Preface: The Agile Requirements Engineering Workshop (AgileRE)

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Abstract
The AgileRE workshop aimed to foster the interaction between practitioners and academics concerning the current state of the art and practice of agile requirements engineering. Through a keynote, presentations from industry and academia, and hands-on tutorials, the participants presented contrasting views on the future of requirements engineering in agile environments.

Keywords
agile development, requirements engineering, agile RE

1. Introduction

Practitioners often conduct requirements engineering (RE) in agile software development environments. Organizations that have formed agile development teams to build products or to offer development services need to be able to feed the backlogs of these teams continuously based on requirements elicited from customers, product managers, and other stakeholders. Agile RE, however, starts even earlier than that; when new product ideas are developed or organizations work with customers to identify the product vision and then refine that vision iteratively to form backlog items, acceptance criteria, and sprint goals. Agile RE also lasts longer than that; when non-functional requirements need to be fulfilled throughout the development lifecycle, when systems move into maintenance mode, and when they are decommissioned and replaced, visions, goals, definitions of done need to adapt.

These scenarios require RE approaches that are tailored to an iterative-incremental way of working. This entails creating the minimal amount of documentation and overhead to achieve their purpose and that produce tangible work items early on and continuously. Following the agile manifesto, these approaches need to be flexible and adaptable, with a focus on communication and responsiveness to change rather than on processes and documentation.

In the AgileRE workshop, practitioners and academics reviewed and *discussed* the current state

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of the art and practice of agile requirements engineering. Based on presentations from industry and academia and interlaced with hands-on tutorials, the participants exchanged experience and views on how organizations that employ agile development handle requirements, what scaling means for agile RE, and what the future of requirements engineering in agile environments will hold.

2. Solicited Topics

AgileRE was open to all topics that pertain to the agile way of working with requirements. In our call for papers, we particularly solicited contributions around the following topics:

- Documentation of requirements;
- RE-related activities and ceremonies in agile development;
- Shared understanding, also through non-linguistic artifacts;
- RE phases prior to the definition of the backlog;
- AI techniques that can be used to support Agile RE practitioners;
- Studies on the transition to or away from agile development;
- Role of models and modeling paradigms;
- Experiments and case studies;
- Agile RE education and training;
- New or revised theories of RE in agile settings.

To attract both academics and practitioners, we welcomed a diverse range of contributions, including classic papers (appearing in these proceedings), paperless presentations, and mini-tutorials. We envisioned tutorials as a way to teach the participating audience an interesting RE technique in a concise and entertaining format.

3. Program Committee

The program committee of AgileRE consisted of a mix of academics and industry practitioners. Each submitted paper received three reviews, while submitted talks that do not appear in the proceedings include at least two reviews. We are very grateful for the high quality of reviews our submissions received. The PC consisted of:

- Maya Daneva, University of Twente, Netherlands
- Thomas Fehlmann, Euro Project Office AG, Switzerland
- Markus Fockel, Fraunhofer IEM, Germany
- Smita Ghaisas, Tata Research Development and Design Center, India
- Anne Hess, Fraunhofer IESE, Germany
- Sylwia Kopczyńska, Poznan University of Technology, Poland
- Kim Lauenroth, Fachhochschule Dortmund, Germany
- Geert Poels, Ghent University, Belgium
- Betül Sögütlü, Deutsche Bahn Netz AG, Germany

- Konstantinos Tsilionis, TU Eindhoven, Netherlands
- Michael Unterkalmsteiner, Blekinge Institute of Technology, Sweden
- Gerard Wagenaar, Utrecht University, Netherlands
- Michael Wahler, Zurich University of Applied Sciences (ZHAW), Switzerland
- Yves Wautelet, KU Leuven, Belgium

4. Workshop Program

The workshop included four sessions of 90 minutes each, in line with the tradition for workshops at the REFSQ conference.

Session 1. After an introduction by the organizers, the first session featured an invited talk by Markus Meuten entitled "A farewell or a new direction? The future of requirements engineering in the agile era.", which discussed the challenges of RE in agile contexts and how the publicly available Req42 framework (https://req42.de/en/req42-at-a-glance) supports agile requirements engineering.

Session 2. The session included one paperless presentation and two papers; the latter two are part of the proceedings:

- *Agile transition – Who owns the requirements?* Andrea Wohlgemuth (SwissLog) gave an experience report regarding the notion of *responsibility* for requirements in agile setups within the (intra-)logistics context;
- *What's Ready in a DoR? Rationales, Responsibility & Rules in using a Definition of Ready.* Mark van Riesen and Gerard Wagenaar (Utrecht University) presented results about the concept of *Definition of Ready* that they derived from a literature review and a case study;
- *Cartooneering – Using Comics and Personas to Enable the Definition of a Software Product Vision.* Simon Andre Scherr (Fraunhofer IESE) and colleagues introduced *Cartooneering*, a graphical scenario-building technique based on proto-personas and comics, which supports the creation of a shared vision.

Session 3. This session was dedicated to two tutorials on specific techniques:

- *Agile RE by Lean Six Sigma – how AI techniques can be used to support Agile RE practitioners.* Thomas Fehlmann and Eberhard Kranich (Euro Project Office AG) introduced the use of the ISO 16355 for improving agile product development by using statistical methods for requirements engineering, including understanding customer needs and focusing agile development on customer needs.
- *The Headstand Method.* Luise Büscher and Nadine Porkert (XITASO GmbH) presented the use of a method for creative brainstorming that relies on framing a problem in reverse or negative terms in order to generate new (and less obvious) ideas, especially in early requirements engineering.

Session 4. This session included another mini-tutorial, which was then followed by a final discussion. The mini-tutorial was:

- *Applying a Grey Multi–Criteria Decision Making Method to Agile Requirements.* Thomas Fehlmann and Eberhard Kranich (Euro Project Office AG) presented the use of multi-criteria decision-making techniques based on Grey Systems Theory, which allow to perform prioritization in settings where only partial information is available.

Overall, the diverse program and the positive reaction to the workshop show that Agile requirements engineering remains an important topic for the RE community and that academics and practitioners continue to refine the methods used in this area.

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