stdSEM® Initiation Phase (Overview)

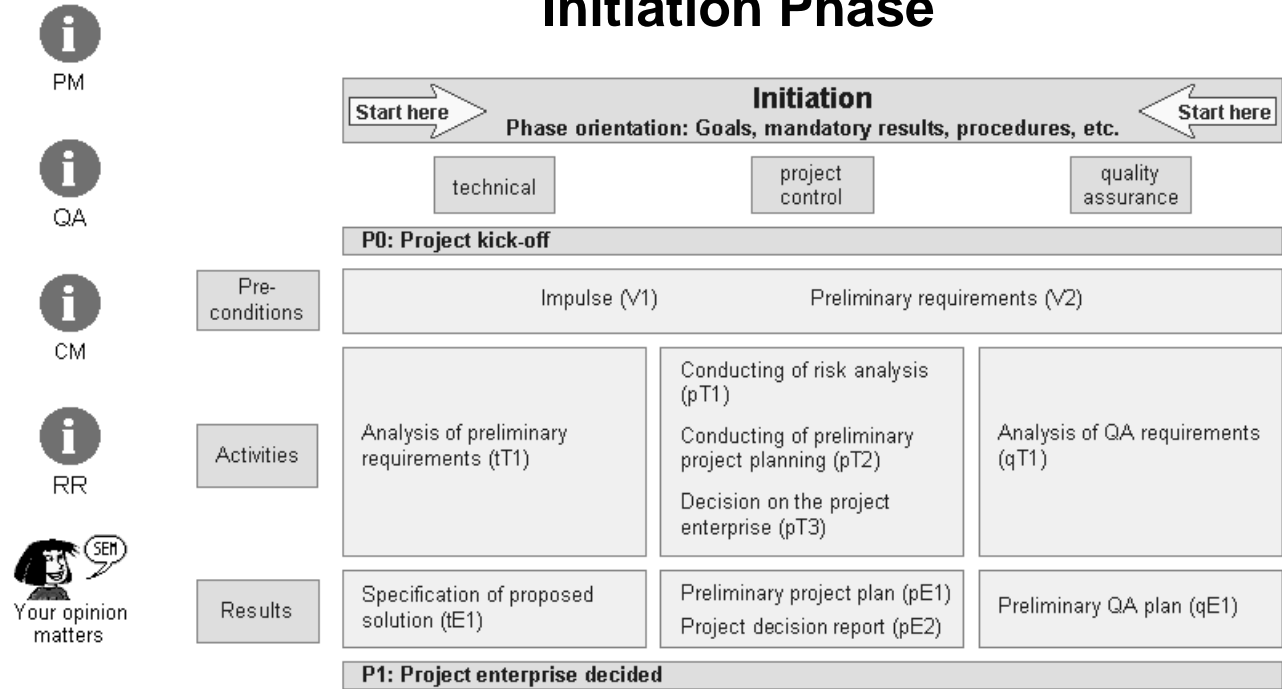## Date: 16. 7. 1998

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Initiation Phase

PM

QA

CM

RR

Your opinion matters

Start here ▶ **Initiation** ◀ Start here
Phase orientation: Goals, mandatory results, procedures, etc.

technical	project control	quality assurance

P0: Project kick-off

Pre-conditions	Impulse (V1) Preliminary requirements (V2)		

Activities	Analysis of preliminary requirements (tT1)	Conducting of risk analysis (pT1) Conducting of preliminary project planning (pT2) Decision on the project enterprise (pT3)	Analysis of QA requirements (qT1)
Results	Specification of proposed solution (tE1)	Preliminary project plan (pE1) Project decision report (pE2)	Preliminary QA plan (qE1)

P1: Project enterprise decided

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Initiation Phase Goals

The major goal of the Initiation phase is to reach a decision on whether the project is to be conducted or not - are we to execute the enterprise or not ("go - no go decision")?

To arrive at a reasoned answer to this question, the activities and results in this phase have been structured to *minimize the project risk.* This is intended to prevent "sliding" into a project.

Two alternatives are possible in the case of a **positive decision**:

- The enterprise is conducted in the form of a *project* (based on the SEM development method or other development method).
- The enterprise is conducted, but *not* in the form of a *project* (e.g. one-off lectures, hourly consulting without preparation, sporadic consulting, troubleshooting on request, etc.). In such scenarios, the project should be terminated immediately after the project decision (the report required for termination can then consist of only a few lines in the project decision report).

In the case of a **negative decision**, the Termination phase is initiated immediately.

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How Do I Reach the Goals of the Initiation Phase?

All activities and results which SEM requires in the Initiation phase are geared to the decision on whether or not to conduct the project.

The **total effort for the activities of the Initiation phase** depends greatly on the particular enterprise:

- In the case of small projects with familiar technology, where version changes are performed with familiar subject areas and personnel have adequate training, the effort can amount to merely a few hours or days (with greatly reduced level of documentation).

- Since the Initiation phase is geared towards **minimizing risk**, considerable effort may be required in order to provide an adequate base for reaching a project decision. This is particularly true for:
    - Larger projects
    - New tasks
    - Fixed-price orders
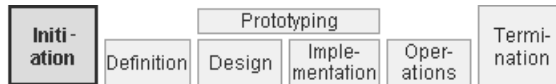   - Projects involving less unfamiliar technology

The key results are the ***specification of proposed solution, preliminary project plan*** and ***preliminary QA plan.*** All analyses relating to this project are included in these results. They therefore provide the basis for deciding whether and how the project can be conducted.

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What Results are Available at the End of the Initiation Phase?

The following degrees of obligation apply for the results available at the end of the Initiation phase:

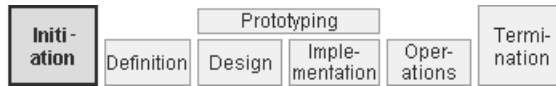|	
must	**Specification of Proposed Solution** **Preliminary Project Plan** **Preliminary QA Plan** **Project Decision Report**

Note: In smaller projects, several of these documents may be combined into a single document, though the contents must be structured to allow easy identification.

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To overview of the phase

Milestones of the Initiation Phase

P0: Project kick-off
This milestone is reached if preliminary requirements exist and if the decision has been made to use these requirements. This decision does not yet involve executing a tender (this will not take place until the Definition phase) but merely initiating the project.

Milestone P0 thus marks the start of the project. However, it is also possible to label the activities of the Initiation phase as being preliminary in nature and not to begin the project until P1 (the decision as to whether the enterprise will become a project will not be decided until this point).

P1: Project enterprise decided
This milestone is reached if all mandatory results of the phase are in place. The mandatory results are:

- Specification of proposed solution
- Preliminary project plan
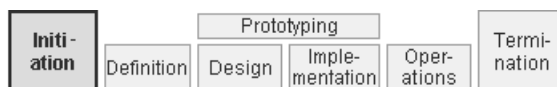- Preliminary QA plan
- Project decision report

If the project decision report is positive, the project data should be entered in the PSE project control tool PROCON no later than this stage (together with the key data of the project, milestones, provisional effort and deadlines).

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Initiation: Important CM Themes

To overview
of the phase

No specific activities relating to configuration management have been envisaged for the Initiation phase.

Initial considerations relating to CM can naturally be examined as part of the preliminary project planning work (e.g. including the reuse of CM systems and tools used earlier, cooperation with other projects as regards the CM system, use of the client's CM system etc.).
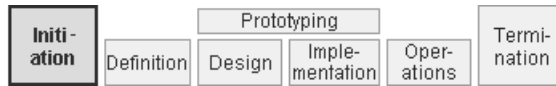
A description of the configuration management throughout the course of the project can be found in the phase-neutral themes.

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Initiation: Important Themes of Project Management

To overview of the phase

Project planning plays a significant role in project initiation. It is after all necessary to plan the approximate scope of the project (personnel effort and costs), the time framework and deployment of personnel, and to identify and assess possible project risks at the earliest possible stage.

The creation of a preliminary project plan and the conducting of a risk analysis are therefore extremely important even at this early stage.

A full description of the project planning work throughout the course of the project can be found in the phase-neutral themes.

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Initiation: Important QA Themes

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of the phase
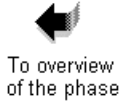
Quality assurance plays an important role as early as the project initiation phase. It covers such aspects as analyses of the quality and quality assurance requirements and the identification of associated problems and risks for the project.

A preliminary QA plan must therefore be drawn up.

A full description of quality assurance throughout the course of the project can be found in the phase-neutral themes.

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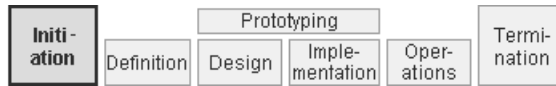Initi-ation | Definition | Prototyping / Design | Imple-mentation | Oper-ations | Termi-nation

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Initiation: Important RR Themes

To overview of the phase

The Initiation phase does not yet contain any mandatory activities regarding reuse and reusability.

Initial considerations relating to RR can naturally be made as early as the preliminary project planning stage (e.g. reuse of methods, tools, know-how and program sections from earlier projects or bought-in software). These considerations should be documented in the preliminary project plan.

One particularly practical aspect of the Initiation phase is also highly important - namely that the **reuse of know-how** is critical for the **risk analysis**. It is only really possible to assess risks if you know them inside out!

A description of reuse and reusability throughout the course of the project can be found in the phase-neutral themes.

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Specification of Proposed Solution (tE1)

Purpose
Technical support for the project decision. This essentially involves a description of the solution and information as to its feasibility.

Content
Firstly, the preliminary requirements must be documented (defined starting point for further considerations). These must then serve as the basis for outlining in broad terms the proposed solution (product) and the possible solution path.

The specification of proposed solution must be **checked**.

Notes
The statements in the specification of proposed solution are geared primarily to devising a solution within the framework of a **project**. If the solution consists solely of the provision of personnel, for example, a brief **analogous** description should be given of how the personnel are to be deployed (deployment conditions as solution path). If the only decision to be made is whether a subsequent tender is to be drawn up, certain parts may not be required.
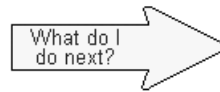
Activities leading to this result:	
● tT1 Analysis of preliminary requirements	Have I already done that?
Follow-up activities (in this phase):	
● pT3 Decision on the project enterprise	What do I do next?

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Checklist for Specification of Proposed Solution (tE1)

1 Introduction

1.1 Purpose of the document
The specification of the proposed solution serves as a technical basis for the project decision report on execution / non-execution of the project and on the type of execution to be performed, which is described in the preliminary project plan and preliminary QA plan.

Formulation proposal:
The purpose of the proposed solution specification is to check the technical feasibility and to identify a possible solution path for the planned project enterprise described below.

1.2 Validity of the document
The proposed solution specification is of only limited scope since, in the Initiation phase, it serves as a basis for making decisions on execution / non-execution of the set task as a project. The content of this document - if the project decision report is positive - will then be incorporated into the documents of the Definition phase (as a tender of software requirements specification).

This section must also specify the constraints (in addition to the primary requirements) on which the proposed solution specification is based (e.g. development at one / more sites, use of existing HW / SW licenses, etc.), if this affects the proposed solution specification or the solution path.

1.3 Definitions of terms and abbreviations
If necessary, the terms used in the document are to be defined in this section. In particular, important technical terms should be specified.
An alphabetical order is recommendable for the terms and abbreviations.

1.4 Relationship with other documents
How does this document relate to other documents (of the project, solutions of a previous project, etc.)? Does the proposed solution path have any constraints for project control and quality assurance?

2 Purpose, goal and application of the solution

This section must clearly identify the task which is to be resolved, what this is intended to achieve and how the solution is to be used.

3 Primary requirements

This section must specify the existing primary requirements. If the primary requirements which have led to the Initiation phase being triggered are available in written form, it is sufficient merely to refer to these (they would be best enclosed in an annex to the proposed solution specification).

4 Proposed solution

The "solution" describes *'what'*: What product is to be created, what is the product to look like and what is it to do? These questions are best covered by means of a rough description of the deliverables, i.e. all components in the product which is to be supplied.

Example Checklist

Example Checklist

Example Checklist

Example Checklist

5 Proposed solution path

The "solution path" describes *"**how**"*: How can we arrive at this solution? This section therefore deals with initial considerations relating to technical implementation and outlines the solution path (use of tools, use of standard software or COTS (commercial off-the-shelf software), possible reuse of components already developed).

Particularly important in this context is a preliminary decision as to whether the solution can be implemented either in full or to a large extent using existing products or whether new developments will be needed for the most part.

If the user already has a rough idea (or specifications) for the design of the system, these considerations should be stated in this section (e.g. client / server architecture, use of specific database system, etc.).

6 Possible solution alternatives

Where they are significant, possible solution alternatives must be outlined, together with their relevant advantages and disadvantages (this is particularly true for new tasks where the specifications have little detail).

Alternative solutions can relate to both the **solution itself** (which product features are to be developed, what form is the product interface to take, input / output media, etc.) as well as different **solution paths** (e.g. different HW / SW platforms, advantages and disadvantages of using specific development environments, discussion on adaptation and use of COTS (commercial off-the-shelf software) compared to complete own development, etc.).

7 Literature

This section must set out all documents cited in the proposed solution specification together with the documents which the proposed solution specification is based on (such as technical specifications, product sheets, experience reports, tenders for outsourced goods, etc.).

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Preliminary Project Plan (pE1)

Contents

Purpose
The preliminary project plan provides a basis for deciding on the execution of the project from a project control perspective. It must therefore be sufficiently detailed to be able to answer the following vital questions with the greatest degree of certainty: "Can we do the job at all - and, if so, with what effort and by when?"

Document checklist

Content
The preliminary project plan must contain the key technical data for the planned project from the perspective of the initial analyses (project goal, effort and deadline frameworks, personnel requirements framework, project organization, etc.). One aspect which is particularly important at this point in time is a risk analysis, the results of which need to be incorporated in the preliminary project plan.

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The preliminary project plan must be *checked*.

Notes
With each planned project enterprise, a documented preliminary project plan must exist at the time the project decision is made. It is not essential, however, to create a separate document in each case. The preliminary project plan can be combined, where necessary, with the specification of proposed solution and the preliminary QA plan (e.g. in the case of small-scale projects, provision of personnel, or sequences of very similar projects). The most important aspect is that the specified goal be achieved (sufficient degree of certainty for project decision).

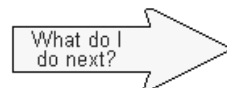| **Activities leading to this result:** ● pT1 Conducting of risk analysis ● pT2 Conducting of preliminary project planning	Have I already done that?
Follow-up activities (in this phase): ● pT3 Decision on the project enterprise	What do I do next?

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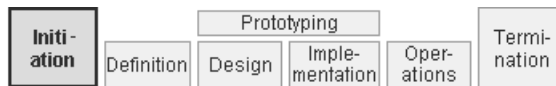
Checklist for Preliminary Project Plan (pE1)

1 Introduction

1.1 Purpose of the document
The purpose of this project plan is to convey a general overview of the course of the planned project <xyz>.

1.2 Validity of the document
This section must specify the solution and solution path (as reference only!) which the preliminary project planning relates to.
Predetermined internal and external constraints (in addition to the client's requirements) for the planning (both technical and organizational) can also be stated in this section.
Does this planning only apply for a project start within a specific period of time (e.g. availability of personnel, HW, prices of procured goods, etc.)?

Checklist

Example

1.3 Definitions of terms and abbreviations
This section is used to define the terms used in the document (e.g. important abbreviations and organizational terms used by the client).
Alphabetical order is recommended for listing the terms and abbreviations.

1.4 Relationship with other documents
How is this document related to other documents both within and outside the project (documents from earlier projects, other requirements documents, planning documents, feasibility studies, etc.)?
To which proposed solution (document) does the preliminary project plan relate? Do any minor deviations exist to the solution path which this describes?

2 Project goal

Checklist

Example

This section must state what the project is to generate by way of a result or what is to be delivered by way of the project result (short profile of the product). For details, reference should be made to the specification of the proposed solution and to the solution it describes.

3 Project organization

3.1 Client
This section must specify the envisaged client (possibly also contact persons).

3.2 Project manager
This section must name the designated project manager (with overall responsibility).

Checklist

Example

3.3 QA manager
This section must name the person who has assumed responsibility for quality assurance in the project (during the Initiation phase).

3.4 Project organization
This section must describe how, in principle, the project is to be organized. It is particularly important, especially with complex forms of cooperation (e.g. business associates, departments, external firms, etc., involved in the project), that the project organization and, consequently, the associated responsibilities are defined as early and unambiguously as possible.

4 Framework for effort

This section must specify the approximate effort for the solution envisaged in the specification for the proposed solution. The total effort must be sufficiently detailed with reference to the proposed solution.

5 Personnel requirements framework

5.1 Qualification
This section must specify the qualifications which the personnel must have (e.g. in the form of a knowledge matrix).

5.2 Histogram of manpower
This section must describe how the manpower is to be distributed over the entire project.

6 Framework for deadlines

6.1 Start of project
This section must state when the project could start.

6.2 Duration of project
This section must state the expected duration of the project.

6.3 Completion / delivery dates
This section must specify the completion and delivery dates which are possible from the perspective of the initial preliminary analysis.

7 Constraints

7.1 Project type
This section must specify the project type based on PROCON (development project, maintenance project, consultancy project, etc.).

7.2 Processing
This section must specify how the project is to be processed and in accordance with which agreements:

- On the basis of effort or fixed price
- Continuous project execution or on the basis of hours "on demand" at fixed hourly rates
- Is a phased development process desired?
- Will the project be conducted with business associates?
- Will PSE International be involved?

8 Risks

All risks which are already known must be specified in this section. This section must state the problematical requirements (see listing below) which give rise to these risks.

The risks will essentially be internal, though external risks must also be taken into account.

It is also necessary to state the effects which these risks can have on the course of the project, how likely they are to occur and what measures can be taken to limit their occurrence.

8.1 Technical risks

- Can the task be resolved through a technical solution (e.g. can performance values be satisfied)?
- Have the interfaces been adequately defined?
- Do the necessary development environments (HW and SW) already exist?
- Etc.

8.2 Quality risks

Example

Checklist

- Have the acceptance criteria been adequately defined?
- Can the product be adequately tested? Are there any technical, organizational or deadline risks involved in conducting the test?
- Can the required norms, standards, etc. be complied with?
- Etc.

8.3 Project execution risks

- Are sufficient numbers of personnel available at the correct time?
- Is there sufficient experience (technical, organizational or domain-related) to execute this project within the agreed framework?
- Are coordination problems to be expected (e.g. when carrying out development work at several sites, with subcontractors, etc.)?
- Etc.

8.4 External risks

- Currency fluctuations, customs duties, taxes
- Market situation (competition) difficult to appraise
- Aspects of the customer's environment unknown (e.g. language)
- What risk is involved in the deadlines and quality of deliveries from the client, subcontractors, suppliers, etc.
- Etc.

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Project Decision Report (pE2)

Purpose
Documenting the decision on implementing the project enterprise.

Content
The decision as to whether to implement the project enterprise must be given in writing and must be sufficiently well reasoned. It is based in general on the other phase results.

Notes
If it is decided not to proceed with the project enterprise, the project should be terminated immediately after the decision has been reached (the report required for the termination can consist of only a few lines in the project decision report).

Activities leading to this result: ● pT3 Decision on the project enterprise	Have I already done that?
Follow-up activities (in this phase): ● (None)	What do I do next?

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Checklist for Project Decision Report (pE2)

Enterprise designation

<enterprise>

Date of decision meeting

<date>

Participants at decision meeting

Name:	Function:	Department:	Location:

Documents available

Specification of proposed solution	available *or* not available
Preliminary QA plan	available *or* not available
Preliminary project plan	available *or* not available

Result of the decision meeting

The enterprise will be executed as a project.
or
The enterprise will be executed, but not as a project.
or
The enterprise will not be executed.

Reasons

The precise reasons for the project decision must be specified at this point, including from the perspective of risk.

Signatures

      Technical Manager: **Commercial Manager:**

    _____   _____

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Preliminary QA Plan (qE1)

Purpose
Support of the project decision from the QA perspective - the most important factor is not to forget any major QA requirements which may involve substantial effort.

Content
The preliminary QA plan must contain all known quality requirements and quality assurance requirements on the part of the client and must state which procedural model is to be used for the project. The resulting consequences must be listed (QA measures required).

The preliminary QA plan must be *checked*.

Notes
Most of the information in the preliminary QA plan will be transferred to the project QA plan when the project is conducted.

The results of the risk analysis (pT1) could well be accommodated in a preliminary QA plan in terms of their content, but should be documented in the preliminary project plan (pE1) in stdSEM in order to emphasize their importance for all areas of project management.

Activities leading to this result:	Have I already done that?
● qT1 Analysis of QA requirements	
Follow-up activities (in the phase):	What do I do next?
● pT3 Decision on the project enterprise	

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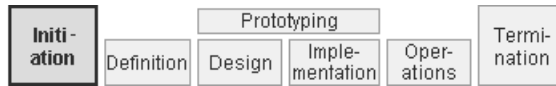
Checklist for Preliminary QA Plan (qE1)

1 Introduction

1.1 Purpose of the document
The preliminary QA plan summarizes all the known Q requirements and QA requirements of the client, defines the process model which is to be used for the project which is to be initiated, and uses this information to derive all necessary QA measures (documents to be drawn up, type and scope of reviews, tests, etc.) which need to be planned in greater detail. This will provide a basis for a preliminary estimation of the effort involved.

Formulation proposal:
The purpose of this preliminary QA plan is to summarize the Q and QA requirements specified for project <xyz> and to define the process model which is to be applied to the project. The QA measures which the plan shows to be necessary are outlined below.

1.2 Validity of the document
The document is essentially limited in scope to the initiation phase, with the QA information known up until that point, and is used in conjunction with the proposed solution and preliminary project plan as a basis for the project decision report.

1.3 Definitions of terms and abbreviations
Where necessary, this section must be used to define all important terms and abbreviations occurring in this document. These include, first and foremost, terms which have different meanings at the PSE to those used by the client.

Example:

Q   *Quality*
QA   *Quality Assurance*

1.4 Relationship with other documents
How is this document related to other internal and external documents?

Examples of interesting references to internal documents:

- Project organization (preliminary project plan)
- Additional QA requirements (e.g. for a superordinate project or the business unit; QA process manual, QA manual)

Examples of references to important external documents:

- Documents relating to calls for tender
- Standards to be complied with
- Other QA requirements of the client (e.g. any QA process manual or QA manual which is available).

2 Process model

This section must be used to enter the process model which is to be used for the project. If the client does not request a specific process model, an existing instance of SEM must be selected in every case. No specification is required in case of provision of personnel.

3 Quality requirements of the client

Quality requirements are requirements made on the *product* (the result of the project). This section must specify all quality requirements so far known of the envisaged client.

Typical quality requirements include the availability of a program, reliability, time behavior, consumption behavior, maintainability, portability and all aspects relating to user friendliness or usability.

4 Quality assurance requirements of the client

QA requirements are requirements made on the *project* (the course of the project). This section must specify all of the client's known requirements which are relevant for handling the project (e.g. from the documentation relating to the call for tender). These must also be examined to determine whether they are critical and risk-related or whether they will have any effect on the effort.

Typical quality assurance requirements include:

- Attaining a specific test coverage
- Conducting official safety certification for safety-relevant software (with all the certification obligations this brings with it)
- Requirements relating to code reviews in the form of intensive inspections for specific program sections
- Test records for performing stand-alone tests
- Inclusion of the client into the procedure for reviewing specific documents.

5 Quality assurance measures required

This section is intended to summarize the consequences of the process model, the Q requirements and QA requirements: Which QA measures need to be planned and implemented in this project?

At this moment, it is not yet necessary to plan all project QA measures in detail, but rather to produce a list of the necessary measures in order that this can be used as a basis for a preliminary estimation of the effort which these measures will require.