

# A2.Gen1 - Requirements Engineering

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## 1. Keyfacts

<b>Duration</b>	3 days
<b>Language</b>	English or German
<b>Setting</b>	on-site or remote

## 2. Target Group

Engineers, Product Manager, Quality Manager and everyone who is affected by Requirements Engineering

## 3. Training Goal

The ultimate goal of this training is to learn and to practice how to develop good Requirements as basis for development and verification. Thus, the particular learning goals are as follows:

### #1 - Understand Requirements Engineering as engineering discipline on it's own

Participants know the theoretic background of requirements engineering and the corresponding state of the art. A particular focus is put on the role of a Requirements Engineer in context of an engineering team

### #2 - Differentiation between "Stakeholder Needs" and "Requirements"

Participants understand the difference between Stakeholder Needs and Requirements. They are able to understand the characteristics of good requirements and how to validate them.

### #3 - Requirements Engineering Methods

Participants know different methods for elicitation, development, and management of requirements. They have first experiences with the practical application of these methods which provides the basis for their application in real projects

## 3. Training Content

### Introduction

- Requirements Engineering as engineering discipline on it's own
- Reasons for poor requirements and the resulting consequences
- Problem space vs. Solution space
- Stakeholder Needs and Requirements
- Big Picture of Requirements Engineering

### System and System Context Analysis

- Importance of System Context Analysis
- Methods for conducting a System Context Analysis
- Relation with solution space

### Stakeholder Analysis

- Different Stakeholder and their role
- Divergent and convergent methods for Stakeholder Analysis
- Stakeholder Assessment and Stakeholder Management

## Needs Elicitation

- Different Methods for Elicitation

## Requirements classification and prioritization

- How to cluster and structure requirements
- Requirements as basis for product shaping

## Requirements Development

- From "Stakeholder Needs" to "System Requirements"
- Correlation with Architecture Concept Development

## Requirements Quality and Requirements Specification

- What is a good Requirement?
- How to specify Requirements?
- Model-Based Requirements Specification

## Requirements Validation and Negotiation

- Requirements Validation with customers
- Requirements Negotiation: Identify, classify and resolve existing conflicts

## Requirements on the lower levels

- Outlook: The link with architecture and design
- Requirements validation with upper levels and Requirements verification

## Requirements Management

- What's it all about
- Tool-support for Requirements and Management: Shortcomings and outlook

## The Role of a Requirements Engineer

- Personality of a Requirements Engineer
- Competence of a Requirements Engineer
- The Requirements Engineer as part of an engineering team

## 4. Learning Methods and Didactics

- Theory Inputs combined with examples and practical exercises to practice learned methods

## 5. Your Benefit

Most people in engineering projects get in contact with requirements, everyone is aware of the importance but only a few have ever learned how to do it. This training gives you an overview on the existing methods and represents the starting point for developing good and verifiable requirements in your project!

## 6. Your Trainer



Christian is Professor at the School of Information Technology and Digitalisation at Salzburg University of Applied Sciences. As head of the "Center for Dependable Systems Engineering" he is an expert in this field and has profound knowledge on the matter.

Asides his academic role, Christian has 10+ years of experience as consultant and trainer at the Successfactory Consulting group with a particular focus on Leadership, Software, and Systems Engineering

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related topics.

**For more information on scheduled trainings or the organisation of a closed group contact us:**

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