Strategic Alignment: A Purposeful Perspective

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Résumé
Des approches traditionnelles a l’alignement stratégique ont été critiquées parce qu’elles soulignent l’hierarchie et le rationalisme. Ces approches ont eu comme conséquence les théories et les modèles conceptuels qui ne s’appliquent pas bien aux situations réelles qu’on rencontre dans les entreprises. Ce papier de recherche en cours offre une nouvelle perspective sur l’alignement stratégique qui donne la priorité aux contributions humaines. Le modèle proposé est basé sur deux théories précédemment développées: la “purposeful systems paradigm” d’Ulrich (1983) et “cultural historical activity theory”. Une étude de cas est employée pour illustrer comment les deux théories peuvent être combinées et mises en pratique en ce qui concerne l’alignement stratégique.

Mots clés :
Alignement stratégique, formulation des systèmes d’information stratégiques, “cultural historical activity theory”, “purposeful systems”.

Abstract
Traditional approaches to strategic alignment have been criticised for their overly rational, top-down emphasis. These approaches have resulted in theories and conceptual models that do not correlate well with real-world situations. This paper offers a new perspective on alignment which gives prominence to uniquely human influences and contributions. The proposed model is based on two previously developed theories: Ulrich’s (1983) purposeful systems paradigm and cultural historical activity theory. A case study is used to illustrate how the two theories can be combined and applied to alignment issues in practice.

Key-words :
Strategic alignment, strategic information systems planning, cultural historical activity theory, purposeful systems.
Introduction

The alignment of information systems (IS) and business objectives remains an elusive goal despite an abundance of research into the topic (Chan, 2002). Henderson & Venkatraman (1993) argue that the lack of alignment between IS and business strategies is the reason many businesses fail to realise value from investments in information technology (IT). Chan, Huff & Copeland (1997) demonstrate the correlation between IS alignment and performance or organisational effectiveness. Other studies that identify IS strategic planning and alignment as a key issue in information systems management include Brancheau, Janz & Wetherbe (1996) and Hartog & Herbert (1986).

A widely accepted definition of strategic alignment presented by Reich & Benbasat (2000) is “the degree to which the information technology mission, objectives, and plans support and are supported by the business mission, objectives, and plans”. This definition relates to strategic alignment of information technology (IT) or information systems (IS) with business. Related concepts include external fit (referring to the relationship of a business with its environment), internal fit (referring to the appropriateness of internal organisational structure) and strategic information systems planning (SISP) which is the process through which strategic alignment is traditionally planned for.

This paper will focus on strategic alignment and processes related to the achievement of strategic alignment. The next section will highlight criticisms of traditional approaches to alignment and explore alternative approaches which could potentially address the criticisms. The following section presents a model which offers a new perspective on strategic alignment intended to overcome the major criticisms of previous perspectives. The model is based on a combination of two previously developed approaches: Ulrich’s (1983) purposeful systems paradigm and cultural historical activity theory (CHAT). This paper and the associated research combine the two approaches in a unique way and then focus on application of the resulting framework. Thus, contribution is expected to be more in terms of operationalisation or application of theory than theory development. The section describing the new perspective also provides a brief illustration of how the theory could be applied in practice. The illustration is developed using a case study previously documented by Simonsen (1999). The final section presents a summary of the key points in the paper and discusses potential directions for future research.

1. Critical Perspectives on Strategic Alignment

Ciborra (1997) criticiseds the dominating IS literature for its rational, top-down approach to alignment and strategic information systems planning, claiming that the conceptual models developed are not useful within the domain of practical experience of managers and organisations. An approach with a strong focus on the uniquely human aspects of the people involved in the planning process (and beyond) would be expected to correlate better with real-world situations than a strictly rational model of SISP.

Traditional approaches to alignment view it as a top-down planning process where upper management develops a set of strategic plans which when implemented result in information systems that fit well with the current business strategies (Henderson & Sifonis, 1988; Premkumar & King, 1994; Lederer & Sethi, 1996). The alternative approach, supported by Ciborra (1997) and Simonsen (1999) is to proceed from the bottom-up where designers and users of the systems also contribute to the planning process.

Knoll & Jarvenpaa (1994) examine the need for flexibility in alignment which suggests that the process should involve an ongoing evaluation of alignment issues throughout all stages of system development rather than exclusively in the up-front planning stages as in the top-down approach. Simonsen’s (1999) design approach to alignment incorporates this aspect of flexibility.

Kearns & Lederer (2000) highlight the importance of a two-way reciprocal relationship between IS and business in achieving competitive advantage. Once again, this contrasts with the traditional top-down models that consider business strategy as a given input to the process of strategic information systems planning (SISP).

One final suggestion for improved SISP has been brought to light by Segars & Grover (1999). They point out that the IT environment encapsulates a very different set of trends, issues and concerns than the business environment that an organisation is operating within. A SISP model which incorporates the unique influences of the IT environment would better reflect the real-world situation and provide a richer starting point for the planning process.

2. A Purposeful Perspective for Strategic Alignment

Ulrich (1983) espouses a new paradigm of planning based on a purposeful systems approach. The approach highlights the importance of designing “for the development of intrinsic motivation and critical reflection on the part of those who will have to work and live with the designs” (Ulrich, 1983, p.335). He presents a taxonomy of problem-solving dimensions (Ulrich, 1983) which can be used to design and assess purposeful systems. The three problem-solving dimensions represent the three types of problem-solving processes that a purposeful system must address. Inquiry processes produce meaningful knowledge in relation to the system’s overall purpose. This is consistent with Churchman’s (1971) conception of Inquiring Systems. Action processes use the knowledge in pursuit of the purpose. Valuation proc-
In Engestrom's (1987) model, an activity is defined through the historical activity theory concept of an activity and is modelled using an object which is the purpose of the activity. Subsequently, representation of Vygotsky's (1978) cultural historical model can be more detailed using Engestrom's (1987) framework. Knowledge produced is used and valued in relation to the context within which the system is set and how the instruments and according to rules defined by the community. The division of labour is determined by relationships within the community.

Lewis (2002) argues that using a purposeful systems approach to analyse both corporations and information systems as human activity systems can lead to improved strategy formulation and alignment. She highlights the importance of both ‘intrinsic’ and ‘extrinsic’ purpose which are analogous to Giddens’ ‘micro’ and ‘macro’ – level activities in his theory of structuration (Bryant & Jary, 1991). Several examples assessing the purposefulness of various corporations according to Ulrich’s (1983) criteria are provided by Lewis (2002). For example, employee participation in strategy development forums at AT&T promotes the production of meaningful knowledge with respect to the corporation’s purpose which satisfies Ulrich’s (1983) criteria for a purposeful inquiry system. 3M’s policy of permitting employees to spend 15% of their time on bootleg projects encourages both the production and use of meaningful knowledge contributing to 3M’s qualification as a purposeful inquiry and action system. Komatsu’s institution of a committee to look at the broad social contributions of the company classify it as a purposeful valuation system according to Ulrich’s (1983) criteria. Lewis (2002) also provides an example illustrating the application of Ulrich’s (1983) taxonomy to information systems by analysing Alavi’s (2002) classification of two types of knowledge management systems. The repository model which aims at the codification of knowledge does not satisfy of Ulrich’s (1983) criteria for any of the three problem-solving processes. Since it is solely concerned with collecting knowledge, it does not produce, use or reflect on the use of any knowledge. The network model which is concerned with facilitating the flow of knowledge among individuals using information and communication technologies (ICT) is concerned with producing meaningful knowledge qualifying it as a purposeful inquiry system. Whether this model represents a purposeful action or valuation system depends on the specific context within which the system is set and how the knowledge produced is used and valued in relation to the system’s overall purpose.

Ulrich’s (1983) problem-solving dimensions can be considered as separate activities in the context of a larger human activity system such as a corporation or an information system. The different dimensions can then be modelled in more detail using Engestrom’s (1987) triangular representation of Vygotsky’s (1978) cultural historical activity theory concept of an activity (see Figure 1). In Engestrom’s (1987) model an activity is defined by an object which is the purpose of the activity. Subjects carry out the activity within a community using instruments and according to rules defined by the community. The division of labour is determined by relationships within the community.

Hasan (2002) argues that CHAT is an appropriate theory to use in the study of IS because of the unique way in which it incorporates the human aspects of activity systems and their relationship to ICT tools. Blacker (1993) supports the use of CHAT for tackling management problems at the strategic level within organisations. CHAT highlights the importance of people and processes and the fundamental role of purpose in any human activity system. Thus it encourages a shift in emphasis from the technology to the human side of information systems where people and processes have a central role.

The study of alignment involves looking at the relationship between an organisation and its information systems. Looking at an organisation using Ulrich’s (1983) paradigm categorises an organisation’s processes into three types of activities – inquiry, action and valuation – in support of the organisation’s overall purpose. Each of these problem-solving processes can be modelled in more detail as an activity in CHAT terms. Information systems can be seen as instrument-producing activities in support of the three central activities of the organisation. The problem of alignment then involves the contradictions (quaternary contradictions in CHAT terminology) between the three central activities and instrument producing neighbour activities of the information systems. This relationship is diagrammed in Figure 2. The smaller triangle represents the information systems which support the three fundamental activities of the corporation. In CHAT terminology, the information systems are instrument-producing activities where the object of the activity is to provide information in support of the fundamental business activities. The problem of alignment focuses on the connection between the triangles. Note that the different activities do not necessarily represent distinct information systems.
The effects of organisational structure are taken into account by the model inherently in the Community, Rules and Division of Labour components of each activity. Structural alignment between IS and business activities is not imposed by the model as a criteria for alignment. It is an underlying premise of this research that the IS and business activities can be aligned strategically while supporting different underlying structural configurations. Ghoshal & Bartlett (1995) emphasise the importance of processes rather than structure in resolving the tensions that prevent organisations from capitalising on their strengths and overcoming their weaknesses. The proposed research model can be used to operationalise this focus by conceptualising the business and information system processes as activities and focusing on the resolution of tensions or contradictions between the activities that prevent alignment.

Within the model, alignment is conceptualised as the process of working through the contradictions between the IS (instrument producing) activity and the central business activity. In this context, Hasan (2002, p.35) describes periods of “instrumental growth interrupted by discontinuities of growth spurts leading to knowledge creation and organisational learning.” This is consistent with Sabherwal, Hirschheim & Goles (2001) dynamic punctuated equilibrium model. Business processes and IS are viewed as dynamic activity systems with a more advanced central activity resulting from each period of change.

An illustration of the application of the model will be developed here using a case study documented by Simonsen (1999). The case documents a study done at the Danish Film Board in 1992. The main function of the film board (by law) was to “promote information, education, and artistic and cultural activities by producing and buying films and videos along with distributing such films and videos to their customers: Educational institutions, libraries, associations, and individuals”. Applications for production were received from directors and producers in the film milieu and processed by the editorial board. The department for order receiving and marketing was responsible for processing customer orders (via telephone or mail) which involved entering the orders into a central booking system. The marketing function involved “fieldwork” – personal visits to customers. An important factor influencing the strategic direction of the organisation was a government imposed mandate to increase income and focus more on the business aspects of operation.

A strategic planning process at the Film Board resulted in the recommendation that an online booking system be developed in order to free up resources for increased fieldwork so that artistic and cultural activities could be better promoted. Further study revealed that an online booking system was not likely to free up resources, because most customers did not have the required IT infrastructure to make use of an online booking system (the world wide web was not widely available at this time) and they were not willing to invest in the required infrastructure.

Using the proposed model (as diagrammed in Figure 2) to analyse the situation, four potential inquiry systems can be identified. The central booking system offers opportunities for production of knowledge about the demand for video distribution. The fieldwork undertaken also offers opportunities for production of knowledge in this area. The system of application review by the editorial board could provide knowledge about trends in the film milieu. A system for financial analysis could be used to produce knowledge related to the mandate for increased income.

The system for financial analysis becomes a purposeful action system if the members of the Film Board review or reflect on the information provided by the system and make decisions based on this information. For instance, knowledge from the financial analysis could be used to adjust pricing strategies or to reduce expenses in certain areas in order to increase income / profitability. If reports from the financial analysis system were to go directly to the government with decisions for operational change
being mandated by the government, the financial analysis system would no longer qualify as a purposeful system, because there would be no opportunity for contributions (based on intrinsic motivation and reflection) by those who live and work with the system.

Similarly for the other potential inquiry systems, it is possible to envisage action processes that could have been developed, based on the knowledge produced, in pursuit of the organisation’s purpose. Knowledge gained from analysis of information in the central booking system could be used to increase marketing in certain areas as part of the fieldwork visits or to influence decisions about accepting/rejecting applications (in order to increase profitability). Valuation systems would potentially involve systems that look at the influence of the Film Board’s decisions on Danish culture or the standard of education in the country. Specific questions that might be asked include whether the producers and directors whose applications are supported by the Film Board go on to achieve successful careers in the broader film industry or whether the availability of quality films for educational purposes is a significant factor contributing to higher educational standards.

The model helped to identify additional inquiry systems that could be used to develop knowledge related to the overall purpose of the organisation. It also encouraged exploration of how the knowledge developed could be used in pursuit of the organisation’s purpose and an evaluation of the broader effects these decisions would have on stakeholders in general. A more detailed analysis of the situation incorporating the CHAT framework would have highlighted the inappropriateness of the plan for an online booking system. The subjects of this system would be the customers and the instruments available to them did not include capabilities for online access.

3. Conclusion

This paper has argued for a new perspective in the domain of strategic alignment. Criticisms of current approaches to alignment were presented and then a new perspective based on the combination of two previously developed theories (Ulrich, 1983; CHAT) was described. Support for the use of these two theoretical frameworks in the domain of strategic alignment was drawn from the literature. Application of the framework based on the new perspective was briefly illustrated by analysing a previously documented case study.

The framework was developed in order to study alignment issues. Since alignment involves two types of human activity systems (corporations and information systems), the intent of the framework was to recognize and incorporate the uniquely human characteristics that affect alignment. Application of the framework necessitates a bottom-up orientation due to the required contribution of all those involved in the system. This contribution ensures that alignment issues are considered at all stages of system development. A two-way reciprocal relationship between IS and business is encouraged when resolving the contradictions between the information systems (as instrument producing activities) and the business problem-solving processes. Finally, the framework explicitly recognizes the unique influences of the IT environment by modelling information systems as activity systems in their own right using CHAT. So, the framework potentially addresses all of the criticisms with traditional approaches to alignment presented in Section 1 and will hopefully correlate more closely with real-world environments than previous approaches.

The perspective as presented represents a theoretical starting point for research into alignment issues. The next step in the research will involve attempts to apply the framework in real-world organisational settings and to evaluate the appropriateness and usefulness of the application. It is hoped that the research will result in insights into alignment issues and how to approach them. Thus, the main area of contribution is expected to be in terms of practical application of theory. There is also potential for insights into further development and/or refinement of the theory.

References


