

Preface

Many companies are discovering that their competitive edge for the future is dependent on transforming their businesses in significant ways by taking widespread advantage of the power of information technology (I/T) to support the transformation and future business at all levels. The methodology and framework for coordinating business strategy with information technology strategy is an emerging area called strategic alignment, and is the focus for this special issue. We are indebted to J. N. Luftman of the IBM Consulting Group in Palisades, New York, for his dedication to the creation of this issue and his efforts in coordinating the work of the authors.

In the papers of this issue, the theme of business transformation through information technology takes this *Journal* and its readers into a new area that builds on both I/T and business management. It is expected that readers with an interest in either aspect will find these papers valuable, because they show how I/T and business management are becoming interdependent and affected by each other, and they demonstrate the principles, practices, and experiences of this emerging area of study. The order of the papers supports the following general outline for the issue: the new model for business transformation, extensions of the model and application of the model to real businesses, related and complementary models and their application, and the infrastructure supporting the use of these models. That infrastructure includes the capabilities of the IBM Consulting Group, as discussed in the final paper, and the educational resources of the IBM Advanced Business Institute in Palisades, New York; Dallas, Texas; and Los Angeles, California.

The first contribution is a paper by Henderson and Venkatraman on the need for strategic management of information technology within a company and on the Strategic Alignment Model for fulfilling that need. The four elements of the model are defined and discussed: business strategy, I/T strategy, organizational infrastructure

and processes, and information systems (I/S) infrastructure and processes. Four perspectives are presented for relating and managing these elements to effectively transform a business.

The ability of management to both lead and manage is constrained by the effectiveness of the merging of processes, culture, and technology and by the capabilities of the I/T infrastructure. Keen presents a way of viewing the effectiveness of that merging through the fusion map, giving examples of real business situations as seen through the map. He also discusses two measures of the I/T capabilities of a company: the connectivity of the I/T network (called "reach") and the accessibility of information across that network (called "range"). Both of these can be seen as complementary extensions to the Strategic Alignment Model.

The pressures of a changing marketplace and improved I/T are causing companies to leave behind the strategies of mass production and invention and move toward mass customization and continuous improvement. The optimal way to accomplish this would seem to be stable business and I/T processes that provide a dynamic flow of goods and services. In their paper, Boynton, Victor, and Pine describe the concept of dynamic stability and present the product-process change matrix through which a company's progress can be planned and measured.

The next paper, by Davidson, explores the ways in which improvements in I/T capabilities can reveal new business opportunities and strategies and maximize the benefits. He develops a three-phase pattern for business transformation that complements the Strategic Alignment Model. It begins with automation and re-engineering, moves on to enhancing customer transactions, and ends with redefinition of the company itself as new capabilities and technologies take hold and form their own markets. Examples are given of companies operating in each phase.

One aspect of the processes used by a company that is often overlooked is the accountability of its people—their roles, relationships, and agreements. This aspect, when added to the traditional ones such as tasks and data, can enhance the understanding of such important business factors as customer satisfaction, supplier relations, and quality. Scherr provides a description of accountability and its impact.

Looking at organizations and I/T from another perspective, Glazer pursues the value of information to a company, rather than the value of the technology that supports that information. Information is considered as a measurable, strategic asset that can be required, owned, and used. The strategy, as seen in the valuation process and a case study, leads to what Glazer calls an information-intensive organization and to management of information assets for competitive and strategic advantage.

I/T has already transformed the ways in which companies relate to each other, as Konsynski shows through examples and through examination of the role of information in multicompany arrangements. The author argues that information and information systems reshape the boundaries of companies. He presents a strategic control framework for investing in I/T for business transformation and across business partnerships.

Multinational and global companies face especially difficult challenges as they align their I/T strategies with their business strategies to meet the future needs of customers worldwide. Identifying opportunities for competitive advantage and effective strategic control, analyzing requirements and possible I/T solutions, and overcoming the barriers and risks involved are the subjects of the paper by Ives, Jarvenpaa, and Mason.

In the next contribution, Broadbent and Weill present an interrelated set of case studies of strategic alignment in the Australian banking industry. The purpose of the study was the identification of organizational practices that enhance strategic alignment and of management implications for business and I/T strategies.

Quantitative methods can illuminate the complexities of strategic alignment and its components, providing insights that are nonobvious or even counter-intuitive. Norden discusses the op-

portunities for methods such as visualization and modeling, gives examples, and offers some possibilities and cautions.

The final paper, by Luftman, Lewis, and Oldach, presents a pragmatic view of the pressures from the business world and competition that are making strategic alignment necessary. It also illustrates the means by which strategic alignment can be achieved in practice with proven methods, especially from the perspective of I/T strategy and planning for business transformation. This paper reflects many of the capabilities that have been developed for or within the IBM Consulting Group.

As the *Journal* begins its 32nd year, we would like to acknowledge the support of readers, authors, and referees that makes such a long history possible. We thank you and encourage you to continue your interest and participation in this publication. We are pleased to note that during this past year we published a record number of authors (108) and papers (44), resulting in the most total pages (816) ever. The authors represented the United States (53 percent) and other countries (47 percent), and IBM (71 percent) and other sources (29 percent). It also seems appropriate at such a time to state a few facts that sometimes escape us as we focus on a single paper, theme, or special issue. First, this publication is a quarterly refereed technical journal, which means that the integrity of each paper is ensured by a process that depends upon peer reviews of content, currency, and value by recognized experts within and outside IBM. Second, it is intended for the software and systems professional community worldwide. The papers are written for a technically aware readership, and we welcome submissions by knowledgeable authors around the globe, within and outside IBM. Third, the *Journal* has about 90 000 subscribers worldwide. Of those, approximately two-thirds are technical professionals and researchers outside IBM; one-third are IBM employees; two-thirds are in the United States; and one-third are in other countries.

The next issue of the *Journal* will present papers on software development, project management, an architecture for retail applications, and other topics.

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Editor