

# Second International Workshop on Requirements Engineering for the Precontract Phase (RE4P<sup>2</sup>)

Axel Kalenborn<sup>1</sup>, Marcus Trapp<sup>2</sup>

<sup>1</sup>Universität Trier  
Wirtschaftsinformatik, 54286 Trier, Germany  
axel.kalenborn@uni-trier.de

<sup>2</sup>Fraunhofer IESE  
Fraunhofer-Platz 1, 67663 Kaiserslautern, Germany  
marcus.trapp@iese.fraunhofer.de

**Abstract.** Before a software project is officially started, there is a stage that has not received much consideration in the requirements engineering literature: the precontract or bidding stage. Part of a bid is a cost estimate that should be as precise as possible. During the bidding stage, bidders are not being paid while competing with each other, i.e., they have to work under great pressure of time, success and cost. As the costs of common requirements engineering (RE) methods are often considered to be too high, these methods are typically not used at this early stage. This workshop aims at discussing and elaborating new ideas to improve RE in this stage.

## 1 Introduction

The goal of this workshop was to discuss the aforementioned and other relevant questions that help us to understand what is necessary from a requirements engineering perspective to prepare a solid and reliable proposal, without the time to do a “complete” requirements analysis. To support the requirements engineers or sales persons, we discussed ideas and possible solutions on a (tool-based) RE methodology for the more effective and efficient creation of bid proposals.

## 2 Key Questions

The workshop aimed at discussing the following questions:

- What are the central requirements engineering problems when preparing a bid?
- How can we handle lacking IT affinity of the decision makers? How can we present software projects in a way that is understandable for decision makers?
- How can we use common procedure models to resolve specific challenges of requirement analyses during the precontract phase?
- Can we apply common methods of requirement engineering in the precontract phase, or are they just too complex and cost intensive?

- Can we find innovative methods that are able to come to reliable cost estimate before a detailed requirements analysis is possible?
- What are constraints of current tools supporting the bid proposal management?
- How can we minimize risks to write imprecise and wrong calculated proposals?
- How can we show effects of changes in the complexity of software projects?
- Can we find best practices in the communication about the requirements with our stakeholders?
- How can we validate the requirements in the dialog with our stakeholders?
- How can we reduce the time that has to be invested in a valid proposal?

### 3 Workshop Agenda

The workshop was organized as a half-day workshop. We started with short presentations and discussions of the papers, followed by a tool presentation and closed with a working session that allowed participants to with the possibility to prepare an own bid with the Smart Offer tool.

- Welcome Session (Axel Kalenborn, Marcus Trapp)
- Paper Presentations:
  - The Box Fight Analogy: A Blueprint for Pre-Sales (Christoph Oemig)
  - Elicitation of Information Needs in Precontract Requirements Engineering (Christian Müller, Matthias Koch, Sebastian Adam)
  - ERP Services Effort Estimation Strategies Based on Early Requirements (Pierre Erasmus, Maya Daneva)
- Tool Presentation: Smart Offer (Daniel Kuhn, Christian Müller)
- Working Session: Bid Preparation with the Smart Offer Tool (Daniel Kuhn, Christian Müller)
- Diskussion & Summary (Marcus Trapp, Axel Kalenborn)

### 4 Program Committee

The program committee members in alphabetical order:

- Sebastian Adam, Fraunhofer IESE, Germany
- Martin Barth, SiteVertreiber GmbH Kaiserslautern, Germany
- Ralph Bergmann, Universität Trier, Germany
- Eckhard Biehl, ICT Solutions AG Trier, Germany
- Kai Breiner, Fraunhofer IESE, Germany
- Karin Fetzer, ICT Solutions AG Trier, Germany
- Michael Gillmann, Insiders AG Kaiserslautern, Germany
- Axel Kalenborn, Universität Trier, Germany
- Daniel Kuhn, Universität Trier, Germany
- Ingo Timm, Universität Trier, Germany
- Marcus Trapp, Fraunhofer IESE, Germany
- Lilia Wählert, Hochschule Fresenius Idstein, Germany