Application guide for the CSM Assessment Body referred to in Regulation (EU) N°402/2013 and in OTIF UTP GEN-G of 1.1.2014 on the CSM for risk assessment

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Abstract: in order to gain trust in risk assessments and to allow mutual recognition of the results of the application of Regulation (EU) No 402/2013, or of the equivalent OTIF Uniform Technical Prescriptions - UTP GEN-G of 1.1.2014, on the CSM for risk assessment, it is necessary to give confidence that the system under assessment can deliver the required level of safety. For this purpose, whenever a significant change is made to the railway system the CSM requires to appoint a CSM assessment body. This body is a competent external or internal individual, organisation or entity, separate and independent from the “design, risk assessment, risk management, manufacture, supply, installation, operation/use, servicing and maintenance” of the system under assessment. Its role is to check the application of the CSM risk management process by the proposer and the risk assessment results in order to form a judgement on whether the change management process and the safety requirements resulting from this process are appropriate and adequate for the planned significant change so that the system can satisfy those safety requirements. The objective of this paper is to summarise and highlight the main requirements to be fulfilled by this body, its role and its responsibilities as defined in “Regulation (EU) No 402/2013(1) on the common safety method for risk evaluation and assessment” or in the equivalent OTIF UTP GEN-G of 1.1.2014.

Used terminology: considering the equivalence of the requirements contained in Regulation (EU) No 402/2013 and in the OTIF UTP GEN-G of 1.1.2014, the following generic terminology is used in the present document to simplify its reading and understanding. “CSM for risk assessment” refers both to Regulation (EU) No 402/2013 and the equivalent OTIF UTP GEN-G of 1.1.2014. “State” refers both to an EU Member State and an OTIF Contracting State.

Keywords: common safety method (CSM), risk assessment, CSM assessment body, independent safety assessment, accreditation, recognition, mutual recognition, cross-acceptance.

Foreword

Until beginning of 2000, Member States of the European Union have developed their own railway safety rules and railway standards, often based on national technical and operational concepts. This has progressively led to differences in principles, approaches and safety cultures making it difficult to break through technical and safety barriers and to establish international rail transport operations. International railway transport depended mostly on voluntary bilateral agreements and it was conditioned to additional, and very often unnecessary, checks, safety demonstrations and authorisations.

The construction of an interoperable, safe and integrated European railway network, without national frontiers, is now made possible by the compliance with the harmonised European legislation for railway safety management(2) and for railway interoperability(3). The demonstration of compliance with the harmonised European railway legislation makes compulsory, under given conditions, the mutual recognition of authorisations and risk assessments within the territory of the European Union. Authorisations and risk assessments shall be accepted, under well given conditions (among which the need for the CSM assessment bodies to be accredited or recognised), by national safety authorities and any other relevant conformity assessment body. Additional authorisations, checks or risk assessments must not be requested unless the existence of a substantial safety risk can be demonstrated.

The Contracting States of OTIF have adopted risk assessment requirements [OTIF UTP GEN-G of 1.1.2014] equivalent to Regulation (EU) No 402/2013. However a part of the scope of application of this OTIF UTP GEN-G differs in COTIF compared to the EU railway regulations. Those differences do however not influence the activities and competences of the CSM assessment bodies. Therefore this application guide is also of use to the non-EU Contracting States of OTIF.

(2) Safety Directive 2004/49/EC.
(3) Interoperability Directive 2008/57/EC.
1. What is the concept of mutual recognition in the scope of the CSM for risk assessment?

Mutual recognition\(^{(4)}\) imposes the acceptance in another State or by another stakeholder of the results of a risk assessment already performed by a proposer, assessed by an independent CSM assessment body and accepted in compliance with the CSM for risk assessment without the need to repeat a full risk assessment. The work done for the first acceptance is to be recognised as valid for any other acceptance provided that "the system is used under the same functional, operational and environmental conditions" as the already accepted one, and that "equivalent risk acceptance criteria are applied". For a new application of an already accepted system, further risk assessments and checks are to concentrate only on the deviations from the conditions in which the system was originally accepted.

2. What is the concept of independent CSM assessment body?

Regulation (EC) N°352/2009 and its equivalent OTIF UTP GEN-G of 1.5.2012 are first to introduce the concept of independent CSM assessment body. They require the CSM assessment body to carry out an independent safety assessment of the risk assessment process and safety demonstration of the system under assessment in order to provide additional assurance that the necessary level of safety can be achieved (see also section § 0 below). Regulation (EC) N°352/2009 and its equivalent OTIF UTP GEN-G of 1.5.2012 define also:

(a) What general criteria according to Regulation (EC) N°352/2009 and its equivalent OTIF UTP GEN-G of 1.5.2012 must the CSM assessment body fulfil?
(b) What is the role of the CSM assessment body?
(c) Who can be the CSM assessment body?
(d) What is the relationship between the CSM assessment body and the CENELEC independent safety assessor?
(e) When is a CSM assessment body required?
(f) Who shall appoint the CSM assessment body?


(g) What specific criteria and requirements does the CSM assessment body have to fulfil?
(h) What are the areas of competence of the CSM assessment body?
(i) Is the CSM assessment body obliged to have internally all the necessary competence?
(j) Why is the ISO/IEC 17020:2012 standard appropriate for the CSM assessment body?
(k) How to check the competence of the CSM assessment body and establish sufficient trust of its work among all the countries where the CSM for risk assessment is to be applied?
(l) What are the benefits of allowing the recognition of CSM assessment bodies?
(m) Can all CSM assessment bodies work EU wide and/or in all OTIF Contracting States?
(n) Can the criteria and requirements for the CSM assessment body be relaxed?
(o) Is it obligatory to have at least one CSM assessment body in the country?
(p) Where can a proposer find the list of all accredited and recognised CSM assessment bodies?
(q) When does the CSM assessment body start the independent safety assessment?
(r) When does the CSM assessment body finish the independent safety assessment?
(s) How is the independent safety assessment to be done by the CSM assessment body?
(t) What is the content of the independent safety assessment report of the CSM assessment body?
(u) Are the judgments and conclusions of the CSM assessment body binding for the proposer?
(v) What are the interactions between the CSM assessment body and the other conformity assessment bodies?

The answers to all the questions in points (a) to (v) above are summarised in the sections below.

\(^{(4)}\) Mutual recognition is also referred to in some legislation or literature as mutual acceptance or cross acceptance.

3. What general criteria according to Regulation (EC) N°352/2009 and its equivalent OTIF UTP GEN-G of 1.5.2012 must the CSM assessment body fulfil?

Annex II of Regulation (EC) N°352/2009 and of the equivalent OTIF UTP GEN-G of 1.5.2012 define general type criteria. These criteria are mainly related to the independence, competence, integrity and impartiality of the CSM assessment body. Regulation (EC) N°352/2009 and the equivalent OTIF UTP GEN-G of 1.5.2012 do neither prescribe any detailed requirement nor the way to check the fulfilment of the relevant criteria and requirements by the CSM assessment body. These general criteria remain applicable until 21 May 2015 which is the date of application of Regulation (EU) N°402/2013 and of the equivalent UTP GEN-G of 1.1.2014. Thereafter, the full set of requirements contained in Regulation (EU) N°402/2013 and in the equivalent UTP GEN-G of 1.1.2014, including these general criteria and additional specific ones for the open issues, will apply: see section § 9 below.

4. What is the role of the CSM assessment body?

The CSM assessment body does neither perform the risk assessment required in Annex I of the CSM for risk assessment nor provides advices or solutions that could compromise its independence. The proposer is responsible for carrying out all the risk assessment and risk management activities specified in the CSM for risk assessment. However, in order to build trust between stakeholders and to facilitate mutual recognition of the results of risk assessments it is necessary to get the assurance that the proposer conducts properly those risk assessment and risk management activities. Therefore to avoid unnecessary additional risk assessments or duplication of work by other conformity assessment bodies, similarly to the CENELEC 50128 and 50129 standards, the CSM for risk assessment requires also an independent safety assessment to be done by an independent, competent and impartial CSM assessment body.

The CSM for risk assessment requires the CSM assessment body to:

(a) check the correct application by the proposer of the risk management process set out in Annex I of the CSM for risk assessment and represented in Figure 1 below;
(b) check the suitability of application of that process by the proposer and the appropriateness of the risk assessment results to fulfil safely the intended objectives of the change.
(c) deliver to the proposer a safety assessment report that contains the results of the check of compliance with the requirements of the CSM for risk assessment and its judgement and conclusions on the safety of the change under assessment.

To gain confidence that the safety requirements identified through the risk assessment are appropriate for the considered change and that the system under assessment complies with those safety requirements, it is necessary that the CSM assessment body also analyses and evaluates the safety, the quality and the consistency of the outputs of each step of the CSM risk management process represented in Figure 1 below.

Based on the evidence collected through the activities in points (b) and (c) above, the CSM assessment body is able to deliver to the proposer a safety assessment report. This report indicates whether the risk assessment and risk management activities carried out by the proposer are compliance with the requirements of the CSM for risk assessment and it contains the judgement and conclusions of the CSM assessment body on the suitability of the significant change to fulfil its safety requirements.

5. Who can be the CSM assessment body?

The following organisations or entities can act as CSM assessment body: a national safety authority (NSA), an OTIF national authority competent for technical admission, an EU notified body (NoBo), an EU designated body (DeBo), an OTIF assessing entity, a competent external or internal (i.e. in-house) individual, organisation or entity which is at least independent from the "design, risk assessment, risk management, manufacture, supply, installation, operation/use, servicing and maintenance" of the change under assessment.

Irrespectively which of those organisations or entities acts as CSM assessment body, it must meet the criteria listed in Annex II of the CSM for risk assessment (see section § 9 below) and it must be accredited or recognised (see section § 13 below).

Figure 1: Risk management process and independent safety assessment in the CSM for risk assessment.
The CSM for risk assessment allows the use of all three types (A, B and C) of the CSM assessment body which are referred to in section §4.1.6 and Annex A of the ISO/IEC 17020:2012 standard which is referred to in Annex II of the CSM for risk assessment. All three types of CSM assessment body must demonstrate their independence at least from the "design, risk assessment, risk management, manufacture, supply, installation, operation/use, servicing and maintenance" of the system under assessment.

Permitting also the use of the type C of independence is crucial for the sector provided the CSM assessment body is able to demonstrate its independence from the system under assessment, its integrity and its impartiality. Indeed, knowing that the number of technical experts is limited in some fields of the railway system, it is not always possible to find the appropriate technical expertise externally. For such specific cases, with lack of fully independent technical expertise, technical competence may be preferred to full independence in order to guarantee the quality of the independent technical safety assessment.

6. What is the relationship between the CSM assessment body and the CENELEC independent safety assessor?

Although the role of the CSM assessment body is similar to the one of the independent safety assessor (ISA) referred to in the CENELEC 50128 and 50129 standards, there is a fundamental difference between the two bodies:

(a) the CSM assessment body is obliged to be accredited or recognised (see section § 13 below) and to demonstrate the compliance with all the requirements, including competence in well-defined areas, as set up in Annex II, Articles 8 and 9 of the CSM for risk assessment, whereas;

(b) the current version of CENELEC standards does not impose similar requirements to independent safety assessors which are neither required to demonstrate competence nor obliged to be accredited or recognised

Consequently, when the EU legislation, or the equivalent OTIF rules, requires the appointment of a CSM assessment body to a project, and when either contractually or through a notified national rule the use of CENELEC 50126, 50128 and 50129 standards is obligatory, the independent safety assessment carried out by the CSM assessment body will at least include all the activities of a CENELEC independent safety assessor. Thereby, for a significant change in order to avoid unnecessary duplication of independent safety assessments by different conformity assessment bodies and unnecessary duplication of inherent costs, it is not necessary to appoint also an independent safety assessor (ISA) for exactly the same scope of work: refer also to section § 24 below.

For the reasons in points (a) and (b), a CSM assessment body cannot be obliged to mutually recognise, without being allowed to request additional checks, if deemed necessary, the independent safety assessment report of a CENELEC independent safety assessor.

7. When is a CSM assessment body required?

A CSM assessment body is required to perform the checks referred to in section § 4 above when by application of the CSM for risk assessment the proposer considers that the change under assessment is significant. The CSM assessment body must not assess the proposer's decision on "non-significant changes" to enable the national safety authority (respectively the ECM certification body) to verify during the supervision (respectively during surveillance) activities that the associated risks are also under control.

(a) understand the significant change, the proposer's organisation and the safety and quality processes put in place by the proposer for managing the development and the risk assessment and risk management of the significant change;

(b) plan the independent safety assessment activities.

In practice the work of the CSM assessment body preferably starts before the first results from the risk assessment are available (see section § 19 below).

(6) The proposer is requested to justify and document its decisions on "non-significant changes" to enable the national safety authority (respectively the ECM certification body) to verify during the supervision (respectively during surveillance) activities that the associated risks are also under control.
8. Who shall appoint the CSM assessment body?

If the organisation or entity that is to act as CSM assessment body is not specified in existing European Union or national legislation, the proposer is free to appoint its own CSM assessment body. He can choose among the types of bodies listed in section § 5 above, including a CSM assessment body accredited and recognised in a third country or in an OTIF Contracting State under equivalent criteria. Refer also to section § 15 below.

9. What specific criteria and requirements does the CSM assessment body have to fulfil?

Regulation (EC) N°352/2009 and the equivalent OTIF UTP GEN-G of 1.5.2012 set up in Annex II the general criteria of "independence, competence, integrity and impartiality" to be fulfilled by the CSM assessment body. As Regulation (EC) N°352/2009 and the equivalent OTIF UTP GEN-G of 1.5.2012 did not specify who shall check the compliance with these general criteria, it was difficult to get sufficient confidence in the CSM assessment body work and thus to mutually recognise its independent safety assessment. This is made possible by Regulation (EU) N°402/2013 and the equivalent OTIF UTP GEN-G of 1.1.2014 which revised Annex II and completed those general criteria with additional requirements, including the formal acknowledgement of the CSM assessment body competence: see section § 13 below. In addition to a full compliance with the ISO/IEC 17020:2012 standard, Annex II of the latest CSM for risk assessment requires the CSM assessment body also to demonstrate the following specific competence:

(a) competence in risk management, including the knowledge and experience of the standard safety analysis techniques and of the relevant risk assessment and risk management standards;
(b) all relevant technical competence for assessing the change under assessment and its safe integration into the railway system;
(c) competence in checking the correct application of safety and quality management systems or in auditing management systems. This requirement is crucial given that the CSM assessment body is not required to check all the activities and details of the risk assessment and risk management done by the proposer: see section § 21 below.

10. What are the areas of competence of the CSM assessment body?

By analogy to Article 28 of interoperability Directive 2008/57/EC concerning the notification of notified bodies, the CSM assessment body shall be accredited or recognised for the different areas of competence within the railway system, or parts of it for which an essential safety requirement exists. That includes the area of competence in the operation and maintenance of the railway system. For example, possible classifications of competence of a CSM assessment body can be:

(a) infrastructure;
(b) energy;
(c) control command and signalling;
(d) rolling stock;
(e) braking components;
(f) operation, maintenance and traffic management;
(g) overall consistency and system approach (system level);
(h) specific engineering disciplines such as embedded real-time systems, telecommunications, hardware, software, human factor, ...
(i) etc.

In particular, the CSM assessment body can be accredited or recognised for the competence needed to assess the overall consistency of the risk management and the safe integration of the system under assessment into the railway system as a whole. This specific competence includes the ability of the CSM assessment body to check the following:

(j) the organisation or arrangements put in place by the proposer to ensure a coordinated approach to achieving system safety through a uniform understanding and application of risk control measures for its composing sub systems;
(k) the methodology for the evaluation of the methods and resources deployed by various stakeholders to support safety at both the sub-system and system levels; and...
(I) the technical aspects necessary for assessing the relevance and completeness of risk assessments and the level of safety for the system as a whole.

The CSM for risk assessment allows a CSM assessment body to be accredited or recognised for one, several or all of these areas of competence. However, to fulfil the requirements of the CSM and to reduce the number of such bodies required to assess the significant change, every CSM assessment body should be accredited or recognised for at least one technical area of competence and the competence for assessing the overall consistency of the risk management and the safe integration of the system under assessment into the railway system as a whole.

11. Is the CSM assessment body obliged to have internally all the necessary competence?

The CSM assessment body is not obliged to have internally (i.e. within its organisation or entity) all the technical competences necessary for carrying out the independent safety assessment work. The ISO/IEC 17020:2012 standard referred to in the CSM for risk assessment allows the use of subcontractors: see section §6.3 of that standard. The practical arrangements and the capability of achieving the consistent fulfilment of the requirements contained in that International Standard, where relevant with the use of subcontractors, need to be documented in the management system of the CSM assessment body.

Where the CSM assessment body subcontracts any part of the independent safety assessment, it has to ensure and be able to demonstrate that the subcontractor is competent to perform the activities in question and, where applicable, complies with the relevant requirements stipulated in the ISO/IEC 17020:2012 standard or in other relevant conformity assessment standards. The CSM assessment body needs thus to be organised and managed so as to enable it to maintain the capability to perform independent safety assessment in the area of its accreditation or recognition. The CSM assessment body remains also responsible for the whole independent safety assessment work, including thus for the part of independent safety assessment that is subcontracted.

12. Why is the ISO/IEC 17020:2012 standard appropriate for the CSM assessment body?

The ISO/IEC 17020:2012 is a standard that defines general criteria and requirements concerning the competence, impartiality, independence, administration capabilities, organisation, resources, processes and management system for the operation of various types of bodies performing inspection. The standard harmonises those general requirements, the inspection bodies are required to comply with, in order to ensure that their services are accepted by clients and by supervisory authorities. The standard is usable for checks of conformity of an "inspected item" with the "requirements of a process" or with "general requirements of a regulation". The standard can be used by an accreditation body for the assessment of conformity of inspection bodies. The ISO/IEC 17020:2012 standard is thus directly applicable for the accreditation or recognition of the CSM assessment body. This latter one is required to check the conformity of the risk assessment done by the proposer [i.e. the "inspected item"] with the requirements of the CSM for risk assessment [i.e. with the "requirements of a process" and the "requirements of a regulation"].

Considering the specific work of the CSM assessment body (see section § 4), the CSM assessment body can be considered as an inspection body. The objective of the independent safety assessment carried out by the CSM assessment body is therefore to provide information about the conformity of the ["inspected item", i.e. of "the risk assessment and risk management activities carried out by the proposer for a significant change"] with the ["requirements of the process" defined in the CSM for risk assessment]. The tasks of the CSM assessment body include:

(a) the assessment of quality, safety and fitness for purpose of the risk assessment and risk management activities performed by the proposer for a significant change;
(b) the examination of those activities and the determination of their conformity with the requirements of the risk assessment and risk management process in Annex I of the CSM for risk assessment and Figure 1.

To determine whether the proposer's activities are compliant with the requirements of the CSM for risk assessment, the independent safety assessment requires professional judgement in the field of risk assessment and risk management. As this specific competence is not contained in the general requirements of the ISO/IEC 17020:2012 standard, the necessary additional requirements were explicitly added in points § 1 and § 3 of Annex II of the CSM for risk assessment. These are described in sections § 9 and § 0 above.
13. How to check the competence of the CSM assessment body and establish sufficient trust of its work among all the countries where the CSM for risk assessment is to be applied?

In order to ensure they are acknowledged in the same way in whole EU, as well as in all OTIF Contracting States, and that they deliver a similar quality of independent safety assessment, the CSM assessment bodies shall fulfil the requirements in Annex II of the CSM for risk assessment and be either:

(a) **accredited** by the national accreditation body (NAB) of the State where it is established; or

(b) **recognised** by a recognition body of the State where it is established; or

(c) for the EU, the national safety authority, or for the OTIF Contracting States the OTIF national authority competent for technical admission, recognised by the State\(^{(7)}\).

The purpose of the accreditation is to provide an authoritative statement of the competence of a body to perform conformity assessment activities. Its functioning is represented on the left side of Figure 2. As shown, it is governed in the EU by Regulation (EC) N° 765/2008. The ISO/IEC 17011 standard specifies the general requirements for accreditation bodies assessing and accrediting conformity assessment bodies. These two documents lay down:

(d) the general rules on the organisation and operation of the accreditation by the national accreditation body of different conformity assessment bodies as defined for the EU in Article 2 of Regulation (EC) No 765/2008. These are also applicable to the CSM assessment body;

(e) the monitoring or surveillance by the national accreditation body of conformity assessment bodies to which they have issued an accreditation. This is also applicable to the CSM assessment body;

(f) the peer evaluations by other national accreditation bodies for the assessment of a national accreditation body. These peer evaluations are managed by the European Co-operation for Accreditation (EA). They are carried out in the EU in accordance with the requirements of Regulation 765/2008 and, where applicable, additional sectorial technical specifications (e.g. Annex II of the CSM for risk assessment concerning the specific needs on risk assessment and risk management).

![Accreditation and recognition of CSM assessment bodies.](image)

**Figure 2**: Accreditation and recognition of CSM assessment bodies.

Whereas accreditation is the preferred means for the EU of demonstrating technical competence of conformity assessment bodies, Article 5(2) of Regulation 765/2008 allows a State not to use the accreditation provided it makes available to the European Commission and the other States all the documentary evidence necessary for

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\(^{(7)}\) When the Member State recognises its national safety authority (NSA) as CSM assessment body, the Member State is responsible for ensuring that the NSA fulfils the requirements set out in Annex II. In addition to that, the assessment body functions of the NSA shall be demonstrably independent of the other functions of the NSA. OTIF UTP GEN-G of 1.1.2014 sets a similar requirement for OTIF Contracting States when they recognise a national authority competent for technical admission as CSM assessment body.
the verification of the competence of the conformity assessment bodies. Therefore, in order to ensure the same confidence in both the recognition and accreditation of CSM assessment bodies, the CSM for risk assessment sets out for the recognition the same requirements as Regulation 765/2008 does for the accreditation. Similarly to the European Co-operation for Accreditation (EA), the role of the European Railway Agency is to coordinate the peer evaluations between the recognition bodies necessary to ensure that all recognition bodies work in a similar way across EU. Similarly, the role of the OTIF Committee of Technical Experts (through the OTIF Secretary General) is to coordinate the peer evaluations between the recognition bodies necessary to ensure that all recognition bodies work in a similar way in all OTIF Contracting States. Use of the ISO/IEC 17011 standard is also recommended to support the recognition bodies. The functioning of the recognition of the CSM assessment bodies is represented on the right side of Figure 2.

14. What are the benefits of allowing the recognition of CSM assessment bodies?

To avoid unnecessary duplication of conformity assessments, and the duplication of inherent costs, it is important to allow the use of recognition in the CSM for risk assessment for in-house CSM assessment bodies. Indeed, compliance with existing legislation already requires that:

(a) for the EU the safety management system (point 8) of railway undertakings and infrastructure managers is certified by the national safety authority;

(b) for the EU and OTIF Contracting States the system of maintenance of entities in charge of maintenance of freight wagons is certified by ECM certification bodies.

To support the railway sector, Article 9 of the CSM for risk assessment leaves thus flexibility:

(c) to the EU Member States to entitle their national safety authorities and ECM certification bodies to act as recognition bodies of CSM assessment bodies internal to railway undertakings, infrastructure managers or entities in charge of maintenance of freight wagons;

(d) to the OTIF non-EU Contracting States to entitle their national authority competent for technical admission and their ECM certification bodies to act as recognition bodies of CSM assessment bodies internal to entities in charge of maintenance of freight wagons.

Those recognition bodies can evaluate, for the EU, during the assessment of the safety management system (point (a) above) or, for the EU and OTIF, during the assessment of the system of maintenance (point (b) above) the ability of the railway undertaking, infrastructure manager or entity in charge of maintenance to manage safely its business, as well as to act as an in-house CSM assessment body.

15. Can all CSM assessment bodies work EU wide and/or in all OTIF Contracting States?

The independent safety assessment report of any CSM assessment body referred to in section § 5 above, accredited or recognised in an EU Member State or an OTIF Contracting State in accordance with the requirements of the CSM for risk assessment, must be mutually recognised in whole EU and in all OTIF Contracting States.

A CSM assessment body accredited in an EU Member State in accordance with the requirements of Regulation (EU) N°402/2013 can carry out independent safety assessment in whole EU and in all OTIF Contracting States. By analogy a CSM assessment body accredited in accordance with the requirements of the equivalent UTP GEN-G of 1.1.2014 can carry out independent safety assessment in all OTIF Contracting States, including those which are also Member States of the EU.

A national safety authority, or an OTIF national authority competent for technical admission, recognised by its State as CSM assessment body in accordance with the requirements of the CSM for risk assessment cannot provide independent safety assessment in other States, unless bilateral agreements are concluded between these two States. Furthermore, Article 6(4) of the CSM for risk assessment limits the cases where the national safety authority can act as CSM assessment body.

Although the CSM for risk assessment does not exclude it explicitly, recognised CSM assessment bodies are not expected to carry out independent safety assessment outside their own companies/organisations and therefore

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(8) OTIF does not prescribe the use of safety management systems (SMS).
16. Can the criteria and requirements for the CSM assessment body be relaxed?

Accreditation or recognition of CSM assessment bodies is required to enable mutual recognition of their independent safety assessment reports and therefore of the results of risk assessments performed in compliance with the CSM for risk assessment. Article 12 of that CSM is an exception to those rules and principles. It is intended to be used for national purposes only when the significant change is not subject to mutual recognition and where the appointment of an accredited or recognised CSM assessment body would not be acceptable from the economical point of view. Article 12 could be used for example for changes that affect only the domestic market, i.e. parts of the railway system where international trains would never operate. It should therefore be used with precautions and in duly justified cases.

Article 12 allows bypassing the accreditation or recognition of a CSM assessment body provided the following key requirements are met: independence, integrity, impartiality and competence in the railway area related to the change under assessment, as well as in the fields described in points (a), (b) and (c) in section § 9 above. The other requirements of paragraph 1 in Annex II of the CSM for risk assessment [mainly some of the “administrative” requirements of the ISO/IEC 17020:2012 standard] may be relaxed in a non-discriminatory way in agreement with the national safety authority, or with the OTIF national authority competent for technical admission. Article 12 does not list the criteria and requirements that could actually be relaxed, or the types A, B or C of independence of the ISO/IEC 17020:2012 standard that are permitted. "Non-discriminatory" means that any assessment body fulfilling the same relaxed criteria and requirements should be allowed to be appointed on the considered significant change.

Contrary to accreditation or recognition, Article 12 does neither prescribe the process to be used nor the actor who should be responsible for checking that the relaxed criteria and requirements are actually fulfilled by such types of assessment bodies albeit the agreement of the national safety authority, or with the OTIF national authority competent for technical admission, is required. It also does neither specify requirements for the surveillance of such bodies nor peer evaluations between the actors who would check the compliance with those relaxed criteria and requirements.

Considering these uncertainties and differences of criteria and requirements for the assessment body, compared to accreditation or recognition Article 12 does not contribute to establish mutual trust between railway stakeholders. It does not provide the same assurance for the different parts of the railway system concerning the independent safety assessment of the correct application of the CSM for risk assessment and of the associated risk assessment results. The independent safety assessment report of an assessment body accepted under Article 12 cannot thus benefit from mutually recognition granted to accredited or recognised CSM assessment bodies.

Article 12 is not intended to be used as the normal and standard way of acknowledging the independence, integrity, impartiality and competence of CSM assessment bodies. As it does not enable mutual recognition of results of risk assessments and of the associated independent safety assessment reports, Article 12 does not support the opening of the European railway market. Article 12 should be used exceptionally and in duly justified cases.

Assuming the text in Article 12 "in agreement with the national safety authority" or "with the OTIF national authority competent for technical admission" means that the check of fulfilment of the relaxed criteria and requirements is actually done by the national safety authority, or by the OTIF national authority competent for technical admission, then recognition of in-house CSM assessment bodies according to Article 9 of the CSM for

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risk assessment should be preferred to the use of Article 12: refer to section § 14 above. That recognition would be done through the certification and supervision or surveillance of the management system of the company. On the contrary, other types of stakeholders than railway undertakings, infrastructure managers and entities in charge of maintenance of freight wagons (e.g. railway consulting companies) are not required to have a certified management system in place, they should not be recognised by the national safety authority, or by the OTIF national authority competent for technical admission. Those other types of stakeholders should be rather submitted to accreditation.

Whenever Article 12 is used, for transparency reasons, the independent safety assessment report of the assessment body should clearly list the criteria and requirements of Annex II of the CSM for risk assessment that are relaxed.

17. Is it obligatory to have at least one CSM assessment body in the country?

Considering the explanations in section § 15 above, States are not obliged to have in place a CSM assessment body. Bodies from other States can be used. In practice there may be several CSM assessment bodies, variously accredited or recognised, or no bodies at all within a State. A State is also able to use either the accreditation or the recognition of those bodies or both of these two options. However a CSM assessment body which is already accredited does not need also to be recognised and vice versa. It would be an unnecessary and not cost effective "double acknowledgement of its competence".

18. Where can a proposer find the list of all accredited and recognised CSM assessment bodies?

The European Railway Agency is responsible for registering in the ERADIS data base the following information for the EU:

(a) the Member State choice concerning the use of accreditation and/or recognition, or not any of these two options (see section § 17);

(b) where applicable, the CSM assessment bodies directly recognised by the Member state;

(c) where applicable, the national accreditation body and/or recognition body(ies) in the Member State;

(d) the accredited and recognised CSM assessment bodies with their area(s) of competence and the Member State where they are accredited/recognised;

(e) the changes\(^{(10)}\) to the situation of a CSM assessment body following a notification from the national accreditation body or recognition body.

The Secretary General of OTIF should make publicly available this information for OTIF non-EU Contracting States.

19. When does the CSM assessment body start the independent safety assessment?

As described in the previous sections of this paper, a CSM assessment body is required by the CSM for risk assessment only when a proposer makes a significant change to the railway system or when required by other EU legislation such as a TSI or equivalent OTIF Uniform Technical Prescriptions.

Considering the role of the CSM assessment body (see section § 21 below), it is important, especially for complex projects or changes to detect the following as early as possible: any non-compliance with the company organisation, safety and quality processes, with the risk management process set out in Annex I of the CSM for risk assessment or inappropriate risk control measures. This is crucial to enable the proposer to take corrective actions before the acceptance of the significant change under assessment. Thereby, the CSM assessment body should start its independent safety assessment work "at the earliest appropriate stage of the risk assessment process". It should follow the project till the completion of the process. In practice this requires sufficient project documentation (e.g. project organisation, project plans, definition of the change, risk assessment plans, etc.) to be available to enable the CSM assessment body to plan and target the key areas for further safety assessment.

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\(^{(10)}\) If it appears during the periodical surveillance by the national accreditation body (by the recognition body) that the CSM assessment body no longer satisfies the criteria set out in Annex II of Regulation 402/2013, the accreditation body (the recognition body) shall limit the scope of application of the accreditation (recognition), suspend or withdraw it, depending on the degree of non-compliance.
To understand the significant change under assessment and the way its management is planned, the CSM assessment body usually needs the system definition, a description of the project, the description of the safety and quality processes, the organisation and information about the experts appointed to carry out the risk assessment process. Based on these inputs, the CSM assessment body is able to produce an "independent safety assessment plan" to cover the assessment of every step of the CSM risk management process represented in Figure 1. The aim of this plan is to highlight the key milestones of the independent safety assessments necessary to ensure the completion of the project on time. To enable the proposer taking timely remedial actions, it is important for every step of the risk management process in Figure 1 that the CSM assessment body regularly reports any identified cases of non-compliance with the company organisation, safety or quality processes, with the provisions of the CSM for risk assessment or the detected inadequacies of results from the risk assessment that compromise the system under assessment from fulfilling safely the intended objectives of the change.

If not involved from the very beginning of the project, it is important that the CSM assessment body finds out the outstanding issues and communicates these to the proposer as a priority for their resolution.

20. When does the CSM assessment body finish the independent safety assessment?

The work of the CSM assessment body finishes when it delivers its independent safety assessment report to the proposer: refer also to sections § 22 and § 23 below.

21. How is the independent safety assessment to be done by the CSM assessment body?

Compared to the conformity assessments with TSIs, or with the equivalent OTIF Uniform Technical Prescriptions, by notified bodies, which aim at checking that all the requirements of the considered TSIs (or the equivalent OTIF Uniform Technical Prescriptions) are met (these are "standard based checks"), the independent safety assessment by a CSM assessment body is "more about making a judgement on safety", focussing the assessment on areas of highest risks. This is a distinct activity, with a different purpose and also with different competences. Thereby the modules that set out a particular methodology for the conformity assessment with a TSI (or with the equivalent OTIF Uniform Technical Prescriptions) are not entirely applicable to the work of the CSM assessment body. Instead, for the specific needs of the independent safety assessment, according to Article 6(2) of the CSM for risk assessment, the CSM assessment body needs to check the correct application of a "full quality management system" and a "full safety management system" for managing the significant change under assessment.

To provide a judgement, based on evidence, of the suitability of the system under assessment to fulfil its safety requirements, the CSM assessment body needs to:

(a) have a thorough understanding of the significant change based on the documentation provided by the proposer;

(b) conduct an assessment of the organisation and processes used by the proposer for managing the safety and quality during the design and implementation of the significant change, if those organisation and processes are not already certified by a relevant conformity assessment body. If they are certified, the CSM assessment body must not reassess them but do the point (c) below;

(c) conduct an assessment of this organisation put in place for managing the change and an assessment of the application of those safety and quality processes for designing and implementing the significant change;

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(11) The CSM for risk assessment specifies the assessments to be done by the CSM assessment body (refer to section § 4 above) but it does not impose any specific working method. Section § 7.1 of the ISO/IEC 17020:2012 standard referred to in Annex II of that Regulation specifies some general requirements on the inspection methods and procedures.

(12) This is the principle of modules CH1 and SH1 from Commission Decision 2010/713 to be used in the EU for the assessment of conformity and suitability for use of the interoperability constituents and for the EC verification of subsystems.

(13) Refer to definition of "assessment body" in Article 3(14) of the CSM for risk assessment.
(d) conduct a **vertical slice assessment**\(^{(14)}\) on key risks to check whether the safety and quality processes are correctly applied by the proposer and whether appropriate risk control measures are produced by the risk assessment;

(e) have for that adequate assessment methods and sampling techniques, as well as sufficient knowledge of statistical techniques to ensure on one side that the sampling method is statistically correct and on the other side that the assessment and interpretation of the risk assessment results is correct.

(f) when it uses methods or procedures which are non-standard, document them appropriately and fully, for transparency reasons and to enable the mutual recognition of its independent safety assessment report.

The CSM assessment body needs to be convinced that the application of the risk assessment process by the proposer captures (i.e. identifies), understands, analyses and mitigates all reasonably foreseeable hazards associated with the significant change under assessment. The key tasks of the independent safety assessment by the CSM assessment body are therefore:

(g) getting an appreciation of the scope and context of the significant change and consequently of the necessary intensity of independent safety assessment or size of the vertical slice to be assessed;

(h) selecting and planning a cost-effective assessment strategy based on risk, risk prioritisation and professional judgement;

(i) gathering relevant evidence by applying the selected assessment strategy;

(j) based on this evidence, forming a judgement on the compliance of the risk assessment and risk management with the requirements of the CSM for risk assessment and on the suitability of the significant change to fulfil its safety requirements;

(k) managing any outcomes, including the following:

1. a proactive and early identification of (potential) issues;
2. a regular reporting of the identified issues to the proposer to enable the later taking timely remedial actions;
3. tracking the issues raised to a satisfactory resolution.

The use of a risk-based strategy for setting up the priorities for its assessment activities enables the CSM assessment body not only to focus the assessment efforts on the areas with the highest risks but ensures also that the level of the independent safety assessment activity is proportionate to the level of the risk.

The gathering of evidence from independent safety assessment is likely to be a combination of audits and inspections including document reviews\(^{(15)}\), observations, interviews, organisational and personnel competency checks, safety culture and organisation assessment, sampling and vertical slice analyses, use of checklists, etc. The precise scope and level of detail or size of the selected samples or of the vertical slices for the independent safety assessment depend on the complexity of the risk assessment activities, complexity or novelty of the technology, safety criticality and level of risk introduced by the change.

It is important that the CSM assessment body promptly reports (e.g. verbally, via telephone, using e-mails, etc.) the identified issues and non-compliances, especially on major concerns, to enable the proposer to take timely any necessary remedial actions. To foster the mutual recognition, it is also important that those issues and non-compliances are systematically and formally recorded in the independent safety assessment report of the CSM assessment body, assigned a priority and tracked down till their resolution by the proposer. This provides a traceable evidence of a proactive involvement of the CSM assessment body in the identification and resolution of problems based on the level of risk associated with the change or on the priority associated with the raised finding.

\(^{(14)}\) The terms “**vertical slice assessment**” refer to a thorough end-to-end review of the application of the risk management process contained in the Appendix to Annex I of the CSM for risk assessment for the key risks of the change under assessment. The purpose is to check a representative cross-sectional slice of the results from the risk assessment and to cover all the steps of the risk management process of Figure 1.

\(^{(15)}\) In particular, the review of documentation will include the analysis and evaluation of the quality and consistency of the outputs at each step of the risk management process of the CSM for risk assessment.
22. What is the content of the independent safety assessment report of the CSM assessment body?

Based on the evidence from the independent safety assessment activities, the CSM assessment body delivers to the proposer a safety assessment report with its judgement and conclusions on the suitability of the significant change to fulfil its safety requirements. At least the following information needs to be included in that report:

(a) the identification of the CSM assessment body;
(b) the independent safety assessment plan;
(c) the definition of the scope of the independent safety assessment as well as its limitations;
(d) the results of the independent safety assessment including in particular:
   (1) detailed information on the independent safety assessment activities for checking the compliance with the provisions of the CSM for risk assessment;
   (2) any identified cases of non-compliances with the provisions of that Regulation and the assessment body’s recommendations;
   (e) the conclusions of the independent safety assessment on the compliance of the risk assessment and risk management performed by the proposer with the requirements of the CSM for risk assessment and the appropriateness of the associated results to fulfil safely the intended objectives of the change.

In case Article 12 is used, for transparency reasons, the independent safety assessment report of the assessment body should clearly list the criteria and requirements of Annex II of the CSM for risk assessment that are relaxed.

The term “recommendations” in point (d)(2) refers to the observations, and the general type of advice [if it is clear that such advice cannot compromise the independence of the CSM assessment body (see below)], raised by the CSM assessment body during the checks of compliance referred to in section § 4 above.

Given that the CSM assessment body must be independent, it cannot deliver advices or solutions on how to address the detected non-compliances with the requirements of the CSM for risk assessment or any organisational concerns related to safety and quality assurance processes. The CSM assessment body may only provide advice if it is clear that the advice cannot compromise the independence of the assessment body. This could be general type advice or guidance, not specific to the system under assessment and such as it could be given to any broadly similar project:

(f) Examples of advices which could be given include safety management process best practice, guidance on the interpretation of standards and the consequences of specific technology choices.
(g) Examples of advice which could compromise the independence include which design, operational or organisational option should be taken to control the identified risks, what technology to use and any specific mitigation for hazards. Such advices cannot be given.

23. Are the judgments and conclusions of the CSM assessment body binding for the proposer?

As explained in section § 4 above, the proposer is responsible for carrying out all the risk assessment and risk management activities specified in the CSM for risk assessment. The independent safety assessment report of the CSM assessment body is an important input for the proposer to be taken into account for the safety acceptance of the change. Based on that report and on the results of application of the CSM for risk assessment by its safety experts, the proposer can judge on whether all identified hazards and associated risks are controlled to an acceptable level. Both of these inputs contribute in making the proposer confident that the system under assessment can fulfil safely the intended objectives of the change. Article 16 of the CSM for risk assessment explicitly requires the proposer to “produce a written declaration that all identified hazards and associated risks are controlled to an acceptable level”.

Although this should not occur because of a proactive involvement of the CSM assessment body from the beginning of the project (see section § 21 above), the proposer can disagree with some of the conclusions of the CSM assessment body. For example, despite a different opinion of the CSM assessment body, the proposer may decide that the implemented safety requirements will keep the risk to an acceptable level. He will monitor in practice the effectiveness of those predictive risk control measures using the Regulation 1078/2012. In such cases, the proposer is required to justify and document the part of the independent safety assessment report for which he eventually disagrees with the conclusions of the CSM assessment body.
24. What are the interactions between the CSM assessment body and the other conformity assessment bodies?

The overall purpose of appointing a competent and independent CSM assessment body, accredited or recognised, is to set up the foundation for mutual recognition. Consequently, by virtue of Article 6(3) of the CSM for risk assessment, duplication of unnecessary work between the different conformity assessment bodies is to be avoided.

When authorising the placing in service of vehicles and other structural sub-systems, the national safety authority, or the OTIF national authority competent for technical admission, must accept the proposer's declaration referred to in section § 23; it is based on the independent safety report of the CSM assessment body.

For the EU Member States and without prejudice to Article 16 of Directive 2008/57/EC, the national safety authority, or the OTIF national authority competent for technical admission, may not request additional checks or risk analyses unless it is able to demonstrate the existence of a substantial safety risk.

As a technical specification for interoperability (TSI), or equivalent OTIF Uniform Technical Prescriptions, may request risk assessments to be performed, legally the EU notified body, or the OTIF assessing entity, is responsible for checking that the risk assessment is duly performed. If the EU notified body, or the OTIF assessing entity, does not fulfil the criteria in Annex II of the CSM for risk assessment for performing itself the independent safety assessment of the correct application of the CSM and of the appropriateness of the results, it can subcontract the work to a CSM assessment body who meets those criteria. In this case, for the EU by virtue of Article 7(1) of Commission Decision 2010/713, "where a notified body subcontracts specific tasks connected with conformity assessment or EC verification ..., it shall take full responsibility for the tasks performed by subcontractors". So:

(a) the EU notified body has the responsibility to check that the tasks of the CSM assessment body are duly performed;
(b) the CSM assessment body who performs the independent safety assessment delivers its conclusions to the EU notified body within an independent safety assessment report;
(c) the EU notified body includes the independent safety assessment report in the technical file that has to accompany the EC declaration of verification.

The same principles apply to OTIF Contacting States by the application of the ATMF Articles 4, 5, 7 and 10. The admission is the task of the OTIF national authority competent for technical admission, or where applicable of an OTIF assessing entity, and it is based on the procedures and prescriptions in force through the ATMF. The OTIF national authority competent for technical admission or the OTIF assessing entity will have therefore the final responsibility for the results of the independent safety assessment carried out by the CSM assessment body in the framework of vehicle admission.

In practice, as the applicant/proposer appoints both the EU notified body, or the OTIF assessing entity, and the CSM assessment body, the applicant/proposer is free to contract to the EU notified body, or to the OTIF assessing entity, the check of conformity with the technical specifications of the TSIs, or with the equivalent OTIF Uniform Technical Prescriptions, and to the CSM assessment body the check of the correct application of the CSM. The applicant/proposer can then request contractually the EU notified body, or the OTIF assessing entity, and the CSM assessment body to find an agreement for the independent safety assessment of the risk assessment activities carried out by the proposer. They have to agree on who will do what part of the work and who will mutually recognise whose work. As described here above, if a TSI (or the equivalent OTIF Uniform Technical Prescriptions) requires risk assessments to be performed, although the work can be contracted to a CSM assessment body, the EU notified body, or the OTIF assessing entity, keeps the responsibility also for the independent safety assessment activities.

For the EU, the other conformity assessment bodies are national safety authorities (NSAs, as defined in Article 3(g) of Directive 2004/49/EC), notified bodies (NoBs, as defined in Article 2(g) of Directive 2008/57/EC), designated bodies (DeBs, as defined in Article 17(3) of Directive 2008/57/EC), independent safety assessors (ISAs, as defined in the CENELEC 50128 and 50129 standards), ISO 9001 conformity assessment body, etc. In OTIF Contacting States, the other conformity assessments bodies are understood to include the National Authority Competent for technical admission, the Assessing Entity and, depending on national provisions, also the independent safety assessors and other conformity assessment bodies.

In OTIF the equivalent process is referred to as admission to international operation.
So, if a risk assessment is required by a technical specification for interoperability (TSI), or by an equivalent OTIF Uniform Technical Prescriptions, the EU notified body, or the OTIF assessing entity, in charge of delivering the conformity certificate must accept the proposer's declaration referred to in section § 23 (it is based on the independent safety report of the CSM assessment body), unless it justifies and documents its doubts concerning the assumptions made or the appropriateness of the results.

In the EU, Article 9(4) of Regulation (EC) N° 765/2008 requires the national accreditation bodies to "have in place the necessary procedures to deal with complaints against the conformity assessment bodies they have accredited". Similar requirements should also exist for the recognition of CSM assessment bodies. Consequently, when a national safety authority, or an OTIF national authority competent for technical admission, or an EU notified body, or an OTIF assessing entity, discovers a problem with the independent safety assessment work of a CSM assessment body, they can inform the national accreditation body which has accredited it or the recognition body which has recognised it. The national accreditation body or the recognition body will then take the complaint into account for the monitoring or surveillance of the CSM assessment body. For the EU, by virtue of Article 5(4) of Regulation (EC) N° 765/2008 for the accreditation, and by analogy for the recognition, where a national accreditation body ascertains that a CSM assessment body which has received an accreditation certificate is no longer competent to carry out a specific conformity assessment activity or has committed a serious breach of its obligations, that national accreditation body/ recognition body shall take all appropriate measures within a reasonable timeframe to restrict, suspend or withdraw the accreditation certificate/ the recognition.

25. More information

Regulation (EU) No 402/2013 on the common safety method for risk evaluation and assessment can be found in all EU languages on the EUR-Lex site under the following link:


ISO/IEC 17011 standard specifies the general requirements for accreditation bodies assessing and accrediting conformity assessment bodies. Its use is also recommended to support the recognition bodies.

ISO 19011 standard, that despite being a guideline for auditing management systems, provides also the general guidance on the management of an "audit programme", on the "planning and conducting of an audit", as well as on the competence and evaluation of an auditor and an audit team.