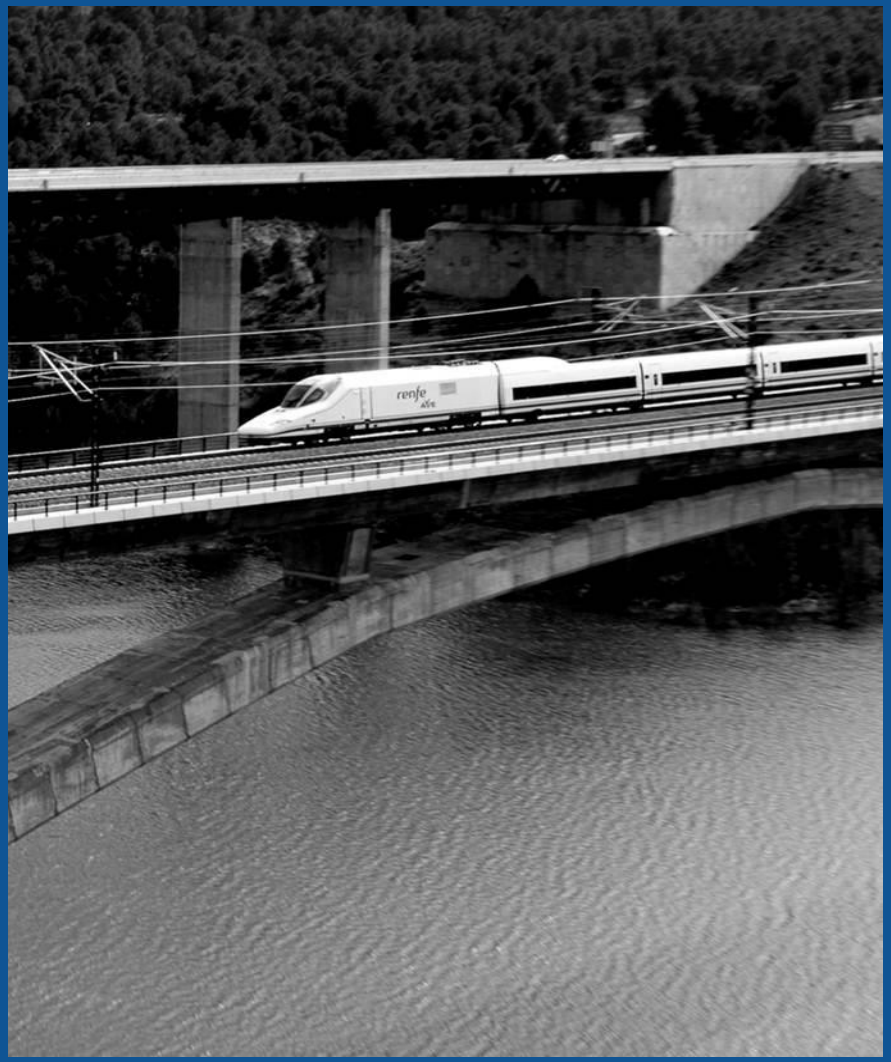
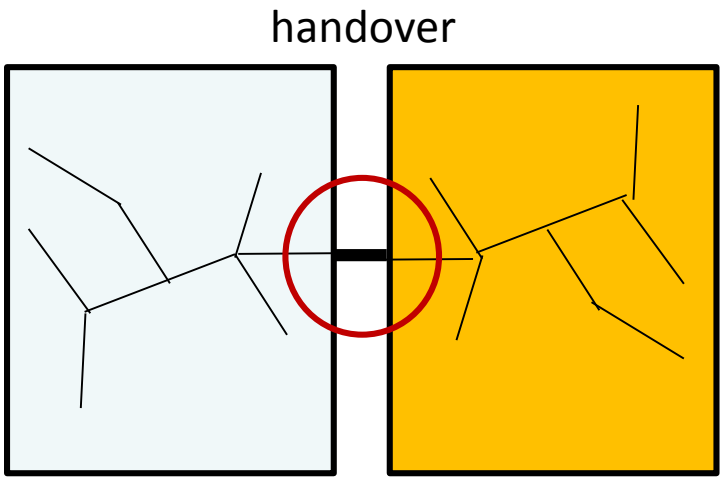
European Commission

ERTMS Deployment Action Plan



Transport

ERTMS: The Interoperability Vision

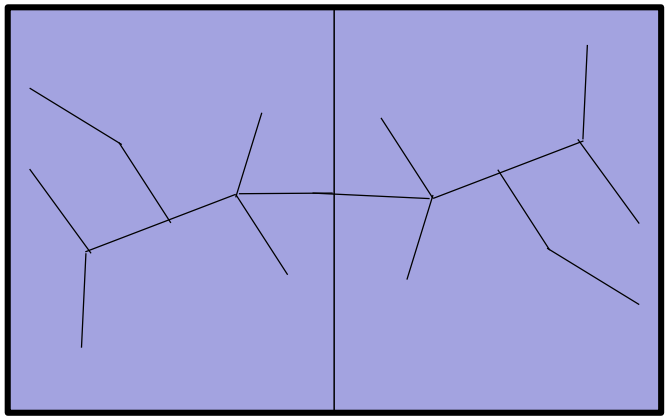


National network A

National monopoly operator A

National network B

National monopoly operator B



Single Rail Area ↔ Transport Union

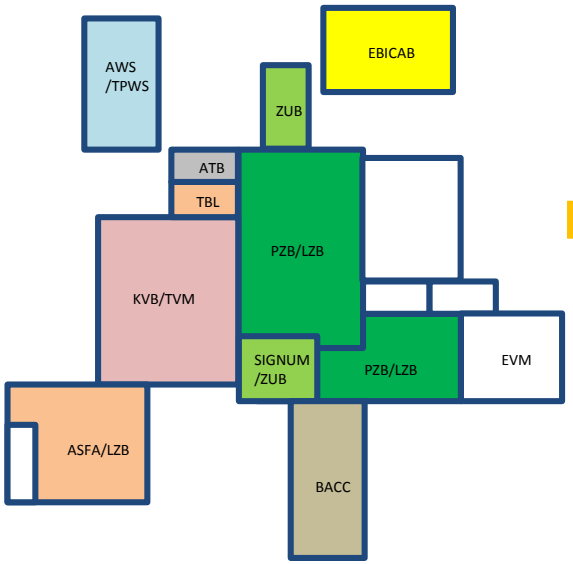
Harmonised specification

Operators work seamlessly across borders (in competition)

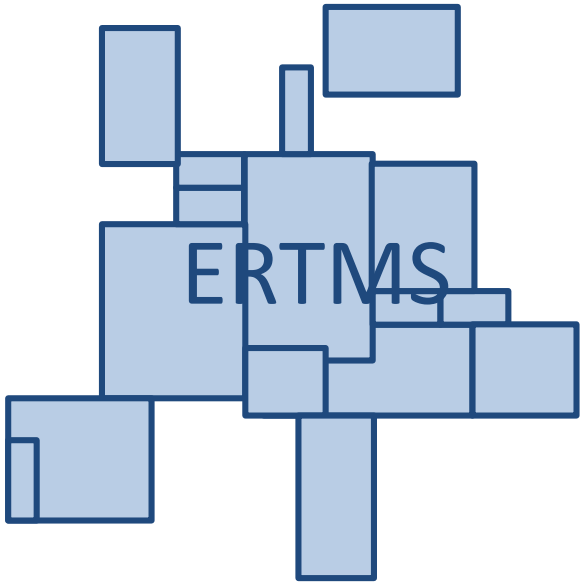
ERTMS: Migration

Fragmented national railway systems

- National supplier oligopolies (captive)
  - obsolescence
- Cross-border:
  - change of locomotive
  - multiple systems fitted
- Limitations in terms of functionality and safety



Single European Railway Area



ERTMS: Action plan – principles

- This action plan identifies the necessary steps to address barriers and to achieve ERTMS interoperability

  ⇒ **With regard to ERTMS deployment, interoperability means a compliant Baseline 3 ERTMS On-board Unit can safely run on any ERTMS line compliant with the TSI with an acceptable level of performance.**

- The Action Plan builds on and incorporates the significant steps that have already been taken.
- It encompasses the commitment in the MoU to provide a detailed plan with concrete actions and defined deadlines.
- It is forward looking and seeks to gain consensus across the industry for the actions to be taken.
- Aims to achieve a coordinated deployment also to support future developments e.g. ATO

ERTMS: Action plan – consulation and implementation

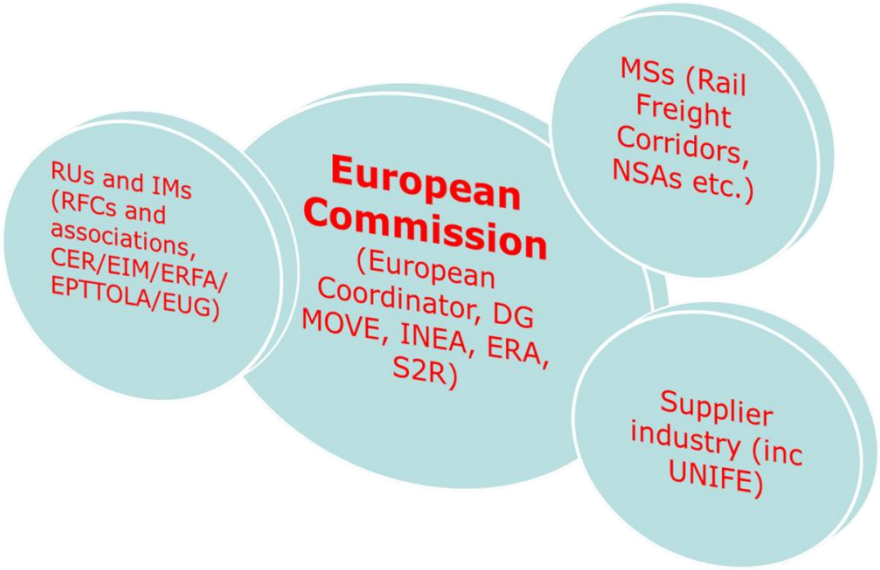
- **June 8**: TTE AOB
- **June 20**: Launch Action Plan for consultation
- **July – October**: Consultation with stakeholders: ERTMS Stakeholder Platform; RISC
- **November**: Publication of final document
- Implementation monitored by MOVE/ERA through ERTMS Stakeholder Platform

- Questions and input can be directed to: MOVE-ERTMSDAP@ec.europa.eu.
- https://ec.europa.eu/transport/modes/rail/ertms/ertms_deployment_en

ERTMS: Action plan - summary

The following steps are necessary to make irreversible the delivery of Bseline 3 ERTMS to support an interoperable rail system:

- **Interoperable and compliant infrastructure**
- **Standardisation of the OBU**
- **More efficient testing and validation**
- **Maintaining ERTMS reliably and consistently**
- **Targeted funding and financing**



Interoperable and compliant infrastructure: objectives

- Ambitious deployment: Infrastructure is delivered according to the EDP, and beyond that national implementation plans are produced based on a coordinated deployment
- Compliant new infrastructure:
  - ERA ensures via the ERTMS Trackside Approval the interoperability of trackside ERTMS and that the application of engineering rules are progressively more and more extended in terms of geographical coverage
  - trackside installations are deployed using modular pre-tested configurations, according to engineering rules valid for entire networks
- Compliant existing infrastructure: investments are made to ensure interoperability

⇒ By 2030, almost 51,000km of railway lines on Core Network Corridors in Europe in service with ERTMS, allowing a single train with a compatible ERTMS on-board unit to travel seamlessly across the whole European core network.

Interoperable and compliant infrastructure: actions

- ERA Approval of trackside
  - Steps to ensure 2019 powers of ERA are in place and able to ensure an harmonised interoperable implementation of ERTMS
- Addressing non-interoperable infrastructure
  - Identification and assessment of already installed ERTMS infrastructure that has interoperability impact
- Resolving incompatibilities between trackside and OBU
  - Process to address incompatibilities whilst preserving interoperability

Interoperable and compliant infrastructure: actions

- Realistic and committed EDP and NIPs
  - Implementing the EDP
- Decommissioning Class B systems
  - Considering the potential benefits and costs to focussing on class B system decommissioning
- Identifying and addressing National rules and requirements that impact interoperability
  - Identifying and mitigating the National rules and requirements that have the greatest interoperability impact
- Harmonisation of Engineering Rules
  - Identification and analysis of Engineering Rules that can be realistically harmonised, focussing on consistency across MSs

Standardised OBU: objectives

- Compliant On Board Units
  - Vehicle authorisations issued by ERA ensure interoperability of the OBU
- Standardisation
  - Locomotives and trainsets installations are based on generic, pre-tested and pre-validated kernel SW/HW proprietary for each supplier

Standardised OBU: actions

- ERA Authorisations of vehicles
  - Steps to ensure 2019 powers of ERA are in place and able to ensure authorisation of interoperable OBUs
- Minimising impacts of class B system interactions with the OBU
  - Consideration of steps needed to produce a more standardised OBU, driving costs efficiencies
- Contractual/commercial issues
  - Production and utilisation of tender template to help deliver procurement efficiencies

Increasing efficiency of testing and validation

- Objective:
  - Efficient cross tests of (the standardised) OBU of each supplier with the (limited possible configurations of) trackside in the different networks. The tests are performed mostly in laboratories giving certainty on time and costs for RUs concerning their area of operation
- Action:
  - Transparency and publication of operational test scenarios, and definition of commonly agreed "generic" process for testing and certification

Maintaining ERTMS in a reliable and consistent manner

- Objectives:
  - OBU maintenance as a software product: regular, scheduled updates with pre-tested configurations maintaining all the products and systems in line with the interoperability specifications.
  - Management of changes: EU Specifications themselves are managed by ERA with the contribution of the Sector, and vehicle authorisations issued by ERA ensures smoothly that ERTMS SW changes do not lead to re-authorisation of the vehicle.
- Actions:
  - Publication and implementations of Technical Opinion on error corrections of Baseline 3
  - Definition of process to ensure ERTMS software releases are managed in a consistent and regular fashion

Targeted financing/financial support

- Objective:
  - Funding support at both EU and Member State level is targeted and deployed in a manner ensuring a coordinated deployment, taking into account both necessary trackside and on-board investment.
- Actions:
  - MS investment vital and also needs to be appropriately targeted
  - Process to negotiate adequate and efficient use of EU funds in future
    - Use of grants where necessary
    - Consideration of other sources of finance/combinations of support e.g. OBU Deployment Fund