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# An integrated approach toward strategic information systems planning

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## Abstract

Within the competitive global environment, information has become a key resource for increasing a corporation's competitiveness by changing the nature or conduct of business. Accordingly, corporations are now seeking a method for information systems planning to maximize their strategic effectiveness.

Strategic Information Systems Planning (SISP) refers to the process of creating a portfolio for the implementation and use of IS to maximize the effectiveness and efficiency of a corporation, so that it can achieve its objectives. An investigation of SISP, however, showed that only 24% of planned applications were actually developed (Int. J. Comput. Appl. Technol., 8 (1995), 61; MIS Quarterly, September (1988), 445). This figure clearly shows that enhancements are required for current SISP processes. In particular, this paper focuses on SISP methodologies, which provide support for overall SISP processes.

The paper initially identifies four general SISP methodology problems: lack of support for Information Technology Architecture, under-emphasis on information technology opportunities, duration of SISP, and lack of support for business process reengineering. Next, it proposes an integrated SISP methodology which solves the above problems while retaining the advantageous qualities of current SISP methodologies. Finally, a case study is added to show how the methodology actually works in practice. © 1999 Elsevier Science B.V. All rights reserved.

*Keywords:* Strategic information systems planning; Information systems; Business process reengineering; Information technology architecture; Strategy; Strategic information systems; Information technology

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## 1. Background

### 1.1. Strategic information systems

Strategic systems are essential for a corporation to gain a competitive advantage to attain its goals. In order for a system to be called strategic, it must significantly change business performance, the means the business employs to attain a strategic goal, the way a corporation does business, the way it competes, or the way it deals with customers or suppliers (Ernst and Chen, 1994).

The difference between strategic information systems and other Information System (IS) such as Transaction Processing System (TPS), Management Information System (MIS), Decision Support System (DSS) is that the new focus is on strategy.

However, the competitive advantage that a corporation may gain by using strategic information systems is not risk-free. A corporation using strategic information systems may lose competitive advantage by shifting the basis of competition in an unfavorable direction, lowering entry barriers, bringing on litigation or regulation, or increasing the power of suppliers and customers relative to the corporation (Tan et al., 1995). Therefore, it is vital to consider all factors surrounding the development of strategic information systems in order to achieve substantial competitive advantage, which makes the planning phase imperative.

### 1.2. Strategic information systems planning

In order for a corporation to develop a strategic plan, it needs to answer the following three questions.

- What position is the corporation taking at present? (current status)
- What position does it plan to take in the future? (objective)
- What path should it take to reach the objective? (implementation)

Strategic Information Systems Planning (SISP) is the process of answering the above questions specifically in relation to IS. Information systems planning is the process of creating a plan for the implementation and use of IS to maximize the effectiveness of corporate resources to achieve its goals.

SISP has become an accepted part of the overall corporate strategic planning process. By using SISP, a corporation is involved in finding a way to manage effectively in a complex and dynamic environment. A study on satisfaction using SISP showed that corporations adopting a specific SISP method were more satisfied with the planning process and outcome than those not using a specific SISP method (Rogerson and Fidler, 1994).

The process of SISP is quite intriguing because if developed quickly, the output is likely to be insufficient; if developed flawlessly over a comparatively long period of time, it is likely to become ineffectual by the time it gets to the stage of implementation (Lederer and Sethi, 1996).

The development of the plan involves many participants working cooperatively, not independently. If business specialists develop the plan independently, the plan is likely to

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