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# INFORMATION STRATEGY DEVELOPMENT: THE STRATEGIC ALIGNMENT IMPERATIVE

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## Abstract

*The information systems field is currently undergoing many changes. Within the past few years many dot-com companies have fallen from grace as their stock prices and valuation have dropped along with investor confidence in their future potential. Their meteoric rise in the late 1990's was a surprise to many and their fall in 2000 was an even greater surprise since, while many analysts and brokers stated that their valuation was too high, the stock prices just kept on climbing. Now, more than two years later, the picture becomes a bit clearer and the aftermath of the dot-com crash can begin to be rationalized. This paper is not intended to be an economic analysis of what went wrong, but rather proposes that the business and information technology strategy of the firms was flawed and the result was an inability to remain competitive and, in some cases, viable in the wake of economic uncertainty. The strategic alignment model will be proposed as a means to assess the extent of business and information technology effectiveness within these firms.*

**Keywords:** Strategic alignment, assessment, strategy development, strategy implementation

## Strategic Alignment

Strategic alignment is the appropriate use of information technology (IT) in the integration and development of business strategies and corporate goals. It remains one the leading areas of concern of business executives and its importance has been well known and documented since the late 1980's (Brancheau & Wetherbe 1987; Dixon & John 1991; Niederman et al. 1991). It is often unclear exactly how a firm can achieve harmony between business and IT, and what the impact of misalignment might be. Nevertheless, the ability to achieve and maintain this synergistic relationship is anything but easy. Firms of all sizes representing diverse industries struggle with this seemingly difficult inter-relationship. While significant research has been done on traditional brick and mortar firms (Papp 1995; Chan & Huff 1993; Henderson, Thomas & Venkatraman 1992), very little research exists on the relatively new dot-com companies, including firms that do business exclusively over the Internet. This research (in-progress) will investigate whether the premise of strategic alignment (which has been investigated and validated in traditional firms) applies to Internet-based firms and to what extent it is imperative.

## Key Questions

In the quest for alignment, some key questions executives must ask themselves include "Are our business strategies and plans leveraging information technology (IT)?", "Are our company's business and IT organizations aligned?", and "What are the implications of a misalignment between business and IT?". These sorts of questions are essential when determining appropriate strategies that take advantage of IT capabilities. Alignment enables a firm to maximize its IT investments and achieve harmony with its business strategies and plans, leading to greater profitability and effectiveness. Alignment is important to firms for many reasons. The major reason is to ease the development and implementation of cohesive organization and IT strategies that enable firms to focus on the application of IT to improve the business. By understanding and leveraging the Business--IT partnership, organizations can concentrate on the application of IT to enable the business strategy. This harmony can be extended and applied throughout the organization as new opportunities are identified.

The alignment of information technology (IT) and business strategy to incorporate the capabilities of IT and to transform the business has increased in importance over the past few years as firms strive for competitive advantage in a diverse and changing marketplace (Faltermayer 1994; Adcock, Helms & Wen-Jang 1993; Cardinali 1992). In light of this, there has been a great deal of research and insight into the linkages between Business and IT (Chan & Huff 1993; Henderson, Thomas & Venkatraman 1992), the role of partnerships between IT and business management (Keen 1993; Ives, Jarvenpaa & Mason 1993), as well as the need to understand the transformation of business strategies resulting from the competitive use of IT (Boynton, Victor & Pine 1993; Davidson 1993). Firms have also been able to change not only their business scope, but their infrastructures as well as a result of innovation regarding IT (Keen 1991; Foster 1986).

## Background

Traditional methods of developing business strategies have failed to take full advantage of IT. Technology. IT was typically treated as a “cost center” or viewed as an “expense” rather than an enabler of business value (Alter 1995; Henderson & Venkatraman 1993). Strategic alignment sheds new light on IT and its role in the development of business strategies; it considers both the strategic fit between strategy and infrastructure as well as a functional integration between business and IT. By focusing on business and IT, strategic alignment addresses both strategy and infrastructure concerns to achieve alignment among these four areas.

Due to the restrictions on submission sizes we must leave out the discussions of other frameworks and models such as business process redesign, reengineering and traditional bivariate models and other approaches to assessing fit. These will be included in the more extensive paper when the full results are published.

Using the strategic alignment model (see Figure 1) as the basis for this study, Internet-based dot com companies and divisions of brick-and-mortar firms that have functioning e-commerce are being asked to analyze their business and information technology strategies to determine the extent of alignment within their firms. The data currently being collected will then be compared to an existing database of over 1400 brick and mortar firms to determine whether any significant similarities or differences exist in a variety of ways.

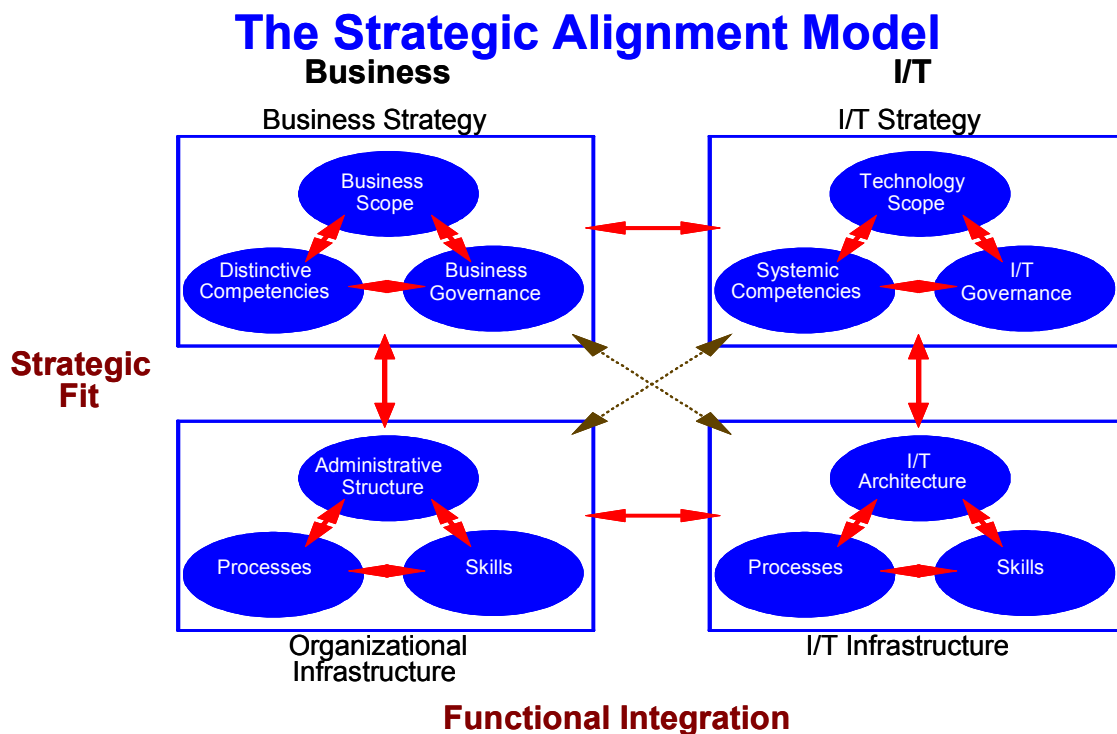


Figure 1. The Strategic Alignment Model  
(Adapted from Henderson, Thomas & Venkatraman 1992)

## Data Collection

Both quantitative and qualitative data will be collected and analyzed on a firm-by-firm basis rather than pooled to identify convergent findings about the firm. The data can be categorized as qualitative or quantitative and objective or subjective relative to the respondents. Our data collection methods, which used each of the categories, enhance the reliability of our findings (Creswell, 1994; Jick, 1979).

Before beginning the assessment, executives will have the opportunity to learn more about strategic alignment and its various components by using an interactive web-based model that provides the user with a point-and-click interface describing each component in detail. Currently this is located at <http://strategic-alignment.com/demo>. Thus, each participant will have a frame of reference from which to respond to the survey questions.

The twelve components of the strategic alignment model (Henderson and Venkatraman, 1993; Papp, 1995) are used as a foundation for the assessment. The series of questions, composed of both quantitative and qualitative measures, is used to measure respondents' perceptions of the constructs including the perceived degree of alignment within their firms and the assessment of their firm's alignment orientation. The questions are presented in a web-based format using active server pages (see figure 2). An assessment that is dynamically published based on the responses will give the participant feedback and assistance in assessing their firm's alignment and its implications. The web format has the additional advantages of allowing the survey taker the option to review their results at a later date and re-answer the questions to see how their assessment has changed. All of this information can then be used to develop longitudinal analyses that trace the ways each participant reports the changes in their firm's alignment. Such longitudinal assessment and their analysis are planned.

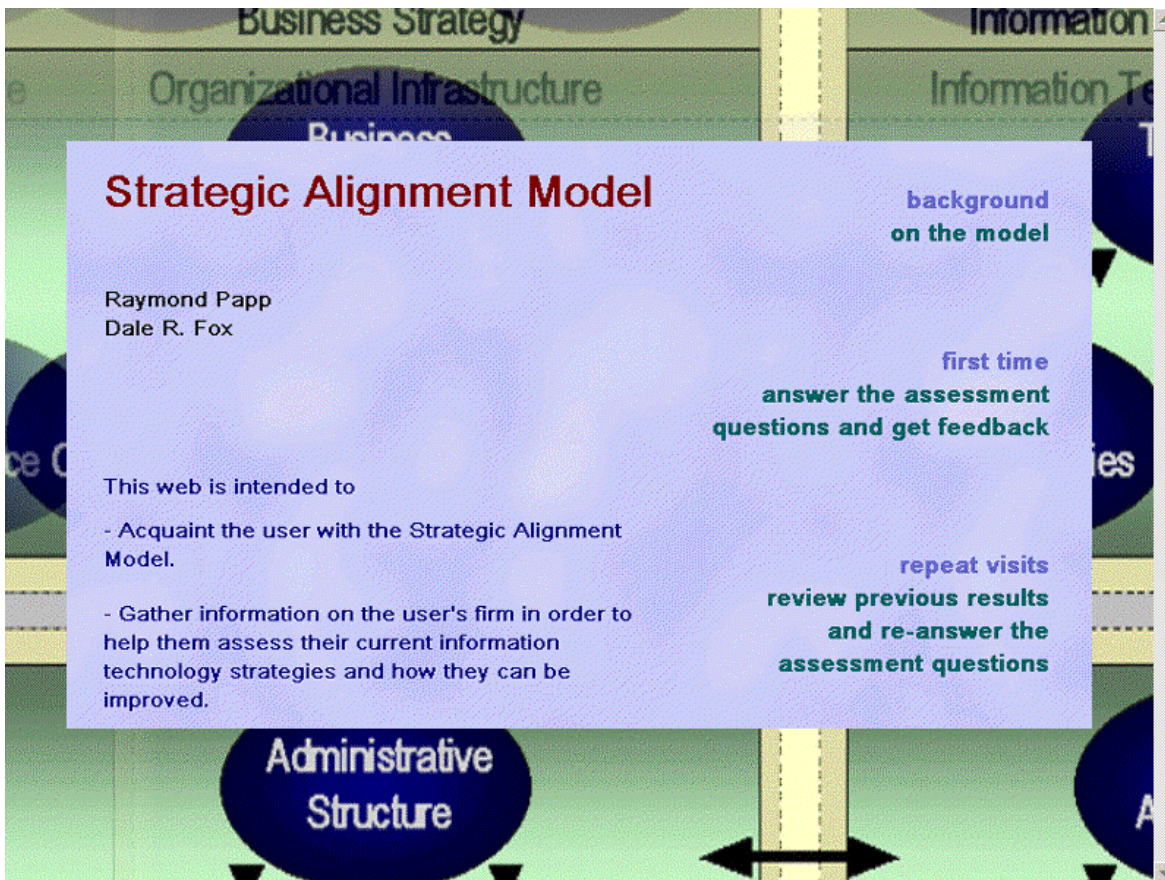


Figure 2. Web-based Assessment Tool

One sort of statistical analysis that has been used makes use of within-group mean responses computed from the questionnaire data and two-tailed t-tests performed to establish significance. In addition, when there is sufficient data, statistical comparisons on different participant groupings of the distributions of the responses will also be developed.



With respect to the questionnaire, it has been field tested in more than 1000 traditional firms representing numerous industry classifications (Papp & Luftman 1995 & Papp 2001). Initially, a pilot study was undertaken prior to the questionnaire's use. The original questionnaire was developed after interviewing approximately 50 executives composing both IT and non-IT areas. These executives were interviewed as to their perceptions of the questionnaire and many of the questions were subsequently revised based on feedback from the pilot study. Several iterations were necessary to identify ambiguous and troublesome questions. Further review of the questions was conducted before the pilot study participants reached agreement and the questions could be validated with multiple responses. Thus, reliability and validity were increased as questions with a high level of abstraction and those with large within-firm variances were removed. To keep the questionnaire reasonable in length, we measured many of the constructs using multiple items, which also enhances validity (Yin 1984).

The executives in this study are first asked to enter some demographic, quantitative information such as name, title, organization, industry and IT expenditures. They are then asked to rate the perceived strength of alignment within their companies. Within the context of their function (business or IT), the executives are next asked to select the key enablers and inhibitors to achieving alignment in their organization. This subjective assessment is used to determine which specific factors the executives felt aided and hindered the achievement of alignment. Our first hypothesis will be tested via analysis of the survey data:

**H1: The respondent's functional area (e.g. business or IT) will influence the ranking of enablers and inhibitors**

Next, executives will be asked to assess their view of each of the four domains in the alignment model, beginning with business strategy (see Figure 3). They will do this by concentrating on each of the ellipses within the domains, including the inter-relationships between them. Once they have assessed each of the four functional areas, the model will determine their strategic alignment perspective and suggest ways in which they can strengthen the alignment within their firms.

This data will be analyzed with respect to industry and executive role (business or IT) and be compared to the existing dataset for traditional companies. Our hypothesis will be tested and validated:

**H2: The type of firm (brick and mortar vs. dot com) will have no bearing on the alignment perspective taking industry into account.**

The results will be statistically evaluated for validity and reliability. It is hoped that a sample of sufficient size will be available from which some conclusions concerning industry classification can be drawn. In any case, the data will be added to the existing database and analyzed in total.

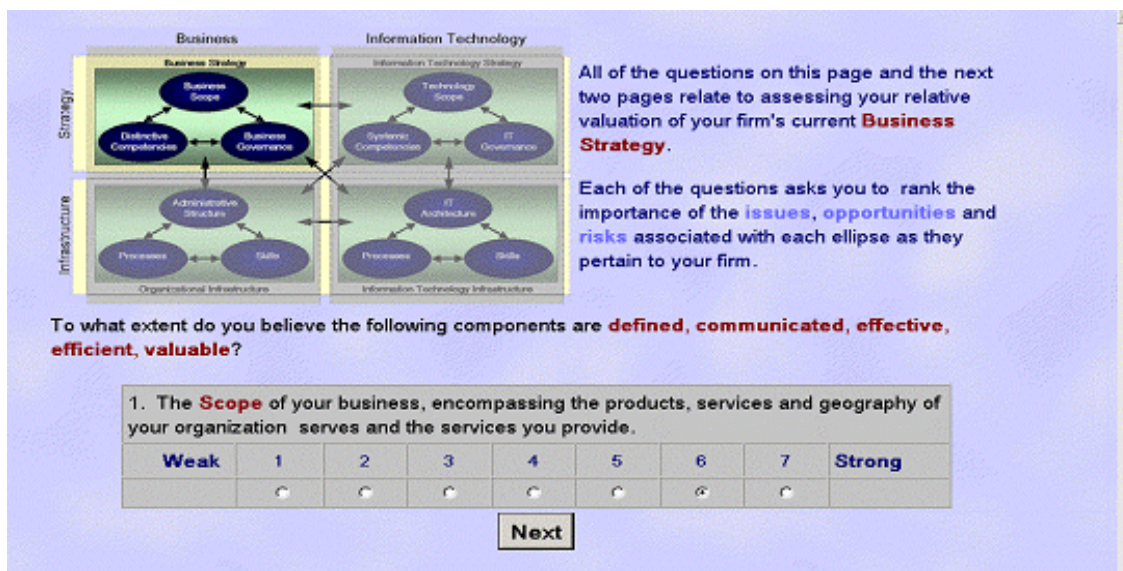


Figure 3. Assessment of Alignment Using the Model

## References

- Adcock, K., Helms, M., & Wen-Jang, K. "Information technology: Can it provide a sustainable competitive advantage?" *Information Strategy: The Executive's Journal*, (Spring 1993), pp. 10-15.
- Alter, A. "The profit center paradox", *Computerworld*, April 24, 1995, pp. 101-105.
- Boynton, A., Victor, B., & Pine II, B. "New competitive strategies: Challenges to organizations and information technology", *IBM Systems Journal*, (32:1), 1993, pp. 40-64.
- Brancheau, J., & Wetherbe, J. "Issues in information systems management", *MIS Quarterly*, (11:1), 1987, pp. 23-45.
- Cardinali, R. "Information systems--A key ingredient to achieving organizational competitive strategy", *Computers in Industry*, (18), 1992, pp. 241-45.
- Chan, Y., & Huff, S. "Strategic information systems alignment", *Business Quarterly*, (58:1), 1993, pp. 51-6.
- Creswell, J. *Research Design: Qualitative and Quantitative Approaches*, Thousand Oaks, California: Sage Publications, 1994.
- Davidson, W. "Beyond re-engineering: The three phases of business transformation", *IBM Systems Journal*, (32:1), 1993, pp. 65-79.
- Dixon, P., & John, D. "Technology issues facing corporate management in the 1990s", *MIS Quarterly*, (13:3), 1989, pp. 247-255.
- Faltermayer, E. "Competitiveness: How U.S. companies stack up now", *Fortune*, (129:8), April 18, 1994, pp. 52-64.
- Foster, R. *Innovation: The attacker's advantage*, New York: Summit Books, 1986.
- Henderson, J., Thomas, J., & Venkatraman, N. "Making sense of IT: Strategic alignment and organizational context", Working Paper 3475-92 BPS, 1992, Sloan School of Management, Massachusetts Institute of Technology.
- Henderson, J., & Venkatraman, N. "Strategic alignment: Leveraging information technology for transforming organizations", *IBM Systems Journal*, (32:1), 1993, pp. 4-16.
- Ives, B., Jarvenpaa, S., & Mason, R. "Global business drivers: Aligning information technology to global business strategy", *IBM Systems Journal*, (32:1), 1993, pp. 143-161.
- Jick, T. "Mixing Qualitative and Quantitative Methods: Triangulation in Action", *Administrative Science Quarterly*, (24), December, 1979, pp. 602-611.
- Keen, P. "Information technology and the management difference: A fusion map", *IBM Systems Journal*, (32:1), 1993, pp. 17-39.
- Keen, P. *Shaping the Future*, Boston, Massachusetts: Harvard Business School Press, 1991.
- Niederman, F., Brancheau, J., & Wetherbe, J. "Information systems management issues for the 1990s", *MIS Quarterly*, (15:4), 1991, pp. 475-95.
- Papp, R., & Luftman, J. "Business and I/T Strategic Alignment: New Perspectives and Assessments", *Proceedings of the Association for Information Systems, Inaugural Americas Conference on Information Systems, August 25-27, 1995*.
- Papp, R. *Determinants of Strategically Aligned Organizations: A Multi-industry, Multi-perspective Analysis*, (Dissertation), Hoboken, New Jersey: Stevens Institute of Technology, 1995.
- Papp, R. *Strategic Information Technology: Opportunities for Competitive Advantage*, Hershey, Pennsylvania: Idea Group Publishing, 2001.
- Yin, R. K. *Case Study Research: Design and Methods*, Newbury Park, California: Sage Publications, 1984.