

# Knowledge entrainment and project management: The case of large-scale transformation projects

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## Abstract

An increasing number of change processes and initiatives are organized and implemented as projects, often through the formation of ‘large-scale transformation projects’ (LST), involving a great number of specialists, departments, partners, development work, and knowledge bases. The theoretical foundation that supports the choice of managing change as projects and, in effect, the role of project management has received surprisingly little attention in the current literature. In this paper, we present a model where the success of change initiatives is explained by the quality of project management, which in turn is determined by the quality of knowledge integration. The outlined model highlights knowledge integration as a process determined by the scope and speed of change, which typically result in problems with synchronization of activities within an LST project. Our model draws on the idea of ‘knowledge entrainment’ to explain the fact that different parts (organizations, teams, individuals) tend to develop different time orientations and hence rely on different cycles of knowledge processes. This has important effects on the absorptive capacity of the involved parts of the project and the amount of information and knowledge that the project can digest. This paper discusses different knowledge-entrainment mechanisms and their effects on the role and practice of project management. Empirical data from an LST project in Posten, one of Northern Europe’s largest messaging and logistics operators, illustrate the model. The paper contributes to the analysis of the relationships between knowledge integration and time, particularly in LST projects.

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## 1. Projects and the practice of change

Change processes and change management are perhaps two of the most discussed and researched topics in management and organization studies. Despite the many studies, articles and books that have summarized the key lessons learned from change initiatives throughout the world, their ensuing results and the eminence of change management have been questioned and sometimes even severely criticized. In particular, some researchers have called for closer scrutiny of the practice of change. Recent works on ‘strategy-as-practice’ and strategizing have, in a similar vein, emphasized the need of analyzing the project management

of strategic and organizational initiatives, and particularly how transformation projects drive strategic change processes (Whittington et al., 2006). Studies have also documented the wide use of project management and the inclination of change to become ‘projectified’ (Whittington et al., 1999), which led researchers to conclude that “project managing strategic reorganisation is far from easy – research suggests that two thirds of strategic transformation projects fail in some degree, with inadequate project management an important cause” (Whittington et al., 2006, p. 621). This generally indicates the need for a deeper empirical analysis of the management and organization of change projects. Two observations are particularly interesting here: (1) change is increasingly being organized as projects (strategic projects, change projects, transformation projects, etc.), and (2) projects in general, be it development

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or business projects, are increasingly involving change elements, i.e., a development project is not only a development project, but additionally an opportunity for organizational renewal (see, e.g., Bowen et al., 1994).

In this paper, we focus on a type of strategic change project that is referred to as ‘large-scale transformation’ (LST) projects. Managing this type of project is a difficult, challenging and complex endeavor. An LST project is characterized by its criticality to the strategic development of the firm and to company performance – both in the short- and long-terms. Studying this kind of project opens up not only an understanding of the linkages between project management and change management, but, also provides a better understanding of the role and value of project management. An LST project typically involves more than 1000 project members, numerous knowledge bases and technologies, complex contractual structures with external partners on client and supplier sides, and a wide range of development and restructuring activities, including the restructuring of production facilities, parallel development and termination of operations, new services and products. This project type is characterized by unique goals, complex and uncertain processes and outcomes, several separate but interrelated sub-projects, severe time limits, investments over several years, and high risks for top management. Due to the large number of participants and units involved and the required organizational differentiation, an LST project typically engages a mix of different time orientations since several different organizational units take part in the project and/or are affected by the project. As a result, some participants have a strong project-orientation whereas others have a functional-orientation. Additionally, some of the actors involved work full-time on the project, others part-time, some are internal resources, and others are external, such as consultants or hired experts. Therefore, this is a particular category of project with a number of difficult challenges. For our purposes, it is important to be focused on the sheer complexity of LST projects and much of the focus of this paper is specific to a LST project. However, we believe, the overarching ideas and conclusions drawn from this study may be valid for other kinds of projects struggling with knowledge integration and time-orientation problems.

Despite the many publications that have called for closer examination of the intersection between change and project management (e.g., Buchanan, 1991), only limited scholarly attention has been paid to the advance of a formal theory that explains the existence of change projects and explicates the role of project management. Given our interest in LST projects with their many knowledge bases, we believe that the analysis might benefit from recent theories on the knowledge-based view of the firm and, because of the speed and complex synchronicity involved in these projects, the literature on the social psychology of time. Combined, these strands of literature have the capacity to give powerful explanations to the fundamental questions concerning why change is

organized as projects and what role project management plays in these instances. Consequently, we explore the linkage between change management and project management through the lens of knowledge integration. We suggest a specific approach to knowledge integration in these settings, inspired by the idea of ‘entrainment’. The concept of ‘knowledge entrainment’ is suggested to coalesce knowledge-based explanations with explanations from the social psychology of time to further assist in the analysis of the management of LST projects (see also Söderlund, 2009).

The paper is structured in the following way: first we describe the basic propositions underpinning our model; after that follows a discussion about the theoretical foundation for the model. This provides a more general analysis of the organization and management of LST projects and a set of specific points that we argue are important to consider in the analysis of knowledge entrainment in LST projects. In the next part of the paper, we present empirical data from an in-depth, real-time study of a major LST project from Posten, one of the leading logistics firms in Scandinavia, which changed its business model, organizational structure, and service/product portfolio. This empirical illustration helps to demonstrate the validity of our model. Finally, we conclude with a discussion of our proposed model.

## 2. Basic propositions and variables

To lead the way for the development of a model that explains the existence of LST projects and the role of project management in these settings, we develop six basic propositions. These propositions are theoretically explored in the second part of the paper. To start with our initial argument, we formulate the first proposition:

**Proposition 1.** *The success of large-scale change processes is highly dependent on the effectiveness of project management.*

This proposition acknowledges the complementarity frequently observed in change processes (Whittington et al., 1999). This complementarity suggests that project management plays an increasingly important role in the management of large-scale change processes, which indicates the significance of integrating a number of knowledge bases, technologies and parts of the project; formulated differently, this addresses the level of differentiation in the project (cf., Lawrence and Lorsch, 1967). This level of differentiation generally gives rise to a need for integration. Given this need, the quality of project management becomes decisive for the success of large-scale change processes.

Our second proposition highlights a second aspect of the complexity of change: when more sub-processes and units are involved, *ceteris paribus*, the greater the need for integration. In addition, when time is compressed the interdependencies normally increase. This would generally lead to a situation when scope and speed increase, the importance

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