



Technical Annex of Application Guide for the European Railway Agency Database of Interoperability and Safety (ERADIS)

In accordance with the Directive (EU) 2016/798, the Directive (EU) 2016/797 and the Regulation (EU) 2016/796.

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See Also: [Application Guide ERADIS Directive \(EU\) 2016/798](#)

License: [EUPL v1.2](#)

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Table of Contents

1. [Revision History](#)
2. [Scope of This Guide](#)
3. [ERADIS Ontology Classes](#)
4. [Auxiliary Properties for ERADISParameters](#)

1. Revision History

Revision	Date	Created By	Changes
3.3.0	19-05-2026	ERA	<ul style="list-style-type: none"> • First publication

2. Scope of This Guide

2.1. Scope of this guide

The present document represents the views of the European Union Agency for Railways and is a non-legally binding document.

It does not represent the view of other EU institutions and bodies. Furthermore, a binding interpretation of EU law is the sole competence of the Court of Justice of the European Union.

These guidelines provide explanations to facilitate the implementation and usage of the Commission

Implementing Decision 2011/665/EU as amended by Commission Implementing Regulation (EU) 2019/776 and Commission Implementing Decision (EU) 2021/701.

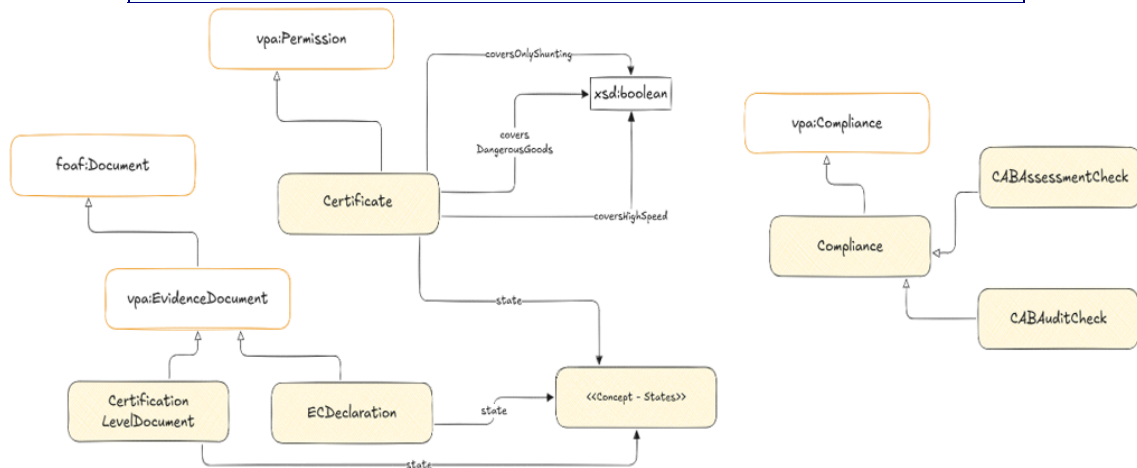
These guidelines are publicly available and will be kept updated.

The reader should refer to the website of the European Union Agency for railways for information about their latest available edition.

Table 1: Namespaces used in the document

cc	http://creativecommons.org/ns#
dcterms	http://purl.org/dc/terms/
eli	http://data.europa.eu/eli/ontology#
era	http://data.europa.eu/949/
foaf	http://xmlns.com/foaf/0.1/
goodrel	http://purl.org/goodrelations/v1#
gsp	http://www.opengis.net/ont/geosparql#

locn	http://w3.org/ns/locn#
org	http://www.w3.org/ns/org#
owl	http://www.w3.org/2002/07/owl#
prov	http://www.w3.org/ns/prov#
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs	http://www.w3.org/2000/01/rdf-schema#
sf	http://www.opengis.net/ont/sf#
skos	http://www.w3.org/2004/02/skos/core#
time	http://www.w3.org/2006/time#
unit	http://qudt.org/vocab/unit/
vpa	https://w3id.org/vpa#
vs	http://www.w3.org/2003/06/sw-vocab-status/ns#
xsd	http://www.w3.org/2001/XMLSchema#



3. ERADIS Ontology Classes

CAB assessed addition ^C

An additionally allowed Option, Added Function which was confirmed by a CAB

IRI: <http://data.europa.eu/949/CABAddition>

Is subclass of
[Restriction](#)

Additional Information

General explanation:

This class is used to express the inverse of a typical Restriction, namely the approval of an Option or Added Function.

This information is stored under the `era:CertificationLevelDocument`'s `era:CABAssessmentCheck` like shown in the example.

Example:

```
era-cld:cld-NoBoCert-25403 a era:CertificationLevelDocument
, vpa:EvidenceDocument ;
vpa:checkedCompliance [
  # Assessment Requirements regarding TSI
  a era:CABAssessmentCheck ;
  era:isOptional "false"^^xsd:boolean ;
  era:isCompliant era-compliance:True ;
# WARNING, SKOS Concept scheme only in version 4.0.0+
  vpa:checkedRequirement eralex:cir-2016-919, eralex:cir-
2019-776, eralex:cir-2020-387, eralex:cir-2020-420 ;
] , [
  a era:CABAssessmentCheck ;
  era:isOptional "true"^^xsd:boolean ;
  era:isCompliant era-compliance:True ;
# WARNING, SKOS Concept scheme only in version 4.0.0+
  vpa:withRestriction [
    a era:CABAddition;
    dcterms:type era-cld-addition-types:Option ;
# WARNING, SKOS Concept scheme only in version 4.0.0+
    dcterms:description "{Describe the optional function
here}"
    era:nonCodedRestrictions "{Conditions and Limits of
Use regarding this Optional Function}"@en ;
    dcterms:source era-cld-additional-function-reasons:R4
# WARNING, SKOS Concept scheme only in version 4.0.0+
  ]
].
```

See also:

<https://nb-rail.eu/official-documents>

CAB Assessment Check ^C

A compliance check as executed by a Conformity Assessment Body. The class can be used NoBo, DeBo and/or AsBo checks.

IRI: <http://data.europa.eu/949/CABAssessmentCheck>

Is subclass of
[Compliance](#)

Additional Information

General explanation:

- This class is used to model the compliance details, typically of a `era:CertificationLevelDocument` (through ``vpa:checkedCompliance``):
- [Scope of /Exemptions from Assessment], using the property ``era:isCompliant`` and a reference to the TSI or Section which was in scope or exempted;
 - Assessment result can be documented using standard ontology properties.

See also:

<https://nb-rail.eu/official-documents>

CAB Audit Check ^C

A compliance observation as executed by a Conformity Assessment Body in an audit. The class can be used NoBo, DeBo and/or AsBo checks.

IRI: <http://data.europa.eu/949/CABAuditCheck>

Is subclass of

[Compliance](#)

Additional Information

General explanation:

- This class is used to model the audit observations of a `era:CertificationLevelDocument` (through ``vpa:checkedCompliance``):
- [Scope of /Exemptions from Audit], using the property ``era:isCompliant`` and a reference to the TSI or Section which was in scope or exempted;
 - Audit result can be documented using standard ontology properties.

See also:

<https://nb-rail.eu/official-documents>

CAB restriction ^C

A Restriction which was issued by a CAB

IRI: <http://data.europa.eu/949/CABRestriction>

Is subclass of

[Restriction](#)

Additional Information

General explanation:

This class is used to express a Restriction, as formulated by a CAB.

This information is stored under the ``era:CertificationLevelDocument``'s ``era:CABAssessmentCheck`` like shown in the example.

Example:

```
era-cld:cld-NoBoCert-25403 a era:CertificationLevelDocument
, vpa:EvidenceDocument ;
vpa:checkedCompliance [
  # Assessment Requirements regarding TSI.
  a era:CABAssessmentCheck ;
  vpa:checkedRequirement eralex:cir-2016-919, eralex:cir-
2019-776, eralex:cir-2020-387, eralex:cir-2020-420 ;
] , [
  a era:CABAssessmentCheck ;
  era:isOptional "true"^^xsd:boolean ;
  era:isCompliant era-compliance:True ;
# WARNING, SKOS Concept scheme only in version 4.0.0+
vpa:withRestriction [
  a era:CABRestriction;
  dcterms:type era-cld-restriction-types:Option ;
# WARNING, SKOS Concept scheme only in version 4.0.0+
  dcterms:description "{Describe the restriction here}"
  era:nonCodedRestrictions "{Conditions and Limits of
Use regarding this Optional Function}"@en ;
  dcterms:source era-cld-additional-function-reasons:R4
# WARNING, SKOS Concept scheme only in version 4.0.0+
]
].
```

See also:

<https://nb-rail.eu/official-documents>

Certification Level Document ^C

Certification Level Document, as issued by a NoBo in the process of its certification/verification activities [RFU-STR-001]. The class can be reused as well for DeBo and AsBo certificates.

IRI: <http://data.europa.eu/949/CertificationLevelDocument>

Also Known As:

CLD

Is subclass of

[Evidence Document](#)

Has Properties

[Assessment/audit result annex](#)

[Assessment/audit result report/file](#)

[Assessment/audit result statement](#)

[Superseded CLD statement](#)

Additional Information

General explanation:

Every CLD is the result of a process by a recognised/accredited body (`vpa:AppropriateBody`) which is allowed to issue it to a `vpa:RequestingBody` needing it for a specific purpose, as defined in the IOD or SD. Several CLDs can support EC Declarations.

See also:

<https://nb-rail.eu/official-documents>

Compliance ^C

A Compliance result, having its origin in a railway verification/certification/assessment process.

IRI: <http://data.europa.eu/949/Compliance>

Is subclass of

[Compliance](#)

Is superclass of

[CAB Assessment Check](#)

[CAB Audit Check](#)

[Vehicle Registration Compliance Check](#)

[Vehicle Type Authorisation Compliance Check](#)

Has Properties

[Is optional](#)

Restriction ^C

A restriction, condition of use, having its origin in a railway verification/certification/permission process.

IRI: <http://data.europa.eu/949/Restriction>

Is subclass of

[Restriction](#)

Is superclass of

[CAB assessed addition](#)

[CAB restriction](#)

[Vehicle Registration Restriction](#)

[Vehicle Type Authorisation Restriction](#)

Technical Specification for Interoperability ^C

Technical Specification for Interoperability

IRI: <http://data.europa.eu/949/TechnicalSpecForInteroperability>

Also Known As:

TSI

Is subclass of

[Requirement](#)

Additional Information

References:

https://eur-lex.europa.eu/eli/dir/2016/797/2020-05-28#art_2

4. Auxiliary Properties for ERADISParameters

Area of Operation ^{OP}

(33) 'area of operation' means a network or networks within one or more Member States where a railway undertaking intends to operate.;

IRI: <http://data.europa.eu/949/areaOfOperation>

Parameter of

[Permission](#)

Data Format

Data Presentation

[Concept](#)

Validation

Validation Rules:

[Scbarea Of Operation Shape](#)

Comment: 4.2 Area of operation under the scope of the certificate.

Message: A Single Safety Certificate allows several Areas of operation to be specified.

Additional Information

General explanation:

The SKOS Concept Scheme should contain all networks existing in the EU.

Assessment/audit result annex ^{DP}

Annex of the assessment/audit result

IRI: <http://data.europa.eu/949/resultAnnex>

Parameter of

[Certification Level Document](#)

Data Format

Data Presentation

[String](#)

Validation

Validation Rules:

[Result Annex](#)

Comment: Annex of the assessment/audit result.

Message: resultAnnex: The value must be a string.

Additional Information

General explanation:

See RFU-STR-001, A.2 - 12.(Where used) Reference to Annex of CLD [R5, R14]

Assessment/audit result report/file ^{DP}

Report about the assessment/audit result (either NoBo File or NoBo Conformity Assessment Report, with identifier, revision, date)

IRI: <http://data.europa.eu/949/resultReport>

Parameter of

[Certification Level Document](#)

Data Format

Data Presentation

[String](#)

Validation

Validation Rules:

[Result Report](#)

Comment: Report about the assessment/audit result, such as a NoBo File or NoBo Conformity Assessment Report, with identifier, revision and date.

Message: resultReport: The value must be a string.

Additional Information

General explanation:

See RFU-STR-001, A.2
- 13.Reference to accompanying EC Assessment Report
[R5,R14,R22,R27,R31,R32]
- 14.Reference to accompanying NoBo File
[R3.c,R5,R6,R7,R13,R14,R15,R18,R19,R35]

Assessment/audit result statement ^{DP}

Statement about the assessment/audit result

IRI: <http://data.europa.eu/949/resultStatement>

Parameter of
[Certification Level Document](#)

Data Format

Data Presentation
[Lang_String](#)

Validation

Validation Rules:
[Result Statement](#)
Comment: Assessment result (free text, required).
Message: Assessment result is required.

Additional Information

General explanation:
See RFU-STR-001, A.2 - 10.Statement about the Assessment Results

CLD validity rule ^{OP}

Links a legal resource (typically a consolidated version of a TSI) to a validity constraint governing a specific CLD type + module combination.

IRI: <http://data.europa.eu/949/cldValidityRule>

Parameter of
[Legal Resource](#)

Data Format

Data Presentation
[Validity constraint](#)

Validation

Validation Rules:

[Cldvalidity Rule](#)

Comment: Links a legal resource to a validity constraint governing a specific CLD type and module combination.

Message: CLD validity rule must point to a validity constraint.

Covers freight transport of dangerous goods ^{DP}

Covers for a `type of operation` involving the freight transport of dangerous goods

IRI: <http://data.europa.eu/949/coversDangerousGoods>

Parameter of

[Permission](#)

Data Format

Data Presentation

[Boolean](#)

Validation

Validation Rules:

[Ecmcb-rid-operation Shape](#)

Comment: Indicates whether the ECM CB is authorized to certify operations regarding wagons specialised in transport of dangerous goods

Message: An ECM CB Attestation MUST indicate whether the ECM CB is authorized to certify operations regarding wagons specialised in transport of dangerous goods

[Ecm-ru-rid-operation Shape](#)

Comment: Indicates whether the ECM is authorized to maintain wagons specialised in transport of dangerous goods

Message: An ECM Certificate MUST indicate whether the ECM is authorized to maintain wagons specialised in transport of dangerous goods

[Scb-ru-rid-operation Shape](#)

Comment: Indicates whether the RU is authorized for dangerous goods transport according to RID regulations

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for dangerous goods operations

[Sca-ru-rid-operation Shape](#)

Comment: Indicates whether the RU is authorized for dangerous goods transport according to RID regulations

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for dangerous goods operations

[Ssc-ru-rid-operation Shape](#)

Comment: Indicates whether the RU is authorized for dangerous goods transport according to RID regulations

Message: A Single Safety Certificate MUST indicate whether the RU is authorized for dangerous goods operations

[Mws-ru-rid-operation Shape](#)

Comment: Indicates whether the ECM is authorized to maintain wagons specialised in transport of dangerous goods

Message: A `Certificate of conformity for Maintenance Functions` MUST indicate whether the ECM is authorized to maintain wagons specialised in transport of dangerous goods

Covers high-speed passenger transport services ^{DP}

Covers for `type of operation` of passenger transport services at speeds higher than 250km/h, or speeds considered as such through TEN-T.

IRI: <http://data.europa.eu/949/coversHighSpeed>

Parameter of

[Permission](#)

Data Format

Data Presentation

[Boolean](#)

Validation

Validation Rules:

[Sca-ru-hs-operation Shape](#)

Comment: Indicates whether the RU is authorized for high-speed operations.

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for high-speed operations

[Ecm-ru-hs-operation Shape](#)

Comment: Indicates whether the ECM is authorized to maintain vehicles intended for high-speed operations.

Message: An ECM Certificate MUST indicate whether the ECM is authorized to maintain vehicles intended for high-speed operations

[Scb-ru-hs-operation Shape](#)

Comment: Indicates whether the RU is authorized for high-speed operations.

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for high-speed operations

[Mws-ru-hs-operation Shape](#)

Comment: Indicates whether the ECM is authorized to maintain vehicles intended for high-speed operations.

Message: A `Certificate of conformity for Maintenance Functions` MUST indicate whether the ECM is authorized to maintain vehicles intended for high-speed operations

[Ecmcb-hs-operation Shape](#)

Comment: Indicates whether the ECM CB is authorized to certify operations regarding vehicles intended for high-speed operations.

Message: An ECM CB Attestation MUST indicate whether the ECM CB is authorized to certify operations regarding vehicles intended for high-speed operations

[Ssc-ru-hs-operation Shape](#)

Comment: Indicates whether the RU is authorized for high-speed operations.
Message: A Single Safety Certificate MUST indicate whether the RU is authorized for high-speed operations

Covers only shunting operations ^{DP}

Covers for a `type of operation` limited to only shunting operations

IRI: <http://data.europa.eu/949/coversOnlyShunting>.

Parameter of
[Permission](#)

Data Format

Data Presentation
[Boolean](#)

Validation

Validation Rules:

[Ssc-ru-shunting-operation Shape](#)

Comment: Indicates whether the RU is restricted to shunting operations only (no mainline running)

Message: A Single Safety Certificate MUST indicate whether the RU is authorized for shunting operations only

[Scb-ru-shunting-operation Shape](#)

Comment: Indicates whether the RU is restricted to shunting operations only (no mainline running)

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for shunting operations only

[Sca-ru-shunting-operation Shape](#)

Comment: Indicates whether the RU is restricted to shunting operations only (no mainline running)

Message: A Safety Certificate Type A MUST indicate whether the RU is authorized for shunting operations only

Is optional ^{DP}

Indicates whether a compliance check concerns an optional function or optional requirement.

IRI: <http://data.europa.eu/949/isOptional>

Parameter of
[Compliance](#)

Data Format

Data Presentation

[Boolean](#)

Validation

Validation Rules:

[Cabcheck Is Optional](#)

Comment: Indicates whether the CAB check concerns an optional function or optional requirement.

Message: The CAB's Check optional flag must be expressed as a boolean value.

Organisation size ^{OP}

The size of a given organisation or body.

IRI: <http://data.europa.eu/949/organisationSize>

Parameter of
[Body](#)

Data Format

Data Presentation
[Concept](#)

Taxonomy Reference:
[Organisation sizes](#)

Values :

Code	Value
10	Micro enterprise
20	Small enterprise
30	Medium sized enterprise
40	Large enterprise

Validation

Validation Rules:

[Organisation Size Skos](#)

Comment: The size of a given organisation or body.

Message: Indication of the organisationSize: The Body {\$this} has a value {?concept} that is not one of the predefined values and cannot be converted into a SKOS concept on this list:

<http://data.europa.eu/949/concepts/org-size/OrgSizes>.

Organisation Size

Comment: The size of a given organisation or body.

Message: organisationSize: Each Body can have up to 1 organisation size which must be represented as an IRI which is a SKOS concept. This error may be due to having more than one value, or having a value that is not an IRI, or a value that is an IRI but not a SKOS concept.

Related Certificate number ^{DP}

Identification number of a related Certificate.

IRI: <http://data.europa.eu/949/relatedCertificate>

Parameter of Permission

Data Format

Data Presentation
String

Validation

Validation Rules:

Sscprevious Certificate Shape

Comment: Reference to a previous certificate with format CC/10/YYYY/NNNN

Message: A Single Safety Certificate MAY refer to ONE previous certificate identifier

Scbscaref Shape

Comment: Reference to the Certificate Part A with format CC/11/YYYY/NNNN

Message: A Safety Certificate Type B MUST refer to ONE Part A certificate identifier

Mwsprevious Certificate Shape

Comment: Reference to a previous certificate with format CC/32/YYYY/NNNN or CC/33/YYYY/NNNN

Message: A `Certificate of conformity for Maintenance Functions` MAY refer to ONE previous certificate identifier

Ecmprevious Certificate Shape

Comment: Reference to a previous certificate with format CC/31/YYYY/NNNN

Message: An ECM Certificate MAY refer to ONE previous certificate identifier

Scaecmcert Shape

Comment: Reference to related ECM Certificate with format CC/31/YYYY/NNNN

Message: A Safety Certificate Type A MAY refer to ONE ECM certificate identifier

Ecmcert Body Previous Certificate Shape

Comment: Reference to a previous certificate with format CC/30/MMMM/NNNN

Message: An ECM CD entitlement can refer to a previous version

Additional Information

Example:

The property is used to identify a certificate strongly related to the resource, if such cannot be expressed using `dcterms:requires`.

For a Safety Certificate Part A, it can contain the identifier of the `1.7 ECM certificate` of the RU. For a Safety Certificate Part B, it can contain the identifier of the `part A Certificate`.

Superseded CLD statement ^{DP}

Statement about the superseded CLD

IRI: <http://data.europa.eu/949/sequenceStatement>

Parameter of
[Certification Level Document](#)

Data Format

Data Presentation
[Lang_String](#)

Validation

Validation Rules:
[Sequence Statement](#)
Comment: Sequence statement (free text, optional).
Message: Sequence statement is not present.

Additional Information

General explanation:
See RFU-STR-001, A.2 - 16.(Where applicable) Reference to superseded CLD in case of restricted or amended EC Certificate. [R37]

Transportation volume freight ^{DP}

The transportation volume for freight services.

IRI: <http://data.europa.eu/949/transportationVolumeFreight>

Parameter of
[Permission](#)

Data Format

Data Presentation

[String](#)

Validation

Validation Rules:

[Sca-ru-volume Freight Shape](#)

Comment: The transportation volume for freight services.

Message: A Safety Certificate Type A MAY describe ONE transportation volume for freight services

[Ssc-ru-volume Freight Shape](#)

Comment: The transportation volume for freight services.

Message: A Single Safety Certificate MAY describe ONE transportation volume for freight services

Transportation volume passenger ^{DP}

The transportation volume for passenger services.

IRI: <http://data.europa.eu/949/transportationVolumePassenger>

Parameter of

[Permission](#)

Data Format

Data Presentation

[String](#)

Validation

Validation Rules:

[Ssc-ru-volume Passenger Shape](#)

Comment: The transportation volume for passenger services.

Message: A Single Safety Certificate MAY describe ONE transportation volume for passenger services

[Sca-ru-volume Passenger Shape](#)

Comment: The transportation volume for passenger services.

Message: A Safety Certificate Type A MAY describe ONE transportation volume for passenger services

^c: Classes

^{op}: Object Properties

^{dp}: Data Properties

^{ep}: External Properties