Chapter 11
Distributed IS Development Projects: Significant Relational–Oriented Conditions

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ABSTRACT

The management of teams in a distributed IS development project is challenging. It has even been suggested that a new breed of managers for the management of dispersed teams is needed, especially when relationships cross national boundaries. Challenges in distributed, global IS development are understood as related to three dimensions of distance: geographic, temporal, and cultural distance, which affect the manager’s ability to control and coordinate distributed IS development projects. This chapter argues that combining a relationship perspective with a success perspective is fruitful for understanding distributed IS development projects. In this context there are several significant conditions that draw the attention to the challenges in the practice of distributed IS development projects. The chapter ends with the provision of a conceptual framework addressing relational-oriented conditions for the management of distributed IS development projects. Using the framework, managers can identify the relational-oriented conditions for realizing the benefits of distributed IS development projects.

THE CHALLENGING TASK OF IS DEVELOPMENT

The unique properties of information systems (IS), such as being complex, sometimes hard to visualize in its entirety and subject to continuous change because of changes in IS user environments, make its development difficult (Willcocks, Oshri, Kotlarsky, & Rottman, 2011). In general, the process of IS development (ISD) is project-driven and requires a high degree of interaction between IS developers and different stakeholders. The process of ISD is complex due to challenges in collecting, communicating, and understanding requirements posed by stakeholders. Stakeholders such as business developers, IS developers, clients and IS users have different frames of reference and value-systems, which result in different IS requirements (Nellborn, 1999). In other words, stakeholders embrace different interests and ideas.
of reality which result in making the task of interpreting and analyzing stakeholder requirements difficult. One dilemma in ISD is thus to bridge communication and knowledge gaps between different stakeholders. The complexity of ISD has resulted in a process characterized by frequent communication (Rosine & Tugrul, 2009) and by the importance of writing useful documentation (Ågerfalk & Fitzgerald, 2006).

As a result of the globalization of many industries, global cooperation has become common and in particular in the IS area (Prikладnicki, 2012). In fact IS services are one of the most common services outsourced for firms in developed countries. Information and Communication Technology (ICT) constitutes enabler in global, distributed ISD which is a growing tendency that seems to continue to grow in the near future (Gonzalez, Llopis, & Gasco, 2013).

The chapter is based on the contention that distributed ISD is more likely to be successful if challenges are managed in a proactive manner and with different actor perspectives in mind. This includes that strategic, operational and systems perspectives are considered for a better understanding of the challenges and how different actors convey successful distributed ISD. For the purpose of increasing the understanding of successful distributed ISD projects this chapter contributes relational-oriented conditions connected with different actor perspectives. This is presented as a conceptual framework providing a way of identifying specific challenges in the realm of distributed ISD projects, thus enabling proactive management.

**DISTRIBUTED IS DEVELOPMENT: WHAT IT IS AND CHALLENGES**

Today’s globalization has contributed to the normal practice of developing software globally – commonly referred to as global, distributed ISD. Distributed ISD is described as the practice where actors, located at different geographical locations, actively work together to achieve common goals (Carmel, 1999). Rationales for global, distributed ISD include the possibility to exploit market opportunities through quick formation of global, virtual teams, to achieve ‘round-the-clock’ development by utilizing time zone differences (Holmström Olsson, Fitzgerald, Ågerfalk, & Conchúir, 2006) and the possibility for innovative collaboration (Whitley & Willcocks, 2012). A further incentive includes the desire of cost reduction through lower salary costs.

As previously introduced the process of ISD is demanding. As the development is dispersed another degree of complexity is added. Especially global distributed ISD brings challenges in relation to the communication, coordination and control of the ISD process (Handley & Benton Jr, 2013). Communication can be described as the formal or informal sharing or exchange of information between actors (Morgan & Hunt, 1994). Control includes ensuring that members of an organization act in a manner that is consistent with the goals and objectives of the organization (Kirsch, 1997). In inter-organizational relationships control includes making sure that the actors’ behaviour and interests are aligned. Coordination includes integrating and linking work processes, resources and information to accomplish joint tasks (Handley & Benton Jr, 2013).

The challenges of distributed ISD, and globally distributed ISD in particular, can be explained as related to three dimensions of distance: geographical, temporal and cultural distance (Carmel, 1999; Ó Conchúir, Ågerfalk, Holmström Olsson, & Fitzgerald, 2009). When team members are dispersed the reliance on asynchronous communication channels, such as e-mail, increases, and the fact that team members work in different time zones further contributes to the general complexity of the ISD process (Ågerfalk & Fitzgerald, 2006). Incomplete pictures of the ongoing work at different locations, different ways of working and incompatible ICT infrastructures are other