

Making the railway system  
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# Light Impact Assessment

*ERA-REC-128-2: PRM TSI Revision*

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## 1. Context and problem definition

<p><b>1.1. Problem and problem drivers</b></p>	<p>Article 4.3(h) of the Interoperability Directive (2016/797) requires the indication of 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 authorization.</p> <p>The PRM TSI currently in force does not contain the above mentioned elements and therefore needs to be revised in order to ensure compliance to the 4<sup>th</sup> RP requirements with particular reference to fixed installations. The existing vehicle related TSIs (LOC&amp;PAS, WAG) face the same problem and changes for these TSIs were necessary to resolve the problem.</p> <p>Also, Article 3 of the Commission Delegated Decision (EU) 2017/1474 specifies common specific objectives for revising the TSIs. In addition, there are specific objectives put forward for the PRM TSI (Article 10) are outlined in Section 2 of this impact assessment.</p> <p>Furthermore, the DA on TSIs also mentions in its recital (31), that the revision <i>“should include a review of permanent structural solutions that may be required in passenger coaches to ensure equal access to extra services for persons with reduced mobility, including in particular access to restaurant cars”</i>.</p> <p>Moreover, the Recital (6) in the same DA is also of relevance :</p> <p><i>TSIs revisions should take into account the experience of the railway sector regarding unclear requirements or other unintended impacts and costs resulting from the TSIs, including in particular the experience of Rail Freight Corridors or experiences resulting from the application of the TSIs to low density lines</i></p> <p>As such, a main issue to consider for the revision of the PRM TSI is then the extent to which current requirements are unclear or lead to adverse impacts on the main stakeholders, incl. persons with disabilities and persons with reduced mobility. These issues are pertinent in relation to the conformity assessment undertaken by the notified bodies.</p>
<p><b>1.2. Main assumptions</b></p>	<p>PRM TSI in general:</p> <p>All introduced changes in the revision proposal, which are not directly in the context of the 4th RP, are implementing clarifications / simplifications of the requirements or providing enhanced flexibility for the concerned stakeholders as well as maintaining or improving accessibility to the railway system for users notably persons with disabilities and persons with reduced mobility.</p> <p>The only exception to this concerns a provision for an enlarged role of the NoBo in the assessment on-site which would generate additional cost. This provision was removed as part of the 2014 revision. However,</p>

	<p>it is expected that the cost increase linked to this provision is limited and would be more than outweighed by the other changes to the PRM TSI.</p> <p>It should be mentioned that the changes linked to the requirements on the Inventory of Assets system are not assessed in this impact assessment.</p>											
<p><b>1.3. Stakeholders affected</b></p>	<table border="1"> <thead> <tr> <th data-bbox="566 539 911 591"><i>Category of stakeholder</i></th> <th data-bbox="911 539 1428 591"><i>Importance of the problem</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="566 591 911 1093">PRMs</td> <td data-bbox="911 591 1428 1093"> <p>5</p> <p>The key issue for PRMs is improvements in accessibility to (rail) transport services covering both rolling stock and stations. While the current PRM TSI has resulted in improvements of the accessibility of new rolling and some improvement of the accessibility of stations further enhancements are warranted. In particular, this concerns access to services provided on-board as well as setting out clearly the requirements applicable to innovative electric wheelchairs.</p> </td> </tr> <tr> <td data-bbox="566 1093 911 1594">IMs</td> <td data-bbox="911 1093 1428 1594"> <p>5</p> <p>As a contracting entity ordering the design, construction, renewal or upgrading of a subsystem (notably stations) any unclear requirements in the PRM TSI requirements may add costs to such station projects including higher costs for the conformity assessment / authorization. These aspects may be particular pertinent for infrastructure managers given their significant responsibility for fixed installations in the context of the PRM TSI.</p> </td> </tr> <tr> <td data-bbox="566 1594 911 1917">Passenger RUs</td> <td data-bbox="911 1594 1428 1917"> <p>5</p> <p>As a contracting entity ordering the design, construction, renewal or upgrading of a subsystem (notably rolling stock) any unclear requirements in the PRM TSI requirements may add costs to such projects including higher costs for the conformity assessment / authorization.</p> </td> </tr> <tr> <td data-bbox="566 1917 911 2056">Suppliers</td> <td data-bbox="911 1917 1428 2056"> <p>4</p> <p>Suppliers are affected by the problem in their role as delivering subsystems (design, construction, renewal or</p> </td> </tr> </tbody> </table>		<i>Category of stakeholder</i>	<i>Importance of the problem</i>	PRMs	<p>5</p> <p>The key issue for PRMs is improvements in accessibility to (rail) transport services covering both rolling stock and stations. While the current PRM TSI has resulted in improvements of the accessibility of new rolling and some improvement of the accessibility of stations further enhancements are warranted. In particular, this concerns access to services provided on-board as well as setting out clearly the requirements applicable to innovative electric wheelchairs.</p>	IMs	<p>5</p> <p>As a contracting entity ordering the design, construction, renewal or upgrading of a subsystem (notably stations) any unclear requirements in the PRM TSI requirements may add costs to such station projects including higher costs for the conformity assessment / authorization. These aspects may be particular pertinent for infrastructure managers given their significant responsibility for fixed installations in the context of the PRM TSI.</p>	Passenger RUs	<p>5</p> <p>As a contracting entity ordering the design, construction, renewal or upgrading of a subsystem (notably rolling stock) any unclear requirements in the PRM TSI requirements may add costs to such projects including higher costs for the conformity assessment / authorization.</p>	Suppliers	<p>4</p> <p>Suppliers are affected by the problem in their role as delivering subsystems (design, construction, renewal or</p>
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		<p>upgrading) for the contracting entity. Unclear requirements would result in higher resources required. Furthermore, suppliers taking the role as applicant for placing in service of subsystems would be affected by non-optimal provisions linked to the conformity assessment and authorisation of subsystems.</p>
	<p>NoBos</p>	<p>3 NoBos are affected by the problem in their role of undertaking the conformity assessment against the requirements of the relevant TSI using the assessment modules. In particular, any lack of clarity regarding the provisions in the PRM TSI will create challenges for the NoBos in terms of uncertainty on how to determine whether given projects conform to the TSI requirements.</p>
	<p>NSAs</p>	<p>2 NSAs are slightly impacted by the problem as they are involved in the authorization of fixed installations as well as the authorization of vehicles.</p>
	<p>Agency</p>	<p>1 Limited impacted by the problem. The Agency is not involved in the authorization for the placing in service of fixed installations, however it is involved in the authorization of vehicles.</p>
<p><b>1.4. Evidence and magnitude of the problem</b></p>	<p>Evidence of the problems experienced with the current PRM TSI was confirmed by the railway sector via the speakers of their representative organisations (EIM, CER, UNIFE, EPTTOLA, and NB Rail) as well as ETF and user groups (EPF, EDF and the Age Platform) along with NSAs in the ERA PRM TSI working party meetings (as recorded in the minutes of these meetings). Moreover, strong interest from stakeholders was recorded in the consultation on the proposed revision (see the Agency’s report on the inputs received). Furthermore, three Agency Technical Opinions linked to the PRM TSI provided evidence on the specific issues concerned:</p> <ul style="list-style-type: none"> <li>• <a href="#">ERA-OPI-2014-4 - Staircases requirements in the PRM TSI</a></li> <li>• <a href="#">ERA/OPI/2015-7 - Technical opinion regarding the question of NB-Rail (ref. QC-NB Rail 017) concerning Definition of Stairs in the PRM TSI</a></li> <li>• <a href="#">ERA/OPI/2017-1 - Opinion of the European Union Agency for Railways to the European Commission regarding PRM TSI deficiencies</a></li> </ul>	

<b>1.5. Baseline scenario</b>	The baseline scenario would be the case when the current PRM TSI is not revised. As such this could create inconsistencies with the 4 <sup>th</sup> RP as well as preventing possible gains from simplification, clarification of the TSI provisions and higher level of flexibility for the concerned stakeholders.
<b>1.6. Subsidiarity and proportionality</b>	The activities related to the PRM TSI revision are mandated to the Agency in the Delegated Act 2017/1474 of the European Commission. As such, it concerns existing legislation where the underpinning principle is to focus harmonisation effort on promotion of interoperability without introducing any additional requirements.

## 2. Objectives

<p><b>2.1. Strategic and specific objectives</b></p>	<p><b>The strategic objective(s) of the Agency</b> with which this initiative is coherent include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Europe becoming the world leader in railway safety</li> <li><input checked="" type="checkbox"/> Promoting rail transport to enhance its market share</li> <li><input checked="" type="checkbox"/> Improving the efficiency and coherence of the railway legal framework</li> <li><input type="checkbox"/> Optimising the Agency’s capabilities</li> <li><input type="checkbox"/> Transparency, monitoring and evaluation</li> <li><input checked="" type="checkbox"/> Improve economic efficiency and societal benefits in railways</li> <li><input type="checkbox"/> Fostering the Agency’s reputation in the world</li> </ul> <p>The <b>specific objective</b> is to align the PRM TSI with the 4th Railway Package thereby contributing to the objectives of the 4<sup>th</sup> RP. Other specific objective(s) for the revision include (as specified in Article 10 of the Delegated Act (DA) on TSIs, 2017/1474) :</p> <ol style="list-style-type: none"> <li>1. <i>To lay down requirements on the Inventory of Assets system (this point was covered already with an earlier recommendation);</i></li> <li>2. <i>To define common priorities and criteria to further improve accessibility to persons with reduced mobility: this point was discussed by the European Commission with the Advisory body established according to Article 9 of the PRM TSI 2014 on the basis of a comparative overview of the strategies contained in the national implementation plans.</i></li> <li>3. <i>To provide a clear definition of manual and electrical wheelchairs and the requirements applicable to innovative electric wheelchairs to access passenger trains safely: this point was discussed by the Working Party.</i></li> </ol> <p>Moreover, Article 3 of the DA specifies common specific objectives for revising TSIs. In the case of the PRM TSI revision the following aspects were considered relevant:</p> <ol style="list-style-type: none"> <li>5. <i>The TSIs shall, where appropriate, include provisions which:</i> <ul style="list-style-type: none"> <li><i>(b) take into account the developments of the Union railway system and related research and innovation activities, and integrate them when they reach the appropriate level of maturity;</i></li> <li><i>(i) take into account the sector's best practice and review the choice of modules prescribed in the procedures for conformity assessment of interoperability constituents and subsystems;</i></li> </ul> </li> </ol> <p>These elements draw also on issues identified as ‘Whereas’ in the DA.</p>
<p><b>2.2. Link with Railway Indicators</b></p>	<p>Specific (monitoring) indicators can be developed with particular reference to the resources (incl. costs and time) of using the PRM TSI by the concerned stakeholders as well as consideration to implications on accessibility. Further details on this aspect are provided in Section 6.1.</p>

### 3. Options

<b>3.1. List of options</b>	<b>Option 0</b> (Baseline) <b>Option 1</b> — Revision of the PRM TSI
<b>3.2. Description of options</b>	<p>Option 0 (Baseline)</p> <ul style="list-style-type: none"> <li>› <i>No revision of the PRM TSI</i></li> </ul> <p>Option 1 – Revision of the PRM TSI</p> <ul style="list-style-type: none"> <li>› <i>The proposed revision is set out in the PRM TSI Recommendation together with the accompanying report</i></li> <li>› <i>Main changes in this revision concern (excl. the changes linked to the Inventory of Assets):</i> <ul style="list-style-type: none"> <li>› <i>Definition of a wheelchair</i></li> <li>› <i>Provision for remotely delivery of services free of charge to the wheelchair users at the wheelchair spaces</i></li> <li>› <i>Introduction of the door finding signal and alternatives to the door closing signal</i></li> <li>› <i>Reintroduction of on-site visits by notified bodies for the assessment of stations</i></li> <li>› <i>Dynamic visual displays should not be considered as Interoperability Constituents (ICs)</i></li> <li>› <i>Clarifications regarding several aspects of the obstacle-free routes</i></li> <li>› <i>Reference to standards have been updated (notably EN 16584-1:2017, EN 16585-1:2017, EN 16585-2:201 and EN 16585-3:2017)</i></li> </ul> </li> </ul> <p>In the following sections 4 and 5 the impacts of this revision will be considered. This will involve an assessment of the revision as a whole + particular consideration to: 1) changes re. access to services; 2) reintroduction of on-site visits by notified bodies for the assessment of stations. For both of these changes it is possible that there could be more significant impacts on particular stakeholders' contexts.</p> <p>This impact assessment will not consider the implications linked to the Inventory of Assessments as these have already been examined in a dedicated impact assessment report.</p>
<b>3.3. Uncertainties/risks</b>	<p>Given that this revision of the PRM TSI is limited in scope it is considered that there are only relative marginal uncertainties and risks involved regarding the impact assessment including the main conclusions concerning the preferred option (see Section 5).</p>

#### 4. Impacts of the options

<p><b>4.1. Impacts of the options (qualitative analysis)</b></p>	<p>The baseline was not included in the analysis as the impacts of the options are compared against the baseline. In particular, it should be noted that the impact assessment is focused on the changes proposed compared to the current PRM TSI.</p>		
	<i>Category of stakeholder</i>	<i>Option 1</i>	
	PRMs	Positive impacts	Some notable improvements with regard to a) definition of a wheel chair; b) access to services provided remotely free of charge to wheelchair users. Moreover, PRMs could be benefitted from the on-site visits by NoBos as this would ensure compliance of station projects with the accessibility requirements in design as well as in implementation.
		Negative impacts	Limited negative impacts of the revision although expectations for improved access to onboard services may not have been fully satisfied.
	IMs	Positive impacts	It is expected that IMs would in general be positively impacted due to clarification of requirements in the TSI
		Negative impacts	IMs could be negatively affected in terms of costs associated with the on-site visits by NoBos to station projects.
	Passenger RUs	Positive impacts	It is expected that RUs would in general be positively impacted due to clarification of requirements in the TSI
		Negative impacts	Limited negative impacts associated with remote provision of services to wheelchair users. This impact is likely to be small.
	Suppliers	Positive impacts	Suppliers are expected to be positively impacted from the revised PRM TSI in their role as contractor and applicant for verification / authorization of subsystems. The positive impacts are generated from the clarification for the users of the TSI creating the possibility for cost savings.

		Negative impacts	Limited negative impacts are foreseen for suppliers of the proposed revision
	NoBos	Positive impacts	NoBos would benefit from increased clarity of the PRM TSI text with particular focus on the aspects linked to the provisions for conformity assessment.
		Negative impacts	N/A
	NSAs	Positive impacts	Impacts on NSAs are expected to be relative modest, although the simplification and / or clarification of the PRM TSI requirements may have a limited positive impact on resources for authorisation for the placing in service of fixed installations.
		Negative impacts	Limited or no negative impacts on NSAs are foreseen
	Agency	Positive impacts	Limited positive impacts linked to VAs + facilitation of harmonisation of PRM accessibility across SERA
		Negative impacts	N/A
	<b>Overall assessment (input for section 5.1)</b>	<b>Positive impacts</b>	<b>Overall stakeholders are expected to be positively impacted by the PRM TSI revision. The positive impacts concern in particular PRMs (through accessibility changes) and NoBos, IMs, suppliers + RUs due to clarification of the requirements in the TSIs. As such, the revision is though relative limited in scope</b>
		<b>Negative impacts</b>	<b>The main negative impact comes from the re-introduction of on-site visits by NoBos to station projects as part of the conformity assessment. Available evidence indicates that these costs are outweighed by the overall benefits.</b>
	<b>4.2. Impacts of the options (quantitative analysis)</b>	<p><b>Introduction</b></p> <p>Given the limited revision scope a full quantitative assessment of benefits and costs has not been undertaken. However, a specific analysis of the possible cost impacts associated with the re-introduction of NoBo on-site visits to station projects have been undertaken. These figures are then contrasted with the likely benefits associated with reduced costs for using the PRM TSI for station projects in general. Below, the outcome of this analysis is outlined.</p>	

	<p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>- From the PRM TSI impact assessment from 2013 it can be inferred that the costs associated with such on-site visits would amount to 10 k€ per station (as this is the figure given for the cost savings associated with not having the on-site visits), see page 37 of the IA report</li> <li>- According to the Agency's 2018 biennial report on Safety and Interoperability there were some 30 projects involving new or upgraded stations placed in service in compliance with the PRM TSI in 2017 (see Annex 8)</li> <li>- Under the assumption that 30 new / upgraded station projects are a typical figure it could be estimated that the total costs of re-introducing NoBo visits for such projects would translate (approximately) to about <b>300 k€ per annum</b> in Europe</li> <li>- The typical costs of a new station would be somewhere in the range from 1-30 m€ where a reasonable average value could be around 6 m€ (Source: Prices and costs in the railway sector, J.P. Baumgartner, EPF Lausanne, 2001)</li> <li>- Available evidence (included as part of the Impact Assessment of INF TSI revision) suggests that conformity assessment would typically be approximately around 1% of the total project cost.</li> <li>- Therefore, assuming an average cost for a (new) station project of 6 m€ and 30 projects/yr would imply that total conformity assessment costs would be approx. 1.8 m€/y for station projects.</li> <li>- Assuming that the clarifications in the PRM TSI text would permit a reduction of conformity assessment costs of 25% result in cost savings of approx. <b>450 k€ per annum</b>. This would then lead to net-benefits of approx. <b>150 k€ per annum</b></li> <li>- As such this expression for net-benefits is excluding any cost savings for rolling stock related conformity assessment as well as other benefits with particular focus on PRMs</li> <li>- A key point is that break-even (the costs incurred from NoBo on-site visits are exactly matched by benefits from the overall revision) implies there should be cost savings from infrastructure and / or rolling stock projects of approximately <b>300 k€ per annum</b></li> <li>- It should be emphasized that these figures are based on available information as well as assumptions which would need to be further validated. It follows that such figures should be considered with caution given the uncertainties involved.</li> </ul> <p><b>Conclusion</b></p> <p>On the basis of the available evidence regarding the changes put forward it is likely that the aggregated benefits will outweigh the aggregated costs. In particular, it is foreseen that the net-benefits will be positive such that a positive NPV would be achieved (or a B/C ratio above 1).</p>
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	The baseline was not included in the analysis as the impacts of the option(s) are compared against the baseline.
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## 5. Comparison of options and preferred option

<b>5.1. Effectiveness criterion (options' response to specific objectives)</b>	<p>The proposed Do-Something option (Option 1) meets the specific objectives for the PRM TSI revision.</p>
<b>5.2. Efficiency (NPV and B/C ratio) criterion</b>	<p>Given the limited revision scope a detailed quantitative assessment of benefits and costs has not been undertaken (See Section 4.2). However, on the basis of the available evidence regarding the changes put forward it is very likely that the aggregated benefits will outweigh the aggregated costs. In particular, it is foreseen that the net-benefits will be positive. This assessment takes into account additional costs incurred from the requirement of NoBo on-site inspections of station projects.</p>
<b>5.3. Summary of the comparison</b>	<p>Option 1 (Do-Something) compares favourably to Option 0 (baseline) both in terms of effectiveness and efficiency.</p>
<b>5.4. Preferred option(s)</b>	<p>Option 1 (Do-Something) consisting of the proposed recommendation for revision of the PRM TSI is preferred compared to the baseline (Option 0).</p>
<b>5.5. Further work required</b>	<p>It could be relevant to undertake analyses of the impact of the Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act) in the context of the PRM TSI.</p>

## 6. Monitoring and evaluation

<p><b>6.1. Monitoring indicators</b></p>	<p>Relevant indicators should distinguish between:</p> <ul style="list-style-type: none"> <li>› <i>The efforts to use the revised PRM TSI and the observed obstacles.</i></li> <li>› <i>The actual results brought by the revision. Of particular interest would be conformity assessment costs, time and resources involved for authorisations of subsystems. This could involve the reintroduced NoBo inspections of stations.</i></li> <li>› <i>Moreover, it would be relevant to monitor how the revised TSI impact persons with disabilities and persons with reduced mobility</i></li> </ul>
<p><b>6.2. Future evaluations</b></p>	<p>The next PRM TSI revision is not expected in the short term but rather the mid / long term. It should be noted that the PRM TSI will be included in the new CCM procedure to be implemented in 2020.</p> <p>In accordance with the provision in the Agency Regulation (Art. 8.3) the Agency may conduct an <i>ex post</i> assessment of the legislation based on its recommendations (e.g. the PRM TSI). In case such an ex-post assessment will be carried out it would be relevant to consider the issue of on-site inspections for station projects.</p>