

# Further ETCS roll-out on RFC Rhine requires B3 OBU deployment



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RNE Rhine-Alpine

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**We will see a strong progress in trackside implementation in the next years**



**National strategies apply when ETCS-only will be mandatory. BE, DE and IT plan a temporary overlay ETCS / class-B, NL will switch directly.**



**B3 on-board is the minimum requirement to achieve interoperability**



**Time for the vehicle owners to plan their rolling stock**

- Phase out
- Upgrade / retrofit
- New vehicles

# RFC Rhine-Alpine provides actual ERTMS deployment information



Interactive Map

Interactive Map

Multi-Corridor View: Dear Customer, please select the Corridor(s), the 'Interactive Map' of which you...

Options

- Background maps
  - None
  - Google Hybrid
  - OpenStreetMap
- Corridor Locations
  - Terminals
  - Nodes
- Corridor Line
  - None
  - By Rail Freight Corridor
  - RFC Line Category
- Line Properties
  - Line Category (Load Model)
  - Traction Power
  - Signalling Groups
  - Intermodal Freight Code
  - Interoperable Gauge
  - Multinational Gauge
  - Gradient Dir. 1
  - Gradient Dir. 2
- ETCS Deployment
  - ETCS Build Status
  - ETCS Deployment Type
  - ETCS Operational Level
  - ETCS System Version
- Projects
  - None
  - Infrastructure
  - Signalling
  - ERTMS

ETCS Deployment Type

- SRS 2.2.2+
- SRS 2.3.0d
- SRS 3.4.0 + Euroloop
- SRS 3.4.0 + Radio Infill
- SRS 3.4.0
- SRS 3.6.0
- SRS 3.6.0 + Radio Infill
- to be defined
- not applicable

Documents

Interactive Map | Information Documents | Feedback

Multi-Corridor View: Dear Customer, please select the Corridor(s), the 'Information Docu...

Tree Structure

- Public Information Document
  - Corridor Information Documents (CIDs)
  - Capacity Offer
  - Temporary Capacity Restrictions (TCRs)
  - Re-routing Scenarios
  - Corridor Performance
  - Annual Reports
- Other Information Documents
  - RFC Rhine-Alpine
    - Railway Undertaking Advisory Group
    - Terminal Advisory Group
    - User Satisfaction Survey
    - Cross-border interoperability overview
    - ERTMS on RFC Rhine-Alpine**
    - Regulatory Bodies (link extern)
    - European Context

Pages

Title: ERTMS on RFC Rhine-Alpine

Page

2018 Update of RFC Implementation Plan

In November 2018 the Executive Board of RFC Rhine-Alpine confirmed an update of the RFC Implementation Plan (IP). The IP includes a chapter on [ERTMS Deployment](#) (double-click for download) and an [annex with graphs](#) (double-click for download).

2017 Workshop with stakeholders

On 24th November 2017 RFC Rhine-Alpine held a workshop with various stakeholders on ERTMS deployment on and the challenges for freight RUs and leasing companies. Here you find a [list of participants](#), [agenda and presentations](#) and the [main results](#).

In the workshop we also agreed to offer downloads

- of the [ERTMS Deployment Action Plan](#) published by the EU Commission (DG Move) on 14 November 2017.
- an explanation of ["ERTMS system version"](#).
- National Implementation Plans of the member states: [Webpage of DG Move](#)

Further documents and Information are available at the [ERTMS Webpage of the European Commission DG Move](#)

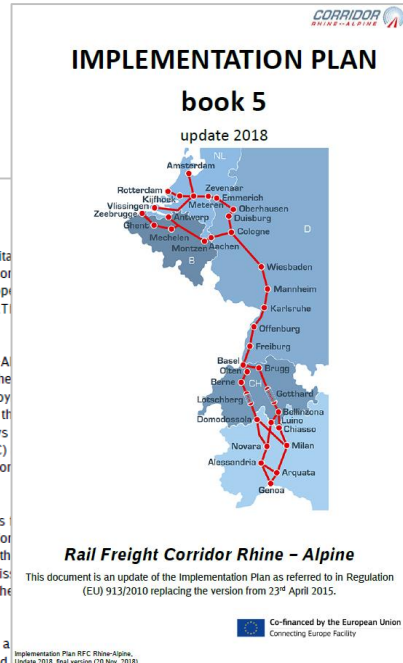
2018 Update of RFC Implementation Plan

Check Customer Information Platform:

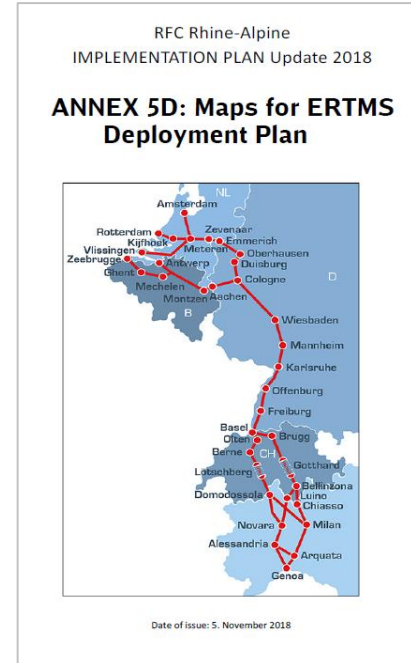


[https://cip.rne.eu/apex/f?p=212:65:":](https://cip.rne.eu/apex/f?p=212:65:)

# The 2018 implementation plan update includes dedicated information on the planned deployment



← Description



Maps →

### 6.3 Deployment plan (ERTMS)

**Introduction**  
In order to keep up with the substantial technical progress in the frame of digitalisation to prepare for the growing traffic demand and to offer the best quality for core freight services, the establishment of interoperability through a common European system is a paramount prerequisite. Subsequently, the implementation of ERTMS is a paramount prerequisite. Subsequently, the implementation of ERTMS is a paramount prerequisite. Subsequently, the implementation of ERTMS is a paramount prerequisite.

The following chapter describes the ERTMS Deployment plan of RFC Rhine-Alpine to Art. 11, 1(b) of the Regulation (EU) 913/2010. Legally the deployment by the along RFC Rhine-Alpine is based on the currently applicable European Deployment Plan (EDP) for the European Rail Traffic Management System which is included in the Implementing Regulation (EU) 2017/6 of 5 January 2017. This Regulation lays timetable for the deployment of ERTMS on the Core Network Corridors (CNC) Annex I schemes. In this context it has to be mentioned that the railway network CNCs and RFCs are not fully aligned.

Member States are also obliged to fulfil/implement the technical specifications for interoperability (TSI). Referring to section 7.4.4 of the annex to the Commission Decision 2016/919 on the "Control-Command and Signalling" subsystems (TSI CCS), they were asked to notify their national Implementation Plans (NIPs) to the Commission in 2017. The collection of the NIPs is published under the following address of the link to NIPs.

In addition to the EDP, on 14 November 2017 the EU Commission published a document on actions and associated objectives to achieve interoperability and deployment (Delivering an effective and interoperable European Rail Traffic Management System (ERTMS) - the way ahead) also known as ERTMS Deployment Action Plan. Therein it is specified that both, the CNC and RFC, which have as their constituent members certain of the addressed stakeholder groups (Ministries, NSAs and Infrastructure Managers), should also be used effectively to support ERTMS deployment.

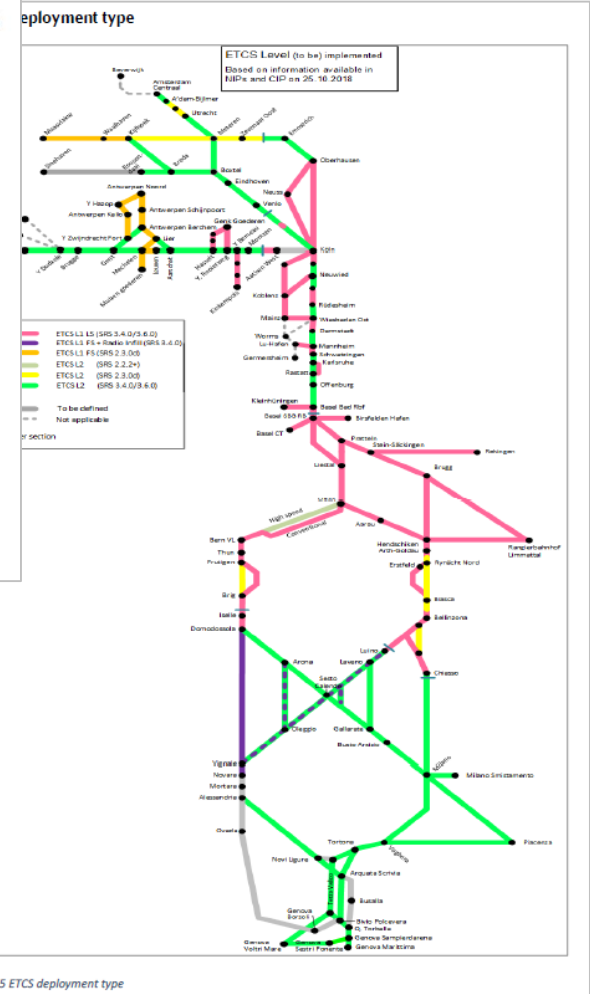
With the aim to develop rail freight on its lines, the RFCs defined their role during the consultation phase in a joint statement in September 2017 as follows:

- Be a dialog platform for all stakeholders
- Act as an alert maker & moderator for the issues raised by its stakeholders
- Act as a forum to address technical issues with impact on operations tackled by its stakeholders.

With this in mind RFC Rhine-Alpine initiated in November 2017 a workshop with RUs and other stakeholders. The main findings were:

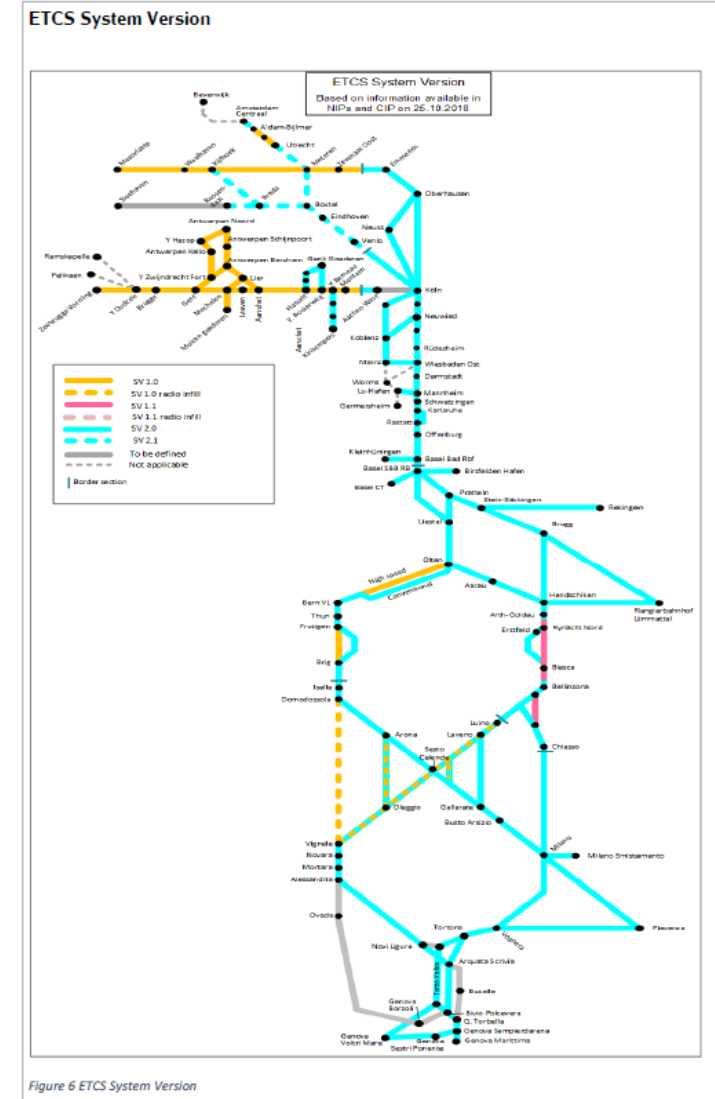
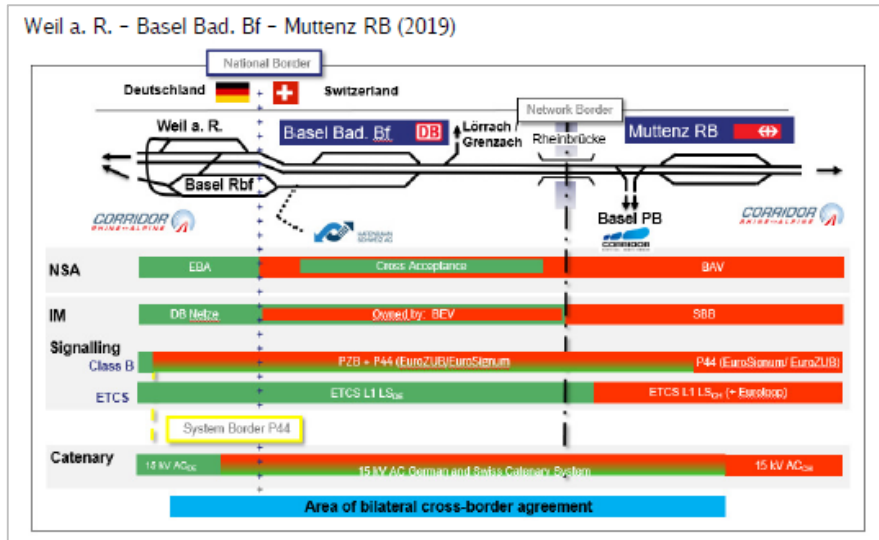
- Business cases for vehicle/On-Board Unit investments are mostly negative, especially for retrofitting
- The suppliers are often not able to deliver good affordable solutions for the retrofitting of On-Board Units (OBUs)

Implementation Plan RFC Rhine-Alpine, Update 2018, final version (20 Nov. 2018)



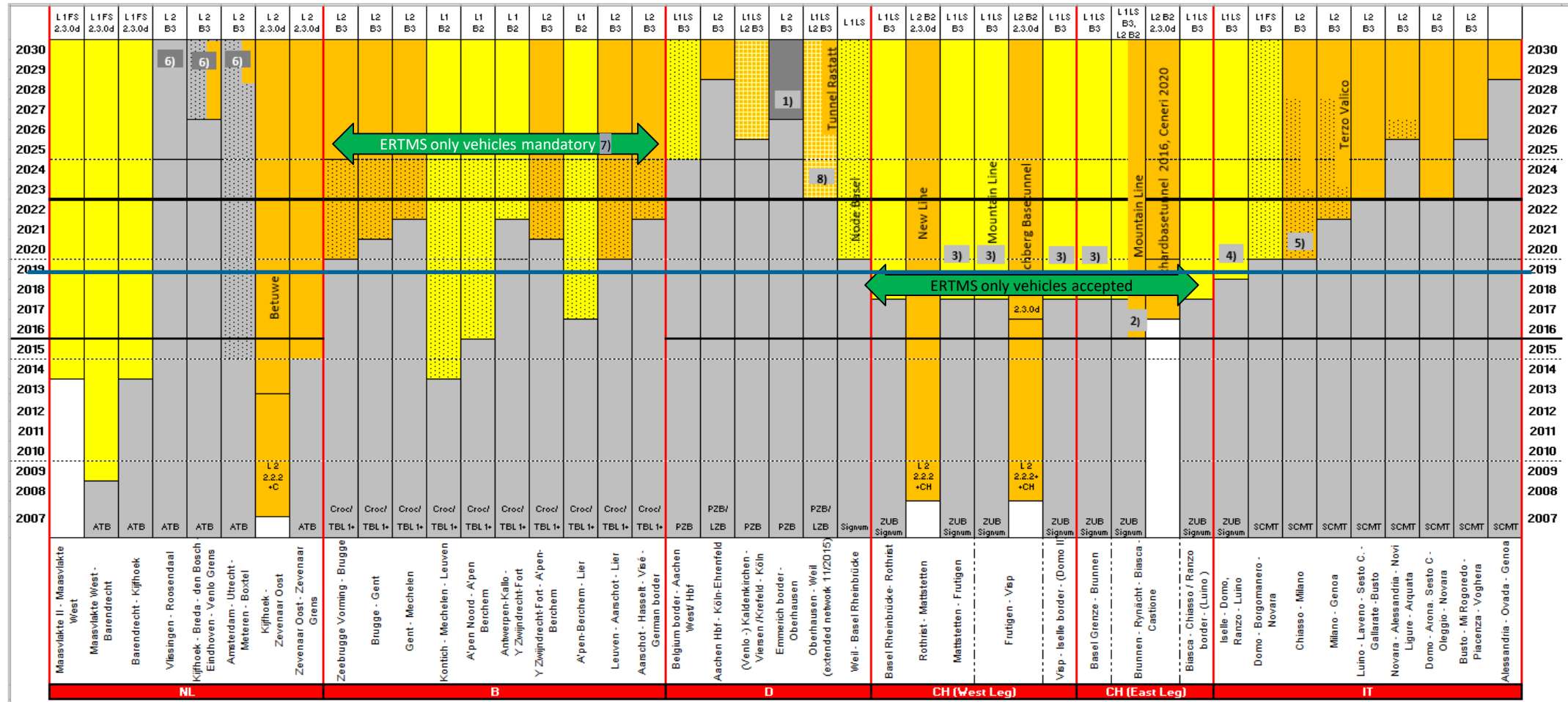
# Maps on ERMTS deployment

- ➔ ETCS installations progress going live until/in 2023
- ➔ ETCS implementation expected in 2028
- ➔ ETCS deployment type (SRS version)
- ➔ ETCS System Version
- ➔ ETCS deployment gap analysis
- ➔ Cross-border installations



# ERTMS deployment overview for RFC Rhine-Alpine

Status October 2019



ERTMS only vehicles mandatory 7)

ERTMS only vehicles accepted



- 1) Implementation of ETCS is connected with the realisation of 3rd track project. The building approval is not yet confirmed for the whole line.
- 2) The sections Brunnen-Rynächt (north access to Gotthard-Basetunnel and to the Gotthard mountain line) and Pollegio-Castione (south access to Gotthard-Basetunnel and to the Gotthard mountain line) are equipped with ETCS Level 2 since August 2015, resp. November 2015. Access to both sections is not possible without ETCS Level 2.
- 3) In Switzerland ETCS L1 LS includes Euro-Signum P44 and Euro-ZUB P44 for locos not equipped with B3 OBU
- 4) ETCS L1 LS<sub>+</sub> on Ranzo - Luino expected in 2019
- 5) Start of service with ERTMS via Monte Olimpino 2 within 2020, via Monte Olimpino in 2021
- 6) Amsterdam - Utrecht already equipped. Dutch ERTMS deployment programme decided in June 2019. Roosendaal - Breda - Eindhoven - Venlo 2026 - 2031, Utrecht - Meteren - Eindhoven 2028 - 2031, Node of Utrecht, Amsterdam Centraal and Roosendaal - Misingen tbd.
- 7) Date for ERTMS only vehicles mandatory by 16.12.2025 (decided by royal decree). Class B system and TBL 1+ will be removed
- 8) Depending on different implementation sections 2022 ff

# Essential data from RFC Rhine-Alpine regarding the requirement of B3 OBU



**ProRail**

Replacement of Class B (ATB) by ERTMS B3 L2 only. A programme for dedicated lines in the comprehensive network with international connections will start in 2026.

**INFRABEL**

The ETCS implementation programme is running (scheduled until 2022). Decommissioning the Class B is decided by Royal Decree. ETCS only operations are required from 16.12.2025 on.

**DB NETZE**

ETCS implementation is in progress (stepwise release from 2022 on, Basel area is already implemented). Decommissioning of the Class B is not decided at the moment. But: The Rastatt-tunnel will be an ETCS-only section (end of 2025)

**SBB CFF FFS  
bbs**

Network is fully equipped with ETCS. New locos have to be equipped with B3. Decommissioning of foreign Class B systems on border sections announced after 2023. However mandatory upgrade of existing L2 rolling stock is suspended after 2025 to include requirements from future radio system.

**RFI  
RETE FERROVIARIA ITALIANA  
GRUPPO FERROVIE DELLO STATO**

ETCS implementation is in progress. RFC lines are planned to be equipped with ERTMS until 2026 (border to Domodossola is already in service, Domo to Novara until the end of 2019). Decommissioning of the Class B is expected stepwise from 2022 to 2035. Radio-Infill is an additional mandatory feature in Italy.



**For implementations after 2025, greater frequency availability for GSM-R is a success factor**

# RFC Rhine-Alpine also deals with other topics/ challenges identified to work towards a mature ERTMS roll-out



**Cross-border installations**



**Radio strategy**



**Initiatives to harmonise key management and DMI language**



**Risk monitoring and mitigation (non-technical risks)**



**Exchange on new developments e. g.**

> ETCS performance analysis tools

> Dragging equipment detection

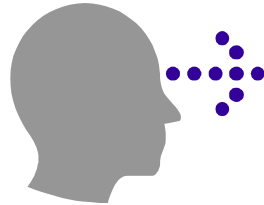


**Communication/ exchange with stakeholders**



# Conclusions

- ➔ ETCS deployment is proceeding on RFC Rhine-Alpine
- ➔ Cooperation of all stakeholders is necessary for mastering the remaining challenges
- ➔ Nevertheless, it's time to prepare rolling stock for B3 on-boards



**Thank you for your attention.**