Ex-post evaluation

Common Safety Method for Assessment of Achievement of Safety Targets

Final Report – March 2021

EUROPEAN
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Contents

Executive Summary

The common safety method for assessment of achievements of safety targets, hereafter referred to as the Method or CSM CST, has been introduced in 2009 to ensure that the safety performance of the railway system is not reduced in any Member State.

The European Union Agency for Railways has so far carried out eleven annual assessments in application of the Method. Based on these experiences, and in line with the Better Regulation Guidelines, there is a need to evaluate the legislation and assess its relevance, effectiveness, efficiency, coherence and EU added value.

The evaluation concludes that the CSM CST has an important role in the EU legal framework for railway safety and it provides added value to the Member States (MS) and the European Commission. However, it suffers from poor application and enforcement.

It is noted that the Method's ***relevance*** is negatively affected by the lacking revisions of the National Reference Values (NRV) and Common Safety Targets (CST). This has a detrimental impact on the accuracy of the results. Furthermore, as the Method determined that the CSTs are equal to the highest NRV in Europe, the CSM CST did and still does not promote the reduction of variance in safety levels. The ***effectiveness*** is limited due to the low compliance with enforcement actions and the absence of effective interaction with MS on safety improvements. The ***efficiency*** of the Method is high as few requirements are imposed on stakeholders, and the benefits largely outweigh the associated costs. The ***coherence*** between the CSM CST and other EU safety requirements is high. The Method often complements national interventions as well. Finally, an ***EU added value*** exist as the CSM CST is often the only source of quantitative safety targets in MS and contributed (albeit often indirectly) to safety improvement actions.

Based on the evaluation, the following recommendations are provided to improve the CSM CST:

- Update NRVs/CSTs
- Faster publication
- Make exclusive use of CSI data
- Automatically update NRVs
- Ensure the application of enforcement actions
- Revise the CST concept
- Adjust the statistical method

The report provides further information on how these recommendations could be implemented, also considering the CSM for assessing the safety level and the safety performance of railway operators.

Part I – Introduction and methodology

1 Introduction

1.1 Context

Opening up the national freight and passenger markets to cross-border competition has been a major step towards creating an integrated European railway area. The liberalisation of the rail market did raise concerns about potential safety risks, as new operators with limited operational experience enter a market. In addition, a large variation in safety levels of Member States may push Member States to address them through country specific legal provisions that may undermine the Single European Railway Area. One possible way to prevent those rules from appearing is to achieve a convergence towards high safety levels across the EU.

The EU legislator therefore deemed it appropriate to provide, as part of the third railway package, an assurance to the public in the form of a regular and transparent assessment of safety levels.

The Common Safety Method for assessment of achievement of safety targets, hereafter referred as the Method or CSM CST, was introduced through the Railway Safety Directive (2004/49/EC). It came into force in 2009 (Commission Decision 2009/460/EC) and aims to ensure that a high level of railway safety is maintained and, when and where necessary and reasonably practicable, improved while supporting the convergence of safety levels across the EU.

1.2 CSM CST

The CSM CST contains a four-step statistical method for testing a hypothesis whether the safety level has started to deteriorate in Member States (MS) and of the EU railway system as a whole. This test is carried out by comparing the safety performance of recent years with baseline values.

The baseline values are also called the National Reference Values (NRVs) and were formalised by Commission Decision 2010/409/EU, which in turn was repealed and replaced by Commission Decision 2012/226/EU.

The values are set for six risk categories[1]:

- Passengers (1.1 and 1.2);
- Staff including employees or contractors (2);
- Level crossing users (3.1)[2];
- Others (4)[3];
- Trespassers (5);
- Societal risk (6).

The European Common Safety Targets (CSTs) are derived from the NRVs. For each risk category, a CST is set to be either the highest NRV of a country, or the European average NRV times 10, whichever of the two values is lowest. The CSTs set the minimum level of safety that needs to be achieved by each country.

The European Union Agency for Railways, hereafter ERA or the Agency, is tasked to annually carry out an assessment on whether the NRVs/CSTs are achieved by MS and for the European railway system as a whole. A flowchart of the methodology is added to Annex 1 for reference. The results are presented to the Railway Interoperability and Safety Committee (RISC) and published on the Agency's website.

The Method prescribes that the MSs that show a possible deterioration of safety performance, report the underlying causes to the Commission. A safety enhancement plan shall be set up in case a probable deterioration of safety performance is observed.

[1] *This report uses the risk categories' names as defined in (EU) 2016/798.*

[2] *The NRVs and CSTs for the risk category 3.2 were not established in the second set of NRVs/CSTs due to the lack of reliable data.*

[3] *This includes the CSIs 'other person at a platform' and 'other person not at a platform'.*

By 2020, eleven assessments have been carried out by the Agency in application of the CSM CST. Each of the annual assessments identified cases of possible deterioration of safety performance and, less frequently, cases of probable deterioration.

1.3 Reasons for evaluation

The call for an ex-post evaluation of the CSM CST originates from the following reasons:

- The legislation is in place for over 11 years without having been subjected to an ex-post evaluation. A review of the CSM CST is:
  - In line with the Agency Regulation 2016/796 Art 13(1)
  - In line with the RSD 2016/798 Art 6(5) and Art 7(5)
  - In line with Better Regulation principles
- The broader railway safety framework has evolved considerably since 2009, which could impact the Method's relevance and coherence.
- The link between negative results and concrete actions at the national level is limited.
- Several MSs have raised strong concerns about the accuracy of the Method.
- The evaluation would provide useful input for an ongoing evaluation of the railway safety directive (EC/2016/798 Art. 29(1)).

Based on these arguments, the evaluation was launched in July 2020.

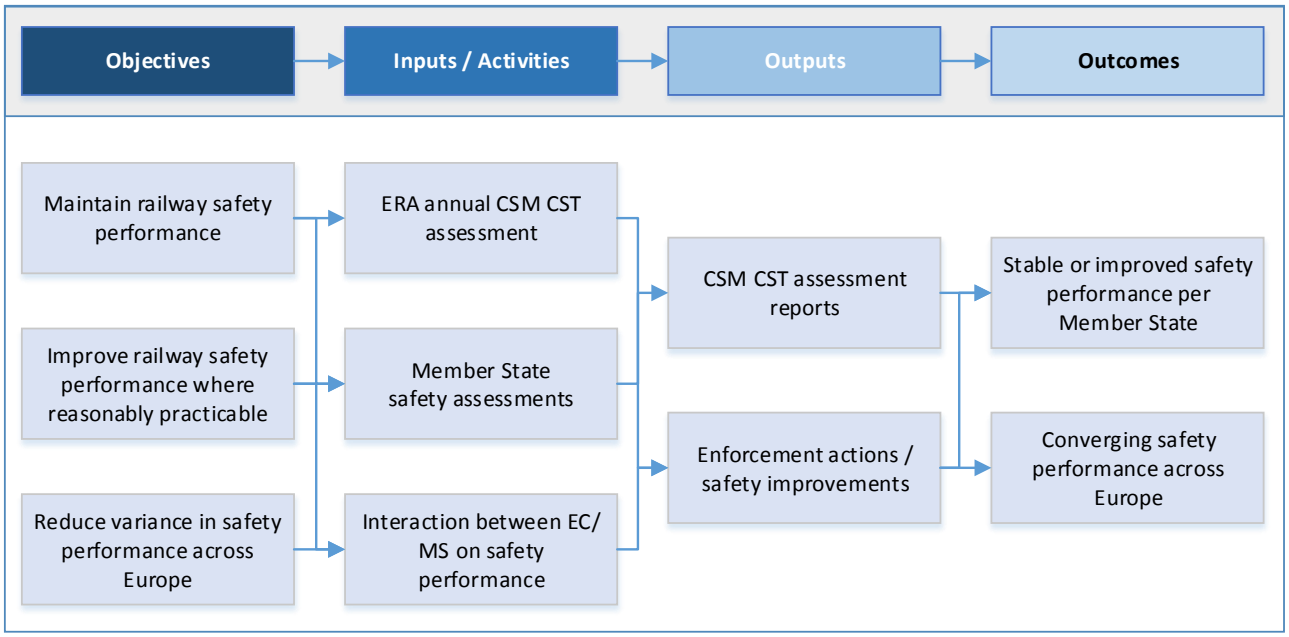
2 Methodology

2.1 Evaluation approach

This evaluation follows the European Commission's Better Regulation Guidelines (BRG). The BRG recommend to specify a so-called 'intervention logic' of the legislation as a basis for the evaluation. An intervention logic explains how the legislation was expected to work and includes the intended causal links and assumptions.

The intervention logic of the CSM CST, as shown in Figure 1, has been developed based on past documentation, including its initial impact assessment, contents of the Railway Safety Directive (EU) 2016/798 (RSD) and associated legal acts.

Figure 1. CSM CST intervention logic



The intervention logic can be evaluated using five key criteria:

- **Relevance**: the extent to which the intervention's objectives are pertinent to the needs, problems and issues to be addressed;
- **Effectiveness**: the extent to which set objectives are achieved;
- **Efficiency**: the extent to which desired effects are achieved at a reasonable cost;
- **Coherence**: the extent to which the intervention logic is non-contradictory and/or the CSM CST does not contradict other interventions with similar objectives;
- **EU added value**: the value resulting from the CSM CST which is additional to the value that could have been created by individual Member States or other (international) actions.

Using these criteria, specific evaluation questions were formulated for the CSM CST that shall be answered in this report. The questions and how they relate to the evaluation criteria are shown in Table 1.

Table 1. CSM CST evaluation questions

Criterion	Question
Relevance	To what extent does the Method address the specific EU objectives
	To what extent is the Method adapted to the needs of the Member States and EC?
Effectiveness	To what extent is the Method used in Member States?
	To what extent have MS explained the causes for deterioration of safety performance?
	Have MS engaged in follow-up actions to improve safety after a negative assessment?
	To what extent did the Method contribute to better safety performance?
Efficiency	To what extent are the costs of the Method justified, given its contributions?
	What are the areas for potential administrative burden reduction and simplification?
Coherence	To what extent is the Method complementary to other railway safety legislation?
	How does the Method fit with other national interventions?
Added value	What has the Method contributed on top of what would have been done by MS at national level?

The next section details which sources were consulted to answer the above questions.

2.2 Sources

2.2.1 Assessment reports

A key input is the eleven reports on the assessment of achievement of CSTs as produced by the Agency, the first of which was published in 2010. The reports contain observations of the assessors along with relevant comments from NSAs obtained during the assessments.

2.2.2 MS explanatory reports

Article 5 of the CSM CST prescribes that MSs shall send a report to the Commission if a possible or probable deterioration of safety performance is noted. The report should address the causes of the results obtained and, in case of a probable deterioration, a safety enhancement plan.

The results are assessed for six risk categories, which makes that a MS could have multiple negative results in one year. In such a case, only one report is expected where the likely causes are explained per risk category.

Table 2 provides an overview of the number of observed deteriorations for two time frames. Although the CSM CST assessment occurred between 2010 and 2020, the reports prior to 2014 could not be retrieved and those for 2020 were not fully available while drafting this report. Reports from 2014-2019 are therefore included in this analysis.

Table 2. Overview of CSM CST results

	2010-2020	*2014-2019*
Number of observed deteriorations: Country-Year-Risk category	74	43
Number of observed deteriorations: Country-Year	47	31
Number of reports submitted	*incomplete data*	17

A line-by-line content analysis of the 17 reports took place. Annex 2 provides an overview of the outcomes.

2.2.3 NSA annual reports

National Safety Authorities (NSAs) publish annual reports, which contain, among others, information on the development of railway safety, including an aggregation at MS level of the CSIs (RSD, Art.19a).

There is no explicit requirement for NSAs to report on the CSM CST in the annual report. However, as they are inherently related to CSIs and safety levels, it is not surprising that many NSAs do describe them. The NSA reports are therefore considered to be an additional source on the prominence and usage of the CSM CST in the different MS.

NSA reports from 2006 till 2018 were collected for 28 jurisdictions[4] (i.e. not just countries, as the Channel Tunnel publishes a separate safety report). A total of 320 English language reports[5] could be retrieved. The documents were text-mined for the following keywords:

- 'target'
- 'CST' or 'common safety target(s)'

The main output is depicted in Annex 3. An additional layer shows the years in which a deterioration in performance was observed. This layer was added to see if the prominence of the CSM CST is related to a deterioration in safety performance.

2.2.4 ERA CSM CST Task Force report

In accordance with the *Commission implementing decision of 22.7.2011 on a mandate to the European Railway Agency, for the revision of common safety targets and the related common safety method for the period from 2011 to 2015 ('Mandate')* the second set of CSTs was established and then revised as a Commission Decision 2012/226/EU on the second set of CSTs as regards the rail system.

A dedicated task force was set up under the Agency's Safety Performance Working Party and prepared a recommendation on the revision of the CSM on CSTs. The Annex to the Accompanying report to this Agency recommendation contains a comprehensive review of the CSM elements proposed for revision, including a proposed recast of the Annex to the CSM CST (Assessment Method). It served as input to this report.

2.2.5 Targeted questionnaire and interviews

Some information could not be satisfactorily collected through desk research. A questionnaire was therefore developed and addressed to a limited number of key stakeholders from Ministries of Transport (MoT) and NSAs. In case of the MoTs, the focus was on countries for which the past assessment reports noted a possible or probable deterioration of safety performance. In case of the NSAs, the focus was on countries, which did not provide their input during a past consultation on safety targets.

After a follow-up effort from the evaluators, half of the contacted organisations agreed to participate. A higher participation rate was hoped for. The questionnaire (shown in Annex 4 and the outcomes in Annex 5) was complemented by a short interview during which the countries were asked to explain some answers. In this way, information was obtained from Bulgaria, Germany, Portugal, Romania, and Slovakia.

In addition, the evaluators interviewed the EC project officers in charge of the CSM CST dossier.

A last point is that the draft final report was sent to ERA's Economic Steering Group and the NSA network for additional feedback, to which 10 organisations responded.

[4] AT, BE, BG, Channel Tunnel, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, NL, NO, PL, PT, RO, SE, SI, SK, UK
[5] The Agency used to ensure the translation into English language if not provided by the NSA

2.2.6 ERA consultation on safety targets

On its own initiative, the Agency has carried out a consultation on the value of safety targets in 2017. The consultation involved National Bodies (NSAs) and Representative Bodies (railway sector organisations).

Although not specifically focusing on the CSM CST the consultation did collect feedback from nineteen organisations, mostly NSAs, of which some elements are relevant for this evaluation. The consultation's main outcomes concerning the CSTs are provided in Annex 6, and were considered as input for this report.

2.3 Limitations

A range of sources were consulted to gather input on the CSM CST from as many countries as possible. Some countries were more active in contributing, so that their perspective is expressed via multiple sources (e.g. explanatory report, interview and the 2017 consultation). Additionally it is noted that countries with an observed deteriorating safety performance were more vocal about their experience with the Method. The evaluators took care to balance and interpret these inputs along with other comments.

As indicated there are also some limitations related to the response rate to the questionnaire and several missing explanatory reports and NSA annual reports. Likewise, national strategic documents, which provide information on the actual use of the CSM CST in MS are not readily available for review, due to language barriers, or simply because of their absence.

While these gaps are acknowledged, sufficient measures were taken to collect additional evidence when needed. It is therefore believed that additional data would not likely alter the results and conclusions of this evaluation.

Part II – Analysis

3 Relevance

3.1 To what extent does the Method address the specific EU objectives

The CSM CST was primarily introduced to ensure that safety is maintained at a high level and, when necessary and where reasonably practicable, improved. It is meant to provide tools for the assessment of railway safety performance at Union level as well as for individual Member States (RSD, Recital 11).

The CSM CST and underlying CSIs are instrumental to ensuring safety monitoring in a regular and standardised way. Both desk research and interviews confirmed that there has been no alternative instrument available that would meet all necessary criteria of transparency, accuracy, broad acceptance, or practicability for ensuring this task.

As evidenced by the CST assessments and the Agency biennial report on railway safety and interoperability in the EU, European safety levels have been improving during the entire period of the application of the CSM CST. However, progress has not been equal across countries and risk categories. The annual assessments provided evidence to policy makers and assurance to the public by monitoring these variations and trends.

The secondary objective was to contribute to the reduction in variance in safety levels among MSs (e.g. RSD, Recital 8 and CSM CST Recital 4). Since in practice the CSTs continued to be defined as the "highest NRV", the CSM CST provided no incentive for MSs with relatively poor safety levels to converge towards higher safety levels. Section 3.2.2 (6) provides a detailed explanation on why this is the case.

It can be concluded that the CSM CST has addressed the RSD objective to monitor railway safety performance as a tool to ensure that safety is maintained and provide input for possible improvements. However, the objective to reduce variance safety performance across Europe has not been reached as no stricter safety targets were instilled by the Method.

3.2 To what extent is the Method adapted to the needs of the Member States and European Commission?

The specific needs for MSs and the EC could be derived from the purposes as described in the RSD and in the Method itself:

- To provide with a transparent, accurate, broadly understood and accepted method for assessing the non-deterioration of safety performance at EU and MS level
- To establish common reference levels usable as numeric safety targets to drive safety improvements, in particular in countries with relative safety underperformance

As the CSM CST is in force for over 11 years, there is considerable knowledge about the fulfilment of those needs[6]. This section elaborates on several of the known concerns. Importantly, last year new concerns emerged regarding the data sources used, which shall be explained in section 3.2.2(1) as well.

3.2.1 Reported strengths

All respondents to the 2017 consultation agreed that the CSTs are useful for monitoring railway safety and all but one respondent agreed that the CSM CST is an accurate method to assess whether railway safety has not started to deteriorate. Likewise, this evaluation's interviews confirmed some key benefits of the Method.

[6] Several strengths and weaknesses were listed in a previous explorative study, as shown in Annex 6.

It was stated that the CSM CST:

- Is typically the only source of quantitative targets for railway safety
- Is the only available method to compare railway safety performance across Europe
- Is used to make key stakeholders aware of evolutions in railway safety and, in some cases, convince governments to invest more in railway safety improvement actions.
- Is one of the few tools the EC has to interact with MS on railway safety performance.

These strengths make that many respondents have a positive view on the relevance of the CSM CST.

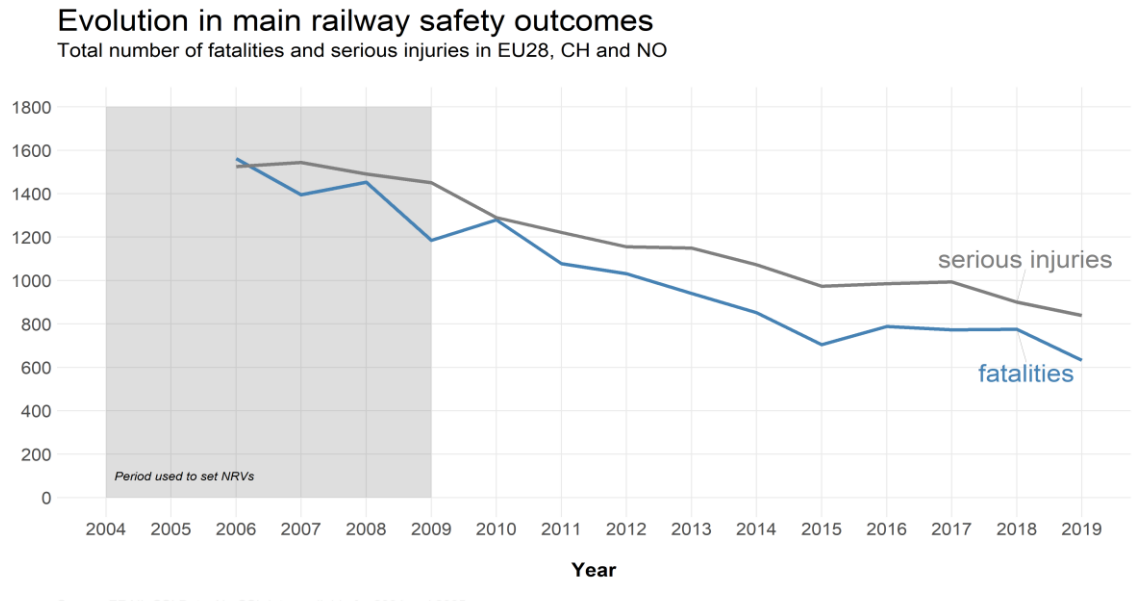
3.2.2 Reported weaknesses

While the strengths of the Method are acknowledged, respondents are generally aware of several issues. The most common and well reported issues are:

1) **Outdated NRVs:** The CSM CST compares safety performance of the most recent 5-year period (i.e. the Moving Weighted Average or MWA) with a set of NRVs. The Method anticipated that the reference values would be regularly updated. However, the last NRV update took place in 2012 using data from 2004 to 2009. This is problematic for several reasons.

   a) Railway safety improved considerably since 2004. Consequently, the method does not detect a possible deterioration in recent years too well, because the point of reference remains the 2004-2009 period when railway safety generally was worse. Figure 2 illustrates this evolution for all fatalities and serious injuries in the EU, Switzerland and Norway. For certain risk categories (e.g. passengers or employees), such drops can be even more striking. Yet, for some risk categories and countries the downward trend could have recently been reverted. But as the NRVs only take the period 2004-2009 into account, no deterioration would be noted. The key question therefore is if the current reference period is appropriate to determine if safety performance is maintained.

Figure 2. Evolution in main railway safety outcomes

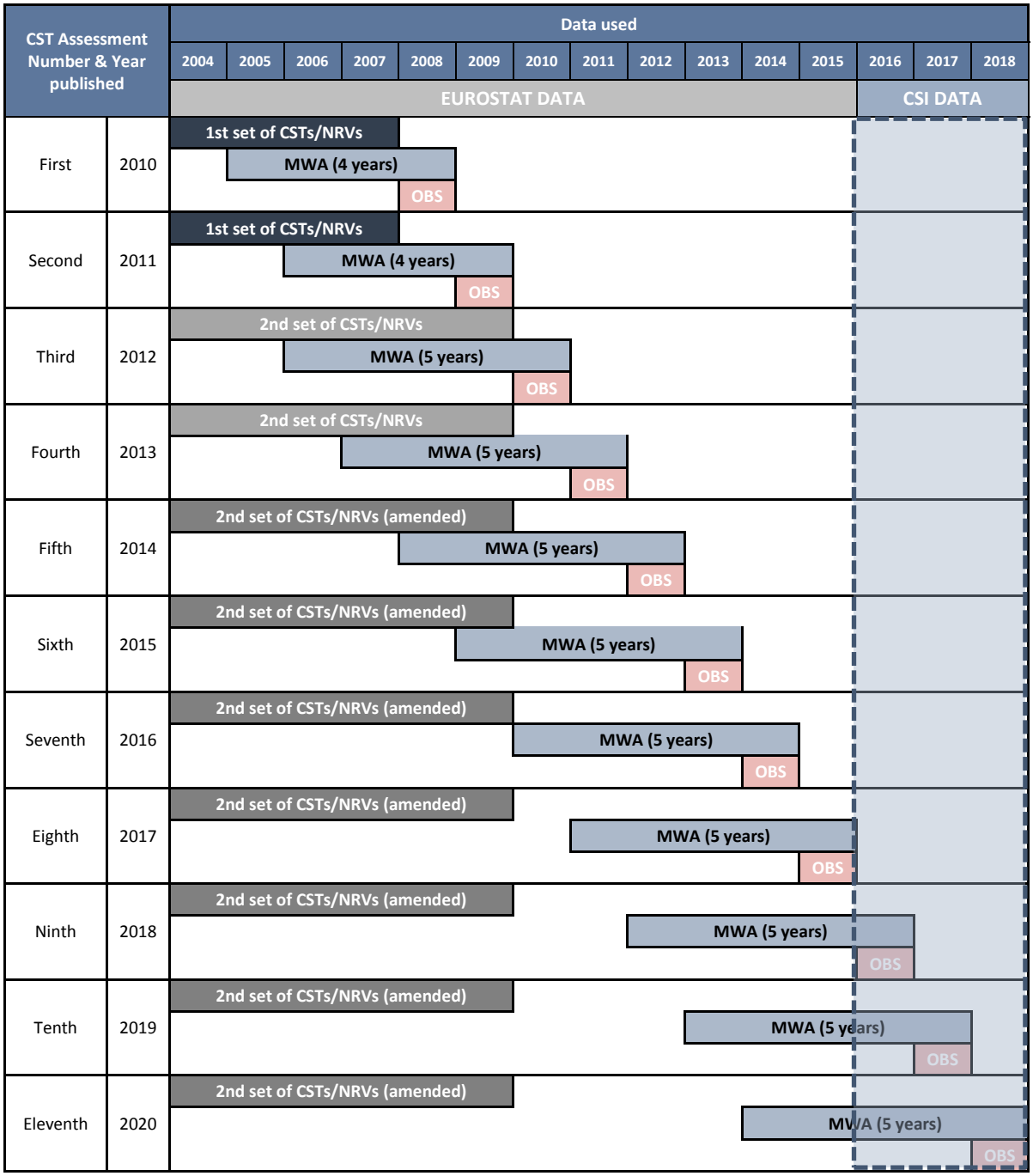


   b) The statistical practice in the field of railways evolved considerably since the publication of the RSD. For one, the EU expanded considerably since 2004 and the statistical practices of all MS have

been largely aligned since. The railway data collected between 2004 and 2009 is however not fully harmonised. The risk categories 'Trespassers' and 'Others' are particularly affected by the changes in statistical practice. The consequence is that a possible deterioration may show up today simply because the category is more accurately monitored.

c) Another reason why the CSM CST assessment is susceptible to inaccuracies follows from the used data sources. From 2004 until 2015, the CSTs were calculated using Eurostat data. As of 2016, however, the CSTs are determined using exclusively CSI data from ERA (see Figure 3).

Figure 3. Data used for CSM CST assessments



The 2020 CSM CST assessment used for the first time more years of CSI data than Eurostat data when calculating the moving weighted average (MWA). For the 2022 assessment, the assessment will use exclusively CSI data to determine the MWA. As a result, the data source used to set the NRVs (i.e. Eurostat) will be different from that used to calculate the MWA (i.e. CSI data). Analyses suggest that this will have a particularly negative impact on the reporting accuracy for the risk categories 'Trespassers' and 'Others'.

In sum, the fact that a) Railway safety improved significantly since the reference period 2004-2009, b) Statistical practices evolved considerably, and c) the data sources used to calculate the NRVs and MWA are increasingly different, means that using the statutory NRVs substantially decreases the assessment's accuracy.

To illustrate this point a hypothetical set of revised NRVs has been created, using CSI data from 2013 to 2017. Figure 4 shows the outcomes of the 2020 CSM CST assessment after step 2 using the hypothetical updated set of NRVs compared to the actual results with the 2004-2009 NRVs. Only in 3 out of 31 negative cases, the results were the same for the two sets of NRVs. The drastic difference evidences the distorting impact of the outdated and inaccurate NRVs.

Figure 4. Analysis of negative results using statutory and hypothetical NRVs

Country	2004-2009 NRVs for 2018 data							2013-2017 NRVs for 2018 data						
	Passengers		Staff	LC users	Others	Tres-passers	Society	Passengers		Staff	LC users	Others	Tres-passers	Society
	NRV 1.1	NRV 1.2	NRV 2	NRV 3.1	NRV 4	NRV 5	NRV 6	NRV 1.1	NRV 1.2	NRV 2	NRV 3.1	NRV 4	NRV 5	NRV 6
Belgium														
Bulgaria														
Czechia														
Denmark														
Germany														
Estonia														
Ireland														
Greece														
Spain														
France														
Croatia														
Italy														
Latvia														
Lithuania														
Luxembourg														
Hungary														
Netherlands														
Austria														
Poland														
Portugal														
Romania														
Slovenia														
Slovakia														
Finland														
Sweden														
United Kingdom														
Norway														
Total	0	0	3	0	7	1	0	7	7	10	1	3	2	1

Negative result using 2nd set NRVs
Negative result using 2nd set NRVs, but no fail using 3rd set NRVs
Negative result only with 3rd set NRVs
Negative result both with 2nd and 3rd set NRVS

Please note that the number of negative results in this step does not necessarily result in more countries with a negative assessment, as the method has additional validation steps (see Annex 1).

2) **Low counts:** The method is more prone to indicate a deteriorating safety performance if low counts of casualties are reported. The consequence is that countries with few accidents overall, or in a certain risk category, are more likely to be flagged for having a deteriorating performance.

   In practice, this limitation leads to discussions on the CSM CST's methodological weaknesses, rather than safety improvement actions.

3) **Delayed:** Another perceived limitation of the CSM CST concerns the delay between the data reporting and the assessment publication year. Respondents indicated that this limits the relevance of the report to influence safety improvement actions.

   It is important to consider that CSI data becomes available in October of the year following the analysed year. The CSM CST sets a deadline of 31 March of the analysed year +2 to have a sufficient buffer for any possible delays in CSI data delivery and validation. However, considering that the CSI data process has been optimised over the years, it would be possible for the Agency to start with the CSM CST assessment and publish the report by the end of the analysis year +1. This would be a time saving by three months. If the speed of publication increases, the operational relevance of the CSM CST assessment report would improve.

4) **Comparison of countries:** Another limitation of the Method is that no country specific characteristics (such as geography, utilisation rate, and quality of infrastructure) are factored in the formula to determine the reference values. Interviewees indicated that this prevents a more detailed comparison of national safety performances.

   Admittedly, this was not the set objective of the legislation and therefore hardly can be faulted for. At the same time, several respondents expressed their interest in making such comparative assessments and therefore see the current country-centric and unweighted assessment formula as a limitation.

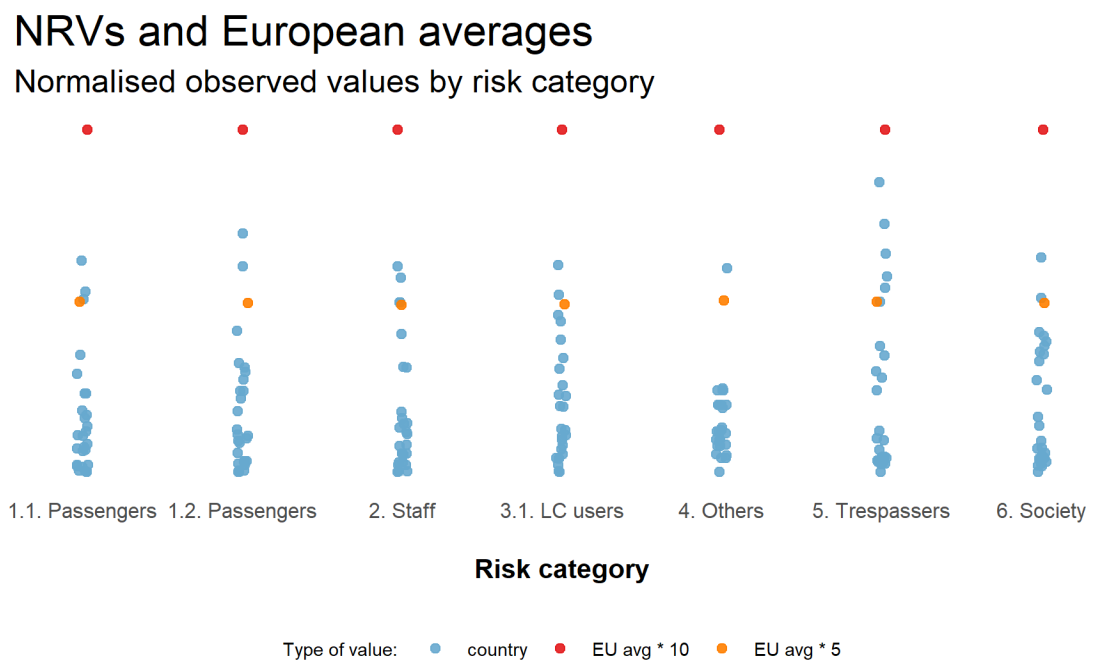
5) **Descriptive vs explanatory:** Interviewees also raised the comment that the Method does not provide any additional insights into why specific results were obtained. The CSM CST report is primarily a descriptive document which needs to be complemented by other evidence to shape safety improvement actions. This is the reason why respondents to the questionnaire answered mostly neutral on whether the CSM CST report contributed to national safety actions.

6) **Reducing variance in safety levels across Europe**: The CSM CST includes one provision to ensure that countries with risk levels that far exceed the European average do not use their past national performance as a point of reference (i.e. NRV), but rather a European CST. This CST is determined for each risk category by multiplying the average European value by 10. If the respective NRV of a MS is higher than the CST, the CST represents the maximum tolerable level of risk. In other words, if the safety performance of a country for a risk category is worse than 10 times the European average, the European average will be the benchmark.

   In practice, this provision does not have any effect. The multiplier is set too high for any NRV to be replaced by a CST. In fact, only as of a multiplying factor of 5 this method would start to have a noticeable impact. Figure 5 provides a normalised depiction of this analysis, illustrating that for all risk categories not a single country has a NRV higher than 10 times the European average (shown

with the red dot). If the CST would be set at 5 times the European average, one to five countries would have a NRV higher than the CST depending on the category (i.e. country values above the orange dot).

Figure 5. Overview of values used to derive the CST



Source: Commission Decision 2012/226/EU

Because no country exceeded the European average times 10, there was no need to provide an assessment of the estimated costs and benefits to achieve the CSTs, as set out by RSD Art. 7(3). And because the NRVs/CSTs have not been regularly updated, no priority areas for safety improvements have been identified.

This runs contrary to the provisions in the first and second RSD (2004/49/EC Art. 7(5) & EU/2016/798 Art. 7(5)) and makes that the CSM CST has not actively contributed towards reducing variance in safety levels across Europe.

To conclude, while the CSM CST is appreciated as a valuable instrument to monitor railway safety across Europe, its weaknesses cause that it has limited relevance to inform safety improvement actions. Several countries requested an update of the NRVs and, albeit a smaller number, a review of the method to address the weaknesses. They believe that failing to do so, would lead to a further decrease in accuracy and relevance of the CSM CST.

4 Effectiveness

4.1 To what extent is the Method used in Member States?

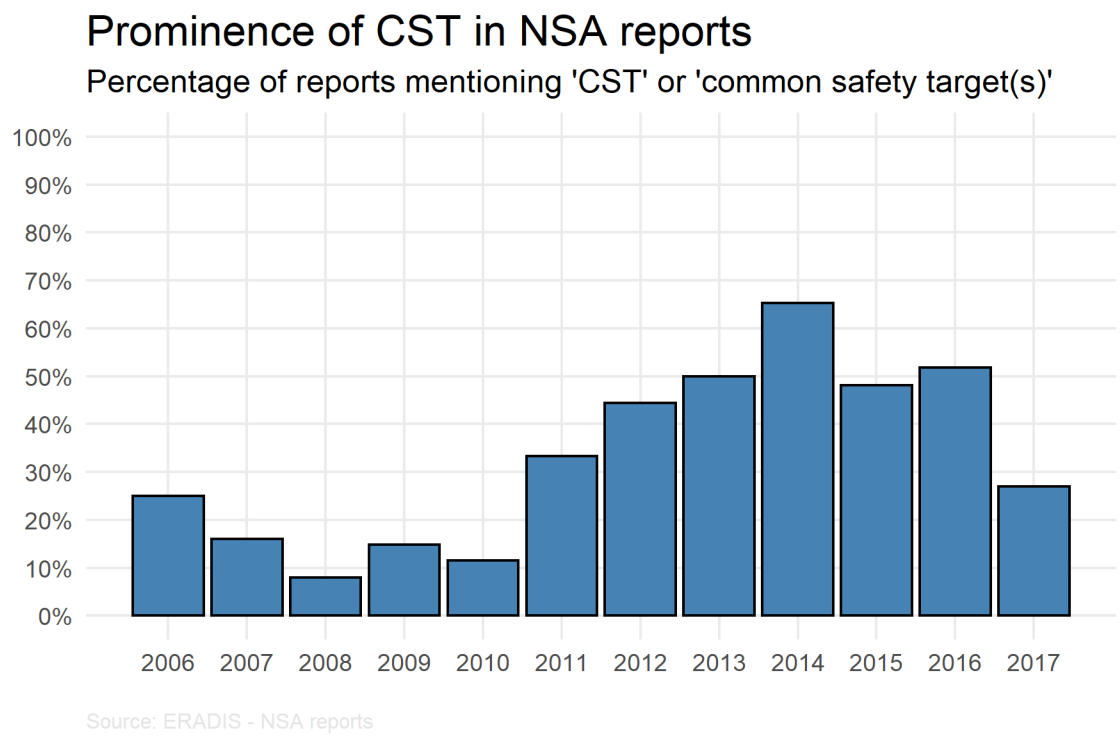
The CSM CST aims to contribute to and support MS with defining their National Safety Plans, required by Article 4(1)(f) of the RSD. This is done by providing a common framework for a discussion between the EC and MS on needed improvements.

The national safety plans, if existing, are not readily available to the Agency and could not be analysed on how the CSM CST is used. However, the consultation and interviews indicate that CSTs are not actively used in defining the national safety plans or strategies. At most, they are considered as one of several relevant inputs.

At the same time, the annual reports of the NSAs (RSD, Art.19) sometimes refer to CSTs when providing details on the development of the railway safety at the national level.

The aggregated results of the analysis, as show in Figure 6, highlight how the prominence of the CSM CST evolved over time. In 2006, the CSTs were first mentioned following the publication of the first RSD which introduced both the term and the upcoming CSM CST legislation. The frequency of CST kept rising till 2014 after which the occurrences dropped. A possible explanation could be that countries became more critical towards the CSM CST or believed it was of less importance to mention it in the annual reports.

Figure 6. Occurrences of “CST” keywords in NSA annual reports



An important footnote to this finding is that not all countries that use the CSM CST, also report on it in public reports. Still, the findings are indicative of a declining prominence of the Method.

The questionnaire and interviews confirmed that the extent and way in which countries use the CSM CST strongly differs. Some countries perform the CSM CST ahead of the formal assessment by ERA. Other countries indicated to only apply the method sporadically or to validate the results by ERA.

In most countries, the CSM CST is the only quantitative target setting instrument. Exceptionally railway undertakings are asked to define safety targets and communicate the outcomes to the NSA. The evaluators

are aware of one case where the CSM CST is used by a railway undertaking to monitor the evolution in safety performance. In these exceptional cases, it may be assumed that the CSTs have been the driver for introducing national and company safety targets.

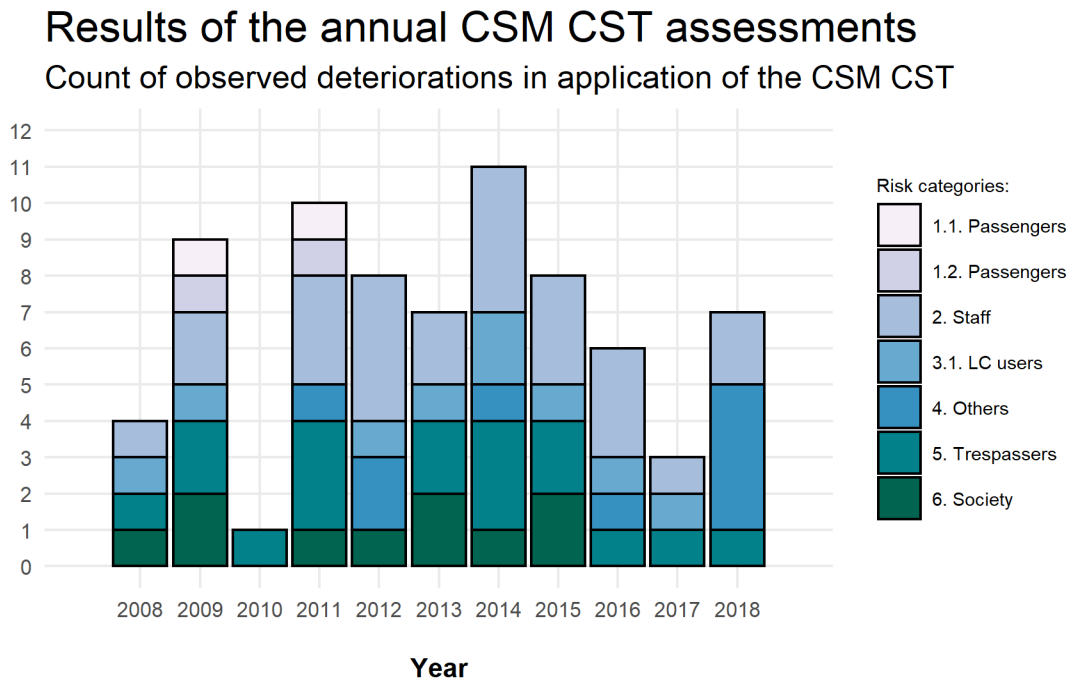
To summarise, the data suggests that countries are familiar with the CSM CST and use it to varying degrees. The prominence of the CSM CST within NSAs may however be backsliding.

4.2 To what extent have MS explained the causes for deterioration of safety performance?

Article 5 of the CSM CST contains an enforcement clause. In case the CSM CST assessment identifies a 'possible deterioration', the MS shall send a report to the Commission to explain the likely causes of the results obtained. If a 'probable deterioration' is noted, the MS shall also add a safety enhancement plan if appropriate. No further enforcement actions exist.

Figure 7 shows the number of possible or probable deterioration since the CSM CST came into force. There were a total of 74 deteriorations observed. As one country can have a negative result for more than one risk category, the unique country-year combinations are 47.

Figure 7. Countries with a possible or probable deterioration



Between 2014 and 2019, a total of 17 reports could be retrieved. No reports were recovered from before 2014 nor from the year 2018. It appears that in some instances, those reports do not exist and there was no active follow up to ensure their availability.

The reports differ substantially in terms of style and depth of analysis, although a content analysis identified three sections that typically recur. First, one or more causes for the identified deterioration were commented on. Second, actions to remedy the result were highlighted. Finally, a conclusion was drawn. For each of these categories a set of indicators was developed as shown in Annex 2.

Table 3 summarises the results by showing the percentage of reports that mention a certain clause, action or conclusion. A few conclusions can be drawn from this.

First, countries are more likely to mention methodological issues as an underlying cause for the observed deterioration than actual safety related aspects. The methodological causes predominantly refer to issues described in section 3.3. Less frequently the cause is found in national methodological or statistical issues.

Table 3. Percentage of reports that mention a specific cause, action or conclusion

Points mentioned	2014	2015	2016	2017	2019	Total
Cause - Methodological	67%	40%	80%	100%	100%	**76%**
Cause - Accident/incident related	33%	60%	40%	50%	100%	**59%**
Actions - Infrastructure / technology improvement	33%	60%	40%	50%	100%	**59%**
Actions - Information improvement	33%	40%	40%	50%	67%	**47%**
Actions - Supervision improvement	67%	40%	20%	0%	0%	**29%**
Actions - Methodological improvement	33%	40%	20%	50%	0%	**29%**
Conclusions - No actual deterioration	67%	60%	40%	0%	100%	**59%**
Conclusions - Performance shall improve	67%	80%	60%	0%	100%	**71%**

Concerning the actions taken to improve railway safety performance, a wide variety of examples were shared. At the same time it should be noted that the reports rarely indicate that the actions were taken because of the CSM CST assessment results. The safety improvement actions were organised based on other insights and often predate the CSM CST assessment. The questionnaire and subsequent interviews confirmed that few enforcement actions were taken because of the outcomes of the CSM CST assessment.

In about 71% of the reports, a statement is added that the national safety performance shall improve following the actions that were taken. Yet in approximately 59% of the reports, the country states that no actual deterioration occurred. Such an outcome puts the relevance of the assessment results in question.

It is notable that the explanatory reports as part of the enforcement actions could be a means of interaction between the MS and the EC on the needed improvement actions. Yet given the low response rate and as methodological issues were often pointed at, the CSM CST has not been a particularly effective instrument to promote interaction.

On top of this it is noted that the explanatory reports typically do not make explicit reference to a national safety plan. It actually appears that the two are disconnected.

There are no other formal channels besides the explanatory reports to explain the causes for deterioration of safety performance. It can therefore be concluded that only a share of MS have explained the observed deterioration. And those countries that did provide an explanatory report frequently pointed to the methodological causes for the results.

In sum, the observations that:

- the explanatory reports provide a limited explanation on safety performance and rarely lead to new safety improvement actions and/or amendment of national safety plans;
- does not feed into other audit or enforcement mechanisms;
- combined with the observation that the MS response rate to the Commission is low;

indicates that the effectiveness of the enforcement actions is limited.

4.3 Have MS engaged in follow-up actions to improve safety after a negative assessment?

The MS reports, questionnaires and interviews indicated that a negative assessment rarely contributed to safety improvement actions in a direct manner. In the interviews only one MS explicitly stated that the

negative CSM CST assessment led to the allocation of more funds for railway safety improvements. As such, the effectiveness of the CSM CST to initiate and ensure follow-up actions after a negative assessment is believed to be generally low.

4.4 To what extent did the Method contribute to better safety performance?

While the CSM CST rarely leads directly to safety improvement actions (as highlighted above), the indirect effects on safety need to be acknowledged. Many countries reported that the CSM CST is used as one of many inputs to shape safety improvement plans and actions. Here the CSM CST achievement report is put besides, amongst others, national safety priorities, statistics and sector feedback. Respondents pointed at the difficulty to isolate the effect of the CSM CST from other inputs, while acknowledging its contribution.

For the Agency and the Commission, the CSM CST is an essential tool for assessing progress in railway safety and benchmark safety levels of individual countries. As such, it is an important tool to inform the policy debate and various activities at the EU level.

In the years 2014-15, the Agency ran a Priority countries programme aiming at improving the safety performance of MSs with relatively low safety levels. The NRVs of the second set, established under the CSM CSTs were used as a reference for determining the focus countries. A series of Agency activities then targeted those countries, with the view to improve their safety levels on the medium term. As of 2020, there is, however no evidence that the safety levels improved in these countries more than in other countries. Notably, the heterogeneity in safety levels remains practically the same (see Fig. A-8 of the Report on progress with Safety 2020).

So while there are pieces of evidence that the CSM CST is used to steer safety improvement actions, it is assumed that the CSM CST contributed mostly indirectly to better safety performance across Europe.

5 Efficiency

5.1 To what extent are the costs of the Method justified, given its contributions?

As described above, the main efforts related to the Method concern the annual assessment report and the MS explanatory reports. Both these outputs are estimated to take at most 60 working days a year when combining the MS, EC and Agency level. No additional investments are made, as no specific infrastructure or budget is allocated to the Method. As such, the costs of the Method are believed to be well below EUR 100 000 a year.

The data collection costs related to the CSIs, which is closely linked to the CSM CST, are higher. At the same time these data collection efforts do not only serve the CSM CST but are an important element of many other national and European safety monitoring efforts, which likely would occur even without the CSM CST. As such the costs are acknowledged but not fully attributed to the CSM CST.

When a probable deterioration of railway safety is established at the level of a MS, followed by a safety improvement action that leads to a reversal of the negative trend, then several fatalities and serious injuries could be prevented during a few years period. The socio-economic costs of a railway fatality in the EU is EUR 3.3M and EUR 0.5M for a serious injury.

As indicated before, the Method is used as one of the inputs to shape railway safety actions. In some exceptional cases, it directly led to additional investments in safety priority areas. It is therefore acknowledged that the CSM CST aids with identifying areas where safety improvements can be realised in the most impactful and cost effective manner.

Even if attributing only a fraction of the observed safety improvements and outcomes to the CSM CST, the benefits largely outweigh the costs. This observation has been corroborated by the interviewees.

5.2 What are the areas for potential administrative burden reduction and simplification?

The potential for efficiency improvements can be evaluated for four key activities and their associated processes.

Activity	Determine NRVs, publish CSTs
Processes	Collect Eurostat/CSI data -> Perform NRV/CST assessment -> Inform EC and RISC on outcomes -> adopt revised NRVs/CSTs as a Commission Decision

CSTs and NRVs shall be revised at regular intervals to provide a solid basis for an accurate assessment and to take into account the global development of railway safety (RSD, Art. 7(5)). Since the mandated publication of the second set of NRVs in 2012, there has been no revision, although a Mandate for the establishment of the next set was issued.

While the method to calculate the updated NRVs requires few resources, the publication as a legal act does represent a burden as the procedure is cumbersome and lengthy.

Today, acknowledging the improved data quality, NRVs could be updated on an annual basis as an integral part of the CSM CST assessment. It would imply that a moving window would be used, rather than using a fixed time frame (i.e. the 2004-2009 period as is currently used). For instance, the 6 year period prior to the years used for the CSM CST assessment can act as the NRV period.

At the same time, the CSTs may need to continue to be established in a formal way if they continue to be referred to by other legal provisions. This option shall be further discussed in the recommendations section.

Activity	Data preparation
Processes	Collect Eurostat/CSI data -> Run CSM CST analysis -> Contact NSAs if 'fail result' observed -> update input data when needed -> validation of results

The data preparation process has been standardised over the years. The CSI data is provided in a stable format and inserted in an established calculation model. The most laborious part of the process is stipulated in Annex 3.2.3 of the CSM CST, mandating the Agency to contact those MS with a negative result after step 2.

The MS is requested to send the specifics of the single highest-consequence accident during the most recent years. If this single accident is more severe than the most severe single accident included in the years used for setting the NRV, it shall be excluded and the values recalculated.

Contacting and following up with the NSAs provides additional assurances that the results are correct and, moreover, makes that outliers are excluded. The Agency has an overview of the relevant contacts and the communication with NSAs generally runs smoothly. From the NSA side there are no indications that the data collection and response cost considerable resources.

There is also no other option to retrieve the data as only the NSAs have a complete overview of the accidents during the years used for setting the NRV (2004-2009), and may also have a better overview on recent accidents than what is available in the Agency's ERAIL register.

In any case, collecting single accident data at the EU level for the sole purpose of the CSM CST could not be recommended. If such information becomes available for other purposes, the CSM CST could benefit from the availability. Specifically, the implementation of the new CSM on the assessment of safety levels and performance of railway operators (CSM ASLP) may result in an establishment of a common occurrence scheme and even a shared database that could effectively feed into the CSM CST assessment procedure. Even then, this may not fully replace a communication between the Agency and the NSA due to the need for data quality assurance.

To conclude, this activity is largely optimised. And while the contact with the NSAs is relatively the most time consuming process, it is a mandated task for which the benefits largely outweigh the costs of any alternative.

Activity	Preparation and publication of report
Processes	Determine report structure -> integrate insights of data analysis -> draw conclusions -> review

Over the years the structure of the CSM CST assessment report and its underlying calculation files have remained stable. The chapters reflect on each step that is mandated by the method and output tables are annexed to the report. By doing so, the report provides a transparent overview on how the results were obtained.

Thanks to the stability, the drafting process of the CSM CST assessment report is highly efficient. The Agency's staff that is involved in drafting the report is well aware on how to write and review the report.

Activity	Enforcement actions
Processes	EC request report from MS -> MS prepares response -> MS communicates response to EC

As was shown before in Figure 7, each year several countries should inform the EC on the likely causes of the observed deterioration in safety performance. An analysis of the reports shows widely diverging approaches in reporting practices.

Some reports are one-pagers, stating that after analysis, no deterioration was noted and the CSM CST erroneously identified a possible deterioration. In other cases, an in-depth study on the relevant accidents and likely causes is provided, together with an overview of existing and future safety improvement actions. The time and effort put into reports therefore varies.

Respondents to the questionnaire and interviews rather agreed that drafting the report takes relatively little time and effort. One respondent indicated however that the associated administrative process is cumbersome. The reason being is that the communication with the Commission goes through the country's permanent representation, ministry of transport and/or ministry of foreign affairs. Yet the NSA typically drafts the explanatory report and subsequently needs to explain various contacts within the national administration why the results were obtained and how the CSM CST works. This process remains nevertheless strongly dependent on how the MS organises the drafting and communication processes.

To conclude on the legislation's efficiency, it is noted that several activities have been optimised over time. And, importantly, the questionnaire highlighted that all respondents agree that the benefits of the CSM CST are larger than the required national efforts.

6 Coherence

6.1 To what extent is the Method complementary to other EU railway safety legislation?

The CSM CST is one of seven specific CSMs introduced in the second RSD (Art.6). These CSMs shall describe how the safety levels, the achievement of safety targets and compliance with other safety requirements.

Table 4. Overview of common safety methods

CSM – abbreviation and title		Purpose(s)
CST	Assessment of achievement of safety targets	General monitoring, assurance of public, informing of decision makers
ASLP	Assessment of the safety level and the safety performance of railway operators at national and Union level	Effective risk management at national and EU level, input to safety supervision and monitoring
SUP	Supervision	Effective supervision by NSAs
MON	Monitoring	Effective safety monitoring by operators
RISK	Risk evaluation and assessment	Effective risk evaluation by operators
SMS	Process of the safety management system	Enhancement of the maturity of the SMS in place by operators
SC&SA	Conformity assessment	Assessment of conformity for safety certificates and authorisations issued by NSAs/Agency

The overview shows that the CSM CST has a unique purpose compared to other CSMs. It focuses on the overall safety performance at the EU and national level. Other CSMs either focus on specific performance of operators or authorities. It could be viewed as hierarchically superior to other CSMs, not only due to specific provisions in the RSD (i.e. dedicated Article 7), but also by informing the other activities under which other CSMs are applied. Importantly, the respondents to the questionnaire confirmed that the method's function and place in the overall EU legal framework on railway safety is clear.

At the same time, some potential issues were identified for the Method in relation to the specific provisions of the RSD:

- RSD Art 4(1)(f): "(f) develop and publish annual safety plans setting out the measures envisaged to achieve the CSTs"
- RSD Art. 7(5): "CSTs shall be revised at regular intervals, taking into account the global development of railway safety."
- RSD Art. 7(7): "7. Member States shall make any necessary amendments to their national rules in order to achieve at least the CSTs, and any revised CSTs, in accordance with the implementation timetables attached to them."

Although the Method is compatible with such provisions, this report has established that they are poorly applied. This leads to the lack of complementarity and consistency. Since there is no formal mechanisms to determine the non-compliance, the enforcement actions are not triggered. As a result, the validity, value and impact of the Method are impacted.

Taking a broader view, it is notable that no legally binding targets exist in other fields of transport (road, aviation, maritime), where policy goals have traditionally prevailed. They are sometimes stated also in legislation (aviation), but with no follow up or enforcement provisions. In this context, the legally binding and enforced safety targets in railways represent an exception, resulting from the particular regulatory and market context.

6.2 How does the Method fit with other national interventions?

No legislative safety targets at national level could be identified as part of this evaluation. At the same time, policy goals of at least maintaining current safety levels are visible in some countries. The CSM CST thus appears fully compatible with other national interventions in the area of railway safety targets.

7 EU Added value

7.1 What has the Method contributed on top of what would have been done by MS at national level?

All reviewed materials suggest that individual Member States have established widely different safety performance monitoring systems. Considering this divergence, the CSIs and CSTs provide a common basis for all countries, enabling benchmarking and a higher level of monitoring.

The Method itself is the only tool to compare the evolution of safety performance across Europe in a harmonised and transparent way. Other similar methods are rarely used in individual Member States. At the same time, only a few countries adopted safety targets at the national level. Quantitative railway safety targets remain a rarity in Member States and the introduction of the CST has had a limited impact in this sense.

The interviews highlighted that the CSM CST assessment report is used as an input to shape safety improvement actions. In exceptional cases, the assessment report was the direct cause for additional investments in railway safety. As such, there is mostly an indirect contribution of the Method to railway safety, but the contribution as such comes on top of what MS would have done without the Method's existence.

Part III – Conclusions and Recommendations

8 Conclusions

The CSM CST has an important role in the EU legal framework for railway safety and it provides added value to the Member States and EC. However, it suffers from poor application and enforcement. Table 5 provides a qualitative summary of the evaluation.

Table 5. Summary of the CSM CST ex-post evaluation

Evaluation criterion	CSM CST criterion status	Recent evolution
Relevance	Medium	Negative
Effectiveness	Low - Medium	Stable
Efficiency	Medium - High	Stable
Coherence	Medium - High	Stable
EU Added Value	Medium	Negative

Scale: Low, medium, high

It is noted that the method's **relevance** is negatively affected by the absence of revised NRVs/CSTs. This has a detrimental impact on the accuracy of the results. And as the CSTs are equal to the highest NRV in Europe, the Method did not promote the reduction of variance in safety levels. In absence of changes, the relevance of the Method will further decrease.

Compliance with enforcement actions (in case of probable/possible deterioration of safety performance) is rather low and the content of the explanatory reports varies in terms of depth. The fact that methodological issues are often pointed at limits the potential of interaction between MS and the EC on possible safety improvements. As such, the **effectiveness** of the Method is considered to be low-medium.

The **efficiency** of the Method is high as few requirements are imposed on stakeholders, and the assessment itself requires limited resources. So while the benefits may not be substantial, the low costs make that the Method can be considered as efficient.

The method has a clear position in the EU legal framework and often complements national interventions. Still, the fact that no stricter CSTs have been set makes some provisions in the RSD superfluous. Based on these points the Method's **coherence** is considered to be medium to high.

The **EU added value** exists, as the CSM CST is often the only source of quantitative safety targets in MS and does contribute (albeit often indirectly) to safety improvement actions. But as the Method's relevance decreases, there looms a risk that its value decreases along.

9 Recommendations

Due to a likely negative evolution in several areas under the status quo, it is recommended to address the shortcomings of the current CSM CST. The recommendations and proposed implementation scenarios are described below.

Rec 1: Update NRVs/CSTs

The NRVs/CSTs are outdated and lead to erroneous results, which undermines the validity and relevance of the Method. The second set was published in 2012 (2012/226/EU) with no subsequent sets published, contrary to the requirement in the RSD (Art. 7(5)) and in the Mandate to the Agency. A swift update is recommended to mitigate this considerable weakness of the Method.

Rec 2: Faster publication

The timely availability of the annual assessments is crucial for the relevance and added value of the Method. The Method requires the report to be published before March 31, two years after the analysed year. Yet the aim should be to publish the report as soon as possible after the relevant CSI data is made available. To this end, the Agency should start the assessment in October, one year after the analysed year, and publish the report by December. This would concern a purely operational change.

Rec 3: Make exclusive use of CSI data

The Eurostat data continues to be used to set the NRVs/CSTs in the assessments. This data does not have the same reporting scope as it used to be compiled for other purposes. Today there is sufficient CSI data available (2006-2019), allowing the Method to rely exclusively on CSI data. This would improve the comparability and accuracy of the data considerably.

On the medium to longer term it would be possible to leverage the Information Sharing System, as established under the CSM ASLP. This could also improve the speed with which the assessment is performed. The possibility of this can only be assessed when the Information Sharing System is operational.

Rec 4: Automatically revise NRVs

The NRVs are defined as a moving average and their publication was deemed necessary at the time when the data were not fully harmonised and of sufficient quality. With the availability of CSIs and a sound data management system, NRVs could be estimated as an integral part of the annual assessment and thus be automatically updated on an annual basis. This would lead to an administrative simplification, and the continuous use of recent data. The CSTs could still be periodically published as a separate legal act if need be.

Rec 5: Ensure the application of the enforcement actions

The interaction between MSs and the Institutions as foreseen under article 5 of the CSM CST in case of possible/probable deterioration of safety performance needs to be better defined and potentially formalised. In its current form, the report is not always transmitted and the content of reports varies considerably. Also, the current methodological limitations are often (rightfully) pointed at as a cause for the deteriorating performance. Such comments limit the scope for discussion on possible safety improvements. Within this context, the enforcement actions and the role of the Agency herein should be reconsidered.

Rec 6: Revise the CST concept

A “target level of safety” can have two theoretical meanings: a level that must be achieved (a mandatory target) and a level that should be aimed for, but need not necessarily be achieved (an aspirational target).

In the EU legislative context, the NRVs are seen as mandatory targets (helping to assure that safety does not start to deteriorate in any MS). Contrary to NRVs, there is a case to conceptualise the CSTs as aspirational targets (safety levels aimed for – policy targets) underpinned by a different enforcement regime. In this way, tangible aspirational policy targets could be defined and used (as in other modes of transport) to drive various improvement activities.

Such a reinterpretation could seek alignment with the perspective adopted in the CSM ASLP. This includes a more proactive approach towards safety improvement, collective learning, and emphasizing not only safety deteriorations, but also safety improvements.

Rec 7: Adjust the statistical method

Since the method may fail to provide reliable results in case of a series of zero safety outcomes, the annual assessment should be skipped if for a given risk category zero fatalities and serious injuries are counted in at least three years for which NRV are calculated. This helps to avoid using a NRV that is likely to be breached if a single railway accident occur in the year for which the assessment is carried out. This could alternatively be addressed directly by the modification to the statistical method used, with a specific solution to be yet determined. Other revisions of the statistical method could also be considered. Some suggestions that were mentioned included the analysis of precursors and the factoring in of technical and geographical differences between MS. The data collected through the information sharing system, as proposed under the CSM ASLP, could enable several of such improvements.

Each of the recommendations above brings specific benefits. However, to achieve the highest possible synergies and effects, a coherent approach is advocated. Acknowledging the urgency of some recommendations, and the fact that some can be implemented swifter than others, several revision scenarios are proposed in the table below.

Table 6. CSM CST Revision scenarios

Revision scenarios	Recommendation						
	1	2	3	4	5	6	7
Short term revision – limited changes	X	X					
Medium term revision – change to legislation	X	X	X	X	X		
Longer term revision – change to legislation and nature of assessment	X	X	X	X	X	X	X

The conclusions and recommendations of this evaluation should shape further actions to improve the functioning of the CSM CST.

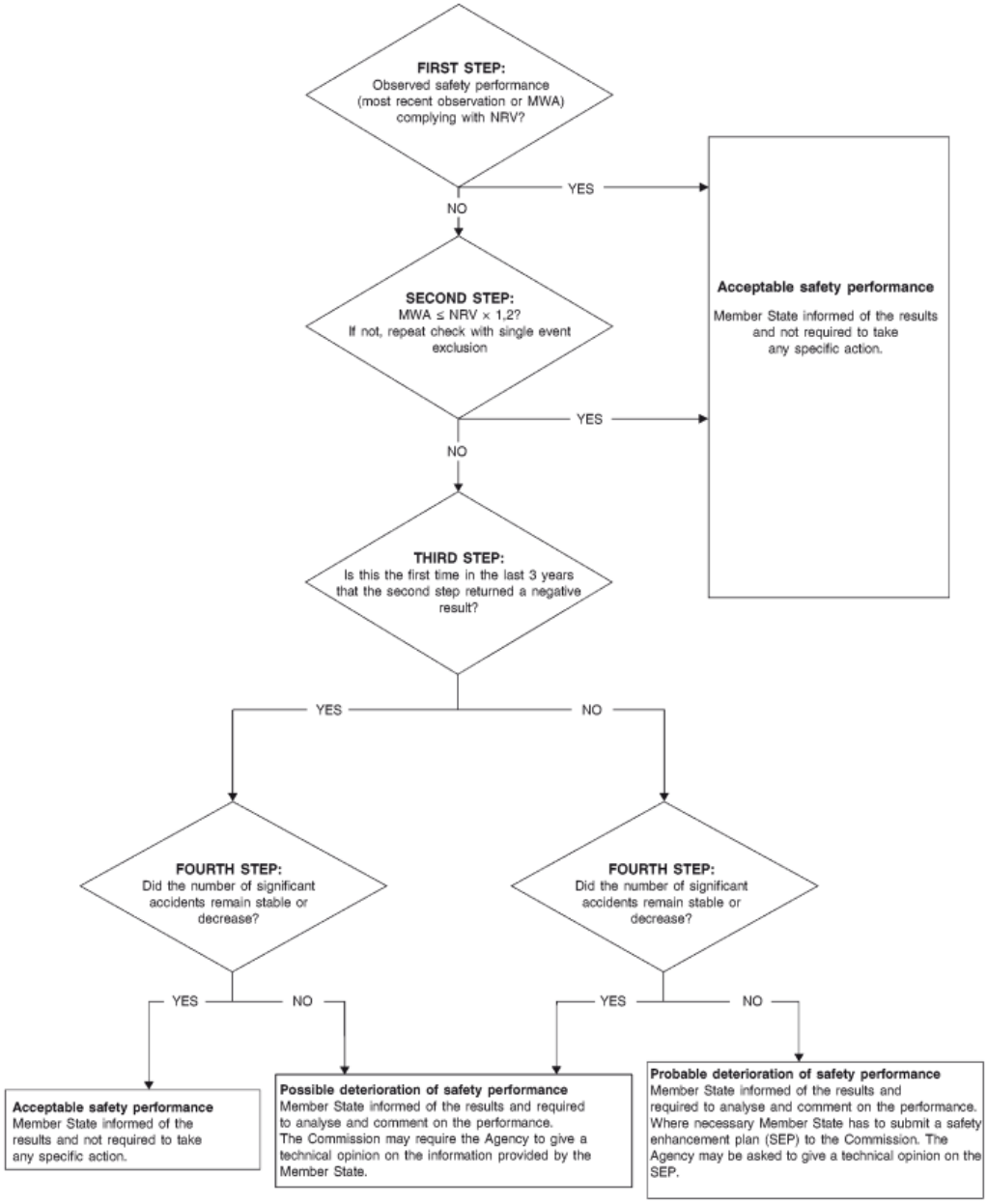
References

N°	*Description*	*Reference*
[1]	Directive 2004/49/EC of the European Parliament and of the Council on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Railway Safety Directive). (In force until 31 October 2020)	2004/49/EC
[2]	Commission Decision on the adoption of a common safety method for assessment of achievement of safety targets, as referred to in Article 6 of Directive 2004/49/EC of the European Parliament and of the Council	2009/460/EC (CSM)
[3]	Commission implementing decision of 22 July 2011 on a mandate to the European Railway Agency on the revision of common safety targets and related common safety method for period 2011-2015	C(2011) 5158
[4]	Commission Decision on the second set of common safety targets as regards the rail system	2012/226/EU
[5]	Commission implementing decision of 11 December amending Decision 2012/226/EU on the second set of common safety targets for the rail system	2013/753/EU
[6]	Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast of the Railway Safety Directive)	(EU) 2016/798
[7]	Commission Staff Working Document on Better Regulation Guidelines of 7 July 2017. The Better Regulation Toolbox is found on https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox/better-regulation-toolbox_en	SWD (2017) 350

Abbreviations

BRG	Better Regulation Guidelines
CSI	Common Safety Indicator
CSM	Common Safety Method
CST	Common Safety Target
EC	European Commission
ERA	European Union Agency for Railways (formerly European Railway Agency)
EU	European Union
MS	Member State
MWA	Moving Weighted Average
NSA	National Safety Authority
NRV	National Reference Value
OBS	Annual observation
RISC	Railway Interoperability and Safety Committee
RSD	Railway Safety Directive

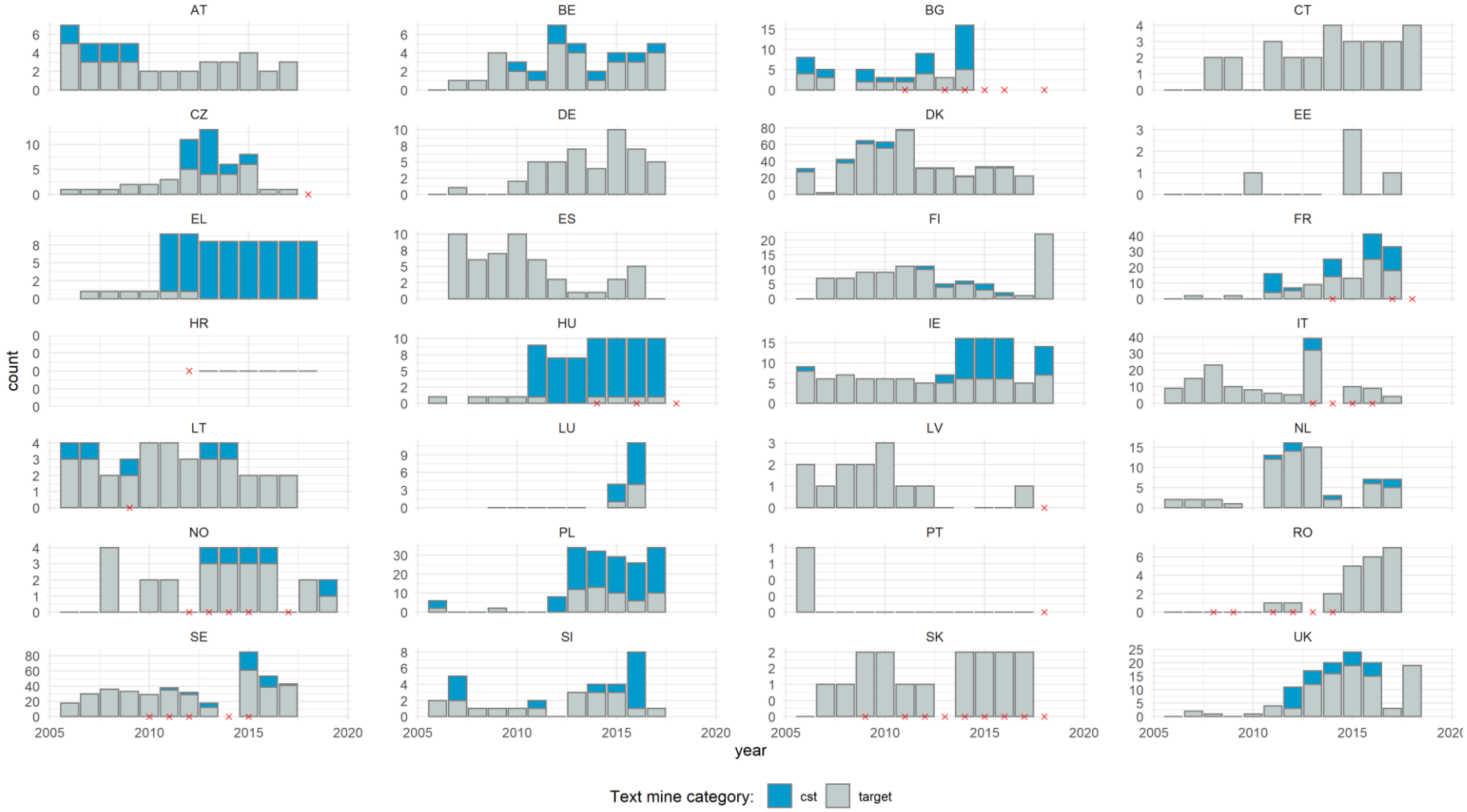
Annex 1 Decision flowchart for the procedure referred to in the CSM CST



Annex 2 Member State Report Analysis

[NOT IN PUBLIC REPORT]

Annex 3 Word counts related to CST and 'target' in NSA reports (2006-2018)



The red crosses show per country the years when the CSM CST observed a possible or probable deterioration in safety performance

Annex 4 Questionnaire template

CSM CST evaluation

Introduction

ERA (the Agency) evaluates the Common Safety Method (CSM) on the assessment of achievement of Common Safety Targets (CST) and its National Reference Values (NRV).

We would like to invite you for an interview of about 20 minutes to discuss the following questions:

- What are in your view the weaknesses of the CSM CST?
- What are in your view the strengths of the CSM CST?
- Could you give some more information on the impacts of the CSM CST, if any? Did it for instance influence national policies, plans or investments?

Prior to the interview we would ask you to fill in the short questionnaire on the next page and return it to mitchell.vanbalen@era.europa.eu

Your feedback will greatly help us to assess the legislation's strengths and weaknesses and provide evidence for possible improvements to the CSM CST framework. Please note that no personal information is collected and the results will be presented in an aggregated form only.

Many thanks in advance for your contribution.

Background

The 2004 Safety Directive first proposed common safety targets to ensure that railway safety is at least maintained at EU and Member State (MS) levels. Since 2009, the CSM CST is in force and the Agency produces annual assessment reports to evaluate the safety performance of MS and the EU for several risk categories (2020 report available here).

These annual reports are presented to MSs at the RISC committee and sometimes lead to a request to a MS to provide explanations on the results achieved.

In recent years, the Agency received an increased number of comments about the validity of the method and the accuracy of results.

In line with the Better Regulation Guidelines, and as foreseen in the Agency Regulation, specific legal provisions should be subject to ex-post evaluations. In this context, the Agency is carrying out the evaluation of the CSM CST to understand its impacts and gather evidence for possible future improvements.

The evaluation report shall be made available at the beginning of 2021.

Questions CSM CST

Please indicate to what extent you agree with the following statements. One answer per row possible.

Questions	1 **Fully disagree**	2 Rather disagree	3 Neutral	4 Rather agree	5 **Fully agree**		Don't know
1. The CSM CST is an accurate method to assess whether railway safety has not started to deteriorate.	☐	☐	☐	☐	☐		☐
2. The CSTs/NRVs are useful indicators for monitoring the general development of railway safety in my country.	☐	☐	☐	☐	☐		☐
3. My country carries out the safety assessment using the CSM CST method ahead of the formal assessment carried out by the Agency.	☐	☐	☐	☐	☐		☐
4. The ERA annual CSM CST assessment reports are used to inform railway safety policies/actions in my country.	☐	☐	☐	☐	☐		☐
5. My country uses other (non-CST/NRV) numeric railway safety performance targets.	☐	☐	☐	☐	☐		☐
6. The CSM CST assessments led to the timely identification of changes in safety performance in my country.	☐	☐	☐	☐	☐		☐
7. The CSM CST contributed to improving railway safety.	☐	☐	☐	☐	☐		☐
8. Actions to improve railway safety were taken because the CSM CST indicated that safety performance deteriorated.	☐	☐	☐	☐	☐		☐
9. The national efforts in relation to the annual assessment (such as CSI data collection and communication with the Agency) are worthwhile given the CSM CST's benefits.	☐	☐	☐	☐	☐		☐
10. Drafting a report to the Commission (after an observed deterioration of safety performance) takes little time and effort.	☐	☐	☐	☐	☐		☐
11. The CSM CST has its clear function and place in the overall EU legal framework on railway safety.	☐	☐	☐	☐	☐		☐
12. The findings presented in the CSM CST annual reports are consistent with our national railway safety assessments.	☐	☐	☐	☐	☐		☐
13. Without the CSM CST, there would be no real national substitute to assess railway safety performance at country level.	☐	☐	☐	☐	☐		☐
14. Because of the CSM CST, more safety improvement actions were taken than if it would not exist.	☐	☐	☐	☐	☐		☐

Annex 5 Questionnaire results

SUMMARY OF RESPONSES							
Question	N	Fully disagree	Rather disagree	Neutral	Rather agree	Fully agree	Don't know
The CSM CST is an accurate method to assess whether railway safety has not started to deteriorate.	5	0	0	1	3	1	0
The CSTs/NRVs are useful indicators for monitoring the general development of railway safety in my country.	5	0	0	0	4	1	0
My country carries out the safety assessment using the CSM CST method ahead of the formal assessment carried out by the Agency.	5	0	1	1	1	2	0
The ERA annual CSM CST assessment reports are used to inform railway safety policies/actions in my country.	5	0	1	2	1	1	0
My country uses other (non-CST/NRV) numeric railway safety performance targets.	5	4	1	0	0	0	0
The CSM CST assessments led to the timely identification of changes in safety performance in my country.	5	1	1	0	2	1	0
The CSM CST contributed to improving railway safety.	5	1	0	1	1	2	0
The national efforts in relation to the annual assessment (such as CSI data collection and communication with the Agency) are worthwhile	5	0	0	0	1	3	1
The CSM CST has its clear function and place in the overall EU legal framework on railway safety.	5	0	0	0	3	2	0
The findings presented in the CSM CST annual reports are consistent with our national railway safety assessments.	5	0	0	1	2	2	0
Without the CSM CST, there would be no real national substitute to assess railway safety performance at country level.	5	1	2	2	0	0	0
Because of the CSM CST, more safety improvement actions were taken than if it would not exist.	5	1	1	0	2	1	0
Actions to improve railway safety were taken because the CSM CST indicated that safety performance deteriorated.	4	1	0	1	1	1	0
Drafting a report to the Commission (after an observed deterioration of safety performance) takes little time and effort.	4	0	1	0	2	0	1

Annex 6 ERA consultation on safety targets – CST findings

Strengths Weaknesses Opportunities Threats (SWOT) Analysis of CSTs

Strengths	Weaknesses
• Clarity of objective • Fairness of assessment • Allow comparison	• Inflexible • Slow to amend • Reactive, not proactive or predictive • Fair normalisation and comparison
Opportunities	**Threats**
• To influence and incentivise decision-making • To encourage collaboration between different actors to a common goal • To focus political action on safety *without* an accident	• Safety responsibility shifted to policy makers, not rail actors • Distorts focus away from key risks identified locally • "Gaming" of targets producing unwanted behaviours • Disincentive to reporting