# SOFTWARE REQUIREMENTS SPECIFICATION

for

<Project>

Version 1.24.8 approved

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<Organization>

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# **Revision History**

Name	Date	Reason For Changes	Version
JM. Bruel	2021-01-22	First Draft	1.0
JM. Bruel	2023-01-28	Check after publication of the Handbook	1.23
JM. Bruel	2023-06-12	Add reqs automated numbering	1.23.1
JM. Bruel	2023-08-25	Add Minimum Requirements Outcome Principle	1.23.8
JM. Bruel	2023-12-22	Remove section numbers	1.23.12
JM. Bruel	2024-08-01	Add warning about non empty chapters	1.24.8

This document follows the requirements documentation structure presented in the Handbook of requirements and business analysis, by Bertrand Meyer.

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# **Goals**

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Comment: Goals are "needs of the target organization, which the system will address". While the development team is the principal user of the other books, the Goals book addresses a wider audience: essentially, all stakeholders.

## G.1 Context and overall objective

**Comment:** High-level view of the project: organizational context and reason for building a system. **Comment:** This chapter should not be empty!

Goal 1. This is a goal example. If you need explicit (and automatic) numbering, you can use the definitions in the .tex template. Is is refined by 3

**Requirement 2.** This is a requirement example. It illustrates how numbering is continuous and cross-types (if this is what you need).

## **G.2 Current situation**

**Comment:** Current state of processes to be addressed by the project and the resulting system.

Requirement 3. This is a requirement example. It refines 1

# **G.3** Expected benefits

**Comment:** New processes, or improvement to existing processes, made possible by the projectâ €™s results. Comment: This chapter should not be empty!

# **G.4** Functionality overview

**Comment:** Overview of the functions (behavior) of the system. Principal properties only (details are in the System book).

# G.5 High-level usage scenarios

**Comment:** Fundamental usage paths through the system.

## **G.6** Limitations and exclusions

**Comment:** Aspects that the system need not address.

## G.7 Stakeholders and requirements sources

**Comment:** Groups of people who can affect the project or be affected by it, and other places to consider for information about the project and system. Comment: This chapter should not be empty!

# **Environment**

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**Comment:** The Environment book describes the application domain and external context, physical or virtual (or a mix), in which the system will operate.

## **E.1 Glossary**

**Comment:** Clear and precise definitions of all the vocabulary specific to the application domain, including technical terms, words from ordinary language used in a special meaning, and acronyms. This chapter should not be empty!

# **E.2 Components**

**Comment:** List of elements of the environment that may affect or be affected by the system and project. Includes other systems to which the system must be interfaced.

## **E.3 Constraints**

**Comment:** Obligations and limits imposed on the project and system by the environment. **Comment:** This chapter should not be empty!

## **E.4 Assumptions**

**Comment:** Properties of the environment that may be assumed, with the goal of facilitating the project and simplifying the system.

# **E.5 Effects**

**Comment:** Elements and properties of the environment that the system will affect.

# **E.6 Invariants**

**Comment:** Properties of the environment that the systemâ€<sup>™</sup>s operation must preserve.

# **System**

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**Comment:** The System book refines the Goal one by focusing on more detailed requirements about the system under development, mainly its constituents, behaviors and properties.

## **S.1 Components**

**Comment:** Overall structure expressed by the list of major software and, if applicable, hardware parts. **Comment:** This chapter should not be empty!

## **S.2 Functionality**

**Comment:** One section, S.2.n, for each of the components identified in S.2, describing the corresponding behaviors (functional and non-functional properties). Comment: This chapter should not be empty!

## **S.3** Interfaces

**Comment:** How the system makes the functionality of S.2 available to the rest of the world, particularly user interfaces and program interfaces (APIs).

# S.4 Detailed usage scenarios

**Comment:** Examples of interaction between the environment (or human users) and the system: use cases, user stories.

# **S.5** Prioritization

**Comment:** Classification of the behaviors, interfaces and scenarios (S.2, S.3 and S.4) by their degree of criticality.

# S.6 Verification and acceptance criteria

**Comment:** Specification of the conditions under which an implementation will be deemed satisfactory.

# **Project**

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**Comment:** The Project book describes all the constraints and expectations not about the system itself, but about how to develop and produce it.

## P.1 Roles and personnel

**Comment:** Main responsibilities in the project; required project staff and their needed qualifications.

## P.2 Imposed technical choices

**Comment:** Any a priori choices binding the project to specific tools, hardware, languages or other technical parameters.

#### P.3 Schedule and milestones

**Comment:** List of tasks to be carried out and their scheduling. **Comment:** This chapter should not be empty!

## P.4 Tasks and deliverables

**Comment:** Details of individual tasks listed under P.3 and their expected outcomes. **Comment:** This chapter should not be empty!

# P.5 Required technology elements

Comment: External systems, hardware and software, expected to be necessary for building the system.

# P.6 Risks and mitigation analysis

**Comment:** Potential obstacles to meeting the schedule of P.4, and measures for adapting the plan if they do arise.

# P.7 Requirements process and report

Comment: Initially, description of what the requirements process will be; later, report on its steps.