



ERTMS deployment trackside and on-board and future challenges

Matthias Ruete
European Coordinator for ERTMS



@Transport_EU

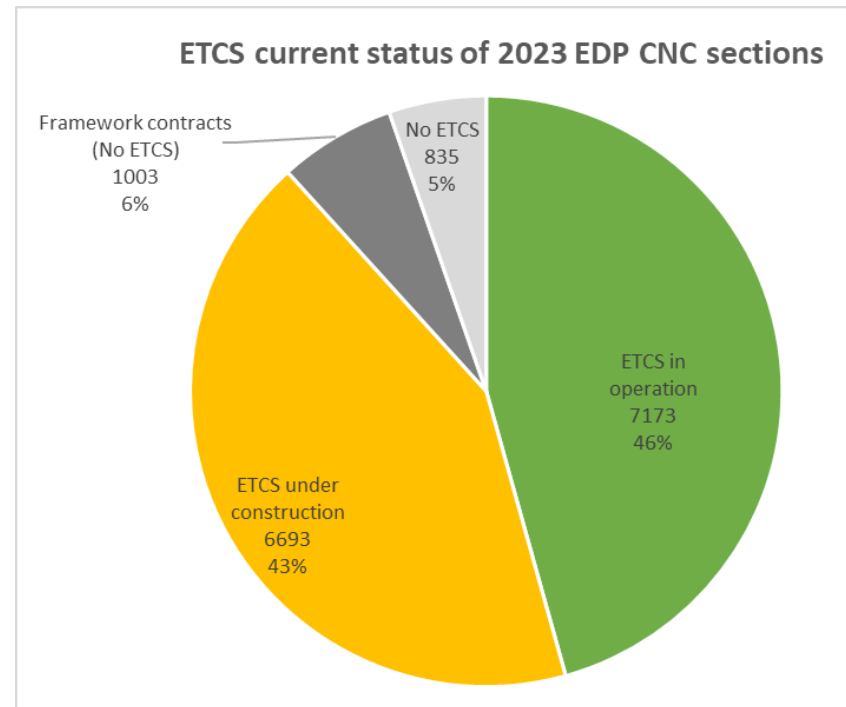
Mobility and
Transport

CONNECTING
EUROPE

Progress on core network corridors towards end 2023

Trackside ERTMS covered by EDP – State of play

- The majority of CNC lines scheduled for 2023 are in operation or under construction (but with some delays).
- By June 2023, ETCS was deployed on **46%** of the lines of the CNC expected to be equipped by 2023 (EDP – Total 15,703 km)
- Additional **49%** are covered by contracts (including framework contracts)

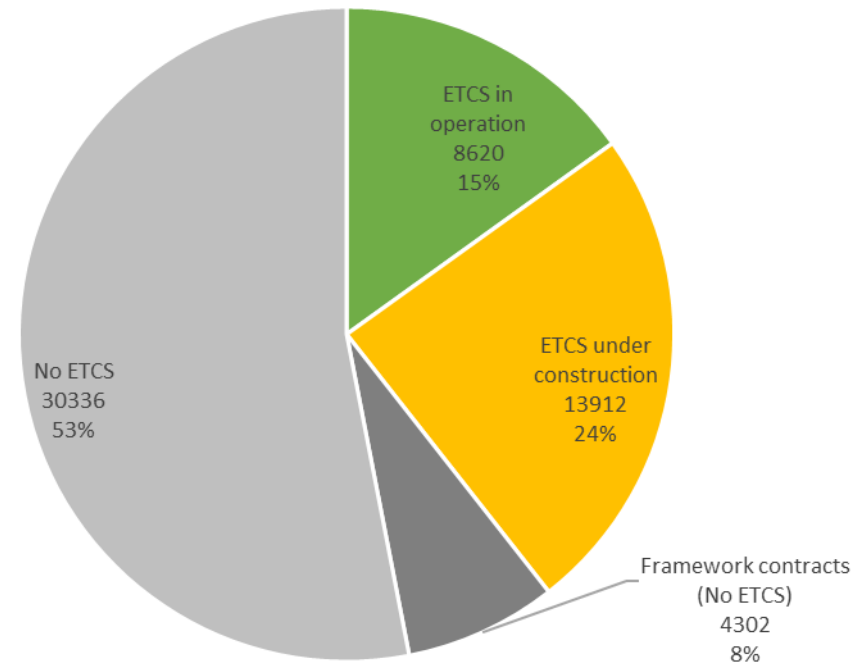


Progress on core network corridors towards 2030

Trackside ERTMS – State of play

- The deployment on the lines scheduled by 2030 is also gradually taking momentum. This regards also lines included to the CNC under CEF2
- By June 2023, ETCS was deployed on **15%** of the lines of the CNC expected to be equipped by 2030 (CEF 2 alignment - Total 57,170 km)
- Additional **32%** are covered by contracts (including framework contracts)

ETCS current status of 2030 CNC sections



ETCS deployment status on CNC in June 2023



Expected ETCS status by 2040 according to national plans



10 countries will have achieved full network coverage, and in total **no class-B** system will be required onboard in **14 countries**

- ETCS in operation by 2040 – Core Network
- ETCS in operation by 2040 – Comprehensive Network
- No ETCS operation – Core Network
- No ETCS operation – Comprehensive Network
- No ETCS operation, new construction – Core Network
- No ETCS operation, new construction – Comprehensive Network
- No ETCS operation without train protection system – Core Network
- No ETCS operation without train protection system – Comprehensive Network

Challenges of the ERTMS roll-out

- High costs of equipment
 - Recently, customers have reported further increasing costs of trackside and on-board equipment
- National variations of ERTMS equipment
 - Suppliers have reported customer wishes to adapt ERTMS equipment to national specificities
- Lack of industry capacity and skills
- Need to align deployment trackside and on-board
 - Limited incentives for rail undertakings to deploy on-board equipment
- Length of approval procedures
 - Lengthy and multi-level approval processes in particular for on-board equipment
- Lack of competitive offer
- Lack of stable, predictable public finance
- Regulatory stability