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References

- [1] Standardization Template
AUTOSAR_TPS_StandardizationTemplate
- [2] Requirements on Standardization Template
AUTOSAR_RS_StandardizationTemplate
- [3] Main Requirements
AUTOSAR_RS_Main

1 Introduction

1.1 Scope of this document

This document has the purpose to collect requirements on Methodology and Templates which are

- unspecific to single documents

OR

- specific to parts of the AUTOSAR meta-model relevant for almost all AUTOSAR templates

1.2 Document Conventions

The representation of requirements in AUTOSAR documents follows the table specified in [TPS_STDT_00078], see Standardization Template, chapter Support for Traceability ([1]).

The verbal forms for the expression of obligation specified in [TPS_STDT_00053] shall be used to indicate requirements, see Standardization Template, chapter Support for Traceability ([1]).

1.3 Guidelines

Existing specifications shall be referenced (in form of a single requirement). Differences to these specifications are specified as additional requirements. All Requirements shall have the following properties:

- **Redundancy**
Requirements shall not be repeated within one requirement or in other requirements.
- **Clearness**
All requirements shall allow one possibility of interpretation only. Used technical terms that are not in the glossary must be defined.
- **Atomicity**
Each Requirement shall only contain one requirement. A Requirement is atomic if it cannot be split up in further requirements.
- **Testability**
Requirements shall be testable by analysis, review or test.
- **Traceability**
The source and status of a requirement shall be visible at all times.

1.4 Requirements Tracing

The following table references the requirements specified in [2] and links to the fulfillments of these.

Requirement	Description	Satisfied by
[RS_Main_00080]	AUTOSAR shall provide means to describe a component model for application software	[RS_MTG_00001]
[RS_Main_00190]	AUTOSAR shall support interoperability with non-AUTOSAR software on the same ECU	[RS_MTG_00003]

2 Requirements

2.1 Category: AUTOSAR Main Requirements

This section re-defines requirements from relevant requirements defined in Main Requirements [3].

2.1.1 Re-usability

[RS_MTG_00001] AUTOSAR shall ease the re-usability of software and its concepts and implementations [

Type:	valid
Description:	AUTOSAR shall ease the re-usability of software and its concepts and implementations
Rationale:	See requirement [RS_Main_00080].
Use Case:	See requirement [RS_Main_00080].
Dependencies:	–
Supporting Material:	–

] (RS_Main_00080)

2.1.2 Different functional domains

[RS_MTG_00002] AUTOSAR shall provide a software architecture that is applicable across different functional domains [

Type:	valid
Description:	AUTOSAR shall provide a software architecture that is applicable across different functional domains
Rationale:	–
Use Case:	–
Dependencies:	–
Supporting Material:	–

]

2.1.3 Interoperability with legacy software

[RS_MTG_00003] AUTOSAR shall provide interoperability with legacy software [

Type:	valid
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Description:	AUTOSAR shall provide interoperability with legacy software
Rationale:	See requirement [RS_Main_00190].
Use Case:	See requirement [RS_Main_00190].
Dependencies:	–
Supporting Material:	–

]([RS_Main_00190](#))

2.2 Category: Variant Handling

This section defines requirements on AUTOSAR Variant Handling.

2.2.1 Supported combinations of System Constant Value

[RS_MTG_00005] Describe supported combinations of System Constant Value of an Software Component Type [

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of a Software Component Type.
Rationale:	Avoid illegal configuration of a software components, Enable selection of an appropriate Software Component Type.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

]

[RS_MTG_00006] Describe supported combinations of System Constant Value of an InternalBehavior [

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of an InternalBehavior.
Rationale:	Avoid illegal configuration of a Software Components Enable selection of an appropriate InternalBehavior.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

]

[RS_MTG_00007] Describe supported combinations of System Constant Value of an Implementation

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of an Implementation.
Rationale:	Avoid illegal configuration of a Software Components Enable selection of an appropriate Implementation.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

]

3 Change History

3.1 Change History for AUTOSAR 4.0.4 against 4.0.3

3.1.1 Removed RS Items

N/A

3.1.2 Changed RS Items

N/A

3.1.3 Added RS Items

Number	Heading
[RS_MTG_00001]	AUTOSAR shall ease the re-usability of software and its concepts and implementations (former RS_SWCT_0040)
[RS_MTG_00002]	AUTOSAR shall provide a software architecture that is applicable across different functional domains (former RS_SWCT_0050)
[RS_MTG_00003]	AUTOSAR shall provide interoperability with legacy software (former RS_SWCT_0130)
[RS_MTG_00005]	Describe supported combinations of System Constant Value of an Software Component Type (former RS_SWCT_3145)
[RS_MTG_00006]	Describe supported combinations of System Constant Value of an Internal-Behavior (former RS_SWCT_3146)
[RS_MTG_00007]	Describe supported combinations of System Constant Value of an Implementation (former RS_SWCT_3147)

Table 3.1: Added Specification Items in 4.0.4