

Strategies to Overcome Requirements Engineering Challenges in Distributed Scrum Teams

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Thesis submitted in partial fulfilment of the requirement for the degree of Master of
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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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ABSTRACT

Requirements are the needs and want of a customer and or a user group, expressed in a formal set-up. They are inevitable in any software and should be managed extensively, to prevent product/project being failed. Requirement management in scrum projects has a significant difference to that of the traditional approach.

This research discusses Requirement Engineering challenges seamlessly occur in Scrum offshore teams. An initial survey was carried out to identify the most challenging factors affecting the Requirement engineering process and it was followed by a survey reaching the software professionals. The challenges identified in the literature review and the pre-survey are same. Therefore, the study was designed to further investigate the matter with three factors that are affecting the success of the business analysis function.

The methodology used for the survey is an online based questionnaire. The population considered for the survey is software professionals in distributed Scrum teams. Sri Lanka is becoming an offshore development destination. Over 30,000 software professionals are employed in Sri Lanka, and the majority are engaged in offshore development. Therefore, a sample of 376 is drawn from the population for further proceedings.

The present study revealed that Scrum requirement process and the soft skills are statistically related to the entire requirement management process in a team. This emphasizes that the method adopted in the team has a direct impact on the requirement analysis. Soft skills produced by the team members are highly contributing to the effectiveness and the productivity of the requirement management.

This research highlights important factors to consider in formulating requirement management plans. Requirements have to balance two extremes of expectations; expectations of the fellow team members on receiving comprehensive clear documentation and the expectations imposed by the development method. Organizations should incorporate suggested changes to the requirement management process depending on the suitability of the organizational culture and standards.

Keywords: Requirement engineering, Scrum, documentation, offshore development, business analysis

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LIST OF ABBREVIATIONS

Abbreviation	Description
IT	Information Technology
RE	Requirements Engineering
XP	Extreme Programming
BABOK	Business Analysis Body of Knowledge
LR	Literature Review