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# Road vehicles — Functional safety — Part 8: Supporting processes

*Véhicules routiers — Sécurité fonctionnelle —  
Partie 8: Processus d'appui*



Reference number  
ISO 26262-8:2018(E)

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## Contents

	Page
<b>Foreword</b> .....	<b>vi</b>
<b>Introduction</b> .....	<b>viii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>2</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Requirements for compliance</b> .....	<b>2</b>
4.1 Purpose.....	2
4.2 General requirements.....	2
4.3 Interpretations of tables.....	3
4.4 ASIL-dependent requirements and recommendations.....	3
4.5 Adaptation for motorcycles.....	4
4.6 Adaptation for trucks, buses, trailers and semi-trailers.....	4
<b>5 Interfaces within distributed developments</b> .....	<b>4</b>
5.1 Objectives.....	4
5.2 General.....	4
5.3 Inputs to this clause.....	4
5.3.1 Prerequisites.....	4
5.3.2 Further supporting information.....	5
5.4 Requirements and recommendations.....	5
5.4.1 Application of requirements.....	5
5.4.2 Supplier selection criteria.....	5
5.4.3 Initiation and planning of distributed development.....	6
5.4.4 Execution of distributed development.....	7
5.4.5 Functional safety assessment activities in a distributed development.....	8
5.4.6 Agreement for production, operation, service and decommissioning.....	8
5.5 Work products.....	8
<b>6 Specification and management of safety requirements</b> .....	<b>9</b>
6.1 Objectives.....	9
6.2 General.....	9
6.3 Inputs to this clause.....	10
6.3.1 Prerequisites.....	10
6.3.2 Further supporting information.....	10
6.4 Requirements and recommendations.....	11
6.4.1 Specification of safety requirements.....	11
6.4.2 Attributes and characteristics of safety requirements.....	11
6.4.3 Management of safety requirements.....	13
6.5 Work products.....	14
<b>7 Configuration management</b> .....	<b>14</b>
7.1 Objectives.....	14
7.2 General.....	14
7.3 Inputs to this clause.....	15
7.3.1 Prerequisites.....	15
7.3.2 Further supporting information.....	15
7.4 Requirements and recommendations.....	15
7.5 Work products.....	15
<b>8 Change management</b> .....	<b>16</b>
8.1 Objectives.....	16
8.2 General.....	16
8.3 Inputs to this clause.....	16
8.3.1 Prerequisites.....	16
8.3.2 Further supporting information.....	16

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8.4	Requirements and recommendations.....	16
8.4.1	Planning and initiating change management.....	16
8.4.2	Change requests.....	17
8.4.3	Change request analysis.....	17
8.4.4	Change request evaluation.....	17
8.4.5	Implementing and documenting the change.....	18
8.5	Work products.....	18
<b>9</b>	<b>Verification.....</b>	<b>18</b>
9.1	Objectives.....	18
9.2	General.....	19
9.3	Inputs to this clause.....	19
9.3.1	Prerequisites.....	19
9.3.2	Further supporting information.....	19
9.4	Requirements and recommendations.....	20
9.4.1	Verification planning.....	20
9.4.2	Verification specification.....	20
9.4.3	Verification execution and evaluation.....	21
9.5	Work products.....	22
<b>10</b>	<b>Documentation management.....</b>	<b>22</b>
10.1	Objectives.....	22
10.2	General.....	22
10.3	Inputs to this clause.....	23
10.3.1	Prerequisites.....	23
10.3.2	Further supporting information.....	23
10.4	Requirements and recommendations.....	23
10.5	Work products.....	24
<b>11</b>	<b>Confidence in the use of software tools.....</b>	<b>24</b>
11.1	Objectives.....	24
11.2	General.....	24
11.3	Inputs to this clause.....	26
11.3.1	Prerequisites.....	26
11.3.2	Further supporting information.....	26
11.4	Requirements and recommendations.....	27
11.4.1	General requirement.....	27
11.4.2	Validity of predetermined Tool Confidence Level or qualification.....	27
11.4.3	Software tool compliance with its evaluation criteria or its qualification.....	27
11.4.4	Planning of usage of a software tool.....	27
11.4.5	Evaluation of a software tool by analysis.....	28
11.4.6	Qualification of a software tool.....	30
11.4.7	Increased confidence from use.....	30
11.4.8	Evaluation of the tool development process.....	31
11.4.9	Validation of the software tool.....	32
11.5	Work products.....	32
<b>12</b>	<b>Qualification of software components.....</b>	<b>32</b>
12.1	Objectives.....	32
12.2	General.....	32
12.3	Inputs to this clause.....	33
12.3.1	Prerequisites.....	33
12.3.2	Further supporting information.....	33
12.4	Requirements and recommendations.....	33
12.4.1	General.....	33
12.4.2	Specification of software component qualification.....	33
12.4.3	Verification of qualification of a software component.....	35
12.5	Work products.....	35
<b>13</b>	<b>Evaluation of hardware elements.....</b>	<b>35</b>
13.1	Objectives.....	35

This is a preview of "ISO 26262-8:2018". [Click here to purchase the full version from the ANSI store.](#)

13.2	General.....	36
13.3	Inputs to this clause.....	36
	13.3.1 Prerequisites.....	36
	13.3.2 Further supporting information.....	36
13.4	Requirements and recommendations.....	37
	13.4.1 General.....	37
	13.4.2 Evaluation of class I hardware elements.....	38
	13.4.3 Evaluation of class II hardware elements.....	38
	13.4.4 Evaluation of class III hardware elements.....	40
13.5	Work products.....	40
<b>14</b>	<b>Proven in use argument.....</b>	<b>40</b>
14.1	Objectives.....	40
14.2	General.....	41
14.3	Inputs to this clause.....	41
	14.3.1 Prerequisites.....	41
	14.3.2 Further supporting information.....	42
14.4	Requirements and recommendations.....	42
	14.4.1 General.....	42
	14.4.2 Proven in use credit.....	42
	14.4.3 Minimum information on candidate.....	43
	14.4.4 Analysis of modifications to the candidate.....	43
	14.4.5 Analysis of field data.....	43
14.5	Work products.....	45
<b>15</b>	<b>Interfacing an application that is out of scope of ISO 26262.....</b>	<b>46</b>
15.1	Objectives.....	46
15.2	General.....	46
15.3	Inputs to this clause.....	46
	15.3.1 Prerequisites.....	46
	15.3.2 Further supporting information.....	46
15.4	Requirements and recommendations.....	46
15.5	Work products.....	47
<b>16</b>	<b>Integration of safety-related systems not developed according to ISO 26262.....</b>	<b>47</b>
16.1	Objectives.....	47
16.2	General.....	47
16.3	Inputs to this clause.....	48
	16.3.1 Prerequisites.....	48
	16.3.2 Further supporting information.....	48
16.4	Requirements and recommendations.....	48
16.5	Work products.....	48
	<b>Annex A (informative) Overview of and workflow of supporting processes.....</b>	<b>49</b>
	<b>Annex B (informative) Development Interface Agreement (DIA) example.....</b>	<b>53</b>
	<b>Bibliography.....</b>	<b>60</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 32, *Electrical and electronic components and general system aspects*.

This edition of ISO 26262 series of standards cancels and replaces the edition ISO 26262:2011 series of standards, which has been technically revised and includes the following main changes:

- requirements for trucks, buses, trailers and semi-trailers;
- extension of the vocabulary;
- more detailed objectives;
- objective oriented confirmation measures;
- management of safety anomalies;
- references to cyber security;
- updated target values for hardware architecture metrics;
- guidance on model based development and software safety analysis;
- evaluation of hardware elements;
- additional guidance on dependent failure analysis;
- guidance on fault tolerance, safety related special characteristics and software tools;
- guidance for semiconductors;
- requirements for motorcycles; and
- general restructuring of all parts for improved clarity.

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

A list of all parts in the ISO 26262 series can be found on the ISO website.

## Introduction

The ISO 26262 series of standards is the adaptation of IEC 61508 series of standards to address the sector specific needs of electrical and/or electronic (E/E) systems within road vehicles.

This adaptation applies to all activities during the safety lifecycle of safety-related systems comprised of electrical, electronic and software components.

Safety is one of the key issues in the development of road vehicles. Development and integration of automotive functionalities strengthen the need for functional safety and the need to provide evidence that functional safety objectives are satisfied.

With the trend of increasing technological complexity, software content and mechatronic implementation, there are increasing risks from systematic failures and random hardware failures, these being considered within the scope of functional safety. ISO 26262 series of standards includes guidance to mitigate these risks by providing appropriate requirements and processes.

To achieve functional safety, the ISO 26262 series of standards:

- a) provides a reference for the automotive safety lifecycle and supports the tailoring of the activities to be performed during the lifecycle phases, i.e., development, production, operation, service and decommissioning;
- b) provides an automotive-specific risk-based approach to determine integrity levels [Automotive Safety Integrity Levels (ASILs)];
- c) uses ASILs to specify which of the requirements of ISO 26262 are applicable to avoid unreasonable residual risk;
- d) provides requirements for functional safety management, design, implementation, verification, validation and confirmation measures; and
- e) provides requirements for relations between customers and suppliers.

The ISO 26262 series of standards is concerned with functional safety of E/E systems that is achieved through safety measures including safety mechanisms. It also provides a framework within which safety-related systems based on other technologies (e.g. mechanical, hydraulic and pneumatic) can be considered.

The achievement of functional safety is influenced by the development process (including such activities as requirements specification, design, implementation, integration, verification, validation and configuration), the production and service processes and the management processes.

Safety is intertwined with common function-oriented and quality-oriented activities and work products. The ISO 26262 series of standards addresses the safety-related aspects of these activities and work products.

[Figure 1](#) shows the overall structure of the ISO 26262 series of standards. The ISO 26262 series of standards is based upon a V-model as a reference process model for the different phases of product development. Within the figure:

- the shaded “V”s represent the interconnection among ISO 26262-3, ISO 26262-4, ISO 26262-5, ISO 26262-6 and ISO 26262-7;
- for motorcycles:
  - ISO 26262-12:2018, Clause 8 supports ISO 26262-3;
  - ISO 26262-12:2018, Clauses 9 and 10 support ISO 26262-4;
- the specific clauses are indicated in the following manner: “m-n”, where “m” represents the number of the particular part and “n” indicates the number of the clause within that part.



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EXAMPLE "2-6" represents ISO 26262-2:2018, Clause 6.

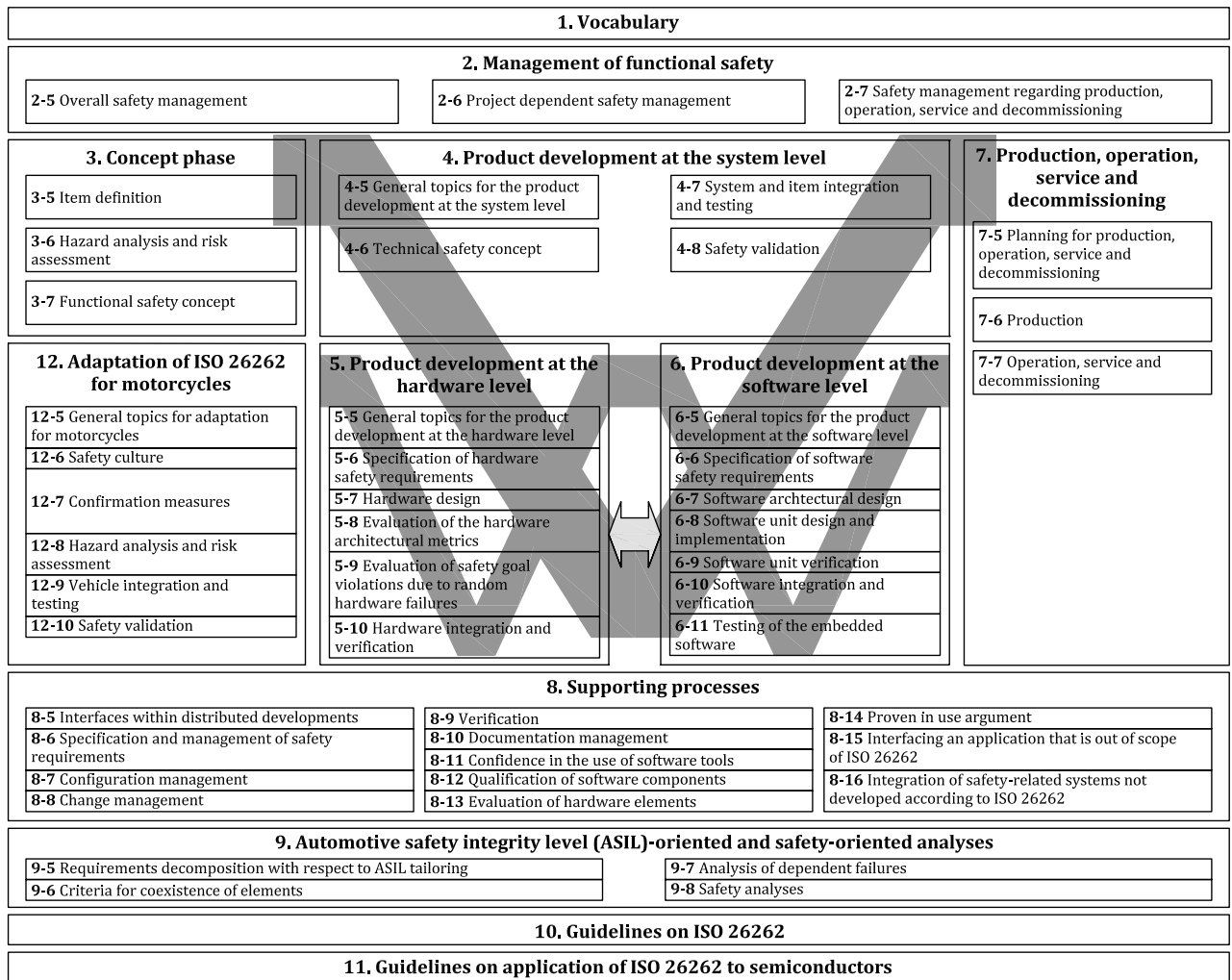


Figure 1 — Overview of ISO 26262