

Chapter XVI

Architecture Based Engineering of Enterprises with Government Involvement

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ABSTRACT

With a plethora of architectures, modelling techniques and methodologies on offer, it is difficult to decide how to begin building an enterprise and achieving seamless integration. This difficulty is most noticeable in consortia that need to deal with government participation. Various government projects have different objectives and agenda. In addition, changes in business environment (or) as well as government policies impose extra conditions onto the project. Failure to comply with the project requirement can lead to loss of business and sometimes unexpected penalty. We use three case studies to show various ways of government involvements in our projects. Based on the experiences of these cases, we discuss how enterprise engineering can help creating and managing the enterprise that can engage government services successfully

INTRODUCTION

Today's working environments are supported with a large number of technologies that serve wide va-

riety of purposes such as training (Shankararaman and Lee, 1994), support (Mo and Menzel, 1998), design (Jiang and Mo, 2001), project management (Hall, 2000), data analysis (Gabbar *et al*, 2002),

and many others related to the management of the business. They are, arguably, advantages to all stakeholders, irrespective of whether they are the customers, staff, suppliers, managers or other roles related to the company.

In this environment, human organisations can become volatile. This is particularly noticeable in government activities because they are principally people-oriented services to the public. Government processes are changing to e-Government environment but there is still difficulty in capturing the concept of citizen engagement, which is a measure of success of government policies (Jones *et al*, 2007). Government services have a wide variety of forms and purposes. When people look at government services, they only realise the public face of the services, that is, the interactive portal of government departments. However, there are many other services that a government has to provide and the enterprise engineering processes in those services must be handled carefully to ensure the best outcome. Orange *et al* (2007) investigated the innovation value in government and recognized the importance of a clear vision for the future. Government funded programmes for enterprise development are difficult to manage. Some governments adopting a “private sector” model for delivering “public good” services faced with considerable challenges of understanding organizational dynamics, for which government agencies were not competent enough to handle effectively (Massey, 2003).

Enterprise architecture adoption in government businesses is important but there are many patterns (Hjort-Madsen, 2007). It is difficult to decide which one to adopt since they are emergent, evolving, embedded, fragmented, provisional. Wu (2007) proposed layering method in the direction of strategy, business, process, service and information for developing enterprise integration in e-government. Gregor *et al* (2007) used enterprise architecture for enabling alignment of IS/IT in government. Enterprise architecture should enable these services to be delivered to the

desired outcomes. The concept of the government operating as an enterprise is to include not only the systems that support government services, but also to understand the management processes that may affect the effectiveness of the execution of government policies.

The term enterprise refers to an identifiable group of people who have a common vision and mission. An enterprise concerns all aspects of tasks, activities, events related to this group. Integration of the enterprise activities requires modelling and analysis of the business processes, process data and knowledge within the enterprise (Shen *et al*, 2004). A holistic, customer oriented approach in enterprise integration helps companies to cater for different requirements and more importantly, provides a way to implement a good solution for integration (Ortiz *et al*, 1999).

This chapter serves as a guide to the design and implementation of government supported enterprises. We discuss the importance of enterprise engineering in the design and execution of enterprise models to cope with changes. Three case studies are used to illustrate the different forms of government services and the impact different enterprise engineering approaches on the outcomes. By comparing these cases, we develop the view of a new dimension in modelling to cater for change.

BACKGROUND

Williams *et al* (1994) summarised architectures of enterprises as a result of evolution from years of experimentation and observation. The ultimate goal of enterprise integration is to develop a cohesive environment that can perform business activities in a seamless fashion and to be responsive to the external world in a timely way. However, the operating conditions of enterprises and more significantly, government environment, are now characterised by frequent changes. The challenge to management is to establish a structure

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