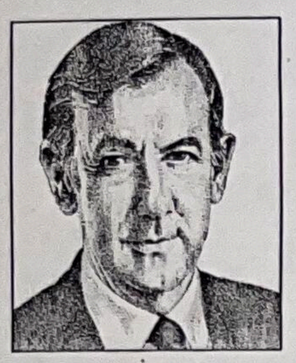
APPLIED INTELLIGENCE

Developing a Strategic Vision for Business



JAMES MARTIN

In this, the second of five columns on strategic systems, James Martin discusses the business risks of building strategic information systems.

Strategic systems often require a corporation to do business in a different way.

They are innovative in the sense that an entrepreneur is innovative. Not all business innovations succeed, just as not all entrepreneurial startups succeed. And some strategic systems have failed.

Federal Express, for example, reaped great benefits from the innovations that led to its basic business, but it failed when it attempted to innovate ZapMail. ZapMail was a system for using electronic transmission combined with the Federal Express computer-controlled delivery fleet for delivering documents in an hour or so. The strategic thrust that ZapMail represented was a very expensive failure.

If the American Airlines Sabre system for travel agents had failed, that would have been disastrous for American Airlines. American spent $350 million to build the system. It was taking a major business risk in the same way a startup company takes a business risk. But the payoff justified the risk handsomely.

Because a strategic information system is a business risk, the decision to build it cannot be taken by an information-systems executive alone. The decision must come from top management. The strategic vision may be initiated by a computer executive or chief information officer, but that vision must be passed to top management, who will refine it and take action.

The use of new technology to create an innovative business thrust was summarized in last week's column. Some of these examples represented sweeping changes in the businesses discussed and resulted in a new mode of operations for their industry. Most examples of strategic systems are less dramatic but of major importance to the corporation in question.

Charles Wiseman, in his book "Strategy and Computers," classifies strategic thrusts into five categories: differentiation, cost, innovation, growth and alliance.

For each of these, the thrusts can be either offensive or defensive. There is thus a matrix of possibilities, as the accompanying figure shows.

In the first case of differentiation, a corporation can move to differentiate its product or services from those of its competition. The move to make a product stand out from its competition is an offensive strategy. A defensive strategy is designed to improve the product to reduce the differentiation achieved by competing products.

As for the cost thrust, there are many types of thrusts to reduce the cost of a product. A company may also manipulate a variety of factors that would raise the costs of competition.

With innovation, there should be a constant search for innovative ideas—to improve products, services, production techniques and so on. Innovation may be used offensively to pre-empt competition or defensively to lessen an advantage the competition has.

Growth may be geographical expansion, expansion within an existing territory, vertical expansion of a product line or diversification by adding new types of products. Growth may be done offensively, or it may be done to protect the sales from competing thrusts.

In the alliance strategy, a corporation may buy or merge with another corporation or form a strategic partnership in order to expand its market or make its product line more complete or more useful. This, again, may be an offensive strategy to pre-empt competition, or it may be defensive to lessen an advantage achieved by the competition.

The technology that makes new strategic thrusts possible is very different now from when Baron de Reuter or Baron de Rothschild used carrier pigeons to gain a competitive advantage. Today the technology keeps changing, constantly opening up new possibilities. Types of technology that support an information strategy are listed in the accompanying chart.

One of the dangers of most methodologies used for strategic planning is that they tend to prevent their users from seeing the strategic-systems opportunities. The reason is that they are concerned with automating today's corporate functions. Strategic-systems vision is concerned with changing the corporate functions or building new activities in the corporation.

Many strategic planning methodologies are derived from IBM's Business Systems Planning (BSP). Methodologies with different names that are used by large consulting or accounting firms are often variants on BSP. The ideas of BSP have been taught in various forms in thousands of IBM training classes and are the basis of various IBM guides on Systems Planning. IBM's BSP manual states that its objective is "to provide an information systems plan that supports the business's short- and long-term information needs and is integral with the business plan."

BSP defines "environment" as those things that lie outside the scope of the planning study: the economy, government regulations, labor, consumerism, competition, industry position, industry trends, suppliers and technology. The BSP manuals instruct planners to ignore these environmental factors when conducting the BSP study.

Strategic systems vision is very much concerned with competition, technology, suppliers, customers, industry trends and, in general, factors that facilitate new, competitive thrusts. Rather than use a planning method which excludes these factors, it is desirable to specifically focus on them. In general, it is desirable strategically to focus on how the enterprise might be changed, rather than to solely examine and model what exists today.

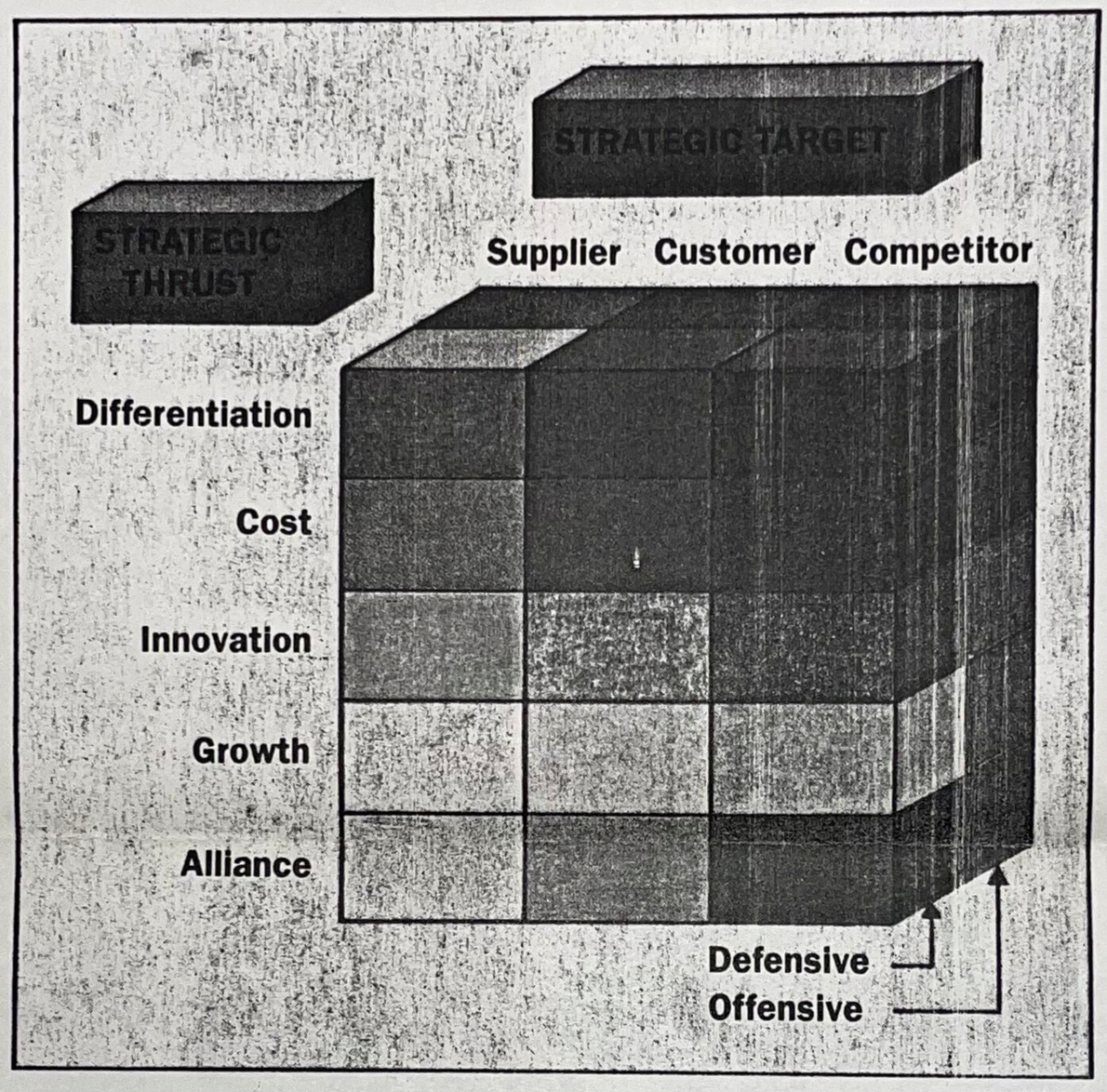
Wiseman observes that the use of computers in corporations evolved from traditional data-processing (MIS) systems to management-support systems (MSS) and now needs to evolve to strategic information systems (SIS). Traditional data processing systems processed predefined transactions to produce predefined results. They included payroll, invoicing, purchasing, inventory control, accounts payable, accounts receivable and so on. Management-support systems were designed to satisfy the information needs of managers and assist in the decision-making process. They provided query facilities, "what-if" capabilities, spreadsheets and decision-support tools.

Wiseman says that many traditional data-processing veterans resisted the emergence of MSS, refusing to admit their existence. Others argued that they were merely extensions of existing MIS systems. Similarly, many of today's systems planners are ignoring strategic-information systems and concentrating solely on the functions of today's enterprise.

MSS systems were often built by people who differed culturally from those who built traditional MIS systems. MIS developers learned to observe what was happening, to draw charts of it and to design systems to replace existing procedures. MSS developers, on the other hand, had to satisfy information needs of managers and professionals, which were not observable and not expressed with precision. Some MSS systems were built by end users or planning staff in an information-center environment.

Wiseman suggests that strategic-information systems should be conceived and designed by a different group in a corporation than that which designs MIS or MSS. Strategic-information systems are not designed by observing existing functions but by inventing new functions. They require a different type of creativity and business acumen. People good at conceiving SIS differ culturally from most of the people who design traditional MIS or MSS. Once specified, SIS might be constructed by the professionals who construct other systems.

Next week, we'll look at strategic applications of personal computers. ■



Alan Witchonke

Strategic systems vision considers competition, technology, suppliers, customers, industry trends—factors that facilitate new, competitive thrusts.

The James Martin Productivity Series, an information service updated quarterly, is available through High Productivity Software Inc., of Marblehead, Mass. (617) 639-1958. For information on seminars, please contact (in the United States and Canada) Technology Transfer Institute, 741 10th St., Santa Monica, Calif. 90402 (213) 394-8305. In Europe, contact Savant, 2 New St., Carnforth, Lancs., LA5 9BX United Kingdom (0524) 734 505.