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1 PRS_E2EProtocol

No content changes.

2 PRS_LogAndTraceProtocol

No content changes.

3 PRS_RemoteEventCommunicationProtocol

No content changes.

4 PRS_SOMEIPProtocol

4.1 Specification Item PRS_SOMEIP_00034

Trace References:

RS_SOMEIP_00021, RS_SOMEIP_00022, RS_SOMEIP_00023, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:

Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace

Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication

Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.2 Specification Item PRS_SOMEIP_00043

Trace References:

RS_SOMEIP_00002, RS_SOMEIP_00021, RS_SOMEIP_00022, RS_SOMEIP_00025, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony

Phone: +49 89 53 88669-296

Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:

Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace

Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication

Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.3 Specification Item PRS_SOMEIP_00044

Trace References:

RS_SOMEIP_00027 00025

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology
André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics
-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.4 Specification Item PRS_SOMEIP_00055

Trace References:

RS_SOMEIP_00008, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology
André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics
-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.5 Specification Item PRS_SOMEIP_00058

Trace References:

RS_SOMEIP_00008, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====
PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====
PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

–Last change on issue 77706 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

4.6 Specification Item PRS_SOMEIP_00521

Trace References:

RS_SOMEIP_00012, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony

Phone: +49 89 53 88669-296

Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:

Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace

Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication

Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

–Last change on issue 77706 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

4.7 Specification Item PRS_SOMEIP_00533

Trace References:

RS_SOMEIP_00012, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony

Phone: +49 89 53 88669-296

Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:

Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace

Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication

Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.8 Specification Item PRS_SOMEIP_00701

Trace References:

RS_SOMEIP_00008, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony

Phone: +49 89 53 88669-296

Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:

Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace

Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication

Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.9 Specification Item PRS_SOMEIP_00739

Trace References:

RS_SOMEIP_00012, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====
PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====
PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====
RS Methodology
André Hergenhan agreed for implementation in FO_RS_Methodology

=====
SRS Diagnostics
-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.10 Specification Item PRS_SOMEIP_00935

Trace References:

RS_SOMEIP_00012, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====

PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====

PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology
André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics
-Last change on issue 77706 comment 7-

BW-C-Level:

Application	Specification	Bus
1	1	1

4.11 Specification Item PRS_SOMEIP_00936

Trace References:

RS_SOMEIP_00012, RS_SOMEIP_00027

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77706: Implement AR Traceability Concept on Foundation Documents

Problem description:

Name: Anil Antony
Phone: +49 89 53 88669-296
Role:

Description/Motivation: The AR Traceability Concept presented to the PLs and the AUTOSAR community shall be implemented in the Foundation documents.

Was there already a decision? Yes

Agreed solution:

RS_Main:
Validas do most till 23rd and the rest we will take it up in September -> approved by Rinat

=====
PRS LogAndTrace
Manfred agreed (after CF-CCB telco on 2017-07-18)

=====
PRS RemoteEventCommunication
Rachid Farsi: agreed -> No one in WP-A4 plans to update PRS RemoteEventCommunication document so you can lock it during these 3 weeks.

=====

RS Methodology

André Hergenhan agreed for implementation in FO_RS_Methodology

=====

SRS Diagnostics

–Last change on issue 77706 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

5 PRS_SOMEIPServiceDiscoveryProtocol

5.1 Specification Item PRS_SOMEIPSD_00437

Trace References:

RS_SOMEIPSD_00004

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #78668: [SD] Contradicting requirements on the usage of the otherserve configuration option

Problem description:

RfC 77251: According to the Autosar Classic Platform the otherserv option shall be used to identify services with not unique ServiceIDs. (see SWS_SD_00293).

According to AUTOSAR_PRS_SOMEIPServiceDiscoveryProtocol the otherserv option shall be used exclusively for non-SOME/IP services.(see PRS_SOMEIPSD_00437)

Agreed solution:

RfC 77251:

Modify SWS_SD_00293

from:

Services exist, that are not identified by a unique 16 Bit Service ID but a unique value of the key otherserv. These services use the Service ID 0xFFFFE and must always carry a configuration option with an otherserv record. ECUs receiving an entry with Service ID 0xFFFFE shall use the configuration option and the otherserv record

within in order to identify the relevant Service or Eventgroup configuration item. This means that two Service Instance with the same Service ID and Service Instance ID may exist as long as their otherserv record is different. The configuration option shall be built based on configuration parameters mentioned in SWS_SD_00292.

to:

Non-SOME/IP-Services exist, that are not identified by a unique 16 Bit Service ID but a unique value of the key otherserv. These services use the Service ID 0xFFFE and must always carry a configuration option with an otherserv record. ECUs receiving an entry with Service ID 0xFFFE shall use the configuration option and the otherserv record within in order to identify the relevant Service or Eventgroup configuration item.

Modify PRS_SOMEIPSD_00437

Replace:

"contain at least an entry with key "otherserv""

by

"contain exactly one entry with key "otherserv""

–Last change on issue 77251 comment 10–

BW-C-Level:

Application	Specification	Bus
1	4	1

6 RS_E2E

No content changes.

7 RS_HealthMonitoring

7.1 Specification Item RS_HM_09028

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.2 Specification Item RS_HM_09125

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.3 Specification Item RS_HM_09159

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.4 Specification Item RS_HM_09163

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.5 Specification Item RS_HM_09169

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.6 Specification Item RS_HM_09222

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.7 Specification Item RS_HM_09226

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.8 Specification Item RS_HM_09235

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.9 Specification Item RS_HM_09237

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.10 Specification Item RS_HM_09240

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.11 Specification Item RS_HM_09241

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.12 Specification Item RS_HM_09242

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.13 Specification Item RS_HM_09243

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.14 Specification Item RS_HM_09244

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.15 Specification Item RS_HM_09245

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.16 Specification Item RS_HM_09246

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.17 Specification Item RS_HM_09247

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.18 Specification Item RS_HM_09248

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.19 Specification Item RS_HM_09249

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.20 Specification Item RS_HM_09250

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.21 Specification Item RS_HM_09251

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.22 Specification Item RS_HM_09253

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.23 Specification Item RS_HM_09254

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.24 Specification Item RS_HM_09255

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.25 Specification Item RS_HM_09256

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.26 Specification Item RS_HM_09257

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.27 Specification Item RS_Watchdog_09028

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.28 Specification Item RS_Watchdog_09125

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.29 Specification Item RS_Watchdog_09159

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.30 Specification Item RS_Watchdog_09163

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.31 Specification Item RS_Watchdog_09169

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.32 Specification Item RS_Watchdog_09222

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.33 Specification Item RS_Watchdog_09226

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.34 Specification Item RS_Watchdog_09235

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.35 Specification Item RS_Watchdog_09237

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.36 Specification Item RS_Watchdog_09240

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.37 Specification Item RS_Watchdog_09241

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.38 Specification Item RS_Watchdog_09242

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.39 Specification Item RS_Watchdog_09243

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.40 Specification Item RS_Watchdog_09244

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.41 Specification Item RS_Watchdog_09245

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.42 Specification Item RS_Watchdog_09246

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.43 Specification Item RS_Watchdog_09247

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.44 Specification Item RS_Watchdog_09248

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.45 Specification Item RS_Watchdog_09249

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.46 Specification Item RS_Watchdog_09250

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340, RS_Main_00435

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.47 Specification Item RS_Watchdog_09251

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.48 Specification Item RS_Watchdog_09253

Trace References:

RS_Main_00001, RS_Main_00010, RS_Main_00011, RS_Main_00340

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.49 Specification Item RS_Watchdog_09254

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.50 Specification Item RS_Watchdog_09255

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.51 Specification Item RS_Watchdog_09256

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

7.52 Specification Item RS_Watchdog_09257

Trace References:

[RS_Main_00001](#), [RS_Main_00010](#), [RS_Main_00011](#), [RS_Main_00340](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0: none

8 RS_LogAndTrace

No content changes.

9 RS_Main

9.1 Specification Item RS_Main_00491

Trace References:

RS_PO_00009

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #76969: [Umbrella RfC]Tracing between PRS and SWS

Problem description:

A draft analysis of the current status regarding Log and Trace revealed some open issues.

1. The PRS (as a FO document) traces to CP SRS requirements, which is illegal.
2. The CP-SRS traces to RS-Features which is under discussion. The linked features trace to XCP and Diagnostic tester functionality. Both have nothing to do with LT.

This issue was also filed as <https://jira.autosar.org/browse/AP-1653>

I'm not sure how to present it to Bugzilla without actually making 3 RfCs out of it. At least the impact is incomplete. One idea could be to use this RfC as an umbrella for the various changes.

Agreed solution:

1. CP-SRS and AP-RS should be merged into a new and consistent FO-RS
2. PRS shall trace to new FO-RS
3. FO-RS shall trace to a new FO-RS-Main-Requirement that avoids any relation to diagnostic (or even XCP)

4. AP-SWS and CP-SWS shall trace to FO-RS

SWS Service Discovery:

3.1 Input documents

AUTOSAR_SRS_Ethernet.pdf

=> Add: AUTOSAR_PRS_SOMEIPServiceDiscoveryProtocol.pdf

=> Add: AUTOSAR_RS_SOMEIPServiceDiscoveryProtocol.pdf

=> Remove: AUTOSAR_SRS_Ethernet.pdf

6 Requirements traceability

=> Currently no requirements tracing at all, since only one Ethernet Requirement exists

SWS SOME/IP TransportProtocol

3.1 Input documents

already available: AUTOSAR_RS_SOMEIPProtocol.pdf

already available: AUTOSAR_PRS_SOMEIPProtocol.pdf

SWS Diagnostic Log and Trace

3.1 Input documents

=> Add: RS_L&T

already available: PRS_DLTProtocol.pdf

6 Requirements traceability

remove PRS_Dlt_00635 / SWS_Dlt_00643

SWS_SOMEIPTransformer

3.1 Input documents

=> Add: AUTOSAR_PRS_SOMEIPProtocol.pdf

=> Add: AUTOSAR_RS_SOMEIPProtocol.pdf

RS Main:

Add the following requirement after 4.1.24

Chapter 4.1.25 [RS_Main_00491] AUTOSAR shall provide means for logging

Type: Valid

Description: AUTOSAR shall provide a unified way to monitor, distribute or store application-internal information at runtime. This shall be possible without knowing anything about the ECU internal memory usage/addressing.

Rationale: For development purpose additional meta information about the current status or current variable values of an application might be needed.

Use Case: Provide current values of application-internal variables, provide information of the current state of an applications state machine.

Applies to: AP, CP

Dependencies: –
Supporting Material: –
(RS_PO_00009)
–Last change on issue 76969 comment 14–

BW-C-Level:

Application	Specification	Bus
1	1	1

10 RS_Methodology

10.1 Specification Item RS_METH_00006

Trace References:

RS_Main_00300

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of

an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for
one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects. Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.2 Specification Item RS_METH_00015

Trace References:

RS_Main_00220 , RS_Main_00513

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

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Chapter 2.1 General Requirements:

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Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the

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Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}

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one vehicle for the suppliers. \{\}

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The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

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RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.3 Specification Item RS_METH_00016

Trace References:[RS_Main_00190](#)**Content:****RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using

the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc). \{\}newline

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different

vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067
Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010
Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts
Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.4 Specification Item RS_METH_00018

Trace References:

RS_Main_00190, RS_Main_00300, RS_Main_00030

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not

needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several

AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\{ }newline

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology

shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.5 Specification Item RS_METH_00020

Trace References:

RS_Main_00300

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of

implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are de-

scribed in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.6 Specification Item RS_METH_00032

Trace References:

RS_Main_00130, RS_Main_00140, RS_Main_00330, RS_Main_00400

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.7 Specification Item RS_METH_00033

Trace References:

RS_Main_00140, RS_Main_00060, RS_Main_00130, RS_Main_00150,
RS_Main_00300, RS_Main_00400

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints

coming from the hardware (ECUs/sensors/actuators) should be taken into account.
Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\}

A single Software Component is updated in a AUTOSAR System. The updated ECU

Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.8 Specification Item RS_METH_00041

Trace References:

RS_Main_00310, RS_Main_00350

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general

requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects. Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,

RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.9 Specification Item RS_METH_00042

Trace References:

RS_Main_00250

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc). \}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-

C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network) some basic checks can be done and early problems can be solved that will ease the integration phase later.
Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates
Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.
Rationale: Usage of AUTOSAR templates in the development process
Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline
Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \\newline
Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \\newline
The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\\newline
The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\newline
The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.10 Specification Item RS_METH_00056

Trace References:

RS_Main_00507

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}newline

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:—

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrat-

ing a BSW module into an ECU.\\}

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\}

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects. Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.11 Specification Item RS_METH_00062

Trace References:

[RS_Main_00080](#), [RS_Main_00360](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc). \}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps:

pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.12 Specification Item RS_METH_00066

Trace References:

RS_Main_00250

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.
Description: The Autosar methodology shall support system development with different combinations of configuration classes.
Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.
Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized
Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082
Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038
Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.13 Specification Item RS_METH_00069

Trace References:

[RS_Main_00030](#), [RS_Main_00290](#), [RS_Main_00300](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not

needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several

AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology

shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.14 Specification Item RS_METH_00074

Trace References:

RS_Main_00360

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of

implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are de-

scribed in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.15 Specification Item RS_METH_00075

Trace References:

[RS_Main_00360](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:—

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:—

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.16 Specification Item RS_METH_00076

Trace References:

[RS_Main_00360](#)

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints

coming from the hardware (ECUs/sensors/actuators) should be taken into account.
Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU

Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.17 Specification Item RS_METH_00077

Trace References:

RS_Main_00300

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general

requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,

RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.18 Specification Item RS_METH_00078

Trace References:

RS_Main_00300, RS_Main_00150

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc). \}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-

C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network) some basic checks can be done and early problems can be solved that will ease the integration phase later.
Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates
Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.
Rationale: Usage of AUTOSAR templates in the development process
Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline
Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \\newline
Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \\newline
The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\\newline
The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\newline
The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.19 Specification Item RS_METH_00079

Trace References:

RS_Main_00300, RS_Main_00150

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:—

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrat-

ing a BSW module into an ECU.\\}

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\}

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects. Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.
Description: The Autosar methodology shall support system development with different combinations of configuration classes.
Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.
Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized
Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082
Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.20 Specification Item RS_METH_00080

Trace References:

[RS_Main_00080](#), [RS_Main_00300](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps:

pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.21 Specification Item RS_METH_00083

Trace References:

RS_Main_00301

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.
Description: The Autosar methodology shall support system development with different combinations of configuration classes.
Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.
Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized
Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082
Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038
Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.22 Specification Item RS_METH_00084

Trace References:

RS_Main_00301

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not

needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several

AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology

shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.23 Specification Item RS_METH_00200

Trace References:

RS_Main_00161

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of

implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are de-

scribed in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.24 Specification Item RS_METH_00201

Trace References:

RS_Main_00150, RS_Main_00060

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:—

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:—

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.25 Specification Item RS_METH_00202

Trace References:

RS_Main_00080, RS_Main_00150

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints

coming from the hardware (ECUs/sensors/actuators) should be taken into account.
Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\}

A single Software Component is updated in a AUTOSAR System. The updated ECU

Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \}\newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \}\newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \}\newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \}\newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \}\newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.26 Specification Item RS_METH_00203

Trace References:

RS_Main_00503

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general

requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,

RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.27 Specification Item RS_METH_00204

Trace References:

RS_Main_00503, RS_Main_00002

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc). \}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-

C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network) some basic checks can be done and early problems can be solved that will ease the integration phase later.
Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates
Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.
Rationale: Usage of AUTOSAR templates in the development process
Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU.\\newline
Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for one vehicle for the suppliers. \\newline
Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \\newline
The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU.\\newline
The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\newline
The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074, RS_METH_00075, RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002, RS_METH_00003, RS_METH_00004, RS_METH_00005, RS_AMETH_00081, RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.28 Specification Item RS_METH_00205**Trace References:**

RS_Main_00503, RS_Main_00150

Content:**RfCs affecting this spec item between releases 1.2.0 and 1.3.0:**

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrat-

ing a BSW module into an ECU.\\}

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \\}

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects. Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050,
RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027,
RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology
–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.29 Specification Item RS_METH_00206

Trace References:

RS_Main_00505, RS_Main_00320

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.

Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps:

pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046, RS_METH_00047, RS_METH_00048, RS_METH_00025, RS_METH_00050, RS_METH_00051, RS_METH_00052, RS_METH_00061, RS_METH_00027, RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.30 Specification Item RS_METH_00207

Trace References:

RS_Main_00002

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

In RS_Main, the following main requirements need to be extended to FO (in Applies To) in order to fulfil traceability: RS_Main_00360, RS_Main_00290

In RS_Methodology (see also https://svn.autosar.org/repos/work/09_WorkPackages/WP-M/06_Subgroups/05_Methodology/Migration_RS_Methodology_CP_to_FO):

- Delete chapter 1.1 Limitations
- Change chapter 2.1 General Requirements: This sections specifies the general requirements, which are valid for both platforms.

Chapter 2.1 General Requirements:

RS_METH_00006: The methodology shall explain how to build an AUTOSAR system

Description: The methodology shall explain how to build an AUTOSAR system using the activities and work products.

It should be like a user manual to help an organization efficiently apply AUTOSAR. In particular, the methodology shall explain how to build a system consisting of classic and adaptive platforms.

Applies to CP,AP

RS_METH_00041: The methodology shall support top-down and bottom-up approaches

Description: The methodology shall support the top-down and bottom-up approach. In the top-down approach, all constraints on the application software and their distribution on ECUs shall be considered. In the bottom-up approach, all constraints coming from the hardware (ECUs/sensors/actuators) should be taken into account.

Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

RS_METH_00077: The methodology shall support different views on the SW-C structure by OEMs and suppliers

Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

RS_METH_00033:

Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

The VFB is the communication mechanism that allows these components to interact. Even if all the resources used by these components are not available yet during the development (HW/Network)

some basic checks can be done and early problems can be solved that will ease the integration phase later.

Applies to CP

Add RS_METH_00208 (RS_Main_00300,RS_Main_00150): The methodology shall explain the high-level usage of the AUTOSAR templates

Description: The AUTOSAR templates include numerous features for the system design, the software component, the ECU configuration etc. The methodology shall clearly describe the activities to use/modify these and which activities require them to be completed before commencing.

Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

Usage of the system template: OEM as integrator is fixing the ECUs, the topology and the list of the SW-C for

one vehicle for the suppliers. \{\}newline

Usage of the BSW module template: An existing BSW module is implemented and is to be integrated into an ECU. A description of the BSW Module is needed in order to correctly integrate that module into the ECU. \{\}newline

The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

The Diagnostic Extract Template that represents a standardized exchange format on diagnostic functionality allows the decentralized configuration of diagnostic aspects.
Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior
Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points
Applies to CP

RS_METH_00084
Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.
Description: The Autosar methodology shall support system development with different combinations of configuration classes.
Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.
Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076
Applies to CP

Delete the following requirements:

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Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038
Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

Delete RS_METH_00021, RS_METH_00043, RS_METH_00046,
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RS_METH_00028, RS_METH_00064, RS_METH_00009, RS_METH_00067

Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

10.31 Specification Item RS_METH_00208

Trace References:

[RS_Main_00300](#), [RS_Main_00150](#)

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #77303: Final migration of RS_Methodology from CP to FO

Problem description:

The document RS_Methodology from CP (CP_RS_Methodology) shall completely be migrated to FO together with the next CP release (for FO_R1.3).

In a first step for FO_R1.1 already some of the requirements in CP_RS_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not

needed anymore. For the next CP release, the document CP_RS_Methodology can then completely be removed.

Agreed solution:

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Applies to CP,AP

RS_METH_00016 (trace to RS_Main_00190): The methodology shall support building a system of both AUTOSAR and Non-AUTOSAR ECUs

Description: The methodology shall support building a system of AUTOSAR compliant ECUs and non-AUTOSAR compliant ECUs.

Rationale: The design of a complete vehicle system shall be supported.

Applies to CP,AP

Add RS_METH_00200 (RS_Main_00161): The methodology shall support building a system consisting of several AUTOSAR platforms

Description: The methodology shall support building a system consisting of several

AUTOSAR platforms.

Rationale: The design of a complete vehicle system shall be supported.

Use Case: The communication description between machines (or ECUs) based on classic and adaptive AUTOSAR platforms.

Applies to CP,AP

RS_METH_00018:

Applies to AP,CP

RS_METH_00032: The methodology shall support different levels of abstractions

Description: The methodology shall support different views for the development of an AUTOSAR system. This corresponds to the typical domains and parties, which are involved in the system development.

Use case: AUTOSAR is using several abstraction levels to describe the information exchanged between the different players.

In an early phase for instance only the "Virtual Functional Bus" is used, whereas in later development phases we handle real implementations of the SWC deployed to several ECUs.

Applies to CP,AP

RS_METH_00020: The methodology shall support round-trip engineering

Description: The methodology shall support round-trip engineering. This implies that several iteration loops might be necessary in order to finalize a task or work product.

Rationale: Meet AUTOSAR Quality requirements.

Dependencies: –

Use Case: Automotive systems are typically developed in several sample phases (A, B, C, etc).\}

A single Software Component is updated in a AUTOSAR System. The updated ECU Extract still matches the existing ECU Configuration (as long as no contradicting changes are made in the iteration).

Applies to CP,AP

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Rationale: Possibility for the supplier to adapt the structure of a SW-C.

Use case: The amount of changes on the supplier side shall be limited to the changes caused by OEM updates.

Applies To CP,AP

RS_METH_00078

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00079

Rationale: Methodology consistency in the software system development approach

Applies to CP,AP

RS_METH_00015

Use case: An ECU built for a particular microcontroller is explicitly optimized for programming language ABC.

The methodology explains when and how to specify and to select the implementation of the software components compatible with the required programming language.

Applies to CP,AP

RS_METH_00066

Header: The methodology shall allow activities that reference tools

Dependencies:–

Use Case: For the classic platform, the activity ...

Applies to CP,AP

RS_METH_00042 (trace to RS_Main_00250)

Rationale: AUTOSAR should not require the use of particular tools when industry standard tools already exist.

Applies to CP,AP

RS_METH_00056 (trace to RS_Main_00507)

Applies to CP,AP

RS_METH_00069:

Dependencies:–

Chapter 2.2 Requirements for the Classic Platform

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Use case: In AUTOSAR, an application is modeled as a composition of interconnected components.

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Rationale: Usage of AUTOSAR templates in the development process

Use Case: Usage of the SW-C template: An existing software component is implemented and is to be integrated into a suppliers ECU. A description of the component is needed in order to correctly integrate that component into the ECU. \{\}newline

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The ECU configuration template is used to describe the configuration when integrating a BSW module into an ECU. \{\}newline

The Safety Extensions allow a standardized exchange of safety information and provide the basis for consistent management among different vendors and tools as required by ISO 26262. \{\}newline

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Applies to CP

RS_METH_00080: The AUTOSAR methodology shall support the concept of implicit communication behavior

Applies to CP

RS_METH_00083: The AUTOSAR methodology shall explain the description and handling of Data Exchange Points

Applies to CP

RS_METH_00084

Applies to CP

RS_METH_00062: The methodology shall support configuration of parameters with different binding time.

Description: The Autosar methodology shall support system development with different combinations of configuration classes.

Rationale: Configuration of parameters can be performed in different process steps: pre-compile, link time, and post-build.

Applies to CP

RS_METH_00074,RS_METH_00075,RS_METH_00076

Applies to CP

Delete the following requirements:

RS_METH_00017: Methodology shall clearly define what is standardized and what is not standardized

Reason: Methodology is an auxiliary document and only informative

Delete RS_METH_00002,RS_METH_00003,RS_METH_00004,RS_METH_00005,RS_AMETH_00081,RS_AMETH_00082

Reason: all requirements on the usage of specific templates will be removed. Instead one general requirement about the usage of templates (RS_METH_00208) will be added.

Delete RS_METH_00038

Rationale: C-Code is supported, but the description nevertheless is independent of the programming language.

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Reason: all these requirements describe general SPEM properties and are described in the introduction of TR_Methodology

Remove RS_METH_00054 and extend instead description in TR_Methodology (handled in different RfC)

Delete RS_METH_00010

Reason: this is a property of the MMT

Delete RS_METH_00057: AUTOSAR methodology shall support traceability to external artifacts

Reason: This is not a feature of TR_Methodology or TR_AdaptiveMethodology

–Last change on issue 77303 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

11 RS_ProjectObjectives

No content changes.

12 RS_SOMEIPProtocol

No content changes.

13 RS_SOMEIPServiceDiscoveryProtocol

No content changes.

14 SRS_Diagnostic

14.1 Specification Item SRS_Diag_04068

Trace References:

RS_Main_00260, RS_Main_00420

Content:

RfCs affecting this spec item between releases 1.2.0 and 1.3.0:

- RfC #78717: FO_R1.3.0 Document finalization

Problem description:

- 1) The change history entry needs to be updated for Foundation Release 1.3.0.
- 2) For Word documents: A document shall meet formal requirements before releasing.
- 3) Hiding of internal document change history
- 4) For MOD files: Adaption of "_readme.txt"
–Last change on issue 78717 comment 1–

Agreed solution:

Please note: the following changes shall be done when all the changes of your document are clear (for R1.3.0)!

ad 1)

Please insert a change history entry for document finalization at the beginning of the Document Change History table in your document and use the following content:

Date	Release	Changed by	Change Description
2017-12-08	1.3.0	AUTOSAR Release Management	[cd]

A) In case your document has not been changed since last release, please use as Change Description [cd] the entry "No content changes".

B) In case your document will be released for the first time, please use as Change Description [cd] the entry "Initial release".

C) In case your document has been already released (in another standard), please put as first line of Change Description [cd] the following:
–Migration of document to standard "Foundation"–

Then, describe with up to 4 bullet points the major changes for this release. The description shall contain no references to Bugzilla issue numbers. This text will make up the Change History of the to-be-released document.

Please keep the entries of the previous changes untouched in the Change History!

ad 2)

*** For Word documents ***

Please check your document once more against this checklist:

https://svn.autosar.org/repos/work/02_ProjectOrganization/06_Templates/AUTOSAR_Checklist_F

Please verify also the PDF file as this is the one which will be released (it is automatically generated right next to the Word source document within four hours).

ad 3)

If not already done, please hide the whole internal document change history.

Please check the PDF file and ensure that nothing of the internal document change history is shown. Especially in case of remaining bullet points, please follow this instruction to get rid of those in your Word document, as well:

https://www.autosar.org/wiki/doku.php?id=collab_guide:hide_internal_changehistory_man

ad 4)

*** For MOD documents only ***

Please create or adapt the folder "contents". That folder shall include all files which will be used for the release R4.3.1 (zip-archive). That folder shall also include the two files: "_disclaimer.txt" and "_readme.txt"

The file "_readme.txt" shall include (besides existing information):

- Document Title: DOC LONG NAME
- Document Owner: AUTOSAR
- Document Responsibility: AUTOSAR
- Document Identification Number: UID
- Document Status: Final
- Part of AUTOSAR Standard: Foundation
- Part of AUTOSAR Release: 1.3.0
- Date: 2017-12-08
- Last change on issue 78717 comment 1–

BW-C-Level:

Application	Specification	Bus
1	1	1