Chapter XIV

Web Services in Government Policy:
Case Study from UK National Health Service

Matthew W. Guah, University of Warwick, UK

Abstract

The public sector accounts for a greater proportion of United Kingdom’s information technology (IT) spending, but cutting edge success stories in government IT have suddenly been reported in the popular press. As a result of the electronic delivery of government services (i.e., the National Health Service, Defence and Criminal Justice systems) becomes more commonplace, the public sector is becoming increasingly dependent on technology. This chapter reports on three years of research, which looks at the application of Web services into United Kingdom healthcare as a fulfilment of numerous semi and unsuccessful IT projects, that fell short of delivering any tangible benefits. The author looks at the National Health Service’s current IS strategy — fully dependent on Web services application — with the criteria of successful implementation, return on investment, increased productivity, innovation, and user benefits.
Introduction

Information technology (IT) strategies play an increasingly pivotal role in the overall strategies of a national healthcare organization, which has moved them in the focus of recent healthcare management research (Wilson & Lankton, 2004). Web services introduce a different business environment with respect to the institutional framework and the resource endowment of healthcare organizations. The institutions supporting the traditional mechanism for healthcare provision are less sophisticated or effective, and the health services are less well endowed with resources, especially in terms of maintaining valuable resources such as skilled labour in management — particularly IT staff.

Consequently, an understanding of emerging technology strategies in the health sector requires adoption and development of the theories currently applied in the management field, including transaction costs/agents theory and resource based theory and institutional theory. Such theories must account for how contextual influences moderate the strategic decisions taken by healthcare organizations. Recent empirical studies on healthcare organizations have begun to incorporate the specificity of the emerging technology context in their theoretical reasoning. In this chapter, the author takes this line of research further by applying the resource-based view (RBV) (Barney, 1991; Wernerfeld, 1984) to healthcare organizations to explain how Web services technologies are being implemented. The RBV has been found particularly suitable for analyzing organizations in high volatility environments (Eisenhardt & Martin, 2003), and has recently been applied to strategies in the health sector (Scott, Ruef, Mendel, & Caronna, 2004).

In recent years, e-government has received much attention by academics and practitioners as a wide-ranging initiative to use the latest IT to automate government services. One important area that has received large financial investment is healthcare services (Devaraj & Kohli, 2000; Majeed, 2003; Wilson & Lankton, 2004). Traditionally, government run healthcare services have not received large funding for IT, and this has led to a situation where disparate IT systems have produced pockets of efficiency alongside serious shortcomings in organizational processes and services.

Using Web-enabled IT systems as a way of empowering e-government within healthcare, the UK government has embarked upon the largest civil IT programme in the world to re-engineer organizational processes and services to enhance patient care. The current wave of Web-enabled IT systems is expected to play a large role in how the UK government fulfils its agenda for public reform in healthcare. Other examples of public sector reform include, e-democracy (voting and referenda by means of the Internet); Web-enabled delivery of products and services to citizens (healthcare, social services, tax payment, etc.); inter and intragovernmental communication and decision making (immigration and homeland security) enhanced by network applications and the digital integration of front and back office operations (Vriens & Achterbergh, 2004). These examples demonstrate that national governments are keen to adopt Web-enabled IT systems to improve public services.

The chapter is based upon a three-year research project that examined the UK’s National Health Service (NHS) information systems strategy, where the National Programme for IT (NPfIT) is being implemented at a cost of $10 billion over 10 ten years. This research involved interviewing over 200 stakeholders in the NPfIT, including healthcare professionals (doctors, consultants, nurses, etc.), healthcare administrators (managers, administrators,
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