AVCDL Phase Requirement Product ISO 26262 Work Product Fulfillment Summary

Revision

Version 1 2/7/22 3:34 PM

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Abstract

This document summarizes how **AVCDL** phase requirement products fulfill **ISO 26262** work products.

Motivation

This document is motivated by the need to justify the sufficiency of the **AVCDL** for compliance with the cybersecurity elements of **ISO 26262**.

Audience / Use of ISO 26262 Text

The audience for this document is the certifying organization. As such it is necessary to provide excerpts from **ISO 26262** itself in order to provide evidence of sufficiency.

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Note: This material is extracted from the **ISO 26262** specification. It is included here for reference only.

ISO/SAE 26262 AVCDL Coverage

The following clauses are within the scope of the AVCDL:

- E.2 General
- E.3.2 Concept phase
- E.3.3 Product development
- E3.4 Production and operation

The following clauses are outside the scope of the AVCDL:

• E.3.1 Functional safety management

Note: Out-of-scope activities are addressed in organizational-level documentation.

Note: Bullet lists from ISO 26262 have been converted to a numbered format for ease of

reference.

E.2 General

Note: This section is addressed by the **AVCDL** primary document.

Information sharing

E.3 Potential interaction between functional safety and cybersecurity

E.3.1 Functional safety management

Note: Items in this section are addressed by organization-level processes.

- a. plans and milestones for cybersecurity activities
- b. coordination of the management of field monitoring activities

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    [Foundation-7] Cybersecurity Monitoring Plan (Foundation-7.1)
    [Foundation-7] Incident Response Plan (Foundation-7.2)
    [Operation-1] Cybersecurity Incident Report (Operation-1.1)
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Note: Although out of scope, the above listed activities should be considered.

E.3.2 Concept phase

a. cybersecurity threats analyzed as functional safety hazards

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[Foundation-11] Threat Prioritization Plan (Foundation-9.1)
[Design-3] Attack Surface Analysis Report (Design-3.1)
[Design-4] Ranked / Risked Threat Report (Design-4.2)
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b. hazards and associated risks to support the cybersecurity identification of threats

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[Design-4] Threat Modeling Report (Design-4.1)
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c. cybersecurity strategies or countermeasures

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[Design-4] Ranked / Risked Threat Report (Design-4.2)
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[Design-4] Threat Report (Design-4.3)

E.3.3 Product development

a. cybersecurity design and implementation technical information

[Requirements-1] Product-level Security Goals (Requirements-1.1)
[Requirements-1] Product-level Security Requirements (Requirements-1.2)
[Design-1] Design Showing Security Considerations (Design-1.1)

b. cybersecurity software and hardware design considerations

[Requirements-1] Product-level Security Goals (Requirements-1.1)
[Requirements-1] Product-level Security Requirements (Requirements-1.2)
[Design-1] Design Showing Security Considerations (Design-1.1)
[Implementation-4] Component/Version – Product/Version Cross-reference Document (Implementation-4.1)

[Implementaiton-5] Secure Development (Implementation-5.1)

c. functional safety design and implementation information

[Requirements-1] Product-level Security Requirements (Requirements-1.2)
[Design-1] Design Showing Security Considerations (Design-1.1)

d. harmonized safety and cybersecurity analysis activities

[Design-1] Design Showing Security Considerations (Design-1.1)
[Design-3] Attack Surface Analysis Report (Design-3.1)
[Design-4] Threat Modeling Report (Design-4.1)

e. cybersecurity countermeasures to address systematic failures

[Implementaiton-1] List of Tools and Components Used (Implementation-1.1)
[Implementaiton-4] Component/Version – Product/Version Cross-reference Document (Implementation-4.1)

E.3.4 Production and operation

a. cybersecurity incident resolution strategies

[Foundation-7] Cybersecurity Monitoring Plan (Foundation-7.1)
[Foundation-7] Incident Response Plan (Foundation-7.2)
[Operation-1] Cybersecurity Incident Report (Operation-1.1)