A survey of Web-based business models for e-government in the Netherlands

Marijn Janssen [a],*, George Kuk [b], René W. Wagenaar [a]

[a] *School of Technology, Policy and Management, Delft University of Technology, Jaffalaan 5, NL-2600 GA, Delft, The Netherlands*
[b] *Nottingham University Business School, Jubilee Campus, Wollaton Road, Nottingham, NG8 1BB, UK*

Abstract

Governments worldwide are increasingly using Web-based business models to enhance their service delivery. Yet the concept of the business model is unexplored within the context of e-government. Drawing upon the literature on e-commerce, we develop a taxonomy for analyzing Web-based business models for e-government. Based on a systematic survey of 59 e-government Web sites in the Netherlands, our findings indicate that most of the Web sites use the content provider or direct-to-customer business models, while only a few are using novel business models. Overall, the concept of business model is appealing and useful in the public sector. Specifically it compliments research on Web site quality by analyzing and describing Web sites using atomic e-government business models and suggesting improvements by using combinations of business models.
© 2007 Elsevier Inc. All rights reserved.

Keywords: e-Government; Business models; e-Government business models; Value creation; Web site survey

1. Introduction

Governments worldwide are increasingly using the Internet to provide public services to their constituents (Layne & Lee, 2001). Much of the research has focused on practical and

---

* Corresponding author.
  E-mail addresses: M.F.W.H.A.Janssen@tudelft.nl (M. Janssen), g.kuk@nottingham.ac.uk (G. Kuk).

technical dimensions while research on how to improve e-government for users remains scarce (Bertot & Jaeger, 2006). Web-based technologies offer governments more efficient and effective means than traditional physical channels to better serve their citizens (Evans & Yen, 2006). The nonhierarchical nature of the Internet, and its ability to speed communication with 24-hr, 7-days-a-week access offers real potential to improve interaction. Yet the transition from using the Internet as a communication to an interaction channel is not only resource intensive, but requires changes in organizational practices, key value chain activities, and strategic partnerships (West, 2004). Government organizations are challenged to provide more customer-oriented products and services, and to approach customers proactively. For this purpose, governments are increasingly exploring different types of Web-based business models to serve customers through multiple channels such as Web-based services, call centers, and physical offices. In the Netherlands, some forms of e-government have been in existence for over 20 years (e.g., remote retrieval of citizens' information). Yet the forms of e-government in the Netherlands have been limited in their diffusion and adoption, and only recently do we witness an extensive outgrowth of public Web sites with designs based on some type of e-commerce Web-based business models (Winkel, 2005). As it stands, there are more than 1800 public organizations and 500 private organizations offering one or more Web sites related to governments, policy-making, and public services.

The term *business model* is a recent addition to the literature of management and largely a product of the dotcom era (Keen & Qureshi, 2006). The business model concept is about shaping the relation between an organizational strategy and Web-based systems (Hedman & Kalling, 2003). In e-business and e-commerce, a Web-based business model is the method of doing business online by which a company generates revenue (Rappa, 2002). Analogous to business models in the private sector, we introduce e-government business models. In the public sector, instead of generating revenue, e-government business models aim at using the Internet to add value to the constituents in areas ranging from service delivery to political involvement (Janssen, Kuk, & Wagenaar, 2005).

e-Government business models are similar to e-commerce and e-business in their stages of development. The similarities include the establishment of an Internet presence and the application of various types of business models aimed at creating customer value (Layne & Lee, 2001). Since 1995, the Dutch Government has been advocating the adoption of customer-oriented business models in various e-government programs and projects. It has actively promoted policy initiatives encouraging governmental organizations to make their public services available online and to provide information, communication, and transaction services (MinBZK, 1995, 1998, 2000, 2004). While there exist opportunities for governmental organizations to transform their current practices and provide new products and services, many initiatives remain at the Internet presence stage, and the types of transactional services available remain restricted to traditional products (Winkel, 2005). The present guidelines are inadequate for governmental organizations to translate the current efforts and views into actions, and the ideas developed to this point remain abstract (MinBZK, 2004). Also, Dutch e-government initiatives are fragmented through geographically dispersed agencies and many initiatives do not learn from the experiences gained in other projects (MinBZK, 2004). Thus