

## Chapter 5

# Assessment of Strategic Information Systems Planning (SISP) Techniques From Requirement View

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### ABSTRACT

*This study reviews Strategic Information Systems Planning (SISP) literature with a focus on the global dimension. The research evaluates SISP techniques against Information System (IS) strategic requirements. These techniques can be vital contributors in the IS Strategy (ISS) design process. Therefore, classification of the techniques of ISS planning is developed. Keeping in mind the global dimension, the planning team needs to identify how it can cluster the ISS requirements of an organisation. This may be achieved by analysing the benefits that can be obtained by IS for the organisation. The result of this research is the taxonomy of SISP techniques with a case study for X airlines. This classification can benefit the evaluation of ISS planning processes to support decision makers through the planning process.*

### INTRODUCTION

Organisations look to obtain the maximum benefit from their resources and reduce their risk as much as possible. They attempt to use all of their resources efficiently, effectively, and competitively. In so doing, there appears a need to link all of the resources in a way that allows them to be controlled, creative, flexible, and educational. From this point of view, there is also a need to determine the significant processes within the entire organisation. The processes are not only important, but they also share activities beyond the business unit to be completed. At the same time, these processes are not just routine, but sometimes also creative. Therefore, it is necessary to consider these processes in the planning stage by analysing them and considering the role of information systems/information technology (IS/IT) in supporting these processes' integration (Robson, 1997; Tallon, 2007).

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There are many motivations to involve a firm with IS strategic adoption. The first is to support the firm by focusing on information technology (IT) applications that improve the firm by facilitating the development and implementation of a connection between business and IT strategies. The second motivation is to increase profitability by maximising the IT investment of the organisation and obtaining an alliance with its business strategies. Strategic alignment focuses on IT as a new cost centre and on how it affects business strategy. Additionally, it also shows the fit between strategy and infrastructure, as well as the business-IT functional integration (Papp, 1999; Mohdzain et al., 2007, Ariyachandra and Frolick, 2008; Eom, 2009). IS/IT activities have had various effects on industries and firms, and within individual firms over time (Applegate, McFarlan, and McKenney, 1999). Turban et al. (2005) suggested that there are three objectives of an IS/IT strategic plan: alignment with the business strategic plan, enabling users, applications and databases to be networked and integrated by providing IS/IT architecture and supporting IS/IT projects to be completed on time, within budget and have the required functionality by efficiently allocating IS/IT development resources for these projects (Wieringa et al., 2005; Hinton, 2006). There are three core elements of IS strategy. The first is a clear statement of IS objectives. The second is that both current organisational capabilities and problems resulting from current practices should be listed and evaluated. Third, the implementation plan shows the route to follow and knowledge of the start point as milestones (Robson, 1997).

This IT/IS – business integration requires the participation of the CIO and other business units' executives through a formal process of discussion and review of resource priorities and allocation. This process is important in allocation of what decisions and who are responsible for these decisions for IS/IT contribution (Luftman et al., 1999; Weill et al., 2004). These decisions and people responsible are the governance matrix arrangements where five IS/IT decisions are interrelated. These IS/IT decisions are: a) addressing the role of IS/IT in the business, b) identifying the requirements of integration and standardisation (IS/IT architecture), c) deciding the core services and their sharing (IS/IT infrastructure), d) allocating the business applications (business application needs), and e) selecting the projects and their funding (IS/IT investment and prioritisation) (Weill et al., 2004; Brown, 2006). From these issues, it is clear that participations from top managers are desired. This type of participation requires different planning techniques.

As such, the importance of the techniques of strategic planning in the role of IS/IT is increasing. These techniques may help to build the business model of the organisation (Robson, 1997), which would support managers by simulating the situation or the problem's solution in many ways, such as decreasing the cost of experimentation to lower than it is in real life; simulating time in seconds as opposed to the years that may be required in real life; changing the variables of the model in the experiment, which is easier than changing them in real life; and finally, using the models to deal with uncertainty by including 'what-if' roles or risk calculations (Turban et al., 2005).

Many headings can be used to categorise techniques that could support strategic planning, as suggested by Robson (1997). These are techniques that follow the model of planning or the decision-making process; their nature of attention, such as opportunities; their identifying origin; their perspective; and current business problems. Another possibility in grouping these techniques is meeting the goal of efficiency, effectiveness, competitiveness, business alignment, or business impactation. The techniques can also be grouped according to awareness, opportunity, or positioning framework, as in Earl (1996). Generally, all of these techniques are grouped according to the judgment of their use because their purposes intermingle, and they are applied in many ways. Therefore, care should be taken in choosing

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