

## Chapter LXIX

# Digital Government Worldwide: An E-Government Assessment of Municipal Web Sites

**James Melitski**

*Marist College, Poughkeepsie, USA*

**Marc Holzer**

*Rutgers University – Campus at Newark, USA*

**Seang-Tae Kim**

*Sungkyunkwan University, South Korea*

**Chan-Gun Kim**

*Rutgers University – Campus at Newark, USA*

**Seung-Yong Rho**

*Rutgers University – Campus at Newark, USA*

### ABSTRACT

*This article evaluates the current practice of digital government in large municipalities worldwide. The study assesses 84 cities from around the world that use a five-stage e-government framework. Our research and methodology goes beyond previous research by utilizing 92 measures that were translated into the native language of each city. In addition, the assessment of each municipal web site was conducted by a native speaker of the municipality's language between June and October of 2003. We reviewed relevant e-government literature for evaluating Web sites nationally and internationally, and discussed our sample selection, methodology, theoretical framework, findings, and recommendations. Our results indicate that Seoul, Hong Kong, Singapore, New York, and Shanghai are the top five large cities for providing digital government opportunities to citizens online. Our research also suggests a difference in the digital government capabilities among the 30 developed nations belonging to the Organization for Economic Cooperation and Development (OECD) and lesser developed (non-OECD) nations.*

## ASSESSING MUNICIPAL WEB SITES

What are the objectives and rationale for public sector services? Some scholars have suggested a list of questions that public administrations have faced, including “How can the public sector achieve efficiency and effectiveness, at the same time balancing those concerns with equity in service delivery?” (Holzer & Gabrielian, 1998, p. 49) and “How can the public sector bring about a more honest dialogue between citizens and their governments?” (Nathan quoted in Holzer & Gabrielian, 1998, p. 79). Since public organizations should be efficient and effective (i.e., productive internally), and should pursue such democratic values as equality, equity, and participation for a better society externally, both dimensions are important to service delivery.

Technological utopians (Blanchard & Horan, 1998; Dyson et al., 1994; Firssen, 1997; Klein, 1999; Winner, 1997) have suggested that information and communication technologies (ICTs) are conducive to both efficient and effective public organizations. In addition, they have argued that ICTs enable citizens to engage in policy deliberation (see Holzer et al., 2004). Following this logic, e-government researchers have examined in recent years how public organizations are using the Internet. They have often sought to answer two questions: (1) Why do public organizations adopt new initiatives such as e-government programs? (2) Why are some initiatives more successful than others?

One way that researchers determine success is to assess performance of organizations that adopt e-government criteria by developing such criteria and conducting a content analysis of government web sites. Unfortunately, most of this literature focuses on state and federal governments in the U.S. in terms of examining trends in digital government (the Center for Digital Government and Microsoft Corp. 2002, 2003). At the local level, a notable survey was conducted of local government managers in conjunction with the International City/Country Management Association and Public Technologies Inc. (Holden et al., 2003; Norris et al., 2001).

Little research has been conducted on analyzing the worldwide movement to digital government from a comparative perspective. Researchers at Brown University, led by Darrell West, have conducted a content analysis of US states and federal government web sites in the US since 2000; they also completed in 2001 a worldwide analysis of central government web sites. A summary of the results was published recently in the *Public Administration Review* (West, 2004). West’s research finds an improvement of digital service delivery at federal, state, local, and international levels.

Previous research, however, lacks a comprehensive framework for evaluating digital government. Such studies have paid attention to a few aspects of digital service delivery, comparing limited aspects of public organizations. They have not provided specific exemplars of practices and conditions necessary to successfully reproduce each best practice. Furthermore, their research that evaluates web site content consists of only 27 dichotomous variables (West 2004). This research attempts to take a more comprehensive approach by utilizing 92 measures, of which 45 are dichotomous and 47 are measures that use a four-point scale.

This research also utilizes a theoretical framework that is consistent with e-government and e-government literature. In 2002, Moon developed a framework for e-government analysis that consists of five stages:

1. Information dissemination/catalogue
2. Two-way communication
3. Service and financial transactions
4. Vertical and horizontal integration
5. Political (citizen) participation

Based on Moon’s research, one can imply performance improvement as a progression from “Stage 1 Information Dissemination” through “Stage 5 Citizen Participation.” From a theoretical perspective, Ho (2002) describes performance improvement as a paradigm shift from a bureaucratic paradigm toward an e-government paradigm. According to Ho, “the new (e-government) paradigm transforms organizational principles

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