

## Chapter 8

# Management Information Systems Needs for Public Service Delivery in the Digital Era

### ABSTRACT

*Chapter 8 continues the path through the ISSP framework described in Chapter 5 by considering the information systems (IS) application needs of government entities to support the identified information requirements. The basic principle is that the organisation needs to identify the information that it requires to run its business and then to determine the application systems that support the information needs. Hence, this approach provides a business-driven model rather than a technology-driven method. The chapter discusses various concepts related to the information resource management, information engineering, database management systems, data warehousing concepts, data mining concepts, business process reengineering, management information systems, decision support systems, executive information systems, and value chain analysis. These concepts link information management with application systems management, thus providing an integrated holistic view of the IS process.*

### INTRODUCTION

*Systems help us to move forward, to go as far as we possibly can. They enable us to work faster, smarter, and more strategically. A good system eliminates waste, while it also anticipates and removes obstacles. To get the most out of systems, you have to make them a lifestyle not a one-off deal. They must become ingrained in your routine. John Calvin Maxwell, American author, speaker, and pastor*

This chapter continues to address the contents of the logical framework for determining the ICT requirements of an organisation (see Chapter Five, Figure 1). In the previous chapter the information requirements of the organisation to run its activities now and in the foreseeable future was discussed in detail.

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This chapter addresses the application IS needs of the organisation to support the identified information requirements, thus providing a rational link with the conceptual material presented in the previous chapter.

This chapter will illustrate that the traditional utilisation of information and the respective application IS are inclined towards a production oriented approach. Under this approach managers are viewed as supervisors or administrators and their decisions are specifically aimed at maximising production, hence their attitude is one of production orientation with the customer being relegated to a secondary status. In this scenario, decisions do not take a corporate focus but have a narrow focal point, namely their particular division, unit or section, which leads to individualistic information ownership that consequently further leads to information hoarding.

On the other hand, a scenario that promotes information as a corporate asset and recognises this asset as a precious resource, views managers as decision makers not just as administrators. Information and the respective IS are utilised extensively through the use of business models (decision systems) that analyse the available information so that the manager may take both proactive and reactive decisions quickly. Under this scenario, decisions are customer orientated but concurrently aim to optimize output. Thus, management decisions take into account a holistic corporate focus, hence leading to information sharing.

Within a traditional approach customers are viewed from a localised level, whereas under an environment where information is regarded as a corporate asset, customers are viewed from a corporate level. Under this scenario, the productivity of an organization is likely to increase, but the objective is firmly oriented towards serving the customer, with productivity and efficiency being a by-product of the IS application. This way technology can resolve two distinct and sometimes contradictory concerns: that of having a customer orientation approach with a resultant increase in productivity. Hence, technology is able to assist the organisation to simultaneously achieve the coexistence of two distinct and at times opposing environments, namely customer and production orientation.

## **BACKGROUND**

Deciding which IS application actually meets an organisation's needs, particularly for government entities, is frequently a challenge, irrespective of whether the system is targeting a specific application or has an enterprise wide information management system objective. Often management may engage information technologists as consultants in the hope that these professionals will recommend the IS solution that is required for their organisation. However, this is erroneous. It is important that senior employees from User Departments are directly involved in the IS application acquisition definition and evaluation process. It is extremely important that the business needs of the organisation are given priority over technological considerations. Throwing technology at an IS application problem is not the solution. This is not to say that technology is an insignificant element in the process. However, technology should be viewed as an enabler to resolving the business and operational concerns of the organisation. An effective solution can only be found if it is based on a thorough examination and comprehension of the business processes that generate and apply the information that is gathered and stored by the required IS application.

Organisations need to focus on the requirements of the end-user, irrespective of whether they are internal or external to the organisation. Hence, there is a need to identify what the Customer needs. As stated above, in determining the IS application requirements for organisations, there are at least two classes of customers. The first and most essential are the organisation's customers. For government organisations these may range from the individual citizen, a civil society entity or a business enterprise.

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