# Advancing Organizational Alignment Decisions:

## **Insights from the Structural Alignment Theory** to the Business - IT Alignment Problem

Hannu Kivijärvi, Aalto University School of Business, Helsinki, Finland

#### **ABSTRACT**

In this article, a theory-driven approach for managing the alignment process between business and IT by making high-quality IT investment decisions is developed. The aim is to increase the understanding of the dimensions of the alignment problem and to offer some support in solving it. The conceptualization of the alignment issue is searched from the structural alignment theory, arising from and applied in psychology. After the theoretical considerations, the article adopts a multidimensional and constructive approach to the alignment problem and looks for answers to the question: How should organizations align business and IT, or at least, how to support the business and IT alignment decisions? As a result, a theoretically sound framework originating from the alignment problem is proposed for the evaluation of IT investments, a methodology based on that framework, and a concrete investment support system to help decision makers. The applicability of the approach is evaluated in the context of an actual case in the finance sector.

#### **KEYWORDS**

AHP, Alignable Differences, Business - IT alignment, Decision Making, IT Investments, Nonalignable Differences, Organizational Alignment, Structural Alignment, Support System

#### 1. INTRODUCTION

During the last century, efficiency in organizational contexts has been sought by specialization, functional differentiation and professionalism - generally, by division and structuring of work. Impressive success stories at the level of organizations and in whole societies have been heard. Consequently, additional managerial requirements to integrate and coordinate the diverging activities within organizations have been recognized at the same time. Organizational units and other groups have become committed to their own goals and started to compete with each other, instead of cooperating and striving towards common goals. The need to align interorganizational or grossfunctional activities has arisen. At the same time organizations operate at more and more competing product and resource markets, and thus the need to align organizational activities in the exogenous context have become obvious as well.

Generally, alignment is the proper positioning or state of adjustment of parts in relation to each other (Merriam-Webster, a). If not a synonym, alignment is at least closely related to the concept of 'fit'. The best known 'fit' -theories are tied to the perspectives of natural selection where the fit is the

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result of an evolutionary process. The theories of managerial selection have adapted the principle of fit to the organizational context-structure relationship.

Today, information technology (IT) has penetrated every organization of any size in every industry. It is difficult to find organizational activities or processes where information systems would not be employed in one way or another. In addition to academic interest, the alignment problem between business and information technology has been assigned to a set of the most challenging IT topics in practice. The problem spans multiple dimensions, like all organizational decision levels, different time frames, intellectual and social capabilities, tangible and intangible assets, organizational structures and processes, etc. It is a most wicked problem with complicated, controversial, diversified and pluralistic features. In the literature the problem has been typically oversimplified by focusing only on a few dimensions and ignoring the others.

Organizational alignment in general but also the alignment between business and IT does not just happen; it is realized by a series of decisions at different organizational levels. The abilities and skills to make such complicated and multidimensional alignment decisions are rare (Powell, 1992), and all support is valuable to advance the quality of those decisions. One of the most significant classes of such decisions are the IT investment decisions. The business – IT alignment (BITA) is finally created or solved by these investment decisions. In principle, the whole IT function within an organization and thus, the whole alignment problem is a result of investment decisions and by implementing those decisions. Fortunately, the problem can also be solved by proper investment decisions and their implementation. Behind the high-quality investment decisions there are, of course, a number of organizational, managerial, financial, technological, and other factors. IT governance, economic situation, technological competences, project management capabilities, to name only a few, might have critical effects on the quality of IT investment decisions.

First and foremost, the purpose of this paper is to combine and integrate IT investment decisions and the alignment issue at the theoretical and conceptual level. To reach the purpose, conceptualization of the most significant dimensions of BITA problem as suggested by prior alignment studies is needed. Unfortunately, the plethora of diverse, nonintegrated concepts and dimensions makes it difficult to develop an integrated, parsimonious approach for managing the alignment process. In order to address this difficulty, a more definite conceptualization and explanation of the alignment issue is searched from the structural alignment theory (SAT), arising from and applied in psychology. In SAT, entities are viewed "as systems of objects, object-attributes and relations between objects" (Gentner, 1983, p. 156). The theory states that two entities can be compared by putting the hierarchical structure of one entity into alignment (or correspondence) with the structure of the other entity to which it is compared. The principles of structural alignment (SA) have extended beyond analogical reasoning to other cognitive phenomena, such as comparison (Markman & Gentner, 1993b) and choice (Markman & Moreu, 2001; Markman & Medin, 1995; Medin, Goldstone, & Markman, 1995). Moreover, the theory has been applied to other phenomena, like information extraction (Mauch, 2000) and opportunity acknowledgement in markets (Grégoire, 2005).

After the theoretical considerations, this paper adopts a constructive approach to the alignment problem and tries to find some answers to the How-question: How should organizations align business and IT, or at least, how to support BITA decisions? The purpose is to develop a theory-driven approach for managing the alignment process by making high-quality IT investment decisions.

Next, the argumentation of the discussion is based on prior studies on BITA, studies on IT investments, and especially on SAT. In section three, the theoretical discussion is materialized as a new alignment approach. In section four, the applicability of the approach is evaluated in the context of an actual case from the financial sector.

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