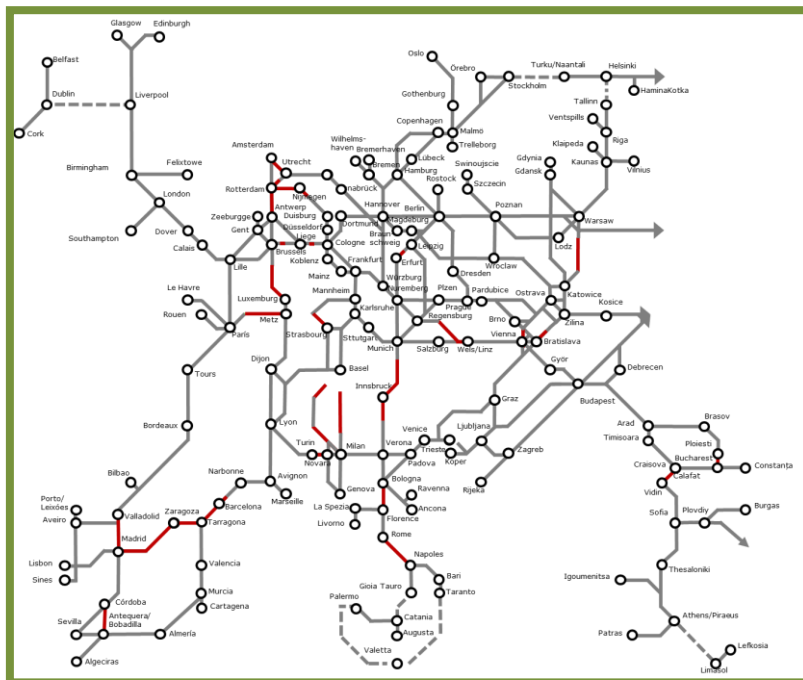
Technical support for the Deployment of ERTMS along the core network corridors



CNC equipped with ERTMS in Europe



Target ERTMS Deployment
Supported by the Deployment Management Team

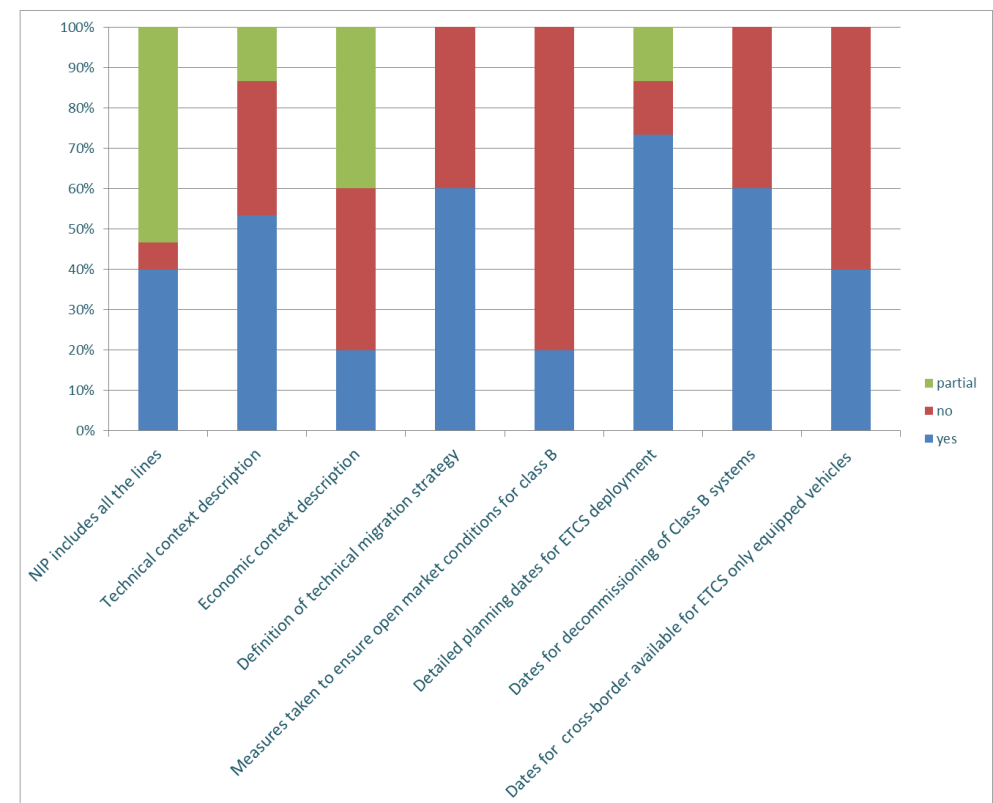
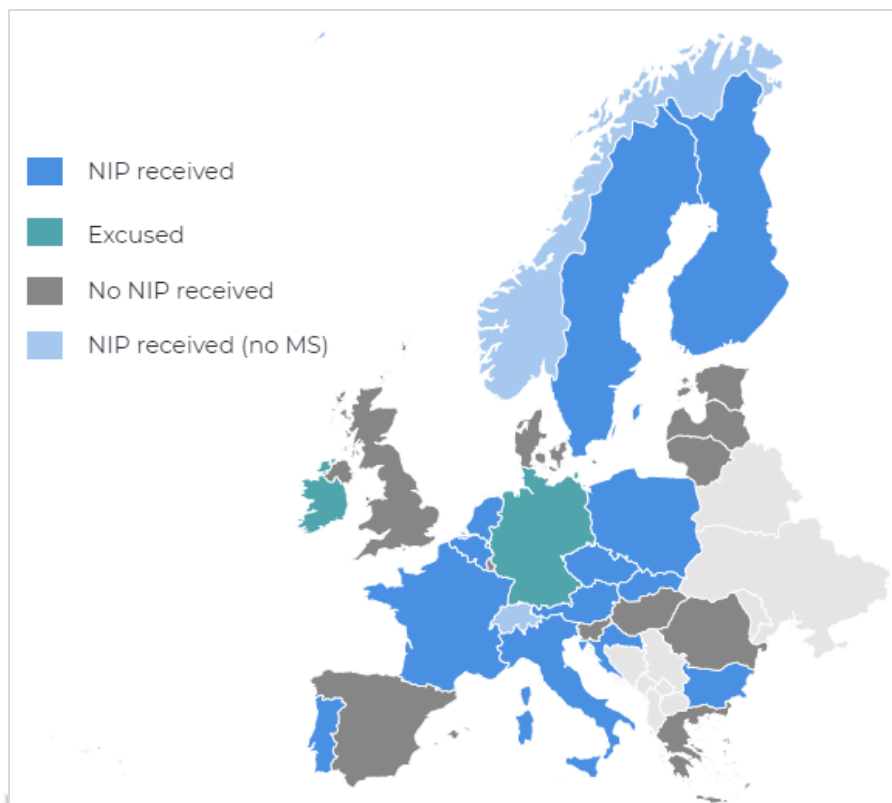


There have been **15** National Implementation Plans (NIPs) submitted to European Commission:

Austria, Belgium, Bulgaria, Switzerland, Czech Republic, Finland, France, Croatia, Italy, Netherlands, Norway, Poland, Portugal, Sweden and Slovakia

The contents and level of detail in the NIPs received varies significantly

Even if some of the NIPs include detail description on some sections, most of them do not include all the types of information as requested in the CCS TSI section 7.4.4



Level of compliance within the NIPs to the EDP is high, including some networks where the expected dates are improved

NIPs show foreseen progress that is speeding up the ERTMS deployment around Europe

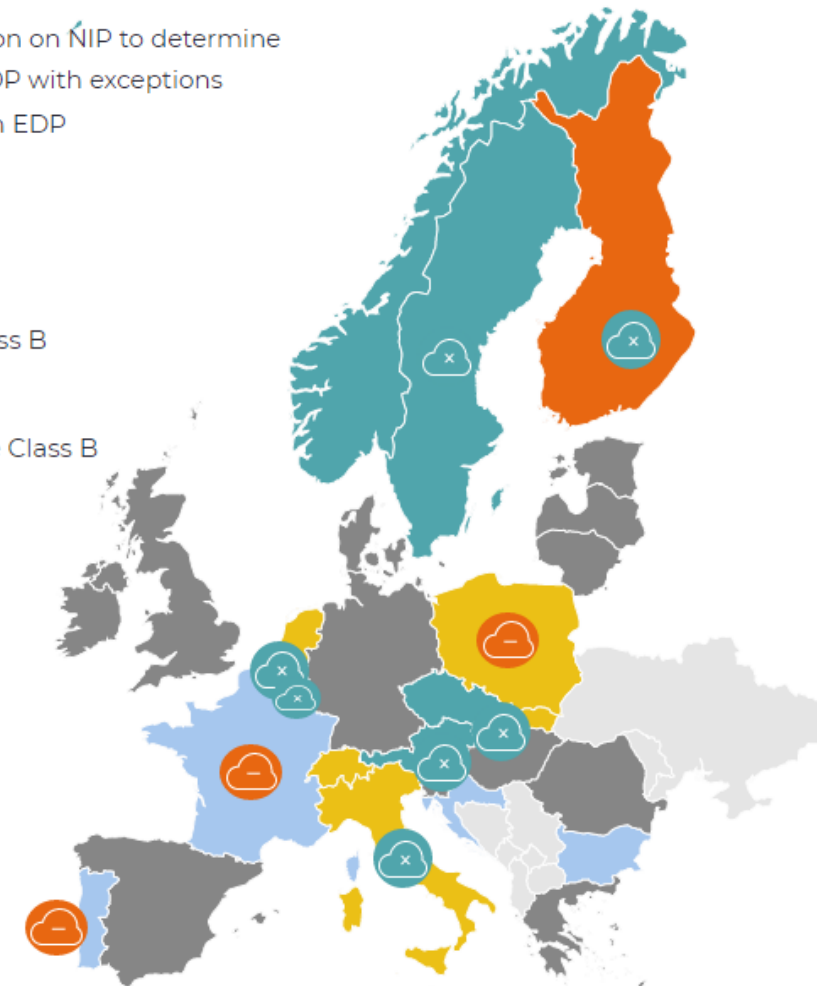
- NIP compliant with EDP
- Not enough information on NIP to determine
- NIP Compliant with EDP with exceptions
- NIP not compliant with EDP
- No NIP received

- ☁ Plan to remove Class B
- ☁ NO Plan to remove Class B

Plans for removal of Class B systems facilitate the efficient ERTMS deployment

MS commit to decommission their legacy system and, in the best cases, indicate also specific dates for the actual switch-off of the class-b system the overall business case for ERTMS improves.

Additionally other MS state that Class B systems will not be mandated in the network even if it has not been decommissioned



safety

Due to the technical characteristics of ERTMS including a continuous technical monitoring of the driver actions

interoperability

Economic analysis included NIPs highlight that ERTMS avoids costs of dual equipment on a longer term of the deployment and open the market to different suppliers.

Most NIPs link ERTMS deployment to the best solution when modernising the existing network and modifying the existing other control command and signalling systems

NIPs highlighting capacity as the main gain for ERTMS deployments are those where level 2 is foreseen.

Some countries mention also the punctuality by decreasing the necessary journey time.

modernisation

capacity





VS



- ✓ Level of compliance within the NIPs to the EDP is high, including some networks where the expected dates are improved
- ✓ Most of the NIPs with some level of economic analysis, conclude that ERTMS has benefits
- ✓ There are 6 (5 NIP + 1 additional) networks with specific plans to decommission the class B system and more of them clearly state that ERTMS only equipped onboards will be able to run in their ERTMS equipped routes foreseen in the near future

There are also negative aspects of ERTMS that have been included by the different countries in the NIPs

These are more specific to each network, but include as examples:

- infeasibility for industry of proposing technical solutions within the time frames set
- still missing standard functionalities
- No plan to install ETCS onboard in existing conventional railway vehicles



All serious **accidents** have happened in lines without ERTMS or in lines with ERTMS not operational



There are operational and maintenance savings from **ERTMS only solutions**, with examples of savings > 50%



There is clear tendency towards a **network-wide ERTMS deployment strategy**. Some countries with a complete network strategy, other prioritising specific typologies within their networks (e.g. HS)



Experience and reliability data included in NIPs show that ERTMS is and will be functioning with **no need for backup system**

for a more synchronized, interoperable and timely implementation of the ERTMS

Thank you for your attention

