

CRR-G-009-G-Annex4 v2.0 (SCM) Sample of a Project Safety & Compliance Matrix



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Issue date:	03 Feb 2021

1 Introduction

This Sample will be employed by the CRR when evaluating a Project Safety & Compliance Matrix (SCM) in association with PIS Projects according to IOD or RSA. The Project Safety & Compliance Matrix shall summarise all Safety Requirements and all Compliance Requirements relating to a project in a structured format. In order to avoid repetition, documentary evidence may be annexed or referenced to a SCM. Any such Annexes and References shall be considered to be part of the SCM. This document provides a suitable approach for managing an SCM and an applicant may use their own method, but they must ensure it covers all of the requirement herein.

2 Elaboration of a Project SCM

Any Project SCM shall follow the structure provided below and shall include all columns listed. If any Matrix-Cell is not relevant for a given project, that Cell shall be marked as 'not relevant for this Project' (in the Sample done by "n.a. ").

The Project SCM must include Safety and Compliance Requirements for all project related Subsystems and Parameters listed in the relevant CRR Guidance on Parameters relating to the affected Subsystems, and any additional affected Parameters identified during the course of the project.

For APIS/Acceptance cases, the Project SCM must have been prepared under the scope of a certified/ authorised RU/IM SMS under RSD and CSM 402/2013 or an 'RU-SMS' in accordance to RSA approved by the CRR. For APOM cases, it is preferable that the applicant engages with the RU/IM that will be operating the Vehicle/s and uses their certified/authorised SMS in developing the Project SCM (as part of the Project SMS). The SCM combines references to a variety of relevant Project SMS documentation as defined by various chapters of EN 50126-1, EN 50126-2, EN 50128, EN 50129 in association with CSM 402/2013.

Each element entered into the SCM shall detail any constraints, dependencies, assumptions and caveats.

3 Internal Review Report

The applicant for APIS/APOM/Acceptance must arrange for an internal (or external) review of the SCM against

this Sample Matrix by an expert in the field of SMS. This review must cover completeness and plausibility of content of the SCM, and must be documented in a report which must be provided to the CRR with the SCM.

4 CRR evaluation of Project SCM

The CRR must evaluate the Project (Change acc. to CSM 402/2013) for which the applicant is applying for an APIS/APOM/Acceptance against the requirements of IOD 18+20+21, RSD 4(1)+6(1), CSM 402/2013 and RSA. The Project SCM will be used by the CRR as one element to form an opinion, whether all requirements relating to APIS/APOM/Acceptance have been satisfied.

The attached list contains the minimum set of information to be provided. Any RU/IM may decide to elaborate on these, if their SMS requires more or higher requirements. (This is typically expected to be the case for complex Projects relating to signalling technology.) Where an RU/IM decides to elaborate, on these requirements, the main chapter headings of the checklist should be retained.

The provision of a Project SCM is also considered to support the requirements of RSA 42+43 for providing a New Works Assessment or a New Rolling Stock Assessment.

Note1: In addition to this Checklist, other requirements may also be applicable, arising from the application of EN 50126-1, EN 50126-2, EN 50128, EN 50129, EN50159-1/-2, CSM 402/2013, or the requirements of a certified/ authorised RU/IM SMS.

Note2: The Hazard Record shall be used as a source for Safety Requirements (EN50126-2 (5.3)). It is expected that the Project SMS ensures that any Safety Requirements derived by the Project Hazard Record is carried forward into the SCM throughout the Project lifecycle.

Note3: Other Safety- and Compliance Requirements may be identified by using checklists, workshops, lessons learnt, accident and incident information, expert knowledge or other means. In any case (for legal compliance) all requirements identified by law and regulations (e.g. TSIs or directives, NRs, or CRR guidance) must be considered as minimum.

*Note4: The SCM shall reflect Safety- and Compliance-Requirements for the **design operating state** of the part of the rail system to which it relates, all **permitted degraded operational modes**, all **foreseeable degraded modes** as well as all **interfaces within the affected part and to other parts of the rail system**.*

Note5: For APOM projects the SCM is expected to be an output of the Requirements capture process mandated in (EU) Reg. 2018/545.

5 Checklist for Project Safety-& Compliance-Matrix

The following column headings in the SCM shall be understood to have the meaning stated below. Other column headings are considered self-explanatory.

Column heading	Meaning / requirement
Identification of Subsystems / Parameters	For each subsystem, list the affected parameters. Include all affected Subsystem parameters from the relevant CRR Guidance on Parameters and any additional affected Parameters as identified throughout the project.
Safety- & Compliance- Req. Specification	List TSI, NRs and Standards (quoting the specific clause / sections) from which requirements relevant to the parameter have been derived. List Hazard Record entries from which Safety Requirements relevant to the parameter have been derived.
Specification of Scope/ Method/ Classification to be applied	Where the quoted TSI, NRs or Standard, specifies different requirements for different applications/classifications/options, the classification relevant to the project scope must be listed. For example, gauge, fire classification of rolling stock.

6 Sample SCM

Identification of Subsystems / Parameters	Safety- & Compliance - Req. Specification	Specification of Scope/ Method/ Classification	Derogations to initial Requirements	Technical/ Functional Description	Drawings/ Partslists/ Calculations/ Simulations	V&V Requirements/ Test Procedures	V&V Reports/ Test Reports	Assessment / Audit performed by	Assessment / Audit Report supporting APIS	Application Conditions for Operation	Application Conditions for Maintenance	Application Conditions for De-commissioning and Disposal
Subsystem INF												
Parameter 1	Hazard Record abc + EN 12345	n.a.	n.a.	Tech. Des 115	Drw Q5+Q6	P2	TR2	NoBo	NoBo Report + Certificate	n.a.	n.a.	> To be developed by last IM operator
Parameter 2	TSI INF 4.1.x	n.a.	n.a.	Tech. Des 116 +Func. Des. 416	Drw Q2	n.a.	n.a.	DeBo1	DeBo1 Report	n.a.	n.a.	n.a.
Parameter 3	UIC 123	n.a.	n.a.	n.a.	Drw Q2	P5	TR5	DeBo2	DeBo2 Report	>max. axle load for INF line section is 16t	n.a.	n.a.
Parameter 4	TSI INF 4.2.x +NTR 321	IRL2 gauge	> existing overbridge at mile 23,4 retains IRL 1 gauge	n.a.	Drw Q2+Q6	P8	TR8.	NoBo + DeBo1	NoBo Report/ Certificate + DeBo1 Report	> vehicle gauge for INF line section is IRL1	> use IM-Standard xyz for maintenance tolerances	n.a.
Parameter ...	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Subsystem OPE												
Parameter 1	Rule Book cl.xyz	n.a.	n.a.	RB 2012	n.a.	n.a.	n.a.	IM	Report 1	RB 2012	n.a.	n.a.
Parameter 2	TSI OPE 4.1.y	n.a.	n.a.	RB 2012	Drw122	n.a.	n.a.	IM	Report 1	RB 2012	n.a.	n.a.
Parameter 3	Hazard Record cl. zyx	n.a.	n.a.	Ops instruction 007	n.a.	P9	TR9	DeBo + IM	Report 1	RB 2012+ Ops instr. 007	n.a.	> fluorescent tubes to be treated as special waste

Explanatory Note: The SCM-Cells shall in principle be completely filled.. However if on a specific Project a Matrix-Cell is 'not relevant for this Project' it shall be marked accordingly (in the Sample done by "n.a."). Empty Cells shall be considered as being 'incomplete, information outstanding'.