Compendium

Brussels, 06 April 2023

Revision of the Train Drivers Directive – CER April 2023 Package

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Revision of the Train Drivers Directive

Summary

With this paper, the Community of European Railway and Infrastructure Companies (CER aisbl) provides support and guidance through a set of proposals, as well as background information for facilitating a sound revision of the Train Drivers Directive (TDD), with a specific focus on the following points:

- Certification scheme
- Digital Approach
- Communication regime
- Periodic checks
- Medical and psychological requirements

1. Certification scheme

Train Drivers Certificate – Structure	Training delivered by	Examination/ Assessment(s) carried out by
Modular train drivers certificate that paves the way to facilitate the movement of TD and will support the improvement of the position of the railways in the market by more efficiency. **The related certification process shall not incur additional costs of any sort for railway companies.**		
• **Constituent 1 as part of the licence / complementary certificates "European interoperability part"– All harmonised European elements of the Union's railway system (medical and psychological requirements, ERTMS (if available & needed)), harmonised European rolling stock (if available), Drivers category (A, B) Native language or similar language proficiency** ***(indicative & non exhaustive list)***	Person/ entity recognised by the NSA of any MS (cross acceptance)	Recognised person/entity by the NSA of any MS (cross acceptance)
Constituent 2 as part of the complementary certificate Professional knowledge of the driver's operation area, needed for the initial training of the train driver for his/her first job or complementary training to extend his/her competences : - **Knowledge of the infrastructure system (Operational principles, ATP-Systems, Principles of the "Signalling system")** - **Working**	Recognised person/entity by the NSA where the area(s) of operation is/are located	Recognised person/entity by the NSA where the area(s) of operation is/are located

language(s) for communication with the IM other than the one indicated in constituent 1. - ***(indicative & non exhaustive list)***		
• **Constituent 3 "Company part" as part of the complementary certificate in the responsibility of the RU in the framework of the competence management system (part of the SMS) supervised by the NSA: Company** - **internal processes linked to the SMS** **- Rolling Stock** **- Route knowledge** - **Route book** **Drivers category**	Initial training provided by the RU or IM who employs or contracts the driver -> Each RU and IM shall set up its own procedures for acquiring route knowledge, as part of its safety management system	Assessment carried out by the RU or IM who employs or contracts the driver -> Each RU and IM shall set up its own procedures for assessing route knowledge, as part of its safety management system

Provisions for driving without route knowledge (as a replacement of art. 4 (2)) – ADVICE ERA/ADV/2014-17 OF THE EUROPEAN RAILWAY AGENCY FOR EUROPEAN COMMISSION REGARDING REVISION OF THE TRAIN DRIVERS DIRECTIVE, 2014

1. The requirement to hold a certificate shall not apply for the purposes of training and examining drivers provided that another train driver who possesses a valid certificate for the infrastructure and rolling stock concerned accompanies the driver during driving. The train driver holding the valid certificate is the driver in charge of the train.
2. The requirement to hold a certificate for a specific part of infrastructure shall not apply provided that another train drive who possesses a valid certificate for the infrastructure concerned accompanies the driver during driving. Whenever an additional driver is used as provided for above, the train driver who possesses a valid certificate for the infrastructure concerned is the driver in charge.
3. Notwithstanding the provisions set out in paragraph 2 of this article, trains may be conducted by drivers without route knowledge, should the operational rules for the driver's operation area in question allow for this.
4. For the purpose of operating historical rolling stock, Member States may adopt provisions allowing that under defined conditions a train driver can be exempted from the obligation to hold a valid certification for the rolling stock concerned. Respective rules and procedures may be established in consultation with the infrastructure manager. These rules and procedures shall be implemented into the safety management system of the railway undertaking or infrastructure manger using the driver concerned. The combination with exemptions provided for in paragraph 2 shall be avoided outside subordinate parts of the route travelled.

2. Digital approach

CER supports **digital solutions and approaches** i.e. the entire certification process should be digitalised. **Functional** requirements for the digital approach should be prescribed but not the technology itself.

We support a **register** (e.g. **data warehouse**) for the train drivers "certificates" (as described in chapter 1 – Certification scheme) with access restricted to authorised users only, respecting EU regulation on data protection & cybersecurity (NIS)), which would **facilitate the NSA supervision tasks**.

3. Communication regime

3.1. Overall position

In the railway sector, safety is a very important factor. Sufficient language skills are elementary to ensure safety in regular, disruptive and emergency situations. Safe operations must also be guaranteed in interoperable traffic. Therefore, a corresponding standard of language and communication level in interoperable rail traffic must be ensured, taking into account the fact that this represents additional hurdles and high costs (financial and personnel-related) for the international railway sector and can be a disadvantage compared to other sectors.

CER believes in defining the following general requirement and two major exemptions:

General requirement

Language level "B1" for all traffic

Exemption

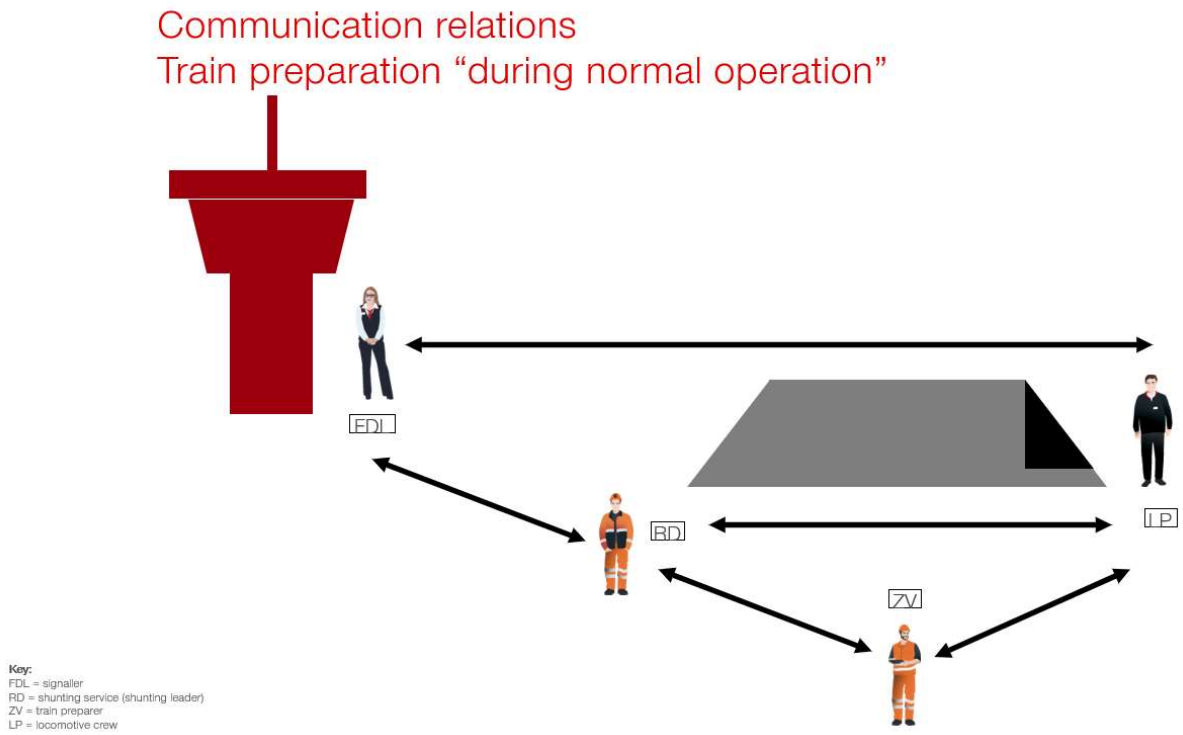
- Countries with more than one official EU language (domestic railway services): EU language level "A1+" (A1+ = A1 + railway-specific terminology (e.g. ERA glossary) and/or "supporting means")
- Border sections: The existing language regime continues to apply (based on bilateral state agreements or (mutual) NSA cross border agreements). If mutually agreed (in consultation with the relevant stakeholders in the railway sector), a lower language level together with railway-specific terminology (e.g. ERA glossary for railway vocabulary) and/or "supporting means" can be applied

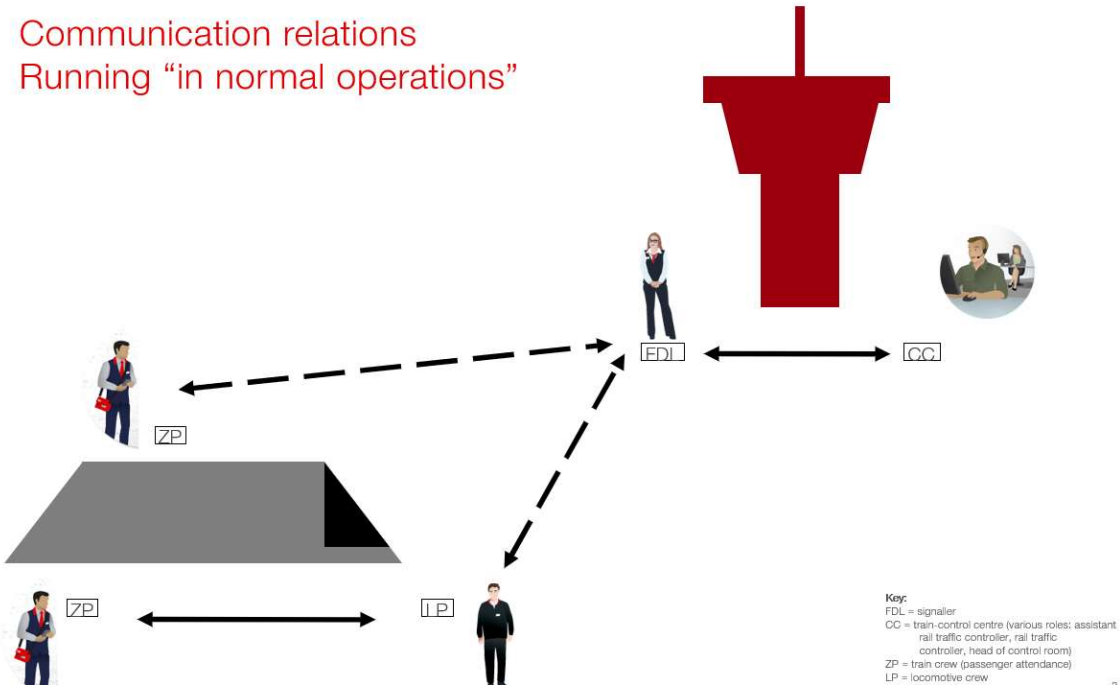
The language regime for operating units of infrastructure managers and yellow fleet operators TD (railway maintenance and emergency service vehicles for infrastructure) is to be defined in the SMS (safety authorisation and safety certification).

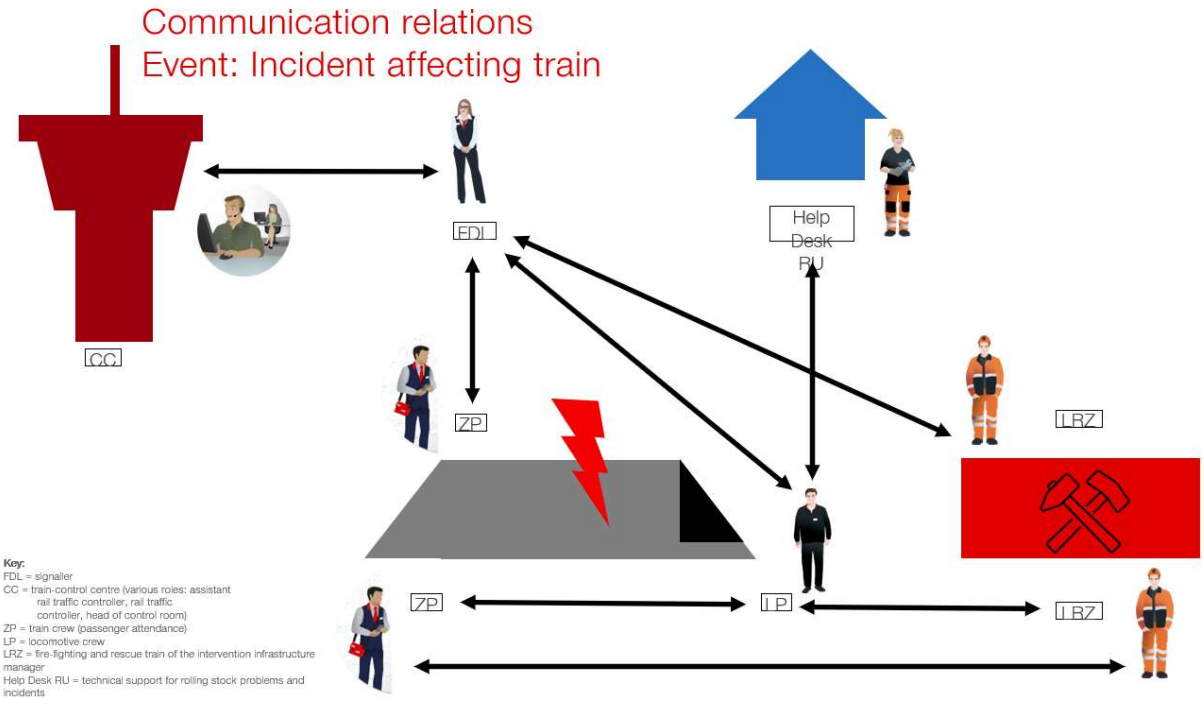
3.2. Communication in the railway sector

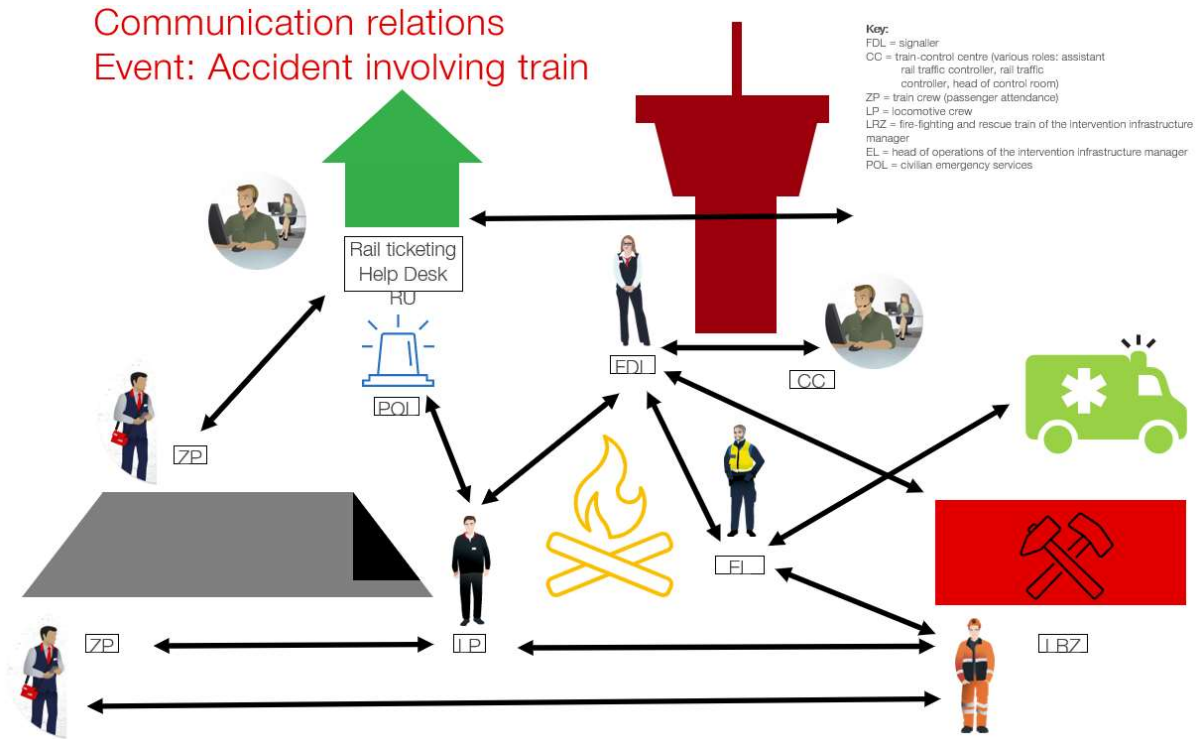
This chapter provides an overview about communication between the train driver and the ground staff from the infrastructure manager.

The diagrams show the employees involved, their functions and the communication relationships with each other. There are variations in this regard from country to country within the European Union (areas of operation) , but the basic principles of communication are essentially the same/similar






Communication relations
Event: Incident affecting train
FDL
Help Desk RU
CC
ZP
LRZ
ZP
LP
LRZ
Key:
FDL = signaller
CC = train-control centre (various roles: assistant rail traffic controller, rail traffic controller, head of control room)
ZP = train crew (passenger attendance)
LP = locomotive crew
LRZ = fire-fighting and rescue train of the intervention infrastructure manager
Help Desk RU = technical support for rolling stock problems and incidents


Communication relations
Event: Accident involving train
Key:
FDL = signaller
CC = train-control centre (various roles: assistant rail traffic controller, rail traffic controller, head of control room)
ZP = train crew (passenger attendance)
LP = locomotive crew
LRZ = fire-fighting and rescue train of the intervention infrastructure manager
EL = head of operations of the intervention infrastructure manager
POL = civilian emergency services
Rail ticketing Help Desk RU
FDL
CC
POL
ZP
EL
ZP
LP
LRZ

3.3. English proficiency RU/IM in the European railway sector

Country	Company	Number of train drivers	Source UIC[1]/ CER members	Number of train drivers speaking English proficiently	Number of IM staff speaking English proficiently
Austria	ÖBB	4903	ÖBB	4903 employees 33% with potential for speaking English proficiently[2]	25 in NTMC for international communication certified for railway English (Out of 2384 signallers) 5258 employees 27% with potential for speaking English proficiently
Belgium	NMBS/SNCB[3]	3000	NMBS/SNCB	no figures regarding knowledge of English	no figures regarding knowledge of English
Bulgaria	BDZ PP	821	UIC		
Bulgaria	BRC	59	UIC		
Croatia	HZ PASSENGER	591	UIC		
Denmark	DSB	1568	UIC	No data available[4]	n.a.
Finland	VR	950	VR	0 Language used in train traffic in Finland is Finnish. No other languages are used. English is not required from VR Group's train drivers as working language.	0 Language used in train traffic in Finland is Finnish. No other languages are used. English is not required as working language.
France	SNCF Group	15319	SNCF	none with an English certification[5]	n.a.
Germany	DB AG	24.000	Company	2%[6]	2%
Hungary	MAV	2533	UIC		
Italy	GRUPPO FS (Mercitalia + Trenitalia)	7456 (1510+5946)	GRUPPO FS	No data available[7]	No data available[7]
Latvia	LDZ	386	UIC		
Lithuania	LG	650	UIC		
Netherlands	NS	8136	UIC		
Poland	PKP	1477	UIC		

[1] https://uic-stats.uic.org/

[2] After teaching railway specific terminology in English

[3] 2250 train drivers out of 3000 have to be trained to fulfil and maintain the high language requirements of the train drivers directive in Dutch and in French for the means of domestic operations only. 65 are trained in German for Services to Aachen (A2 can be accepted) or to Frankfurt (B1).

[4] See info box: DSB

[5] For this RUs, some drivers might probably speak English but it is not something SNCF asks as for it is not necessary for their jobs

[6] Estimation

[7] See info box: GRUPPO FS

Poland	PKP PLK S.A.	911	Company		Not available[8]
Portugal	CP	761	UIC		
Slovakia	Železničná spoločnosť Slovensko	1221[9]	Company	2	n.a.
Slovakia	Železničná spoločnosť Cargo Slovakia	733	Company	Less than 5% of train drivers know enough English to be considered proficient[10]	The percentage is about the same for the rest of infrastructure employees.
Slovakia	ŽSR	0 Only OTM	Company	0	2011 0% speaking English
Slovenia	SZ	800	UIC		
Spain	FGC	478	UIC		
Spain	RENFE	5257	UIC		
Sweden	ASTOC– Association of Swedish Train Operating Companies	4600		Language used in train traffic in Sweden is Swedish. No other languages are used as working language.	Language used in train traffic in Sweden is Swedish. No other languages are used as working language.
Switzerland	SBB CFF FFS	4810	Company	0	0

Special comments

DSB

- The working language in Denmark for train drivers is Danish
- The working language across the Danish/German border is German in accordance to language level demands for cross border traffic
- The working language across the Danish/Swedish border is "Nordic" which basically means Danes speak Danish – if possible some Swedish -, swedes speak Swedish – if possible some Danish -, we do have a catalogue of phrases and words in order to support common understanding
- English is not a language required for working as a train driver in Denmark, neither for those in national operations nor for those train drivers in international operations. As such we do not have information in regards to our train drivers' English language competencies on register and we do not have any grounds to demand such information.

ZSSK Cargo

- The reasons for the percentages are probably the same as in many other countries, especially in Eastern Europe. Most of our current employees were educated in the Communist era, where English was not taught, so unless they went and found work in countries in Western Europe following the fall of Communism, they had little opportunity or reason to learn English. Even if they

[8] English is not required from our train drivers and the other employees working on the PLK tracks, we do not collect such information. Thus we cannot assume that the knowledge of English language is common among ou TDs.

[9] Mismatch between the UIC statistics (Railisa) and the figures provided by the CER members directly. In this case, CER used the CER members' figures

[10] See info box: ZSSK Cargo

worked in foreign countries it was usually as labourers, where they did not need to know a language to be able to fulfil their tasks and for most of them it was a long time ago, so their English knowledge is very weak now.

ŽSR

- **Total number of train drivers** in your company in 2021
- ŽSR: The ŽSR has no train drivers, therefore the number is zero. The ŽSR has only OTM (on track machines) drivers.

- 2. **Total number of train drivers in your company speaking English** as second language (proficient level for railway operations)
- ŽSR: The ŽSR has no train drivers, therefore the number is zero. No OTM drivers are speaking english as second language.

- **Total number of infrastructure personnel** (involved in operations e.g. signal box) **in your company speaking English** as second language (proficient level for railway operations)
- ŽSR: There was 2011 infrastructure employees (dispatcher etc.) in 2021 in the ŽSR. No one of them was speaking english as second language (proficient level for railway operations).

SBB

- The official languages of Switzerland are German, French and Italian. Our train drivers and operating staff are accordingly certified for these languages (reading, writing, understanding) - thus we ensure safe frictionless operation.
- English is not a national language. English is not a mandatory part of school education. Therefore, our train drivers and operations staff cannot have this language in a certified framework to ensure safe frictionless operations.
- Therefore: 0 train drivers and 0 operating staff

SNCF

- The official language of France and the railway operational language of France is French.
- The train drivers as well as the ground staff who interact with them have no English proficiency and are not recruited based on their ability to learn it. In addition, the staff's education level at the recruitment doesn't guarantee English proficiency.
- For the cross-border sections, the operational language is either French or the language of the neighbouring following bilateral agreements. When accurately applied, this system has proved to be very efficient both in terms of cost and of functioning.

NMBS/SNCB

- The national languages of Belgium are Dutch, French and German.
- The languages for safety communication with the IM are Dutch or French depending on the location of the signalling cabin. Only the signalling cabin of the Brussels area is bilingual.

- Based on today's legal provisions, unfortunately no derogations so far apply to the Belgian situation since language borders are no state borders although safety is less at risk : the train drivers only need to know the principles, regulations and provisions regarding rail operation in Belgium and the Belgian signalling and train control systems, also the communication forms with the infrastructure manager are bilingual (French and Dutch). Within SNCB 2250 train drivers out of 3000 have to be trained in Dutch or French to fulfil and maintain the high language requirements of the train drivers directive for the means of domestic operations only.
- English is not a language required for working as a train driver in Belgium (international trains included). As such we do not have information in regards to our train drivers' English language competencies on register and we do not have any grounds to demand such information.
- We have no reasons to believe that English will solve the problem of countries with several national languages.

ÖBB

- It has to be considered, even today at a border at least one of the signallers involved has to be bilingual for the safe operation of trains across the border (IM-IM communication) – independent if this signaller is located directly at the border station or in an OCC far away. Since decades RU/drivers are allowed to enter such stations with the relevant operational language.
- This is important for RUs, which business case „ends" at the border station by handing over their trains (with or without locomotive) to partners or which operate local/regional passenger traffic.
- Today such trains are the majority and allow in special passenger RU to provide a lot of local/regional services without additional language training for their drivers.
- If now EN would be the European wide „second" operational language, IMs would have to train also their signallers for border stations accordingly – and all RUs would be required to train their drivers, too – even for the short section only. This may have a strong impact on the business case of RUs, which do not have long-distance traffic in their planning.

GRUPPO FS

- The official language in Italy and the railway operational language is Italian.
- Nowadays, there is no available information on train drivers' and ground staff's English proficiency. Knowledge of English is not a mandatory requirement during recruitment. Furthermore, the level of education for staff recruitment does not guarantee knowledge of English.
- For cross-border sections, the operational language is established by bilateral agreements and selected among the official languages in the two neighbouring states.
- When accurately applied, this system has proved to be very efficient in terms of functioning.

3.4. Cost

Assumptions

- English as operational language (variation s in the assessed options)
- Language level B1 for all train drivers and infrastructure manager staff

The cost calculations can vary depending on the applied scenario

Results

Cost calculation (examples from some CER members)
The calculations are indicative and do not necessarily use the same method (hence the figures are not fully comparable) Nonetheless, the figures give a good indication about the cost dimension (**huge cost impact**) due to the introduction of English as operational language.

CER sees a major cost impact for the infrastructure manager – without a real benefit.

- **CH – Switzerland – SBB Passenger division**
  - In case of first operating language all 2.700 train drivers of the SBB passenger division needing English B1 level
  - Training time expected 60 days leading to 123 FTE p.a.
  - Total one time cost 160 Mil € (159 Mil CHF)
  - Annual refresh cost 5,9 Mil € (5,9 Mil CHF)

- **FR – France - SNCF**

In case of English as second operational language:

- Cost for the ground staff (at Group level):
  - Total number of ground staff: 10.400
  - Cost for English training: 450 hours x 78Euros = 35.100 Euros

  Total cost: 365.040.000 Euros

- Cost for train drivers (at group level)
  - Number of interoperable train drivers that are currently trained for a 2nd language (but not English): 1693
  - Cost for English training: 450 hours x 78Euros = 35.100 Euros

  Total cost: 59.424.300 Euros
- The cost of English as a second language for SNCF Group would reach 424.464.300 Euros

This calculation doesn'tinclude the following costs:

- Substitution cost for an employee who is following a training
- Potential pay rise of the employee(such as language bonus)
- Annual retraining cost (an employee that will not speak daily English will need to annual retraining sessions)

- Documentation to be translated in English
- Other staff that would be impacted on board and on the ground (rolling stockmaintenance staff, train stations' staff, staff managers, infrastructure train drivers, passenger train shunters...)

- **IT – Italy – GRUPPO FS**

In case of English as second operational language:

- Cost for the ground staff:
  - Total number of ground agents: 5000
  - Cost for English training: 5000 agents x 2000 Euros = 10.000.000 Euros

  Total cost: 10.000.000 Euros

- Cost for train drivers (Mercitalia)
  - Number of train drivers: 1510
  - Cost for English training: 1510 agents x 2000 Euros = 3.020.000 Euros

  Total cost: 3.020.000 Euros
- Cost for train drivers (Trenitalia)
  - Number of train drivers: 5946
  - Cost for English training: 5946 agents x 2000 Euros = 11.892.000 Euros
- Total cost: 11.892.000 Euros

- The cost of English as a second language for GRUPPO FS would reach 24.912.000 Euros

This calculation does not include the following costs:

- Substitution cost for an agent who is following a training
- Annual retraining cost (an agent that will not speak daily English will need to annual retraining sessions)
- Set of documents to be translated in English

Other staff engaged in on board and on the ground operations (maintenance staff, train stations' staff, staff managers, infrastructure train drivers, passenger train shunters...)

DE – Germany – Deutsche Bahn AG

- In case of first operating language English total staff training cost plus staff substituting: 1,3 billion €
  - Cost for training and pay rise of c. 20.000 train drivers 350 million €
  - Cost for training and pay rise of c. 17.000 signallers and operation control centre 245 million €
  - Cost for recruiting and training of substituting staff (to compensate the train driver attending training): 740 million €
- In case of English as second operating language

- Cost for training and pay rise of c. 2.900 train drivers 52 million €
- Cost for training and pay rise of c. 17.000 signallers and operation control centre 245 million €
- Cost for recruiting and training of substituting staff (to compensate the train driver attending training): 163 million €

General assumptions (by DB)

- 7y transition time (assumption basing on experience with implementation of EU legislation)
  - 14% of staff will be trained p.a. in the first training
  - All staff will spend 2 days p.a. to keep the level
  - Experts estimate that max 5% of staff can be taken out of daily operations for training purposes
- All train drivers and all signalers and operation control center included ***– minus some percent already capable of English level B1***
- ***Not included in the calculation, but in reality to be considered: Yellow and red fleet, workshops, onboard staff, admin and overhead etc.***
- Training duration and cost chosen on the basis of experience
  - 40 days are set for the first training
    - 40 – 60 days are assumed to reach B1 level from zero
    - 23 - 25 days would be assumed to reach B1 level from A2
  - 2 days are set p.a. for a refreshment training
    - Cost are assumed as 10% of the initial training cost
- 2026 costs have been inflated with 8% for the period with cost level 2022 counted to 2026
- Training cost contains
  - Seminar cost
  - Non-productive working time
- All trained staff will receive a small pay rise as the qualification profile was improved
  - 2% assumed from the point they successfully finish their training courses
- A fixed inflation of cost has been assumed over the 7y period
  - 3% assumed
- Necessary substitute FTE have been calculated
  - Professional training cost for FTE included
  - existing language skills B1 assumed, ***no language training cost for substitute FTE included, in reality they would need to come on top***
  - In the total cost overview FTE substitute figures are shown as a separate figure

Assumptions scenario 1, English as first operational language, 7y implementation period

- All staff needs to learn English

Scenario 1	English as first operational language								
Year #	1	2	3	4	5	6	7	Total	Year #
Year	2026	2027	2028	2029	2030	2031	2032		Year
Train Drivers who need to be trained	2.786	2.786	2.786	2.786	2.786	2.786	2.786	19.502	Train Drivers who need to be trained
Total training cost p.a.	15.044.400	20.747.041	23.995.107	27.178.350	30.375.957	33.588.359	36.816.001	**187.745.215**	**Total training cost p.a.**
Total staff cost rise for additional qualification	5.140.170	10.588.750	16.359.619	22.467.210	28.926.533	35.753.195	42.963.423	**162.198.900**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	71.704.275	73.855.403	76.071.065	78.353.197	80.703.793	83.124.907	85.618.654	**549.431.293**	**Staff cost substitute FTE**
Total cost train drivers with substitutes	129.916.144	105.191.195	116.425.791	127.998.757	140.006.283	152.466.461	165.398.077	937.402.707	Total cost train drivers with substitutes
Signallers - who need to be trained	2.240	2.240	2.240	2.240	2.240	2.240	2.240	15.680	Signallers - who need to be trained
Total training cost p.a.	12.096.000	14.226.707	16.474.371	18.628.768	20.844.568	23.073.855	25.315.395	**130.659.665**	**Total training cost p.a.**
Total staff cost rise for additional qualification	4.132.800	4.256.784	8.768.975	13.548.066	18.606.011	23.955.239	29.608.676	**102.876.552**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	17.699.090	18.230.062	18.776.964	19.340.273	19.920.481	20.518.096	21.133.639	**135.618.605**	**Staff cost substitute FTE**
Total cost train Signallers with substitutes	40.042.832	36.713.554	44.020.310	51.517.108	59.371.061	67.547.190	76.057.709	375.269.765	Total cost train Signallers with substitutes
Operations control center - who need to be trained	140	140	140	140	140	140	140	980	Operations control center - who need to be trained
Total training cost p.a.	756.000	903.874	934.746	962.789	991.672	1.021.423	1.052.065	**6.622.569**	**Total training cost p.a.**
Total staff cost rise for additional qualification	258.300	266.049	548.061	846.754	1.162.876	1.497.202	1.850.542	**6.429.785**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	1.507.945	1.553.183	1.599.779	1.647.772	1.697.205	1.748.121	1.800.565	**11.554.570**	**Staff cost substitute FTE**
Total cost train operations control center with substiti	2.522.245	2.723.106	3.082.586	3.457.315	3.851.753	4.266.746	4.703.172	24.606.924	Total cost train operations control center with substitutes
Total staff train drivers, signallers, occ trained	5166	5166	5166	5166	5166	5166	5166	36.162	Total staff train drivers, signallers, occ trained
Total training cost	27.896.400	35.877.623	41.404.224	46.769.907	52.212.197	57.683.637	63.183.461	**325.027.449**	Total training cost
Total Payrise cost	9.531.270	15.111.583	25.676.655	36.862.031	48.695.420	61.205.637	74.422.641	**271.505.237**	Total Payrise cost
Total Cost without FTE substitutes	37.427.670	50.989.206	67.080.879	83.631.938	100.907.617	118.889.274	137.606.102	596.532.686	Total Cost without FTE substitutes
Total cost FTE substitutes	135.563.129	93.638.648	96.447.808	99.341.242	102.321.479	105.391.124	108.552.858	**741.256.288**	Total cost FTE substitutes
Total cost including substitutes	172.990.799	144.627.855	163.528.687	182.973.180	203.229.097	224.280.397	246.158.959	1.337.788.974	Total cost including substitutes

Assumption scenario 2, English as second language, 7y implementation period

- All signalers and operations control center staff need to be capable of English level B1
- A select number of train drivers working cross border needs to be trained

Scenario 2	English as second operational language								
Year #	1	2	3	4	5	6	7	Total	Year #
Year	2026	2027	2028	2029	2030	2031	2032		Year
Train Drivers who need to be trained	416	416	416	416	416	416	416	2.915	Train Drivers who need to be trained
Total training cost p.a.	2.248.646	3.114.905	3.607.751	4.090.700	4.575.796	5.063.104	5.552.689	**28.253.591**	**Total training cost p.a.**
Total staff cost rise for additional qualification	768.288	1.582.672	2.445.229	3.358.114	4.323.572	5.343.935	6.421.628	**24.243.438**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	4.129.734	4.253.626	4.381.235	4.512.672	4.648.052	4.787.494	4.931.118	**31.643.931**	**Staff cost substitute FTE**
Total cost train drivers with substitutes	11.809.873	8.951.203	10.434.215	11.961.486	13.547.420	15.194.532	16.905.436	88.804.165	Total cost train drivers with substitutes
Signallers - who need to be trained	2.240	2.240	2.240	2.240	2.240	2.240	2.240	15.680	Signallers - who need to be trained
Total training cost p.a.	12.096.000	14.251.144	16.524.710	18.703.567	20.944.515	23.198.971	25.465.680	**131.184.587**	**Total training cost p.a.**
Total staff cost rise for additional qualification	4.132.800	4.256.784	8.768.975	13.548.066	18.606.011	23.955.239	29.608.676	**102.876.552**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	14.520.903	14.956.531	15.405.226	15.867.383	16.343.405	16.833.707	17.338.718	**111.265.873**	**Staff cost substitute FTE**
Total cost train Signallers with substitutes	35.766.599	33.464.459	40.698.912	48.119.016	55.893.930	63.987.917	72.413.075	350.343.909	Total cost train Signallers with substitutes
Operations control center - who need to be trained	140	140	140	140	140	140	140	980	Operations control center - who need to be trained
Total training cost p.a.	756.000	905.956	936.953	965.062	994.014	1.023.834	1.054.549	**6.636.368**	**Total training cost p.a.**
Total staff cost rise for additional qualification	258.300	266.049	548.061	846.754	1.162.876	1.497.202	1.850.542	**6.429.785**	**Total staff cost rise for additional qualification**
Staff cost substitute FTE	1.237.167	1.274.282	1.312.510	1.351.885	1.392.442	1.434.215	1.477.242	**9.479.742**	**Staff cost substitute FTE**
Total cost train operations control center with substitute	2.669.541	2.446.287	2.797.524	3.163.701	3.549.331	3.955.252	4.382.333	22.963.969	Total cost train operations control center with substitutes
Total staff train drivers, signallers, occ trained	2.796	2.796	2.796	2.796	2.796	2.796	2.796	19.575	Total staff train drivers, signallers, occ trained
Total training cost	15.100.646	18.272.005	21.069.415	23.759.329	26.514.324	29.285.909	32.072.919	**166.074.547**	Total training cost
Total Payrise cost	5.159.388	6.105.505	11.762.265	17.752.935	24.092.459	30.796.377	37.880.847	**133.549.774**	Total Payrise cost
Total Cost without FTE substitutes	20.260.034	24.377.510	32.831.679	41.512.263	50.606.783	60.082.286	69.953.765	299.624.321	Total Cost without FTE substitutes
Total cost FTE substitutes	29.985.979	20.484.438	21.098.971	21.731.940	22.383.899	23.055.416	23.747.078	**162.487.722**	Total cost FTE substitutes
Total cost including substitutes	50.246.013	44.861.948	53.930.651	63.244.204	72.990.682	83.137.701	93.700.843	462.112.042	Total cost including substitutes

3.5. Human and Organisational Factors

CER analysis of all hazards due the implementation of English as operational language and identification where the occurrence (number) of hazards increases.

Analysis of work tasks

Change: TDD - English as 2. language in railway operation

Index	Function	Work tasks [WORK PLACE] Tasks and work itself of the functions are identified which are affected by the change and have to be included in the hazard identification.	Work task is affected by change (x = yes)
1	Train Driver	Make shunting agreement with the signaller	x
2	Train Driver	Receive and understand disposition conversation regarding train sequence or driving / shunt routes	x
3	Train Driver	Receive, understand and repeat commands from the signaller	x
4	Train Driver	Send or receive and understand train preparation/finish message	x
5	Train Driver	Send train integrity/stop/boundary sign clearance message	x
6	Train Driver	Receive and understand messages in the event of operating deviations (e.g. infringement of the loading gauge, missing braked weight percentage).	x
7	Train Driver	Send message about applying sand until the train stops	x
8	Train Driver	Making or receiving and understanding emergency announcements	x
9	Train Driver	Send, receive and understand message about dangerous occurence not communicated by emergency stop order	x
10	Train Driver	Send or receive and understand reporting of (suspicion of) dangerous goods leakage	x
11	Signaller	Make shunting agreement with the train driver	x
12	Signaller	Conduct a disposition conversation with the train driver regarding train sequence or driving / shunt routes	x
13	Signaller	Give orders to train drivers and understand repetition	x
14	Signaller	Receive and understand train preparation/finish message	x
15	Signaller	Receive and understand train integrity/stop/boundary sign clearance message	x
16	Signaller	Send, receive and understand messages in the event of operating deviations (e.g. infringement of the loading gauge, missing braked weight percentage).	x
17	Signaller	Receive and understand message about applying sand until the train stops	x
18	Signaller	Making or receiving and understanding emergency announcements	x
19	Signaller	Transmit or receive and understand message about dangerous occurence not communicated by emergency stop order.	x
20	Signaller	Send or receive and understand reporting of (suspicion of) dangerous goods leakage	x

Hazard identification from HOF Train Driver

Change: **TDD language - dual language regime on the infrastructure**

	Performance Influencing Factors (PIF)	Justification of how the causal factors may be related to human error
Identified performance influencing factors (PIF) are summarised in the impact structure. The listed PIFs have an effect in all change-relevant tasks/activities and are used in their entirety for hazard identification.	**- Skills** **- Instructions**	Knowledge of the English language must either be newly acquired or extended in order to achieve or maintain the required level B1 (incl. railway terminology). Furthermore, the amendment requires that, in addition to the national language, all regulations, instructions and forms must also be available in the 2nd operating language and be able to be used by those involved. The fulfilment of the basic requirements for the 2nd operating language is necessary in order to be able to carry out the corresponding operational tasks: - shunting agreements, - dispatching discussions, - orders, - train preparation messages or train completion messages, - train integrity/stop/boundary sign clearance messages, - operational deviation, - sanding, - emergency announcements, - dangerous occurrences, - leakage of dangerous goods and - disruption of operations Lack of or insufficient language skills or rules / instructions not adapted to the English language may encourage human error. During a regular train run from point A to point B in high levels of automation (for instance with technical train-ready-message) oral communication might not be required or occur very infrequently. However if unexpectedly a degraded operation condition occurs or shunting is required, the need for oral communication abruptly arises. Due to the fact that the train driver may not have practiced his/her language skills during operation (for instance since it was not required) "skill degradation" may occur in the use of the second language and increase the probability of communication errors such as misunderstandings.
	- Communications **- Fatigue** **- Stress** **- Pressure** **- Awareness**	The application of English as the second working language in communication also changes the way in which the interlocutors understand each other and coordinate. However, the permanently increased attention and required concentration that can be expected as a result can tire the person performing the work or bring them to the edge of their mental capacity. In combination with the expected higher time requirement for communication between the train driver and the signaller (due to possible limited knowledge of the second operating language of at least one communication participant), the pressure on the train driver - not to make mistakes - can be increased in the aforementioned operational tasks. Erroneous actions cannot be disabled due to the higher mental workload. Carelessness, non-completion of tasks, lack of concentration or malfunctioning decision-making are to be expected as stress-related consequences. This also includes necessary adjustments to internal and external interfaces. Lack of or insufficient language skills or regulations / instructions / interfaces that are not adapted to the English language can promote human error. Furthermore, the fact of not being able to fully speak or understand the 2nd operating language may impair awareness of the situation. This can be associated with potential risks.
	Summarising evaluation	It is clear from the impact of the relevant PIFs that information can be misunderstood or transmitted incorrectly due to language deficits and that misunderstandings can arise as a result.

	Change-relevant task/activities Train Driver	Working failure failure types	Description of the expected failure sequence per failure type	Assessment of the failure sequence Hazard / Inhibition / Without Effect
Index 1	Make shunting agreement with the signaller	FALSE	Due to language deficits and the resulting misunderstandings, dangerous occurrences - even collisions - can occur. Existing barriers of the different operating systems in the member states of the EU must be taken into account in the risk management procedures to be carried out.	HAZARD
Index 2	Receive and understand disposition conversation regarding train sequence or driving / shunt routes	FALSE	Due to language deficits and the resulting misunderstandings, the planned operations may be misunderstood. As the journeys require further recordings of signal terms or of commands by the train driver, there is no immediate risk to life and limb. Delays in operation are possible.	INHIBITION
Index 3	Receive, understand and repeat commands from the signaller	FALSE	If one of the communication participants assigns a different meaning to a dictated or received term in a command than intended, incorrect actions can occur despite correct repetition. These can lead to dangerous occurrences - including train collisions.	HAZARD
Index 4	Send or receive and understand train preparation/finish message	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If a train is reported completed although it is still secured by a drag shoe, this can lead to a derailment at the frog of the next switch.	HAZARD
Index 5	Send train integrity/stop/boundary sign clearance message	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. As these messages are only relevant in shunting operations (German operating system) at low speeds, a possible danger to life and limb is considered to be low. However, minor damage to property may cause operational delays.	INHIBITION
Index 6	Receive and understand messages in the event of operating deviations (e.g. infringement of the loading gauge, missing braked weight percentage).	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. A driver has to be able to communicate a reduction of braking performance precisely, e.g. switching off brake(s) caused by defects, hot axle, open doors, a missing rear end signal, etc., to allow the signaller to give him clear instructions (speed limitation) to clear the line or to continue to a point, where a new train preparation/brake calculation can take place. If a misunderstanding occurs during this communication, the train may not reach the required braking performance to stop before an EoA/ stop signal. Background: Some European operating systems do not have fixed block sections. They can be varied by the signaller depending on the braking capacity of the convoys involved.	HAZARD
Index 7	Send message about applying sand until the train stops	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If this message is not correctly received by the signaller and the track vacancy message in the affected track section is sent via a track circuit, there is a risk that the track section will be indicated as vacant although there are still vehicles in it. Allowing a journey into this actually occupied track section can lead to a train collision (German operating system).	HAZARD

	Change-relevant task/activities Train Driver	Working failure failure types	Description of the expected failure sequence per failure type	Assessment of the failure sequence Hazard / Inhibition / Without Effect
Index 8	Making or receiving and understanding emergency announcements	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. The emergency announcement might be related to occurrences for which standard risk-controlling measures such as driving on sight are not sufficient to mitigate the risk transmitted orally by the train driver in addition to the acoustic signal. E.g. An information transmitted refers to a hazard with the train itself (freight train is derailed, fire in a freight train, etc.). In these cases, driving on sight might not be sufficient to mitigate the hazard, the driver must come to a safe stop to perform evacuation (e.g. in case of fire). He then needs specific information on how to proceed.	HAZARD
Index 9	Send, receive and understand message about dangerous occurence not communicated by emergency stop order	FALSE	As the subject of such a message is a dangerous occurence which does not directly endanger the railway traffic, the consequences outside the railway system are not assessed!	WITHOUT EFFECT
Index 10	Send or receive and understand reporting of (suspicion of) dangerous goods leakage	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If a wrong localisation of the leak is recorded, wrong conclusions are drawn and inappropriate measures (controlled evacuation, rescue, etc.) are taken.	HAZARD

Hazard identification from HOF Signaller

Change: **TDD language - dual language regime on the infrastructure**

	Performance Influencing Factors (PIF)	Justification of how the causal factors may be related to human error
Identified performance influencing factors (PIF) are summarised in the impact structure. The listed PIFs have an effect in all change-relevant tasks/activities and are used in their entirety for hazard identification.	**- Skills** **- Instructions** **- Contexts** **- Motivation** **- Involvement**	Knowledge of the English language must either be newly acquired or expanded in order to achieve or maintain the required level B1 (incl. railway terminology). Furthermore, due to the less frequent application of the 2nd operating language (lack of language practice) compared to the train driver, it is assumed that maintaining the qualification requires more time. Furthermore, the amendment requires that in addition to the national language, all regulations, instructions and forms must also be available in the 2nd operating language and can be applied by those involved. The fulfilment of the basic requirements for the 2nd operating language is necessary in order to be able to carry out the corresponding operational tasks: - shunting agreements, - dispatching discussions, - commands, - train preparation messages or train completion messages, - train integrity/stop/boundary sign clearance messages, - operational deviation, - sanding, - emergency announcements, - dangerous occurrences, - dangerous goods leakage and - disruption of operations This also includes necessary adjustments to internal and external interfaces. Lack of or insufficient language skills or regulations / instructions / interfaces focus areas not adapted to the English language can promote human error. This can be exacerbated by the fact that the additional language to be learned decreases the motivation of the person concerned in performing the task, as the foreign language is perceived as an additional burden. Furthermore, the amendment cannot disable the fact that the signaller's commitment to work decreases due to submitted legislation decisions to introduce the 2nd operating language English, and that this has a negative impact on performance.
	- Communications **- Stress** **- Pressure** **- Awareness**	The application of English as a second working language in communication also changes the way the interlocutors understand each other and coordinate. The sudden requirement to speak English can push the person performing the work to the edge of mental capacity. In combination with the expected need for more time for communication between the train driver and the signaller (due to possible limited knowledge of the second operating language of at least one of the communication participants), the pressure on the signaller - not to make mistakes - can be increased for a short time in individual operational situations. Erroneous actions This also includes necessary adjustments to internal and external interfaces. Missing or insufficient language skills or regulations / instructions / interfaces that are not adapted to the English language can promote human error. Furthermore, the fact of not being able to fully speak or understand the 2nd operating language may impair awareness of the situation. This can be associated with potential risks.
	Summarising evaluation	It is clear from the impact of the relevant PIFs that information can be misunderstood or transmitted incorrectly due to language deficits and that misunderstandings can arise as a result.

	Change-relevant task/activities	Working failure	Description of the expected failure sequence per failure type	Assessment of the failure sequence
	Signaler	failure types		Hazard / Inhibition / Without Effect
Index 11	Make shunting agreement with the train driver	FALSE	Due to language deficits and the resulting misunderstandings, dangerous occurrences - even collisions - can occur. Existing barriers of the different operating systems in the member states of the EU must be taken into account in the risk management procedures to be carried out.	HAZARD
Index 12	Conduct a disposition conversation with the train driver regarding train sequence or driving / shunt routes	FALSE	Due to language deficits and the resulting misunderstandings, the planned operations may be misunderstood. As the journeys require further recordings of signal terms or of commands by the train driver, there is no immediate risk to life and limb. Delays in operation are possible.	INHIBITION
Index 13	Give orders to train drivers and understand repetition	FALSE	If one of the communication participants assigns a different meaning to a dictated or received term in a command than intended, incorrect actions can occur despite correct repetition. These can lead to dangerous occurrences - including train collisions.	HAZARD
Index 14	Receive and understand train preparation/finish message	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If a train is reported completed although it is still secured by a drag shoe, this can lead to a derailment at the frog of the next switch.	HAZARD
Index 15	Receive and understand train integrity/stop/boundary sign clearance message	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. As these messages are only relevant in shunting operations (German operating system) at low speeds, a possible danger to life and limb is considered to be low. However, minor damage to property may cause operational delays.	INHIBITION
Index 16	Send, receive and understand messages in the event of operating deviations (e.g. infringement of the loading gauge, missing braked weight percentage).	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. A driver has to be able to communicate a reduction of braking performance precisely, e.g. switching off brake(s) caused by defects, hot axles, open doors, amissing rear end signal, etc., to allow the signaller to give him clear instructions (speed limitation) to clear the line or to continue to a point, where a new train preparation/brake calculation can take place. If a misunderstanding occurs during this communication, the train may not reach the required braking performance to stop before an EoA/ stop signal. Background: Some European operating systems do not have fixed block sections. They can be varied by the signaller depending on the braking capacity of the convoys involved.	HAZARD
Index 17	Receive and understand message about applying sand until the train stops	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If this message is not correctly received by the signaller and the track vacancy message in the affected track section is sent via a track circuit, there is a risk that the track section will be indicated as vacant although there are still vehicles in it. Allowing a journey into this actually occupied track section can lead to a train collision.	HAZARD

	Change-relevant task/activities	Working failure	Description of the expected failure sequence per failure type	Assessment of the failure sequence
	Signaler	failure types		Hazard / Inhibition / Without Effect
Index 18	Making or receiving and understanding emergency announcements	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. The emergency announcement might be related to occurrences for which standard risk-controlling measures such as driving on sight are not sufficient to mitigate the risk transmitted orally by the train driver in addition to the acoustic signal. E.g. An information transmitted refers to a hazard with the train itself (freight train is derailed, fire in a freight train, etc.). In these cases, driving on sight might not be sufficient to mitigate the hazard, the driver must come to a safe stop to perform evacuation (e.g. in case of fire). He then needs specific information on how to proceed.	HAZARD
Index 19	Transmit or receive and understand message about dangerous occurence not communicated by emergency stop order.	FALSE	As the subject of such a message is a dangerous occurence which does not directly endanger the railway traffic, the consequences outside the railway system are not assessed!	WITHOUT EFFECT
Index 20	Send or receive and understand reporting of (suspicion of) dangerous goods leakage	FALSE	Due to language deficits and the resulting misunderstandings, errors can occur in the transmission of information. If a wrong localisation of the leak is recorded, wrong conclusions are drawn and inappropriate measures (controlled evacuation, rescue, etc.) are taken.	HAZARD

3.6. Conclusion

Safe train operation on a country's network can only work if communication between drivers and traffic controllers, emergency services as well as other railway staff, works flawlessly, particularly in disrupted/emergency situations. The railway communication arrangements in place already ensure this essential requirement. The majority of passenger and freight transport, as well as maintenance and other activities, are undertaken at national level. Under these conditions, introducing a single or an additional common European language (i.e. English) would not bring any added value, but would instead constitute a massive disadvantage for the railway sector competing with other modes of transport. The switch to a single or an additional common language would affect train drivers, as well as all professional job profiles in railway undertakings and infrastructure managers, particularly those responsible for safety-related activities.

The introduction of such an additional hurdle requires a massive (re-)training of staff as well as a significant increase of training for service providers in the railway sector, and will further hinder a shift from road to rail.

Additionally, it cannot be ensured that the existing safety level can be maintained. We must emphasise that a multiple language regime at border stations has been working successfully for decades.

In order to define a future target system for railway communication, which takes into account all communications aspects and relations comprehensively, we recommend that a scientific study which looks into the communication needs of the railway sector incl. field tests/ pilots is carried out.

4. Periodic checks

TDD Article 16 (2)	CER proposal for amending article 16 (2)
Article 16 Periodic checks 2. In order for a certificate to remain valid, its holder shall undergo periodic ***examinations and/or tests*** relating to the requirements referred to in Articles 12 and 13. The frequency of those examinations and/or tests shall be determined by the railway undertaking or the infrastructure manager employing or contracting the driver in accordance with its own safety management system, and respect the minimum frequencies set out in Annex VII. For each of these ***checks the issuing body shall confirm by a statement on the certificate and in the register provided for in Article 22(2)(a) that the driver has met the requirements referred to in the first subparagraph of this paragraph.***	Article 16 Periodic checks 2. In order for a certificate to remain valid, its holder shall undergo periodic ***assessments*** relating to the requirements referred to in Articles 12 and 13. The ***conditions and*** the frequency of those assessments shall be determined by the railway undertaking or the infrastructure manager employing or contracting the driver in accordance with its own safety management system, and respect the minimum frequencies set out in Annex VII. ***The railway undertaking or the infrastructure manager employing or contracting the driver shall decide to conduct those assessments, in accordance with its own safety management system, through periodic assessments and/or continuous assessment and/or other means.*** For each of these ***assessments a digital registration is made in accordance with the SMS of the railway undertaking or the infrastructure manager.***

Proposal amendment Annex VII of the TDD

TDD Annex VII	CER proposal for amending Annex VII
Annex VII FREQUENCY OF ***EXAMINATIONS***	Annex VII FREQUENCY OF ***ASSESSMENTS***
The minimum frequency of the periodic ***checks*** shall be as follows:	The minimum frequency of the periodic ***assessments*** shall be as follows:
(a) linguistic knowledge (only for ***non-native speakers***): every three years or after any absence of more than one year;	(a) linguistic knowledge (only for ***the languages other than mentioned on the licence***): every three years or after any absence of more than one year;
(b) infrastructure knowledge (including route and operation rules knowledge): every three years or after any absence of more than one year on the relevant route;	(b) infrastructure knowledge (including route and operation rules knowledge): every three years or after any absence of more than one year on the relevant route;
(c) knowledge of rolling stock: every three years.	(c) knowledge of rolling stock: every three years.

Justification

CER fully acknowledges that assessments need to be carried out systematically and periodically. The periodic checks shall fit into the overall business process of the railway undertakings. Railway undertakings are capable to design a system for periodic checks that is more effective. For some RU's, conducting continuous assessment is the best option to detect promptly any need of knowledge update and therefore insure adequate level of safety.

Annex

See Annex I
Translation matrix

5. Medical and psychological requirements

5.1. CER proposal for the revision of the TDD Annex II (without TC – final version)

ANNEX II
MEDICAL REQUIREMENTS

1. GENERAL REQUIREMENTS
1.1. Drivers must not be suffering from any medical conditions or be taking any medication, drugs or substances which
are likely to cause:
— a sudden loss of consciousness,
— a reduction in attention or concentration,
— sudden incapacity,
— a loss of balance or coordination,
— significant limitation of mobility.
1.2. Vision
The following requirements as regards vision must be complied with:
— aided or unaided distance visual acuity: 1,0 binocular; minimum of 0,5 for the worse eye,
— maximum corrective lenses: hypermetropia + 5/myopia -8. Derogations are authorised in exceptional cases and after having obtained the opinion of an eye specialist. The medical doctor then takes the decision,
— near and intermediate vision: sufficient, whether aided or unaided,
— contact lenses and glasses are authorised when periodically checked by a specialist, a spare pair of glasses must be carried.
— normal colour vision: use of a recognised test, such as Ishihara, as well as another recognised test if required,
— field of vision (binocular): full,
— vision for both eyes: effective; not required when person has adequate adaptation and sufficient compensation
experience. Only in case he lost binocular vision after starting his job,
— binocular vision: existing,
— recognition of colour signals: the test shall be based on recognition of single colours and not on relative differences,
— sensitivity to contrasts: good,
— Potentially progressive eye diseases must be checked at regular intervals,
— lens implants, keratotomies and keratectomies are allowed only on condition that they are checked on a yearly basis or at intervals set by the medical doctor,
— unobtrusive glare sensation[11],
— coloured contact lenses, photochromatic lenses and optical aids which are supposed to compensate colour deficiency are not allowed. UV filter lenses are allowed.

[11] Guidance for the translation:
The German term "unauffälliges Blendungsempfinden" is the reference term
This equals = EN: « unobtrusive glare sensation »; FR: « faible sensibilité à l'éblouissement»

- Deviations from the above-listed requirements are permitted in justified exceptional cases and after obtaining an opinion from an ophthalmologist. The decision will then be taken by the medical doctor.

1.3. Hearing and speaking requirements

Sufficient hearing confirmed by an audiogram, i.e.:
— hearing good enough to hold a phone conversation and to be able to hear warning sounds and radio messages.
The following values should be taken as guidelines:
— the hearing deficiency must not be higher than 40 dB at 500 and 1 000 Hz,
— the hearing deficiency must not be higher than 45 dB at 2 000 Hz for the ear with the worst air conduction of sound,
— no anomaly of the vestibular system,
— no chronic speech disorder (given the necessity to exchange messages loudly and clearly),
— the use of hearing aids is allowed in special cases if they are checked annually or at the intervals specified by the medical doctor.

- Deviations from the above-listed specifications are permissible in exceptional cases and after obtaining an opinion from an otologist. The decision shall then be taken by the medical doctor.

1.4. Pregnancy

In the event of poor tolerance or a pathological condition, pregnancy must be considered to be a reason for the temporary
exclusion of drivers. Legal provisions protecting pregnant drivers must be applied.

2. MINIMUM CONTENT OF THE EXAMINATION BEFORE APPOINTMENT

2.1. Medical examinations:

— a general medical examination,
— examinations of sensory functions (vision, hearing, colour perception),
— blood or urine tests, testing among others for diabetes mellitus, insofar as they are necessary to judge the candidate's
physical aptitude,
— an Electro-Cardiogram (ECG) at rest,
— tests for psychotropic substances such as illicit drugs or psychotropic medication and the abuse of alcohol calling into question the fitness for the job,
The medical doctor can initiate an additional psychological examination in addition to point

2.2. Occupational psychological examinations

The purpose of the occupational psychological examinations is to assist in the appointment and management of staff.
In determining the content of the psychological evaluation, the examination must assess that the applicant driver has no established occupational psychological deficiencies, particularly in operational aptitudes or any relevant personality factor, which are likely to interfere with the safe exercise of the duties.

The psychological examination should at least take into account the following aspects:

- cognitive capability: attention and concentration; memory; perception; discernment;
- communication;
- psychomotor skills: reaction speed, hand coordination

3. PERIODIC EXAMINATIONS AFTER APPOINTMENT

3.1. Frequency

Medical examinations (physical fitness) must be taken at least every three years up to the age of 55, thereafter every year.

In addition to this frequency, the medical doctor accredited or recognised under Article 20 must increase the frequency of examinations if the health of the member of staff so requires.

Without prejudice to Article 16(1) an appropriate medical examination must be carried out when there is a reason to doubt that a holder of the licence or certificate no longer fulfils the medical requirements set out in section 1 of Annex II.

Physical fitness must be checked regularly and after any occupational accident or any period of absence following an accident involving persons. The medical doctor accredited or recognized in accordance with Article 20 can decide to carry out an additional appropriate medical examination and/or to initiate an additional psychological examination, particularly after a period of at least 30 days' sick leave. The concluding assessment of fitness shall be carried out by an accredited or recognised medical doctor in accordance with article 20.

The employer must ask the accredited or recognised medical doctor in accordance with article 20 to check the physical fitness of the driver if the employer had to withdraw the driver from service for safety reasons. According with art. 11 point 3 psychological assessments shall be performed where there is reasonable ground for doubting the psychological fitness of a train driver (for example if the train driver had to be relieved of his duties for safety reasons).

3.2. Minimum content of the periodic medical examination

If the driver complies with the criteria required for the examination which is carried out before appointment, the periodic
examinations must include as a minimum:
— a general medical examination,
— an examination of sensory functions (vision, hearing, colour perception),
— blood or urine tests to detect diabetes mellitus and other conditions as indicated by the clinical examination,
— tests for drugs where clinically indicated.
In addition, an ECG at rest is also required for train drivers over 40 years of age.

5.2. CER Support for translation

Indicative and not complete
Work in progress

EN baseline	ES	DE	FR	IT	HU	PL
binocular	binocular	binokular	Binoculaire	binoculare	szemüveg	widzenie obuoczne
a spare pair of glasses must be carried	Debiendo llevar consigo un par de gafas de recambio	eine Ersatzbrille muss mitgeführt werden	Une paire de lunettes de secours doit être disponible	deve essere disponibile un paio di lenti di ricambio	tartalék szemüvegrendelkezésre állásaszükséges	konieczność posiadania zapasowej pary okularów
field of vision (binocular)	campo de visión (binocular)	Gesichtsfeld (binokular)	Champ visuel (binoculaire)	campo visivo (BINOCULARE)	látótér (binokuláris)	pole widzenia (obuoczne)
binocular vision: existing,	visión binocular: existente,	Binokulares Sehvermögen: vorhanden	Vision binoculaire : existante	visione binoculare: presente	megfelelő térlátás	widzenie obuoczne: zachowane
Potentially progressive eye diseases must be checked at regular intervals	Las enfermedades oculares potencialmente degenerativas deben ser controladas regularmente	Potentiell fortschreitende Augenkrankheiten müssen in regelmäßigen Abständen überprüft werden	les maladies oculaires potentiellement évolutives doivent être vérifiées à intervalles réguliers	le patologie oculari potenzialmente evolutive debbono essere periodicamente verificate	A feltehetően rosszabbodással járó szembetegségek rendszeres kontrollja szükséges	Potencjalnie postępujące choroby oczu wymagają regularnych kontroli okulistycznych
unobtrusive glare sensation	Discreta sensibilidad al deslumbramiento	unauffälliges Blendungsempfinden	faible sensibilité à l'éblouissement	visione sufficiente dopo abbagliamento	zavaró tükröződés-érzés	oporność na olśnienie
optical aids which are supposed to compensate colour deficiency	Ayudas ópticas para la supuesta corrección de las deficiencias en la visión de los colores	optische Hilfsmittel zur vermeintlichen Korrektur von Farbsinnstörungen	Les dispositifs optiques supposés compenser le déficit de la vision des couleurs	dispositivi ottici che si ritiene possano compensare un difetto della percezione dei colori	optikai segédeszközök, melyek feltehetően kompenzálják a színtévesztést	pomoce optyczne kompensujące deficyt widzenia kolorów
Deviations from the above-listed requirements are permitted in justified exceptional cases and after obtaining an opinion from an ophthalmologist. The decision will then be taken by the medical doctor	Las desviaciones en los requisitos mencionados anteriormente estarán permitidas en situaciones excepcionales justificadas y después de haber obtenido el dictamen de un oftalmólogo. La decisión última corresponderá al médico.	Abweichungen von den oben genannten Anforderungen sind in begründeten Ausnahmefällen und nach Einholung einer Stellungnahme eines Augenarztes zulässig. Die Entscheidung wird dann von dem Arzt getroffen.	Des dérogations aux exigences ci-dessus sont autorisées dans des cas exceptionnels justifiés et après avis d'un ophtalmologiste. La prise de décision relève du médecin.	possono essere ammesse eccezioni al rispetto dei sovraelencati requisiti, in casi eccezionali e sulla base di un giustificato parere di un oculista. La decisione finale verrà in ogni caso presa dal medico accreditato o riconosciuto	A fenti követelményektől való eltérések szemész szakorvos véleménye alapján, kivételes esetekben lehetségesek. A döntést az alkalmasságot vizsgáló orvos hozza meg.	Odstępstwa od powyższych wymagań są dozwolone w wyjątkowych, uzasadnionych przypadkach, po uzyskaniu opinii lekarza okulisty. Ostateczną decyzję podejmuje lekarz medycyny pracy.
the use of hearing aids is allowed in special cases if they are checked annually or at the intervals specified by the medical doctor	El uso de prótesis auditivas está permitido en casos especiales si se realizan revisiones anuales o con la periodicidad especificada por el médico.	Die Verwendung von Hörhilfen ist in bestimmten Fällen zulässig, wenn sie jährlich oder in vom Arzt festgelegten regelmäßigen Abständen überprüft werden.	L'utilisation d'aides auditives est autorisée dans des cas particuliers sous réserve d'une vérification annuelle ou à intervalles précisés par le médecin.	è consentito l'utilizzo di protesi auricolari in casi particolari, purchè siano verificate annualmente o con la periodicità definita dal medico accreditato o riconosciuto	A hallókészülék használata kivételes esetekben megengedett, amenyiben az eszköz működését évente, vagy az orvos által előírt időközönként ellenőrzik.	używanie urządzeń poprawiających słuch jest dozwolone w wyjątkowych przypadkach, jeżeli kontrolowane są corocznie albo w terminach określonych przez lekarza uprawnionego
Deviations from the above-listed specifications are permissible in exceptional cases and after obtaining an opinion from an otologist. The decision shall then be taken by medical doctor.	Las desviaciones en los requisitos mencionados anteriormente estarán permitidas en situaciones excepcionales y después de haber obtenido el dictamen de un otorrinolaringólogo. La decisión última corresponderá al médico.	Abweichungen von den oben genannten Anforderungen sind in begründeten Ausnahmefällen und nach Einholung einer Stellungnahme eines Hals-Nasen-Ohren-Arztes zulässig. Die Entscheidung wird dann von dem Arzt getroffen.	Des dérogations aux caractéristiques ci-dessus sont autorisées dans des cas exceptionnels et après avis d'un oto-rhino-laryngologiste. La prise de décision relève du médecin.	possono essere ammesse eccezioni al rispetto dei sovraelencati requisiti, in casi eccezionali e sulla base di un giustificato parere di un otorinolaringoiatra. La decisione finale verrà in ogni caso presa dal medico accreditato o riconosciuto	A fenti feltételektől való eltérésekfül-orr-gégész szakorvosvéleménye alapján, kivételes esetekben lehetségesek. A döntést az alkalmasságot vizsgáló orvos hozza meg.	Odstępstwa od powyższych wymagań są dozwolone w uzasadnionych przypadkach, po uzyskaniu opinii lekarza laryngologa. Ostateczną decyzję podejmuje lekarz medycyny pracy.
The medical doctor can initiate an additional psychological examination in addition to point 2.2.	El médico puede iniciar una evaluación psicológica adicional a la prevista en el punto 2.2	Der Arzt kann bezugnehmend zu Punkt 2.2. eine weiterführende psychologische Untersuchung einleiten.	Le médecin peut demander un examen psychologique complémentaire à ceux prévus au point 2.2	il medico accreditato o riconosciuto può disporre una valutazione psicologica ulteriore rispetto a quella prevista al punto 2.2	Az orvos a 2.2-es pont értelmében kiegészítő pszichológiai vizsgálatot kezdeményezhet.	Lekarz medycyny pracy może skierować na dodatkowe badanie psychologiczne, zgodnie z pkt 2.2.
The psychological examination should at least take into account the following aspects:	La evaluación psicológica deberá tener en cuenta, al menos, los siguientes aspectos:	Die psychologische Untersuchung soll mindestens folgende Aspekte berücksichtigen:	L'examen psychologique doit tenir compte au moins des éléments suivants :	L'esame psicologico dovrebbe almeno tenerne conto dei seguenti aspetti:	A pszichológiai vizsgálatnak legalább a következő szempontokat kell figyelembe vennie:	Badanie psychologiczne powinno zakończyć się wydaniem:
discernment	capacidad de juicio	schussfolgerndes Denken	discernement	Capacità di giudizio	ítélőképesség	opinii psychologicznej
The medical doctor accredited or recognized in accordance with Article 20 can decide to carry out an additional appropriate medical examination and/or to initiate an additional psychological examination, particularly after a period of at least 30 days' sick leave.	El médico acreditado o reconocido según el Artículo 20 puede decidir llevar a cabo un reconocimiento médico adicional y/o iniciar una evaluación psicológica adicional, particularmente después de una baja por enfermedad de al menos 30 días.	Der nach Artikel 20 zugelassene oder anerkannte Arzt kann — insbesondere nach einer krankheitsbedingten Arbeitsunterbrechung von mindestens 30 Tagen — die Durchführung einer entsprechenden zusätzlichen ärztlichen Untersuchung und/oder die Einleitung einer zusätzlichen psychologischen Untersuchung beschließen.	Le médecin agréé ou reconnu conformément à l'article 20 peut décider la réalisation d'un examen médical approprié complémentaire et/ou de demander un examen psychologique complémentaire, notamment après une période d'absence d'au moins 30 jours pour cause de maladie	il medico accreditato o riconosciuto conformemente all'articolo 20 può decidere di disporre accertamenti medici ulteriori o di attivare una valutazione psicologica, in particolare in casi di assenza per malattia di durata superiore a 30 giorni	Az akkreditált vagy a 20. cikkely alapján elismert orvos dönthet úgy, hogy egyéb indokolt orvosi és/vagy pszichológiai vizsgálatot kezdeményez, különösen a 30 napnál hosszabb betegszabadságot követően.	Lekarz uprawniony zgodnie z Art. 20 może skierować na dodatkowe konsultacje lekarskie i/lub badanie psychologiczne, w szczególności po 30 dniach absencji chorobowej.
The concluding assessment of fitness shall be carried out by an accredited or recognised medical doctor in accordance with article 20.	La valoración final de la aptitud será realizada por un médico acreditado o reconocido según el Artículo 20.	Die abschließende Beurteilung der Eignung wird von dem nach Artikel 20 zugelassenen oder anerkannten Arzt vorgenommen.	l'évaluation finale de l'aptitude est effectuée par le médecin agréé ou reconnu conformément à l'article 20	Il giudizio di idoneità finale deve essere espresso da un medico accreditato o riconosciuto conformemente all'articolo 20	A záróvizsgálatot akkreditált vagy szakmailag elismert orvosnak kell elvégeznie a 20. Cikkely értelmében.	Orzeczenie o zdolności do pracy wydaje albo zatwierdza lekarz uprawniony zgodnie z Art. 20
According with art. 11 point 3 psychological assessments shall be performed where there is reasonable ground for doubting the psychological fitness of a train driver (for example if the train driver had to be relieved of his duties for safety reasons).	De acuerdo con el art. 11 punto 3, se realizará una evaluación psicológica cuando haya dudas razonables sobre la aptitud psicológica del maquinista (por ejemplo si el maquinista debería ser relevado de sus funciones por razones de seguridad)	Gemäß Artikel 11 Punkt 3 sollen psychologische Beurteilung durchgeführt werden, wenn begründete Zweifel an der psychologischen Eignung eines Triebfahrzeugführers vorliegen (z. B. wenn der Triebfahrzeugführer aus Sicherheitsgründen von seiner Tätigkeit entbunden werden muss).	Conformément à l'article 11.3 une évaluation psychologique doit être effectuée lorsqu'il existe un motif raisonnable de douter de l'aptitude psychologique d'un conducteur (par exemple si le conducteur a été relevé de ses fonctions pour des raisons de sécurité)	Ai sensi dell'art. 11 punto 3 le valutazioni psicologiche devono essere eseguite ove si presenti un ragionevole motivo per dubitare della idoneità psicologica di un macchinista (ad esempio se il macchinista deve essere sollevato dall'incarico per motivi di sicurezza)	A 11. Cikkely 3. pontja értelmében pszichológiai vizsgálatot kell végezni abban az esetben, ha a vasúti járművezető pszichológiai állapotával kapcsolatban reális és indokolható kételyek merülnek fel. (Például, ha a vasúti járművezetőt valamilyen biztonsági okból kellett felmenteni a munkavégzés alól)	Zgodnie z Art.11 pkt. 3 badanie psychologiczne powinno być przeprowadzone w przypadku podejrzenia obniżenia sprawności psychofizycznej u maszynisty (np. Jeśli maszynista został odsunięty od pełnienia obowiązków zawodowych ze względów bezpieczeństwa)

Annex I
Periodic checks
CER Translation support
Work in progress

EN	DE	FR	NL
Assessment: process that evaluates a person's fulfilment of the requirements of the certification scheme	**Bewertung:** Verfahren zur Bewertung der Erfüllung der Anforderungen des Zertifizierungssystems	**Evaluation:** processus permettant d'évaluer qu'une personne satisfait aux exigences du dispositif particulier de certification	**Evaluatie:** evaluatieproces dat beoordeelt of een persoon voldoet aan de vereisten van de certificeringsregeling
Competence: ability to apply knowledge and skills to achieve intended results	**Kompetenz:** Fähigkeit, Kenntnisse und Fähigkeiten anzuwenden, um die beabsichtigten Ergebnisse zu erzielen.	**Compétence:** aptitude à mettre en pratique des connaissances et un savoir-faire pour obtenir les résultats escomptés.	**Competentie:** vermogen om kennis en vaardigheden toe te passen om de beoogde resultaten te bereiken

ES	
Evaluación: Proceso que evalúa el cumplimiento de los requisitos de una persona con el esquema de certificación	proces oceny spełnienia wymagań ustalonych w ramach systemu certyfikacji
Competencia: Capacidad de aplicar el conocimiento y las habilidades para lograr los resultados previstos	zdolność do zastosowania wiedzy i umiejętności w celu osiągnięcia zamierzonych rezultatów

Translations of the Proposal amendment article 16 (2) of the TDD (DE, FR and NL)

- **DE-version**

Zur Aufrechterhaltung der Gültigkeit der Bescheinigung hat sich der Inhaber regelmäßigen Bewertungen der in den Artikeln 12 und 13 genannten Anforderungen zu unterziehen. Die Bedingungen und die Häufigkeit dieser Bewertungen ist vom Eisenbahnunternehmen oder vom Infrastrukturbetreiber, das bzw. der den Triebfahrzeugführer beschäftigt oder unter Vertrag genommen hat, gemäß seinem internen Sicherheitsmanagementsystem festzulegen, wobei die in Anhang VII vorgesehene Mindesthäufigkeit einzuhalten ist. Das Eisenbahnunternehmen oder der Infrastrukturbetreiber, das bzw. der den Triebfahrzeugführer beschäftigt oder unter Vertrag genommen hat, entscheidet, dass diese Bewertungen, entsprechend seinem internen Sicherheitsmanagementsystem durch regelmäßige Bewertungen und/oder durch kontinuierliche Bewertungen und/oder andere Mittel durchgeführt werden.

Bei jeder dieser Bewertungen wird eine digitale Registrierung in Übereinstimmung mit dem Sicherheitsmanagementsystem des Eisenbahnunternehmens oder des Infrastrukturbetreibers vorgenommen.

- **FR-version**

Afin qu'une attestation demeure valide, son titulaire se soumet à des évaluations périodiques portant sur les exigences énoncées aux articles 12 et 13. L'entreprise ferroviaire ou le gestionnaire de l'infrastructure qui emploie le conducteur ou qui a passé un contrat avec lui fixe les modalités et la fréquence de ces évaluations en fonction de son propre système de gestion de la sécurité, en respectant les périodicités minimales indiquées à l'annexe VII. L'entreprise ferroviaire ou le gestionnaire d'infrastructure qui emploie ou engage le conducteur décide de procéder à ces évaluations, conformément à son propre système de gestion de sécurité, par le biais d'évaluations périodiques et/ou d'une évaluation continue et/ou par d'autres moyens.

Pour chacune de ces évaluations, un enregistrement numérique est effectué conformément au système de gestion de sécurité de l'entreprise ferroviaire ou du

- **NL-version**

Teneinde zijn bevoegdheidsbewijs te kunnen behouden, onderwerpt de houder zich aan periodieke evaluaties om te beoordelen of de houder nog steeds aan de in de artikelen 12 en 13 genoemde eisen voldoet. De voorwaarden en frequentie van deze evaluaties worden bepaald door de spoorwegonderneming of de infrastructuurbeheerder die de treinbestuurder in dienst heeft of contracteert, in overeenstemming met het eigen veiligheidsbeheersysteem en met inachtneming van de in bijlage VII bepaalde minimumperioden. De spoorwegonderneming of de infrastructuurbeheerder die de treinbestuurder in dienst heeft of contracteert, besluit deze evaluaties overeenkomstig haar eigen veiligheidsbeheersysteem uit te voeren door middel van periodieke evaluaties en/of permanente evaluaties en/of andere middelen. Voor elk van deze evaluaties is een digitale registratie opgezet in overeenstemming met het veiligheidsbeheersysteem van de spoorwegonderneming of de infrastructuurbeheerder.

Translations of the proposal amendment Annex VII

FR

CER proposal for amending Annex VII (FR)
Annexe VII **FRÉQUENCE DES** *EVALUATIONS* **La fréquence minimale des** *évaluations* **est la suivante :** **a. connaissances linguistiques (***seulement pour les langues autres que celles indiquées sur la licence***):** **b. tous les trois ans ou après toute absence de plus d'un an ;** **b) connaissance de l'infrastructure (y compris des itinéraires et des règles d'exploitation) : tous les trois ans ou après toute absence de plus d'un an sur l'itinéraire concerné ;** **c) connaissance du matériel roulant : tous les trois ans.**

DE

CER proposal for amending Annex VII (DE)
ANHANG VII **HÄUFIGKEIT DER** *BEWERTUNGEN* **Bei regelmäßigen** *Bewertungen* **ist folgende Mindesthäufigkeit einzuhalten:** **c. Sprachkenntnisse (***nur für die Sprachen, die nicht auf der Fahrerlaubnis aufgeführt sind***): alle drei Jahre oder nach jeder Abwesenheit von mehr als einem Jahr;** **d. Infrastrukturkenntnisse (einschließlich Streckenkenntnis und Kenntnis der Betriebsvorschriften): alle drei Jahre und immer dann, wenn eine bestimmte Strecke länger l sein Jahr nicht befahren wurde;** **c) Fahrzeugkenntnisse : alle drei Jahre**