Organisation intergouvernementale pour les transports internationaux ferroviaires
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr
Intergovernmental Organisation for International Carriage by Rail

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Joint Coordinating Group of Experts

(Video conference, 8 and 9 September 2020)

Agenda item 3: Review and report on the list of priority items agreed at the previous meeting (see also document OTIF/RID/CE/JCGE 2019-B/Add.1)

5b – Coordination processes between RID and general railway legislation for reporting of accidents/incidents and statistics

ITEM 9: Draft version CSM ASLP Regulation

Transmitted by European Union Agency for Railways

This is the second draft version of the CSM ASLP Regulation for the purpose of discussing in the working party (WP).
It is not definite and might be changed in the course of the discussions.

COMMISSION DELEGATED REGULATION (EU) No …./….

of …-…-…

establishing common safety methods for assessing the safety level and the safety performance of railway operators at national and Union level

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive (EU) 2016/798[(1)] of the European Parliament and of the Council of 11 May 2016 on railway safety (recast), and in particular Article 6(6) thereof,

Having regard to Recommendation ERA-REC-… from the European Union Agency for Railways delivered to the Commission on … … …, on the development of common safety methods for assessing the safety level and the safety performance of railway operators at national and Union level,

Whereas:

(1) Common safety methods ('CSMs') describe how the safety levels and the achievement of safety targets and compliance with other safety requirements are assessed.

(2) By its Implementing Decision of 7 January 2019[(2)], the Commission issued a mandate to the European Union Agency for Railways (the 'Agency') in accordance with Article 6(2) of Directive (EU) 2016/798 to make recommendations for new common safety methods for assessing the safety level and the safety performance of railway operators at national and Union level (the 'railway operators'). On [date of issue of the CSM ASLP recommendation], the Agency issued its recommendation, enclosing a report on the results of the consultation of national safety authorities, social partners and users and a report assessing the impact of the amended CSMs to be adopted, to address the mandate of the Commission. The Commission examined the recommendation issued by

[(1)] Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) (OJ L 138 26.5.2016, p. 102). OJ L 138, 26.05.2016, p. 102.
[(2)] Commission Implementing Decision of 7 January 2019 on a mandate to the European Union Agency for Railways to draft common safety methods for assessing the safety level and the safety performance of railway operators at national and Union level (C(2018) 8887 final).

the Agency to verify that the mandate was fulfilled as referred to in Article 6(4) of Directive (EU) 2016/798.

(3) The overall purpose of these new common safety methods is to provide assistance to the railway undertakings and infrastructure managers for improving their safety management and, in particular to ensure that they can achieve their business objectives in a continuously improved safe manner. The methods should also support decision-making of Member States regarding the achievement of common safety targets referred to in Article 7 of Directive (EU) 2016/798, by providing evidence and information on the evolution of safety performance and safety levels at national and Union level.

(4) The methods introduced in this Regulation should also enable railway operators, National Safety Authorities and the Agency to collectively ensure a broader visibility of the current safety level and safety performance of the railway sector for the different categories of railway services and should provide necessary system wide data and information for efficient continuous improvements, taking into account technical and scientific progress.

(5) These methods should establish a harmonised assessment of safety levels, a harmonised assessment of safety performance and a well-structured process to help operators, authorities and the Agency to qualitatively and quantitatively learn about the causes of accident and incident occurrences.

(6) The methods should be based on all potentially available safety data and information, structured in such a way that it would minimise the overall effort to assess operators and to implement efficient collective learning.

(7) These methods should also establish the necessary elements of a well-structured and sustainable collective learning, allowing any operator to identify and target their own improvement needs and allowing the authorities and the Agency to collect national and Union level data with the aim to produce meaning full harmonised information that are necessary for their respective risk-based decision-making.

(8) The assessments of operators' safety level and safety performance should only be based on information provided by the railway operators themselves.

(9) In the context of the continuing integration and opening of the Single European Rail Area, this Regulation aims to strengthen the safety related information management, in particular on the occurrence of accidents and incidents, their causes, their outcomes and the management of the associated risk control measures, thereby allowing an improved risk-based decision-making approach by all railway safety actors.

(10) Collective learning should be based on the contributions from operators and, when necessary, from any interested parties, who should collaborate for achieving well-defined safety improvements objectives from in-depth analyses of the most relevant incident and accident occurrences.

(11) Collective learning would be strengthened through the establishment of a group of experts gathering any relevant parties, devoted to the analysis of the shared data and information and which would have the overall objective of contributing to the systemic and efficient development of the Union railway system, taking into account technical and scientific progress.

(12) A sound and mature safety culture of the railway sector is needed to guarantee that collective learning and improvement are based on a comprehensive set of safety data and information.

(13) Positive safety culture would also imply that any natural person should be entitled, when necessary, to report an occurrence of a safety-related event. Details on the use of this reporting channel, as well as the way to proceed with the information collected, should be clearly defined and well-managed as part of the general rules for the processing of the safety information gathered under this Regulation.

(14) Various categories of staff working or otherwise engaged in the rail system witness events which are of relevance to accident prevention. They should therefore have access to tools enabling them to report such events, and their protection should be guaranteed. In order to encourage staff to report occurrences and enable them to appreciate more fully the positive impact which reporting has on rail safety, they should be regularly informed about action taken under the established reporting systems.

(15) To fulfill the purpose of this Regulation, all relevant data and information on safety occurrences should be accessible to all railway operators, authorities and to the European Union Railway Agency.

(16) The access to data and information by the national safety authorities should not lead to the adoption of uncoordinated national measures that would hamper railway interoperability, but rather to improve a harmonized collective learning.

(17) As few Member States have already developed occurrence reporting systems at national level, the information collected by the national reporting systems should be interfaced with the common IT system developed by the Agency to avoid double-reporting by the operators.

(18) To ensure non-discriminatory access to data and information shared under this Regulation in all Member States and to allow an efficient management of the large amount of data and information shared by the different interested parties, the sharing of applicable data and information should be organized with common information sharing rules, where any interested parties could access relevant information for exercising their safety roles and responsibilities, subject to the rules concerning the confidentiality of such information and the anonymity of the persons involved.

(19) As foreseen in section 2.1 of the Commission Implementing Decision of 7 January 2019, the implementation of this Regulation would require an informatics tool for collecting and storage of the information from the railway operators, but also to support the sharing of all the relevant data and information applicable under this Regulation and to facilitate the assessment of operators, in all Member State, with the same level of quality, accessibility and service, taking into account pre-existing national systems.

(20) The complexity of defining this inter-connected common information sharing system with pre-existing national systems would justify a gradual introduction of different application phase of this Regulation, taking into account the development of the system, its implementation and tests.

(21) As the full application of this Regulation require a common system the articles of this Regulation which cannot be implemented without such a common information system should be delayed, if necessary, until this system would be fully operational.

(22) The objective of the sharing of safety information should be the prevention of railways accidents and incidents. It should be used strictly for the purpose of maintaining or improving safety of the railway system and should not be used to attribute blame or liability.

(23) The purpose of protecting safety information from inappropriate use is to ensure the continuing availability of safety information so that appropriate and timely preventive action can be taken and safety of the railway system improved. In this context, sensitive safety information should be protected in an appropriate way and its collection should be ensured by guaranteeing its confidentiality, protecting its source and ensuring the confidence of staff working in railways in occurrence reporting systems. Appropriate measures should be put in place to ensure that personal information collected through reporting schemes is kept confidential and that access to the Information Sharing System is restricted. National rules on freedom of information should take into account the necessary level of confidentiality of such information. The personal information collected should be adequately protected from unauthorised use or disclosure.

(24) A 'just culture' should encourage individuals to report safety-related information. It should not, however, absolve individuals of their normal responsibilities. In this context, employees and contracted personnel should not be subject to any prejudice on the basis of information provided pursuant to this Regulation, except in cases of willful misconduct or where there has been manifest, severe and serious disregard with respect to an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or to property, or seriously compromising the level of safety.

(25) In order to encourage reporting of occurrences, it should be appropriate to protect not only reporters, but also persons mentioned in the reports concerned. However, such protection should not exonerate those persons from their reporting obligations under this Regulation. In particular, in a situation where a person is mentioned in an occurrence report and has himself or herself the obligation to report that same occurrence, and intentionally fails to report it, then that person should lose his or her protection and face penalties in application of this Regulation.

(26) In order to enhance the confidence of individuals in the system, the handling of occurrence reporting should be organised in such a way as to appropriately safeguard the confidentiality of the identity of the reporter and other persons mentioned in occurrence reporting with regard to fostering a 'just culture'.

(27) A reporter or a person mentioned in the data and information retained in the common information system should be adequately protected. In this context, reporting should be disidentified and details relating to the identity of the reporter and of the persons mentioned in occurrence reporting should not be disclosed for any other reasons than those related to manage safety improvements.

(28) It is possible that the persons involved in the evaluation, processing or analysis of occurrences may fear potential consequences in terms of prosecution before judicial authorities. Without prejudice to national criminal law and the proper administration of justice, Member States should not institute proceedings against persons who, in the competent authorities of the Member States, are involved in the evaluation, processing or analysis of occurrences in respect of decisions taken as part of their duties which subsequently, and with the benefit of hindsight, prove to have been erroneous or

ineffective but which, when they were taken and on the basis of the information available at that time, were proportional and appropriate.

(29) Individuals may be discouraged from reporting occurrences by the fear of self-incrimination and the potential consequences in terms of prosecution before judicial authorities. The objectives of this Regulation can be achieved without interfering unduly with the justice systems of the Member States. It is therefore appropriate to provide that unpremeditated or inadvertent infringements of the law that come to the attention of the authorities of the Members States solely through reporting pursuant to this Regulation should not be the subject of disciplinary, administrative or legal proceedings, unless where otherwise provided by applicable national criminal law. However, the rights of third parties to institute civil proceedings should not be covered by this prohibition and should be subject only to national law.

(30) In addition, cooperation with judicial authorities and safety authorities should be established in the form of arrangements aiming at introducing the respect of a balance between the public interests at stake and which should in particular cover access to and use of occurrence reporting contained in the pre-existing national systems and in the common information system.

(31) The rules on data processing and the protection of natural persons as laid down in Regulation (EU) 2016/679[(3)] of the European Parliament and of the Council (General Data Protection Regulation) and in Regulation (EU) 2018/1725[(4)] shall be fully respected in the application of this Regulation.

(32) It should be possible for interested parties to request access to certain information contained in the Information Sharing System, subject to the rules concerning the confidentiality of such information and the anonymity of the persons involved.

(33) The rules on access to documents as laid down in Regulation (EC) No 1049/2001[(5)] of the European Parliament and of the Council should be fully respected in the application of this Regulation in particular as regards the dissemination of data and information contained in the common information sharing system, which are protected under stricter access rules laid down in this Regulation.

(34) Furthermore, commercial data and information pertaining to the activities of operators that have to be shared for safety purposes need also to be protected and therefore, confidentiality requirements should be identified to clarify the level of protection involved by means of specifying the interests relevant to the nature of data and limit their disclosure as appropriate.

[(3)] OJ L 119/1 4.5.2016 REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance).

[(4)] OJ L 295/39, 21.11.2018, REGULATION (EU) 2018/1725 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC.

[(5)] OJ L 145, 31.5.2001, Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter

Without prejudice to the applicable legislation on personal data and on the transparency of information this Regulation establishes common safety methods ('CSMs'), referred to in point (d) of Article 6(1) of Directive (EU) 2016/798, for assessing the safety level and the safety performance of railway operators at national and Union level.

Article 2

Scope

1. This Regulation shall apply to any party who may contribute as a natural person or as a legally established entity for the sharing of data or information concerning the category of events defined in this Regulation and on their risk control measures.

2. For the assessment of safety level and safety performance it shall apply to any operator holding a valid safety certificate or a safety authorization to operate on the European Union railway system.

Article 3

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(a) 'railway operator' means any infrastructure manager and any railway undertaking;

(b) 'safety level' means level of occurrences of eligible events defined in Annex I of this CSM, as estimated and assessed by the method defined in Annex IV;

(c) 'safety performance' means the level of maturity of a railway operator to manage its risk control measures, as assessed by the method defined in Annex V;

(d) 'risk control measure' is equivalent to 'safety measure' as defined in point (10) of Article 3 of Commission Implementing Regulation 402/20136;

(e) 'category A event' means accident with a potential to directly result in victims or damages;

(f) 'category B event' means incident with the potential to directly cause a category A event;

(g) 'category C event' means incident with the potential to directly or indirectly cause a category B event;

(h) 'event type' means a given type of event defined by an event name and an event code, as defined in Annex I – Part D;

[6] Commission Implementing Regulation (EU) No 402/2013 of 30 April 2013 on the common safety method for risk evaluation and assessment and repealing Regulation (EC) No 352/2009 (OJ L 121 3.5.2013, p. 8).

(i) ‘risk classification method’ means the method developed in accordance with Annex VII of this CSM, which allocates any event type to the categories of events defined by this Regulation,

(j) ‘sharing’ means any exchange of data or information between two or more interested parties applicable in accordance with this Regulation and implemented in accordance with the process for managing data and information defined in Annex VI.

(k) ‘sharing request’ means a request to share data and information which is logged with the applicable template defined in Annex VI – Part G

(l) ‘TDG Competent Authority’ means the Transport of Dangerous Goods (TDG) competent authority responsible for collecting the reports on the occurrence and dangerous goods events in accordance with the Annex II to Directive 2008/68/EC of the European Parliament and of the Council[7];

(m) ‘ISS’ means common Information Sharing System in accordance with Article

Article 4

Collection of data used for the assessments

1. For the purpose of safety level and safety performance assessment, each railway operator shall provide the following data and information:

(a) any occurrence of the event types as described in the method defined in Annex I and the relevant volume of operations;

(b) the self-estimation of its safety performance in accordance with the method defined in Annex II;

(c) any occurrence scenario and related risk control measures as described in the method defined in Annex III.

2. Each National Safety Authority, TDG Competent Authority and the Agency shall be entitled to request a review of reported data and information.

3. The data and information specified in the applicable Annexes for implementing Article 4(1) shall be send to the Agency using the facilities and communication channels defined in Article 6.

Article 5

Assessment of Safety Level and Safety Performance

1. Before proceeding to the estimation of safety level and safety performance the Agency shall ask in due time each railway operator to confirm that the estimation can be performed with the data and information collected for the considered reporting period. For this purpose, the Agency shall provide the railway operators with access to all the information used to elaborate the estimations for the applicable reporting period.

[7] Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods, as amended. (Text with EEA relevance) (OJ L 260, 30.9.2008, p. 13–59).

2. Having received the above mentioned confirmation, the Agency shall provide each railway operator with the following elements:

(a) estimation of their safety levels for each applicable type of operation;

(b) estimation of their safety performance indicators.

3. The Agency shall aggregate the estimations provided to operators into national and Union level indicators for each type of operation. These indicators shall be used as reference values.

4. The Agency shall provide each operator with a comparison of their own safety level and safety performance estimates with the applicable national and Union indicators, including where applicable, an assessment of the observed safety level and safety performance trends.

5. For the execution of tasks described in this Article the Agency shall follow the methods defined in Annex IV for assessing safety levels and defined in Annex V for assessing safety performance.

Article 6

Collective learning

1. For the purpose of railway safety collective learning and continuous safety improvement any party may share safety-related data and information with the Information Sharing System using the applicable structured data sets defined in the Annexes of this Regulation.

2. For facilitating the implementation of effective collective learning, the Agency shall establish a Group of Analysts composed of experts representing railway operators, the National Safety Authorities, the Transport of Dangerous Goods Competent Authorities, the Agency and the European Commission.

3. The Agency shall organize the activities of the Group of Analysts by establishing its rules of procedure. It shall also support the functioning of this group by providing assistance for the preparation and organisation of the meetings.

4. The Group of Analysts shall develop and maintain its action plan to address the objectives and perform the activities described in Annex VII, taking into account the data and information collected in the Information Sharing System.

5. Based on their collective analyses, the members of the Group of Analysts shall collaborate to implement its action plan with the aim to improve and develop the safety of the Union rail system, using the most efficient approach to residual risk reduction and taking into account the need to ensure efficient interfaces with the other modes of transport.

6. Based on its findings, once a year, the Group of Analysts shall address to the Agency a report on its activity, possibly containing well-justified proposal(s) which may contribute to a better functioning of this group. When relevant, it may also propose improvements of the technical Annexes to this Regulation in accordance with Article 9(1).

Article 7

Information sharing system

1. Any party subject to the implementation of Articles 4, 5, and 6 shall be registered in accordance with Annex VI – Part F.

2. To allow an efficient implementation of this Regulation the Agency shall establish an Information Sharing System to be used by each registered operator, authority, the Agency and other registered interested parties for sharing data and information.

3. The Agency shall provide the registered parties with a common digital interface allowing them to establish an effective connection with the Information Sharing System and to share, on Agency request or on voluntary basis, applicable data sets according to the structured format established by this Regulation.

4. When not requested otherwise, the Information Sharing System shall be the system used by any registered parties to share applicable data and information.

5. The Information Sharing System shall offer the possibility to interface pre-existing digital systems in order to facilitate the implementation of this Regulation, in particular with machine to machine communications.

6. Where applicable, any interested party may notify the Agency with their request to interface one or several pre-existing system(s) with the common digital interface of the Information Sharing System. All the expenses related to these requests shall be borne by the requesting party, and in particular shall cover development, update, operation and maintenance costs.

7. For the implementation of this Regulation, the operators shall notify the Agency whether they will share the applicable data and information directly with the Information Sharing System or indirectly via a pre-existing system notified by a third party.

8. Independently from the communication channel – direct or indirect - each operator shall be responsible for the validity of the data and information they share with the Information Sharing System.

9. The Agency shall not be responsible for any malfunction of indirect communications and, if necessary, the data and information retained in the Information Sharing System shall be considered as the valid reference for implementing this Regulation.

10. When based on a valid and justified request from a registered entity, the data and information retained in the Information Sharing System may be rectified by the Agency, at any time, in order to take into account relevant information which was not available at the moment the concerned data items were reported and to ensure a high level of quality of the data and information.

11. When applicable and necessary, the data and information mirrored in the systems connected to the Information Sharing System shall be corrected to ensure full consistency with the data and information retained in the Information Sharing System.

12. The Agency shall define the applicable level of service, quality and security required for the Information Sharing System and shall ensure the maintenance of the Information Sharing System operating state within the applicable limits.

13. The management of data and information in the Information Sharing System, including the protection of personal, commercial and specific interest data and information, shall be implemented in accordance with the Annex VI.

14. Within the limits of the sharing rules established by the Annex VI, any interested party shall be entitled to use the data and information that are accessible by them from the Information Sharing System in order to fulfil the roles and responsibilities placed on them by the European Union legislation.

Article 8

Applicable fees

1. The Agency will provide the services necessary for the implementation of Articles 4, 5 and 6 free of charge.

2. For the maintenance and operation of the Information Sharing System modules dedicated to other purpose than the EU harmonised implementation of Articles 4, 5 and 6 the Agency shall be entitled to apply fees, in particular when the service delivered is specific to a given entity.

3. The conditions in which specific services may be implemented shall be described in dedicated agreements between the Agency and the involved parties.

Article 9

Control mechanisms

1. Based on the proposals made by the Group of Analysts, taking into account the technical and scientific progress, and when necessary, the Agency shall address recommendations to the European Commission for updating the Annexes to this Regulation.

2. Five years after the full application date of this Regulation, the Agency, in collaboration with the Group of Analysts, shall address a report to the European Commission on the implementation of these Common Safety Methods.

Article 10

Entry into force and application

1. This Regulation shall enter into force on the twentieth day following its publication in the *Official Journal of the European Union*.

2. The Group of Analysts shall be establish by the Agency and shall start its activities before [date].

3. The Regulation shall apply from [date] with an application scope limited to data and information relating to the occurrences of serious accidents (corresponding to a subset of Category A event types), with the exclusion of Article 4(1)(b) and Article 5, which shall not be implemented, and with the exclusion of the use of the Information Sharing System which shall be temporarily replaced, on behalf of the European Commission, by an immediately available IT solution provided by the Agency, not requiring specific IT developments.

4. The Agency shall publish the first version of the technical reference manual of the Information Sharing System before [date].

5. The Agency shall make available on-line a test version of the Information Sharing System and shall publish an updated technical reference manual and the first version of the user reference manual before [date].

6. The Agency shall make available on-line the final version of the Information Sharing System as well as an updated technical reference manual and user reference manual before [date].

7. The entities requested to share data and information in accordance with this Regulation shall be registered and connected with the Information Sharing System before [date].

8. The Regulation shall apply in its entirety from [date of application].

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission

The President

COLLECTION OF DATA AND INFORMATION

1. Applicable request types

1.1. Any sharing of data and information between the any entities shall be processed in accordance with the Annex VI.

1.2. The collection of data and information required in accordance with Art. 4(1) shall be processed as described in the sharing request listed in section 1.3.

1.3. The applicable sharing requests are the following:

(a) 'Simple Reporting' (SR) means that the data set defined in section 2 of this Annex is systematically and mandatorily reported in accordance with the sharing request specified in the corresponding section,

(b) 'Simple On request Reporting' (SOR) means that a simple reporting is applicable under a specific request specified by the Group of Analysts in section 4 of this Annex,

(c) 'Detailed Reporting' (DR) means that the data set defined in section 4 of this Annex is mandatorily reported in accordance with the sharing request specified in the corresponding section,

(d) 'Detailed On request Reporting' (DOR) means that a detailed reporting is applicable is applicable under a specific request specified by the Group of Analysts in section 6 of this Annex,

(e) 'Reporting of Occurrence Scenario' (ROS) means that the data set defined in section x.x of the annex III is mandatorily reported in accordance with the sharing request specified in the corresponding section,

(f) 'Reporting of Risk Control Measure' (RRCM) means that the data set defined in section x.x of the annex III is mandatorily reported in accordance with the sharing request specified in the corresponding section,

(g) 'Reporting of Operation Volume' (ROV) means that the data set defined in section x.x is mandatorily reported in accordance with the request specified in the corresponding section,

(h) 'Voluntary reporting' (VR) means that a sharing of data or information is voluntary implemented by one of the entities listed in Annex VI.

2. Applicable process for the management of any data and information

2.1. Any sharing of data and information shall be implemented in accordance with the sharing request types defined in the previous section and shall be managed in accordance with the rules defined in Annex VI.

3. Simple reporting (SR)

3.1. Dataset for Simple reporting

3.1.1. Any 'Simple reporting' shall contain the data items specified in this section.

3.1.2. Data set applicable for the simple reporting:

Data items	Applicable parameter/values	Comment
Reporting entity	Entity name	(specific interest data)
Reporting entity category*	Entity category code	In accordance with the coding defined in Annex VI – Part D
Reporting entity identifier*	Entity ID Number	(anonymized specific interest data) (when not defined yet, a unique identifier will be allocated in accordance with Annex VI – part F
Reporter contact name	Contact name	(personal data)
Reporter contact e-mail*	Contact e-mail	(personal data)
Reporter contact identifier	Contact ID number	(anonymised personal data)
Reporting reason*	'INVOLVED' or 'WITNESS'	
Operation category*	Operation category code	Category of operation in accordance with Annex I – General part – section xxx
Occurrence identifier* (if applicable)	Occurrence ID (Country code _ Reference number) or - 'NEW'	In accordance with ISS identification process

Occurrence event type*	Event type code (if not yet included in Annex I – Part D) - Event name - Event definition	Event type coding as defined in Annex I – Part D (in this case the Group of Analyst is informed of the occurrence for the definition of the potential new event type)
Date of occurrence*	dd.mm.yyyy	
Time of occurrence*	hh:mm:ss	
Deemed cause of the reported occurrence*	Event type code (if not yet included in Annex I – Part D) - Event name - Event definition	Event type coding as defined in Annex I – Part D (in this case the Group of Analyst is informed of the occurrence for the definition of the potential new event type)
Date of deemed occurrence cause	dd.mm.yyyy	
Time of deemed occurrence cause	hh:mm:ss	

3.2. Sharing request for 'Simple reporting'

3.2.1. If not otherwise specified, any occurrence of a reportable event type marked as 'SR' in the tables of Annex I – Part A, B or C shall be reported by the requested operators in accordance with the following request specification.

3.2.2. Request for 'Simple reporting'

Requesting entity	ERA	(specific interest data)
Requested entity	Each registered operator	(specific interest data)
Sharing request type	'New input of data or information to ISS'	(specific interest data)
Sharing justification	Occurrence simple reporting in accordance with CSM ALSP article 4.1(a) and request of Annex I – Article 2.2.	(specific interest data)
Targeted data set	N/A	(specific interest data)
Data set shared	Data set for simple reporting in accordance with CSM ALSP Annex I –	Applicable personal or specific interest data items are identified in the submitted data set in accordance

	Article 2.1. (mandatory template)	with the data set request in Annex I – Article 2.1
Start date and time of the reporting period	Date and time provided by the Information Sharing System	
End date and time of the reporting period	Date and time provided by the Information Sharing System + 3 months	
Sharing deadline	Category A events: - time of occurrence + 72 h Other event categories - end of reporting period + 72 h	(Cat. A events other than serious or significant accidents and other event categories may be subject to grouped simple reporting at the end of the reporting period)
Validation date and time	End date and time of the reporting period + 1 month	
Closure of the sharing request	Each operator notified with the list of valid – simple reporting - entry for the reporting period End date and time of the reporting period + 2 months	(specific interest data) (this data set is used for the estimation of SL for each operator)

The generic steps of the data and information management process are defined in Annex VI – Part D.

4. Simple On Request reporting (SOR)

(reserved)

5. Detailed reporting (DR)

5.1. Detailed reporting data set

5.1.1. Any ‘Detailed reporting’ shall contain the data items specified in the following sections.

5.1.2. Data set applicable for a ‘Detailed reporting’ (in addition to a simple reporting)

Data items	Applicable parameter/values	Comment

Reporting entity identifier*	Operator ID	(anonymized specific interest data) (if not defined yet, a unique operator identifier will be allocated in accordance with Annex VI – Part G.2)
Reporting entity category*	Entity category code	In accordance with the coding defined in Annex VI – Part G.1
Reporting person identifier	Contact ID number	(anonymized personal data)
Occurrence context*	Data set as defined in Annex I – section 3.1.1	
Consequences*	Data set as defined in Annex I – section 3.1.2	
Free text (optional data items, if needed for better understanding of the structured reporting of the context or the consequences of the reported occurrence	Text	(the text reported shall not contain person's name)

5.1.2.1.Data set for reporting the context of the occurrence of an event

Data items	**Applicable parameter/values**	**Comment**
Reporting entity identifier*	Operator ID	(anonymized specific interest data) (if not defined yet, a unique operator identifier will be allocated in accordance with Annex VI – Part C.2)
Reporting entity category*	Entity category code	In accordance with the coding defined in Annex VI – Part C.1
Reporting person identifier	Contact person ID	(anonymized personal data)
Occurrence ID number	Occurrence number ID	The occurrence ID number is allocated by the Information Sharing System at the moment of the first reporting. It must be referred to in any further reporting concerning this occurrence
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		

Data items	**Applicable parameter/values**	**Comment**
OPERATION - TYPE OF MOVEMENT	CARRYING - MOVING - STATIONARY SHUNTING LOADING/FILLING UNLOADING/EMPTYING OTHER	N/A (loading/filling and unloading/emptying are not considered as railway operations but specific to the TDG legislation)
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
OPERATION - SPEED OF TRAIN / VEHICLE / CARGO (as applicable)	TRAIN_NUMBER TRAIN_SPEED (km/h) VEHICLE_NUMBER VEHICLE_SPEED (km/h) CARGO_NUMBER CARGO_SPEED (km/h) (for each involved train /vehicle /cargo at the moment of the reported impact)	(speed = 0 if stationary)
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
METEO /WEATHER - AMBIENT AIR CONDITION	AIR TEMPERATURE	(°C)
	DRY	
	CLEAR	
	FOG, MIST, SMOKE	
	RAIN	
	SNOW	

	SLEET, HAIL	
	HIGH WINDS	
	STORM	
	LIGHTNINGS	
	OTHER	
	UNKNOWN	
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
METEO /WEATHER - TRACK SURFACE CONDITION	DRY	
	SLIPPERY	
	LEAVES	
	SNOW	
	SLUSH	
	FROST	
	ICE	
	WET/DAMP	
	FLOODED	
	OTHER	
	UNKNOWN	
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
LIGHT CONDITIONS - DAYLIGHT		
- TWILIGHT	SUNRISE	

	SUNSET	
- DARKNESS	LIGHT LIT	
	LIGHT UNLIT	
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		

5.1.2.2.Data set for reporting the consequences of the occurrence of an event:

Data items	**Applicable parameter/values**	**Comment**
Reporting entity identifier*	Operator ID	(anonymized specific interest data) (if not defined yet, a unique operator identifier will be allocated in accordance with Annex VI – Part G.2)
Reporting entity category*	Entity category code	In accordance with the coding defined in Annex VI – Part G.1
Reporting person identifier	Contact person ID	(anonymized personal data)
Occurrence ID number	Occurrence number ID	The occurrence ID number is allocated by the Information Sharing System at the moment of the first reporting. It must be referred to in any further reporting concerning this occurrence
Free text: Note: the text reported shall not contain person's name or other personal or specific interest data. (optional data items, if needed for better understanding of the structured reporting of the context or the consequences of the reported occurrence)		
Data items	**Applicable parameter/values**	**Comment**

HUMAN CONSEQUENCES - PASSENGER	DEATH	Total number of person(s)
	SERIOUS INJURY (AIS>=3)	Total number of person(s)
	LIGHT INJURY (AIS<3)	Total number of person(s)
HUMAN CONSEQUENCES - EMPLOYEE	DEATH	Total number of person(s)
	SERIOUS INJURY (AIS>=3)	Total number of person(s)
	LIGHT INJURY (AIS<3)	Total number of person(s)
HUMAN CONSEQUENCES - TRESPASSER	DEATH	Total number of person(s)
	SERIOUS INJURY (AIS>=3)	Total number of person(s)
	LIGHT INJURY (AIS<3)	Total number of person(s)
HUMAN CONSEQUENCES - OTHER (Third party and public)	DEATH	Total number of person(s)
	SERIOUS INJURY (AIS>=3)	Total number of person(s)
	LIGHT INJURY (AIS<3)	Total number of person(s)
HUMAN CONSEQUENCES <u>DUE TO DANGEROUS GOODS' SUBSTRANCES</u>	DEATH - Traumatic - Intoxicated - Burned - Radiation	Total number of person(s) in each category
	SERIOUS INJURY (AIS>=3) - Traumatic - Intoxicated - Burned - Radiation	Total number of person(s) in each category
	LIGHT INJURY (AIS<3) - Traumatic - Intoxicated - Burned - Radiation	Total number of person(s) in each category
Free description, if necessary for better understanding of the above reporting: Note: the text reported <u>shall not</u> contain person's name or other personal or specific interest data.		
DAMAGE TO THE ENVIRONMENT (natural or built)	AIR POLLUTION	(Estimated volume of pollutant released)

	WATER POLLUTION	(Estimated volume of pollutant released)
	SOIL POLLUTION	(Estimated volume of pollutant released)
	ESTIMATED COST OF DEPOLLUTION (if applicable)	Euros
	DAMAGE TO BUILT SURROUNDING	Euros
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
DAMAGE TO THE ROLLING STOCKS	TOTAL NUMBER OF COACHES/WAGONS DAMAGED	(Number)
	TOTAL NUMBER OF COACHES/WAGONS OVERTURNED	(Number)
	TOTAL COST OF DAMAGE	(Euros)
	MEDIAN COST OF DAMAGE	(Euros)
	TOTAL NUMBER OF WAGONS LEAKING	Only applicable in case of TDG wagons involvement (Number)
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
DAMAGE TO THE RAILWAY INFRASTRUCTURE	TOTAL LENGTH OF TRACK DAMAGED	(m)
	LENGTH OF TRACK (RAILS) DAMAGED	(m)
	LENGTH OF TRACK SUBSTRUCTURE DAMAGED	(m)
	LENGTH OF TRACK SUPERSTRUCTURE DAMAGED	(m)

	NUMBER OF (SWITCHES, POINTS) DAMAGED	(number)
	TOTAL COST OF DAMAGE	(Euros)
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		
DAMAGE TO OPERATING SERVICES	DELAYED PASSENGER TRAINS - Number of trains - Minutes	(Estimated)
	DELAYED FREIGHT TRAINS - Number of trains - Minutes	(Estimated)
	SOIL POLLUTION	(Estimated volume of pollutant released)
	ESTIMATED COST OF OPERATION DISRUPTION - Passenger service - Freight service - TDG service - Terminal service	(Euros)
Free description, if necessary for better understanding of the above reporting: Note: the text reported shall not contain person's name or other personal or specific interest data.		

5.2. Sharing request for 'Detailed reporting'

5.2.1. If not otherwise specified in section 6, any occurrence of a reportable event type marked as 'DR' in the tables of Annex I – Part A, B or C shall be reported by the requested operators in accordance with the following request specification.

5.2.2. Request for 'Detailed reporting'

Requesting entity	ERA	(specific interest data)
Requested entity	Operator ID	(specific interest data)
Sharing request type	'New input of data or information to ISS'	(specific interest data)
Sharing justification	Occurrence detailed reporting in accordance with CSM ALSP	(specific interest data)

	article 4.1(a) and Annex I – Article 1.3.	
Targeted data set	Every serious and significant accident occurrences of the event types marked as 'DR' in the tables of Annex I – Part A	(specific interest data)
Data set shared	Data set for detailed reporting in accordance with CSM ALSP Annex I – Article 5.1.	Personal or specific interest data items are identified in the submitted data set in accordance with the data set template.
Start date and time of the reporting period	N/A	
End date and time of the reporting period	N/A	
Sharing deadline	time of occurrence + 2 months	(no grouped reporting allowed)
Validation date and time	Serious and significant accidents: - date and time of NIB report release, if applicable or - time of occurrence + 1 year Other accidents and incidents: time of occurrence + 3 months	
Closure of the sharing request	Acknowledgement of validation receipt by ISS	

The generic steps of the data and information management process are defined in Annex VI – Part D.

6. Detailed On request Reporting (DOR)

6.1. Dataset for DOR reporting

6.1.1. Any 'Detailed On request Reporting' shall contain the same data items as the one required for Detailed reporting.

6.2. Sharing request for DOR reporting

6.2.1. The sharing request for DOR reporting is established by the Group of Analysts in order to target learning on specific accidents or incidents while limiting the effort to collect related data and information for operators.

6.2.2. 'DOR' request shall be justified by a cost-benefit analysis of the potential for learning and shall serve the delivery of the Group of Analysts working plan.

6.2.3. 'DOR' request evolving by nature and operator shall be specifically requested for the data and information contained in the sharing request by a specific notification from the Information Sharing System.

6.3. Sharing request applicable for DOR

6.3.1. When notified by the Information Sharing System operators shall implement the request defined in the following section.

6.3.2. Any 'Detailed On request Reporting' shall contain the data items specified in the following section.

6.3.3. Applicable 'DOR' request

Requesting entity	ERA	(specific interest data)
Requested entity	Operator randomly selected upon 'simple reporting' of the same event type	(specific interest data)
Sharing request type	'New input of data or information to ISS'	(specific interest data)
Sharing justification	Occurrence detailed reporting in accordance with CSM ALSP article 4.1(a) and Annex I – Article 1.3.	(specific interest data)
Targeted data set	'Simple reporting' of the following event types: - A-3: Level Crossing accidents - A-4: Accidents to persons involving rolling stock in motion	(specific interest data)
Data set shared	Data set for detailed reporting in accordance with Annex I – Article 5.1 for the following occurrences: - Fifty (50) significant or serious accident occurrences of A-3	Personal or specific interest data items are identified in the submitted data set in accordance with the data set template.

	event type (Level Crossing accidents) - One hundred (100) significant or serious accident occurrences of A-4 event type (Accidents to persons involving rolling stock in motion), randomly selected by the Information Sharing System based on the simple reporting of these event types.	
Start date and time of the reporting period	N/A	
End date and time of the reporting period	N/A	
Sharing deadline	time of occurrence + 2 months	(no grouped reporting allowed)
Validation date and time	Serious and significant accidents: - date and time of NIB report release, if applicable or - time of occurrence + 1 year	
Closure of the sharing request	Acknowledgement of validation receipt by ISS	

The generic steps of the data and information management process are defined in Annex VI – Part D.

7. Reporting of category(ies) of operation and associated 'Operation volumes'

7.1. Dataset for reporting of 'Operation volumes'

7.1.1. In accordance with Article 4.1(a), any assessed operator shall report the applicable data items specified in section 7.2.

7.1.2. For each category of operators (IM and RU), the reporting of the type of applicable operations shall correspond to (the) type(s) of operation declared in the safety certificate and the safety authorization that are relevant for the considered reporting period.

7.1.3. For the operations performed during a given reporting period, operators shall report the type of performed operation and the volume of these operations per category of operation and per country in which operations have been actually performed (one reporting per operated country).

7.1.4. Any operation volumes reported by any operator is considered as commercial data to be protected in accordance with the rules set out in Annex VI.

7.2. Data set applicable for reporting 'Operation volumes':

Data items	Applicable unit	Comment
Reporting entity	Name	(specific interest data)
Reporting entity category*	'RU' or 'IM'	In accordance with the coding defined in Annex VI – Part D
Reporting entity identifier*	Integer	(when not defined yet, a unique identifier will be allocated in accordance with Annex VI – part F
Reporter contact name	Text	(personal data)
Reporter contact e-mail*	Text	(personal data)
Reporter contact identifier	Integer	(personal data)
Country of operation	Country code	(specific interest data)
Operation of railway lines (including sidings and stations operations)	Reporting by IMs only, if applicable: - Number of Passenger train-kilometers - Number of Freight train-kilometers - Number of Freight ton-kilometers	(specific interest data)
Operation of terminals	Reporting by IMs only, if applicable: - Number of railway vehicle processed in terminals - Number of operating hours	(specific interest data)
Operation of passenger trains (one report per operated country)	Reporting by RU only, if applicable: - Number of Passenger train-kilometers	(specific interest data)
Operation of high speed passenger trains	Reporting by RU only, if applicable:	(specific interest data)

(one report per operated country)	- Number of high speed Passenger train-kilometers	
Operation of freight trains (one report per operated country)	Reporting by RU only, if applicable: - Number of Freight train-kilometers - Number of Freight ton-kilometers	(specific interest data)
Operation of dangerous goods freight trains (one report per operated country)	Reporting by RU only, if applicable: - Number of Dangerous goods freight train kilometers - Number of Dangerous goods freight ton kilometers	(specific interest data)
Operation of freight terminals	Reporting by RU only, if applicable: - Number of railway vehicle processed in freight terminals	(specific interest data)

7.3. Request for reporting the 'Operation volumes'

7.3.1. The request below for the reporting of operation volumes is applicable to each operator, including those who have not performed any operations. In the latter case, the operator will not be further assessed.

Requesting entity	ERA	
start of the reporting period	dd/mm/yyyy – hh:mm	(date and time notified by the information sharing system)
end of the reporting period	Start of reporting period + 3 months	
deadline for reporting the operation volumes	End of reporting period + 72h	
data items to be reported	data items defined in table xxx (one report per actually operated country)	(if no operation was performed during the reporting period, the operator shall report '0' (zero) to the applicable categories of operation)
end of validation period	End of reporting period +1 month	
notification	End of reporting period +2 months - Operation volumes validated by the operator	

The generic steps of the data and information management process are defined in Annex VI – Part D.

8. Reporting of Occurrence Scenarios (SOR)

8.1. Operators shall report occurrence scenarios in accordance with Article 4.1(c).

8.2. The applicable data sets for reporting occurrence scenarios are defined in Annex III – Part A

8.3. The applicable sharing request for reporting occurrence scenarios is defined in Annex III – Part A

9. Reporting of Risk Control Measures (RRCM)

9.1. Operators shall report occurrence scenarios in accordance with Article 4.1(c).

9.2. The applicable data sets for reporting occurrence scenarios are defined in Annex III – Part B.

9.3. The applicable sharing request for reporting occurrence scenarios is defined in Annex III – Part B

ANNEX I – Part A

List of events type and reporting modes applicable to category A events

(see detailed taxonomy in Annex I – Part D)								
		Concerned operators categories						
		IM-1	IM-2	RU-1	RU-2	RU-3	RU-4	RU-5
Event code	Name of the reportable event type	Sharing request type (see Annex I – General part)						
A-1	Collision	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR
A-2	Derailment	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR
A-3	Level Crossing Accident	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR
A-4	Accidents to persons involving rolling stock in motion	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR	SR & DOR
A-5	Fire or Explosion – not involving - dangerous goods cargo	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR
A-6	Accidents involving dangerous goods cargo	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR
A-7	Suicides and attempted suicides	SR	SR	SR	SR	SR	SR	SR
A-8	Other accident	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR	SR & DR
	(reserved)	DOR	DOR	DOR	DOR	DOR	DOR	DOR
(Event code)	(Name of the reported event type)	VR	VR	VR	VR	VR	VR	VR

ANNEX I – Part B

List of events type and reporting modes applicable to Category B events

(see detailed taxonomy in Annex I – Part D)								
		Concerned operators categories						
		IM-1	IM-2	RU-1	RU-2	RU-3	RU-4	RU-5
Event code	Name of the reportable event type	Sharing request type (see Annex I – General part)						
B-1	Train (or Vehicle) Operations Failure	SR	SR	SR	SR	SR	SR	SR
B-2	Technical Failure of the vehicles	SR	SR	SR	SR	SR	SR	SR
B-3	Technical Failure of fixed installations	SR	SR	SR	SR	SR	SR	SR
B-4	Environmental relevant factor	SR	SR	SR	SR	SR	SR	SR
	(reserved)	SOR / DOR	SOR / DOR	SOR / DOR	SOR / DOR	SOR / DOR	SOR / DOR	SOR / DOR
(Event code)	(Name of the reported event type)	VR	VR	VR	VR	VR	VR	VR

ANNEX I – Part C

List of events type and reporting modes applicable to Category C events

(see detailed taxonomy in Annex I – Part D)								
		Concerned operators categories						
		IM-1	IM-2	RU-1	RU-2	RU-3	RU-4	RU-5
Event code	Name of the reportable event type	Sharing request type (see Annex I – General part)						
	(reserved)	SR	SR	SR	SR	SR	SR	SR
	(reserved)	SOR	SOR	SOR	SOR	SOR	SOR	SOR
	(reserved)	DR	DR	DR	DR	DR	DR	DR
	(reserved)	DOR	DOR	DOR	DOR	DOR	DOR	DOR
(Event code)	(Name of the reported event type)	VR	VR	VR	VR	VR	VR	VR

ANNEX I – Part D

Applicable taxonomy of event types (to be finalised)

Category A events **-** **Accidents with a potential to directly result in victims or damages**			
Code of event type	Name of the event type	Definitions	By default allocation of related occurrences (see Annex IV for details)
A1	**Collision**	RSD AppAnnexI	
A1.1	**Collision with rail vehicle**		RU / RU+IM
A1.1.1	Front to Front		RU / RU+IM
A1.1.2	Front to End		RU / RU+IM
A1.1.3	Side (including front to side or side to side)		RU / RU+IM
A1.2	**Collision with obstacle within the clearance gauge**	RSD AppAnnexI	
A1.2.1	With objects fixed on or near the track		IM
A1.2.1.1	with buffer stops		RU
A1.2.1.2	with (part of) infrastructure (equipment) within clearance gauge		IM
A1.2.1.3	with other fixed objects		IM
A1.2.2	With objects temporarily present on or near the track		IM
A1.2.2.1	with animals (excluding birds)		IM
A1.2.2.2	with rocks		IM
A1.2.2.3	with landslides		IM
A1.2.2.4	with trees		IM

A1.2.2.5	with lost parts of railway vehicles		RU ext.
A1.2.2.6	with lost or displaced loads		RU ext.
A1.2.2.7	with vehicles and machines or equipment for track maintenance		IM
A1.2.2.8	with road vehicles		IM
A1.2.2.9	with other temporary objects		IM
A1.2.3	With overhead contact lines		IM
A2	**Derailment**	RSD AppAnnexI	
A2.1	**on a Continuous track**		IM / RU / IM+RU
A2.2	**on a Switch**		IM / RU / IM+RU
A2.3	**on a Crossing**		IM / RU / IM+RU
A3	**Level Crossing Accident**	RSD AppAnnexI	
A3.1	**with one or more crossing vehicles**		IM
A3.2	**with crossing users (e.g. pedestrians)**		IM
A3.3	**with other objects temporarily present on or near track if lost by a crossing vehicle or user**		IM
A4	**Accidents to persons involving rolling stock in motion**	RSD AppAnnexI	
A4.1	**person hit by a railway vehicle (or by an object attached to, or that has become detached from, the vehicle)**		IM
A4.2	**person falling from railway vehicle**		RU
A4.3	**person falling or being hit by loose objects when travelling on board vehicles**		RU
A5	**Fire or Explosion NOT involving dangerous goods cargo**	RSD AppAnnexI	
A5.1	**Fire in Rolling Stock**		RU
A5.2	**Explosion in Fixed installations**		IM

A6	**Accidents involving dangerous goods cargo**		RSD + RID
A6.1	**in combination with another type A event (please specify)**		IM+RU
A6.1.1	with a release of dangerous goods substance (please report details in accordance with TDG legslation)		IM+RU
A6.1.2	without release of dangerous goods substance (please report details in accordance with TDG legslation)		IM+RU
A6.2	**without combination of another type A event**		IM+RU
A6.2.1	with a release of dangerous goods substance (please report details in accordance with TDG legslation)		IM+RU
A6.2.2	without release of dangerous goods substance (please report details in accordance with TDG legslation)		IM+RU
A7	**Other accident**	RSD AppAnnexI	
A7.3	**Electrocution**		IM / IM+RU
A7.4	**Cargo falling form a height**		RU
A7.5	**Other non-already listed event of type A (please propose a taxonomy with the relevant template)**		
A8	**Suicides and attempted suicides**	RSD AppAnnexI	
A8.1	**Suicide**		IM
A8.2	**Attempted suicide**		IM
	(reserved)		

Category B events - Incidents with the potential to directly cause a category A event			
Code of event type	Name of the event type	Definitions	By default allocation of related occurrences (see Annex IV for details)
B.1	**Train (or vehicle) Operations Failure**		
B.1.1	**Signal passed at danger when passing a danger point**	RSD AppAnnexI	RU
B.1.2	**Signal passed at danger without passing a danger point**	RSD AppAnnexI	RU
B.1.3	**Runaway**	Any uncontrolled movement of a rail vehicle over a distance of at least one meter.	RU
B.1.4	**Wrong routing**	Any occasion when a train enters wrong track.	IM / RU+IM
B.1.5	**Over-speeding**	Any occasion when a train runs with a speed higher than the maximum authorized speed or design speed.	RU / RU+IM
B.1.6	**Loading irregularity**	Any situation in which an improperly loaded goods creates an imminent risk of an accident.	RU
B.1.6.1	Overweight		RU
B.1.6.2	Oversized loading		RU
B.1.6.3	Imbalanced loading		RU
B.1.6.4	Insecure loading		RU
B.1.6.5	Open door		RU
B.1.7	**Train composition Failure**		RU
B.1.8	**Train available for boarding or alignment outside platform**		RU
B.1.9	**Passenger entrapment in door**		RU

B.1.10	**Train departure with open door**		RU
B.1.11	**Long stop in tunnel**	Any occasion when a passenger train is stopped in a tunnel for more than 10 minutes.	RU / RU+IM
B.1.12	**On track plant incorrectly outside possession**		IM
B.1.13	**On track plant incorrectly outside possession**		IM
B.1.14	**Pushed switch**	Any occasion when a switch is run over in a wrong setting.	IM
B.1.15	**Other (train operation failures)**		
B.2	**Technical Failure of the vehicles**		**RU**
B.2.1	**Broken wheel on rolling stock in service**	RSD AppAnnexI	RU
B.2.2	**Broken axle on rolling stock in service**	RSD AppAnnexI	RU
B.2.3	**Other Safety Critical Component broken**	RSD AppAnnexI	RU
B.2.4	**Wrong side signalling (vehicle) failure**	RSD AppAnnexI	RU
B.2.5	**Braking system failure**	A failure in breaking system significantly reducing the braking capacity.	RU
B.2.5.1	Severe brake/snatch		RU
B.2.5.2	Brake not correctly set for load		RU
B.2.5.3	Breake not checked / maintained		RU
B.2.6	**Losing of vehicle parts**	Any situation when a part of a rail vehicle detach and falls on ground.	RU
B.2.7	**Traction motor failure (electrical)**		RU
B.2.8	**Diesel engine failure**		RU
B.2.9	**Hot axle box**	Any situation in which the axle suffers structural failure due to friction-induced overheat.	RU
B.2.10	**Coupling failure**	Any situation in which the railway vehicles detach as a result of a structural component failure.	RU
B.2.11	**Doors failure**		RU

B.2.12	**Suspension system failure**		RU
B.2.13	**Loss of ventilation**		RU
B.2.14	**ERTMS/ATP/APC odometry error**		RU
B.2.15	**Twisted underframe**		RU
B.2.16	**Other (technical failure of the vehicle)**		RU
B.3	**Technical Failure on the infrastructure**		**IM**
B.3.1	**Broken rail**	RSD AppAnnexI	IM
B.3.2	**Track buckle and other track misalignment**	RSD AppAnnexI	IM
B.3.3	**Gauge spread**		IM
B.3.4	**Track twist**		IM
B.3.5	**Rail fastening and joints**		
B.3.6	**Wrong side signaling (infrastructure) failure**	RSD AppAnnexI	IM
B.3.7	**Switch and crossing failure**	A break affecting the switch or crossing, ...	IM
B.3.8	**Failure of the level crossing equipment**	Any occasion when a train passes over a level crossing with lower protection level than required.	IM
B.3.9	**Disorder of earthworks/embankment failure**		
B.3.10	**Structures failure**	Any collapse, including partial, distortion or break affecting the clearance gauge and stability of the superstructure.	IM
B.3.10.1	Tunnel failure		IM
B.3.10.2	Viaduct failure		IM
B.3.10.3	Culvert failures		IM
B.3.10.4	Rail bridge structural failure		IM
B.3.10.5	Over line bridge (e.g. pedestrian) failure		IM
B.3.10.6	Station Structure failure		IM
B.3.10.7	Platform failure		IM
B.3.11	**Power supply equipment failure**		IM

B.3.12	**Train detection equipment failure**		IM
B.3.13	**Overhead contact line failure**		IM
B.3.14	**De-shunting**		IM
B.3.15	**Other (technical failure of fixed installations)**		IM
B.4	**External events**		
B4.1	**Earthquake**		
B4.2	**Flooding**		
B4.3	**Landslide**		
B4.4	**Vegetation**		
	(reserved)		

Category C events - Incidents with the potential to directly or indirectly cause a category B event			
Code of event type	Name of the event type	Definitions	By default allocation of related occurrences (see Annex IV for details)
C.1	**Human Performance**		
C.1.1	**To provide power for train (or vehicle) operations in normal operations, or situations where there are disruptions or engineering work**		
C.1.1.1	Take up power control duties		
C.1.1.2	Monitor power		
C.1.1.3	Provision of traction supply		
C.1.1.4	Detect irregularity		
C.1.1.5	Agreement of isolation		
C.1.1.6	Formal agreement for control of the line		
C.1.1.7	Apply isolation		
C.1.1.8	Return of power / remove isolation		
C.1.2	**To respond to incidents and occurrences, including arrangements for safety and initiation of remedial actions**		
C.1.2.1	Detect irregularity		
C.1.2.2	Conduct immediate mitigation, containment		
C.1.2.3	Gather and communicate incident information		
C.1.2.4	Protect work area		
C.1.2.5	Verify work arrangements		

C.1.2.6	Ensure status of infrastructure		
C.1.2.7	Formal agreement for control of the line		
C.1.2.8	Coordinating failure and incident response		
C.1.2.9	Anticipate delay		
C.1.2.10	Re-planning train service		
C.1.2.11	Ensure passenger and personnel safety		
C.1.2.12	Rectifying the incident		
C.1.2.13	Protect evidence		
C.1.3	**To maintain, repair and extend the infrastructure**		IM
C.1.3.1	Identify engineering work requirements		IM
C.1.3.2	Establish network access		IM
C.1.3.3	Formulate work plans		IM
C.1.3.4	Allocate resources		IM
C.1.3.5	Formal agreement for control of the line		IM
C.1.3.6	Verify work arrangements		IM
C.1.3.7	Protect work area		IM
C.1.3.8	Supply of resources to site work		IM
C.1.3.9	Establish safe working environment		IM
C.1.3.10	Using trains, plant and machinery for engineering work		IM
C.1.3.11	Close down site on completion of work		IM
C.1.3.12	Supervision of teams and individuals		IM
C.1.3.13	Carrying out trackside work		IM
C.1.4	**To operate a train in normal operational situations and situations where disruption or problems occur**		RU
C.1.4.1	Ensure authority		RU
C.1.4.2	Maintain appropriate speed		RU

C.1.4.3	Ensure train integrity and load integrity on journey		RU
C.1.4.4	Stopping train		RU
C.1.4.5	Management of train control systems		RU
C.1.4.6	Ensure status of infrastructure		RU
C.1.4.7	Operate level crossing		RU
C.1.4.8	Warnings to other rail users		RU
C.1.4.9	Stabling of vehicles		RU
C.1.4.10	Provide information and support to passengers		RU
C.1.5	**To control train movements in all operational circumstances**		IM
C.1.5.1	Take up control of train movement duties		IM
C.1.5.2	Handover of responsibility		IM
C.1.5.3	Monitor rail network		IM
C.1.5.4	Authorise train movements		IM
C.1.5.5	Route / re-route passenger or freight service		IM
C.1.5.6	Record train movements		IM
C.1.5.7	Anticipate delays or poor traffic flow		IM
C.1.5.8	Deal with irregular train movements		IM
C.1.5.9	Provide train identification		IM
C.1.5.10	Manage implementation of emergency / temporary speed restrictions		IM
C.1.5.11	Gather and communicate information		IM
C.1.5.12	Control level crossing		IM
C.1.5.13	Dispatch train		IM
C.1.5.14	Supervision of teams and individuals		IM
C.1.6	**To prepare trains for service**		RU
C.1.6.1	Assembling vehicle formation		RU
C.1.6.2	Preparation of vehicles		RU

C.1.6.3	Take up driving duties		RU
C.1.6.4	Loading of freight		RU
C.1.7	**Support passenger movements and well-being at stations**		RU
C.1.7.1	Preparing stations for use by passengers		RU
C.1.7.2	Assisting passengers		RU
C.1.7.3	Control of crowds		RU
C.1.8	**To check, inspect maintain and repair rolling stock for service**		
C.1.8.1	Identify rolling stock maintenance requirements		
C.1.8.2	Allocate resources		
C.1.8.3	Prepare rolling stock for inspection		
C.1.8.4	Inspect rolling stock		
C.1.8.5	Handover of responsibility		
C.1.8.6	Installation of components onto vehicles normally in service		
C.1.8.7	Maintenance of components on vehicles normally in service		
C.1.8.8	Servicing of rolling stock		
C.1.9	**To design a structural subsystem**		
C.1.9.1	Define scope and purpose		
C.1.9.2	Establish system definition and application conditions		
C.1.9.3	Identify risks		
C.1.9.4	Specify system requirements		
C.1.9.5	Apportion system requirements (sub-system and compoment level)		
C.1.10	**To Install a structural subsystem**		
C.1.10.1	Manufacture		
C.1.10.2	Assemble and install		

C.1.10.3	Validate (incl. safety acceptance and commissioning)		
C.1.10.4	Accept system (incl. entry in service)		
C.1.11	**To Maintain a structural subsystem**		
C.1.11.1	Coordinating/managing of maintenance (of below 3 activities)		
C.1.11.2	Identifying of maintenance needs		
C.1.11.3	Organizing maintenance activities		
C.1.11.4	Executing maintenance		
C.1.12	To Decommission a structural subsystem		
C.2	**Performance relevant factor**		
C.2.1	**Dynamic staff factors**		
C.2.1.1	Expectation / Intention while acting / Decision model / Error type		
C.2.1.2	Vigilance/ concentration		
C.2.1.3	Fatigue		
C.2.1.4	Stress (incl. emotions & psychosocial factors)		
C.2.1.5	Situational awareness (incl. self-awareness - situational self-knowledge)		
C.2.2	**Dynamic tasks factors**		
C.2.2.1	Uncertainty-Volatility / Time pressure / Time to respond		
C.2.2.2	Complexity-Ambiguity / Autonomy		
C.2.2.3	Monotony / Routine; habits		
C.2.2.4	Shift pattern (working hours, breaks, manning)		
C.2.2.5	Working environment (visibility, noise, vibrations, weather,…)		
C.2.3	**Static Staff Factors**		
C.2.3.1	Familiarity / Individual experiences - job history		

C.2.3.2	Individual characteristics (incl. self-trust, openness (and others aspects of personality,...))		
C.2.3.3	Motivation / Commitment (to goal (priorities, risks), to organisation, to rules)		
C.2.3.4	Fit to work (matching to the requirements of the tasks/activities, health)		
C.2.3.5	Decision making skills		
C.2.4	**Static Task Factors**		
C.2.4.1	Technical Communication Means		
C.2.4.2	Task instructions - Quality of procedures and rules		
C.2.4.3	User-centered design / Human Machine Interfaces / Levels of automation		
C.2.4.4	Preventive dispositions and devices		
C.2.4.5	Societal & Institutional context (regulation, economy, politics, medias, trespassing, sabotage, terrorism…)		
C.2.5	**Interactional Factors**		
C.2.5.1	Communication (between employees, within organisation)		
C.2.5.2	Relations (within team, with team-leader, within organisation) - power issues		
C.2.5.3	Trust in information - in others (management, colleagues, technical means,…)		
C.2.5.4	Positive - negative reinforcement		
C.2.5.5	Involvement in decision making		
C.3	**Safety Management System**		
C.3.1	**Leadership**		
C.3.1.1	Leadership and commitment		
C.3.1.2	Safety Policy		
C.3.1.3	Organizational roles, responsibilities, accountabilities and authorities		

C.3.1.4	Consultation of staff and other parties		
C.3.2	**Planning**		
C.3.2.1	Actions to address risks		
C.3.2.2	Safety objectives and planning		
C.3.3	**Support**		
C.3.3.1	Resources		
C.3.3.2	Competence		
C.3.3.3	Awareness		
C.3.3.4	Information and communication		
C.3.3.5	Documented information		
C.3.3.6	Integration of human and organizational factors		
C.3.4	**Operation**		
C.3.4.1	Operational planning and control		
C.3.4.2	Asset Management		
C.3.4.3	Contractors, partners and suppliers		
C.3.4.4	Management of change		
C.3.4.5	Emergency management		
C.3.5	**Performance evaluation**		
C.3.5.1	Monitoring		
C.3.5.2	Internal auditing		
C.3.5.3	Management review		
C.3.6	**Improvement**		
C.3.6.1	Learning from accidents and incidents		
C.3.6.2	Continual improvement		
C.4	**Regulatory Framework**		
C.5	**Security**		
C.5.1	**Terrorism**		
C.5.2	**Assault**		

C.5.3	**Theft**		
C.5.4	**Arson**		
C.5.5	**Vandalism**		
C.5.6	**Cyber attack**		
C.5.7	**Other (security indirect causes)**		
	(reserved)		

ANNEX II

COLLECTION OF DATA AND INFORMATION ON SAFETY PERFORMANCE

1. Applicable scope

1.1. This annex shall be applied to share data and information required for the implementation of Article 4.1(b).

1.2. The self-estimation is shared by operators without prejudice to their current certification/authorisation.

1.3. The data and information collected for assessing the safety performance of operators are limited to the domain of the management of risk control measures. The self-estimation derived from these data and information aims to measure maturity levels higher than the one requested to obtain a certificate/authorisation and concerns a narrower domain.

1.4. The operator may use their self-estimation to better identify possible improvements of their current management of risk control measure towards higher maturity levels.

2. Applicable process

2.1. The operator shall report its self-estimation to the Information Sharing System in accordance with the sharing request defined in section 4.

2.2. Self-estimations shall cover the scope of operations declared in the operator's registration made in accordance with the Annex VI – Part B.

2.3. The operator shall self-estimate its maturity level in using the self-estimation tables provided in section 5 for each following risk management areas:

(a) Planning of risk control measures;

(b) Setting up and operating of risk control measures;

(c) Monitoring of risk control measures;

(d) Reviewing and adjusting of risk control measures.

2.4. The operator shall report the self-estimation maturity level it considers to achieve, as well as the references of the supporting evidences with the sharing data set of section 3.

2.5. For each area, the level self-estimated by the operator shall be the one fulfilling the following criteria:

(a) The operator is able to provide, immediately on request, the supporting evidences corresponding to all the elements of proof required by the table corresponding to this level;

And,

(b) The operator is able to provide, immediately on request, the supporting evidences corresponding to all the elements of proof required by lower level(s) self-estimation tables of the same area.

2.6. For a given area, if only one supporting evidence required for this level is missing it shall be interpreted that neither the level corresponding this self-estimation table is reach nor higher level(s).

3. Applicable sharing data set

3.1. Self-estimations shall cover the scope of operations declared in the operator's registration made in accordance with the Annex VI – Part B.

3.2. Only one data set is required to cover all the applicable railway operations of an operator.

3.3. The self-estimation shall be shared with the data set defined in this section.

3.4. Data set applicable for reporting a SP self-estimation:

Data items	Applicable parameter/values	Comment
Reporting entity identifier*	Entity ID Number	(specific interest data – dis-identified) (when not defined yet, an identifier will be allocated in accordance with Annex VI – part F
Reporter contact name	Contact name	(personal data)
Reporter contact e-mail*	Contact e-mail	(personal data)
Reporter contact identifier	Contact ID number	(personal data – dis-identified)

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<tr>
<td>Self-estimation*</td>
<td>
Self-estimated level for area P: # (1..5)
Evidences for area P
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<tr><th>Element #</th><th>Evidence Ref.</th><th>Version</th><th>Date</th></tr>
<tr><td>1</td><td></td><td></td><td></td></tr>
<tr><td>..</td><td></td><td></td><td></td></tr>
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</table>
Self-estimated level for area D: # (1..5)
Evidences for area D
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<tr><td>..</td><td></td><td></td><td></td></tr>
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</table>
Self-estimated level for area C: # (1..5)
Evidences for area C
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<tr><td>..</td><td></td><td></td><td></td></tr>
<tr><td>43</td><td></td><td></td><td></td></tr>
</table>
Self-estimated level for area A: # (1..5)
Evidences for area A
<table>
<tr><th>Element #</th><th>Evidence Ref.</th><th>Version</th><th>Date</th></tr>
<tr><td>44</td><td></td><td></td><td></td></tr>
<tr><td>..</td><td></td><td></td><td></td></tr>
<tr><td>55</td><td></td><td></td><td></td></tr>
</table>
</td>
<td>(specific interest data)
(In case no element of proof can be delivered for a given situational aspect the minimum maturity score (1) will be allocated for the considered area)</td>
</tr>
</table>

4. Sharing request for reporting ‘SP self-estimation’

4.1. The operator shall report its self-estimation to the Information Sharing System in accordance with the sharing request defined in this section.

Requesting entity	ERA	
Requested entity	Operator ID	(specific interest data) (the sharing request will be notified in due time by the Information Sharing System to each operator)
Sharing request type	'New input of data or information to ISS'	
Sharing justification	Request in accordance with Article 4.1(b) of this Regulation	
Targeted data set	n/a	(specific interest data)
Data set shared	Data set in accordance with section 3.4 of this Annex.	
Start date and time of the reporting period	n/a	
End date and time of the reporting period	n/a	
Sharing deadline	+7 months after the date of the first issue of certification/authorisation	(If no (or incomplete) reporting is received at this date the operator will be notified with a reminder)
Validation date and time	Sharing deadline + 1 month At this stage the National supervisory authority is entitled to request a review of the self-estimation by the concerned operator, in accordance with the implementation of the CSM on Supervision and with Article 4.2 of this Regulation.	(If no (or incomplete) reporting is received at this date the operator will be notified with a second reminder)
Closure of the sharing request	Sharing deadline + 2 months	(If no (or incomplete) reporting is received at this date the operator will be allocated the minimum score (1) for each missing self-estimation area)

The 'start', 'end', 'validation' and 'notification' are generic steps of the data and information management process defined in Annex VI – Part E.

5. Applicable self-estimation tables

5.1. Self-estimation of the ‘Planning of risk control measures’

5.1.1. Requirements for Maturity level 1

No requirements are established for this level. It is the level allocated in the case the operator is not able to provide the required evidences for demonstrating the achievement of level 2.

5.1.2. Requirements for Maturity level 2:

Description of expected for maturity for level 2 in ‘Planning of risk control measures’ area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 2
1. Process for risk assessment 2. Overview of training of staff members with regard to risk assessment 3. Process for change management 4. Overview of assessed risk scenarios (serious risks for safety) 5. Staff with knowledge of operational processes have risk assessment activities mentioned in their job description. 6. Someone in the company is aware/has knowledge of HOF concepts and is able mandated to organise necessary resources when needed 7. Evidence that the change management process systematically involves risk management process 8. The 10 most important risk control measures described in accordance with the parts 1 and 2 of the applicable data set in Annex III – Part B

5.1.3. Requirements for Maturity level 3:

Description of expected for maturity for level 3 in 'Planning of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 3
9. Operator uses acceptance criteria in risk-based decision-making. 10. Process for the identification of risks associated with human and organisational factors during the risk assessment process. 11. Elements exist that human and organisational factors are taken into consideration in the risk assessment process and the change management process (evidence of application of process – see 11.) 12. Overview of assessed risk scenario's concerning all the risks for safety that are identified the operator. 13. The 10 most important risk control measures described in accordance with the parts 1, 2 and 3 of the applicable data set in Annex III – Part B

5.1.4. Requirements for Maturity level 4:

Description of expected for maturity for level 4 in 'Planning of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 4
14. Performance indicators are measured with regard to the risk assessment process. 15. Periodic review meetings with regard to the risk assessment process take place 16. Reviews are undertaken of the expertise present during risk analyses versus the topics under analysis 17. The 10 most important risk control measures described in accordance with the parts 1, 2, 3 and 4 of the applicable data set in Annex III – Part B

5.1.5. Requirements for Maturity level 5:

Description of expected for maturity for level 5 in 'Planning of risk control measures' area
[Situation descriptions currently under review, to be completed] …

…
…
Required elements of proof for level 5
18. The operator regularly conducts in depth reviews of its risk assessment methods and adapts them in function of these findings 19. Human and organisational factors issues are fully integrated in the risk assessment process and the change management process and are continuously reviewed 20. The 20 most important risk control measures described in accordance with the parts 1, 2, 3 and 4 of the applicable data set in Annex III – Part B

5.2. Self-estimation of the 'Setting up and operating of risk control measures'

5.2.1. Requirements for Maturity level 1

No requirements are established for this level. It is the level allocated in the case the operator is not able to provide the required evidences for demonstrating the achievement of level 2.

5.2.2. Requirements for Maturity level 2:

Description of expected for maturity for level 2 in 'Setting up and operating of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 2
21. The operator informs its staff (and external staff concerned) of the risks and RCM relevant for their activities 22. The overview of risk control measures shows for each risk control measure an assigned responsible/responsible(s) in charge of operating and maintaining the risk control measure. 23. The competence management system ensures staff has the competences needed to implement, operate and maintain risk control measures 24. The overview of risk control measures includes the system assumptions identified during the risk assessment process and contains a clear reference to the origin of the hazards and to the selected risk acceptance principles 25. Records of decisions taken by the operator show that safety was taken into consideration

5.2.3. Requirements for Maturity level 3:

Description of expected for maturity for level 3 in 'Setting up and operating of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 3
26. Arrangements exist on managing shared risks and responsibilities 27. A distinction is made between the type of risk control measure: RCM that prevent occurrences, RCM that reduce the severity of consequences 28. A method exists that takes into account both the effort as well as the benefits of the risk control measures in order to be able to prioritize measures based on resource-effectiveness.(Goal: Resources for risk reduction are allocated in order to maximize the resulting risk reduction)

5.2.4. Requirements for Maturity level 4:

Description of expected for maturity for level 4 in 'Planning of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 4
29. There is evidence to estimate the effects of risk control measures across multiple risks (e.g. risks identified in multiple risk assessments) 30. The method for assessing the resource effectiveness of RCM is systematically applied 31. Management systems for different topics (such as safety) are integrated.

5.2.5. Requirements for Maturity level 5:

Description of expected for maturity for level 5 in 'Planning of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 5

32. Description of the decision making process at strategic level that includes a risk-based approach

5.3. Self-estimation of the ‘Monitoring of risk control measures’

5.3.1. Requirements for Maturity level 1

No requirements are established for this level. It is the level allocated in the case the operator is not able to provide the required evidences for demonstrating the achievement of level 2.

5.3.2. Requirements for Maturity level 2:

Description of expected for maturity for level 2 in ‘Monitoring of risk control measures’ area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 2
33. The monitoring plan takes into account the risk control measures in areas that give rise to the serious risk and if these measures are not monitored effectively, this could lead to adverse consequences for safety

5.3.3. Requirements for Maturity level 3:

Description of expected for maturity for level 3 in ‘Monitoring of risk control measures’ area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 3
34. The monitoring plan takes into account all monitorable and necessary risk control measures. The monitoring plan yields robust and reproducible results. 35. The performance of RCM is monitored using pre-defined indicators that give information with regards to its effectiveness.

5.3.4. Requirements for Maturity level 4:

Description of expected for maturity for level 4 in ‘Monitoring of risk control measures’ area

[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 4
36. The operator systematically monitors the risk control measures and identifies their weaknesses. 37. The management supports a culture in which both positive and negative experiences on how risk levels are perceived are openly shared and discussed for learning. 38. The majority of important risks are monitored using leading indicators. 39. Reporting is available on the coherent and correct application of the risk assessment process and the change management process 40. Best practices stemming from other industries are sought after and incorporated.

5.3.5. Requirements for Maturity level 5:

Description of expected for maturity for level 5 in 'Monitoring of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 5
41. Where possible, the operator has put into place a system for real-time automated monitoring and real-time data collection with regard to monitoring of RCM's. and The system ensures that the data is available when needed 42. The operator proactively organizes the sharing of lessons learned on the effectiveness or efficiency of risk control measures with external stakeholders (such as peers 43. Reporting is available on the coherent and systematic application of the risk based decision making criteria and decision making process

5.4. Self-estimation of the 'Reviewing and adjusting of risk control measures'

5.4.1. Requirements for Maturity level 1

No requirements are established for this level. It is the level allocated in the case the operator is not able to provide the required evidences for demonstrating the achievement of level 2.

5.4.2. Requirements for Maturity level 2:

Description of expected for maturity for level 2 in 'Reviewing and adjusting of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 2
44. Reports of ad-hoc reviews of risk assessments following the results of the monitoring activities 45. Reports showing that relevant incidents and accidents are taken into account in the review (of risk assessment). 46. Risk acceptance criteria defined 47. The interface between the process(es) for risk assessment and the process(es) decision making is documented

5.4.3. Requirements for Maturity level 3:

Description of expected for maturity for level 3 in 'Reviewing and adjusting of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 3
48. Planning of review of risk assessments 49. Records of top level management decisions clearly show the risks involved and the decision whether to accept/mitigate them 50. Learnings from monitoring process are used in the risk analyses. Risk analyses (risk calculations and/or risk identification) are updated in function of the learnings from monitoring.

5.4.4. Requirements for Maturity level 4:

Description of expected for maturity for level 4 in 'Reviewing and adjusting of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …

Required elements of proof for level 4
51. Planning of reviews of risk assessments is risk-based and takes into account reported accident and incident occurrences rates 52. The interface between the monitoring processes and the risk assessment processes guarantees a quick adjustment in the operational processes in case of predictive trends pointing towards a decline in safety performance.

5.4.5. Requirements for Maturity level 5:

Description of expected for maturity for level 5 in 'Reviewing and adjusting of risk control measures' area
[Situation descriptions currently under review, to be completed] … … …
Required elements of proof for level 5
53. The organisation tracks the continuously evolution of its risk profile, which shows continuous improvement 54. The top management takes a proactive role in developing, maintaining and improving the Safety Management System through regular review of internal measures, including staff communication as well as horizon scanning to identify new improvement 55. The way risks are managed is constantly challenged. The interface between the monitoring processes and the risk assessment processes ensures an improvement initiative in the applied risk management methods (continuous improvement of risk management activities)

COLLECTION OF DATA AND INFORMATION ON OCCURRENCE SCENARIOS AND RISK CONTROL MEASURES

1. Applicable scope

1.1. This annex shall be applied to share data and information required for the implementation of Article 4.1(c).

2. Applicable process

2.1. The operator shall report the occurrence scenarios and the related risk control measures in accordance with the relevant data sets and in accordance with the sharing requests defined in this Annex.

2.2. The data and information reported by the operator in application of this annex are shared between interested parties in accordance with the Annex VI.

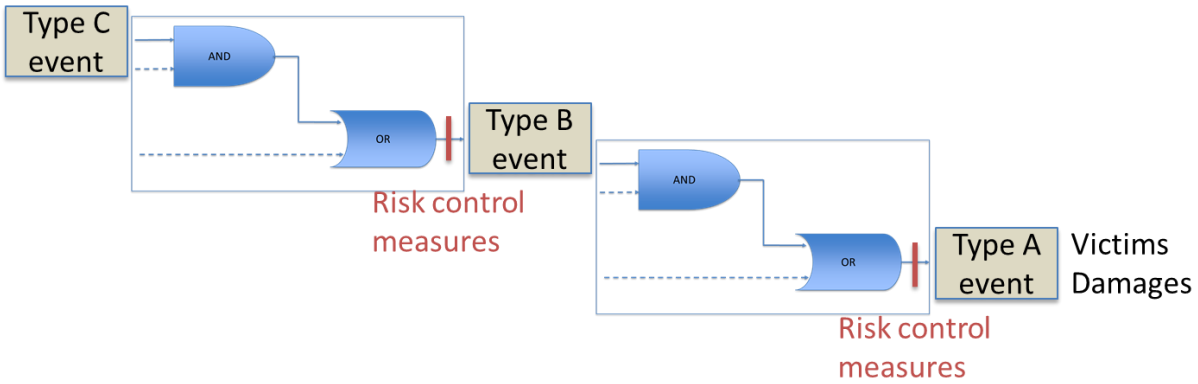
2.3. The data and information received by interested parties in application of the sharing process are used in accordance with Article 7.14.

3. Practical implementation

3.1. Practical meaning of the term ‘risk control measure’

3.1.1. In the context of this Common Safety Method the type of risk control measures that are considered are those put in place with the specific purpose of either preventing a loss of control or mitigating (or to regain control) on possible outcomes of a loss of control.

3.1.2. In other terms, in the context of this Common Safety Method it means controlling the combination of contributing events in order to avoid the occurrence of Category A events.



3.1.3. It is understood that a category A event can be caused by one or multiple direct causes and one or multiple indirect causes and that an occurrence scenario may involve only one risk control measures, several risk control measures or no risk control measures.

3.2. ‘Risk control measure’ versus ‘Management of a Risk control measure’

3.2.1. In the context of this Common Safety Method a distinction is made between the ‘risk control measures’ functions and performance and the management of the risk control measures established to set-up, operate and maintain the designed functions and the expected performance limits.

3.2.2. The management of the risk control measures includes:

(a) Risk analysis, for instance gathering up-to-date information regarding the risk scenario on which the risk control measure acts;

(b) Integration, for instance clear definition and allocation of roles and responsibilities of internal and external stakeholder linked to the management of risk control measures;

(c) Measuring/Monitoring activities, for instance activities that aim to monitor that the actual functioning and the expected performance of risk control measures is achieved:

(d) Resource management, for instance activities to guarantee the availability of resources needed to maintain the risk control measures;

(e) Competence management, for instance training of staff involved in the operation and maintenance of the risk control measures;

3.2.3. All the Safety Management System requirements that are part of Annex I and Annex II of Regulation (EU) 2018/762 are in the context of this Regulation to be considered provisions for the management of the risk control measures.

3.3. Practical aspects for the reporting an occurrence scenario

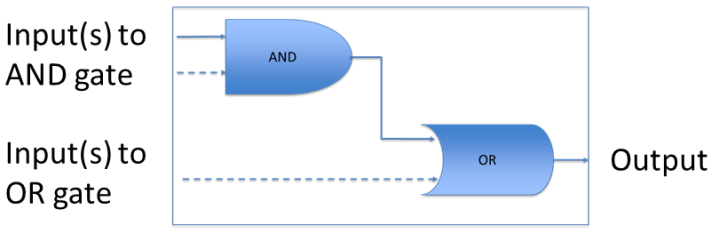
3.3.1. At the time an occurrence scenario is reported doubts may remain on the chain(s) of events that have led to the occurrence considered, the contributing event types and risk control measures which have failed. This is the reason why the OR gate may be used when needed.

3.3.2. In theory, the OR gate will not be used if all the event types and risk control measures that have failed are known with sufficient level of certainty.

3.3.3. As a consequence of the two previous paragraphs, the reporting of occurrence scenario, may use OR gates in an initial phase of reporting, which may not be used after a correction or update of the applicable data sets have been shared.

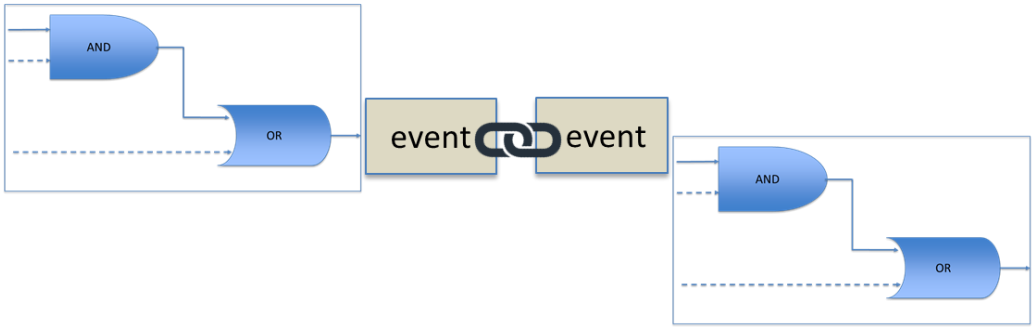
3.3.4. When reporting an occurrence scenario the following principles shall be respected at any phase of an occurrence reporting:

(a) An occurrence scenario shall be described with of one or more "building block(s)" as defined in Annex III – Part A;



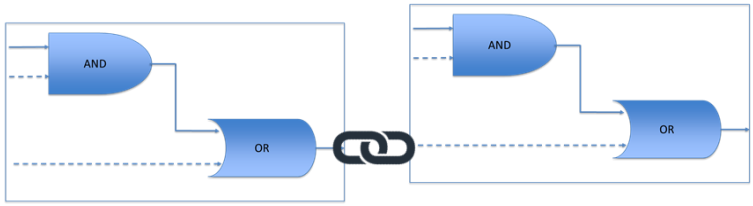
(b) The links between each 'building blocks' composing the reported occurrence scenario shall be clearly identified and shall either correspond to:

i) a matching event type;



or

ii) a neutral functional link (not using a linking event type);



(c) Applicable sharing data sets defined in Annex III – part A are used to clearly identify the relevant event types and links composing the reported occurrence scenario;

(d) A given event type can be used in one or several 'building blocks';

(e) A given link (same link ID) can be used in one or several 'building blocks'.

3.4. Practical aspects for the reporting of risk control measures

3.4.1. At the planning phase some risk control measures are reported independently of any specific actual occurrence scenario reporting as part of the elements of proof required for the Safety Performance self-estimation.

3.4.2. When applicable for a reported occurrence scenario, any risk control measure(s) that has(have) failed – already shared or not already shared during the SP self-estimation - shall be shared using the data set defined in Annex III – Part B.

3.4.3. If the reported occurrence scenario involves one of risk control measures that has not functioned in accordance with the planned functioning, the reporting corresponding this risk control measure shall be updated, in particular with the objective to fill-in the part describing the failing modes.

4. Reporting of 'Occurrence Scenarios'

4.1. Dataset for reporting 'Occurrence Scenarios'

4.1.1. Any reporting 'Occurrence Scenarios' shall contain the data items specific in the following section.

4.1.2. Applicable data set for reporting 'Occurrence Scenarios':

Data items	Applicable unit	Comment
Reporting entity identifier*	Operator ID	(anonymized specific interest data) (if not defined yet, a unique operator identifier will be allocated in accordance with Annex VI – Part C.2)
Reporting entity category*	Entity category code	In accordance with the coding defined in Annex VI – Part C.1
Reporting person identifier	Contact person ID	(dis-identified personal data)
Occurrence concerned	Occurrence ID	
Occurrence scenario	Building Block composing the scenario reported in accordance with Annex III – Part A – Section 1.1.	
RCMs relevant for the reported scenario	Relevant RCMs for the scenario reported in accordance with Annex III – Part A – Section 2.2.	
	Description of relevant RCMs for the scenario reported in accordance with Annex III – Part B.	

4.2. Request for reporting the 'Operation volumes'

4.2.1. The reporting occurrence shall be applied for any occurrence applicable as described in the request defined in the following section.

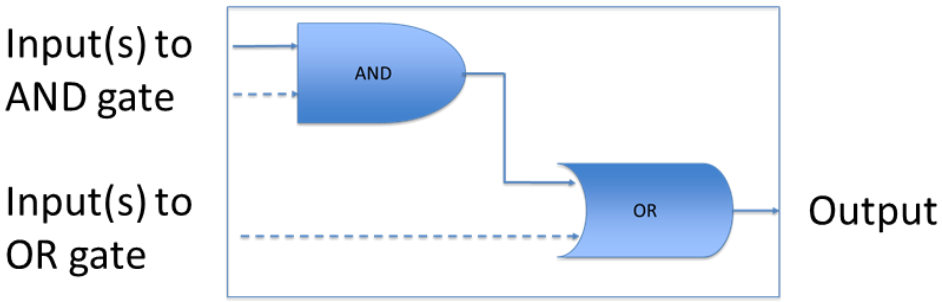
4.2.2. Request for sharing an occurrence scenario:

Requesting entity	ERA	(specific interest data)
Requested entity	Operator ID	(specific interest data)
Sharing request type	'New input of data or information to ISS'	(specific interest data)
Sharing justification	Occurrence detailed reporting in accordance with CSM ALSP article 4.1(c) and Annex I – Article 1.3.	(specific interest data)
Targeted data set	Occurrence ID of any 'Simple reporting' concerning a serious accident	(specific interest data)
Data set shared	Data set defined in Annex III – section 4	Personal or specific interest data items are identified in the submitted data set in accordance with the data set template.
Start date and time of the reporting period	N/A	
End date and time of the reporting period	N/A	
Sharing deadline	time of occurrence + 2 months	(no grouped reporting allowed)
Validation date and time	Serious and significant accidents: - date and time of NIB report release, if applicable or - time of occurrence + 1 year	
Closure of the sharing request	Acknowledgement of validation receipt by ISS	

The generic steps of the data and information management process are defined in Annex VI – Part D.

DATA SETS FOR REPORTING A "BUILDING BLOCK"
(PART OF AN OCCURRENCE SCENARIO)

1. Applicable 'Building Block'

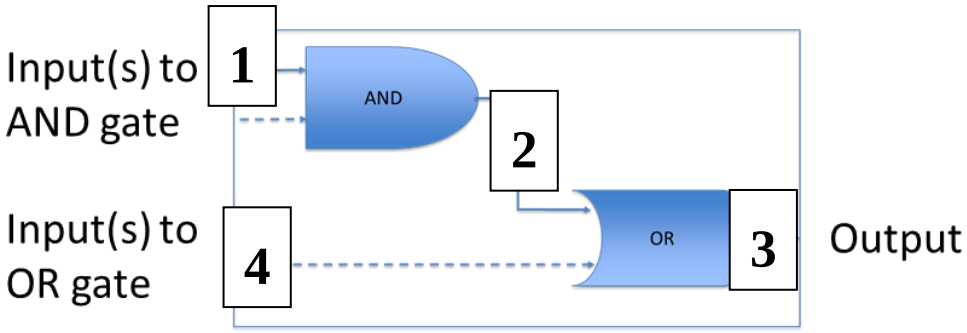


1.1. Dataset for reporting of relevant input(s) and the output of a "building block":

Building block ID:		
Reported data	Name of Event type / Link	Linked building block ID
Inputs to the 'AND' gate		
☐ Event ☐ Link		
☐ Event ☐ Link		
☐ Event ☐ Link	[Add rows if necessary]	
Inputs to the 'OR' gate		
☐ Event ☐ Link		
☐ Event ☐ Link		
☐ Event ☐ Link	[Add rows if necessary]	
Output [only one row]		
☐ Event ☐ Link		

2. Applicable positions of (failed) 'Risk Control Measures' in a 'Building Block'

2.1. The following positions 1, 2 ,3 or 4 are applicable for reporting a the location of a Risk Control Measure action within a given building block:



2.2. Dataset for reporting (failed) Risk Control Measure in a given occurrence scenario:

Building block ID: (in which a failed RCM is to be reported)				
RCM Name	RCM ID	Position in the Building Block (1,2,3 or 4)	RCM failure mode (how the RCM failed)	RCM analysis (why the barrier failed)
(as specified in the related RCM reporting data set, in accordance with Annex III – Part B)			Data and information specific to the reported occurrence scenario	
[Add rows if necessary]				

DATA SET FOR REPORTING A RISK CONTROL MEASURE

3. Applicable 'Building Block'

Table xxx: 'Reviewing and adjusting of risk control measures' Situation level 3

1. General information		
Risk Control Measure	RCM ID: RCM Name:	
General description of risk control measure aim and expected functioning of the RCM:	Aim: List of functions to be assured (technical/human): Performance expected:	
2. Description of triggering event and resulting events linked to an RCM *(in case multiple events, please provide this information for each event*)		
	Triggering event(s)	
Normal RCM functioning, as planned	Reference(s) of <u>each possible</u> triggering Event type (according to coding defined in Annex I)	(if not referenced yet) Name of the event Definition of the event Category of the event
	Resulting event(s)	
Normal RCM functioning, as planned	Reference(s) of <u>each possible</u> resulting Event type (according to coding defined in Annex I)	(if not referenced yet) Name of the event Definition of the event Category of the event
In case of RCM failure	Reference(s) of <u>each possible</u> resulting Event type	(if not referenced yet)

(used only in case of failure reporting)	(according to coding defined in Annex I)	Name of the event Definition of the event Category of the event
3. Expected effectiveness		
Estimated occurrence rate of triggering events:	Number per applicable volume of operation	Unit used for the Volume of operation (train kilometer, ton kilometer, or number of vehicle operated)
Estimated occurrence rate of resulting events: (normal functioning situation)	Number per applicable volume of operation	Unit used for the Volume of operation (train kilometer, ton kilometer, or number of vehicle operated)
Estimated occurrence rate of resulting events: (in case of failure)	Number / Applicable volume of operation	Unit used for the Volume of operation (train kilometer, ton kilometer, or number of vehicle operated)
4. Management of Risk Control Measures		
Provision type:	Description how provision is realized	
Competence management		
Measuring/Monitoring	*Leading indicators, and/or lagging indicators*	
Risk analysis		
Integration		
Resource Management		
Expected - Life cycle costs	Setting/Operation/Maintenance/Decommissioning	

ANNEX IV

ASSESSMENT OF SAFETY LEVELS

1. Assessment of operators

1.1. The method described in this annex shall apply for the assessment of each operators in accordance with Article 5(5) of this Regulation.

2. Objective of the Safety Level assessments

2.1. The general objective is to assess, with various tests, the extent to which an operator fulfils the requirement of maintaining and continuously improving railway safety.

2.2. The assessment of safety levels refers to the method for comparing the safety levels of a given operator, estimated in accordance with section 3, with an applicable reference value, allowing a judgment on the achievement of harmonised assessment criteria.

2.3. The safety level assessments shall establish whether a safety level estimated for an operator:

(A) has not started to deteriorate.

In this case the test consists of evaluating the variation of the safety level of the assessed operator between two consecutive reference periods of time.

(B) is not worse than the level of similar operators.

In this case the test consists in comparing the safety level of the assessed operator with the reference safety level established for a group of operators operating the same operation category(ies), in accordance with Annex I – section 7, over the same reference period of time.

(C) is not worse than it was in the past.

In this case the test consists of comparing the safety level of the assessed operator in a given year with the reference value provided by the average safety level of the same operator over a past period of time.

2.4. Statistical inference and tests shall be used to provide harmonised assessments to each operator. The applicable periods of time and reference values are defined in section 3.1 and the assessment criteria are defined in section 3.2.

3. Applicable reference values and periods of time

3.1. The assessment of the fulfilment of the objectives defined in section 2 shall be based on the reference values and periods of time defined in this section.

Objective assessed	(A)	(B)	(C)
Assessed period	Calendar year n	Calendar year n	5 years period after last date of certification or authorization
Assessed value	SL of the assessed operator over year n	SL of the assessed operator over year n	SL of the operator over the assessed period
Reference period	Calendar year n-1	Calendar year n	Previous 5 years period of certification or authorization
Reference value	SL of the assessed operator over year n-1	SL of similar group of operators over year n	SL of the operator over the previous assessed period
Applicable test	See details of the applied statistical methods in the technical implementing document referred to in the section 7		

3.2. Assessment criteria

For each assessed objective and assessment period referred to in section 3.1 the Agency shall determine the achievement of the criteria described in the technical implementing document referred to in section 7 which shall describe the following possible situation:

(a) No deterioration

(b) Potential deterioration

(c) Probable deterioration

Each assessment shall be accompanied by the estimation of a confidence interval in accordance with section 6.

4. Estimation of the Safety Levels

4.1. Safety Level (SL) estimations shall be based on the 'simple reporting' of occurrences collected in accordance with Annex I, and validated by the operators in accordance with the sharing request applicable to 'Simple reporting'.

4.2. From the data and information contained in the Information Sharing System, the Agency shall provide SL estimations to each operator in the Union and shall provide applicable reference values aggregated in each Member State and in the Union as a whole.

4.3. The Agency shall deliver the SL estimations for each applicable category of operation and each category of events in strict implementation of the technical document referred to in section 7.

5. Generic formula applied for individual operator's safety level estimation

5.1. Allocation of occurrences to responsible operators

5.1.1. In order to reflect correctly the safety responsibilities of operators, the safety level estimations uses a system of allocation of each occurred event taking into account the part of the railway system which directly caused the accidents occurrence. As established by this Regulation, the direct causes of the accidents are, by definition, Cat. B event types.

5.1.2. The following method apply to the allocation of the counting of an occurrence to the category of operators responsible for the prevention or mitigation of the deemed cause of the accident occurrence.

5.1.3. The following counting rules apply:

(a) Only one deemed cause – Cat. B event type – is identified.
In this case the counting of the occurrence for the SL estimation is allocated to the operator involved in the occurrence that is responsible for the part of the system which is deemed to have caused the occurrence.

(b) Several combined causes – several Cat. B event types – are identified.
In this case the counting of the occurrence for the SL estimation is allocated to the operator(s) involved in the occurrence that are responsible for the part(s) of the system which are deemed to have caused the occurrence in the relevant proportion.

(c) The cause(s) – Cat. B event type(s) – are not identified.
In this case the counting of the occurrence for the SL estimation is equally shared between the involved operator(s).

5.1.4. The implementation of the above counting rules shall provide:

(a) an estimation of the number of occurrence of accidents (Cat. A) allocated to each operator (N_OCC_A)

(b) an estimation of the number of occurrence of causes of accidents (Cat. B) allocated to each operator (N_OCC_B)

5.2. Safety Level (SL) estimation formula

5.2.1. This section provides a generic formula to be applied for Safety Level estimations.

5.2.2. The following generic formula shall apply separately to each category of occurred events:

$$\text{For Operation Volume}^{Cat.\ \ of\ \ operation}(Operator\_ID) \neq 0$$

$$SL^{Cat.\ \ of\ \ operation}_{Cat.\ \ A,B\ \ or\ \ C}(Operator\_ID)$$

$$= \frac{N\ \ OCC\ \ {}^{Cat.\ \ of\ \ operation}_{Cat.A,\ \ B\ \ or\ \ C}(Operator\_ID)}{\text{Operation Volume}^{Cat.\ \ of\ \ operation}(Operator\_ID)}$$

$$\times\ Severity\ \ index^{Cat.of\ \ operation}_{Cat.\ \ A,\ \ B\ \ or\ \ C\ ;\ Cat.\ \ of\ victims\ and\ damage}$$

6. Technical implementing document

6.1. In accordance with the date indicated in Article 10(4), and as a contribution to the development of the reference manual of the Information Sharing System, the Group of Analysts shall provide the description of the detailed implementing calculations of the generic formulas defined in section 5 and the limit conditions to be applied for their use.

6.2. All the details necessary to ensure fair, transparent, reproducible and effective implementation of the estimation formulas shall be described in this implementing document which shall cover all the possible operators' situations, including the different categories of operators, categories of operations and categories of victims and damages, the expected number of occurrences, including the case of no occurrence.

6.3. The proper usage or non-usage of the Severity Index shall also be detailed in the technical implementing document, including the cases in which the Severity Index shall be set to 1. When describing the details relating to the Severity Index, the Group of Analysts shall also define the applicable categories of victims and damage to be used, taking into account the victims and damage categories defined in Annex I.

6.4. In application of Article 9(1), the Group of Analysts shall, when needed, make justified proposals to review or update this method.

7. Aggregation of Operators' Safety Levels at National and Union levels

7.1. Based on the actual volumes of operation performed by each operator in each Member States and for each category of operation, the Safety Level aggregated at National and Union levels shall be estimated with averages of individual operators Safety Levels weighted by their respective volume of operation.

7.2. The Group of Analysts shall define the detailed implementing formulas and their limits for use in the reference manual of the Information Sharing System referred to in Article 10(4).

8. Estimation of confidence intervals

8.1. Appropriate usage of statistical inferences and tests shall be specified by the Group of Analyst setting out detailed implementing formulas and shall be reported in the reference manual of the Information Sharing System referred to in Article 10(4).

9. Information to operators

9.1. The reference manual of the Information Sharing System will be made publically available by the Agency.

9.2. Any modification concerning the practical implementation of the method defined in this annex will be notified by the Information Sharing System to the registered operators.

9.3. Each operator will be notified by the Agency with their assessment results in accordance with the sharing request defined in the following section.

9.4. Sharing request for the notification of SL assessment:

Requesting entity	N/A	The assessment results will be systematically notified to each operator after each individual assessment has been performed
Requested entity	ERA	
Sharing request type	'Extraction of data or information from ISS'	
Sharing justification	Article 5.2.(a), 5.3. and 5.4.	
Targeted data set	Set of reported occurrences declared as valid by operators in accordance with CSM ASLP Annex I – section 3.2.2.	(specific interest data)

Data set shared	SL estimations, applicable reference values and SL assessment in accordance with the method defined in Annex IV	(specific interest data). Systematic implementation of the pre-defined method in accordance reference manual.
Start date and time of the assessed period	As specified in Annex IV – section 3.	
End date and time of the assessed period	As specified in Annex IV – section 3.	
Sharing deadline	+1 month after the end of the applicable assessment period the assessed operator is notified of the assessment results	
Validation date and time	The assessed operator or a relevant authority may request a checking within 2 weeks after the notification of the assessments	
Closure of the sharing request	Notification of confirmed or updated assessment results	(if updated results, the process is restarted at the sharing step)

10. Publication of SL indicators at National and Union levels

10.1. The National and Union Safety Level indicators (reference values) shall be published, when available, in the Information Sharing System. These indicators shall be visible to any interested party.

ANNEX V

SAFETY PERFORMANCE ASSESSMENT

1. Assessment of operators

1.2. The method described in this annex shall apply for the assessment of each operators in accordance with Article 5(5) of this Regulation.

2. Objective of the Safety Performance assessments

2.1. The general objective is to assess, based on the self-estimations provided by each operator, the extent in which an operator fulfils the requirement of maintaining and continuously improve railways safety in the domain of risk control measures.

2.2. The assessment of performance levels refers to the method for comparing the performance levels of a given operator, with an applicable reference value allowing to pose a judgment on the achievement of harmonised assessment criteria.

2.3. The safety performance assessments shall establish whether a performance level estimated for an operator:

(A) has not started to deteriorate.

In this case the test consists in evaluating the variation of the performance level of the assessed operator between two consecutive reference periods of time.

(B) is not worse than the level of similar operators.

In this case the test consists in comparing the safety level of the assessed operator with the reference safety level established for a similar group of operators over the same reference period of time.

(C) is not worse than it was in the past.

In this case the test consists in comparing the safety level of the assessed operator in a given year with the reference value provided by the average safety level of the same operator over a past period of time.

2.4. Statistical inference and tests shall be used to provide harmonised assessments to each operators. The applicable periods of time and reference values are defined in section 3.1 and the assessment criteria are defined in section 3.2.

3. Applicable reference values and periods of time

3.1. The assessment of the fulfilment of the objectives defined in section 2 shall be based on the reference values and periods of time defined in this section.

Objective assessed	(A)	(B)	(C)
Assessed period	Calendar year n	Calendar year n	5 years period after last date of certification or authorization
Assessed values	SP indicators reported by the assessed operator over year n	SP indicators reported by the assessed operator over year n	SP indicators reported by the assessed operator over the assessed period
Reference period	Calendar year n-1	Calendar year n	Previous 5 years period of certification or authorization
Reference value	SP indicators of the assessed operator over year n-1	SP indicators of similar group of operators over year n	SP indicators of the assessed operator over the previous assessed period
Applicable test	See details of the applied statistical methods in the technical implementation document referred to in section 6		

3.2. For each assessed objective and assessment period referred to in section 3.1 the Agency shall determine the achievement of the criteria by implementing the detailed technical reference manual referred to in section 6 which shall describe the following possible situations:

(a) No deterioration

(b) Potential deterioration

(c) Probable deterioration

4. Estimation of the Safety Performance indicators

4.1. Safety Performance indicators of a single operator are corresponding to the self-estimations validated by the concerned operator, possibly checked by its National supervisory authority, in accordance with Article 4(2).

4.2. From the data and information contained in the Information Sharing System, the Agency shall provide applicable SP reference indicators aggregated in each Member State and in the Union as a whole.

4.3. The Agency shall deliver the SP reference indicators following the strict implementation of the technical reference manual referred to in section 6.

5. Generic formula applied for individual operator's safety performance estimation

5.1. (Not applicable). It is considered that the merging of the four P/D/C/A indicators provided by the operators self-estimation would provide little added value or difficult a difficult to interpret indicator.

5.2. Possible interpretation of non-merge P, D, C, or A indicators:

(a) Score strictly equates 1:

This score reflects that the operator did not deliver its self-estimation in accordance with the provisions required in this Regulation,

OR

That it is likely that the operator do not comply with EU legal obligations applicable in regards the management of risk control measures.

This score reflects that risks are not structurally controlled and the overall process that manages this is weak. It may also mean at the time of the renewal of its safety certificate or safety authorisation the operator may not be able to comply with all the EU legal obligations applicable in regards the management of risk control measures.

(b) Score equating 2:

This score reflects that in the area of risk control measures the operator is performing at the level of minimum legal compliance. Written provisions with regard to risk management exists and are being used to control safety risks however, there is a lack of structure and coordination. The system is coherent overall but there are gaps and some inconsistencies of approach in different areas.

Due to the lack of integration between procedures, risk management may rapidly evolve into significant technical, operational or organisational risks. Risks are controlled more by the actions of the people who work for the organisation rather than through the design of the Safety Management System.

A reactive approach to accidents or incidents is the main way of operation of the considered operator to manage risks rather than a pro-active approach to prevent risks.

(c) Score equating 3:

The safety management system of the considered operator is developed with a systematic and consistent approach to the management of risk. All the elements are in place and are operated, including all aspects of safety.

Whilst the organisation is consistent it does not try to anticipate risks in advance.

The operator safety culture may not be developed enough to self-sustain the process of risk management. The reactive approach has been complemented by a more pro-active approach to risk management but it does not seem very robust and the may fall back (e.g. in case a failure to manage key processes or procedures over time) into a lower safety performance maturity level.

(d) Score equating 4:

As for the previous however in addition, the operator is constantly managing risk pro-actively. The operator monitors precursors of risks and takes action in advance where possible to prevent incidents arising.

A lot of effort goes into regular and in depth reviews of risk scenarios and to understanding the nature of the risks the organisation faces and what could be done to prevent or mitigate them.

(e) Score equating 5:

As for the previous score however in addition, the safety management system is fully formalised and constructed in a manner which allows for continuous improvement.

The operator actively seeks out opportunities to improve safety using information from both within the railway sector and from outside of it.

The operator benchmarks its own performance against others both within the railway sector and outside.

There is evidence that the operator is aware of issues it has or may have in the future and is actively seeking to address them through its safety management system.

The operator is confident of its ability to manage the risks it faces and is looking outward to educate those with whom it has interfaces and in addition it is seeking to learn lessons from other fields which can be incorporated within its business. Safety is an integral part of the business of the operator.

6. Aggregation of Operators' Safety Performance at National and Union levels

6.1. Based on the actual volumes of operation performed by each operator in each Member States, the Safety Performance aggregated at National and Union levels shall be estimated with averages of individual operators Safety Levels weighted by their respective volume of operation.

6.2. The Group of Analysts shall define the detailed implementing formulas and the limits for use of aggregated indicators, as National and Union reference values, in the reference manual of the Information Sharing System referred to in Article 10(4).

7. Estimation of confidence intervals

7.1. Appropriate usage of statistical inferences and tests concerning the aggregated SP reference values shall be detailed by the Group of Analyst and reported in the reference manual of the Information Sharing System referred to in Article 10.4.

8. Information of operators

8.1. The reference manual of the Information Sharing System will be made publically available by the Agency.

8.2. Any modification concerning the practical implementation of the method defined in this annex will be notified by the Information Sharing System to the registered operators.

8.3. Each operator will be notified by the Agency with their assessment results in accordance with the sharing request defined in the following section.

8.4. Sharing request for the notification of SP assessment

Requesting entity	N/A	The assessment results will be systematically notified to each operator after each individual assessment performed
Requested entity	ERA	
Sharing request type	'Extraction of data or information from ISS'	
Sharing justification	Article 5.2.(a), 5.3. and 5.4.	
Targeted data set	Set of reported self-estimations declared as valid by operators in accordance with Annex II – section 4.	(specific interest data)

Data set shared	SP self-estimations (reminder), applicable SP reference values and SP assessment in accordance with the method defined in Annex V – section 3.2	(specific interest data). Systematic implementation of the pre-defined method in accordance reference manual.
Start date and time of the assessed period	As specified in Annex V – section 3.	
End date and time of the assessed period	As specified in Annex V – section 3.	
Sharing deadline	+1 month after the end of the applicable assessment period the assessed operator is notified the assessment results	
Validation date and time	The assessed operator or a relevant authority may request a checking within 2 weeks after the notification of the assessments	
Closure of the sharing request	Notification of confirmed or updated assessment results	(if updated results, the process is restarted at the sharing step)

9. Publication SP reference values at National and Union levels

9.1. The National and Union Safety Performance reference values shall be published, when available, in the Information Sharing System. These indicators shall be visible to any interested party.

MANAGEMENT OF DATA AND INFORMATION

1. Confidentiality and appropriate use of information

1.1. Member States authorities and other entities, in accordance with their national law, and the Agency shall take the necessary measures to ensure the appropriate confidentiality of the information and data received by them pursuant to Article 4, 5 and 6 of this Regulation.

1.2. Each Member State authority, each entity established in a Member State shall process personal data only to the extent necessary for the purposes of this Regulation and without prejudice to Regulation (EU) 2016/679[8](GDPR).

1.3. Member States authorities, the Agency and other entities shall not make available or use the personal information reported:

(a) in order to attribute blame or liability;

or

(b) for any purpose other than the maintenance or improvement of the rail system safety.

1.4. Member States authorities, the Agency and other entities, when discharging their obligations in relation to the information contained in the ISS, shall:

(a) ensure the confidentiality of the information;

and

(b) limit the use of the information to what is strictly necessary in order to discharge their safety-related obligations without attributing blame or liability; in this respect, the information shall be used in particular for improving railway safety and safety risks management and for analysis of safety indicators, trends and patterns which may lead to recommendations or actions, addressing actual or potential safety deficiencies.

1.5. Member States shall ensure that their competent national safety authorities and their competent authorities for the administration of justice cooperate with each other through advance administrative arrangements. These advance administrative arrangements shall seek to ensure the correct balance between the need for proper administration of justice, on the one hand, and the necessary continued availability of safety information, on the other.

2. Protection of the information source

[8] OJ L 119/1 4.5.2016 REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)
(Text with EEA relevance).

2.1. For the purposes of this Article, ‘personal details’ includes in particular identification and contact data of natural persons and reporters mentioned in the defined data sets.

2.2. Each operator established in a Member State shall ensure that no personal details are made available to staff of that organisation other than persons designated to receive the data and only where absolutely necessary in order to investigate the correctness of data sets reported. Dis-identified information shall be disseminated within the organisation as appropriate.

2.3. Each Member State authority concerned shall ensure that no personal details are made available to staff of that authority other than persons designated to receive them on a ‘need to know’ basis and they are managed and disclosed further to other authorities in order to perform duties in the context of their established competencies. Dis-identified information shall be made available to all relevant parties.

2.4. Pre-existing systems other than the Information Sharing System referred to in Article 7 shall manage personal details in way that it compatible with the data and information sharing rules in this Regulation.

2.5. The Agency shall ensure that personal details are disclosed in the Information Sharing System referred to in Article 7 in line with the rules set in this Annex. Dis-identified information shall be made available to all relevant parties.

2.6. Without prejudice to applicable national criminal law, Member States authorities shall refrain from instituting proceedings in respect of unpremeditated or inadvertent infringements of the law which come to their attention only because they have been reported pursuant to Article 4 of this Regulation.

2.7. Paragraph 6 shall not apply in the cases referred to in paragraph 10. Member States may retain or adopt measures to strengthen the protection of reporters or persons mentioned in occurrence reporting. Member States may in particular apply this rule without the exceptions referred to in paragraph 10.

2.8. If disciplinary or administrative proceedings are instituted under national law, information contained in occurrence reporting shall not be used against:

(a) the reporters;

or

(b) the persons mentioned in reported data sets applicable in this Regulation.

The first subparagraph shall not apply in the cases referred to in paragraph 10.

Member States authorities may retain or adopt measures to strengthen the protection of reporters or persons mentioned in occurrence reporting. They may in particular extend that protection to civil or criminal proceedings.

2.9. Member States authorities may adopt or maintain in force legislative provisions ensuring a higher level of protection for reporters or for persons mentioned in occurrence reporting than those established in this Regulation.

2.10. Except where paragraph 11 applies, employees and contracted personnel who report or are mentioned in occurrence events collected in accordance with Article 4 shall not be subject to any prejudice by their employer or by the organisation for which the services are provided on the basis of the information supplied by the reporter.

2.11. The protection under paragraphs 6, 7 and 8 of this Article shall not apply to any of the following situations:

(a) in cases of wilful misconduct;

(b) where there has been a manifest, severe and serious disregard of an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or property, or which seriously compromises the level of safety.

3. Access to documents and protection of personal data

3.1 With the exception of Articles 1 and 2 of this Annex, which establish stricter rules on access to the data and information contained in the Information Sharing System, this Regulation shall apply without prejudice to Regulation (EC) No 1049/2001[9].

3.2 This Regulation shall apply without prejudice to Regulation (EU) 2016/679 and Regulation (EU) 2018/1725[10].

[9] *OJ L 145, 31.5.2001,* Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.

[10] OJ L 295/39, 21.11.2018, REGULATION (EU) 2018/1725 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC.

RULES FOR SHARING SPECIFIC INTEREST AND OTHER DATA AND INFORMATION

1. Definitions

1.1 For the purpose of this Regulation, data designated under the term ‘specific interest data’ consists of information and data that are considered of commercial nature and allowing to identify traffic volumes of operators as well as other similar information and data.

1.2. For the purpose of this Regulation ‘specific interest data’ include:

(a) The identification data of a single operator,

(b) Volumes of operation reported by a single operator in accordance with Annex I;

(c) Risk Control Measures reported by a single operator in accordance with Annex III as they may reflect the risk management strategy applied to the concerned railway business operations, extent of the resource allocated to the management of RCMs or the effectiveness of the RCMs/strategy.

2. Confidentiality arrangements and access to specific interest data in the ISS

2.1. Data and information with specific interest to be delivered in application of this Regulation concerning:

(a) a single operator,

shall only be shared with this single operator, the Member State authorities where the concerned operations are performed and the Agency;

(b) one Member State and which may consist in any national indicators, national averages or national patterns,

may be shared with any registered entity, including, Members State authorities the Group of Analysts and the Agency;

may be made publicly available directly or upon request.

(c) the Single European Rail Area and which may consist in any Union level indicators, Union level averages or Union level patterns,

may be shared with the any registered entity, including Member State authorities, Group of analysts and the Agency;

may be made publicly available directly or upon request.

3. Confidentiality arrangements and access to other data in the ISS

3.1. Any data and information mandatorily shared in application of this Regulation, other than those identified as personal or specific interest data and information to be protected, shall be shared in accordance with the table in this section.

Table xxx: Summary table of the rules applicable on 'specific interest data'

<table>
<tr><td></td><td colspan="3">Applicable rules
for data and information
<u>specified as mandatory</u>
by the CSM ASLP</td><td>Applicable rules
for data and information
<u>not specified as mandatory</u>
by the CSM ASLP.</td></tr>
<tr><td></td><td>Concerning one given operator</td><td>Concerning one EU Member State</td><td>Concerning the SERA</td><td>Any other specific data or information request</td></tr>
<tr><td>May be shared with</td><td colspan="4"></td></tr>
<tr><td>the same given (single) operator</td><td>Any data and information to be delivered in application of the CSM concerning the targeted operator</td><td rowspan="4">Any national averages or national patterns to be delivered in application of the CSM</td><td rowspan="4">Any EU averages or EU patterns to be delivered in application of the CSM</td><td rowspan="4">Sharing of information based on applicable EU legislation, and where necessary, completed by a confidentiality agreement signed between the concerned parties.

In such a case, the sharing of data and information will be managed under a specific fee-based regime, defined in agreement with the concerned party (ies) and the Agency in order to cover the expenditures incurred by the Agency related to the design, setting, operation, and maintenance of the shared data and information.</td></tr>
<tr><td>the authority(ies) from the EU MS where the targeted operator operates (NSA, NIB, TDG CA)</td><td>Any data and information to be delivered in application of the CSM concerning the operations of the targeted operator in the targeted EU MS</td></tr>
<tr><td>European Union Agency for Railways</td><td>Any data and information to be managed in application of the CSM</td></tr>
<tr><td>Group of analysts (GoA)</td><td>Not Applicable</td></tr>
<tr><td>General public</td><td colspan="4">Any data and information foreseen to be made public in application of the CSM ASLP, or on request in accordance with the applicable EU legislation.</td></tr>
</table>

3.2. Data and information that are reported on voluntary basis in application of this Regulation and based on any other specific data or information request shall be shared in line with applicable EU legislation, and where necessary, completed by a confidentiality agreement signed between the concerned parties.

3.3. Voluntary reporting shall be subject to an agreement between the concerned party or parties and the Agency and may be subject to a specific fee-based regime in order to

cover, when necessary, the expenditures incurred by the Agency related to the design, setting, operation, and maintenance of the shared data and information.

Such agreements shall also include provisions on the applicable confidentiality rules on data and information sharing.

INTERESTED PARTIES SHARING DATA AND INFORMATION

1. Categories of interested parties

1.1. Any entity interested in sharing data and information shall be registered and shall be allocated a category in order to strictly implement appropriate sharing rules as defined in this Annex.

1.2. The following categories and coding shall apply when sharing data and information.

Table xxx: List and coding of entities' categories

Entity categories	Entity coding	Entity definition
Natural person	NPER	
Infrastructure Manager	IM	
Infrastructure Manager	IM-1	Operating railway lines (including sidings and stations operations)
Infrastructure Manager	IM-2	Operating terminals (including sidings and stations operations)
Railway Undertaking	RU	
Railway Undertaking	RU-1	Operating passenger trains
Railway Undertaking	RU-2	Operating high speed passenger trains
Railway Undertaking	RU-3	Operating freight trains
Railway Undertaking	RU-4	Operating dangerous goods freight trains
Railway Undertaking	RU-5	Operating terminals
Entity in charge of Maintenance	ECM	(in accordance with Regulation 2019/779)
Entity in charge of Maintenance	ECM-b	ECM implementing the function defined in article 14(3) b of Regulation 2019/779

Entity in charge of Maintenance	ECM-c	ECM implementing the function defined in article 14(3) c of Regulation 2019/779
Entity in charge of Maintenance	ECM-d	ECM implementing the function defined in article 14(3) d of Regulation 2019/779
National Safety Authority	NSA	
TDG Competent Authority	TDGCA	
National Investigation Body	NIB	
Sector Organisation	SORG	
European Railway Agency	ERA	
European Commission	EC	
Other	OENT	

2. Registration of interested parties

2.1. Any entity which is required or is willing to share data and information in application of this Regulation shall be registered and shall be identifiable at the moment data and information are shared.

2.2. Before sharing information any entity shall be registered in sending a duly-filled application form to the Agency as defined in the following section.

3 Application form for the registration of an entity

Entity Name	(mandatory field)	(specific interest data)
Entity Category	(mandatory field)	Applicable code(s) form the list in section G.1
Entity Area of operation (list of operated countries in accordance with valid certificate/authorisation)	(mandatory field)	(specific interest data)
Entity Contact functional e-mail address	(optional)	(specific interest data)

Entity Contact person name	(mandatory field)	(personal data)
Entity Contact person e-mail address	(mandatory field)	(personal data)
Entity Contact person ID document number	(mandatory field)	(personal data)
Entity IT system reference (reference or name of the IT system used for sharing information with the 'Information Sharing System' in application of art. 6)	(optional) Note: in case no system if registered by the 'Entity' the data and information shall be manually shared using the 'Information Sharing System' service provided by the European Union Agency for Railways	(specific interest data)
IT system Third party system (Y/N)	(if applicable) Yes, third party system to be used on behalf the registered entity No, own registered entity's system	(specific interest data)
IT system Contact functional e-mail address (if applicable)	(if applicable)	(specific interest data)
IT system Contact person name	(if applicable)	(personal data)
IT system Contact person e-mail address	(if applicable)	(personal data)
IT system Contact person ID document number	(if applicable)	(personal data)

APPLICATION FORM
FOR REQUESTING A SHARING OF DATA AND INFORMATION

1. Sharing request application scope

1.1. Any entity which is required or would like to share any data and information in application of the present Regulation shall use the sharing request template of the present annex and shall fill-in the fields applicable to its request.

2. Sharing request content

2.1 The sharing request application template shall be composed of the following fields:

(a) The requesting entity (mandatory): the entity which shall receive the requested data set, when applicable;

(b) The requested entity (mandatory): the entity which shall send the requested data set, when applicable;

(c) The data set to be shared (mandatory): one of the structured set of data and information defined by this Regulation;

(d) The sharing type (mandatory): the type classify the type of action performed on the targeted data and information set:

i) New input data or information to the Information Sharing System;

ii) Correction;

iii) Update;

iv) Extraction of data or information from the Information Sharing System;

(e) The targeted data set (mandatory in case of Correction/Update/Extraction): the target data set is identified;

(f) The sharing justification (mandatory): the justification provides the legal basis under which data and information shall be processed by the 'Information sharing system';

(g) The start date and time of the reporting period (if applicable): the starting time of the period after when the data and information requested shall be collected for further pre-defined sharing of data and information;

(h) The end date and time of the reporting period (if applicable): the end time of the period before when the data and information requested shall be collected for further pre-defined sharing of data and information;

(i) the sharing deadline (mandatory): the time before when the requested data set(s) shall be shared with the requesting entity;

(j) the validation end date and time (if applicable): the time after when the reported data and information shall be notified as valid input from which data analyses

and information analyses can be performed in accordance with the usage foreseen by this Regulation;

(k) the closure of the sharing request (mandatory): the sending entity is informed that the request is closed or that a follow-up request will be logged.

3. Sharing request application form

3.1. The sharing of any data and information shall be based on a duly-filled sharing request.

3.2. The application form in section 4 below shall apply to any request for sharing data and information.

4. Sharing request application form

Requesting entity	(mandatory field)	(specific interest data)
Requested entity	(mandatory field)	(specific interest data)
Sharing request type	(mandatory field) 'New input of data or information to ISS' or 'Correction' or 'Update' or 'Extraction of data or information from ISS'	(specific interest data)
Sharing justification	(mandatory field)	(specific interest data)
Targeted data set	Data set ID (applicable if correction, update or extraction)	(specific interest data)
Data set shared	(mandatory template)	Personal or specific interest data items are identified in the submitted data set in accordance with the data set template.
Start date and time of the reporting period	(if applicable)	
End date and time of the reporting period	(if applicable)	
Sharing deadline	(mandatory field)	
Validation date and time	(if applicable)	

Closure of the sharing request	(mandatory)	

ANNEX VI – PART D

GENERIC PROCESS FOR SHARING DATA AND INFORMATION

1. Generic process application scope

1.1. The practical management of data and information shared in application of this Regulation shall be implemented in accordance with the generic process described in section 2.

2. Main elements of the generic process

2.1 The steps of the generic process are covering the content of the sharing requests defined in Annex VI – Part C.

2.2 The columns are representing the party(ies) that is(are) concerned by the workflow elements.

2.3. The arrows indicates which entity is concerned by a sharing request or which party is voluntary sharing a data set with the applicable data set template.

2.4 The element  represents one or several data sets that are shared in application of a given sharing request, or on voluntary basis. These data sets may be new inputs, corrections, updates or validations. At any time, the data sets that prevail are the one retained in the ISS, represented in 'blue' in the generic process.

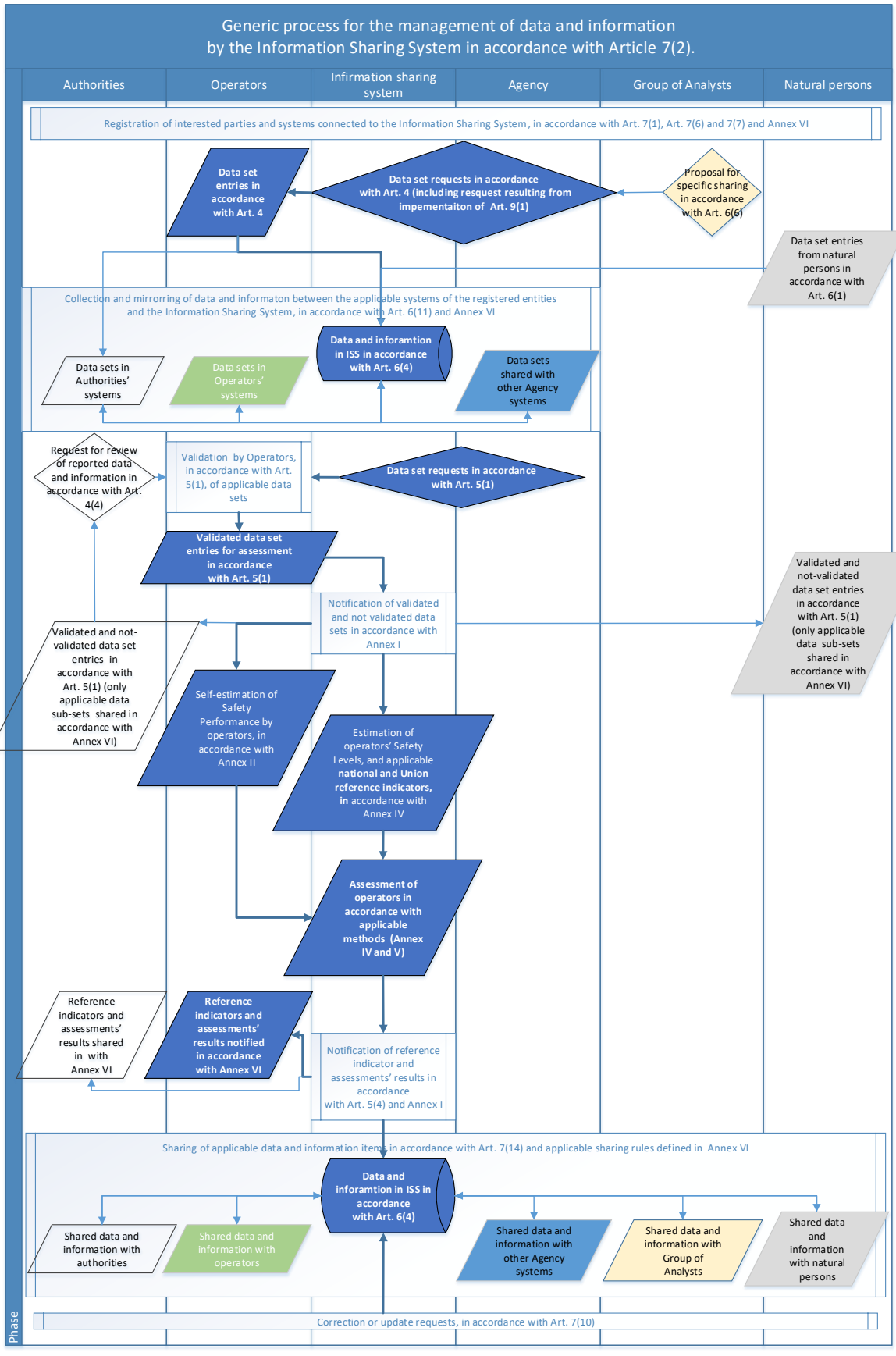
2.5 Sub-processes are represented by this element and  its title indicates on which article of this Regulation the sub-process is implementing.

2.6 The element  is indicating a decision to implement or a starting point to implement an article of this Regulation.

3. Reference technical implementing documents of the Information Sharing System

3.1 In addition to Annex VI – Part D, and before the mandatory date of implementation of the Information Sharing System in accordance with Article 10, a User guide and a Technical implementing document on the functioning of the ISS shall be published by the Agency.

3.2 These reference documents shall be developed in collaboration with the Group of Analysts, in accordance with the organisation defined in Annex VII.


Generic process for the management of data and information
by the Information Sharing System in accordance with Article 7(2).
Authorities
Operators
Infirmation sharing system
Agency
Group of Analysts
Natural persons
Registration of interested parties and systems connected to the Information Sharing System, in accordance with Art. 7(1), Art. 7(6) and 7(7) and Annex VI
Data set entries in accordance with Art. 4
Data set requests in accordance with Art. 4 (including resquest resulting from impementaiton of Art. 9(1)
Proposal for specific sharing in accordance with Art. 6(6)
Data set entries from natural persons in accordance with Art. 6(1)
Collection and mirrorring of data and informaton between the applicable systems of the registered entities and the Information Sharing System, in accordance with Art. 6(11) and Annex VI
Data and inforamtion in ISS in accordance with Art. 6(4)
Data sets in Authorities' systems
Data sets in Operators' systems
Data sets shared with other Agency systems
Request for review of reported data and information in accordance with Art. 4(4)
Validation by Operators, in accordance with Art. 5(1), of applicable data sets
Data set requests in accordance with Art. 5(1)
Validated data set entries for assessment in accordance with Art. 5(1)
Notification of validated and not validated data sets in accordance with Annex I
Validated and not-validated data set entries in accordance with Art. 5(1) (only applicable data sub-sets shared in accordance with Annex VI)
Validated and not-validated data set entries in accordance with Art. 5(1) (only applicable data sub-sets shared in accordance with Annex VI)
Self-estimation of Safety Performance by operators, in accordance with Annex II
Estimation of operators' Safety Levels, and applicable national and Union reference indicators, in accordance with Annex IV
Assessment of operators in accordance with applicable methods (Annex IV and V)
Reference indicators and assessments' results shared in with Annex VI
Reference indicators and assessments' results notified in accordance with Annex VI
Notification of reference indicator and assessments' results in accordance with Art. 5(4) and Annex I
Sharing of applicable data and information items in accordance with Art. 7(14) and applicable sharing rules defined in Annex VI
Data and inforamtion in ISS in accordance with Art. 6(4)
Shared data and information with authorities
Shared data and information with operators
Shared data and information with other Agency systems
Shared data and information with Group of Analysts
Shared data and information with natural persons
Phase
Correction or update requests, in accordance with Art. 7(10)

4. Inputs/Outputs to the generic process

Any input to or output from the generic process shall be composed, at least, with a data and information sharing request and the corresponding data set(s) to be shared, both structured in accordance with the applicable formats established by this Regulation.

5. Correction of errors and update of data and information

Correction of errors and updates can be submitted to the Information Sharing System at any time, if justified, with the applicable request and structured data set established by this Regulation.

6. Digitalisation

6.1. The Information Sharing System and the system(s) notified to be connected with it shall use the data structures defined in this Regulation in order to allow efficient sharing of data and information.

6.2. When an entity does not use a digital system to share its data and information, this entity shall use the manual common interface provided by the Information Sharing System.

7. Retention periods

7.1. Any sharing request and related data and information disclosure processed by the Information Sharing System is retained until this system remains operational.

7.2. Personal data are kept the time necessary for processing the related sharing requests, after that data and information will be kept in a dis-identified form for statistical and analysis purposes.

ANNEX VII

GROUP OF ANALYSTS

1. Scope

(reserved, it should include partly the former Annex VII concerning the scope/railway services/legislative coordination considered)

2. Objectives

(reserved)

3. Main tasks

(reserved, it should include partly the former Annex VII on risk classification)

4. Membership

5. Management

6. Structure

7. Rules of procedures

8. Working arrangements