



# Plans versus people: Comparing knowledge management approaches in IT-enabled business projects

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## Abstract

This paper evaluates the impact of two approaches to knowledge management in projects — one focused on aligning project documents (“the Plan-based approach”) and another focused on developing shared understanding between different teams within a project (“the People-based approach”). A theoretical model and hypotheses are proposed and explored using data from a survey of 212 IT-enabled business projects. Results indicate that the people-based approach is more strongly influential on a project’s success in securing business benefits. Although the plan-based approach is less influential, it does positively influence business benefit attainment and also supports the people-based approach. Thus, attaining shared understanding within the project team and aligning key documents are both important goals for a project’s knowledge management strategy. © 2014 Elsevier Ltd. APM and IPMA. All rights reserved.

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## 1. Introduction

Knowledge is an important resource for organizational tasks (Grant, 1996) and the management of knowledge affects an organization’s ability to accomplish these tasks successfully (Wiig, 1997). In this paper, we consider knowledge management within projects (Gann and Salter, 2000; Lindner and Wald, 2011) and apply organizational knowledge management concepts recognizing that projects can be conceptualized as temporary organizations (Lundin and Soderholm, 1995; Packendorff, 1995). The specific context we consider is information technology (IT)-enabled business projects. These projects require the challenging combination and coordination of technical, organizational and business knowledge to achieve successful outcomes (Markus, 2004). Since knowledge is a key component of these projects, the IT-enabled business project provides a useful context in which knowledge management within projects can be studied.

In practice, knowledge in projects can be managed by focusing on knowledge embedded in plans and on knowledge embodied in

people (Madhavan and Grover, 1998). In focusing on plans,<sup>1</sup> knowledge management is directed towards codifying detailed, specific knowledge about the application domain in an effort to make explicit the shared understanding of future states (Wand and Weber, 1993; Khatri et al., 2006). In focusing on people, project managers encourage social interaction to build an environment enabling the integration of many kinds of knowledge from multiple sources to produce mutual understanding (Nonaka, 1991; Ruuska and Vartiainen, 2005).

The normative practice-oriented literature on projects tends to focus on plans and documents as the major knowledge deliverables en route to full project delivery (Reich and Wee, 2006). In contrast, much of the research literature attempts to counter-balance this emphasis on codification by demonstrating the importance of less explicit knowledge and the need for

<sup>1</sup> In this paper “plans” refers to any codified knowledge document pertaining to a project, such as a design, plan, model, program code, task list, chart or schedule. These are all considered “plans” because they are statements of intention about the future system, product, process or organization.

socialization, communities of practice and the development of shared understanding (Brown and Duguid, 1991; Bresnen et al., 2003; Nonaka and von Krogh, 2009). In an organizational context, Hansen et al. (1999) described the choice between plans and people as a choice between “codification” and “socialization” approaches to knowledge management. Reflective practitioners likely recognize the importance of both plan-based and people-based approaches. However, there are no studies that compare the effectiveness of these two perspectives and hence there is no research-based guidance as to the emphasis project managers should place on building comprehensive plans or building shared understanding among people as management approaches.

This paper is the third in a series which has investigated the concept of knowledge management within IT-enabled business projects. The first paper (Reich et al., 2012) conceptualized knowledge management as a three dimensional concept comprising knowledge stock, enabling environment and knowledge practices. We suggested that knowledge management enabled the creation and alignment of three types of project-based knowledge that are critical to achieving desired business outcomes: technical design knowledge, organizational change knowledge and business value knowledge. The factor analysis and regression testing of survey data from 212 IT projects statistically supported the model’s conceptualization of the key constructs and showed that knowledge management within IT projects contributes to the creation and alignment of the important project-based knowledge.

The second paper (Reich et al., 2014) used structural equation modeling to test the relationships between knowledge management and various aspects of performance in IT-enabled business projects. Analysis of the previously collected survey data showed that project managers who achieve knowledge alignment among the people and the artifacts from three parts of the project – the IT team, the business change team, and the governance team – can have a significant positive impact on the achievement of business value from the project.

This paper investigates the question: “Which knowledge management approach has the stronger positive impact on project performance — managing plans or managing people?” We present a theoretical model of project-based knowledge management and examine evidence from the same survey data. The findings indicate that a people-based approach to knowledge management is critical to project performance. In addition, a plan-based approach that concentrates on aligning documents complements the people-based approach and contributes further to project performance.

The section that follows provides background for our theoretical model of knowledge management in projects. In this model, the focus is placed on the alignment of knowledge across three knowledge areas through both a codification and socialization process. Improved social and document alignment is theorized to lead to improved project performance as measured by the quality of the project outcome and the satisfaction of the organization with the outcome. The model is used to develop hypotheses regarding the impact of knowledge management on the production of documents, document alignment, social alignment and project performance outcomes. Measures of these constructs along with a survey method are described. Results from a structural

equation model analysis are provided and these results are followed by a discussion and conclusion.

## 2. Background

The terms “knowledge” and “knowledge management” lack universal definitions (Nonaka and von Krogh, 2009). What they refer to often depends upon the context and level of analysis. For example, at the industry or firm level of analysis, the knowledge-based theory of the firm (Grant, 1996) suggests that knowledge be viewed as a strategically significant organizational resource embodied in multiple entities including organizational culture, policies, routines and employees. Alternatively, at the functional level, the community of practice literature (Brown et al., 1989; Brown and Duguid, 1991) suggests that knowledge is situated in a learning community and is not a firm level resource. The knowledge in a community of practice is not separable from the activity, context and culture within which the knowledge is being developed.

Our focus on knowledge management is placed within the context of an IT-enabled business project, an entity that has a mandate to deliver change to the “base” organization (Andersen, 2008). The IT-enabled business project is a unit typically composed of individuals who have different disciplinary backgrounds, belong to a different part of the base organization or to an external organization, and consequently often have different goals and objectives. This complexity creates challenges for integrating technology and human systems as has been detailed in socio-technical literature (Mumford, 2003). Successful exploitation of IT requires the integration and coordination of knowledge areas across technical, organizational and business unit knowledge dimensions (Markus, 2004). As Peppard and Ward (2004, p. 183), describe it:

“Managing IS/IT and delivering business value is essentially a set of knowledge-based activities: a complex and multidimensional set of tasks and processes, incorporating many different but interdependent types of knowledge. It involves integrating and coordinating knowledge from many individuals from different disciplines and backgrounds, with varied experiences and expectations, located in different parts of the organization.”

We have noted that knowledge from various sources has to be managed within an IT-enabled project. There are also different types of knowledge to be managed. The classic distinction between explicit and tacit knowledge provides a starting point (Polanyi, 1966). Tacit knowledge, strictly defined, defies codification. This paper relaxes that definition and incorporates the knowledge conversion processes described by Nonaka (1994) and by Nonaka and von Krogh (2009) such that knowledge that has not previously been articulated is tacit but that when such knowledge is expressed in documents we refer to this as a process of codification (Hansen et al., 1999). When knowledge is shared through interaction or conversation with other people we call this the process of socialization (Hansen et al., 1999).

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