EUROPEAN UNION AGENCY FOR RAILWAYS

Making the railway system
work better for society.

Light Impact Assessment

4th Railway Package

Revision of LOC&PAS TSI and WAG TSI

Contents

1. Context and problem definition

1.1. Problem and problem drivers	One of the main objectives of the the 4th Railway Package (RP) is to increase the efficiency of the authorisation process of vehicles and to ensure transparency and non-discrimination of applicants in this process. There are two newly introduced elements in the Interoperability Directive 2016/797 (ID) impacting the existing TSIs: a) What changes of a subsystem require a new authorisation? Art. 4.3(h) of the ID requires the indication of the the provisions applicable to the existing subsystems and vehicles, in particular in the event of upgrading and renewal and, in such cases, the modification work which requires an application for a new authorisation b) After vehicle authorisation, how does the RU check the compatibility of the vehicle with a given route? Art. 4.3(i) of the ID requires the indication of: - the parameters of the vehicles and fixed subsystems to be checked by the railway undertaking and - the procedures to be applied to check those parameters after the delivery of the vehicle authorisation for placing on the market and before the first use of the vehicle, in order to ensure compatibility between vehicles and the routes on which they are to be operated. **Problem/need to be addressed**: The rolling stock related TSIs currently in force **do not contain the above mentioned elements** and therefore need to be revised in order to ensure compliance to the 4th RP requirements.
1.2. Main assumptions	1. In June 2012, the European Commission has commissioned an impact assessment in view of the preparation of the 4th RP , hereinafter referred to as the 4th RP IA[1]. Out of the five potential options evaluated in the 4th RP IA, option 4 “NSA and ERA share competencies” was recommended as yielding to the highest net benefits for the railway sector and was taken into account in the legal documents of the technical pillar of the 4th RP. The revision of the TSIs contributes to the net benefits calculated for this option. 2. The main aim of the revision is to ensure that the rolling stock related TSIs applied in the framework of vehicle authorisation are compatible with the provisions of the 4th RP. 3. The revisions do not introduce any changes concerning the technical content (e.g. modification of existing basic parameters, introduction of new basic parameters or closure of open points). For this reason the economic impacts of the revision concern efficiency gains within the authorisation process and during the later use of the vehicle.

[1] See https://ec.europa.eu/transport/sites/transport/files/modes/rail/doc/impact_assessment_recast.pdf

4. The newly introduced elements, in relation to Art. 4.3(i) of the ID are introduced in OPE TSI (section 4.2.2.5 and Appendix D1).

5. The newly introduced elements, in relation to Art. 4.3(h) of the ID, reflect best practice of NSAs when they evaluate changes, leading to the requirement of a new authorisation or not.

1.3. Stakeholders affected

Category of stakeholder	*Importance of the problem (*)*
National Safety Authorities	4 The new element in the TSIs related to changes (if or if not requiring a new authorisation) will have an impact on workload at NSA level, for vehicle authorisations. NSAs will likely adapt their internal processes related to vehicle authorisation and especially the notification of changes to a vehicle. NSAs are not impacted by the new element related to route compatibility
ERA	4 Similar as for NSAs
RUs	5 The introduction of Basic Design Characteristics will impact the operational costs related to the management of vehicle/ vehicle type changes during its lifecycle. The new element provides transparency and predictability in the authorisationand changes notification. The introduction of the route compatibility check will facilitate the management of the operational use of the vehicle. This new element will provide the RU with the means for performing the route compatibility checks.
IMs	3 The IM has to provide the necessary technical information of the infrastructure to the RU enabling him the route compatibility check. The IM (legally the Member State) already has to provide such information in RINF, according to the legal provisions in force. However the level of detail in RINF required after the new provisions, as well as its reliability, will increase.

	Entity managing changes (to vehicle/vehicle type) (e.g. suppliers of vehicles or RUs)	5 The new element in the TSI related to changes (if or if not requiring a new authorisation) will have a direct impact on vehicle life cycle costs especially the administrative costs for managing changes. It will provide transparency and predictability in the framework of authorisation/notification when managing changes.
	**) 1=low; 5=high*	
1.4. Evidence and magnitude of the problem	The evidence of the problem related to the inefficiency of the authorisation process was analysed in detail in the 4th RP impact assessment (see section 3 problem definition). The magnitude of the problem for all EU countries was not quantified but it is estimated to be an impact of several hundreds of millions EUR for the European railway sector.	
1.5. Baseline scenario	The baseline is similar to the one used in the 4th RP IA.	
1.6. Subsidiarity and proportionality	The activities related to the TSI revision are mandated to the Agency in the Delgated Act 2017/1474 of the European Commission. e.g. Art. 4 (5) LOC&PAS TSI or Art. 5 (6) WAG TSI *The TSI shall take into account changes in the procedure for placing mobile subsystems on the market,as provided for in Articles 20 to 26 of Directive (EU) 2016/797, including the checks before the first use of authorised vehicles mentioned in Articles 4(3)(i) and 23 of that Directive. (Route Compatibility Check)*	

2. Objectives

2.1. Strategic and specific objectives	**Strategic objective(s) of the Agency** with which this initiative is coherent. ☐ Europe becoming the world leader in railway safety ☐ Promoting rail transport to enhance its market share ☒ Improving the efficiency and coherence of the railway legal framework ☐ Optimizing the Agency's capabilities ☒ Transparency, monitoring and evaluation ☒ Improve economic efficiency and societal benefits in railways ☐ Fostering the Agency's reputation in the world The **specific objective** is to ensure the compliance of the rolling stock related TSIs with the provisions of the 4th RP and thus contribute to the objectives of the 4th RP (as quoted in the 4th RP IA), especially: • *Increase the efficiency of the vehicle authorisation and access granting processes (Specific Objective 1);* • *Ensure non-discrimination in the granting and recognition of, interoperability authorisations and in the granting of access to the rail network and services across the EU (Specific Objective 2).*
2.2. Link with Railway Indicators	Specific indicators are developed to measure the costs and time for vehicle authorisation.

3. Options

3.1. List of options	Baseline Option 1 – Revision of the LOC&PAS TSI and WAG TSI
3.2. Description of options	**Baseline** - corresponds to the Baseline of the 4th RP IA › No revision of the current vehicle related TSIs **Option 1** – revision of the LOC&PAS TSI and WAG TSI › Description, which changes to vehicles and vehicle types require additionnal approval (version or variant) › Description, which parameters have to be checked in the framework of the route compatibility check
3.3. Uncertainties/risks	1. Although the current modifications reflect current practice in EU Member States on how NSAs decide whether a change to a vehicle/vehicle type requires a new authorization/ERA TV update or not, there can be cases in certain Member States where vehicle changes requiring a new authorisation under the framework of the 4th RP which was not required under the framework of the 3rd RP (risk of additional administrative costs, risks of delays in the implementation of changes). These risks will be monitored during the implementation of the 4th RP. They can already be revealed during the learning cases of the Agency for vehicle authorisations. 2. The current wording of the revised TSI defines the threshold for any change impacting a TSI requirement triggering an update of ERATV or an authorisation. If only thresholds for authorisations are retained, this would lead to an additional, unforeseen impact to NSAs, RUs and entities managing the changes. This impact concerns administrative burdens related to the registering of the changes and management of ERATV (due to the very high volume of versions and additional delays). Moreover, the positive effect of transparency and predictability when managing a change explained in section 1.3 of this report would be compromised. 3. Concering Route Compatibility: The route compatibility check might be delayed in case the concerned IMs fail to deliver relevant infrastructure information. The route compatibility might result in too strict compatibility checks especially if the IM provides too conservative infrastructure information. In this case the RU and IM need specific dialogue procedures to assess and find out solution for non-compatibilites 4. Additional complex checks for specific parameters might still be necessary after authorisation but before the use of the vehicle – especially where Member States, or even the IM, impose complex rules in the framework of the route compatibility check (e.g. dynamic compatibility check between traffic loads and load carrying capacity of bridges). The consequence might be, that a vehicle is not usable for a RU although it is already authorised. These risks were not quantified in the 4th RP IA.

	5. The estimation of benefits of the 4th RP as stated in the 4th RP IA was based on stakeholders' opinion survey and was performed in 2012. More updated evidence is not yet available.

4. Impacts of the options

4.1. Impacts of the options (qualitative analysis)

Baseline was not included in the analysis because it is not legally compliant with the provisions of the Agency Regulation and the Interoperability Directive in force.

Category of stakeholder		*Option 1*
Entity managing changes	Positive impacts	Time and cost savings concerning the management of changes to an existing vehicle or to a vehicle type. Better planning predictibility for the management of changes.
	Negative impacts	N/A
NSAs	Positive impacts	In the context of their prerogatives for VA, NSAs can focus their available work capacity to vehicle/ vehicle type changes which are considered to be critical/complex.
	Negative impacts	One Off Costs to adapt internal processes related to notification of vehicle changes, authorization of vehicles. Specific supervision activities might be needed with the focus how the RU managed or manages changes to the vehicle/ vehicle type (which did not require an authorisation).
RUs	Positive impacts	Reduced costs for vehicle/ vehicle type management (e.g. in terms of vehicle change management and management of its operational use)
	Negative Impacts	Increase of costs of processes related to network access, as the RU is in charge of the compatibility check of the vehicle with a given route
IMs	Positive impacts	Reduced operating costs of processes related to network access, as the RU is in charge of the compatibility check of the vehicle with a given route
	Negative Impacts	Increase in costs to keep up to date the relevant information for the route compatibility check.
Agency	Positive impacts	As for NSAs, but corresponding to its VA prerogatives.
	Negative impacts	N/A
Overall assessment *(input for section 5.1)*	Positive impacts	Additional time and cost savings for the entity managing changes due to an increase in the efficiency of the authorisation process.
	Negative impacts	Very limited

4.2. Impacts of the options (quantitative analysis)

Category of stakeholder		*Option 1*
RUs, Suppliers	Benefits (euro)	535 M€ (1)
	Costs (euro)	N/A
NSAs	Benefits	N/A
	Costs (euro)	28 M€ (2)
Agency	Benefits (euro)	N/A
	Costs (euro)	N/A
Overall	Benefits (euro)	507 M€
	Costs (euro)	

All costs/benefits are cumulated for the 2015-2025 period.

(1) Based on 4th RP IA: net benefits from authorization, certification and opportunity costs savings. It takes into account all activities in the framework of the 4th RP.

Both revisions (WAG TSI and LOC&PAS TSI) contribute to these benefits, however, the extent of the contribution cannot be quantified.

(2) Based on 4th RP IA: costs represent revenue losses from authorization fees.

Overall resulting figures:

CBA	Option 1
NPV	507 M€
B/C ratio	>1

5. Comparison of options and preferred option

5.1. Effectiveness criterion (options' response to specific objectives)	The proposed option **meets all specific objectives**. Comparison not applicable as only one option was proposed and the baseline is not legally compliant with the 4th RP in force.
5.2. Efficiency (NPV and B/C ratio) criterion	The proposed option retrieves **positive NPV (~ 507 M€) and B/C ratio >1** The NPV is linked to the implementation of the complete 4th RP, of which the revision of the LOC&PAS and WAG TSIs makes an integral part. Comparison not applicable as only one option was proposed and the baseline is not legally compliant with the 4th RP in force.
5.3. Summary of the comparison	N/A as there is only one option.

5.4. Preferred option(s)	The proposed option is recommended in terms of both effectiveness and efficiency. There is no alternative proposal concerning the implementation of the 4th RP.
5.5. Further work required	The risks mentioned under section of 3.3 have to be closely monitored once the 4th RP is transposed and the revised TSIs are applied , in particular to detect any potential negative economic impacts.

6. Monitoring and evaluation

6.1. Monitoring indicators	Costs related to the management of changes to vehicle types. (for different types of vehicles e.g. EMU, wagon, locomotive)
6.2. Future evaluations	N/A