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Release Notes

Errata and known deficiencies

All modifications planned in the scope of Release 2.1 for the incorporation into this document are completed. The document, however, has not yet undergone the necessary finalization.

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1 Introduction

The goal of this document is to define the Change Management Process of the AUTOSAR standard to be applied after 2006 (part of the Maintenance Process).

An AUTOSAR product will, after first release[1], be subject to maintenance, which is the longest phase of the standard lifecycle.
A maintenance process that enables the standard to live but keeps it together into one piece is a crucial condition to be achieved for the standard to become successful.

Processes and tools shall be defined consistently with the standard lifetime.

Note:
In this document the term “product” will be used to denote all items of AUTOSAR that are subject to maintenance like documents (requirements, process definitions, specifications, test specifications etc.) and templates, etc.

1.1 Scope of this document

During the maintenance phase of AUTOSAR, a number of processes will interact among each other as well as with the market, among them are the change management and the release management – see also [1].

- Change management focusing on all input from the market (i.e. AUTOSAR members mainly) concerning the standard and caring about processing this input and giving feedback to the market. Also the continued development will live under the change management umbrella.
- Release management focusing mainly on planning releases (i.e. functionality and time schedule) and rolling them out. Refer to the [1] for a description of the release management process.

This document will focus on the description of a detailed change management process flow as well as the decision and escalation routines. It will also provide a tailored description of the roles in the process (who will decide what? who will act or execute? when will be acted?)

[1] First Release means release for the “purpose for commercial exploitation” as part of the Release Management Process.

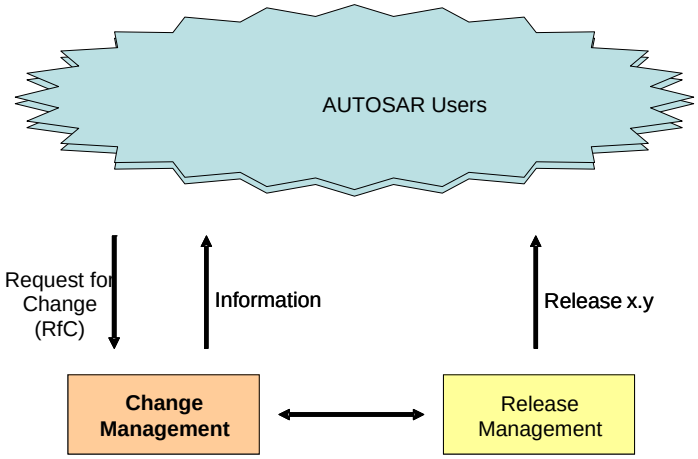

Figure 1 - Scope of this document

Note:

The process described in this document does not define the rules of voting or decision finding. It is, however, designed in such a way that a consensus approach / unanimous voting is possible.

1.2 Links to Related Documents

[1] Release Management Process Definition
https://svn.autosar.org/repos/10Releases/
AUTOSAR_DS_ReleaseManagement.pdf

[2] Standard Maintenance Requirements
https://svn.autosar.org/repos/10Releases/
AUTOSAR_RS_StandardMaintenance.pdf

2 AUTOSAR Change Management Process during Standard Maintenance

2.1 Basic remarks

- The Change Management Process of the project organization has been adapted to fit the requirements of the maintenance phase, because the requirements on maintenance (e.g. release and change management) are different between the situation when the standard is under development – without end users – and when the standard is released for the purpose of commercial exploitation and hence ready for implementation in car projects.
- The assumption for the maintenance processes is that they cover AUTOSAR products that are in status "purpose for commercial exploitation" (released).
- The maintenance processes shall start before the end of the development phase in order to get ready upon release. This may lead in extra effort during the transition period.
- The Change Management Process will be established by the AUTOSAR members.

2.2 Scope of Change Management Process

The Change Management Process will be established

- for AUTOSAR products in the status “purpose for commercial exploitation” like standard specifications, test specifications and templates.
- to provide the update procedure for products and make sure that the standard is consistent and up-to-date.
- to register and administer incoming error reports, trouble reports and improvement proposals as **Requests for Change (RfC)**.
- to ensure the decision making process and process the Requests for Change by taking into account technical impacts, release planning, feasibility and costs. Processing an RfC will result in rejection or approval of RfC’s and, in case of approval, in selecting and applying a solution.
- to ensure that a communication policy is executed (by proceeding necessary information to anybody concerned).

2.3 Overview

If a change in the AUTOSAR standard is proposed (may it be an error or an extension) an RfC is issued. Depending on the impact of the request, different levels of decision bodies will decide on its status.
If the request has been approved, the change is implemented and reviewed. In cooperation with the Release Management, the change will be rolled out to the public and the request will be closed. If at any point in the Change Management process, the RfC cannot be fully processed (for either technical or political reasons), it will be

rejected or, after rework, be re-processed back from the start and the initiator of the request will be informed.

Figures 2-6 provide examples of typical scenarios:

- an RfC can be processed without escalation (Figure 2)
  (Issuing – Approval – Implementation – Review – Release)
- an RfC has to be decided on by the main decision body (Figure 3)
  (Issuing – Escalation – Approval – Implementation – Review – Release)
- an RfC has to be escalated to the highest instance of decision (Figure 4)
  (Issuing – 2 x Escalation – Approval – Implementation – Review – Release)
- an RfC cannot be implemented after approval (Figure 5)
  (Issuing – Approval – Implementation fails – new approval/classification)
- an RfC has to be rejected (Figure 6)
  (Issuing – Rejection (with or without prior escalation) – Information)

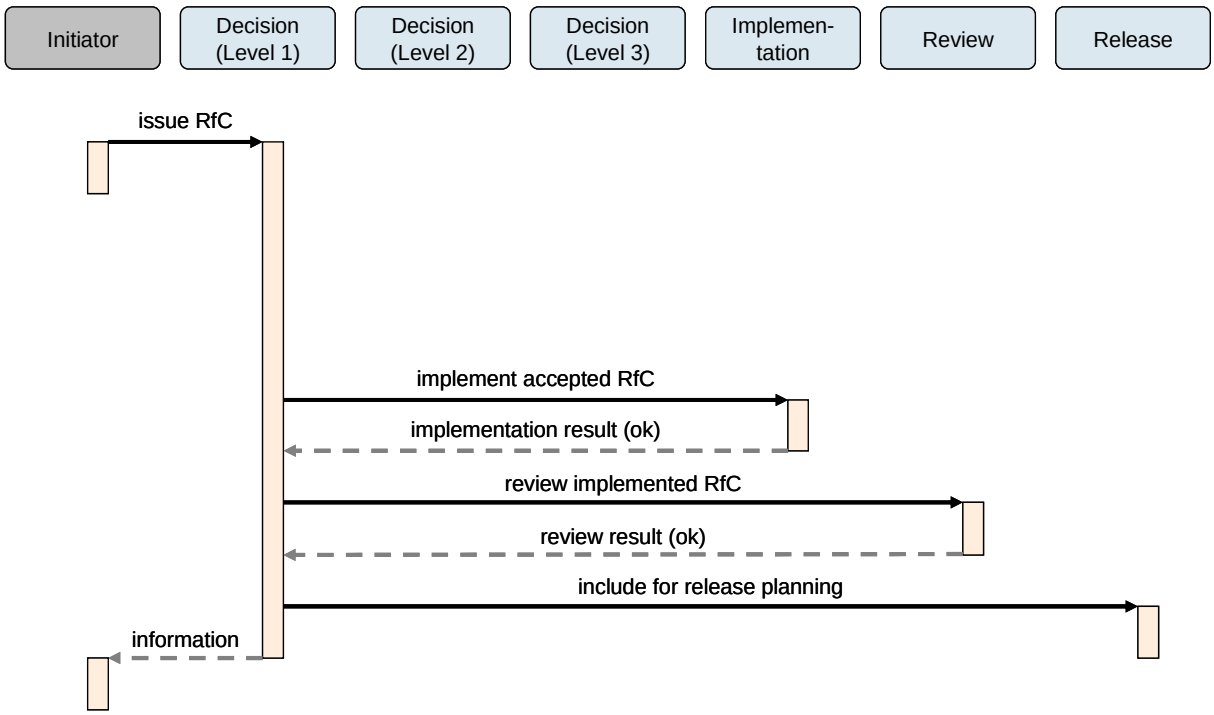

Figure 2 - RfC is processed without escalation

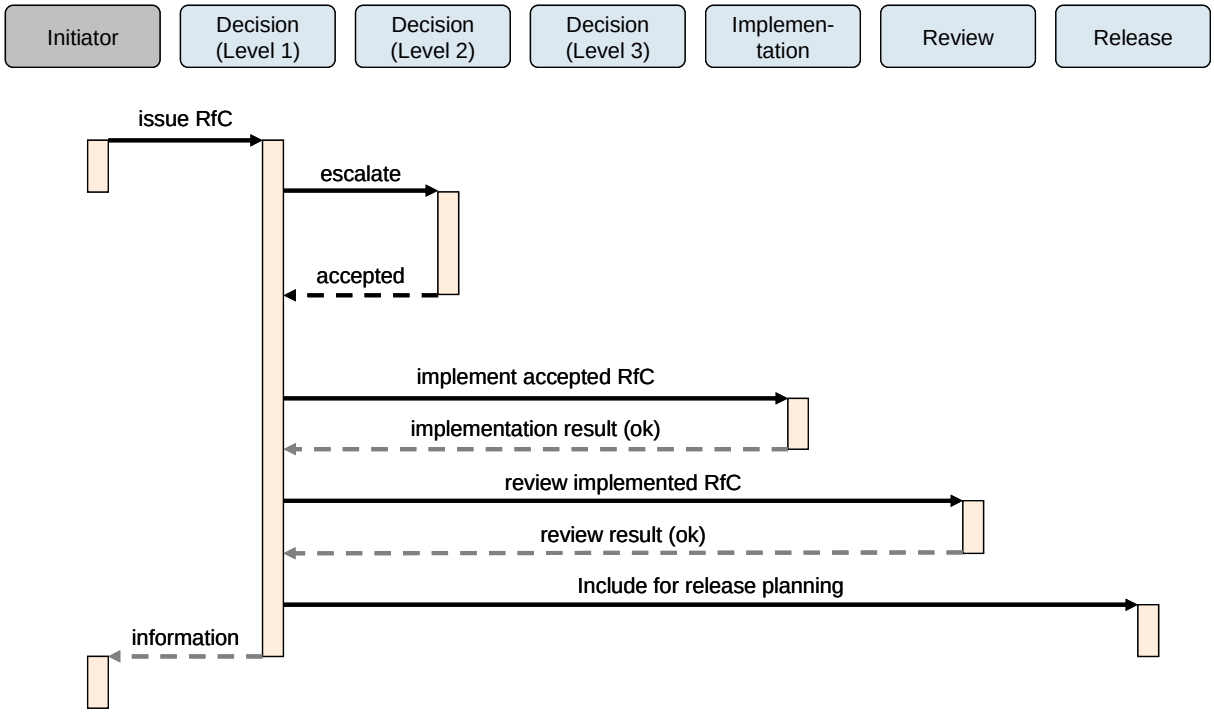

Figure 3 - RfC is decided on in the main decision body

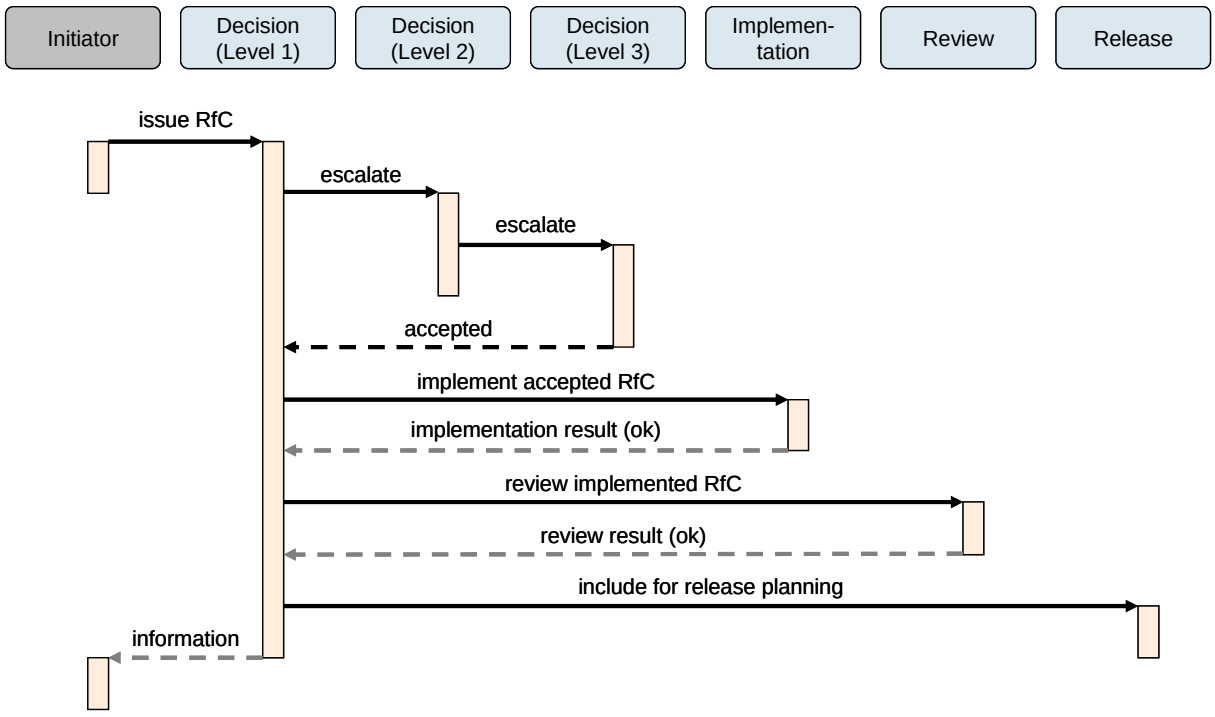

Figure 4 - RfC is escalated to highest instance of decision

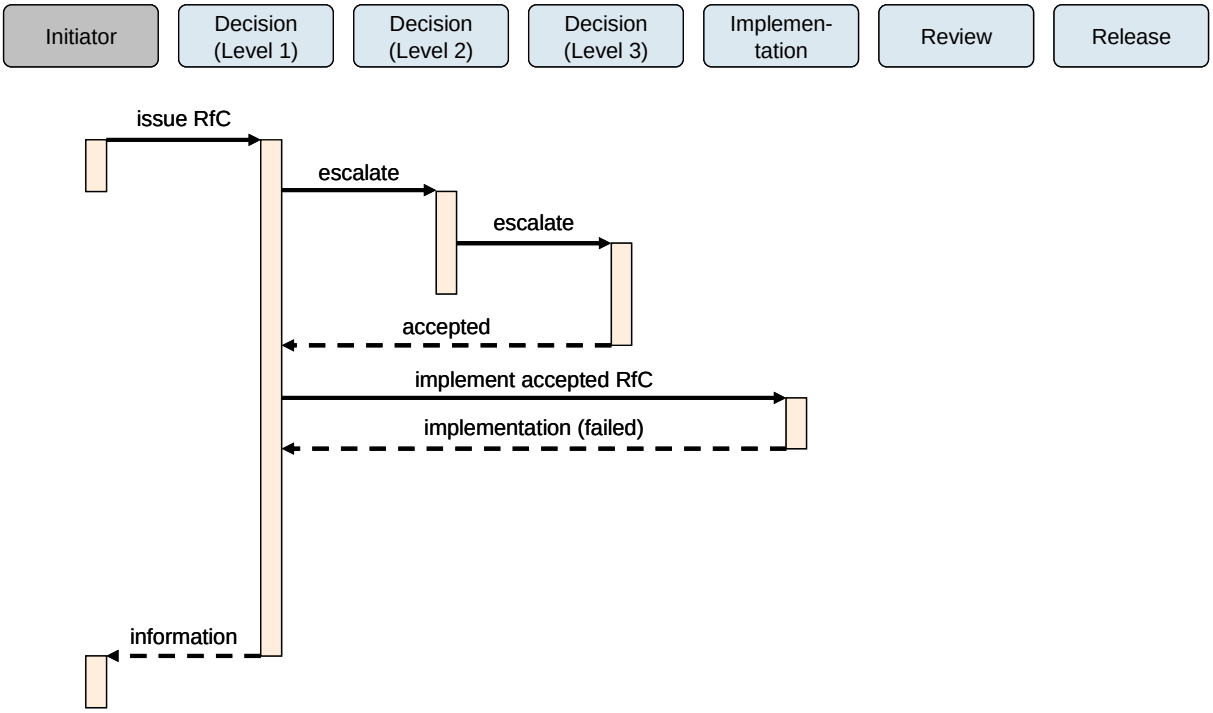

Figure 5 - RfC cannot be implemented [2]

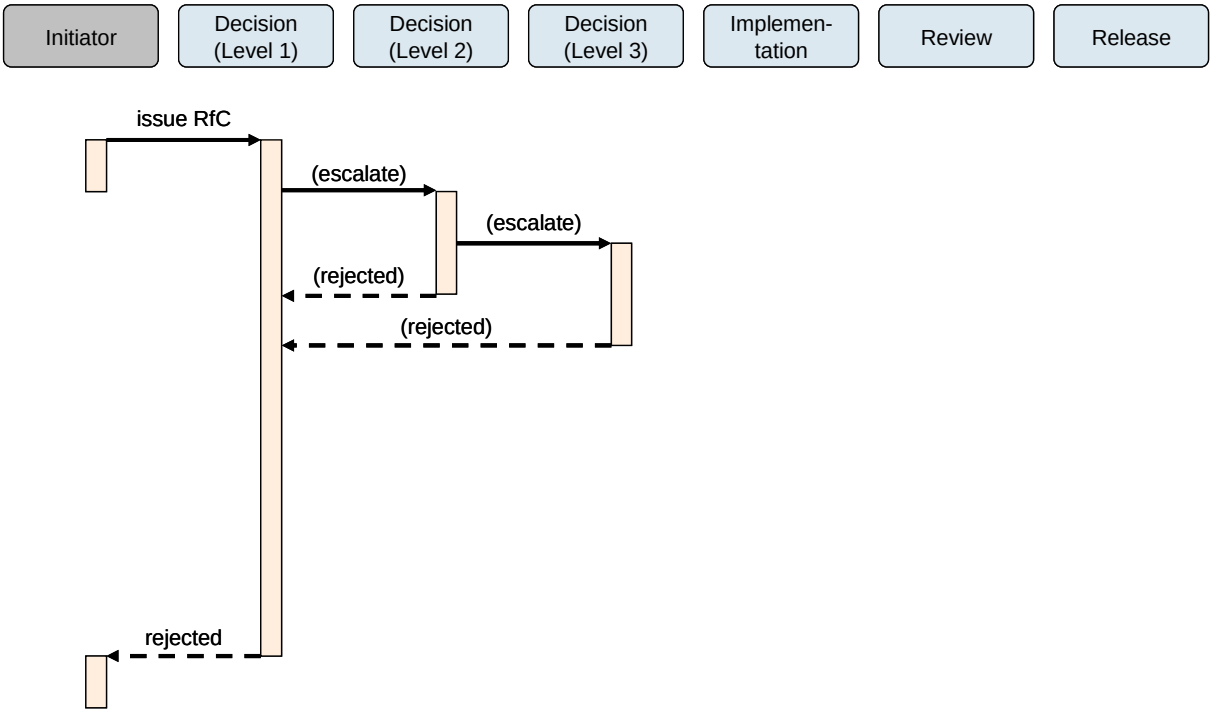

Figure 6 - RfC is rejected

[2] In the case of “implementation failed” the RfC will processed back to the Change Manager (Decision Level 1). The Change Manager will reevaluate and approve the RfC again (depending on Decision Bodys decision) and decide on how to process the RfC (reject – escalate – implement).

Chapter 3 will give a detailed list of the roles and responsibilities within the process. It will also define the Decision Levels to be Change Manager (level 1), CCB (level 2) and Management Board (level 3). Chapter 4 will focus on the process itself.

2.4 Prerequisites

Before the Change Management Process can be established, a certain set of conditions have to be met. The following sections deal with these conditions.

2.4.1 Resource Allocation

It is assumed that the resources have been allocated and the composition of the decision bodies have been agreed upon by the shareholders (i.e. the partners) of the AUTOSAR organization.

2.4.2 List of AUTOSAR products to maintain

Within the work of AUTOSAR a set of products will be produced. Many of these products will build bases which actually define the standard. Whenever changes are necessary, they will be reflected in changes of one or many of these products. It is thus important to define which of the deliverables from AUTOSAR the organization commits to maintain during the lifetime of the standard.

A list of AUTOSAR products will be available, listing all products defining the standard and subject to maintenance within AUTOSAR. The versions will be handled in a configuration management tool (see also section 2.4.3.1)

Note:

- It is up to each work group to issue the sub-list of the products to be maintained for the corresponding work package.
- The AUTOSAR list will be made of the compilation of all these sub-lists.

2.4.3 Tools

2.4.3.1 Configuration Management Tool

A configuration management tool is needed before the process can be implemented. The configuration management tool handles activities, schedules and projects milestones (for RfC processing) including release, change and version management. The AUTOSAR organization will decide on an appropriate tool and come up with requirements and the decision to use certain tools. (See appendix C.1 for a list of a sample list of possible tools).

2.4.3.2 Change Management Tool

In order to keep the consistency among the many elements subject to change management and their relations to different change requests, there is a need for a computerized tool.

The AUTOSAR Change Management Process should have a single tool-based formal input and follow up procedure for:

- bug/defect report (corrections)
- request for modification (of an existing product)
- request for extension (add-on of a new feature)

All inputs will be handled as RfC.

There should be written guidelines for how reporting bugs, modifications or extensions to AUTOSAR. These guidelines will be used to define the RfC-form .

See appendix C.2 for a sample list of possible tools.

3 Change Management – Roles and Responsibilities

It is of high importance for the success of AUTOSAR that the maintenance is kept lean (which means a lean organization and flat hierarchies), with fast response time[3] and distinct and relevant answers to change requests. The maintenance processes shall therefore be designed with the ambition to avoid unnecessary administration and effort, thus ensuring quick and efficient feedback to the users of the standard.

Therefore the roles and responsibilities of the Change Management Process are set up lean in order to secure an efficient working procedure. A lean organizational structure will be helpful especially for consensus finding and all technical issues (e.g. impact analysis, effort estimation and implementation of RfC's).

When an issue has been identified by a change request initiator, it has to be dealt within time to avoid damage or unnecessary rework among the users of AUTOSAR. A high number of process steps would also increase the risk of having the process diluted and with a deteriorated quality as the result.

3.1 Description of Roles and Responsibilities

Each product developed within AUTOSAR needs to have at least one expert who is responsible for assessing change requests on the product and who is expected to provide the CCB with a relevant analysis on the impact of the change request.[4] Furthermore a document owner has to be defined (if no such document owner is defined, the Change Manager will be the default document owner while a document owner is defined). The sum of these experts must cover all technology areas involved in AUTOSAR and should have a deep understanding of AUTOSAR.

This requirement being fulfilled, the CCB is able to cover all areas of AUTOSAR and then has to balance and prioritize change requests according to both technical and commercial aspects.

It is not expected that the CCB members have to possess this expertise themselves.

The following sections describe the responsibilities for the different roles of the Change Management Process.

Note:
In the following sections, the terms 'implementation' and 'testing' will be used. Depending on the context of the deliverable (either a specification document in natural language or source code in computer language), the term 'implementation' will be used to refer to writing or describing for documents and coding for source

[3] This does not imply that changes are implemented quickly but that the process is started quickly, with a continuous feedback to anybody concerned.

[4] This does not imply that the number of experts must be equal to the number of modules, since one expert may cover more than one topic.

code. The term ‘testing’ will accordingly refer to proof-reading for documents and checking for products.
The state definitions in this chapter can change due to new requirements for the RfC processing (see also Chapter 4.1).

3.1.1 Initiator

The initiator is not part of the change management organization structure and is mentioned here merely for sake of completeness.

The initiator

- is any person or group within AUTOSAR (AUTOSAR member) who detects a need for change and reports it.
- has to specify the request by filling in the RfC form so that the issue is sufficiently documented for reproduction, and should be available for answering questions that may come up. (For a detailed view of the form see appendix C.3)
- may participate in the process (e.g. for testing or reviewing) if appropriate.

3.1.2 Change Manager

The Change Manager

- is a member of the CCB
- is the process owner of the Change Management Process.
- keeps track of all RfC’s and administrates the RfC status list.
- ensures the completeness of all new RfC’s by complementing with the necessary information, with the help of experts if required (status: OPEN)
- classifies all RfC’s according to the information provided by the initiator within the form. If necessary forwards the RfC’s to an RfC-Expert Pool for detailed evaluation of impacts and effort estimation for implementation and verification.
- ASSIGNs corrections with no technical impact (minor changes) to himself, and implements them. (see Table 5 in section 4.4)
- passes any other RfC on to the CCB for decision.
- ASSIGNs any ACCEPTED RfC to the RfC-Implementation Team for implementation
- plans and initiates a review of the implementation of the RfC by the defined RfC-Review group.
- REJECTs any irrelevant, incomplete or duplicate RfC
- CLOSEs all REVIEWED RfC’s after confirmation of integration by the Release Manager.
- sends information to anybody concerned as soon as a status change of the RfC occurs
- is responsible for preparing and moderating all CCB meetings (see also chapter 5.2):
    - Valid for all regular and extraordinary meetings:
    - Invitation and agenda (at least 1 week before the meeting)

  - Minutes (within three working days after the meeting)
- is responsible for reports to the CCB (e.g. implementation or rejection of RfC's)
- may convene a CCB meeting if necessary, especially for critical RfC's.
- provides regular management summaries to the Management Board (e.g. for statistic reason) at least on a quarterly basis.

3.1.3 Change Control Board (CCB)

The CCB

- decides (ACCEPTED / REJECTED) about RfC's according to Table 5 in section 4.4
- if necessary forwards the RfC's to an RfC-Expert Pool for detailed evaluation of impact and effort estimation for implementation and verification.
- harmonizes[5] and prioritizes RfC's.
- if it is not possible to decide about an RfC within the CCB (i.e. no consensus is found), escalates to the Management Board.
- secures the consistency of technical content.
- informs the Change Manager to assign an RfC for implementation (including all information gathered from the analysis of RfC Experts).
- consists of the following members:
  - Change Manager
  - Release Manager
  - Senior engineer with expertise in (embedded) ECU Software Architecture
  - Senior engineer with expertise in Software System Architecture (AUTOSAR Methodology and concepts).
  - Representative of the Implementation Team (Implementation Manager – a permanent role in the organization; see Chapter 3.16)
  - Representative of the Review Team (Quality Manager – a permanent role in the organization)
- nominates a speaker to represent the group.
- will need the following input for its meetings
  - list of RfC's to decide on at lease 2 weeks in advance (provided by the Change Manager)
  - agenda (provided by the speaker)
- will provide the following results
  - list of decisions taken (RfC's to accept, reject or escalate)
  - meeting minutes
  - a target date for a next meeting

Note:
An overall AUTOSAR expertise is needed within the Change Control Board.
The staffing of the CCB will be discussed by the appropriate decision bodies separately.

[5] This can include altering, rephrasing etc. of the RfC.

3.1.4 Management Board

The Management Board

- decides (ACCEPTED / REJECTED) about escalated RfC's and all RfC's according to Table 5 in section 4.4
- harmonizes and prioritizes RfC's at Acceptance Meetings (see section 5.2)
- secures consistency of technical content through Acceptance Meetings.
- if necessary forwards via Change Manager the accepted RfC's to an RfC-Expert Pool for detailed evaluation of impact and effort estimation for implementation and verification.
- informs the Change Manager and the CCB about the decision (a reason for rejection should be provided).
- nominates a speaker to represent the group.
- will need the following input for its meetings
    - list of RfC's to decide on at lease 2 weeks in advance (provided by the Change Manager)
    - agenda (provided by the speaker)
- will provide the following results
    - list of decisions taken (RfC's to accept, reject or escalate)
    - meeting minutes
    - a target date for a next meeting

Note:
The staffing of the Management Board will be discussed by the appropriate decision bodies separately.

3.1.5 RfC-Expert Pool

It is obvious that there is a need for experts. In fact each product developed and each technology area covered within AUTOSAR needs to have an expert who is responsible to assess change requests on the product and who can issue an analysis to the Change Manager and the CCB.

The experts in the RfC-Expert Pool

- evaluate an RfC regarding complexity and impact to estimate the effort necessary to complete and implement it. This evaluation also contains all effected areas, and a proposal of possible members of the RfC-Implementation Team.
- must give special attention to safety aspects or system structure.
- must at least cover the following expertise areas:
    - RfC Implementation Team
    - System Architecture Team
    - Embedded SW Architecture Team
    - AUTOSAR methodology
    - Safety
    - Conformance testing
    - Quality assurance
    - Tools (automatic generators and testing, …)

3.1.6 RfC-Implementation Team

The Implementation Team

- is a temporary team.
- implements changes on products according to the indications of the decision bodies.
- sets the status of successfully implemented RfC's from ASSIGNED to IMPLEMENTED.
- may set the status of RfC's to REJECTED, if an implementation is impossible.
- reports to the Change Manager at least on a monthly basis. This includes the list of IMPLEMENTED and REJECTED RfC's. The Change Manager ensures the correct status handling.
- members are taken from the Expert Pool or externally and are assigned by the Change Manager.
- ensures that implementation and review are not performed by the same person.
- nominates a speaker who represents the team and has the role of an Implementation Manager (who has to be a permanent member of the AUTOSAR organization).
- may be represented only by the Change Manager, especially if an RfC has been rated to be a minor change (in which case the Change Manager himself may do the implementation).

3.1.7 RfC-Review Team

The Review Team

- is a temporary group that checks the correct implementation of an RfC.
- can escalate to the CCB and Management Board (in case of quality problems).
- may refer an RfC to the corresponding decision body (i.e. CCB) for re-evaluation (not passed), especially if it proves to be beyond the limits of the decision body or produces a conflict with other AUTOSAR products.
- ensures that implementation and review are not performed by the same person.
- sets the status of successfully reviewed RfC's from IMPLEMENTED to REVIEWED.
- may set the status of RfC's to ASSIGNED
- reports to the Change Manager. This includes the list of all IMPLEMENTED and ASSIGNED RfC's.
- nominates a speaker who represents the team and has the role of a Quality Manager (who has to be a permanent member of the AUTOSAR organization).

Note:

- members of the group should be assigned according to the severity.
- Appendix D gives an (informative) idea of the availability of the roles.

3.2 Possible Organization Diagram

Figure 7 is a preliminary and incomplete version of a possible organization diagram of the standard maintenance operation.

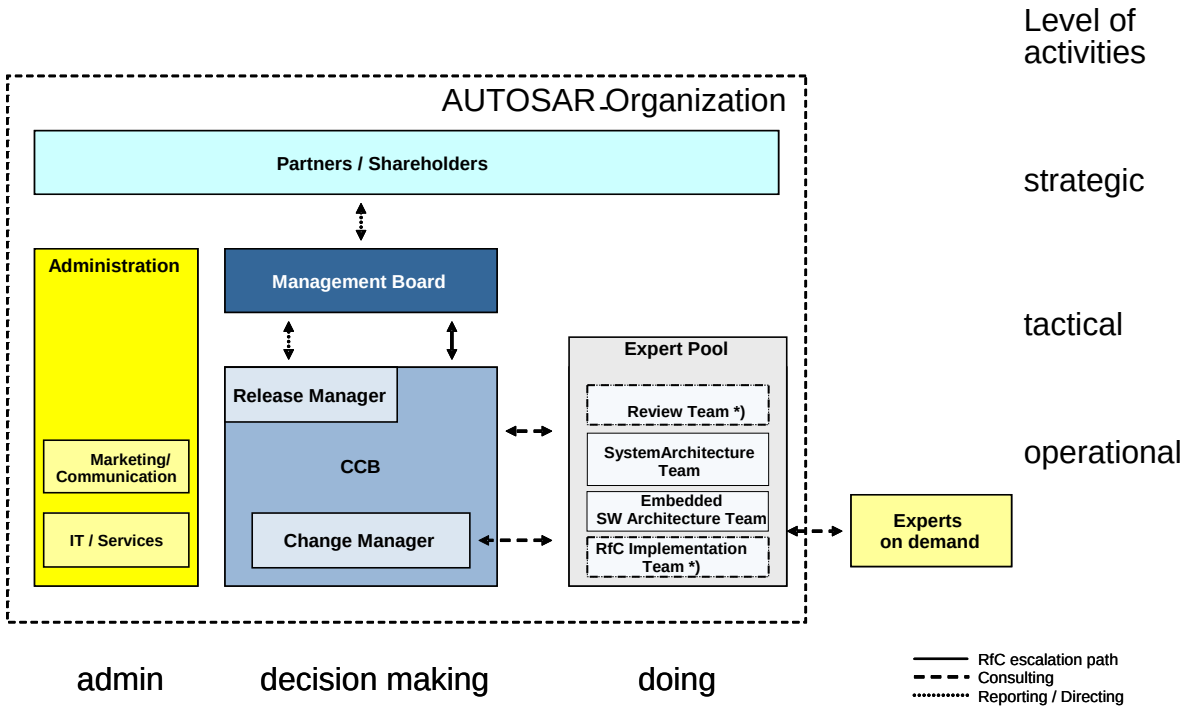

Figure 7 - Organization diagram

Note: *) temporary team

Note: The shown structure is a suggested extract of the organizational design, focusing on Change Management as the main operation. It does not show the entire organization, which can feature other operations, too.
The process can also be used in AUTOSAR Phase II if the shown roles are mapped into the project organization of that phase.

4 Change Management – Process

Guidelines have to be defined in order for the RfC to be processed efficiently. They will help the Change Manager to deal with different types of changes, by defining the difference between minor and major changes (see section 4.2). These guidelines are defined in this chapter.

A Change Management Process is required, because of the specific requirements for the handling of RfC's during the standard maintenance phase, e.g.:

- a relatively high amount of change requests is expected at the beginning.
- the required reaction time has to be short during implementation and integration phase (i.e. the process has to react to and decide on an RfC in a reasonable period of time. That does not necessarily mean that a solution has to be found or a change has to be implemented quickly – see also section 3).
- the decision making process and implementation has to make sure, that the best solution for the implementation has to be applied.

4.1 Status of an RfC

An RfC can have the following status[6]:

Status	Description
NEW	any RfC that enters the change process
OPEN	first classification (priority, impact, minor/major) by Change Manager
ACCEPTED	by appropriate decision body for detailed evaluation of impacts and effort estimation for implementation and review.
ASSIGNED	by appropriate decision body to an RfC-Implementation Team for implementation and review.
IMPLEMENTED	RfC is implemented and tested
REVIEWED	implementation of the RfC is checked, implementation is forwarded to the Release Manager for integration purposes
REJECTED	RfC's which can't pass the complete change process
CLOSED	completion of the regular closing procedure for any RfC (default final state of all RfC's)

Table 1 - Status of RfC

Refer to

Table 6 for the rights to change the status of an RfC.

[6] A renaming of the status is possible.

4.2 Classes of RfC's

Each RfC is classified using the three attributes Category, Severity and Priority (this list can be changed due to different requirements).

Category of Changing Documents:
Four different categories will be distinguished

Minor Change	Correction	Correction without technical impact such as • typing errors, • grammatical issues
Major Change	Correction	Correction with potential technical impact (Technical meaning and document structure will not be changed) such as • typing errors, • grammatical issues • ephrasing of sentences, • errors concerning names of variables or values of constants • changes in the Main Requirements Documents or • extensions and modifications in the Main Requirements Document (strategic changes).
	Modification	Any modification of an existing product that is beyond a mere correction of the text (Technical meaning will be changed or document structure will be changed) such as • additional text (for further explanation) • additional figures (for better explanation) • deprecation of features and content • deletion of text or figures
	Extension	Any add-on of a new feature to the standard. • Technical feature will be added, a chapter or section will be added. • Removal of API (following AUTOSAR_Configuration_Mgmt.doc [Reference No. 4])

Table 2 - Categories of changes

Severity of impact product and Standard:

The following three severity levels will apply

Critical	Standard can not be applied without potential critical impact on the ECU or car system (safety, reliability, stability).
Significant	May lead to problems in some special conditions.
Uncritical	No impact for the user of the standard or improvement for the standard.

Table 3 - List of severities of RfC's

Priority of action timing:

Three different priorities will be distinguished

P1	required immediately, immediate action necessary
P2	required for the next release
P3	not required for the next release

Table 4 - List of priorities for RfC's

Note:

The Change Manager, the CCB and the Management Board may change the classification of any RfC during its processing. These changes will be made based on decisions made in the decision bodies. Usually these changes may lead to a different priority or different severity (based on the expertise given by the expert pool). Refer to

Table 7 for the rights to change the classification.

4.3 Process Steps

1. Any person or group within the AUTOSAR community (e.g. users) can issue an RfC. Issuing the RfC will set it to status NEW.
2. The RfC will then be processed by the Change Manager who ensures relevancy and completeness and set it to REJECTED, if an identical RfC is already in the system, otherwise the RfC will be set to OPEN.
    a. The Change Manager selects the RfC which will be processed and informs the initiator. The duplicate will be kept in the Document Management System (e.g. Bugzilla) as reference. It will be used to update and detail the RfC's being processed.

3. All RfC's in status OPEN have to be classified into minor or major changes (according to section 4.2). Based on the result of the classification, the RfC will be either processed by the Change Manager (minor change) or be escalated to the CCB for further evaluation (major change).
4. The Change Manager / CCB will decide whether the RfC will be implemented (setting the status to ACCEPTED), rejected (setting the status to REJECTED) or escalated to the Management Board for final decision.
5. If the CCB has escalated an RfC, the Management Board will either accept the RfC (ACCEPTED) or reject it (REJECTED) and inform the CCB of the taken decision.
6. All accepted RfC's will be implemented[7] (IMPLEMENTED).
    a. If the implementation team finds it impossible to complete the process of implementation, they can set the RfC back to OPEN, in order for the RfC to be re-evaluated.
7. All IMPLEMENTED RfC's will be REVIEWED.
    a. If the review team cannot accept the implementation, they can set the RfC back to ASSIGNED, in order for the Change Manager to reassign it for re-implementation (could be a different team).
8. Once an RfC has been totally processed, implemented and reviewed the status will be set to CLOSED. (This happens in cooperation with the release manager)
9. If an RfC cannot pass the entire change process, the status will be set to REJECTED.[8]

The different process steps and the status transitions are also depicted in Figure 8.

[7] This comprises resolution of impacts to all affected AUTOSAR products.
[8] REJECTED RfC's can be reconsidered for further exploitation.

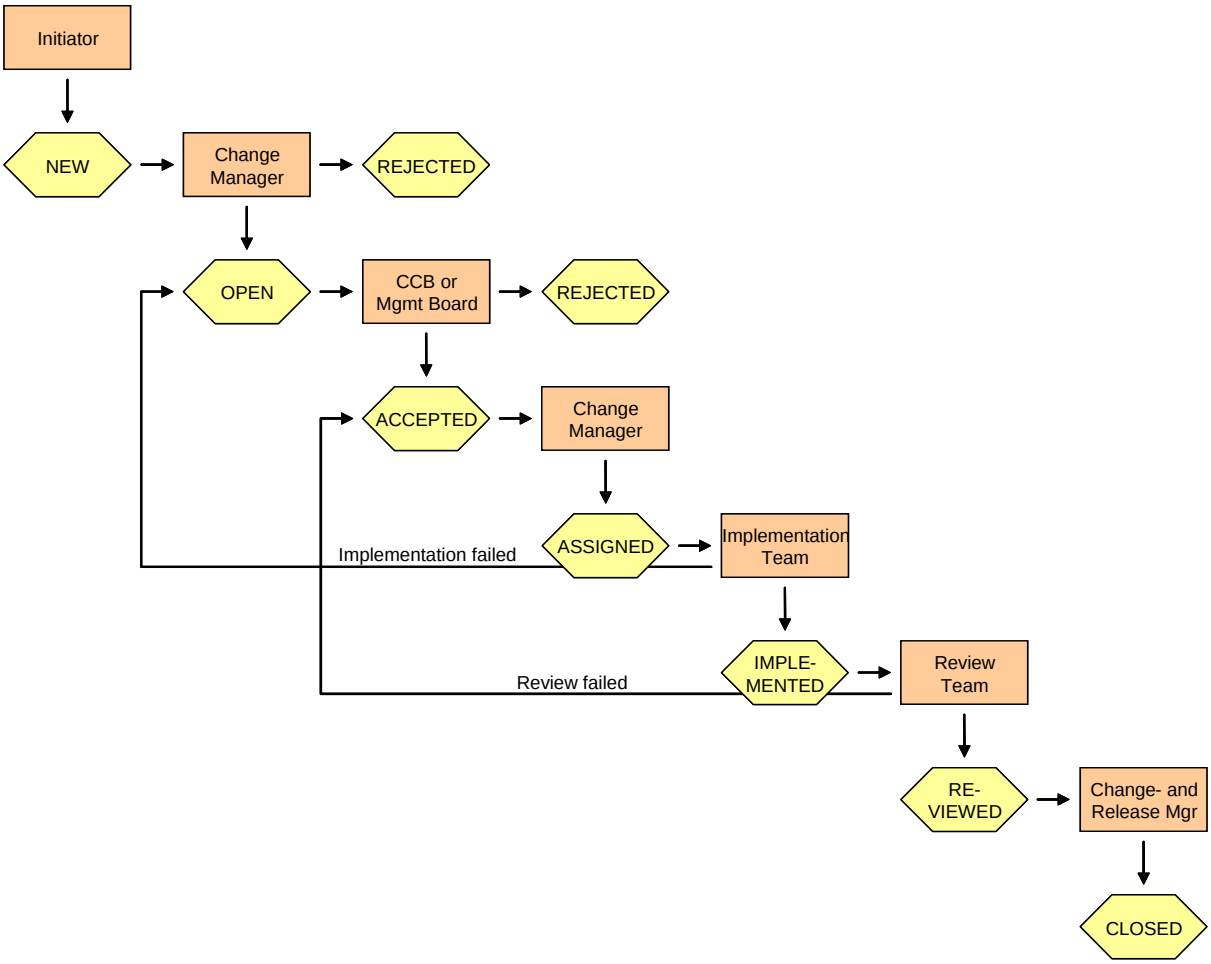

Figure 8 - Status transition

4.3.1 Issuing the RfC's

In order to have an efficient process where lack of vital information does not hinder further processing of a change request, the RfC has to reflect the information added by each role during the process. For example, the initiator shall provide sufficient information to be able to reproduce the problem, while change manager and experts can add additional information along the process about what needs to change and how it needs to change.

A form has to be developed where necessary inputs are defined:

- Identification:
  - Initiator, product, version
  - Technical information: Document ID, position in the document (page and line, tag within a meta-model, link) affected configuration, etc.
- Description of the defect or of the requested change
- Motivation of the RfC, e.g. benefit or damage if not implemented
- Impact Analysis, especially known and expected dependencies
- Suggested Solution - if possible
- Information for unique identification of each RfC (ID)

4.3.2 Classifying the RfC's

The classification will be made according to the criteria in section 4.2.

4.3.3 Deciding on the RfC's

The decision finding or escalation process is shown in Figure 9

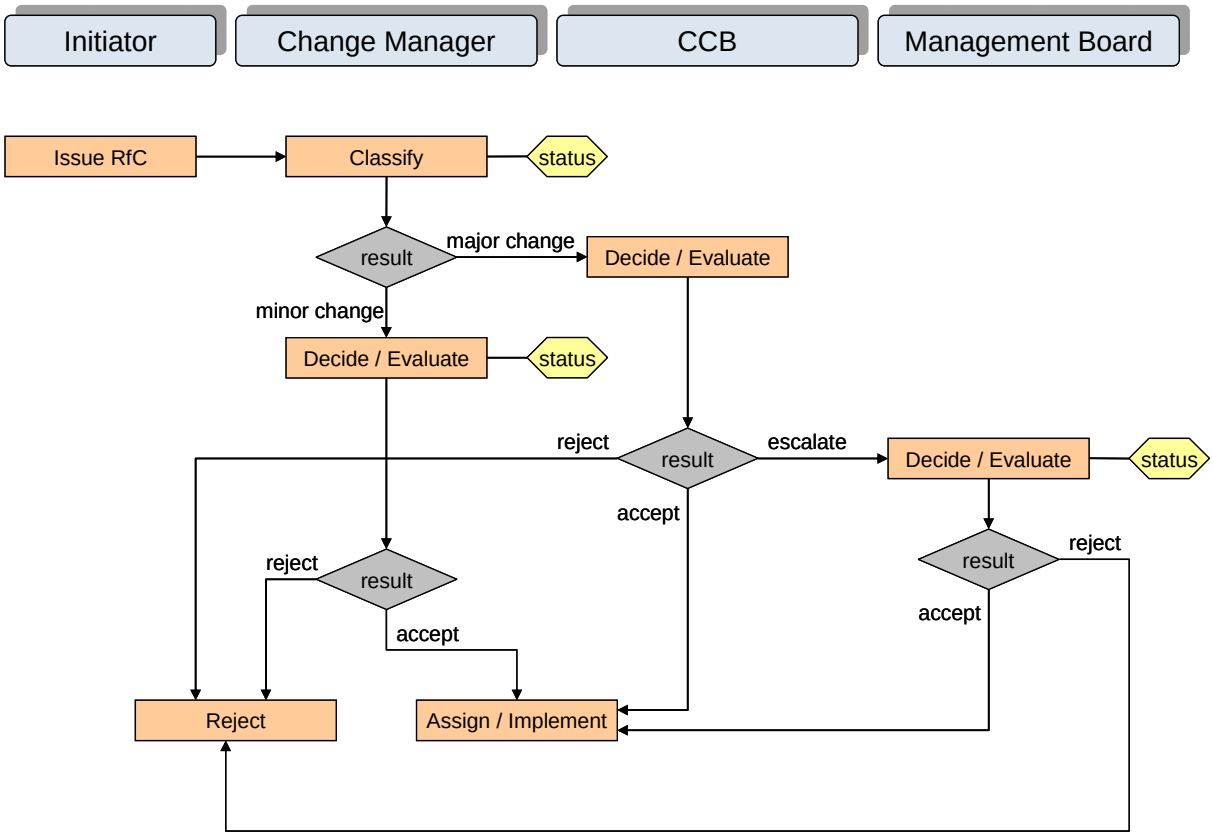

Figure 9 - Decision process

4.3.4 Implementing the RfC's and Reviewing the Changes

The implementation process is shown in Figure 10

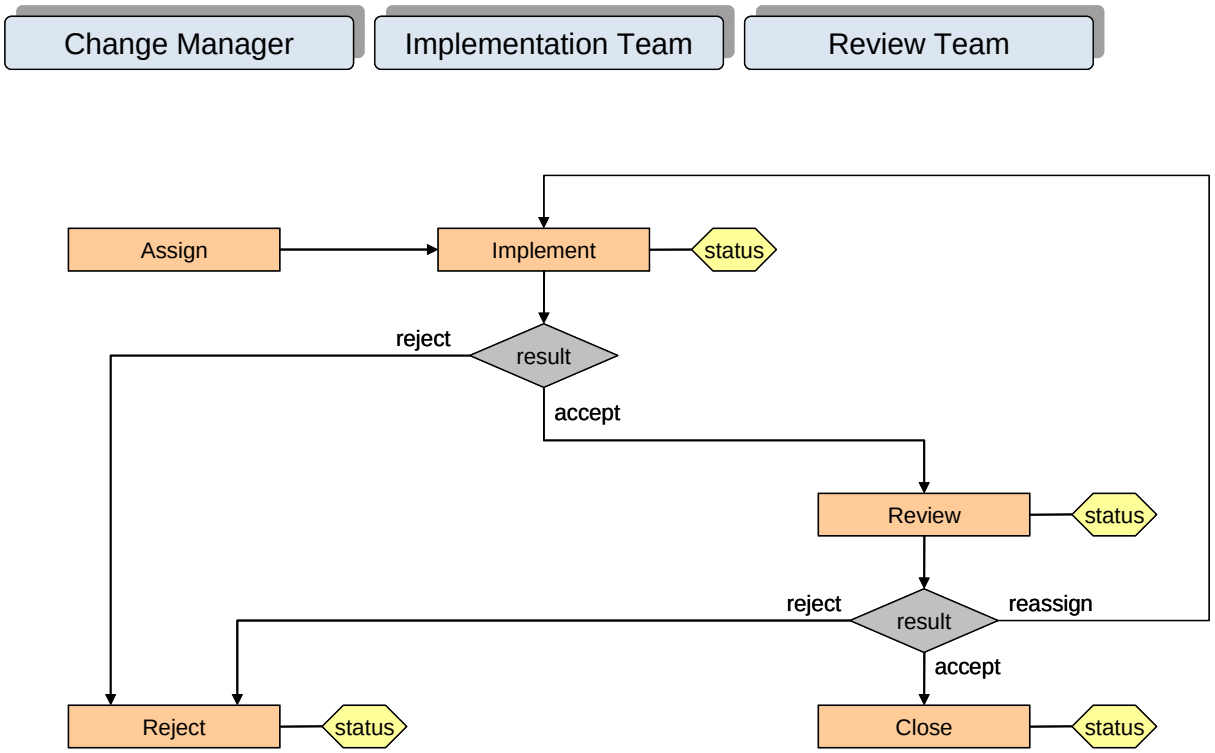

Figure 10 - Implementation process

4.4 Escalation Criteria

The escalation criteria for a decision finding in the Change Management process are shown in Table 5. It shows the mimimum level of decision body for possible actions on the document classes given.

Category of RfC Affected Documents	CORRECTION without technical impact (typos inside deliverable)	CORRECTION with technical impact (new wording)	MODIFICATION	EXTENSION
Main Requirements	Change Manager	CCB	Management Board	Management Board
Change/Release Management Definition	Change Manager	CCB	Management Board	Management Board
Req. Specification API (SRS)	Change Manager	CCB	CCB	CCB
Software Specification incl. UML Models (SWS)	Change Manager	CCB	CCB	CCB
Word/Powerpoint Template	Change Manager	CCB	CCB	CCB

Table 5 - Escalation criteria for decision finding

Examples:

- If a Powerpoint template needs to be modified, the CCB needs to decide on this.
- If a typo in the Main Requirements document needs to be corrected, the Change Manager can decide on this by himself.

Note:

If, at any level, a decision cannot be reached or a major risk is considered, the RfC should be escalated to the next decision body. The next escalation step should only be entered after a thorough consideration of all circumstances (no quick to hand on).

4.5 Reaction Times

The RfC's have to be processed within a limited delay (typical: 3 months). Moreover, this depends on the classification of the RfC: less critical RfC's can be processed within this delay, while more critical RfC's may have to be processed within a shorter time (reaching from hours to weeks).
"Processing within a limited delay" does not mean that the RfC is CLOSED within this delay, but that all necessary actions have been engaged as well as related schedule is approved and available for processing bodies and initiator.

4.6 Standard Consistency

4.6.1 Change Management and Release Management

The outcome of the change management process and the impacts of the decisions on implementation of RfC's are independent of the release management. However, the implementation of the RfC's has to be coordinated with the release management process.

To ensure this, the Change Manager and the Release Manager have to work closely together and set up a joint policy.

For the policies on meetings and release planning refer to section 5.2 (meetings) and (release planning).

Changes and releases have to be managed in order to ensure the consistency of the standard. For further information refer to Chapter 2.1 in the Release Management Process definition (1.2).

4.6.2 Release Policy

The Change Management Process has to satisfy the conflicting interests of having a stable standard on the one hand and the AUTOSAR members' interests in new features on the other hand (e.g. OEMs may need new features for their programs).
For detailed information on the Release Policy refer to the Release Management Process definition [1].

4.6.2.1 Deadlines

For sake of a consistent release management, deadlines for change requests for upcoming releases shall be defined. Change requests that are raised before the deadlines are reached will be taken into account. Requests that are raised after the deadline will be postponed to the next release.[9] The concrete deadlines have to be decided on by the AUTOSAR organization.

4.6.2.2 Release Frequency

The release frequency shall be defined by the AUTOSAR organization according to the requirements of both a stable standard and the needs for changes. Refer to the ([1]) for further information on the release frequency.

4.7 Major Development

Major developments, like anything else, will be entered into the change management as RfC's. The internal processing of an RfC is transparent to external (initiators).

A change may be implemented simply by changing some wording or by installing a (micro-)project.

4.7.1 Handling of Deviations

Outside the AUTOSAR development process, the need for proprietary deviations from a standard release may occur.

If there is good reason to integrate these deviations into the AUTOSAR standard, AUTOSAR will handle these deviations by introducing RfC's to the Change Management Process.

For more information refer to the [1].

[9] This is in accordance with the Release Management Process

5 Communication Policy

In order to ensure that all users of AUTOSAR have access to all necessary information regarding planning of changes and releases of the standard, a defined communication policy must be defined. The information shall cover pending change requests, dates for change windows and planned dates for coming standard releases.

5.1 Communication

Communication will be implemented in two ways: one will deal with the information concerning an RfC, the other will be more general and will address all AUTOSAR members.

5.1.1 Communication Concerning RfC's

Communication concerning RfC's will include automatic e-mail notification (e.g. via Bugzilla) regarding any change of the status of an RfC as well as global status reports.

In case an RfC is rejected but will be considered to be implemented in a different way the Initiator will be informed.

Furthermore, the communication mechanisms will

- support a flexible and fast consensus finding
- secure a valid and controlled decision procedure
- minimize the effort for meetings
- secure the proceeding of necessary information to anybody concerned
- provide process tracking information

Examples

Figure 11 gives an example on how RfC-based communication may work.

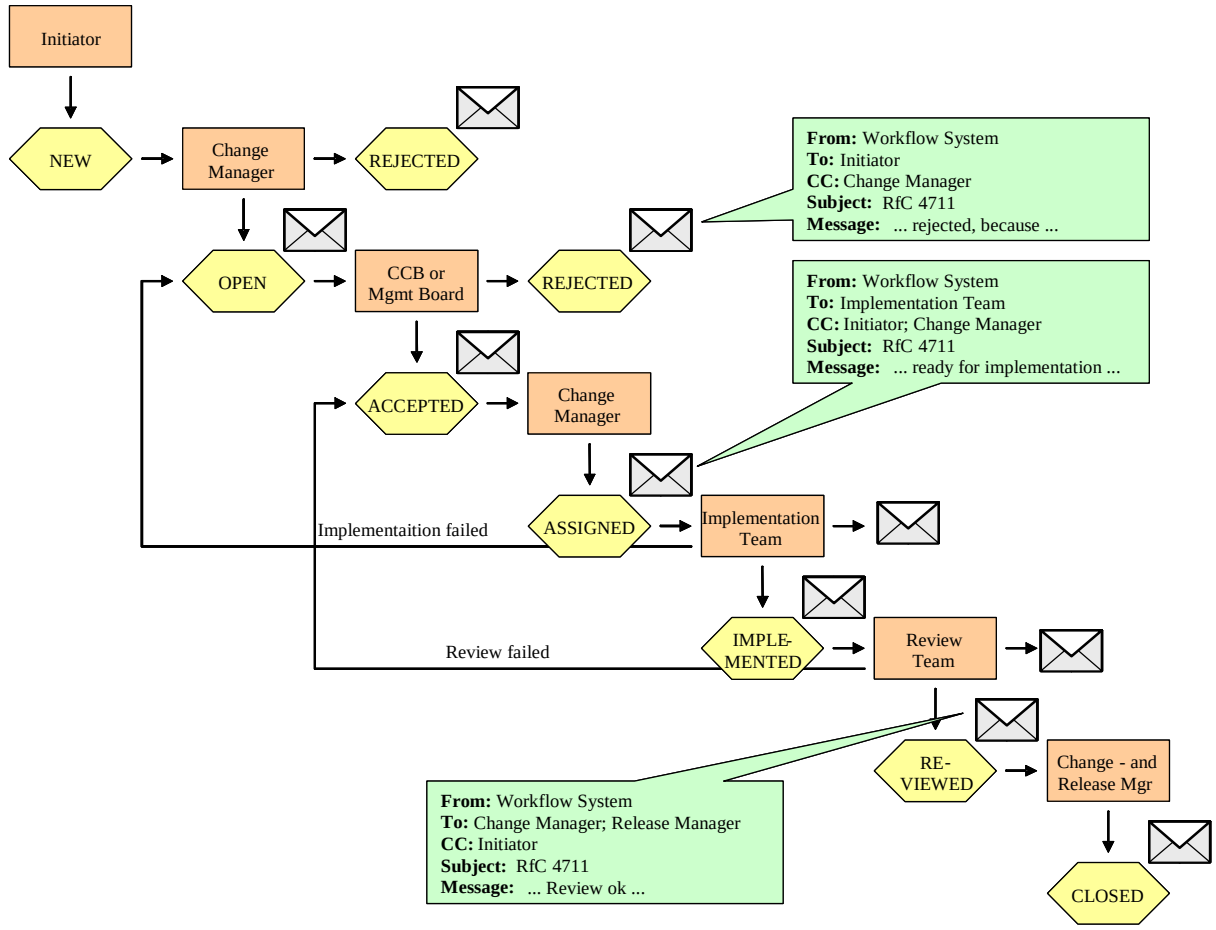

Figure 11 - Communication based on RfC

Figure 11 describes the communication for CCB meetings

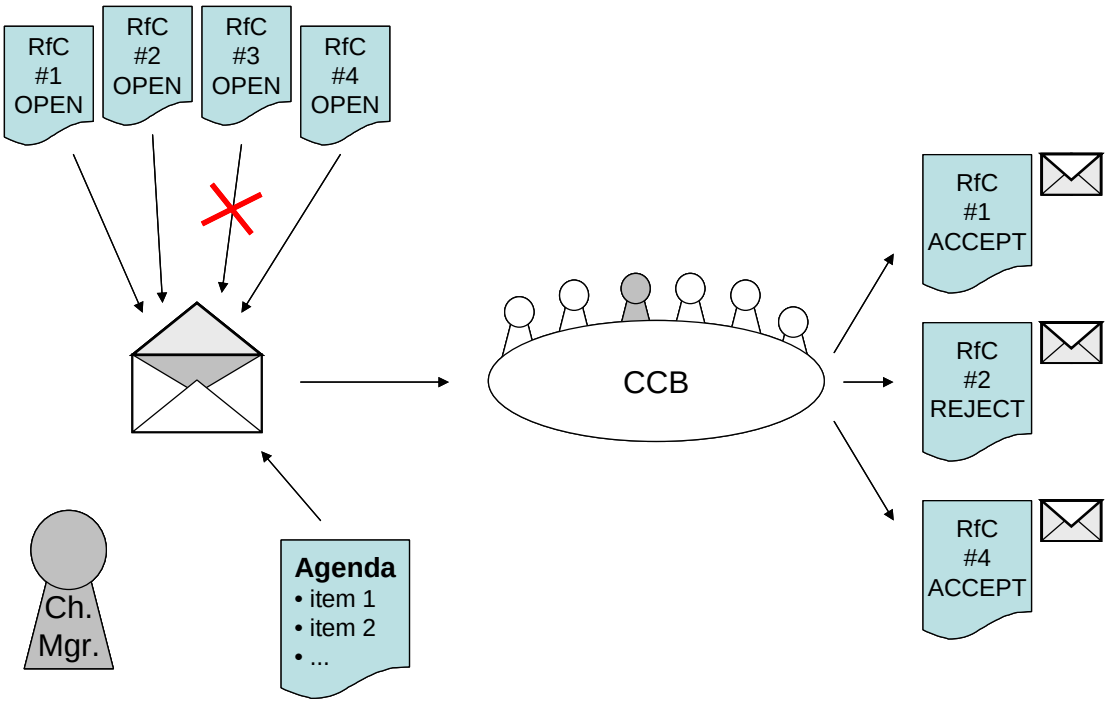

Figure 12 - Communication for CCB-meeting

5.1.2 Communication on General Topics

General communication to AUTOSAR members will include information on

- release planning
- new features
- new technologies
- orientation
- political/strategic decisions
- major bugs
- patches
- etc.

The communication mechanisms are defined in detail in [1].

5.2 Meetings

Each decision body will hold regular acceptance meetings where all OPEN RfC's concerning the decision level are examined. The following results are possible for each RfC:

1. The RfC is within the authority of the decision body

    a. The RfC is **rejected** and the initiator is informed either automatically (tool based) or manually by the Change Manager.

    b. The RfC is **accepted** and an RfC Experts Team is nominated for further investigation.

2. The RfC is outside the authority of the decision body

    The RfC is **escalated** to the next higher decision body together with a proposal regarding the acceptance or rejection and possible members of the RfC-Expert Pool.

The regular meeting schedule for CCB shall be set at a fixed period. There shall be a last deadline for RfC's to be issued before a CCB meeting in order to be handled at the meeting. The RfC has to be processed within a certain period of time. This depends on the classification of the RfC. Uncritical RfC can be processed within this time.
Critical RfC's, depending on their criticality and complexity may require additional meetings.

Note:
The number of CCB meetings does not necessarily dependent on the release frequency. See also section 4.5 Reaction Times.

Appendix A Requirements traceability

Requirement ID	*Description*	*Section(s)*
[SMR0010]	Maintenance is assumed when the standard is publicly released	2.1
[SMR0020]	The maintenance processes shall be lean	3
[SMR0030]	A guideline on how to process major changes and minor changes shall be defined	4
[SMR0040]	Maintenance process shall be tailored to support standard consistency	4.6
[SMR0050]	A list of which AUTOSAR modules are subject to maintenance shall be compiled.	2.4.1
[SMR0070]	Categorization of changes	4.6.2
[SMR0080]	Formalization of change requests	4.3.1
[SMR0090]	Deadlines for change requests to be considered for the next release shall be defined	4.6.2
[SMR0100]	Need for experts over time	3.1.5
[SMR0110]	CCB Access to experts	3.1.5
[SMR0130]	A communication policy shall be defined	5
[SMR0140]	Minimum release period shall be defined	4.6.2
[SMR0160]	Meeting schedule for CCB shall be set	5.2
[SMR0170]	Only AUTOSAR members can directly raise change requests	3.1.1
[SMR0180]	Mandates for different decision bodies	3.1
[SMR0190]	The maintenance processes shall be supported by a tailored tool environment	2.4.3.2
[SMR0200]	The processes for Change management and Release management shall be decoupled	4.6.1
[SMR0230]	General change policy needed.	All

Appendix B Rights to change certain attributes of an RfC

B.1 Changes to status

Status / ***Role***	NEW	OPEN	ACCEPTED	ASSIGNED	IMPLEMENTED	REVIEWED	CLOSED	REJECTED
Initiator	(X)							
Change Manager		X	X	X	X	X	X	X
CCB			X					X
Management Board			X					X
Implementation Team					X			X
Review Team				X		X		X
Release Manager							X	

Table 6 - Rights to change the status

B.2 Changes to classification

Role	***Rights to change***
Initiator	May propose but not change the classification
Change Manager	May change at all times
CCB	May change during assessment
Management Board	May change during assessment
Implementation Team	May request through Change manager
Review Team	Not applicable
Release Manager	May change the priority according to the release planning.

Table 7 - Rights to change the classification

Appendix C Tools [informative]

C.1 Sample List of Possible Configuration Management Tools

Possible Tools are:

- Rational ClearCase for Lifecycle Management, Build and Release Management, Version Management,
- Microsoft Visual Source Safe for Version Control and archiving,
- CVS,
- Documentum,
- Hyperwave,
- Subversion,
- eASEE-CM,
- MKS Source Integrity.
- Requirement Mgmt. Tool

C.2 Sample List of Change Management Tools

Possible Tools are:

- Bugzilla,
- IBM Rational ClearQuest.

C.3 Sample RfC form

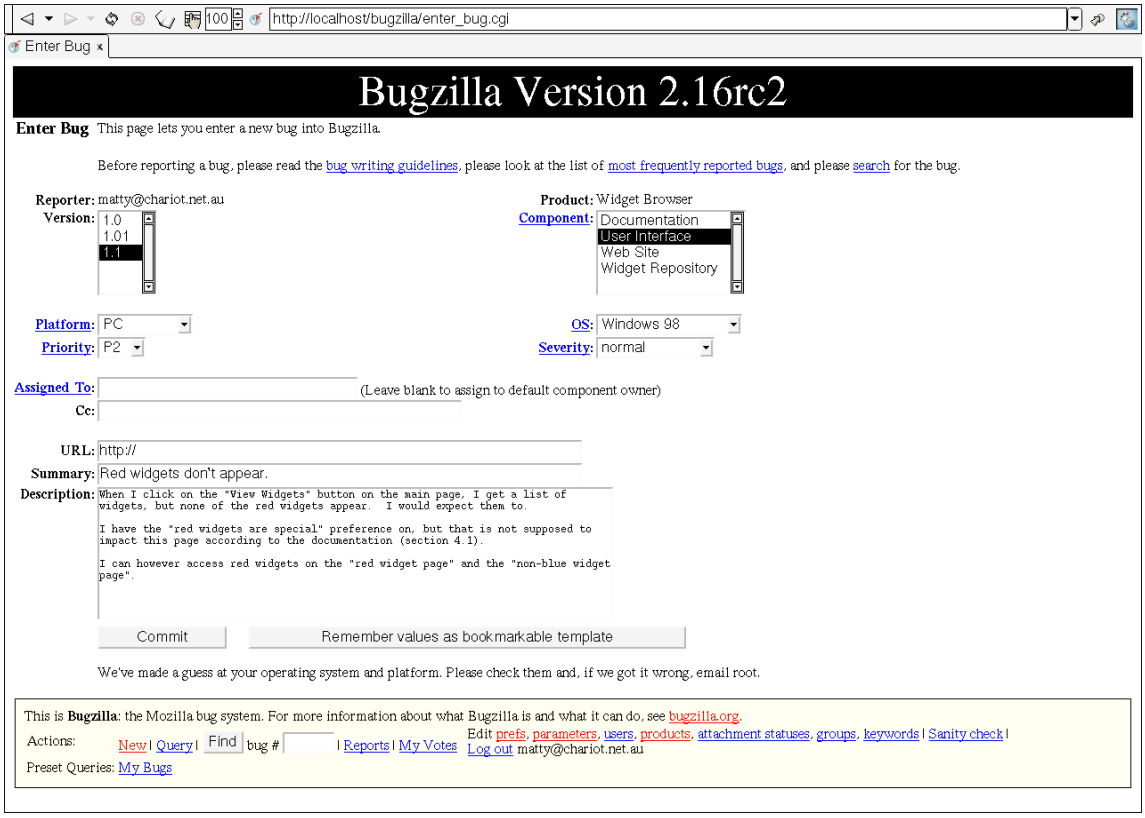

Figure 13 - Sample Bugzilla form

Appendix D Availability of Roles [informative]

The following table gives an overview of the expected typical response times and the expected work load of the roles within the AUTOSAR organization.

Role	***Typical Response Time***	***Expected Effort[10]***
Change Manager	One day to one week	100 %
CCB	One week to one month	100 %
Management Board	One month to one quarter	20 %
RfC Expert Pool	--	100 %
RfC Implementation Team	--	100 %
RfC Review Team	--	50 %

Table 8 - Availability of roles in the change management process

Note:
The table is subject to change.

Appendix E Glossary

CCB	Change Control Board
RfC	Request for Change

[10] in percentage of a full time equivalent – i.e. 100% means one person full time