

# Outline of Best Practice Requirements Management

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November 3, 2008

There is no such thing as *the* best requirements management framework. Every best practice approach needs to be customized to the needs at hand. This is important to take into mind when reading this white paper. It lists a number of elements and steps found in best practice requirements management. It is by no mean complete. Final project deliverables will be customized to the needs of the respective client / organization.

## ***First Step: The Vision Document***

Every project starts with a vision. Hence, the first step of any requirements management process is to ensure a common understanding of the project objectives. The results are documented in a "Vision Document", the outline of which may look as follows:

- 1 Introduction**
  - 1.1 Purpose of the Vision Document
  - 1.2 Definitions, Acronyms and Abbreviations
  - 1.3 References
- 2 Solution overview**
  - 2.1 Challenge Statement
  - 2.2 Product perspective
  - 2.3 Product position statement
  - 2.4 SMART Project Objectives
  - 2.5 Key Features
  - 2.6 Assumptions, dependencies and constraints
- 3 Stakeholder Description**
  - 3.1 Stakeholder profiles
  - 3.2 User environment
  - 3.3 Key stakeholder needs
  - 3.4 Alternatives

The purpose of the Vision Document is a) to describe the project objectives and b) to collect, analyze, and define high-level features of the solution. It focuses on key features of the solution which come from the top needs of the stakeholders and users. These will form the basis for the more detailed technical and contractual requirements detailed in a later step of the requirements management process.

## ***Second Step: The Scope Document***

Desired features and requirements have to be systematically captured. The requirements management team needs to assess the expected business value as well as its technical complexity and risks. As the features will be implemented technically it is necessary that the requirements management team has a basic technical knowledge. Alternatively, it may involve a member of the technical implementation team in this requirements gathering phase.

This is analogous to the approach of Joint Application Design (JAD) (see, for example, <http://en.wikipedia.org/wiki/Jad>).

The use of a professional requirements management tool can be quite helpful. However, it is not an absolute necessity as long as the team ensures a complete and comprehensive analysis and documentation of the requirements. Eventually, all requirements are documented in a Scope Document which, at a minimum, provides the following information:

- Executive overview
- Business context (vision, goals, critical success factors, etc.)
- Process flows, use case model
- Prioritized functionality / scope matrix and detailed descriptions
- Technical architecture
- Business case (showing value of described requirements)
- Next steps (often includes a timeline for the next phase(s) of the project)
- Issues and assumptions

The functionality or scope matrix is a key deliverable of this phase. It structures functional and non-functional requirements thus modelling solution requirements to an appropriate level of detail. At the same time it leverages user-centric techniques to improve understanding of solution requirements.

Note that the Scope Document also includes non-functional requirements. While often times technical in nature it is crucial to capture them early in the process. Examples of non-functional requirements are the following: performance, availability, capacity, security, fault tolerance, scalability, maintainability, modularity, reliability, reusability, usability, etc.

In addition, requirements have to be put into context, i.e., they need to be referenced to standard business processes and the respective use cases (and vice versa). This is important as it helps identify dependencies with other requirements and systems. It also serves as a foundation for the creation of test cases later in the project.

Step 1 and 2 form the Scope phase of a project.

### ***Third Step: Specification or Technical Design***

In most cases, specification of the requirements is conducted by a technical team. The output is a Specification or Design Document. As this document needs to be approved by the requirements management team it is recommended that the requirements management team is actively involved in the specification phase. Again, this is analogous to the approach of a Joint Application Design (JAD).

It is the responsibility of the specification team to show how each functionality specified in the document can be traced back to a requirement described in the Scope Document. Unless already set up in a previous project phase, a change management process needs to be defined, implemented and followed.

## ***Fourth Step: Technical Development & Test***

While technical development and technical testing are the responsibilities of the technical development team and not the requirements management team, it is in the best interest of all parties involved to ensure that the solution being developed is in sync with the actual requirements. On this token, it is recommended that the requirements management team requests the technical development team to present interim results. The change management process set up in an earlier project phase needs to be followed closely.

## ***Fifth Step: User Acceptance Test (UAT)***

The User Acceptance Test and its respective test cases are based on the use case model referenced in the Scope Document. Hence, while the requirements management team may not conduct the actual testing, it is responsible for building the foundation for a comprehensive and complete UAT by providing a complete and correct use case model.

## ***Sixth Step: Release***

The requirements management team updates the solution scope matrix and the respective use case model as a starting point for future releases.

## ***Conclusion***

The focus of requirements management is on the first phase of a software development cycle: gathering, analyzing and prioritizing requirements. This is referred to as the Scope phase of a project. Requirements management, however, does not stop with the Scope phase. Instead it touches all subsequent project phase. The requirements management team has to request that the technical project management sets up an appropriate governance structure which ensures that development is done according to the requirements described and specified. Consequently, regular alignment meetings between business and IT are a prerequisite for effective and efficient requirements management.

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For additional information, feel free to contact us

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