

A Case Study: Coordination Practices in Global Software Development

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Abstract. Global Software Development (GSD) is a new challenge for software developers to reach mobility in resources, obtain extra knowledge, speed time-to-market and increase operational efficiency. However, the new trend is followed by specific risks and needs a deeper analysis for successful risk overcoming. This paper gives an insight into a research on GSD project performance improvement in one of the biggest software development companies in Latvia. Project management and coordination in distributed environment is a great challenge, though being not very widely explored. In this paper the author emphasizes the necessity of research in this area and provides an overview of coordination practices used in the organization chosen for the case study.

1 Introduction

The question explored in this paper is related to global software development (GSD) project coordination. To start with the term GSD has to be explained.

GSD is also known as a type of outsourcing relations. Campbell R. Harvey's Hypertextual Finance Glossary defines outsourcing as purchasing a significant percentage of intermediate components from outside suppliers [6]. There are various forms of outsourcing, e.g. business process outsourcing (BPO), application outsourcing or application service provider (ASP) outsourcing, hardware outsourcing, data centre outsourcing, selective or full software development outsourcing.

The area of author's research is devoted to selective and full software development outsourcing also known as global software development. In particular, the author examines relations between geographically distributed End Customer, a Mediating Partner and the Developer aiming to produce software (See Fig. 1).

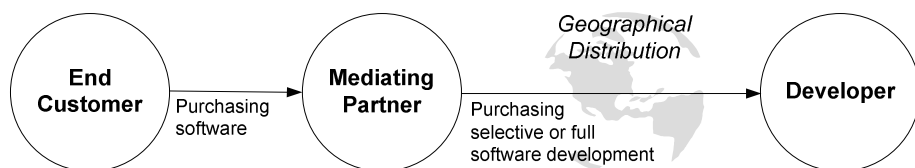


Fig. 1. The Model of Global Software Development Explored by the Author

A review of related literature on the field of global software development shows that the topic of performance is poorly explored, especially from the supplier's point of view. Most of the related research is devoted to questions as decision making – whether to outsource or not ([9], [18], [21]), relationship risk management ([1], [3], [4], [8], [17]), contractual problems and advices ([2], [5], [9]), success factors, that will help to survive starting outsourcing relationship ([10], [12], [13], [15], [17]), and case studies from the field ([7], [13], [14], [16]).

Working on the research, the author explores an organization chosen as a case study. This organization competes in the global market as a software development supplier, in other words – developer. The lack of research that would answer the question “How to perform software development in distributed environment?” makes practitioners act intuitively and precludes the prognosticated success of global projects. Therefore, the main objectives for the research are as follows: *To build a framework for global projects, which would contain guidelines, practices and tools for effective performance in distributed environment.*

The paper is organized as follows. The following section describes the research structure and methodology, and gives an insight to the case study. Then GSD coordination practices are presented. The practices are followed by a discussion section. And the paper is concluded by a brief summary and an overview of further work.

2 Research Overview

2.1 Research Structure

The analysis of GSD coordination practices described in this paper is a part of a larger research, which aims to develop a framework for GSD projects, containing guidelines for global project management, software engineering methods adapted for global specifics, best practice knowledge base and project management tools for better performance in distributed environment [19].

The current results of the research, in particular GSD project coordination practices, are the output from the previous steps of the research – global project questionnaire and experienced project manager interviewing. These practices are further used as an input for GSD knowledge base and examination in ongoing projects.

2.2 Research Methodology

The overall research approach for the research is active methodology – “learning by doing”, which aims to deepen the understanding of GSD projects and learn how to improve them [11]. According to this methodology the author performs cycles: Observe → Plan → Implement → Evaluate → Improve → Observe → In this case, the author is Observing global projects → Indicating risks → Planning preventive actions and developing guidelines → Implementing the guidelines in the ongoing projects → Evaluating the results, identifying areas for further improvement [20].