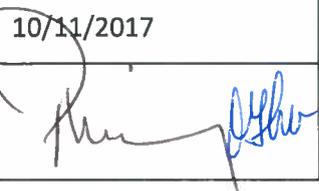
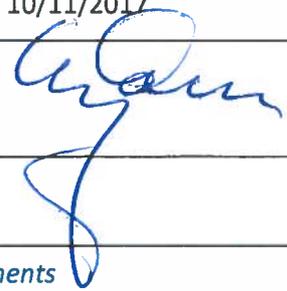


Making the railway system
work better for society.

Light Impact Assessment

Revision of the LOC&PAS TSI

	<i>Elaborated by</i>	<i>Validated by</i>	<i>Approved by</i>
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Document History

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1.0	09/11/2017	Final draft – after internal review

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1. Context and problem definition

<p>1.1. Problem and problem drivers</p>	<p>The current provisions of LOC&PAS TSI trigger a persisting number of vehicle related national technical rules arising from:</p> <ol style="list-style-type: none"> 1. non-harmonized requirements for on-board energy meter systems 2. thermal incompatibility of Eddy Current Braking Systems with existing infrastructure 3. missing requirements for ballast pick up at LOC&PAS side <p>Note: The problem 1 is addressed in the amendment of the ENE TSI as well (ERA-REC-114), the problems 2 and 3 are addressed in the amendment of the INF TSI (ERA-REC-127) as well. For both amendments, a specific LIA was already performed.</p>																
<p>1.2. Main assumptions</p>	<p>N/A</p>																
<p>1.3. Stakeholders affected</p>	<p>For Problem 1 Non harmonized requirements for energy meter systems</p> <table border="1" data-bbox="560 943 1418 1160"> <thead> <tr> <th><i>Category of stakeholder</i></th> <th><i>Importance of the problem</i></th> </tr> </thead> <tbody> <tr> <td>RU</td> <td>3</td> </tr> <tr> <td>Suppliers</td> <td>2</td> </tr> <tr> <td>IM</td> <td>2</td> </tr> </tbody> </table> <p>For Problem 2 Thermal incompatibility of Eddy Current Braking System with existing infrastructure</p> <table border="1" data-bbox="560 1285 1418 1917"> <thead> <tr> <th><i>Category of stakeholder</i></th> <th><i>Importance of the problem</i></th> </tr> </thead> <tbody> <tr> <td>Infrastructure Managers</td> <td>0 – related to LOC&PAS TSI 4 – related to INF TSI There is a risk for additional cost for the construction of new or upgraded lines if harmonized parameters would be defined in the INF TSI ensuring compatibility with Eddy Current Braking Systems.</td> </tr> <tr> <td>Suppliers</td> <td>4 Lack of national rules can lead to delays of the authorization of vehicles.</td> </tr> <tr> <td>Railway Undertaking</td> <td>1 RUs are not directly impacted. They need information where they can operate vehicles with Eddy Current brakes</td> </tr> </tbody> </table>	<i>Category of stakeholder</i>	<i>Importance of the problem</i>	RU	3	Suppliers	2	IM	2	<i>Category of stakeholder</i>	<i>Importance of the problem</i>	Infrastructure Managers	0 – related to LOC&PAS TSI 4 – related to INF TSI There is a risk for additional cost for the construction of new or upgraded lines if harmonized parameters would be defined in the INF TSI ensuring compatibility with Eddy Current Braking Systems.	Suppliers	4 Lack of national rules can lead to delays of the authorization of vehicles.	Railway Undertaking	1 RUs are not directly impacted. They need information where they can operate vehicles with Eddy Current brakes
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	<p>For Problem 3 Missing requirements for ballast pick up</p> <table border="1" data-bbox="552 331 1415 810"> <thead> <tr> <th data-bbox="552 331 896 385"><i>Category of stakeholder</i></th> <th data-bbox="903 331 1415 385"><i>Importance of the problem</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="552 394 896 533">Infrastructure Managers</td> <td data-bbox="903 394 1415 533">3 The infrastructure (ballast bed) is compatible with a limited set of HS trains</td> </tr> <tr> <td data-bbox="552 542 896 680">Vehicle Manufactures</td> <td data-bbox="903 542 1415 680">4 Vehicle Suppliers need to adapt high speed trains depending on different requirements related to ballast pick up.</td> </tr> <tr> <td data-bbox="552 689 896 810">Railway Undertaking</td> <td data-bbox="903 689 1415 810">4 RUs can currently operate on a limited number of HS trains due to different ballast pick up requirements.</td> </tr> </tbody> </table>	<i>Category of stakeholder</i>	<i>Importance of the problem</i>	Infrastructure Managers	3 The infrastructure (ballast bed) is compatible with a limited set of HS trains	Vehicle Manufactures	4 Vehicle Suppliers need to adapt high speed trains depending on different requirements related to ballast pick up.	Railway Undertaking	4 RUs can currently operate on a limited number of HS trains due to different ballast pick up requirements.
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Vehicle Manufactures	4 Vehicle Suppliers need to adapt high speed trains depending on different requirements related to ballast pick up.								
Railway Undertaking	4 RUs can currently operate on a limited number of HS trains due to different ballast pick up requirements.								
<p>1.4. Evidence and magnitude of the problem</p>	<p>Evidence was provided by the experts in the LOC&PAS WP, INF TSI WP and ENE TSI (for LOC&PAS TSI see report to ERA-REC-120-1 of the Agency related to this amendment).</p>								
<p>1.5. Baseline scenario</p>	<p>If no action is taken, the provisions from the LOC&PAS TSI in force (2014) apply.</p> <p>These would have the following main negative consequences:</p> <ul style="list-style-type: none"> - due to non-harmonized requirements for on-board energy meter systems, these systems cannot be used in different Member States - The lack of national rules for ensuring compatibility of Eddy Current Braking Systems with existing infrastructure causes delays in the authorization process for vehicles. - the missing requirements for ballast pick up at INF side hamper the design of vehicles. 								
<p>1.6. Subsidiarity and proportionality</p>	<p>Problem 1 - relates to the interface between the on-board part of the Energy subsystem and the trackside part of the Energy subsystem. It concerns interoperability and can only be solved at TSI level.</p> <p>Problem 2 - The discussion in the WP demonstrated that this basic parameter can be better managed at Member State level and there are already other ways in place to manage compatibility of infrastructure with vehicles equipped and using Eddy Current Braking Systems (e.g. via RINF).</p> <p>Therefore – strictly applying the subsidiarity principle – this parameter was removed from both TSIs (INF/LOC&PAS).</p> <p>Problem 3 - relates to the interface between the vehicle and the infrastructure. It concerns interoperability and can only be solved at TSI level.</p>								

2. Objectives

<p>2.1. Strategic and specific objectives</p>	<p>The strategic objective(s) of the Agency with which this initiative is coherent.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Europe becoming the world leader in railway safety <input checked="" type="checkbox"/> Promoting rail transport to enhance its market share <input checked="" type="checkbox"/> Improving the efficiency and coherence of the railway legal framework <input type="checkbox"/> Optimising the Agency’s capabilities <input type="checkbox"/> Transparency, monitoring and evaluation <input checked="" type="checkbox"/> Improve economic efficiency and societal benefits in railways <input type="checkbox"/> Fostering the Agency’s reputation in the world <p>Specific objective: Reduce the number of vehicle related National Technical Rules impacting vehicle design and operation</p>
<p>2.2. Link with Railway Indicators</p>	<p>2.1 Evolution of the applicable National Technical Rules for vehicles</p>

3. Options

<p>3.1. List of options</p>	<p>Baseline Option 1 : Revision of the LOC&PAS TSI</p>
<p>3.2. Description of options</p>	<p>Baseline Keep the LOC&PAS TSI (Commission Regulation 1302/2014/EU) currently in force. Option 1 : Revision of the LOC&PAS TSI The amendmends to LOC&PAS TSI as described in ERA-REC-114 and ERA-REC-127. This includes the closure of the following Open Points (linked with the problems described under section 1.1)</p> <p>Linked to Problem 1</p> <ul style="list-style-type: none"> • <i>Amendment of clause 4.2.8.2.8 and Appendix D of LOC & PAS TSI in line with the clause 4.2.17 of ENE TSI (See ERA-REC-114)</i> <p>Linked to Problem 2</p> <ul style="list-style-type: none"> • <i>Ammendment (Withdrawal) of clause 4.2.8.3 in line with clause 4.2.6.2.2 of INF TSI (See ERA-REC-127)</i> <p>Linked to Problem 3</p> <ul style="list-style-type: none"> • <i>Ammendment of clause 4.2.6.2.5 in line with clause 4.2.10.3 of INF TSI (See ERA-REC-127)</i>
<p>3.3. Uncertainties/risks</p>	<p>N/A</p>

4. Impacts of the options

4.1. Impacts of the options (qualitative analysis)	<i>Category of stakeholder</i>		<i>Option Baseline</i>
	Infrastructure Manager	Positive impacts	-
		Negative impacts	The infrastructure (ballast bed) is compatible with a limited set of HS trains Lack of standardization will increase the product costs for the ground based energy data collecting system
	Vehicle Manufacturer	Positive impacts	-
		Negative impacts	Vehicle Suppliers need to adapt high speed trains depending on different requirements related to ballast pick up Risk of delays in authorization of trains due to lack of national requirements for thermal compatibility with eddy current brakes.
	Railway Undertakings	Positive impacts	-
		Negative impacts	Installation of multiple national on-board meters on cross-border operating vehicles RUs can currently operate on a limited number of HS lines due to different ballast pick up requirements.
	<i>Category of stakeholder</i>		<i>Option Revision of the LOC&PAS TSI</i>
	Infrastructure Manager	Positive impacts	New/ Updated/ Renewed Infrastructure will be open to more vehicles and therefore to more potential RUs
		Negative impacts	There might be a limited impact in increase of maintenance costs of infrastructure (related to ballast pick up)
Vehicle Manufacturer	Positive impacts	Less remaining vehicles related NTRs resulting from infrastructure constraints. This will probably decrease vehicle authorisation and design costs. More relaxed vehicle requirements related to ballast pick up will reduce vehicle authorization and design costs (e.g. ballast pick up requirements apply for speeds over 250 km/h instead of 190 km/h as specified in the baseline)	
	Negative impacts	-	
Railway Undertakings	Positive impacts	More compatible routes for their TSI conforming vehicles. Avoidance of installation of multiple national on-board meters on cross-border operating vehicles. w(Expected minimum interoperability positive impact of 2 MEUR/year)	
	Negative impacts	-	

4.2. Impacts of the options (quantitative analysis)	N/A (it is a Light Impact Assessment)
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5. Comparison of options and preferred option

5.1. Effectiveness criterion (options' response to specific objectives)	Based on the findings from section 4.1, we assessed the extent to which the various options respond to the specific objectives, from 1-very low response to 5-very high response (effectiveness).													
		<table border="1"> <thead> <tr> <th></th> <th><i>Option 0 (baseline)</i></th> <th><i>Option 1</i></th> </tr> </thead> <tbody> <tr> <td>Reduce the number of Infrastructure Related National Technical Rules impacting vehicle design and operation</td> <td>N/A (no closure of existing Open Points)</td> <td>4 (as 3 existing Open Points are closed)</td> </tr> <tr> <td>Overall score</td> <td></td> <td>4</td> </tr> <tr> <td>Effectiveness (average score)</td> <td>N/A</td> <td>4</td> </tr> </tbody> </table>		<i>Option 0 (baseline)</i>	<i>Option 1</i>	Reduce the number of Infrastructure Related National Technical Rules impacting vehicle design and operation	N/A (no closure of existing Open Points)	4 (as 3 existing Open Points are closed)	Overall score		4	Effectiveness (average score)	N/A	4
		<i>Option 0 (baseline)</i>	<i>Option 1</i>											
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	Overall score		4											
Effectiveness (average score)	N/A	4												
5.2. Efficiency (NPV and B/C ratio) criterion	N/A (LIA)													
5.3. Summary of the comparison	N/A (one option only)													
5.4. Preferred option(s)	N/A (Option 1 – Amendment of the TSI)													
5.5. Further work required	N/A													

6. Monitoring and evaluation

6.1. Monitoring indicators	No specific monitoring activities required for this specific amendment.
6.2. Future evaluations	Ex Post Evaluations in relation to the LOC&PAS TSI in general