

A Qualitative Study of Hard Decision Making in Managing Global Software Development Teams

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We empirically explored the implication of hard decisions in the context of the management of global software development (GSD) teams. We hypothesized and empirically tested our belief that hard decision making in conventional development projects is very similar to GSD and differences arise from the nature of the relationship and the ranking of issues. Findings from a Delphi study illustrated our approach and shed some light into the management of GSD teams.

Keywords global software development teams; hard decisions; qualitative study; trust

INTRODUCTION

Due to increasing globalization tendencies in organization environment, Software Development is evolving from a single site development to multiple localization team environments (Hernández-López, Colomo-Palacios, García-Crespo, & Soto-Acosta, 2010). Thus, Software Development evolved in order to adopt some Globalization characteristics; as a result, a new field called Global Software Development (GSD) emerged to cover specific aspects of global distributed software development (Oshri, Kotlarsky, & Willcocks, 2007). Intrinsically, GSD teams are like any other team and, therefore, need to be managed. The task of managing a software project can be an extremely complex one, drawing on many personal, team and organizational resources (Rose, Pedersen, Hosbond, Kraemmergaard, 2007). Given that management implies decision-making, managing GSD teams also implies new decisions in new scenarios. And some of the decisions that every software development project manager must make can be tagged as Hard Decisions. According to Clemen (1996) and Clemen and Reilly (2001) hard decisions are characterized by:

1. the complexity of the problem;
2. uncertainty inherent in the situation;

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3. the decision-maker being interested in working towards multiple objectives but progress in one direction impeding progress in others;
4. different perspectives leading to different conclusions.

Taking into account the crucial importance of GSD, the aim of this article is to find out which managerial decisions taken in GSD are different from the traditional ones. This goal is aimed to be reached by means of qualitative research, namely the Delphi method.

GLOBAL SOFTWARE DEVELOPMENT TEAMS

Software development is an intense human capital activity, more intense in intellectual capital (Sommerville & Rodden, 1996). Back in the nineties, organizations seeking lower costs and access to skilled resources began to experiment with remotely located software development facilities (Prikladnicki, Nicolas Audy & Evaristo, 2003; Lytras, Sakkopoulos, & Ordóñez de Pablos, 2009).

As a result, software development became a multi-site, multicultural, globally distributed undertaking. Globalization of software development introduced a great deal of complexity in an already complex process (Treinen & Miller-Frost, 2006). Today, more software projects are run in geographically distributed environments, and global software development is becoming a norm in the software industry (Damian & Moitra, 2006). In this scenario, firms developing or maintaining software products cannot ignore global software development's impact (Cusick & Prashad, 2006). Thus, according to Herbsleb and Moitra (2001), GSD causes a profound impact on the way the products are conceived, designed, constructed, tested, and delivered to customers.

Working in a global context has its advantages, but it also has drawbacks (Ebert & De Naeve, 2001). On the plus side, many organizations have distributed software development across geographies to capitalize on global resource pools, attractive cost structures, and round-the-clock development to achieve cycle-time acceleration and cater to local markets (Damian