

Brussels, 25 October 2018

Permanent Representation of the
Republic of Poland to the
European Union in Brussels

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Mr Matthew Baldwin
Deputy Director General
DG Mobility and Transport
European Commission

Dear Mr Baldwin,

Please find attached a letter (ref.: DTK.9.4600.16.2018.MS.1) dated 12 October 2018, from Mr Andrzej Bittel, Undersecretary of State in the Ministry of Infrastructure, concerning *Supplement to the National Implementation Plan for TSI Control-Command and Signalling* which complements *National Implementation Plan for TSI Control-Command and Signalling* published in June 2017 and provides a migration Schedule from VHF 150 analogue communication (B class system) to GSM-R digital communication.

Yours sincerely,

Sebastian Barkowski
Deputy Permanent Representative
of the Republic of Poland to the EU

MINISTER FOR INFRASTRUCTURE
DTK.9.4600.16.2018.MS.1

Warsaw, 12 October 2018

FAO:

Matthew Baldwin

Deputy Director-General DG MOVE

European Commission

Dear Mr Baldwin,

Please find enclosed the *Supplement to the National Implementation Plan for TSI Control-Command and Signalling*. This document supplements the *National Implementation Plan for TSI Control-Command and Signalling*, which was drawn up and published in June 2017 pursuant to Article 6(4) of Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the 'control-command and signalling' subsystems of the rail system in the European Union (OJ L 158, 15.6.2016, pp. 1-79).

The *Supplement* sets out the timetable for migrating the radio communication system from the VHF 150 MHz analogue communication system (Class B system) currently in use to the GSM-R system. One of the main reasons for issuing this Supplement is the need to develop a 'road map' for transport operators as regards the expected migration from the VHF 150 MHz analogue radio communication system to the GSM-R digital communication system.

I am confident that this Supplement will have a positive impact on the process of implementing the interoperability of the rail system in Poland.

For the
MINISTER FOR INFRASTRUCTURE
Andrzej Bittel
Deputy State Secretary

Annex:

Supplement to the National Implementation Plan for TSI Control-Command and Signalling

SUPPLEMENT TO THE NATIONAL IMPLEMENTATION PLAN FOR TSI CONTROL-COMMAND AND SIGNALLING

Ministry of Infrastructure

Republic of Poland

Warsaw, October 2018

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List of abbreviations

No	Abbreviations	Explanation
1.	VHF 150 MHz	The analogue radio communication system currently in use in Poland
2.	GSM-R	Global System for Mobile Communications-Railway
4.	ERTMS	European Rail Traffic Management System
5.	ETCS	European Train Control System
6.	EU	The European Union
7.	EC	European Commission
8.	MI	Ministry of Infrastructure
9.	MID	Ministry of Investment and Development
10.	CUPT	<i>Centrum Unijnych Projektów Transportowych</i> (Centre for EU Transport Projects)
11.	UTK	Rail Transport Office
12.	PKP PLK S.A.	PKP Polskie Linie Kolejowe S.A.
13.	CEF	Connecting Europe Facility
14.	KPWERTMS	National Implementation Plan for TSI Control-Command and Signalling, Ministry of Infrastructure and Construction, June 2017
15.	EMU	electrical multiple unit
16.	DMU	diesel multiple unit
17.	TEN-T	Trans-European transport network

1. Introduction

1.1. Background to and purpose of the Supplement

Pursuant to Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the 'control-command and signalling' subsystems of the rail system in the European Union (OJ L 158, 15.6.2016, pp. 1-79), GSM-R is the basic Class A communication system ensuring the interoperability of the rail system; together with the ETCS, it should be fitted on new and upgraded or renewed railway lines and on new and upgraded or renewed rail vehicles, in particular those co-financed by EU funds. Furthermore, according to Chapter 7.3 'TSI CCS' (Technical Specification for Interoperability for Control-Command and Signalling),¹ it is mandatory to install the GSM-R system in cases where the ETCS system is installed on account of the fact that, in addition to voice communication, GSM-R also ensures the transmission of vehicle data - the trackside systems on railway lines. That is also why applying the ETCS together with the GSM-R ensures full use of the GSM-R system's functionality and, furthermore, full interoperability of the rail system.

The main reason for producing this Supplement to the KPWERTMS is to provide rail-market actors with a specific 'road map' for the expected migration from the VHF 150 MHz analogue radio communication system to the GSM-R digital system. This road map should include official, transparent information on:

- the necessity of introducing the new system together with the reasons for doing so (including EU requirements concerning the introduction of the ERTMS on European railway lines and the need for the ETCS and GSM-R systems to work together in order to fully satisfy this requirement);
- the time limit for implementing this obligation for transport operators in Poland and the fixing of a time schedule indicating the end date for inclusion in the GSM-R system and for exclusion from the VHF 150 MHz system;
- the geographical scope in which the obligation to fit out traction units with on-board GSM-R equipment will be introduced.

A secondary reason for issuing this Supplement is the high priority that the European Commission gives to ERTMS activities and the reluctance of transport operators to equip their existing traction units with on-board GSM-R equipment. It is therefore appropriate to adopt measures to give EU financial support to transport operators in this respect. Such support may provide transport operators with the incentive they need to purchase vehicles fitted with on-board GSM-R equipment and to retrofit such equipment when upgrading and repairing existing vehicles. It is also a key element for achieving an efficient migration from VHF 150 MHz to GSM-R.

At the same time, Poland takes the view that, in principle, the best solution for ensuring the required level of rail traffic safety is to implement the full functionality of the ERTMS (ETCS + GSM-R) system. Poland will therefore strive to ensure that the entire TEN-T core network, as defined in Regulation No 1315/2013², is equipped in line with that Regulation with the full functionality of the ERTMS (ETCS + GSM-R) system by 2030.

In accordance with the TSI CCS, on-board ETCS Baseline 3 equipment must be installed on new rail vehicles placed in service for the first time after 1 January 2019. It is therefore necessary to lay down rules for the handling of newly built rail vehicles equipped with on-board ETCS Baseline 2 equipment, which are the subject of a contract at the time of adoption of this document.

1.2. Content of the Supplement

The Supplement specifies:

- the procedure for switching from the VHF 150 MHz system to the GSM-R system;
- the rules for fitting out traction vehicles with on-board GSM-R equipment;
- the possibility of financing the fitting-out of traction vehicles with on-board GSM-R equipment;
- provisions concerning newly built rail vehicles which are the subject of a contract at the time of adoption of this document.

¹ The TSI CCS is an annex to Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the 'control-command and signalling' subsystems of the rail system in the European Union (OJ L 158, 15.6.2016, pp. 1-79).

² Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013, pp. 1-128).

2. Migration strategy for the GSM-R subsystem

2.1. Trackside subsystem

Assumptions about the procedure for migrating to the GSM-R digital train communication system as regards trackside equipment:

1. On lines covered by the KPWERTMS, the plan as far as train communications are concerned is to use the GSM-R system, except for networks that are functionally separate from the rail system and to which the requirements concerning the interoperability of the rail system and shunting communications do not apply. The goal is to equip a total of around 15 300 km of railway lines with the GSM-R system (GSM-R network project together with other projects);
2. From 2018 to 2023, the VHF 150 MHz system will be used for transport purposes on the rail network managed by PKP PLK S.A., excluding the lines referred to in paragraph 3.
3. By 31 December 2018, PKP PLK S.A. is to select a section on one of the following railway lines equipped with the ETCS as part of investment projects under the 2007-2013 Financial Perspectives, i.e.:
 - the Bielawa Dolna-Opole section of the E 30 railway line;
 - the Kunowice-Terespol section of the E 20/C-E 20 railway line (excluding the Warsaw rail intersection);
 - the Warsaw-Gdynia section of the E 65/C-E 65 railway line;
 - the Warsaw-Łódź railway line.

On the selected section the GSM-R system will be operated under observation. PKP PLK S.A. will draw up a detailed schedule for the system's operation under observation on this section. The purpose of observing its operation is to gather experience which will serve to prepare for a smooth and safe migration from the VHF 150 MHz to the GSM-R system.

4. It is assumed that the 'Construction of ERTMS/GSM-R system infrastructure on PKP PLK S.A. railway lines under the KPWERTMS' project will be completed by 31 December 2023. This process will depend directly on how the project in question is progressing and, in particular, on the issuing by the President of the UTK of authorisations to operate the system.
5. The GSM-R will become fully operational during the period between January and December 2024 (this time limit does not apply to the system's operation under observation referred to in paragraph 3).
6. The migration from the VHF 150 MHz to the GSM-R system will be carried out following the 'Day Zero' approach, i.e. the whole of the network will migrate on the scheduled date during the period referred to in paragraph 5.
7. There is no plan for the VHF 150 MHz analogue radio communication system to operate in parallel with the GSM-R system on the rail network.
8. In line with the safety culture currently prevailing on the Polish rail network and in order to ensure an adequate safety system, Poland is planning to introduce a new area braking function, which is not a Class B system. Poland will hold discussions with the European Commission on this issue and will present technical details to show that implementing this function does not conflict with EU law and is not at odds with the TSI CCS.
9. The functionality referred to in paragraph 8 will not jeopardise the interoperability of the rail system.
10. By the end of 2019, the national rules on rail traffic management and signalling will include a rule whereby a train driver, upon receiving an alarm signal, is obliged to stop the train in a safe place.
11. For railway lines where no GSM-R is to be installed, it is planned to use GSM - GSM-R roaming in order to maintain communications;
12. By the end of 2021, PKP PLK S.A. will have signed the relevant agreements with operators on the use of GSM - GSM-R roaming. Starting from the beginning of 2019, PKP PLK S.A. will send six-monthly updates to the MI, MID, CUPT and the President of the UTK to keep them informed of the progress in this respect.
13. As shunting communications require large radio resources that exceed the capacity of the GSM-R system, they will continue (indefinitely) to use the VHF 150 MHz system currently in operation.
14. The VHF 150 MHz system will continue to be used (indefinitely) by infrastructure managers that have networks which are functionally separate from the rail system and to which the interoperability requirements for the rail

system do not apply.

2.2. On-board subsystem

According to UTK data, as at the end of 2017 the following are authorised to operate on the Polish rail network:

- 3 928 locomotives,
- 1 515 electrical and diesel mobile units and
- 1 773 special vehicles.

In total, there are 7 216 traction vehicles, of which currently 413 (locomotives, EMUs and DMUs) are equipped with a GSM-R radio, which represents slightly more than 5.7 % of all traction vehicles.

These data show that the process of equipping traction vehicles with the on-board GSM-R system needs to be speeded up. According to a survey conducted by the President of the UTK, transport operators have declared that a further 2 211 traction vehicles will be equipped with GSM-R, most of which will be upgraded vehicles (1 221 as compared with 990 new vehicles). In addition, they estimate that a total of 11 000 staff (mainly train managers and conductors) will need to be equipped with mobile GSM-R equipment.

In the light of the survey data, the President of the UTK estimated the total cost of equipping transport operators' vehicles and staff with GSM-R at around PLN 193 670 000. Close to 80 % of that total figure is made up of the costs related to vehicles: if the date of the migration to GSM-R is assumed to be 2024, transport operators would have to spend an average of PLN 44.37 million per year in order to adapt to the new requirements.

The following should therefore be assumed as regards the equipping of traction vehicles with the on-board GSM-R system:

1. As from 1 January 2019, all new traction vehicles (locomotives, EMU, DMU) and any traction units that are being upgraded or renewed must be equipped with the on-board GSM-R system.
2. On the section selected by PKP PLK S.A on which the operation of the GSM-R system will be observed, only vehicles equipped with GSM-R will be permitted to operate. PKP PLK S.A. will give transport operators at least six months' notice of the planned date for starting to operate the GSM-R system under observation.
3. By the time full migration to the GSM-R system (planned to take place between January and December 2024) has been completed, all other vehicles (with the exception of vehicles which run exclusively on lines on which GSM-R is not used) must have been equipped with GSM-R. Transport operators will be notified by PKP PLK S.A. at least six months in advance of the exact date of migration ('Day Zero').
4. As of the timetable for 2021/2022, the Rules of Procedure of the PKP PLK S.A. Network will give priority as regards train path allocation to trains equipped with both on-board ERTMS/ETCS equipment and GSM-R communication.

2.3. Funding

In view of the need to support transport operators during the process of installing on-board GSM-R communication equipment, measures will be taken to develop a model for funding this type of work.

A financial facilitation for transport operators to fit vehicles with on-board ETCS equipment appears to be necessary as part of EU funding in view of the high unit costs of the project. The full functionality of the communication system for the ERTMS will only be ensured once the equipment has been installed on all traction vehicles that run on railway lines equipped with the ETCS. At present, resources earmarked for the rail sector under the EU's 2014-2020 Financial Perspectives are mostly allocated to investment projects concerning infrastructure or rolling stock, but the necessary measures will be taken to provide additional sources of financing.

A model to support the financing of the installation of on-board GSM-R equipment will be developed by means of the following:

1. Financing of rail rolling-stock projects under the 2014-2020 Infrastructure and Environment Operational Programme.

The MID, together with the CUPT, will explore the possibility of organising a competitive procedure in order to address the

requirement of installing on-board GSM-R equipment - in the case of the installation on vehicles of the Level 1 ETCS which does not require data transmission. An appropriate aid programme will need to be drawn up and accepted by the European Commission by means of notification. The level of funding will not exceed 50 % of the total eligible expenditure.

2. Funding of projects under the CEF

CEF funding is granted through competitions organised by the European Commission, which are coordinated at national level by the MID.

The rules for applying, a detailed description of the support and the level of ERTMS funding will be specified in the calls for proposals published by the European Commission. The MID in conjunction with the CUPT and in consultation with the MI will support the entire process of selecting ERTMS proposals. It will examine the proposals from a formal and substantive point of view, including meeting the requirements of the competition and the project's financial and technical feasibility. In addition, the MID may support transport operators in the submission of a joint proposal by creating a project platform (i.e. a platform which supports, but does not create a theoretical model).

3. Financing from the post-2020 perspective

The Minister for Development will endeavour to ensure that appropriations can be provided for the period beyond 2020 so that it will be possible, using Cohesion Fund resources under the next financial perspectives, to carry out projects to equip vehicles with the GSM-R system. The relevant documents, guidelines and priority descriptions will be prepared for the next Operational Programme concerning infrastructure in time to be able to support transport operators directly from the start of the applicable perspectives, i.e. as of 2021. In this context, State aid issues should be considered and solutions (e.g. calls for proposals) need to be introduced which will reduce the likelihood of having to carry out lengthy administrative procedures.

Depending on the availability and volume of the funds that could be granted to support public funding for equipping rolling stock, such equipping should include both the GSM-R system and the ETCS Level 2 system.

3. Provisions concerning newly built rail vehicles which are the subject of a procurement contract at the time of adoption of this document.

Newly built rail vehicles which conform to the authorised type, are the subject of a procurement contract at the time of adoption of this document and are fitted with on-board ETCS equipment according to Specification No 1, as set out in Table 2.1. of Annex A to the TSI CCS (Baseline 2), may be placed in service after 1 January 2019.