



Is E-Government Ready for Prime Time?

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Every nation has some form of e-government process, but there's considerable debate about whether it's even close to its potential. In spite of flashy and multifaceted implementations in developed nations, considerable evidence suggests that even the most technologically advanced countries aren't getting the full return yet for their e-government investments. Poorer nations fare even worse.

Electronic government is far more than a lofty, idealistic notion. Nearly every country in the world – from the poorest to the richest – has instituted some form of it, and an extensive literature on the subject continues to grow. Although e-government isn't even close yet to the digital commons Joachim Astrom envisioned with his menu of citizen voting choices (quick, strong, or thin),¹ it does offer convenience in the form of service improvements.

Reduced government costs tend to accompany such improvements, but cost savings are a secondary goal: the primary objective is to link citizens with user-friendly services that have the latest IT advances, much like Amazon.com connects with its customers. Large e-government Web sites such as USA.gov connect users to a dizzying collection of federal and government services, including congressional voting records, links to legislators' offices, government job opportunities, government statistics, live personal assistance through Web chats, and so on. Most countries – even North Korea (www.korea-dpr.com/) – offer a cluster of services on their official sites, and municipal e-government portals are similarly varied world wide. In the US, the state e-government leader is Texas, which offers online services for renewing driver's licenses, e-filing court documents, checking lottery results, and ordering birth, death, marriage, and divorce records (www.texas.gov). Municipal sites such as for New York City (www.nyc.gov), Seoul, Korea (<http://english.seoul.go.kr/>), and Fairfax County, Virginia, ([www.fair](http://www.fairfaxcounty.gov)

faxcounty.gov) have advanced e-government portals as well.

The Digital Divide

From a supranational policy perspective, e-government is an attempt to use technology to improve peoples' lives, regardless of where they live. The language of the 2003 Internet Summit in Geneva illustrates the vision's breadth (www.scienceblog.com/community/older/archives/L/2003/B/un031407.html):

to connect villages with ICT [information and communication technologies] and establish community access points; to connect universities, colleges, secondary schools, and primary schools with ICTs; to connect scientific and research centers with ICTs; to connect public libraries, cultural centers, museums, post offices, and archives with ICTs; to connect health centers and hospitals with ICTs; to connect all local and central government departments and establish Web sites and e-mail addresses.”

Because the world's poorer nations have the lowest Internet and cell phone penetration, e-government is usually modestly deployed – for example, through cybercafés and kiosks in India, post offices in Nigeria, or other communal technology sites. Beyond disseminating official information, e-government can also be an instrument of social policy or change, especially in Africa, South America, Southeast Asia, and other developing regions of the world. For example, thousands of South

Touring E-Government Web Sites

If you want to explore e-government in more depth, the following Web sites are a good start:

- Possibly the world's best known e-government site, the US government's official Web Portal (www.firstgov.gov) offers links to a vast array of government services and to examples of nearly every e-government service.
- The World Bank's e-government Web site, although not updated as often as an e-government site should be, has some

useful tutorials that give a casual user some good international examples (<http://www1.worldbank.org/publicsector/egov>).

- The European Union Information Society's thematic portal (<http://ec.europa.eu/>) is for the EU what www.firstgov.gov is for the US. It has a variety of services and links and offers links and services in 22 languages.
- How is North Korea doing in e-government? The answer (#19 in the world in one study) is available in these rankings developed at Brown University (www.insidepolitics.org/egovt06int.pdf).

Japan's Waseda University also offers rankings that serve as a good counterpoint to Brown's (www.obi.giti.waseda.ac.jp/e_gov/3nd_rankings_en.pdf).

- The *Electronic Journal of e-Government* (www.ejeg.com) publishes essays and articles about the study, implementation, and management of e-government processes. The December 2006 issue featured, among other items, an article about a recent e-voting experiment in Switzerland.

African voting kiosks used tribal symbols to help voters who couldn't read, thus facilitating Nelson Mandela's historic election.

An E-Government Model

The UN believes e-government can be a positive instrument of national policy through a three-step process: inclusion, access, and connectivity. As greater numbers of the rural poor are permitted to participate in the government (inclusiveness), more will be able to tap available government services through ICT (access) and eventually use IT services to get crucial current information about weather, regional market conditions, and so on (connectivity). The full report appears at <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf>.

Countless case studies demonstrate this inclusion/access/connectivity connection, from Sao Paulo's implementation of Poupatempo (or TimeSaver; www.tabblo.com/studio/stories/view/99858/), a one-stop shop for government service centers, to farmers' land-ownership records in Karnataka, India, delivered to users through so-called *bhoomi* or kiosks located throughout the subcontinent (www.apdip.net/resources/governance/egovernance-egovernment/APDIP-eGovPaper-Subhash.pdf).

In China, the Guangdong Province's Information Service on Towns and Townships Web site provides

information-distribution platforms for farmers in 82 localities (www.apdip.net/projects/e-government/capblg/case_studies/China-Yang.pdf). Visitors not only access the Web site for supply and demand information about agricultural products but also to gain abundant production information and scientific knowledge about planting crops.

E-Government Implementations

Several rating schemes assist researchers in evaluating national and municipal capacities to leverage e-government. The most comprehensive indices come from the UN (<http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf>), Brown University in the US (www.insidepolitics.org/egovt06int.pdf), and Waseda University in Japan (www.obi.giti.waseda.ac.jp/e_gov/3nd_rankings_en.pdf). The rankings evaluate various representative features, including

- ease of navigation,
- availability of online publications and databases,
- audio and video clips,
- non-native languages or foreign language translation,
- commercial advertising,
- premium fees,
- user payments,
- disability access,

- privacy and security features,
- presence of online services,
- digital signatures,
- credit-card payments,
- automatic email updates, and
- Web site personalization.

The UK, Singapore, the US, Canada, and South Korea have the highest rankings in the most recent evaluations. Texas, New Jersey, Oregon, Michigan, and Utah lead the US states, and the Department of Agriculture, Department of Housing and Urban Development, Department of Treasury, and Social Security Administration lead US federal agencies in e-government (www.insidepolitics.org/egovt06us.pdf).

Problems with E-Government

The Freedom House (www.freedomhouse.org) ranks countries' relative standings in accordance with their adherence to democratic principles and the press's ability to report freely. Of 192 countries, only 68 have a rating of "free" in both press and government (www.freedomhouse.org/uploads/fiw/FIWScores.xls). The leaders in e-government proliferation are the nations in which the freedom ratings for press and government are high, and they include most of the developed countries (www.freedomhouse.org/uploads/fop/historical/DDSGlobal.xls).

New Department

This issue of *IEEE Internet Computing* marks the debut of a new department — Public Policy — which will feature short articles about the public policy issues surrounding the deployment of telecommunications technology. The focus will be international instead of US-centric — our next installment, for example, will examine e-voting, something that has been unsuccessful in the US so far, but operates well in some nations. Interested in contributing an article? If so, contact Steve Ruth at ruth@gmu.edu.

Obviously, freedom is only one predictor of e-government success, and it isn't surprising that e-government is more extensively deployed in the wealthier nations. Many of the poorer countries in Africa, Asia, and Latin America have few of the technological resources required to implement and sustain e-government initiatives. In India, for example, developers initially had great enthusiasm for Project Gyandoot in the Dahr district, which covers a 600-village area in the Madhya Pradesh state (www.iimahd.ernet.in/egov/documents/gyandoot-evaluation.pdf). Started in 2000, it was a way to promote local self-governance through computer kiosks conveniently positioned in cybercafés and other locations frequented by the tribal and rural population. Low in cost and high on design utility, the project targeted grass-roots needs, such as village auctions, rural email, redressing grievances with the government, exchange of health and education data, spot prices of farm products, and so on. Even today, various Web sites describing the project indicate its considerable success, but the system's users have entirely different reports. Apparently, it's falling into disuse due to the inability to sustain interest in the original goals. As a World Bank report puts it, "subsequent evaluations have reported diminishing levels of activity, placing in question the long-term via-

bility of the project" (<http://poverty2.forumone.com/library/view/14649>).

Similar projects in Russia, Turkey, Costa Rica, and other locations also indicated results far below the high hopes behind such projects. In Costa Rica, for example, a project called "lincos" seemed to benefit wealthy coffee growers far more than it did the poorer citizens it was designed to help. In several reported cases in other countries, pornographic sites were more popular than the educational links provided (www.i4donline.net/issue/march04/computer_full.htm).

Robert Schware of the World Bank has a similarly pessimistic view of e-government potential in wealthier, developed nations, finding that rich countries aren't doing much better than poorer ones. He determined that roughly 15 percent of e-government projects meet their goals and more than a third are complete failures. He also noted that in some developed countries, e-government measures are accelerated to win votes at election time (www.noticias.info/Archivo/2004/200411/20041109/20041109_39362.shtm). A recent source of sobering news is *Dangerous Enthusiasms: E-Government, Computer Failure and Information System Development*,² which describes one horror story after another about New Zealand's attempts to integrate various levels of government across functional lines such as law enforcement and health care. New Zealand has a population of roughly 4 million people, but its government ICT expenditures are considerable — approximately US\$3 billion annually — and its online presence (www.e.govt.nz and www.govt.nz) has received high rankings. However, the authors of *Dangerous Enthusiasm* chronicle a series of colossal failures, with hundreds of millions of taxpayer dollars lost due to the alleged unwillingness of various government constituencies to collaborate on e-government projects. To

quote the book's authors on one of New Zealand's health system failures,

"The story is one of lost opportunity, political negligence, shifting ideas about health policy and the shape of the health system, and the development of the Byzantine ICT topography."

In spite of the missteps, there is still considerable optimism about e-government worldwide because its potential benefits aren't ephemeral. Every time Amazon.com sells a book or EBay brings together a buyer and seller, it proves that governments have an attainable objective: the technology already exists and flourishes, so governments must learn to leverage it. Some day, perhaps all citizens will be treated like customers. □

References

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