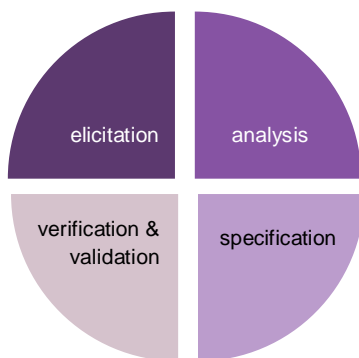# EVOCEAN – Requirements Management Competence Center
Increasing efficiency through agile requirements

In our fast-moving world it is difficult to define all requirements for future products and services upfront. Further, driven by the integration of additional functionality and performance needs in products, the competitive environment is becoming even more dynamic. At the same time we are confronted with new technologies, customers and competitors as well as with changing standards and regulations. To cope with these challenges successfully, agility in requirements management is beneficial. We can help you!

Typical requirements engineering process

An extract of our expertise and services:

- Training, Workshops & Coaching in the area of RM&E
- Specification of non-functional & functional requirements
- Requirements management – Best Practices Workshops
- Agile requirements management – Workshops and Coaching
- SCRUM Coaching
- Support the evaluation of appropriate tools
- UML and SysML Trainings, Workshops and Coaching
- Modeling of Systems – Workshops and Coaching

Agile requirements analysis and documentation, which enjoy increasing popularity, deviate in some points from the classical approach. EVOCEAN helps you to find pragmatic approaches (classical and agile) which correspond best with your development organization as well as with the standards relevant for you.

Formulating & Managing Requirements – Best Practices
Various practices for requirements management are surely already in use in your company. We help you to identify best practices, to optimize them and to establish them throughout the company.

Identify customer requirements: with the help of different techniques, which optimally correspond to the abilities of your team, the requirements of your systems, as well as to the culture of the various stakeholders. Use Cases, interviews, templates and other "tools" support the communication between the various stakeholders.

To refine customer requirements into the developer's language: define terminology and level of detail for every requirement type in order to write clear and precise product specifications.

Verify that requirements are traceable, unambiguous, clear and testable: for example with check lists, reviews or analysis models (UML/SysML).
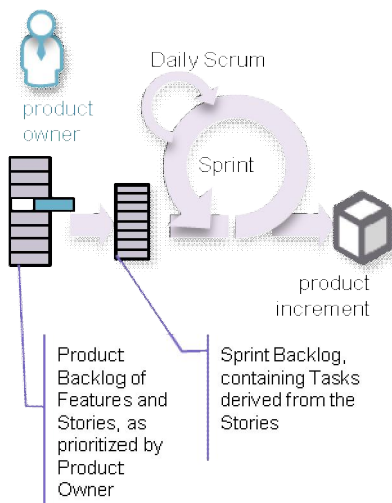
Manage requirements and their changes throughout the project lifecycle; to enable traceability, in order to ease analysis and valuation of impact of changes on the projects.

Agile and Lean Methods Applied to Requirements Management
In fast changing projects, experimentation must be built into the development process; also because it is usually not possible to fully define the product at its inception. In order to implement the feedback of the product owners early in the process, complex products must be split into understandable parts and be developed in fully functional iterations.

Requirements in the agile Scrum process

An example of traceability

Approaches for agile requirements management:

- The "product owner" formulates the requirements for the product as well as **their value to the users**.
- The "product owner" manages the requirements according to their market value.
- The "product owner" defines priorities at the start of each iteration (sprint), taking the changes and learning effects into account.
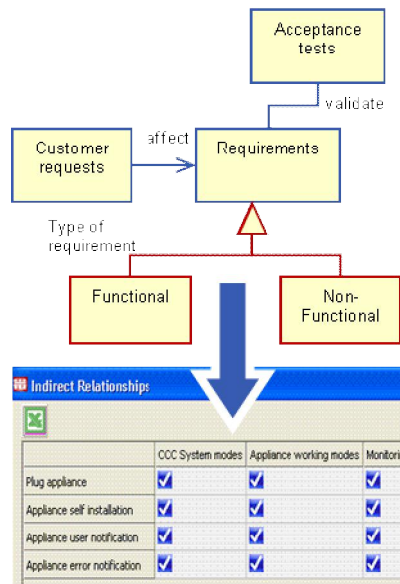
Approaches for a lean requirement management:

- **Eliminating ballast in the requirements management**; for example by writing requirements by cross-functional teams – for better communication.
- **Promoting learning practices**; by using iterative development to enable teams to get to know the demands of the stakeholders and to act accordingly.
- **Integrating quality in the process**; by applying standards and compliance right from the beginning into the process.
- **Teams organize themselves**; so that the most important requirements are fulfilled first.

Techniques and Tools for Compliance with Standards

To cope with standards such as CMMI, IEC 62304 or IEC 61508 supporting tools are very beneficial. In order to guarantee the required traceability and documentation of the development process on one side and on the other hand, also to efficiently realize the requirements with modeling into the design. The tools also help that products are completely specified and that the product, the tests and the risks are traceable to all requirement levels. A major benefit of tool support is the easy impact analysis of changes.

EVOCEAN supports you to evaluate and implement corresponding tools and technologies with the aim to improve your processes and to raise your development efficiency, thus minimizing risk and cost. Our expertise is based on years of experience with many known tools in various domains as well as on practice-oriented knowledge.

Developing complex systems efficiently (mechanical components, hardware or software chips) from the multi-layered requirements, nowadays the functional modeling with SysML is used increasingly.

Your advantage

Agile requirements management is a logical advancement with respect to the classical approaches corresponding to actual needs of our time. The simple and in itself consistent approach allows you to develop new products with minimum effort and risk, according to market requirements and creating space for innovation!

EVOCEAN GmbH ▪ **www.evocean.com** ▪ **Consulting, Training and Tools**
Grundstrasse 8 ▪ CH-6343 Rotkreuz ▪ Tel.: + 41 41 790 78 88 ▪ Fax +41 41 790 78 93 ▪ info@evocean.ch
Fischhof 3/6 ▪ A-1010 Wien ▪ Tel.: +43 1 740 40 80 35 ▪ Fax +43 1 740 40 80 36 ▪ info@evocean.at
Karlstrasse 35 ▪ D-80333 München ▪ Tel.: +49 89 452 352 191 ▪ Fax +49 89 452 352 110 ▪ info@evocean.de