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Understanding Strategic IS Alignment: Toward a Process Guide Framework

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ABSTRACT

The need for strategic alignment of business and information systems (IS) strategies and objectives has become increasingly important to organizations, yet little is known about the appropriate processes for creating strategic IS alignment. Rapid change, internal and environmental forces necessitating strategic IS alignment require us to look beyond traditional, intellectual, planning based views of alignment toward other levels of analysis and social theoretical viewpoints. This work builds upon past alignment theory and incorporates critical elements from change management, leadership and IT adoption/diffusion literatures. The goal of this research is to develop a strategic information systems alignment process guide. This process guide framework encompasses six stages of IS alignment: Awareness, Generation, Motivation, Unification, Empowerment and Fusion. This work helps generate a greater understanding of strategic IS alignment by uniquely integrating leadership, shared vision, change management and IT adoption/diffusion theory into strategic alignment.

IMPORTANCE OF STRATEGIC ALIGNMENT

Strategic IS alignment, is considered by many organizations and business people to be one of the most important issues facing management and business strategy, today (Tan and Gallupe, 2003, Sabherwal and Chan, 2001, Luftman and Brier, 1999, Thompson and King, 1997, Reich and Benbasat, 2000). The linking, matching and/or harmonizing the corporate goals with the technological goals, unites all organizational communities within the firm move towards the same objectives. The importance of strategic IS alignment to organizations has been emphasized in the literature and researchers have investigated the process of realizing alignment for over a decade, however, a commonly accepted framework for attaining strategic alignment has not yet been developed (Reich and Benbasat, 2000). Additional research is needed to help firms gain the knowledge of how strategic IS alignment can be achieved and maintained (Chan and Huff, 1993).

Despite the progress of IT toward a more strategic organizational role, few researchers have examined the complex social forces influencing strategic IS alignment (Tan, 1999; Reich and Benbasat, 2000) and even fewer researchers have pursued the development of a process guide for strategic alignment (Luftman and Brier, 1999).

From a synthesis of relevant literature (Broadbent and Weill, 1993; Kotter, 1996; Reich and Benbasat, 2000; Gallivan, 2001), it appears strategic IS alignment is the product of change management (including good communication and leadership), mutual understanding, shared vision and integrated planning, and IS adoption/diffusion theory. However, a large theoretical gap exists concerning what the elements of a process model are and how these elements (as offered by varied influencing theories) could interact - especially in ways which can be implemented by practice and which also contribute to academic theory.

The goal of this study is to develop a more complete process guide for strategic IS alignment encompassing the critical elements of strategic IS alignment and based around components of alignment, change management and diffusion theories. It addresses gaps in prior knowledge by uniquely incorporating these theories. Little is understood about these gaps as they are highly complex and mainly social in nature, making them difficult to measure.

In the next section the theoretical underpinnings of this work is discussed. The theoretical framework developed as a process guide to strategic alignment is then presented. Conclusion follows.

UNDERLYING SUPPORTING THEORIES

It appears as strategic IS alignment research has evolved it has moved to a more social focus – one that increasingly explores more highly complex social issues. In order to understand the complex internal and environmental forces necessitating strategic IS alignment, we must look beyond traditional, intellectual, planning based views of alignment toward other levels of analysis and social theoretical viewpoints.

The present study has been designed to encompass critical social elements of strategic alignment which were beyond the scope of previous works. These elements have been identified as emerging from three supporting theories: social aspect of strategic alignment; change management (including leadership, shared vision, communication, and planning) and diffusion/adoption literatures.

Social Aspect of Strategic Alignment

Few researchers have examined the complex social forces influencing strategic IS alignment (Reich and Benbasat, 2000). The social dimensions of alignment efforts must be heeded as any efforts towards transformation which are incompatible with the culture of the organization will be subject to rejection (Kotter, 1996). Chan and Huff (1993) outline the three stages organizations have historically passed through in the formation of alignment: Awareness, Integration and Alignment.

As far back as 1990, Zviran found the presence of strategic alignment. Reich and Benbasat (2000) expanded on Zviran's work by examining the social dimensions of strategic alignment. Reich and Benbasat found alignment was affected by factors such as: shared domain knowledge, IT implementation success, communication between business and IT executives, connections between business and IT planning and short-term business direction. The necessary elements from Reich and Benbasat's work have been incorporated into the IS alignment process guide.

Strategic Change Management

Results from a recent survey suggest many executives attribute their success to clear strategy (Anonymous, 2001, p. 3). Eighty-four percent of these executives also claimed a shared vision characterized their cultures when successful. By creating a shared vision of goals, a leader can create a clear conception of strategic intent. A clear understanding of vision unifies individuals and helps to move organizations toward a desired future state (Campbell and Collins, 2001, Nanus, 1996, Davis, 2001). Many factors play contributing roles in the alignment process.

These factors necessitate management strategy and leadership as integral to the success of any complex corporate process - especially an IS alignment process. Strategic leaders demonstrate through their actions. "Landmark decisions, training programs, reward structures, celebrations, performance measures, and feedback must all reinforce behavior and, ultimately, a unique and appropriate culture" (Campbell and Collins, 2001, p. 32) as was also previously noted by Kotter and Conger, Spreitzer and Lawler strategic change discussions.

Conger, Spreitzer and Lawler (1999) and Kotter (1996, 1999), both offer essential steps to manage organizational change. As alignment involves change it is important to integrate change management techniques into an IS alignment process guide. Kotter (1999) has developed a process framework comprised of necessary steps for conducting efficient and successful change, including visionary leadership and planning. Kotter claims these steps are most effective when occurring in the order provided, however, if one step is not completed or is missed it can be carried out recursively. Kotter (1999) claims the omission of any of these eight steps can result in devastating errors capable of producing unsatisfactory results, slowing the momentum of change and "negating hard-won gains" (p.88). The strategic alignment process requires the strategic viewpoint and critical success factors from this comprehensive process model.

Information Systems Adoption and Diffusion of Innovation

Larsson and Lowstedt (2001) claim effective IT implementation is dependent on how the system is integrated socially within the organization. Social factors are both controllable and uncontrollable and it is this variability and uncertainty, which can make the high cost of implementation an enormous risk. Acceptance and comprehensive use of technology can be crucial to the success and even the survival of organizations. Stajkovic and Luthans (1998) ask us to look beyond organizational streamlining to explore new social/psychological processes in order adequately comprehend the motivations behind usage and adoptions. Gallivan (2001) asserts many social factors influence the breath and depth of the diffusion process.

Gallivan (2001) integrated traditional IS literature, models and frameworks to create a hybrid process model of facilitating and constraining themes around factors, origin, task technology and environment. Gallivan (2001) asserts certain factors have an influence on the IS processes. These factors or themes as defined by Gallivan's work can positively or negatively influence one particular stage or can alternatively influence several stages of the diffusion process. The factors or themes may also influence the depth and breadth of assimilation and therefore how well aligned a technology becomes, they therefore must be considered when creating and IS alignment process guide.

STRATEGIC IS ALIGNMENT PROCESS GUIDE

By blending the commonalties and core elements of the underlying theories a hybrid theoretical framework emerges (see Table 1). The framework is based upon three foundational models discussed above: Reich and Benbasat (1994, 2000), Gallivan (2001), and Kotter (1996).

The Reich and Benbasat's (2000) framework offers a foundation in social alignment as well as providing necessary elements for successful alignment outcomes, such as planning, shared understanding, communication and past implementation success. Implementation success was found by the authors as necessary to the alignment process and as the IS alignment process involves transformations, IS assimilation and integration theory must also be examined to ensure current technologies and any technological changes maintain a strategic fit with the organization's objectives and directives.

Gallivan's (2001) factors or themes may influence the depth and breadth of assimilation and therefore how well aligned a technology becomes. Gallivan's work is very comprehensive regarding the elements required for this work and therefore has been chosen for inclusion in the theoretical framework.

Of the change management theories examined, Lewin (1952), Conger, Spreitzer and Lawler (1999), and Kotter (1996, 1999), Kotter appears to be the most comprehensive and best fitting to the objectives of this study. Kotter's framework also includes elements of leadership, shared vision and communication and has therefore been chosen for inclusion in the framework of the present study.

Supplemented by other important elements from the literature, these three foundational frameworks fill gaps of prior theoretical knowledge and offer a more comprehensive view of strategic IS alignment process. The important linkages between the three supporting theoretical frameworks have not yet been demonstrated by prior research, and it is hoped a coupling of relevant theories will enable leaders to participate more completely in the IS alignment process and will hopefully increase the likelihood of alignment success. Similarly to the supporting theories, this six-step framework is defined by necessary phases, integral to completion of the alignment process. The six steps are presented in Table 2.

These six steps are labeled Awareness, Generation, Motivation, Unification, Empowerment, and Fusion. They six steps lead to alignment and are explicated as follows:

Table 1. Hybrid Theoretical Framework

Diffusion of Innovations	**Social Aspects of Strategic Alignment**	**Strategic Change Management and Leadership**	***Strategic IS Alignment Process Guide***
·Gallivan's Hybrid Model	**·Reich and Benbasat**	**·Kotter**	
A: Strong, clearly communicated messages from top management.	Existence of Visionary Planning	Establishing a sense of urgency	***Awareness***
			Generation
B: High levels of committed resources.			
C: A strong, top-down, bureaucratic organizational culture.	Communication/ Shared Understanding	Forming a powerful guiding coalition	***Motivation***
		Creating a vision	***Unification***
D: Highly centralized planning and oversight of an organizational initiative		Communication of the vision	
E: Cultural norms reinforcing the locus of responsibility for ongoing learning and career development.	Historical Implementation Success	Empowering others to act on the vision	***Empowerment***
F: Cultural norms reinforcing views of employees' job roles.		Planning for and creating short term wins	
G: Perception of job security.		Consolidating improvements and producing still more change	***Fusion***
H: Individual attributes.		Institutionalizing new approaches	
Strategic IS Alignment			

Table 2. Strategic IS Alignment Process Guide

Awareness	Need Awareness	• Kotter (1996, 1999)
Generation	Visionary Planning	• Gallivan (2001), Reich and Benbasat (1994, 2000) Kotter (1996, 1999)
	Urgency	• Gallivan (2001), Kotter (1996, 1999)
	Obvious Gestures	• Gallivan (2001), Kotter (1996, 1999)
Motivation	Resource Commitment	• Gallivan (2001), Kotter (1996, 1999)
	Communication	• Gallivan (2001), Reich and Benbasat (1994, 2000), Kotter (1996, 1999)
Unification	Shared Vision	• Kotter (1996, 1999)
Empowerment	Historical Success	• Reich and Benbasat (1994, 2000)
	Action Empowerment	• Kotter (1996, 1999)
	Cultural Change	• Gallivan (2001), Kotter (1996, 1999)
	Rewards	• Gallivan (2001), Kotter (1996, 1999)
Fusion	Consolidation	• Gallivan (2001), Kotter (1996, 1999)
	Institutionalization	• Gallivan (2001), Kotter (1996, 1999)
Alignment		

1. **Awareness:** (1a) *Need Awareness:* In this phase the identification of the existence of a problem, the need for change, or the opportunity for improvement comes to fruition. Solutions are speculated.
2. **Generation:** (2a) *Visionary Planning:* A clear, compelling and understandable vision of the future is created from chosen solution to the problem/opportunity. This vision epitomizes the ideal results of the project. Organizational leaders (project leaders as well as top hierarchical members) begin to describe and quantify goals and objectives designed to accomplish the future vision. Integrated, inter-departmental plans are fashioned and laid out to accomplish the future vision and goals. (2b) *Urgency:* High levels of complacency will halt the change process in its onset. A sense of the importance and immediacy of the project and its impending deadlines are disseminated. (2c) *Obvious Gestures*: Support for the project is demonstrated by organizational leaders and alignment champions through bold, clear gestures - both verbal and behavioural. Examples included, public discarding of old plans or ceremonies welcoming new vision. Organizational members must be shown support goes farther than just verbal and written patronage.
3. **Motivation:** (3a) *Resource Commitment:* Negotiation for the division and dissemination of significant resources, such as financial support, communications, time, training and facilities begin and enable organizational members to assume future vision. (3b) *Communication:* The future vision and strategic plans are conveyed to organizational members with frequency and on a grand scale. Reciprocal and inter-member communication is endorsed to increase understanding, the effectiveness of inter-departmental planning and most importantly, momentum and excitement.
4. **Unification:** (4a) *Shared Vision:* Abundant communication leads to a common, mutual understanding for the desirable future state of the organization. A future oriented shared understanding of intended goals leads to a shared vision. Resistance to change is addressed. The organization is unified in its efforts toward a common goal.
5. **Empowerment:** (5a) *Historical Success:* Past successes are drawn upon as the groundwork of previous knowledge and experience for the current project. Historical successes serve as both a memory and a learning tool, and act as motivation for thrusting the project forward. (5b) *Action Empowerment:* Strategic change is often created by a small group of individuals and enacted upon by a large group of people. Skill acquisition is necessary either through training or hiring of new employees. The community of implementers must be empowered to remove barriers to the success of the strategic initiative. Some examples of obstacles may include financial restrictions, organizational structure, out dated procedures, technological difficulties, lack of support, unanticipated events, rejection of new ideas, laggards (remaining few individuals still resisting change) or pressure from external forces. (5c) *Cultural Change:* In order for the innovation to diffuse throughout the organization, cultural norms must reinforce its adoption. Attitudinal and behavioral modifications are necessary to reflect new responsibilities and perceptions of the altered working environment. The influence of attitudes and behaviors on the implementation process must be demonstrated. (5d) *Rewards:* Perceptible improvement milestones should be anticipated, strategically planned and rewarded to maintain project momentum. Those involved and/or displaying these improvements should be visibly rewarded. Behaviors and attitudes modified to promote the success of the project are recognized during this phase. Celebrations of successes provide social support for changes.
6. **Fusion:** (6a) *Consolidation:* The innovation has been accepted and routinized into the organizational culture. Implementation is nearly complete. Organizational members are utilizing the new system and their new skills as part of their regular work responsibilities. They are discovering new and innovative ways to of using the new system to improve their efficiency, their work situation and organizational competitiveness. New hires are establishing themselves and becoming comfortable in their new environment. The process is continually rejuvenated through reward systems, hiring, promotion, development, leadership and management support. (6b) *Institutionalization:* The implementation and innovation have become anchored as part of the organizational structure, procedures and culture. The success of the project is celebrated and can be used to fuel future endeavors. The project is assessed through measurement and feedback. Adjustments are made to maintain strategic fit. Leadership and change management strategies are utilized to ensure succession.

Strategic IS Alignment: The six steps result in strategic IS alignment. When alignment has been achieved, the organization has attained the 'ideal results' they had envisioned for the future. Technology use is comprehensive, integrative and institutionalized. It is being utilized to its greatest capacity (within its particular situation) or in other words, its ideal capacity and all aspects are strategically aligned.

NATURE OF THE PROCESS MODEL

This framework is a process model developed from other process models and from factors necessary for successful outcomes. A process structure, inclusive of its inherent sequencing should then be applicable in this situation. The strength and value of process and stage research models lies in their ability to describe change processes and in their usefulness for understanding the various stages of technology processes - including the factors and events that influence them (Gallivan, 2001). These strengths should be carried forward in similar adaptations of these process frameworks. Basing the framework for this study on earlier process frameworks enhances the likelihood of inherent process aspects being incorporated.

By assessing an organization at a certain phase, one cannot assume all previous phases have been met and completed at any given time. However, it can be assumed some or most of the previous phases have been engaged as the literature has stated, all steps/factors are essential for their particular processes and successful outcomes - although some steps can be carried out in a recursive order. Kotter's theory (1999) claims the omission of any of the eight steps in his process model can result in devastating errors capable of producing unsatisfactory results, slowing the momentum of change and "negating hard-won gains" (p.88). Kotter claims the steps are most effective when occurring in the order provided, however, if one step is not completed or is missed it can be carried out recursively. Additionally, the alignment framework is based upon a list of success factors for strategic alignment and where recursive causality between factors was expected. Reich and Benbasat identified some interactions between constructs, although it was not possible to for the researchers to determine the weight of influence of each construct (2000). Therefore, although the process framework for this study is

based on process models and therefore should retain its inherent process nature, it cannot be assumed every previous step in the process have been successfully completed at a certain point in the framework.

CONCLUSION

A large gap exists in research regarding how best to create strategic alignment. Although the current methods have been in existence for many years, a clear commonly accepted model has been yet to be recognized. A standard measure of alignment, its sub-factors and the degree of penetration of alignment throughout the organizational culture is needed.

The composite nature of the process guide framework presented in this paper increases our understanding of the necessity for linkages between theoretical models of related research disciplines. Hybrid models such as this process guide help to reduce the gaps in our understanding and connect the practice to theory by observing circumstances more broadly and universally.

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