

# Chapter LXIII

## Evaluation of E–Government Web Sites

**Michael Middleton**

*Queensland University of Technology, Faculty of Information Technology, Australia*

### INTRODUCTION

In recent times, the popularity of the Internet has led to e-government practices being widely recognized as an important option for service to the general public. In response, various tiers of government from national to local level have sought opportunities to engage the public through Web sites.

Many governments now provide some level of access to government through Web interfaces, for example, through access to resources such as publications and government data. In some cases there are services provided that may be executed online. For example, users may provide personal information for licensing or to undertake payments. There continues to be a diversity of implementation quality and levels for such services.

The facilitation of e-government has been characterized in various ways. For example, the European Union has seen it in terms of four main tasks: the development of Internet-based services to improve access to public information and services, the improvement of the transparency of public administration by using the Internet, the

full exploitation of information technology within public administration, and the establishment of e-procurement (Strejcek & Theilb, 2003). More recently, the United Nations (UN), noting that ICTs may be used to transform its internal and external relationships, has also identified four similar but distinct areas: internal processes such as record keeping, electronic service delivery, virtual communities for digital democracy, and e-business opportunities such as procurement (United Nations Department of Economic and Social Affairs, 2005).

Legislation that supports e-government may address many aspects of its implementation. For example, a regulatory environment for electronic contracts, regulation of telecommunications, digital signatures, and consumer protection is being developed by different states. In terms of access to public information and services, the USA has tackled the issue with an E-Government Act that provided for an office of electronic government within its Office of Management and Budget along with minimum standards of information for the public on federal agency sites (Jaeger, 2004; Matthews, 2002).

The UN has also produced participation and readiness indexes in order to indicate the extent of participation in, and development toward, e-government (United Nations Department of Economic and Social Affairs, 2004). These indexes are among a number approaches to measuring e-government performance. A comparison of methods for assessing implementation has been made by Janssen, Rotthier and Snijkers (2004). They have used the term “supply oriented eGovernment measurements” for evaluations that focus on delivery, typically through the Internet.

This is closest to the second of the four UN areas, that of service delivery, and is the focus of what is described in the following. The intent here is to provide an overview of different approaches to Web site evaluation in order to suggest further application and development of evaluation instruments.

## BACKGROUND

Evaluation instruments are useful to governments at all levels in order to provide for benchmarking, and detailed assessment and comparison between Web sites. Such instruments may also help governments in developing nations to direct their online strategies by reference to analytical tools for evaluating Web sites.

It has been noted by Sharma (2004) that a number of e-government benchmarking studies have been limited by a focus solely upon the supply side. Likewise, Holland, Bongers, Vandeberg, Keller, and te Velde (2005) have pointed out that the measurement of e-government must take account of more than the supply side. Beyond the provision of services, there should also be consideration of policy including the regulatory environment, prerequisites such as Internet penetration, and internal government functioning such as intranet development. However, as the focus here is on services as presented via the Web, two main types of evaluation are relevant for consideration.

These are, first, approaches to Web site design and evaluation in general, and second, approaches to examining the performance of e-government as delivered via the Internet.

In the case of Web site design and evaluation, there are many examples of guidance. These may take the form of online checklists (Ciolek & Goltz, 1996-2006; World Wide Web Consortium [W3C], 1999). There are also many general texts on the subject that provide direction in matters of information architecture and design, style, and information quality in Web site development (Benyon, Turner, & Turner, 2005; Lazar, 2006; Rosenfeld & Morville, 2002).

A great deal has been written on e-government online delivery practices, however, in this work the focus is on the evaluation of delivery that makes some reference to methods for testing the delivery. For example, a need for the effective benchmarking of e-government implementations was suggested by Kaylor, Deshazo, and van Eck (2001). They conducted studies on local governments in the USA, and focused on the functions and services that cities typically provide. The model they used contains detailed questions on services delivered online. It also used a four-point scale system to measure the presence and the degree of implementation of online services.

Korsten and Bothma (2005a, 2005b) have evaluated South African government Web sites for content and usability. They also studied the portal *South African Government Online*, which provides a gateway to government information. Usability was differentiated for first-time users and frequent users, where the focus was on efficiency and satisfaction. Web sites were assessed with regard to site-level criteria that included the home page and site-wide design, information architecture, navigation, search capability, linking strategy, overall writing style, page templates, and layout. Specific issues relating to individual pages including downloading time, coding problems, and error messages were considered to be outside the scope, as were accessibility and downtime.

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